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Edited by the Understanding Korea Project

FEATURE

Traditional Korean Villages

Modern Korean Living Spaces:
The Rise of Apartment Complexes



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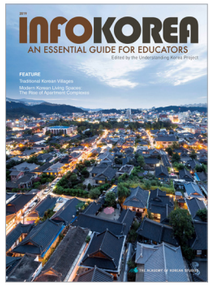
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Jeonju Hanok Village Scenic Area © Image today

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All statistics and descriptions in the statistics part refer to *Korea Statistical Yearbook 2017* by STATISTICS KOREA (kostat.go.kr).

01 Land, Population, and Households

Utilization of Land

Currently, some sixty-four percent of Korea's land mass is covered with forests. A national land utilization plan is used to allocate land properly, and the country is constantly pursuing the balanced development of its national territory.

As of the end of 2017, forests accounted for 63.6 percent of Korea's land mass, followed by dry paddy fields and paddy fields at 18.8 percent, road and railroad sites at 3.4 percent, and building sites at 3.1 percent.

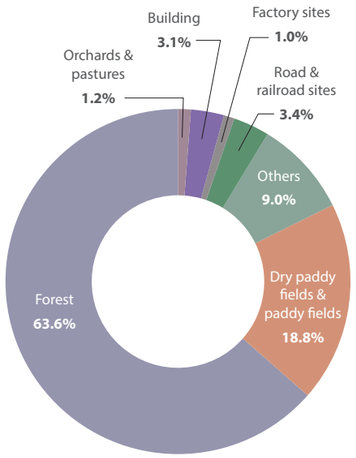
Table 1-1 Land Utilization by Land Category

(km², %)

	Total land area	Dry paddy fields & paddy fields	Forests	Orchards & pastures	Building sites	Factory sites	Road & railroad sites	Others
1997 (Composition)	99,373 100.0	20,834 21.0	65,325 65.7	1,017 1.0	2,218 2.2	444 0.4	2,232 2.2	7,303 7.3
2002 (Composition)	99,585 100.0	20,351 20.4	65,018 65.3	1,103 1.1	2,426 2.4	561 0.6	2,517 2.5	7,609 7.6
2007 (Composition)	99,720 100.0	19,902 20.0	64,639 64.8	1,123 1.1	2,611 2.6	674 0.7	2,794 2.8	7,977 8.0
2012 (Composition)	100,188 100.0	19,486 19.4	64,216 64.1	1,181 1.2	2,827 2.8	814 0.8	3,106 3.1	8,558 8.5
2017 (Composition)	100,364 100.0	18,893 18.8	63,834 63.6	1,163 1.2	3,094 3.1	991 1.0	3,394 3.4	8,995 9.0

Source: Ministry of Land, Infrastructure and Transport, *Cadastral Statistical Annual Report, Statistical Yearbook of MLTM*

Figure 1-1 Land Utilization by Land Category (2017)



Source: Ministry of Land, Infrastructure and Transport, *Cadastral Statistical Annual Report, Statistical Yearbook of MLT*

As of 2017, the total land area of South Korea was 100,364 square kilometers: Gyeongsangbuk-do province occupied the largest area at 19.0 percent, followed by Gangwon-do at 16.8 percent, and Jeollanam-do at 12.3 percent.

Table 1-2 Statistics by Cities and Provinces (2017)

	Land area (km²)	Composition (%)	Estimated population (1,000)	Composition (%)	Population density (people/km²)	Number of households (1,000)	Composition (%)
2017	100,364	100.0	51,446	100.0	513	19,524	100.0
Seoul	605	0.6	9,776	19.0	16,159	3,787	19.4
Busan	770	0.8	3,429	6.7	4,453	1,351	6.9
Daegu	884	0.9	2,465	4.8	2,789	940	4.8
Incheon	1,063	1.1	2,923	5.7	2,750	1,070	5.5
Gwangju	501	0.5	1,501	2.9	2,996	573	2.9
Daejeon	539	0.5	1,531	3.0	2,841	595	3.0
Ulsan	1,061	1.1	1,169	2.3	1,099	429	2.2
Sejong	465	0.5	276	0.5	593	103	0.5
Gyeonggi-do	10,187	10.2	12,809	24.9	1,257	4,541	23.3
Gangwon-do	16,828	16.8	1,521	3.0	90	621	3.2
Chungcheongbuk-do	7,408	7.4	1,605	3.1	217	622	3.2
Chungcheongnam-do	8,226	8.2	2,148	4.2	261	824	4.2
Jeollabuk-do	8,069	8.0	1,830	3.6	227	731	3.7
Jeollanam-do	12,335	12.3	1,796	3.5	146	733	3.8
Gyeongsangbuk-do	19,033	19.0	2,681	5.2	141	1,088	5.6
Gyeongsangnam-do	10,540	10.5	3,355	6.5	318	1,283	6.6
Jeju-do	1,850	1.8	634	1.2	343	233	1.2

Source: Ministry of Land, Infrastructure and Transport Cadastral Statistical Annual Report, Statistics Korea Future Population Projections by City and Province, Future Household Projections by City and Province

In terms of population, Gyeonggi-do had the highest share, at 24.9 percent, followed by Seoul at 19.0 percent, Busan at 6.7 percent, and Gyeongsangnam-do at 6.5 percent. The average population density in South Korea was 513 people per square kilometer, although the number of population per square kilometer was highest in Seoul at 16,159, followed by Busan at 4,453, and Gwangju at 2,996; while Gangwon-do had by far the lowest population per square kilometer at just 90.

Gyeonggi-do accounted for 23.3 percent of the country's households, followed by Seoul at 19.4 percent, Busan at 6.9 percent, and Gyeongsangnam-do at 6.6 percent.

While South Korea's main metropolitan area (Seoul, Incheon, and Gyeonggi-do) occupied only 11.8 percent of the country's land mass, its population accounted for 49.6 percent of the total.

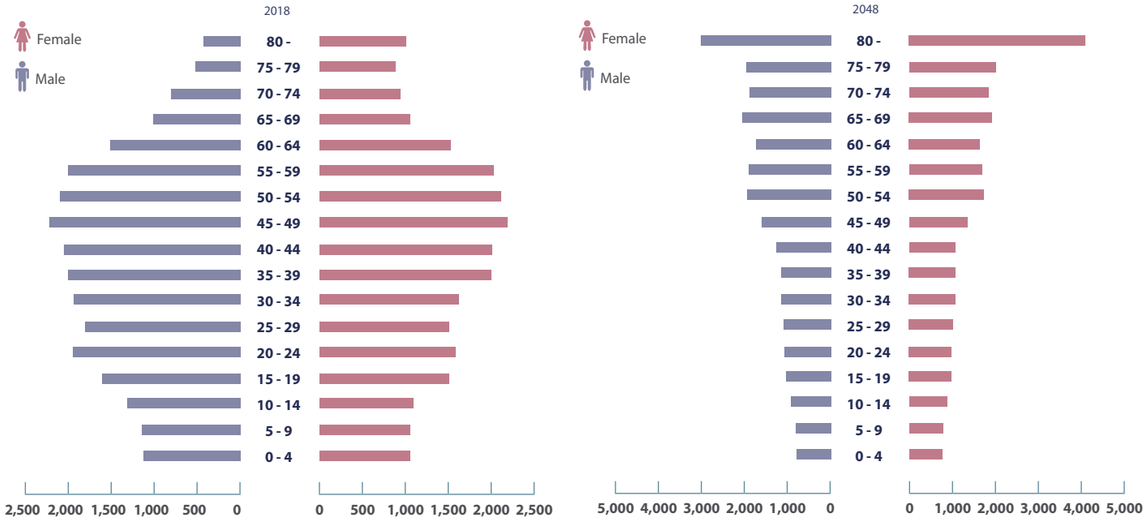
Size and Composition of Population

Since the population drives both the production and consumption of a country, demographic changes—both the size of a population and its composition—can have profound and far-reaching effects on a country, including economic and social impacts. A decline in population due to a low birthrate can undermine a country's growth potential because it weakens the labor market in the long term. In addition, an aging population can cause a decline in labor productivity, as the number of economically active people is reduced. A younger population will therefore sustain a heavy burden in supporting the elderly members of society.

In *Population Projections* released in December, 2016, the future population of Korea is estimated in mid-range, high-range, and low-range scenarios based on the results of *2015 Population and Census*, as well as on recent trends of population changes (child births, deaths, international migration, etc.).

If the mid-range projections turn out to be accurate, Korea's population will peak at 52,960,000 in 2031 and then fall gradually.

Figure 1-2 Changes in Korea's Population Composition[1)]



Notes: 1) The chart is based on a mid-range growth scenario.
Source: Statistics Korea, Population Projections

According to the population projections, Korea's total population reached 51,635,000 in 2018, marking a year-on-year increase of 0.37 percent. In terms of population structure, Koreans under the age of 15 accounted for 12.9 percent of the country's entire population, while economically active people between the ages of 15 and 64 made up 72.8 percent of the total, and persons aged 65 and over made up the remaining 14.3 percent. A society in which citizens over the age of 65 make up more than 7 percent of the population is considered an aging society. Thus, as 14 percent of the Korean population is over 65, it is an aged society, and at 20 percent it will become a super-aged society. (In fact, Korea became an aged society in 2018, when the figure reached 14.3 percent.)

The aging index, which refers to the ratio of aged population over 65 years of age to young population aged under 15, was 110.5 in 2018, representing an increase by 5.7 people from the previous year. Furthermore, the dependency ratio, an indicator of the number of elderly people over 65 who require support to the number of working-age people between 15 and 64 who are capable of supporting them, rose by 0.8 person Year-on-year to reach 19.6 people.

Table 1-3 Size and Composition of Population[1)]

Year	Population size (1,000 people)	Population growth (%)	Population composition by age group (%)			Aging index[2)] (per 100 people)	Dependency ratio[3)] (per 100 people)
			Age 0-14	Age 15-64	Age over 65		
1980	38,124	1.56	34.0	62.2	3.8	11.2	6.1
1990	42,869	0.99	25.6	69.3	5.1	20.0	7.4
2000	47,008	0.84	21.1	71.7	7.2	34.3	10.1
2005	48,185	0.21	19.1	71.9	9.0	46.8	12.5
2010	49,554	0.50	16.1	73.1	10.8	67.2	14.8
2015	51,015	0.53	13.8	73.4	12.8	93.1	17.5
2016	51,246	0.45	13.4	73.4	13.2	98.6	18.0
2017	51,446	0.39	13.1	73.1	13.8	104.8	18.8
2018	51,635	0.37	12.9	72.8	14.3	110.5	19.6
2019	51,811	0.34	12.8	72.4	14.8	116.4	20.5
2020	51,974	0.31	12.6	71.7	15.6	123.7	21.8
2030	52,941	0.07	11.5	64.0	24.5	212.1	38.2
2040	52,198	-0.32	10.8	56.4	32.8	303.2	58.2
2050	49,433	-0.72	9.5	52.4	38.1	399.0	72.6
2060	45,246	-0.97	9.4	49.6	41.0	434.6	82.6

Notes: 1) The chart is based on a mid-range growth scenario.
2) The aging index is the ratio of people aged 65 and over to those aged between 0 and 14. (Population aged over 65 / population between 0 and 14)*100
3) The dependency ratio is the proportion of people aged 65 and over who need to be supported by those aged between 15 and 64 to people aged between15 and 64. (Population aged over 65 / population aged between 15~64)*100
Source: Statistics Korea, *Population Projections*

Population Growth Trends and Fertility

The total number of births in South Korea was 357,771 in 2017, a decrease of 48,472 from the 406,243 births recorded in 2016 (-11.9%). Conversely, the number of deaths was 285,534 in 2017, an increase of 4,707(1.7%) over the 280,827 deaths recorded in 2016. In 2017, the crude birth rate per 1,000 people was 7.0 people, and the crude death rate was 5.6 people; thus, the natural population growth rate was 1.4 per 1,000 people. Meanwhile, the total fertility rate decreased by 0.1 persons from 1.172 in 2016 to 1.052 in 2017.

The natural growth rate of the population is expected to decrease as the number of births and total birth rate are on the decline whereas the number of deaths is on the rise.



Figure 1-3 Population Growth Trend

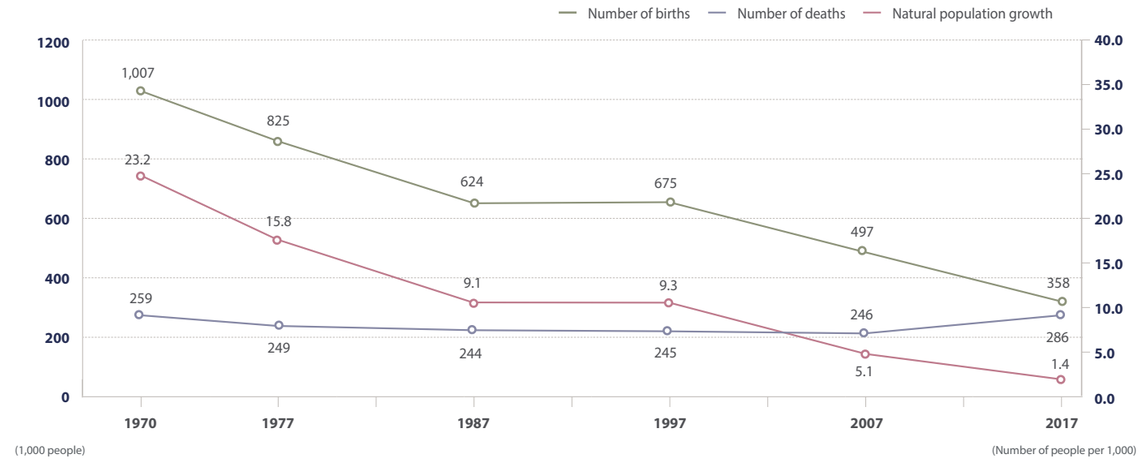


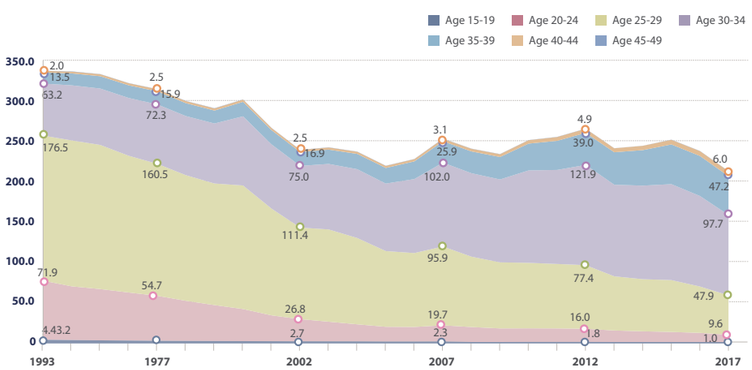
Table 1-4 Population Growth

(People, per 1,000 people)

	Number of births	Number of deaths	Crude birth rate	Crude death rate	Natural population growth	Total fertility rate
1977	825,339	249,254	22.7	6.8	15.8	2.990
1987	623,831	243,504	15.0	5.9	9.1	1.530
1997	675,394	244,693	14.5	5.3	9.3	1.537
2002	496,911	247,524	10.3	5.1	5.2	1.178
2007	496,822	246,482	10.1	5.0	5.1	1.259
2012	484,550	267,221	9.6	5.3	4.3	1.297
2016	406,243	280,827	7.9	5.5	2.5	1.172
2017	357,771	285,534	7.0	5.6	1.4	1.052
Year-on-year increase	-48,472	4,707	-0.9	0.1	-1.1	-0.1
Year-on-year increase rate(%)	-11.9	1.7	-11.4	1.8	-44.0	-10.2

Source: Statistics Korea, *Annual Report on Live Births and Deaths Statistics* (Based on the chapter "Vital Registration")

Figure 1-4 Trend of Fertility Rate by Age Group



Fertility Rate by Age Group

In 2017, the age group with the highest fertility rate was women aged between 30 and 34 (97.7 births per 1,000 women), followed by women aged between 25 and 29 (47.9 births per 1,000 women), and women aged between 35 and 39 (47.2 births per 1,000 women). The fertility rate for women aged between 30 and 34 had increased consistently for a number of years before finally entering a downward trend recently, while the rate for women aged between 25 and 29 has shown a constant decrease and that for women aged over 35 a constant increase.

Table 1-5 Fertility Rate by Age Group

(Number of births per 1,000 women)

Year	Age 15-19	Age 20-24	Age 25-29	Age 30-34	Age 35-39	Age 40-44	Age 45-49
1997	3.2	54.7	160.5	72.3	15.9	2.5	0.2
2002	2.7	26.8	111.4	75.0	16.9	2.5	0.2
2007	2.3	19.7	95.9	102.0	25.9	3.1	0.2
2012	1.8	16.0	77.4	121.9	39.0	4.9	0.2
2016	1.3	11.5	56.4	110.1	48.7	5.9	0.2
2017	1.0	9.6	47.9	97.7	47.2	6.0	0.2
Year-on-year increase	-0.3	-1.9	-8.5	-12.4	-1.5	0.1	0.0
Year-on-year increase rate (%)	-23.1	-16.5	-15.1	-11.3	-3.1	1.7	0.0

Source: Statistics Korea, *Annual Report on Live Births and Deaths Statistics* (Based on the chapter "Vital Registration")

Marriage and Divorce

In 2017, there were 264,455 marriages, a decrease of 17,180 (-6.1%) from the 281,635 marriages recorded in 2016. However, the number of Koreans who married foreign nationals increased by 244 (1.2%).

The number of divorces was 106,032 in 2017, a decrease of 1,296 (-1.2%) from the 107,328 recorded in 2016. The number of divorces from foreign nationals decreased by 535 (-7.0%).

Figure 1-5 Marriage and Divorce

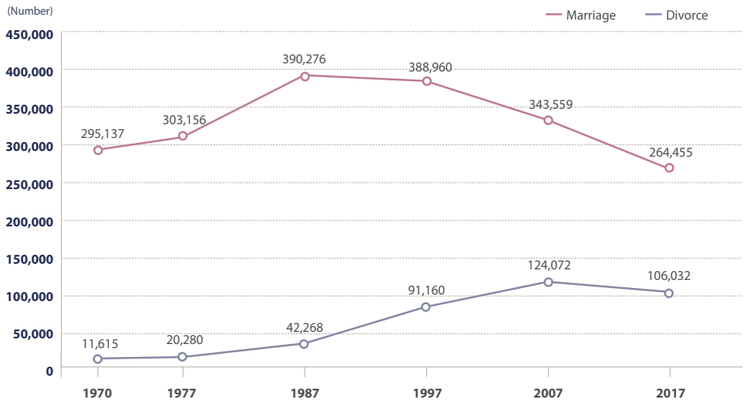






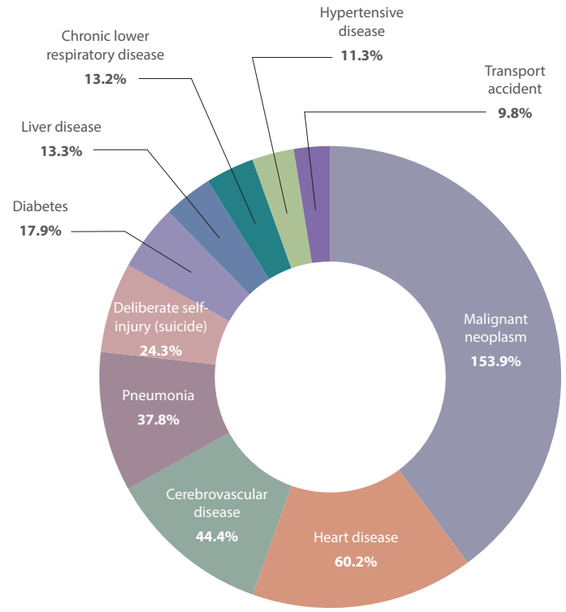
Table 1-6 Marriage and Divorce

(Number)

	Marriages			Divorces		
		Foreign nationals			Foreign nationals	
			Proportion			Proportion
1997	388,960	12,473	3.2	91,160	1,519	1.7
2002	304,877	15,202	5.0	144,910	1,744	1.2
2007	343,559	37,560	10.9	124,072	8,294	6.7
2012	327,073	28,325	8.7	114,316	10,887	9.5
2016	281,635	20,591	7.3	107,328	7,665	7.1
2017	264,455	20,835	7.9	106,032	7,130	6.7
Year-on-year increase	-17,180	244	-	-1,296	-535	-
Year-on-year increase rate (%)	-6.1	1.2	-	-1.2	-7.0	-

Source: Statistics Korea, *Annual Report on Marriage and Divorce Statistics*

Figure 1-6 Major Causes of Death



Major Causes of Death

In 2017, the ten major causes of death in Korea were malignant neoplasm (cancer), heart disease, cerebrovascular disease, pneumonia, deliberate self-injury (suicide), diabetes, liver disease, chronic lower respiratory disease, hypertensive disease, and transport accidents, which between them accounted for 69.3 percent of all deaths in South Korea. Of these, the top three major causes of death (cancer, heart disease, cerebrovascular disease) accounted for 46.4 percent of all causes of death, showing a decrease of 0.4 percent Year-on-year.



Table 1-7 Trend of Causes of Death

(Number of deaths per 100,000, number of people, %)

Rank	2007		2016		2017					
	Cause of death	Death rate	Cause of death	Death rate	Cause of death	Number of deaths	Proportion	Death rate	Compared to ranking in 2007	Compared to ranking in 2016
1	Malignant neoplasm	138.1	Malignant neoplasm	153.0	Malignant neoplasm	78,863	27.6	153.9	-	-
2	Cerebrovascular disease	60.0	Heart disease	58.2	Heart disease	30,852	10.8	60.2	↑+1	-
3	Heart disease	44.1	Cerebrovascular disease	45.8	Cerebrovascular disease	22,745	8.0	44.4	↓-1	-
4	Deliberate self-injury (suicide)	24.9	Pneumonia	32.2	Pneumonia	19,378	6.8	37.8	↑+6	-
5	Diabetes	23.1	Deliberate self-injury (suicide)	25.6	Deliberate self-injury (suicide)	12,463	4.4	24.3	↓-1	-
6	Transport accident	15.6	Diabetes	19.2	Diabetes	9,184	3.2	17.9	↓-1	-
7	Chronic lower respiratory disease	15.4	Chronic lower respiratory disease	13.7	Liver disease	6,797	2.4	13.3	↑+1	↑+1
8	Liver disease	15.0	Liver disease	13.3	Chronic lower respiratory disease	6,750	2.4	13.2	↓-1	↓-1
9	Hypertensive disease	11.1	Hypertensive disease	10.6	Hypertensive disease	5,775	2.0	11.3	-	-
10	Pneumonia	9.4	Transport accident	10.1	Transport accident	5,028	1.8	9.8	↓-4	-

Source: Statistics Korea, *Annual Report on Cause of Death Statistics*

02 Employment, Labor, and Wages



Economic Activity

Economic activity is important for the maintenance and development of any society, while labor is important not just as a means of living but also as a means of self-realization. Furthermore, higher employment rates greatly improve individuals' economic power and render a society more stable.

In 2018, the number of people over the age of 15 stood at 44,182,000, a 0.6 percent increase from the previous year. The economically active population amounted to 27,895,000 people, showing a year-on-year increase of 0.5 percent, whereas the number of economically inactive population was 16,287,000, a year-on-year increase of 0.6 percent from the previous year.

The economic participation rate, which refers to the ratio of the economically active population to the population of people over the age of fifteen, was 63.1 percent, showing a decrease of 0.1 percent Year-on-year. The economic participation rate for men declined by 0.4 percent from the previous year to 73.7 percent, while the rate for women increased by 0.2 percent to 52.9 percent.

The number of unemployed people in 2018 was 1,073,000, an increase of 4.9 percent Year-on-year, while the unemployment rate was 3.8 percent, an increase of 0.1 percent from the previous year.

Table 2-1 Economic Activity[1]

(1,000 people, %)

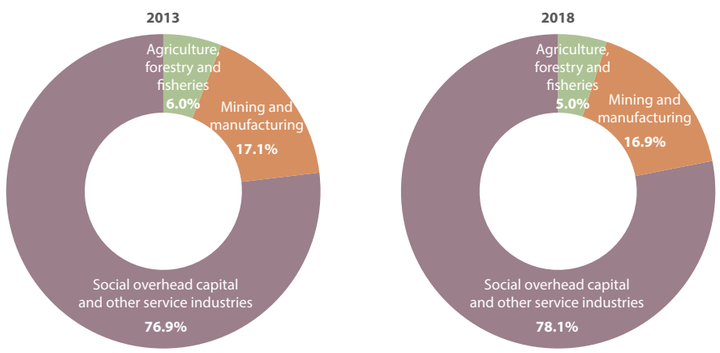
	Population over 15[2]	Economically active population	Economically inactive population	Economic participation rate	Male	Female	Unemployed people	Unemployment rate
2011	41,387	25,389	15,998	61.3	73.4	49.8	863	3.4
2012	41,857	25,781	16,076	61.6	73.5	50.1	826	3.2
2013	42,304	26,108	16,196	61.7	73.5	50.3	808	3.1
2014	42,795	26,836	15,959	62.7	74.4	51.5	939	3.5
2015	43,239	27,153	16,086	62.8	74.1	51.9	976	3.6
2016	43,606	27,418	16,187	62.9	74.0	52.2	1,009	3.7
2017	43,931	27,748	16,183	63.2	74.1	52.7	1,023	3.7
2018	44,182	27,895	16,287	63.1	73.7	52.9	1,073	3.8
Year-on-year Increase (rate)	0.6	0.5	0.6	-0.1%p	-0.4%p	0.2%p	4.9	0.1%p

Note: 1) The data have been revised to reflect changes in the population projections that were written retroactively based on the results of the 2015 Population Census (Registration Census).
2) Excluding soldiers, riot police, public service workers, and prisoners whose jail terms have been confirmed
Source: Statistics Korea, *Annual Report on Economically Active Population Survey*

Employment Levels for Different Industries

In 2018, the number of employed people in industry as a whole stood at 26,822,000, showing an increase of 0.4 percent Year-on-year. When broken down in more detail, the number of people employed in the social overhead capital and other service industries increased by 0.5 percent, while the number employed in agriculture and fisheries increased by 4.8 percent. Conversely, the number of people employed in mining and manufacturing decreased by 1.3 percent.

Figure 2-1 No. of Employees by Industry



Source: Statistics Korea, *Annual Report on Economically Active Population Survey*

Employment Levels for Different Classes of Workers

In 2018, the number of regular employees increased by 2.6 percent compared with 2017. Conversely, the number of temporary workers decreased by 2.8 percent; the number of daily workers by 3.6 percent; the number of self-employed people by 0.8 percent; and the number of unpaid family workers by 0.8 percent.

Wages and Hours Worked

In 2017, the average number of days an employee worked per month at businesses with five or more employees was 20.6 days, showing a decrease of 1.4 percent from 2016. Meanwhile, the total average monthly wage per regular worker rose by 2.3 percent, to KRW 3,707,000, compared with 2016 (except for people working in the agriculture, forestry and fisheries industries).

Table 2-2 No. of Employees by Industry[1]

(1,000 people)

	2013	2014	2015	2016	2017	2018	Year-on-year increase (%)
Total	25,299	25,897	26,178	26,409	26,725	26,822	0.4
Agriculture, forestry and fisheries	1,513	1,446	1,337	1,273	1,279	1,340	4.8
Mining and manufacturing	4,322	4,471	4,618	4,603	4,589	4,529	-1.3
Manufacturing	4,307	4,459	4,604	4,584	4,566	4,510	-1.2
Social overhead capital and other services	19,464	19,980	20,222	20,534	20,857	20,953	0.5
Construction	1,780	1,829	1,854	1,869	1,988	2,034	2.3
Wholesale and retail trade/hotels and restaurants	5,678	5,952	6,011	6,045	6,083	5,965	-1,9
Electricity, transport, telecom and finance	3,077	3,068	3,079	3,088	3,053	3,154	3.3
Business, personal, public, service and others	8,929	9,131	9,278	9,532	9,734	9,800	0.7

Note: 1) The data are taken from the Tenth Revision of the Standard Industrial Classification
Source: Statistics Korea, *Annual Report on Economically Active Population Survey*

Table 2-3 No. of Employed People by Work Status[1)]

(1,000 people)

	Total	Regular workers	Temporary workers	Daily workers	Self-employed small business owners	Unpaid family workers
2010	24,033	10,178	5,107	1,826	5,643	1,279
2011	24,527	10,786	5,045	1,765	5,657	1,273
2012	24,955	11,250	5,032	1,639	5,768	1,266
2013	25,299	11,847	4,919	1,600	5,703	1,232
2014	25,897	12,319	5,069	1,570	5,720	1,219
2015	26,178	12,716	5,114	1,572	5,622	1,153
2016	26,409	13,062	5,124	1,483	5,614	1,126
2017	26,725	13,428	4,992	1,514	5,682	1,110
2018	26,822	13,772	4,851	1,460	5,638	1,101
Year-on-year increase (%)	0,4	2.6	-2.8	-3.6	-0.8	-0.8

Note: 1) The data have been revised to reflect changes in the population projections that were written retroactively based on the results of the 2015 Population Census (Registration Census).
Source: Statistics Korea, *Annual Report on Economically Active Population Survey*

Table 2-4 Wage and Hours Worked[1) 2)]

(Days, KRW 1,000)

	2010	2011	2012	2013	2014	2015	2016	2017	Year-on-year increase (%)
Average monthly days worked	21.5	21.5	21.3	21.1	20.9	21.1	20.9	20.6	-1.4
Total amount of average monthly wages	3,047	3,019	3,178	3,299	3,378	3,490	3,623	3,707	2.3

Note: 1) Regular employees of businesses with five or more employees in entire industries except for agriculture, forestry, and fisheries
2) The Ninth Revision of the Standard Industrial Classification
Source: Ministry of Employment and Labor



Employment Insurance and Unemployment Allowances

As of the end of December 2017, the number of business establishments covered by employment insurance stood at 2,211,482, representing an increase of 1.7 percent from 2016. Similarly, the number of insured employees saw a 2.4 percent increase from 2016, to reach a total of 12,958,825, whereas the number of unemployment allowance beneficiaries was 1,295,789, showing a decrease of 0.6 percent from 2016.

Industrial Accidents

In 2017, a total of 89,080 accidents were recorded, showing a decrease of 1.0 percent from the previous year, while the number of injured people decreased by 0.9 percent from the previous year to 89,848.



Table 2-5 Coverage by Employment Insurance

(Number of business establishments, persons)

	Number of business establishments covered by employment insurance	Year-on-year increase (%)	Number of workers covered by insurance[1)]	Year-on-year increase (%)	Number of unemployment allowances beneficiaries	Year-on-year increase (%)
2009	1,385,298	-2.7	9,653,678	4.1	1,528,407	31.5
2010	1,408,061	1.6	10,131,058	4.9	1,336,439	-12.6
2011	1,508,669	7.1	10,675,437	5.4	1,278,106	-4.4
2012	1,610,713	6.8	11,152,354	4.5	1,267,427	-0.8
2013	1,747,928	8.5	11,571,213	3.8	1,290,686	1.8
2014	1,935,302	10.7	11,930,602	3.1	1,296,505	0.5
2015	2,107,071	8.9	12,363,063	3.6	1,307,963	0.9
2016	2,174,508	3.2	12,655,202	2.4	1,303,691	-0.3
2017	2,211,482	1.7	12,958,825	2.4	1,295,789	-0.6

Note: 1) The statistics on insured workers are for regular workers, excluding daily workers.
Source: Korea Employment Information Service, *Yearly Statistics of Employment Insurance*

Table 2-6 Industrial Accidents

	Number of accidents (case)	Number of injured persons	Number of deaths[1)]	Physical disability, injury, and disease (persons)
2007	89,106	90,147	2,406	87,741
2008	94,745	95,806	2,422	93,384
2009	96,984	97,821	2,181	95,640
2010	97,923	98,645	2,200	96,445
2011	92,657	93,292	2,114	91,178
2012	91,417	92,256	1,864	90,091
2013	91,097	91,824	1,929	89,591
2014	90,158	90,909	1,850	88,775
2015	89,354	90,129	1,810	88,063
2016	90,009	90,656	1,777	88,616
2017	89,080	89,848	1,957	87,639
Year-on-year increase (%)	-1.0	-0.9	10.1	-1.1

Note: 1) The number of deaths after 2012 excludes deaths resulting from traffic accidents that occurred outside business establishments, sports events, acts of physical violence, and deaths resulting from accidents that occurred at least one year earlier. (However, it does include deaths resulting from traffic accidents that occurred in the transportation business and outside restaurant and hotel business establishments.)
Source: Ministry of Employment and Labor, *Yearbook of Employment & Labor Statistics*

03 Prices and the Household Economy

Prices

The term "prices" is a comprehensive concept that refers to a rough average of diverse products and services that are required in everyday life. Prices can be expressed in the form of a price index that shows comprehensive price trends, with the index being a number calculated on the basis of the average prices of different products. To measure changes in prices, economists set a certain price as the baseline level, i.e. 100, and then consider changes in other prices relative to that baseline.

Though the price index is calculated objectively and systematically, the figures shown here may differ somewhat from actual prices in daily life.

Table 3-1 Producer Price Index

(2010=100)

	Weight	2012	2013	2014	2015	2016	2017	2018	Year-on-year increase (%)
All items	1,000.0	107.5	105.7	105.2	101.0	99.1	102.5	104.6	2.0
Products	649.5	108.9	106.2	104.8	98.0	94.7	99.0	101.1	2.1
Agricultural, forestry, and fisheries products	37.6	108.3	101.9	102.5	104.9	111.0	118.2	124.1	5.0
Mining products	2.6	105.7	108.2	110.5	110.9	115.3	121.0	126.8	4.8
Manufacturing products	558.1	108.6	105.3	103.1	96.2	92.8	97.2	99.4	2.3
Electric power, water supply, and gas	51.2	113.7	120.2	126.6	116.6	106.9	108.0	106.8	-1.1
Services	350.5	104.2	104.5	106.1	107.5	108.8	110.5	112.3	1.6

Source: Bank of Korea

Producer Price Index

The producer price index consists of statistics used to measure changes in the prices of products and services supplied by domestic producers within the domestic market, which is used both as an indicator for assessing economic trends and as a GDP deflator. As of 2018, a total of 867 items (765 products and 102 services) were surveyed in order to calculate the index.

The producer price index in 2018 was 104.6 (2010=100), showing an increase of 2.0 percent year-on-year. The index for products rose by 2.2 percent, as did the index for agricultural, forestry and fisheries products, mining products, and manufacturing products, all of which are sub-items of products.



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Consumer Price Index

The consumer price index (CPI) is a number that is calculated to measure changes in the prices of 460 different goods and services that are purchased by households to meet their everyday needs.

In 2018 the consumer price index was 104.45 (2015=100), showing an increase of 1.5 percent compared with the preceding year. When broken down by sector, the indices for restaurants and hotels (3.0%), foods and non-alcoholic beverages (2.8%), transportation (2.4%), household equipment and routine household maintenance services (2.3%), education (1.4%), %), clothing and footwear (1.1%), housing/water/power/fuel (0.7%), other goods and services (0.6%), recreation and culture (0.5%), and alcoholic beverages and cigarettes (0.3%) all increased in the order presented here, while the index for communications decreased by 0.9 percent.

Consumer Price Index for Daily Necessities

The prices that consumers experience daily are subjective, depending on an individual's lifestyle. Generally speaking, consumers tend to think that changes in the prices of goods that they buy frequently reflect larger price trends. To measure consumers' subjective perception of prices, Statistics Korea compiles a list of 141 items, including those purchased by consumers frequently and basic necessities, for which changes in price would have a significant impact on consumers. This list forms the basis for the consumer price index for necessities. The consumer price index for necessities in 2018 was 104.77(2015=100), showing in increase of 1.6 percent Year-on-year.

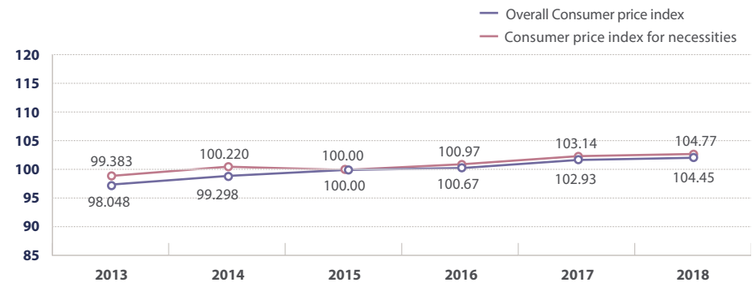
Table 3-2 Consumer Price Indexes[1) 2)]

(2015=100)

	Weight	2013	2014	2015	2016	2017	2018	Year-on-year increase (%)
All items	1,000.0	98.048	99.298	100.00	100.97	102.93	104.45	1.5
Foods and non-alcoholic beverages	137.6	98.090	98.377	100.00	102.31	105.78	108.72	2.8
Alcoholic beverages and cigarettes	15.8	66.678	66.630	100.00	100.69	102.21	102.47	0.3
Clothing and footwear	61.1	94.873	98.680	100.00	101.80	102.90	104.04	1.1
Housing, water, electricity and fuels	165.9	97.841	100.645	100.00	99.19	100.87	101.58	0.7
Household equipment and routine household maintenance services	44.2	95.446	97.476	100.00	101.55	102.67	104.99	2.3
Health	69.8	98.074	98.765	100.00	100.99	101.88	101.83	0.0
Transportation	112.6	110.279	108.508	100.00	97.79	101.29	103.74	2.4
Communications	53.5	100.254	100.192	100.00	100.09	100.38	99.52	-0.9
Recreation and culture	61.2	100.063	100.492	100.00	101.84	101.90	102.39	0.5
Education	89.6	96.888	98.312	100.00	101.64	102.80	104.21	1.4
Restaurants and hotels	131.8	96.326	97.722	100.00	102.51	104.97	108.14	3.0
Other goods and services	56.9	94.495	97.409	100.00	103.44	106.31	106.95	0.6

Note: 1) Prior to 2014 the indices were given to the last three digits, but to double digits only after 2015.
2) The weights were calculated based on the 2017 figures, but the same weights cannot be applied to the data for previous years.
Source: Statistics Korea, *Monthly Consumer Price Index Report*

Figure 3-1 Consumer Price Index for Necessities and Overall Consumer Price



Source: Statistics Korea, *Monthly Report on Consumer Price Index*

Table 3-3 Consumer Price Index for Necessities and Overall Consumer Price Index[1)]

(2015=100)

	2013	2014	2015	2016	2017	2018
Consumer Price Index for Necessities	99.383	100.220	100.00	100.67	103.14	104.77
Year-on-year increase (%)	0.7	0.8	-0.2	0.7	2.5	1.6
	2013	**2014**	**2015**	**2016**	**2017**	**2018**
Consumer price index	98.048	99.298	100.00	100.97	102.93	104.45
Year-on-year increase (%)	1.3	1.3	0.7	1.0	1.9	1.5

Note: 1) Prior to 2014 the indices were given to the last three digits, but to double digits only after 2015.
Source: Statistics Korea, *Monthly Consumer Price Index Report*

Average Monthly Consumption Expenditure per Household Nationwide

In terms of the monthly average consumption expenditure per household in 2017, expenditure on transportation accounted for the largest proportion at 14.4 percent, followed by food and non-alcoholic drinks (14.1%), restaurants and hotels (13.9%), and housing, water, and heating (11.1%).

The total value of consumption expenditure in 2017 was KRW 2,560,000, an increase of 0.3 percent over the previous year. The rate of increase year-on-year was the highest for transportation at 20.0%, while the rate of decrease Year-on-year was the highest for education at 33.3%.

Table 3-4 Average Monthly Consumption Expenditure per Household (i.e. two or more people) Nationwide

(KRW 1,000, %)

	2015	Composition	2016	Composition	2017[1)]	Composition	Year-on-year increase
Consumption expenditures	2,563.1	100.0	2,549.7	100.0	2556.8	100.0	0.3
Foods and non-alcoholic drinks	354.0	13.8	349.4	13.7	360.3	14.1	3.1
Alcoholic beverages and cigarettes	33.1	1.3	34.8	1.4	34.8	1.4	0.0
Clothing and footwear	161.9	6.3	158.0	6.2	159.0	6.2	0.6
Housing, water, heating	277.5	10.8	273.1	10.7	283.0	11.1	3.6
Household equipment and routine household maintenance services	105.2	4.1	109.2	4.3	112.0	4.4	2.6
Health	174.4	6.8	177.2	6.9	181.8	7.1	2.6
Transportation	321.6	12.5	307.7	12.1	369.1	14.4	20.0
Communications	147.7	5.8	144.0	5.6	137.8	5.4	-4.3
Recreation and culture	149.9	5.8	149.7	5.9	174.7	6.8	16.7
Education	283.3	11.1	282.1	11.1	188.3	7.4	-33.3
Restaurants and hotels	339.5	13.2	344.4	13.5	354.2	13.9	2.8
Other miscellaneous goods and services	215.1	8.4	220.2	8.6	201.7	7.9	-8.4

Note: 1) 1 or more persons.
Source: Statistics Korea, *Household Economy Survey*



04 Health, Society, and Welfare

Number of Licensed Healthcare Providers and Pharmacists

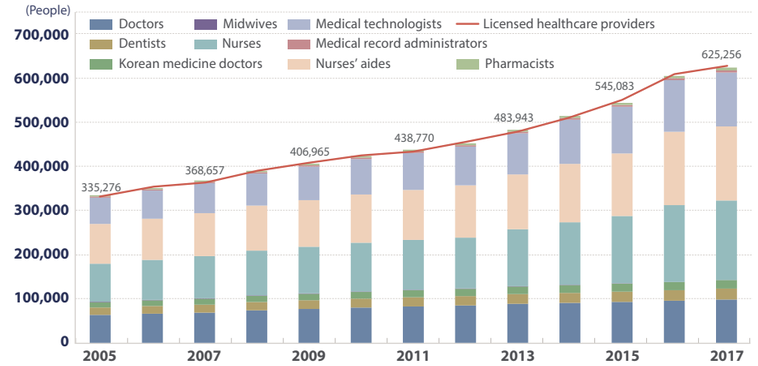
In 2017, the number of healthcare providers increased by 18,958 (3.1%) to 625,256 from the 606,298 recorded in the previous year. The number of licensed nurses was the greatest at 18,654 (28.9%), followed by nurses' aides at 168,286 (26.9%), medical doctors (including dentists and Korean traditional medicine doctors) at 142,583 (22.8%), and medical technologists at 122,525 (19.6%).

Crime Rates

The total number of crimes recorded in 2017 was 1,824,876, representing a decrease of 9.1 percent compared with the preceding year.

An examination of the details regarding the criminal offenses recorded in 2017 shows that the number of property crimes was the largest at 542,336 (29.7%), followed by violent crimes at 274,819 (15.1%), other types of criminal offenses at 97,783 (5.4%), and forgery at 19,502 (1.1%).

Figure 4-1 Trend of Change in Number of Heathcare Providers



Source: Ministry of Health and Welfare, *Ministry of Health and Welfare Yearbook*

Table 4-1 Number of Licensed Healthcare Providers

(Persons, %)

	Total	Doctors	Dentists	Korean traditional doctors	Midwives	Nurses	Nurses' aides	Medical technologists	Medical record administrators	Pharmacists
2007	368,657	68,382	18,268	13,352	1,170	95,739	97,617	68,166	2,876	3,087
2012	453,287	84,732	21,388	16,503	997	115,273	118,848	87,956	3,232	4,358
2016(A)	606,298	95,597	23,759	18,769	61	174,580	166,688	117,272	4,662	4,910
2017(B)	625,256	98.287	24,895	19,401	67	180,654	168,286	122,525	4,812	6,329
Proportion(%)	100.0	15.7	4.0	3.1	0.0	28.9	26.9	19.6	0.8	1.0
Increase (B-A)	18,958	2,690	1,136	632	6	6,074	1,598	5,253	150	1,419
Increase rate (%)	3.1	2.8	4.8	3.4	9.8	3.5	1.0	4.5	3.2	28.9

Source: Ministry of Health and Welfare, *Ministry of Health and Welfare Yearbook*

Table 4-2 Crime Occurrence[1)]

(Number of cases)

	Total number of criminal offenses	Criminal offenses	Property crime	Violent crime	Forgery	Crimes committed by public officials	Crimes against customs	Negligence	Other types of criminal offenses	Special offenses
2011	1,902,720	997,263	605,360	277,495	25,850	2,468	15,193	7,131	63,766	905,457
2012	1,944,906	1,038,609	637,686	278,294	25,895	2,865	11,523	7,229	75,117	906,297
2013	2,006,682	1,057,855	671,224	267,513	21,681	2,466	10.030	7,114	77,827	948,827
2014	1,933,835	1,016,209	617,119	267,781	21,662	2,705	9,580	7,092	90,270	917,626
2015	2,020,731	1,047,761	622,126	283,846	20,878	3,286	10,252	7,599	99,774	972,970
2016	2,008,290	1,005,689	573,445	284,852	18,569	3,103	15,856	7,708	102,156	1,002,601
2017	1,824,876	958,865	542,336	274,819	19,502	3,845	12,161	8,419	97,783	866,011
Proportion(%)	100.0	52.5	29.7	15.1	1.1	0.2	0.7	0.5	5.4	47.5

Note: 1) It is somewhat inappropriate to conduct a simple comparison of the yearly figures because the breakdown of the different categories of crimes changed in 2014.
Source: Supreme Prosecutors' Office, *Crime Analysis*

Table 4-3 Rate of Occurrence of Different Types of Juvenile Delinquency

(Number of persons)

	Total	Greed[1)]	Gambling	Revenge	Domestic troubles	Curiosity	Temptation	Crimes of opportunity	Dissatisfaction with reality	Negligence	Others	Unidentified
2015	71,035	12,555	788	22	171	6,430	1,058	18,228	401	4,537	18,266	8,579
2016	76,000	12,764	850	129	259	8,330	1,168	19,010	523	4,632	19,549	8,786
2017	72,759	10,850	783	39	260	8,186	1,049	19,496	420	4,510	18,280	8,886
Proportion (%)	100.0	14.9	1.1	0.1	0.4	11.3	1.4	26.8	0.6	6.2	25.1	12.2

Note: 1) Earning a living + earning entertainment expenses + earning gambling money + vanity Extravagance + accumulation of wealth, etc.
Source: Supreme Prosecutors' Office, *Crime Analysis*

Types of Juvenile Delinquency

The total number of juvenile delinquencies in 2017 was 72,759, showing a decrease of 4.3 percent Year-on-year.

By motive for delinquencies, crimes of opportunity accounted for 26.8 percent, followed by greed at 14.9%, curiosity at 11.3%, and negligence at 6.2%.

Traffic Accidents

The total number of traffic accidents recorded in 2017 was 216,335, showing a decrease of 2.1% from the previous year's 220,917. The numbers of deaths and injuries resulting from traffic accidents also posted a year-on-year decrease of 2.5 percent and 2.7 percent, respectively.

Fire Outbreaks

The total number of fires recorded in 2018 was 42,337, showing a year-on-year decrease of 4.2 percent. As for casualties, the number of deaths resulting from fire was 369, and the number of injuries was 2,225, showing a year-on-year increase of 24 and 373, respectively.

Meanwhile, the amount of property damages caused by fire increased by KRW 52.609 billion to KRW 559.523 in 2018.



Table 4-4 Traffic Accidents

	Total number of traffic accidents (number)	Casualties (number of persons)	
		Deaths	Injuries
2006	213,745	6,327	340.229
2007	211,662	6,166	335,906
2008	215,822	5,870	338.962
2009	231,990	5,838	361,875
2010	226,878	5,505	352,458
2011	221,711	5,229	341,391
2012	223,656	5,329	344,565
2013	215,354	5,092	328,711
2014	223,552	4,762	337,497
2015	232,035	4,621	350,400
2016	220,917	4,292	331,720
2017	216,335	4,185	322,829
Year-on-year increase (%)	-2.1	-2.5	-2.7

Source: National Police Agency, Road Traffic Authority, *Traffic Accident Statistics*

Table 4-5 Fire

(Number of cases, number of persons, KRW 1 million)

	Number of fires	Increase rate (%)	Casualties (persons)	Deaths (persons)	Injuries (persons)	Amount of property damage
2008	49,632	3.7	2,716	468	2,248	383,145
2009	47,318	-4.7	2,441	409	2,032	251,853
2010	41,863	-11.5	1,892	304	1,588	266,505
2011	43,875	4.8	1,861	263	1,598	256,548
2012	43,249	-1.4	2,222	267	1,955	289,494
2013	40,932	-5.4	2,184	307	1,877	434,467
2014	42,135	2.9	2,181	325	1,856	405,366
2015	44,435	5.5	2,093	253	1,840	433,209
2016	43,413	-2.3	2,024	306	1,718	420,603
2017	44,178	1.8	2,197	345	1,852	506,914
2018	42,337	-4.2	2,594	368	2,225	559,523
Year-on-year increase	-1,841	-	397	24	373	52,609

Source: National Fire Agency, National Fire Data System

Recipients of National Basic Livelihood Security Benefits and Total Expenditure

The number of recipients of national basic livelihood security benefits in 2017 was 1,582,000. The number of general recipients was 1,492,000, while the number of institutionalized recipients was 90,000. The percentage of the recipients of national basic livelihood security benefits to the entire registered population in Korea (recipient rate) was 3.1 percent in 2017.

The total amount of national basic livelihood security paid to recipients in 2017 was KRW 4,438 billion, including KRW 4,199 billion paid to general recipients and KRW 239 billion paid to institutionalized recipients.

Number of Welfare Institutions for the Elderly and Their Residents

As of the end of 2017, the number of welfare facilities for the elderly stood at 5,613, showing an increase of 1.0 percent Year-on-year. The number of residential welfare institutions for the elderly was 371, decreasing by 5.6 percent compared with the previous year. The number of medical welfare institutions for the elderly was 5,242, showing in increase of 1.5 percent Year-on-year.

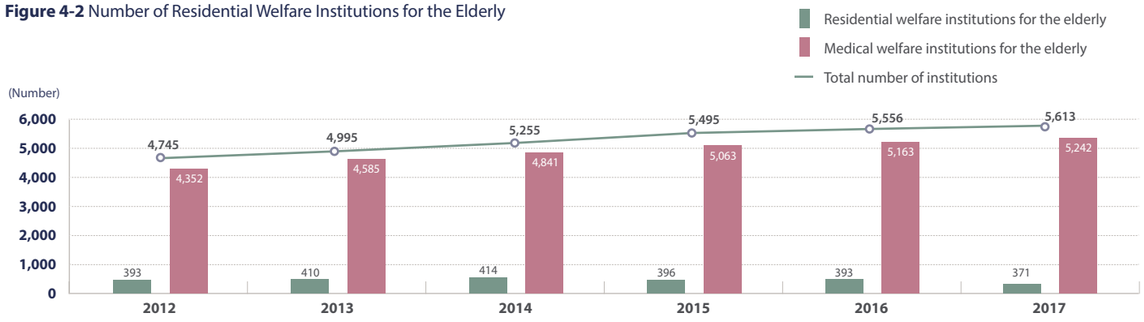
Table 4-6 Total Recipients of National Basic Livelihood Security Benefit and Total Expenditure[1)]

(1,000 people, KRW 1 billion, %)

	2010	2011	2012	2013	2014	2015	2016	2017
Total number of recipients	1,550	1,469	1,394	1,351	1,329	1,646	1,631	1,582
Percentage of recipients	3.1	2.9	2.7	2.6	2.6	3.2	3.2	3.1
General recipients	1,458	1,380	1,300	1,259	1,237	1,554	1,540	1,492
Institutionalized recipients	92	89	94	92	91	92	91	90
Total benefits	3,998	4,017	3,930	4,088	4,072	3,410	4,157	4,438
General benefits	3,854	3,856	3,761	3,899	3,853	3,180	3.914	4,199
Benefits to institutions	144	161	170	189	218	230	243	239

Note: 1) Basic livelihood security benefits include basic livelihood security, as well as living expenses, residential benefits, education benefits, childbirth benefits, and funeral benefits that are paid to recipients.
Source: Ministry of Health and Welfare, *Ministry of Health and Welfare Yearbook*

Figure 4-2 Number of Residential Welfare Institutions for the Elderly



Source: Ministry of Health and Welfare, *Ministry of Health and Welfare Yearbook*

Table 4-7 Welfare Institutions for the Elderly and Their Residents

(People, facilities)

	Population over 65[1)]	Total number of establishments	Facilities of residential welfare institutions for the elderly		Medical welfare facilities for the elderly	
			Number of facilities	Number of residents	Number of facilities	Number of residents
2012	5,766,729	4,745	393	9,943	4,352	112,650
2013	6,022,659	4,995	410	9,428	4,585	118,713
2014	6,277,126	5,255	414	9,968	4,841	127,356
2015	6,541,168	5,459	396	9,709	5,063	135,154
2016	6,762,842	5,556	393	9,590	5,163	142,079
2017	7,075,518	5,613	371	9,272	5,242	148,646
Year-on-year increase (%)	4.6	1.0	-5.6	-3.3	1.5	4.6

Note: 1) Based on population projections (medium-level scenario) produced in December 2016.
Source: Statistics Korea, *Population Projections,* Ministry of Health and Welfare, *Ministry of Health and Welfare Yearbook*

05 Environment

Overall Weather

The annual mean temperature in 2017 was 13.1 degrees Celsius (°C). The mean maximum temperature for the year was 18.7°C and the mean minimum temperature was 8.1°C. The annual mean temperature, mean maximum temperature, and mean minimum temperature in 2017 were 0.6°C, 0.6°C, and 0.4°C higher, respectively, than the average levels.

Nationwide, annual average precipitation in 2017 was 967.8 millimeters (mm), 339.9mm less than the average level. The number of days with 30mm or more of hourly precipitation was 2.2 in 2017, higher than the average by 0.5 days. The number of days with 80mm or more daily precipitation was 1.5, which was 0.8 days less than average.

The global average temperature in 2017 (from January to November) was 0.84°C higher than the average temperature for the twentieth century (14.0°C), which was the third highest figure following the years 2016 (+0.96°C) and 2015 (+0.88°C).

Water Quality of Major Water Supply Sources

Water quality standards are measured according to the biological oxygen demand (BOD) of rivers and lakes: water with a BOD of 1 milligram (mg) or lower per liter is classified as a first-grade water supply source, and 3mg or lower is considered second grade. Second-grade water is not potable without treatment, although it is clear and odorless.

When examining the contamination level for major water supply sources as of 2017, Paldang Dam recorded 1.1mg per liter, Mulgeum 2.0mg, Daecheong Dam 0.8mg, and Damyang 1.9mg of BOD.


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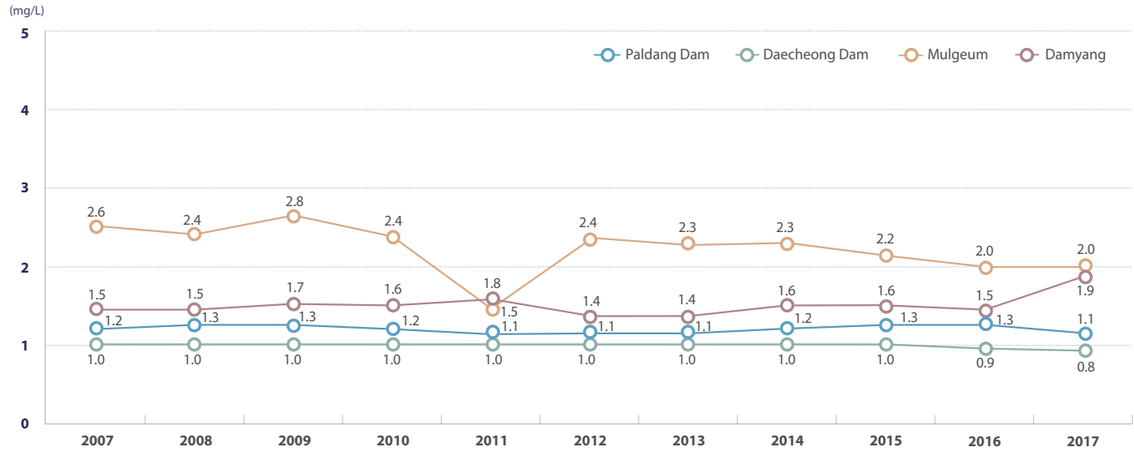
Table 5-1 Weather Factors by Decade[1)]

(°C, mm, Days)

	Average temperature	Mean maximum temperature	Mean minimum temperature	Precipitation	Number of days of precipitation	Number of days with 30mm or more of hourly precipitation	Number of days with 80mm or more of daily precipitation
1973-1980	12.1	17.6	7.3	1,209.6	104.6	1.2	1.7
1981-1990	12.2	17.8	7.4	1,284.1	104.2	1.6	2.1
1991-2000	12.5	18.2	7.6	1,280.5	99.3	1.6	2.4
2001-2010	12.8	18.3	8.1	1,358.5	106.9	2.0	2.5
Level of average years(a) (1981~2010)	12.5	18.1	7.7	1,307.7	103.5	1.7	2.3
2017(b)	13.1	18.7	8.1	967.8	99.5	2.2	1.5
2017 values-level of average years(b-a)	0.6	0.6	0.4	-339.9	-4.0	0.5	-0.8

Note: 1) Average of values measured at the 45 largest weather observatories on land, excluding island areas.
Source: Korea Meteorological Administration

Figure 5-1 Water Quality of Major Water Supply Sources (BOD)



Source: Ministry of Environment

Table 5-2 Water Quality of Major Water Supply Sources (BOD)

(mg/L)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Paldang Dam	1.2	1.3	1.3	1.2	1.1	1.1	1.1	1.2	1.3	1.3	1.1
Mulgeum	2.6	2.4	2.8	2.4	1.5	2.4	2.3	2.3	2.2	2.0	2.0
Daecheong Dam	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	0.8
Damyang	1.5	1.5	1.7	1.6	1.8	1.4	1.5	1.6	1.6	1.5	1.9

Source: Ministry of Environment

Waste

The total volume of waste (excluding specified wastes) generated in 2017 amounted to 414,626 tons (t) per day, a decrease of 719 tons from the previous year (415,345t/day). While the volume of construction waste decreased by 3,182 tons per day (-1.6%) and household waste by 282 tons per day (-0.5%) in 2017, the volume of waste generated by industrial facilities recorded a year-on-year increase of 2,745 tons (1.7%).

As of 2017, the amount of household waste generated by one person per day stood at 1.01 kilograms, the same as the previous year's figure. The amount showed a downward trend for some time, but began to increase again recently.

Disposal of General Waste

Recycling accounted for the largest share in the disposal of general waste in 2017 at 358,271 tons per day (86.4%), followed by landfill at 32,269 tons (7.8%) and incineration at 24,038 tons (5.8%).

While the amount of waste recycling per day increased by 2,185 tons (0.6%), the amounts of waste landfill, incineration, and discharge into the sea decreased by 2,763 tons (-7.9%), 97 tons (-0.4%), and 44 tons (-47.8%), respectively.

The rate of recycling of general waste has seen a constant increase, while the rates of waste landfill and discharge into the sea, both of which cause environmental contamination, are decreasing.

Table 5-3 Volume of Waste Generated

(Tons/day)

	Total	Household waste	Waste generation per person(kg/day)	Waste from industrial facilities[2)]	Construction waste
1997	189,200	47,895	1.05	93,528	47,777
2002	268,548	49,902	1.04	99,505	120,141
2007	337,158	50,346	1.02	114,807	172,005
2012	382,009	48,990	0.95	146,390	186,629
2013	380,709	48,728	0.94	148,443	183,538
2014	388,486	49,915	0.95	153,189	185,382
2015	404,812	51,247	0.97	155,305	198,260
2016 (A)	415,345	53,772	1.01	162,129	199,444
2017 (B)	414,626	53,490	1.01	164,874	196,262
Increase (B-A)	-719	-282	-	2,745	-3,182
Year-on-year increase (%)	-0.2	-0.5	-	1.7	-1.6

Source: Ministry of Environment, National Institute of Environmental Research, *Generation & Treatment of Wastes*

Table 5-4 Disposal of General Wastes

(Tons/day; %)

	Total	Landfill	Proportion (%)	Incineration	Proportion (%)	Recycle	Proportion (%)	Discharge into the sea	Proportion (%)
1997	189,200	74,059	39.1	10,292	5.4	104.849	55.4.	-	-
2002	269,548	53,641	19.9	16,785	6.2	189,609	70.3	9,513	3.5
2007	337,158	37,554	11.1	17,957	5.3	273,561	81.1	8,086	2.4
2012	382,009	33,698	8.8	22,848	6.0	322,419	84.4	3,044	0.8
2013	380,709	35,604	9.4	22,918	6.0	319,579	83.9	2,608	0.7
2014	388,486	35,375	9.1	22,420	5.8	329,268	84.8	1,423	0.4
2015	404,812	35,133	8,7	23,904	5.9	345,114	85.3	661	0.2
2016 (A)	415,345	35,032	8.4	24,135	5.8	356,086	85.7	92	0.0
2017 (B)	414,626	32,269	7.8	24,038	5.8	358,271	86.4	48	0.0
Increase (B-A)	-719	-2,763	-0.6	-97	0.0	2,185	0.7	-44	0.0
Increase rate (%)	-0.2	-7.9	-	-0.4	-	0.6	-	-47.8	-

Source: Ministry of Environment, National Institute of Environmental Research, *Generation & Disposal of Wastes Nationwide*

06 Agriculture, Forestry, and Fisheries

Farming Population and Cultivated Land Area

In 2017, the number of farming households and the farm population fell by 2.5 percent and 3.0 percent Year-on-year, respectively, showing a trend towards decrease every year. However, the cultivated land area per farming household increased, reaching 155.5a (a=100m^2) in 2017, which is a 1.0 percent increase compared with the previous year.

Income Structure of Farming Households

In 2017, dependence on agriculture, i.e. agricultural income as a proportion of a farming household's total income, was 26.3 percent, showing a 0.8 percent drop from the previous year. Overall, the agricultural income of farming households decreased by 0.2 percent while their irregular income fell by 2.4 percent Year-on-year.

Cultivation Area by Crop

In 2017, the land area used for the cultivation of food crops was 920,000 hectares (ha), representing a decrease of 4.4 percent from the previous year, which is commensurate with the ongoing decline. Among the cultivation area for food crops, the area for rice cultivation amounted to 755,000 hectares, down by 3.1 percent Year-on-year.

Conversely, the area used to cultivate vegetables increased by 4.4 percent Year-on-year, while the area for fruits increased by 0.6 percent. The figure for special-purpose/medicinal crops remained the same as the previous year.

Table 6-1 Farming households

(Households, number of persons, a)

	Number of farming households	Farming population	Farming household size	Farming area per household
2008	1,212,050	3,186,753	2.63	145.1
2009	1,194,715	3,117,322	2.61	145.4
2010	1,177,318	3,062,956	2.60	145.7
2011	1,163,209	2,962,113	2.55	146.0
2012	1,151,116	2,911,540	2.53	150.3
2013	1,142,029	2,847,435	2.49	149.9
2014	1,120,776	2,751,792	2.46	150.9
2015	1,088,518	2,569,387	2.36	154.2
2016	1,068,274	2,496,406	2.34	153.9
2017	1,042,017	2,422,256	2.32	155.5
Year-on-year increase (%)	-2.5	-3.0	-0.9	1.0

Source: Statistics Korea, *Agriculture, Forestry, and Fisheries Report, Agricultural Area Statistics, Agriculture, Forestry, and Fisheries Census*

Table 6-2 Income Structure of Farming Households

(1,000 won, %)

	1990	2000	2005	2010	2014	2015	2016	2017	Year-on-year increase
Farming household income	11,026	23,072	30,503	32,121	34,950	37,215	37,197	38,239	2.8
Farming income	6,264	10,897	11,815	10,098	10,303	11,257	10,068	10,047	-0.2
Non-farming income	2,841	7,432	9,884	12,946	14,799	14,939	15,252	16,269	6.7
Transfer income	1,921	4,743	4,078	5,610	6,819	7,906	8,783	8,902	1.4
Irregular income	-	-	4,725	3,467	3,029	3,114	3,095	3,022	-2.4
Dependence on agriculture	56.8	47.2	38.7	31.4	29.5	30.2	27.1	26.3	-0.8%p

Source: Statistics Korea, *Farm Household Economy Statistics*

Table 6-3 Cultivation Area by Crop

(1,000ha)

	Food crops	Rice[1)]	Vegetables[2)]	Fruits	Special-purpose/medicinal crops[3)]
2011	1,056	854	242	161	62
2012	1,052	849	225	160	59
2013	1,040	833	228	161	58
2014	1,013	816	231	162	70
2015	983	799	211	163	72
2016	962	779	203	166	78
2017	920	755	212	167	78
Year-on-year increase	-4.4	-3.1	4.4	0.6	0.0

Note: 1) Polished rice
2) Green vegetables, fruits and vegetables, root vegetables, condiment vegetables
3) Sesame, perilla, peanut
Source: Statistics Korea, *Agricultural Area Statistics*



Trend of Agricultural Production

In 2017, South Korean farmers produced 4,466,000 tons of food crops, showing a 5.1 percent decrease from the previous year's 4,707,000 tons. By type of crop, the production volume of rice decreased by 5.4 percent, that of fruits by 1.2 percent, and that of special-purpose crops by 1.2%, whereas that of vegetables increased by 8.0 percent.

Rice Consumption

In 2018, the annual rice consumption per person in the household sector was 61.0 kilograms, showing a year-on-year decrease of 1.3 percent. As more people live on a simpler diet with diverse options for foods that can substitute rice, rice consumption has shown a constant decrease.

The consumption of rice as a staple food and in side dishes, which accounted for the largest share of Koreans' rice consumption in 2018, was 60.5 kilograms, showing a year-on-year decrease of 1.0 percent. The daily rice consumption per person in 2018 was 167.1 grams, a year-on-year decrease of 1.3 percent.

Forest Land Area and Growing Stock

In 2017, South Korea's forest land area covered some 6,320,000ha, while its growing stock recorded 973,600,000 cubic meters. Although the forest land area has shown a constant decline, growing stock has been increasing, with the amount per hectare reaching 154.10 cubic meters in 2017, i.e. a 2.6 percent increase over the previous year.

Table 6-4 Trend of Agricultural Production

(1,000 tons)

	Food crops	Rice[1]	Vegetables[2]	Fruits[3]	Special-purpose crops[4]
2010	4,836	4,295	7,894	2,216	61
2011	4,775	4,224	9,120	2,102	51
2012	4,565	4,006	7,518	2,027	49
2013	4,825	4,230	8,196	2,207	57
2014	4,828	4,241	9,381	2,347	68
2015	4,846	4,327	8,167	2,364	74
2016	4,707	4,197	7,615	2,387	81
2017	4,466	3,972	8,221	2,358	80
Year-on-year increase (%)	-5.1	-5.4	8.0	-1.2	-1.2

Note: 1) Polished rice
2) Green vegetables, fruit vegetables, root vegetables, condiment vegetables
3) For apples, pears, peaches, grapes, tangerines, persimmons, plums, and other fruits, a different method of calculation was applied.
4) Sesame, perilla seeds, peanuts
Source: Statistics Korea, *Crop Production Statistics*

Table 6-5 Rice Consumption (Sector of Households)[1]

(kg)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	Year-on-year increase(%)
Annual rice consumption (per person)	72.8	71.2	69.8	67.2	65.1	63.6	61.9	61.8	61,0	-1.3
Consumption by farming households	118,5	115.3	111.2	107.9	104.7	102.9	100.5	96.6	94.6	-2.1
Consumption by non-farming households	69.8	68.3	67.0	63.9	61.9	60.5	59.6	59.8	59.2	-1.0
Rice consumption as staple food/side dishes	71.3	69.8	68.6	66.0	64.0	62.6	61.0	61.1	60.5	-1.0
Daily rice consumption per person(g)	199.5	195.1	191.2	184.1	178.4	174.2	169.6	169.3	167.1	-1.3

Note: 1) The figures have been calculated based on the amount of rice cooked and consumed directly by households (not including rice consumption by groups/institutions, etc.)
Source: Statistics Korea, *Rice Consumption Survey Report*

Table 6-6 Forest Land Area and Growing Stock

	Forest land area (1,000ha)	Growing stock (1,000m^3)	Growing stock per Ha (m^3)
2010	6,369	800,025	125.62
2011	6,348	827,982	130.44
2012	6,340	848,763	133.88
2013	6,339	872,613	137.65
2014	6,342	901,816	142.19
2015	6,335	924,810	145.99
2016	6,326	950,486	150.24
2017	6,318	973,600	154.10

Source: Korea Forest Service, *Statistical Yearbook of Forestry*

Number of Fishing Households and Fishing Household Income

The number of fishing households in 2017 stood at 53,000, the same as the previous year; however, the actual fishing population decreased by 3.2 percent from the previous year to 122,000. In 2017, the income of fishing households increased by 4.1 percent from the previous year to reach KRW 49,016,000.

Table 6-7 Major Indicators of Fishing Households

	Fishing households (1,000)	Fishing population (1,000 people)	Fishery workers (1,000 people)	Fishery workers per household (people)	Fishing household income (1,000 won)	Fishery income (1,000 won)	Composition of fishery income (%)
2009	69	184	116	1.7	33,945	16,220	47.8
2010	66	171	107	1.6	35,696	16,607	46.5
2011	63	159	104	1.6	38,623	20,432	52.9
2012	61	153	100	1.6	37,381	19,539	52.3
2013	60	147	98	1.6	38,586	18,538	48.0
2014	59	141	96	1.6	41,015	20,987	51.2
2015	55	128	90	1.6	43,895	23,086	52.6
2016	53	126	88	1.7	47,077	26,598	56.5
2017	53	122	88	1.7	49,016	26,692	54.5
Year-on-year increase (%)	0.0	-3.2	0.0	0.0	4.1	0.4	-2.0%p

Source: Statistics Korea, *Census of Agriculture, Forestry and Fisheries, Agriculture, Forestry and Fisheries Research Report, Statistics of Fishing Household Economy*

07 Mining and Manufacturing and Energy

Mining and Manufacturing

In 2017, the number of mining and manufacturing business establishments with 10 or more employees stood at 69,790, representing a 1.0 percent increase from 2016; while the number of employees at those establishments (as of the end of December 2017) stood at 2,966,221, a decrease of 0.1 percent from 2016.

The annual wages and salaries paid to those employees amounted to KRW 129,036 billion, showing an increase of 4.0 percent over 2016. Meanwhile, the value of shipments in the mining and manufacturing industry reached KRW 1,515,029 billion in 2017, showing an increase of 6.9 percent over 2016.

Manufacturing by Industry Structure

When looking at the structure of the manufacturing industry in 2017, the number of heavy industry business establishments was 46,771, an increase of 1.0 percent from 2016, and its proportion was 67.3 percent, the same as the previous year.

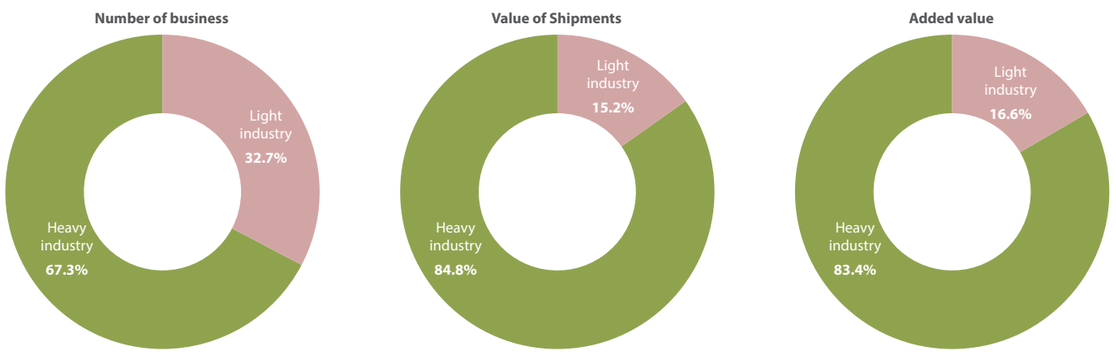
Meanwhile, the number of light industry business establishments in 2017 stood at 22,687, a 0.9 percent increase from 2016, and the proportion of light industry establishments was 32.7 percent, i.e. the same as the previous year.

Table 7-1 Mining and Manufacturing[1)]

Sector	Year	Number of establishments	Number of workers (people)	Wages and salaries (KRW 1 billion)	Value of shipments (KRW 1 billion)
Mining and Manufacturing	2014	68,989	2,915,775	111,329	1,489,572
	2015	69,269	2,958,171	120,026	1,432,727
	2016	69,126	2,969,164	124,024	1,416,705
	2017	69,790	2,966,221	129,036	1,515,029
	Year-on-year increase (%)	1.0	-0.1	4.0	6.9
Manufacturing	2014	68,640	2,904,914	110,895	1,486,574
	2015	68,913	2,946,796	119,575	1,429,715
	2016	68,790	2,957,917	123,554	1,413,485
	2017	69,458	2,954,811	128,572	1,511,760
	Year-on-year increase (%)	1.0	-0.1	4.1	7.0

Note: 1) Tenth Revision of the Korea Standard Industrial Classification; the 2015 data have been calculated based on the Economy Census (Ninth Revision of the Korea Standard Industrial Classification).
Source: Statistics Korea, *Report on Mining and Manufacturing Survey*

Figure 7-1 Manufacturing (%) by Structure of Industry (2017)



Source: Statistics Korea, *Report on Mining and Manufacturing Survey*

Table 7-2 Manufacturing by Industry Structure (Business establishments with 10 or more employees)[1)]

(EA, KRW 1 billion, %)

	Sector	Number of establishments	Composition	Value of shipments	Composition	Added value	Composition
2014	Manufacturing	68,640	100.0	1,486,574	100.0	484.485	100.0
	Light industry	21,833	31.8	211,962	14.3	78,639	16.2
	Heavy industry	46,807	68.2	1,274,612	85.7	405,847	83.8
2016	Manufacturing	68,790	100.0	1,413,485	100.0	504,295	100.0
	Light industry	22,484	32.7	225,887	16.0	88,146	17.5
	Heavy industry	46,306	67.3	1,187,598	84.0	416,149	82.5
2017	Manufacturing	69,458	100.0	1,511,760	100.0	543,341	100.0
	Light industry	22,687	32.7	229,362	15.2	90,008	16.6
	Heavy industry	46,771	67.3	1,282,398	84.8	453,333	83.4

Note: 1) Tenth Revision of the Korea Standard Industrial Classification
The 2015 data have been excluded, as they were taken from the Economy Census.
Source: Statistics Korea, *Report on Mining and Manufacturing Survey*

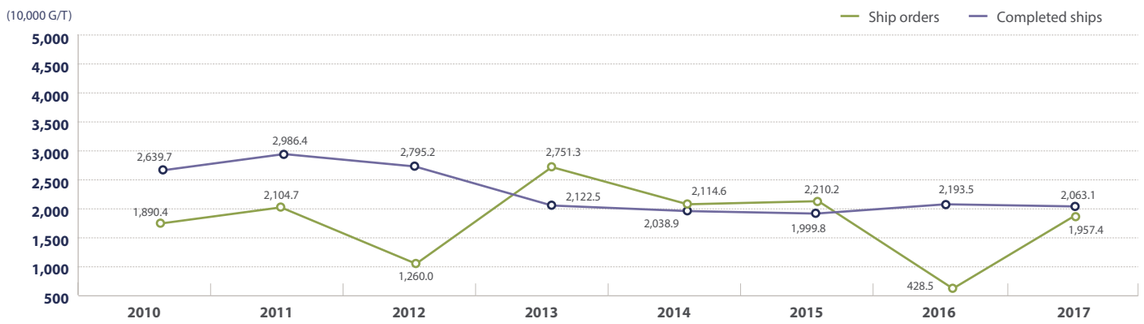
Shipbuilding Performance

The amount of ship orders in 2017 amounted to 19,574,000 gross tonnage (G/T), showing a huge increase from the 4,285,000 G/T recorded in 2016. However, the volume of completed ships amounted to 20,631,000 G/T in 2017, showing a decrease of 5.9 percent from the 21,935,000 G/T completed in 2016.

As of the end of 2017, the number of ship orders that had not yet been delivered stood at 36,807,000 G/T, a 6.5 percent decrease from the 39,351,000 G/T recorded in 2016.



Figure 7-2 Shipbuilding Performance



Source: Korea Offshore & Shipbuilding Association, *Shipbuilding Yearbook*

Table 7-3 Shipbuilding Performance

(10,000 G/T)

	2010	2011	2012	2013	2014	2015	2016	2017	Year-on-year increase (%)
Ship orders	1,890.4	2,104.7	1,260.0	2,751.3	2,114.6	2,210.2	428.5	1957.4	356.8
Completed ships	2,639.7	2,986.4	2,795.2	2,122.5	2,038.9	1,999.8	2,193,5	2,063.1	-5.9
Remaining orders	8,067.5	7,176.0	5,560.2	6,343.2	6,332.2	5,848.4	3,935.1	3,680.7	-6.5

Source: Korea Offshore & Shipbuilding Association, *Shipbuilding Yearbook*

Energy Supply and Dependence on Imported Energy

In 2017, the volume of the primary energy supply was 302 million tons of oil equivalent (TOE), showing an increase of 8 million TOE year-on-year. The volume of final energy consumption in 2017 was 234 million TOE, increasing by 9 million TOE from the previous year.

Per capita energy consumption was 5.87 TOE, a 0.14 TOE increase year-on-year. The rate of dependence on imported energy in 2017 was 94.0 percent, a decrease of 0.6 percent from 2016.

Oil Imports and Unit Cost

In 2017, Korea imported 1,118 million barrels of oil, which was a 3.7 percent increase from the previous year. The value of oil imports in 2017 was USD 58,044 million, showing an increase of 36.1 percent year-on-year. The annual average unit cost of oil imports increased by 31.2 percent Year-on-year, from USD 39.57 per barrel in 2016 to USD 51.91 in 2017.

Supply Structure by Primary Energy Source

When looking at the energy supply structure in 2017, petroleum accounted for the greatest share of the total at 39.5 percent, followed by coal at 28.5 percent, liquefied natural gas (LNG) at 15.7 percent, and nuclear energy at 10.5 percent. Compared with 2016, the proportions of petroleum (0.5%) and nuclear energy (1.1%) decreased, while those of coal (0.8%), natural gas (0.2%), and new and renewable energy (0.6%) increased.

Table 7-4 Energy Consumption and Dependence on Imported Energy[1)]

	Energy consumption (million toe)		Per capita energy consumption (toe)	Dependence on imported energy (%)
	Primary energy	Final energy		
1997	181	145	3.94	97.6
2002	209	161	4.39	97.1
2007	237	181	4.86	96.6
2012	278	207	5.54	96.0
2013	280	209	5.55	95.7
2014	282	213	5.57	95.2
2015	287	218	5.62	94.8
2016	294	225	5.73	94.6
2017	302	234	5.87	94.0
Year-on-year increase	8	9	0.14	-0.6%p

Note: 1) The Calorific Value, which is revised every five years, has been applied since 2007.
Source: Korea Energy Institute, *Energy Statistics Yearbook*

Table 7-5 Oil Imports and Unit Price of Import

	1997	2002	2007	2012	2013	2014	2015	2016	2017
Oil imports (million barrels)	873.4	791.0	872.5	947.3	915.1	927.5	1,026.1	1,078.1	1,118.2
Year-on-year increase (%)	21.0	-8.0	-1.8	2.2	-3.4	1.4	10.6	5.1	3.7
Value of oil imports (FOB, million dollars)[1)]	16,837	18,465	59,207	105,212	97,610	92,374	52,889	42,662	58,044
Year-on-year increase (%)	21.7	-8.9	9.1	6.7	-7.2	-5.4	-42.7	-19.3	36.1
Unit price of imported oil (FOB, dollars /barrel)[1)]	19.28	23.34	67.86	111.07	106.67	99.59	51.54	39.57	51.91
Year-on-year increase (%)	0.6	-1.0	11.1	4.5	-4.0	-6.6	-48.2	-23.2	31.2

Note: 1) FOB (free on board) price
Source: Korea Energy Institute, *Energy Statistics Yearbook*

Table 7-6 Supply Structure by Primary Energy Source[1)] (%)

	Coal	Petroleum	Natural gas	Hydro energy	Nuclear energy	New and renewable energy
1997	19.3	60.4	8.2	0.7	10.6	0.7
2002	23.5	49.2	11.0	0.6	14.2	1.4
2007	25.2	44.7	14.6	0.5	13.0	2.0
2012	29.0	38.1	18.0	0.6	11.4	2.9
2013	29.1	37.8	18.8	0.6	10.5	3.2
2014	29.9	37.1	16.9	0.6	11.7	3.9
2015	29.8	38.0	15.2	0.4	12.1	4.5
2016	27.7	40.0	15.5	0.5	11.6	4.6
2017	28.5	39.5	15.7	0.5	10.5	5.2
Year-on-year increase (%)	0.8	-0.5	0.2	0.0	-1.1	0.6

Note: 1) The Calorific Value, which is revised every 5 years, has been applied since 2007.
Source: Korea Energy Institute, *Energy Statistics Yearbook*

08 Construction and Housing

Construction Permits Issued

In 2018, the total land area for which construction permits were issued amounted to 160,960,000 square meters, a decrease of 6.3 percent year-on-year. Land for residential use amounted to 57,330,000 square meters, a decrease of 18.4 percent year-on-year. The area for commercial use was 44,760,000 square meters, a decrease of 7.2 percent from the previous year, and the area for industrial use was 16,250,000 square meters, a 0.8 percent decrease from the previous year. The area used for educational and social purposes decreased by 3.5 percent year-on-year to 8,670,000 square meters.

Housing Construction and Investment

In 2018, a total of 554,136 units of housing were constructed, which was a 15.2 percent decrease from 2017.

By type of housing, the number of newly constructed detached houses, apartments, row houses, and multi-household houses declined by 13.8 percent, 13.2 percent, 25.1 percent, and 26.1 percent, respectively. Meanwhile, the housing investment rate, in other words the ratio of the amount invested in housing to real GDP, decreased by 11.6 percent compared with the preceding year, to -4.0 percent in 2018.

Table 8-1 Land Area of Construction Permit ($1,000m^2$)

	Total area	Residential	Commercial	Industrial	Educational, and social	Others
1998	50.965	31,154	8,754	2,796	-	8,260
2003	142,108	62,128	45,809	14,738	-	19,433
2008	120,658	38,462	33,265	18,504	-	30,427
2013	127,066	50,238	33,719	16,092	10,319	16,697
2014	141,347	60,935	37,420	15,655	9,350	17,987
2015	189,840	85,520	52,449	16,709	10,333	24,828
2016	178,955	78,420	48,144	17,443	10,612	24,335
2017	171,875	70,255	48,226	16,377	8,988	28,029
2018	160,964	57,325	44,755	16,247	8,671	33,967
Year-on-year increase (%)	-6.3	-18.4	-7.2	-0.8	-3.5	21.2

Source: Ministry of Land, Infrastructure, and Transport

Table 8-2 Housing Construction and Investment (Unit, %)

	Number of housing construction[1)]	Detached house (including multiple dwellings)	Apartment	Row house	Multi-household housing	Housing investment rate
1998	306,031	23,773	265,701	7,418	9,139	-13.3
2003	585,382	42,173	468,763	6,265	68,181	8.8
2008	371,285	53,667	263,153	4,044	50,421	-2.7
2013	440,116	69,759	278,739	10,730	80,888	5.5
2014	515,251	74,979	347,687	10,898	81,687	1.1
2015	765,328	88,293	534,931	19,308	122,796	6.6
2016	726,048	96,768	506,816	17,983	104,481	10.3
2017	653,441	88,239	468,116	16,313	80,773	7.6
2018	554,136	76,099	406,165	12,220	59,652	-4.0
Year-on-year increase (%)	-15.2	-13.8	-13.2	-25.1	-26.1	-11.6%p

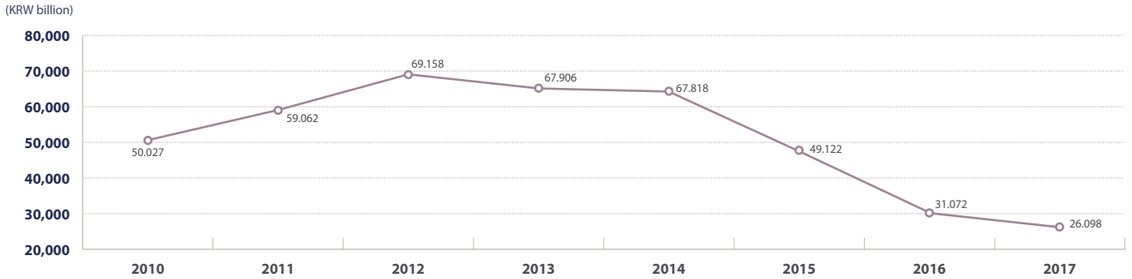
Note: 1) Based on construction permits and approvals of construction plans
Source: Ministry of Land, Infrastructure, and Transport, Bank of Korea

Value of Overseas Construction Orders Received

The total value of overseas constru-ction contracts as of 2017 was KRW 26,098 billion, a decrease of 16.0 percent Year-on-year. When comparing the value of overseas construction orders by region, the Middle East accounted for 55.8 percent and Asia for 40.6 percent, together accounting for 96.4 percent of the total figure.

In terms of the increase in regions that account for large percentages of the overall figure for overseas construction contracts, that occupied by the Middle East increased by 32.5%, whereas that occupied by Asia declined by -38.2%, and Africa by -60.3%.

Figure 8-1 Value of Overseas Construction Orders Received



Source: Statistics Korea, *Report on Construction Survey*

Table 8-3 Value of Overseas Construction Orders Received by Construction Site[1)]

(KRW 1 billion, %)

	2010	2011	2012	2013	2014	2015	2016	2017	Composition
Total	50,027	59,062	69,158	67,906	67,818	49,122	31,072	26,098	100.0
Middle East	32,492	32,680	35,047	28,813	25,856	17,653	10,977	14,550	55.8
Asia	13,323	17,772	24,779	27,700	18,868	20,546	17,145	10,596	40.6
Europe	138	184	414	1,516	7,099	462	330	228	0.9
Africa	976	1,077	2,841	2,122	7,309	908	1,229	488	1.9
Oceania	58	38	52	5,284	204	1,804	91	2	0.0
America	3,016	7,304	5,987	2,453	8,471	7,736	1,299	234	0.9
Others	25	8	38	17	12	12	0	-	-

Note: 1) Contract value (general contract, subcontract), the tenth revision of the Korea Standard Industrial Classification has been applied.
Source: Statistics Korea, *Report on Construction Survey*



09 Transportation and Information and Communications

Number of Registered Cars

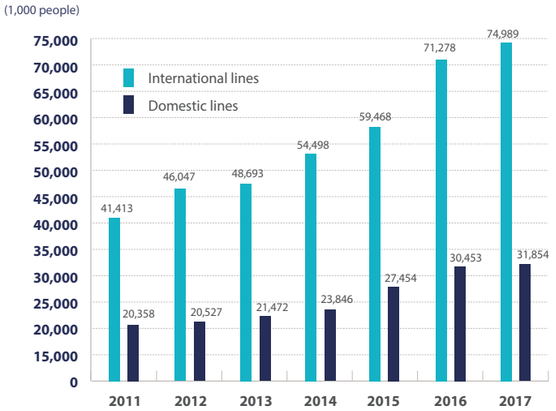
As of the end of 2018, the number of cars registered in Korea stood at 23,203,000, an increase of 3.0 percent from the end of the previous year. The number of passenger cars was 18,677,000, which accounted for 80.5 percent of all cars in Korea. Of those, the number of private cars was 17,663,000, for a ratio of 8.9 cars to every 10 households.

Civil Aviation Traffic

The number of passengers carried by civil international flights in 2017 was 74,990,000, an increase of 5.2 percent year-on-year. The volume of air freight transport was 3,830,000 tons, up by 5.4 percent from the previous year.

For civil aviation traffic in 2017, the number of passengers carried by domestic airlines was 31,850,000, a year-on-year increase of 4.6 percent. As for the volume of freight carried by domestic airlines, it decreased by 0.8 percent from the previous year to 287,000 tons.

Figure 9-1 Civil Aviation Passenger Traffic



Source: Ministry of Land, Transport and Maritime Affairs, *Statistical Yearbook of MLTM*

Table 9-1 Number of Registered Cars

(1000 cars, cars)

	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	17,942	18,437	18,871	19,401	20,118	20,990	21,803	22,528	23,203
Passenger cars	13,632	14,136	14,577	15,078	15,747	16,562	17,338	18,035	18,677
Private passenger cars	13,125	13,602	14,011	14,460	15,060	15,808	16,505	17,122	17,663
Vans	1,050	1,015	987	971	947	920	893	868	844
Freight vehicles	3204	3,226	3,244	3,286	3,354	3,433	3,492	3,540	3,591
Special-purpose vehicles	56	59	63	66	70	75	80	86	91
Number of private passenger cars per 10 households[1)]	7.5	7.6	7.7	7.9	8.1	8.3	8.6	8.8	8.9

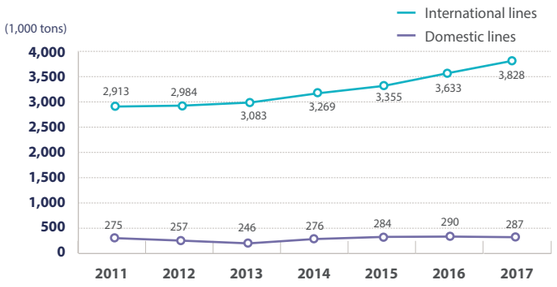
Note: 1) Calculated based on the number of households stated in the "Future Household Projections"
Source: Statistics Korea, Ministry of Land, Infrastructure, and Transport

Table 9-2 Civil Aviation Traffic

	1992	1997	2002	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Year-on-year increase (%)
International lines															
Passengers (1,000 persons)	10.901	15,980	21,876	35,450	34,311	32,891	38,877	41,413	46,047	48,693	54,498	59,468	71,278	74,989	5.2
Freight[1)](1,000t)	797	1,542	1,998	3,001	2,845	2,729	3,138	2,913	2,984	3,083	3,269	3,355	3,633	3,828	5.4
Domestic lines															
Passengers (1,000 persons)	14,134	25,226	20,754	16,202	16,134	17,584	19,586	20,358	20,527	21,472	23,846	27,454	30,453	31,854	4.6
Freight[1)](1,000t)	237	383	428	310	248	264	257	275	257	246	276	284	290	287	-0.8

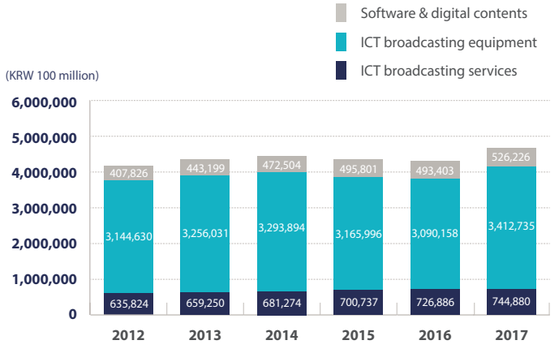
Note: 1) Includes the postal service
Source: Ministry of Land, Infrastructure, and Transport, *Statistical Yearbook of MLTM*

Figure 9-2 Civil Aviation Freight Traffic[1)]



Note: 1) Including postal service
Source: Ministry of Land, Infrastructure, and Transport, *Statistical Yearbook of MLTM*

Figure 9-3 Production of ICT Industry



Source: Ministry of Science and ICT, *ICT Survey, Report on Major ICT Items*

Marine Cargo Transport

Regarding marine cargo transport in 2018, when calculating based on port entry, the volume of coastal freight transport was 10,903,000 revenue tonnage (R/T), a decrease of 16.7 percent year-on-year, while the volume of ocean-going cargo increased by 6.1 percent year-on-year to 13,030,000 R/T.

Production of Information and Communications Technology (ICT) Industry

In 2017, the entire production value of the information and communications technology industry stood at KRW 468,384.1 billion, an increase of 8.7 percent from 2016. By sub-sector, the production of ICT broadcasting services, ICT broadcasting equipment, and software and digital contents all increased, by 2.5 percent, 10.4 percent, and 6.7 percent, respectively.

Table 9-3 International Shipping Traffic

(1,000 R/T)

	Coastal cargo ship[1)] (port entry)	Ocean-going cargo		
		Total	Entry	Departure
2007	115,538	862,523	576,501	286,022
2008	122,205	894,694	601,617	293,077
2009	114,236	848,299	566,082	282,217
2010	119,022	966,193	647,040	319,153
2011	121,045	1,069,565	703,753	365,812
2012	115,025	1,108,539	724,397	384,142
2013	117,860	1,123,205	735,854	387,351
2014	115,631	1,184,641	776,623	408,018
2015	123,136	1,216,782	799,470	417,312
2016	133,441	1,242,597	820,335	422,262
2017	130,926	1,312,490	860,365	452,125
2018	109,033	1,402,809	913,032	489,777
Year-on-year increase (%)	-16.7	6.9	6.1	8.3

Note: 1) The figure excludes coastal passenger transport.
Source: Ministry of Oceans and Fisheries

Table 9-4 ICT Production

(KRW 100 million)

	2012	2013	2014	2015	2016	2017[P)]	Year-on-year increase (%)
Total	4,188,280	4,358,480	4,447,672	4,362,534	4,310,447	4,683,841	8.7
ICT broadcasting service	635,824	659,250	681,274	700,737	726,886	744,880	2.5
Communications service	365,962	373,639	377,878	374,746	380,107	382,543	0.6
Broadcasting service	140,810	149,416	156,722	164,305	169,862	171,601	1.0
Information service	129,052	136,195	146,674	161,686	176,917	190,737	7.8
ICT broadcasting equipment[1)]	3,144,630	3,256,031	3,293,894	3,165,996	3,090,158	3,412,735	10.4
Software and digital contents	407,826	443,199	472,504	495,801	493,403	526,226	6.7

Note: 1) Statistics on companies with 10 or more employees
Source: Ministry of Science and ICT, *ICT Survey, Report on Major ICT Items*

10 Service Industry

Service Industry Survey

The number of service businesses in 2017 stood at 2,863,000, an increase of 62,000 from the previous year (2.2%), while the number of employees at those businesses amounted to 11,714,000, an increase of 284,000 from the previous year (2.5%). Their combined annual sales were KRW 2,041,511.2 billion, an increase of KRW 141,200.7 billion from the previous year (7.4%).

By sub-sector, the number of hotels and restaurants in 2017 increased by 19,000 from the previous year (2.6%), while the number of their employees in the healthcare and social welfare service sector increased by 108,000 year-on-year (6.4%). In 2017, sales increased by KRW 83,417.3 billion (7.3%) in the wholesale and retail sector; by KRW 17,835.9 billion in the real estate business; and by KRW 11,778.5 billion in the healthcare and social welfare service business.



Table 10-1 Major Service Industry Indices

(1,000, 1000 people, KRW 1 billion)

	2016			2017		
	Number of business establishments	Number of employees	Sales	Number of business establishments	Number of employees	Sales
Total	2,801	11,430	1,900,310.5	2,863	11,714	2,041,511.2
Water, sewage, waste disposal, raw material reproduction services	9	103	22,290.0	9	103	24,650.7
Wholesale and retail	1,017	3,142	1,150,024.4	1,023	3,173	1,233,441.8
Hotels and restaurants	729	2,163	131,802.8	748	2,215	141,223.1
ICT industry	38	477	100,421.8	38	483	107,187.7
Real estate services	143	502	110,828.6	152	505	128,664.5
Professional, science and technology services	94	646	79,907.5	95	643	81,043.5
Business facilities management and business support services	67	1,149	74,271.5	68	1,168	79,998.3
Education services	158	552	31,313.5	163	590	31,922.9
Healthcare and social welfare services	141	1,675	116,533.1	146	1,783	128,311.6
Art, service, and recreational services	110	395	46,751.5	119	417	48,232.6
Associations, groups, repair and other personal services	294	627	36,165.8	304	634	36,834.5

Source: Statistics Korea, *Service Industry Survey*

Volume of Trade via Cyber Shopping Malls

The total value of trade via cyber shopping malls in 2018 was KRW 113,729 billion, an increase of 20.7 percent from the previous year. By product line, travel and transportation services recorded trade of KRW 16,158 billion; clothes, KRW 13,899 billion; and home electric appliances/electronics/telecommunication equipment, KRW 11,592 billion.

The volume of cyber trade increased in all product groups, including home electric appliances/electronics/telecommunication equipment (27.2%), food and beverages (31.7%), and food services (93.0%).



Table 10-2 Volume of Trade via Cyber Shopping Malls by Product Line

(KRW 1 billion)

	2017	2018[P]	Composition (%)	Year-on-year increase (%)
Total	94,186	113,729	100.0	20.7
Computer and computer-related appliances	4,954	5,390	4.7	8.8
Home electric appliances / electronics / telecommunication equipment	9,112	11,592	10.2	27.2
Books	1,682	1,821	1.6	8.3
Office supplies and stationery	733	831	0.7	13.4
Clothes	11,875	13,899	12.2	17.0
Shoes	1,714	1,893	1.7	10.4
Bags	1,924	2,240	2.0	16.4
Fashion goods and accessories	2,028	2,367	2.1	16.7
Sports / leisure items	3,202	3,799	3,3	18.6
Cosmetics	8,117	9,840	8,7	21.2
Goods / toys for infants and children Various services	3,387	3,610	3.2	6.6
Food and beverages	7,997	10,533	9.3	31.7
Agricultural, livestock, and fisheries products	2,425	2,949	2.6	21.6
Household goods	7,484	8,774	7.7	17.2
Motor vehicle parts and accessories	1,023	1,031	0.9	0.8
Furniture	2,612	3,133	2.8	20.0
Pet goods	737	860	0.8	16.8
Travel arrangements and transportation services	14,578	16,158	14.2	10.8
Culture and leisure services	1,819	1,995	1.8	9.7
e-coupon services	1,202	2,109	1.9	75.5
Food services	2,733	5,273	4.6	93.0
Other services	675	829	0.7	22.9
Others	2,174	2,802	2.5	28.9

Source: Statistics Korea, *Trends of Online Shopping*

11 Economy and Business Management

Business Management Analysis

During 2017, the growth index, profitability, and stability of financial structure of domestic non-financial for-profit corporations (corporations) improved generally. As for the growth index, sales growth increased by 6.6 percent to 9.2 percent in 2017, from 2.6 percent in 2016. The ratio of operating profit to net sales increased by 0.7 percentage points to 6.1 percent in 2017, from 5.4 percent in 2016. Following such robust growth of operating profit and the non-operating balance, the ratio of net income before tax to sales increased from 4.9 percent in 2016 to 6.1 percent in 2017.

In the meantime, in terms of financial structure stability, the debt ratio decreased from 121.2 percent at the end of 2016 to 114.1 percent at the end of 2017, while the ratio of total borrowings and bond payables to total assets decreased from 29.8 percent at the end of 2016 to 28.8 percent at the end of 2017.

Newly Established Corporations

The number of newly established corporations in 2018 stood at 102,042, showing a 3.8 percent increase from the previous year. By industry, the number of newly established corporations increased by 9.3 percent in the service industry, and by 14.5 percent in the electricity, gas, steam and air conditioning supply industry; whereas it declined by 40.2 percent in the agriculture, forestry, fishing, and mining industries, and by 8.1 percent in the manufacturing industry.

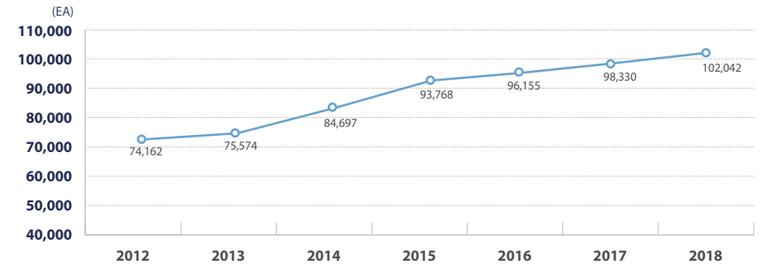
Table 11-1 Business Management Analysis[1)]

(%)

	Debt ratio	Stockholders' equity to total assets	Total borrowings and bonds payable to total assets	Operating income to sales	Net income before taxes to sales	Rate of sales growth
2010	150.1	40.0	32.2	5.3	4.9	15.3
2011	152.7	39.6	32.2	4.5	3.7	12.2
2012	147.6	40.4	31.9	4.1	3.4	5.1
2013	141.0	41.5	31.5	4.1	2.9	2.1
2014	134.5	42.6	32.2	4.0	3.3	1.3
2015	128.4	43.8	31.4	4.7	4.4	0.3
2016	121.2	45.2	29.8	5.4	4.9	2.6
2017	114.1	46.7	29.8	6.1	6.1	9.2
Year-on-year increase(%p)	-7.1	1.5	-1.0	0.7	1.2	6.6

Note: 1) The tenth revision of the Korea Standard Industrial Classification has been applied, all-number survey

Figure 11-1 Number of Newly Established Corporations



Source: Small and Medium Business Administration

Table 11-2 Number of Newly Established Corporations by Industry

(EA)

	Total	Agriculture, forestry, fishing, and mining	Manufacturing	Electricity, gas, steam and air-conditioming supply	Construction	Services
2010	60,312	1,077	14,818	234	6,790	37,393
2011	65,110	1,768	15,557	299	6,593	40,893
2012	74,162	2,067	17,733	391	6,996	46,975
2013	75,574	1,637	18,721	711	7,069	47,436
2014	84,697	2,593	19,509	1,363	8,145	53,087
2015	93,768	3,161	20,155	967	9,742	59,743
2016	96,155	2,391	19,037	1,488	9,825	63,414
2017	98,330	2,559	20,629	4,699	9,963	60,480
2018	102,042	1,531	18,954	5,382	10,069	66,106
Year-on-year increase(%p)	3.8	-40.2	-8.1	14.5	1.1	9.3

Source: Small and Medium Business Administration

12 National Accounts and Regional Accounts

GDP & GNI

GDP (gross domestic production) is one of the indicators used to understand a country's economic scale, while GNI (gross national income) is used to measure a country's living standards. Per-capita GNI is calculated by dividing the gross national income by population.

In 2018, South Korea posted a (nominal) GDP of KRW 1,782 trillion, an increase of 3.0 percent from the previous year; converted into U.S. dollars, the figure was USD 1,620 billion, an increase of 5.9 percent Year-on-year.

GNI increased by 2.9 percent Year-on-year to KRW 1,781 trillion, and per capita GNI increased by 2.5 percent to KRW 34,490,000.

Table 12-1 GDP and GNI[1)]

	GDP		GNI		Per-capital GNI	
	KRW 1 billion	USD 1 billion	KRW 1 billion	USD 1 billion	KRW 10,000	USD
1970	2,795	8.2	2,843	8.3	9	257
1980	39,471	65	39,083	64	103	1,686
1990	197,712	279	197,415	279	461	6,505
2000	635,185	562	630,614	558	1,342	11,865
2007	1,043,258	1,123	1,040,092	1,119	2.136	22,992
2008	1,104,492	1,002	1,104,414	1,002	2,251	20,419
2009	1,151,708	902	1,148,982	900	2,330	18,256
2010	1,265,308	1,094	1,266,580	1,095	2,556	22,105
2011	1,322,681	1,203	1,340,530	1,210	2,685	24,226
2012	1,377,457	1,222	1,391,596	1,235	2,772	24,600
2013	1,429,445	1,305	1,439,644	1,315	2,855	26,070
2014	1,486,079	1,411	1,490,764	1,415	2,938	27,892
2015	1,564,124	1,382	1,568,383	1,386	3,074	27,171
2016	1,641,786	1,415	1,646,209	1,419	3,212	27,681
2017[p)]	1,730,399	1,530	1,730,461	1,530	3,364	29,745
2018[p)]	1,782,269	1,620	1,781,091	1,619	3,449	31,349

Note: 1) Nominal figures
Source: Bank of Korea

Economic Growth Rate and GDP Deflator

South Korea posted an economic growth rate of 2.7 percent in 2018, a decrease of 0.4 percent from the 3.1 percent recorded in the previous year. By sector, the mining and manufacturing industry recorded the highest growth rate at 3.5 percent, followed by the services industry at 2.8 percent, and the power, gas, and water industry at 2.2 percent.

In 2018, the GDP deflator showed 0.3 percent growth, which was 2.0 percentage points lower than the 2.3 percent recorded in the previous year.

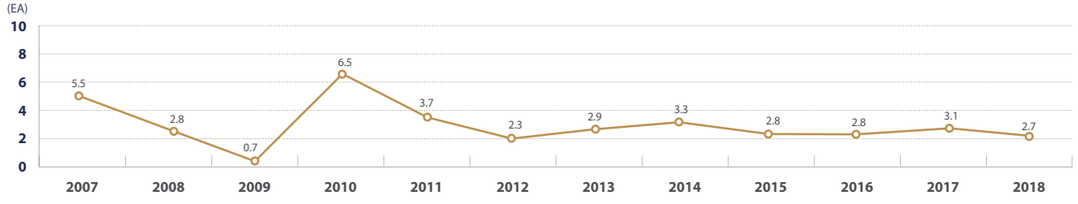
Table 12-2 Growth Rate by Sector of Economic Activity[1)] and GDP Deflator[2)]

(2010=100, %)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016[p)]	2017[p)]	2018[p)]
Economic growth rate	5.5	2.8	0.7	6.5	3.7	2.3	2.9	3.3	2.8	2.8	3.1	2.7
Agriculture, forestry, and fisheries	4.1	5.6	3.2	-4.3	-2.0	-0.9	3.1	3.6	-0.4	-2.8	0.3	1.5
Mining and manufacturing	8.3	3.7	-0.5	13.5	6.5	2.4	3.6	3.5	1.7	2.4	4.3	3.5
Electricity, gas, and water	4.2	3.4	5.0	5.9	0.2	4.0	-0.3	2.6	5.1	2.7	3.1	2.2
Construction	2.5	-2.6	2.3	-3.7	-5.5	-1.8	3.0	0.8	5.7	10.1	7.1	-4.2
Services	5.2	3.2	1.5	4.4	3.1	2.8	2.9	3.3	2.8	2.5	2.1	2.8
GDP Deflator	90.9	93.6	96.9	100.0	101.6	102.6	103.5	104.1	106.6	108.7	111.2	111.6
Increase rate	2.4	3.0	3.5	3.2	1.6	1.0	0.9	0.6	2.4	2.0	2.3	0.3

Note: 1) Based on prices in 2010 2) GDP Deflator = (Nominal GDP/Real GDP) *100
Source: Bank of Korea

Figure 12-1 Economic Growth Rate



Source: The Bank of Korea

National Balance Sheet

The national balance sheet contains a series of stock statistics that record the real assets, both tangible and intangible, as well as the size of and changes in the financial asset/debut of each economic entity of a country as of the end of each year. The national balance sheet can be seen as the financial statements of a national economy, which allows one to clearly and comprehensively understand changes in the national wealth and national net assets, including tangible and financial assets, or net assets of a given country.

In 2017, the total value of non-financial assets (nominal) was KRW 13,552 trillion, which represents a year-on-year increase of KRW 811 trillion. Compared with a decade earlier, the figure increased by 1.7 times from the KRW 8,132 trillion recorded in 2007.

Broken down by type of asset, land and construction assets accounted for the lion's share at 88.8 percent of the total. Land represented the majority of this sub-category at KRW 7,439 trillion (54.9 percent), followed by construction at KRW 4,598 trillion (33.9 percent); plants at KRW 758 trillion (5.6 percent); inventories at KRW 360 trillion (2.7 percent); intellectual property products at KRW 346 trillion (2.6 percent); underground natural resources at KRW 25 trillion (0.2 percent); and standing timbers at KRW 25 trillion (0.2 percent).

Table 12-3 National Balances Sheet (Net-asset Stock by Asset Type)[1)]

(KRW trillion, %)

		2007(A)	Composition	2013	2014	2015	2016[P)]	2017[P)](B)	Composition	Ratio(B/A)
Total value of non-financial assets		8,131.9	100.0	11,097.4	11,582.2	12,121.6	12,740.2	13,551.5	100.0	1.7
Produced assets	**Tangible fixed assets**	3,251.9	40.0	4,826.0	5,002.8	5,176.0	5,369.6	5,702.2	42.1	1.8
	Construction assets	2,624.9	32.3	3,911.1	4,045.7	4,167.3	4,318.2	4,597.8	33.9	1.8
	Plant assets	466.0	5.7	642.5	664.1	698.5	724.1	758.2	5.6	1.6
	Intellectual property products	161.0	2.0	272.4	293.1	310.2	327.2	346.2	2.6	2.2
	Inventories	206.4	2.5	324.6	327.8	331.1	345.8	360.2	2.7	1.7
Non-produced assets	**Land**	4,642.5	57.1	5,900.9	6,209.8	6,571.4	6,976.9	7,438.8	54.9	1.6
	Subsoil assets	20.0	0.2	23.7	19.1	19.9	23.7	25.3	0.2	1.3
	Standing timbers	11.0	0.1	22.2	22.7	23.2	24.3	25.0	0.2	2.3

Note: 1) Prices as of the end of the year.
Source: Statistics Korea, Bank of Korea



Gross Savings Rate and Investment Rate

The gross savings rate in 2018 was 34.8 percent, representing a decrease of 1.5 percent from the previous year (36.3 percent). The gross savings rate in the private sector decreased by 0.8 percent from the previous year (31.2 percent) to 30.4 percent.

In 2018, the gross national disposable income (nominal) was KRW 1,771 trillion, an increase of 2.8 percent Year-on-year, and final consumption expenditures increased by 5.1 percent from the previous year.

Gross Regional Domestic Production

In 2017, South Korea recorded gross regional domestic production (nominal) of KRW 1,732 trillion, an increase of KRW 90 trillion (5.5 percent) from the previous year. By city and province, Gyeonggi-do accounted for the largest proportion with KRW 414 trillion (23.9 percent), followed by Seoul with KRW 372 trillion (21.5 percent) and Chungcheongnam-do with KRW 124 trillion (7.2 percent). The proportion of the gross regional domestic production in the capital area (Seoul, Gyeonggi-do, and Incheon) was 50.3 percent, showing an increase of 0.7 percent from the previous year (49.6%).

When looking at growth by city and province, several regions recorded higher growth rates than the national average (5.5 percent), as follows: Gyeonggi-do (11.0%), Chungcheongbuk-do (8.2%), and Chungcheonnam-do (6.3%). Other regions, however, recorded lower growth rates compared with the average, including Gyeongsangnam-do (0.9%), Daegu (2.1 percent), and Busan (2.5 percent).

Table 12-4 Gross Savings Rate and Investment Rate[1)]

(%)

	2012	2013	2014	2015	2016	2017[p)]	2018[p)]	Year-on-year increase(%p)
Gross savings rate[2)]	34.2	34.3	34.5	35.6	36.1	36.3	348	-1.5
Private	26.6	27.0	27.6	28.6	28.2	27.9	-	-
Government	7.6	7.3	6.9	7.0	7.9	8.4	-	-
Total domestic investment rate	30.8	29.0	29.3	28.9	29.3	31.2	304	-0.8

Note: 1) Based on current prices for the year.
2) (Gross savings by sector/gross national disposable income)*100
Source: Bank of Korea

Table 12-5 Gross National Disposable Income and Final Consumption Expenditures[1)]

(KRW 1 billion)

	2012	2013	2014	2015	2016	2017[p)]	2018[p)]	Year-on-year increase (%p)
Gross national disposable income	1,385,445.3	1,435,097.6	1,485,516.9	1,562,737.0	1,639,584.9	1,722,492.8	1,770,713.9	2.8
Final consumption expenditures	911,938.2	942,267.2	972,924.9	1,006,005.6	1,047,895.8	1,097,581.7	1,153,773.2	5.1
Private	707,614.0	727,799.9	748,200.8	771,239.2	798,728.9	832,234.7	867,042.9	4.2
Government	204,324.2	214,467.3	224,724.2	234,766.4	249,166.9	265,347.0	286,730.4	8.1

Note: 1) Based on current prices for the year
Source: The Bank of Korea

Table 12-6 Gross Regional Domestic Production[1)2)]

(KRW 1 billion)

Region	2012	2013	2014	2015	2016	2017[p)]	Year-on-year increase (%)	Composition (%)
Entire country	1,377,040.5	1,430,254.9	1,485,504.7	1,565,247.8	1,641,957.2	1,731,544.8	5,5	100.0
Seoul	313,478.5	318,607.0	328,660.9	344,426.0	359,439.9	372,110.0	3.5	21.5
Busan	67,999.0	70,337.9	73,673.6	78,238.1	81,263.5	83,298.7	2.5	4.8
Daegu	43,021.0	44,753.5	46,523.7	48,869.0	49,757.7	50,796.0	2.1	2.9
Incheon	62,207.9	64,654.2	69,500.6	75,674.8	80,859.2	84,059.4	4.0	4.9
Gwangju	28,913.8	29,763.2	31,294.7	32,516.3	33,921.8	35,371.1	4.3	2.0
Daejeon	30,884.5	31,455.7	32,798.8	34,061.8	35,944.7	37,303.2	3.8	2.2
Ulsan	70,783.4	68,347.7	67,018.1	69,673.9	72,197.3	75,079.4	4.0	4.3
Gyeonggi-do	288,146.8	313,670.6	329,559.0	352,856.9	373,329.0	414,339.1	11.0	23.9
Gangwon-do	33,853.5	35,357.5	37,170.3	39,565.6	41,738.2	43,651.2	4.6	2.5
Chungcheongbuk-do	43,628.0	47,401.8	49,790.7	52,655.7	56,660.9	61,314.4	8.2	3.5
Chungcheongnam-do	95,307.9	99,154.3	105,002.4	111,265.1	117,074.9	124,419.2	6.3	7.2
Jeollabuk-do	40,431.8	42,512.7	44,242.7	45,641.1	46,894.6	48,613.2	3.7	2.8
Jeollanam-do	64,642.2	62,289.5	62,456.7	65,454.2	68,576.7	71,224.0	3.9	4.1
Gyeongsangbuk-do	85,401.0	89,132.4	92,697.2	94,987.7	99,351.0	102,969.6	3.6	5.9
Gyeongsangnam-do	95,634.5	99,619.4	101,028.4	103,995.4	107,961.6	108,973.4	0.9	6.3
Jeju-do	12,706.8	13,197.5	14,086.9	15,366.1	16,986.1	18,022.7	6.1	1.0

Note: 1) Based on current prices for the year.
2) Sejong City is included in Chungcheongbuk-do and Chungcheongnam-do, according to the former administrative district system
Source: Statistics Korea, Regional Income Statistics

13 Public Finance, Finance, and Insurance

Consolidated Budget Balance

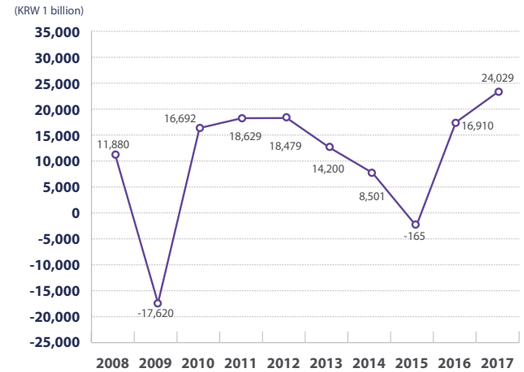
Consolidated public finance is a method of accounting by which all revenues and expenditures of the central government are tracked so as to understand the national economy at a glance. The consolidated budget balance is calculated by subtracting the consolidated public expenditures over one year from the consolidated public revenues for the same year.

In 2017, the consolidated public finance balance increased by KRW 7,119 billion to KRW 24,029 billion.

Tax Burden Ratio

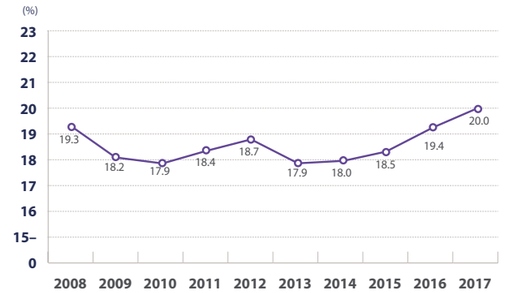
The tax burden ratio measures the extent of the tax burden that the people of a given country must shoulder. It is calculated by measuring the ratio of gross tax (national taxes plus local taxes) to current GDP. In 2017, the percentage of tax burden to current GDP (excluding social insurance programs) was 20.0 percent, showing an increase of 0.6 percent from 2016.

Figure 13-1 Trend of Consolidated Central Government Balance



Source: Ministry of Strategy and Finance

Figure 13-2 Tax Burden Ratio (to current GDP)



Source: Ministry of Strategy and Finance

Table 13-1 Consolidated Budget Balance

(KRW 1 billion)

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Consolidated budget balance	11,880	-17,620	16,692	18,629	18,479	14,200	8,501	-165	16,910	24,029
Total revenue	250,713	255,252	270,923	292,323	311,456	314,438	320,895	339,186	371,264	403,839
Total expenditure and net lending	238,834	272,873	254,231	273,694	292,977	300,238	312,394	339,351	354,354	379,809

Source: Ministry of Strategy and Finance

Table 13-2 Tax Receipt and Tax Burden Ratio

(KRW trillion, %)

		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Gross Tax	**Total**	212.8	209.7	226.9	244.7	257.0	255.7	267.2	288.9	318.1	345.8
	National taxes	167.3	164.5	177.7	192.4	203.0	201.9	205.5	217.9	242.6	265.4
	Local taxes	45.5	45.2	49.2	52.3	53.9	53.8	61.7	71.0	75.5	80.4
Tax burden ratio (to GDP)	**Total**	19.3	18.2	17.9	18,4	18.7	17.9	18.0	18.5	19.4	20.0[p)]
	National taxes	15.1	14.3	14.0	14.4	14.7	14.1	13.8	13.9	14.8	15.3[p)]
	Local taxes	4.1	3.9	3.9	3.9	3.9	3.8	4.2	4.5	4.6	4.6[p)]

Source: Ministry of Strategy and Finance

Official Development Assistance

In 2017, the scale of South Korea's official development assistance (ODA) decreased by 2.0 percent from the previous year to USD 2,201 million; and the ratio of ODA to gross national income (GNI), which indicates the level of a country's ODA compared with its economic scale, recorded 0.14 percent, a decrease of 0.02 percent from the previous year.

Bilateral assistance, in which assistance funds and goods are delivered directly to developing countries, increased by 4.3 percent Year-on-year to USD 1,615 million; while multilateral assistance, which is provided through international organizations, increased by 16.0 percent Year-on-year to USD 586 million.

Table 13-3 Official Development Assistance (Based on Net Expenditure)

(USD million)

	Total ODA	Bilateral ODA	Multilateral ODA	ODA/GNI[1] (%)
1995	116	71	45	0.02
2000	212	131	81	0.04
2005	752	463	289	0.10
2006	455	376	79	0.05
2007	696	491	206	0.07
2008	802	539	263	0.09
2009	816	581	235	0.10
2010	1,174	901	273	0.12
2011	1,325	990	335	0.12
2012	1,597	1,183	414	0.14
2013	1,755	1,310	446	0.13
2014	1,857	1,396	461	0.13
2015	1,915	1,469	447	0.14
2016	2,246	1,548	698	0.16
2017[p]	2,201	1,615	586	0.14
Year-on-year increase (%)	-2.0	4.3	-16.0	-

Note: 1) Based on nominal figures.
Source: The Export and Import Bank of Korea, Economic Development Cooperation Fund, *ODA in Numbers*

Money Supply

Monetary policy is an indirect method of controlling a country's economy that consists in adjusting the money supply or interest rates, which in turn affects the country's national income. The primary methods include open-market operations and rediscount policies among others. In such cases, an indicator for the management of the money supply is necessary, and base money can be used for such a purpose.

The term "base money" refers to cash held in the private sector, vault cash held by private banks, and private banks' deposits at the central bank. Narrow money (M1), which refers to the general money supply, is a combination of cash currency, demand deposits, and cash-management time and savings deposits. When financial instruments with maturities of less than two years, such as installment deposits and savings, are included in the previously mentioned combination, they are called broad money (M2). Broad money, when added to other types of deposits received by commercial banks and non-bank financial institutions, constitutes financial institutions' liquidity (Lf).

In terms of the scale of the money supply in 2018, the value of base money increased by 10.6 percent to reach KRW 172,353.3 billion, while Lf, M2, and M1 increased by 7.2 percent, 6.7 percent, and 1.9 percent, respectively, from the previous year.

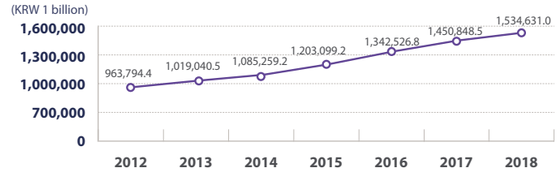
Table 13-4 Money Supply

(KRW 1 billion)

	Bank notes and coins in circulation	Base money	Narrow money (M1)	Broad money (M2)	Financial institutions' liquidity (Lf)
2009	37,346.2	67,779.1	389,394.5	1,566,850.0	2,018,785.0
2010	43,307.2	74,545.7	427,791.6	1,660,530.0	2,137,197.9
2011	48,657.6	80,055.9	442,077.5	1,751,458.4	2,277,679.0
2012	54,334.4	88,342.0	470,010.6	1,835,641.6	2,456,120.5
2013	63,365.9	104,262.0	515,643.4	1,920,795.0	2,615,093.5
2014	74,944.8	116,793.7	585,822.6	2,077,234.0	2,841,785.1
2015	86,757.1	131,438.8	708,452.9	2,247,375.0	3,098,949.4
2016	97,382.3	143,435.3	795,531.1	2,407,459.1	3,344,919.6
2017	107,907.6	155,881.0	849,862.4	2,530,353.6	3,565,892.7
2018	115,389.5	172,353.3	865,851.8	2,700,362.4	3,824,267.7
Year-on-year increase (%)	6.9	10.6	1.9	6.7	7.2

Source: Bank of Korea

Figure 13-3 Credit to Households



Source: The Bank of Korea, Monthly Statistical Bulletin

Figure 13-4 Dishonored Checks and Bills Ratio



Source: The Bank of Korea

Credit to Households

Total credit to households as of the end of 2018 amounted to KRW 1,534,631 billion, an increase of KRW 83,782.5 billion (5.8 percent) from the end of 2017. The rate declined by 2.3 percent from the rate recorded at the end of 2017 (8.1 percent).

As of the end of 2018, outstanding loans to households stood at KRW 1,444,478.7 billion, an increase of 5.4 percent from the end of 2017, while outstanding merchandise credits increased by 11.6 percent, to KRW 90,152.3 billion, compared with the end of 2017.

Table 13-5 Credit to Households

(KRW 1 billion)

	2012	2013	2014	2015	2016	2017	2018[p]	Year-on-year increase (%p)
Credit to households	963,794.4	1,019,040.5	1,085,259.2	1,203,099.2	1,342,526.8	1,450,848.5	1,534,631.0	5.8
Loans to households	905,944.1	960,579.6	1,025,076.2	1,137,953.1	1,269,808.2	1,370,058.2	1,444,478.7	5.4
Merchandise credit	57,850.3	58,460.8	60,183.0	65,146.1	72,718.7	80,790.3	90,152.3	11.6

Source: The Bank of Korea, *Monthly Statistical Bulletin*

Dishonored Checks and Bills Ratio

One of the indicators of the current market-fund condition is the ratio of dishonored checks and bills. This ratio is calculated by dividing the amount of dishonored bills and checks by the total amount of checks and bills that are due. A high ratio of dishonored checks and bills means that the financial situation of the market is poor.

The national ratio of dishonored checks and bills in 2018 was 0.13 percent, a decrease of 0.02 percent from 2017.

Table 13-6 Dishonored Checks and Bills Ratio[1]

(%)

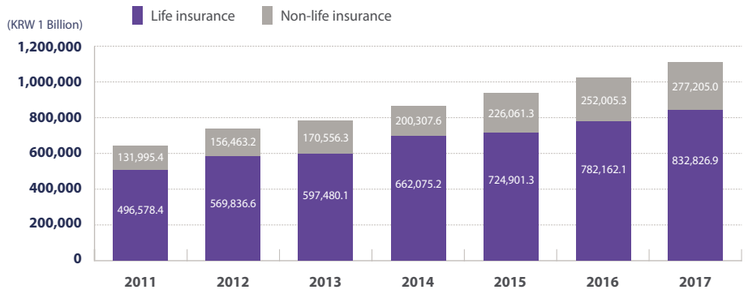
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Nationwide dishonored checks and bills ratio	0.15	0.14	0.15	0.11	0.12	0.14	0.19	0.17	0.11	0.15	0.13

Note: 1) Based on the dishonored value.
Source: The Bank of Korea

Assets of Insurance Companies

In 2017, life insurance companies held total assets worth KRW 832,826.9 billion, showing a 6.5 percent increase from 2016 (KRW 782,162.1 billion). Meanwhile, non-life insurance companies held assets of KRW 277,205 billion, an increase of 10.0 percent from 2016 (KRW 252,005.3 billion).

Figure 13-5 Assets of Insurance Companies



Source: The Financial Supervisory Service, *Monthly Financial Statistics Bulletin*

Table 13-7 Assets of Insurance Companies[1]

(KRW 1 billion)

	2011	2012	2013	2014	2015	2016	2017	Year-on-year increase (%p)
Total	628,573.8	726,299.8	768,036.4	862,382.8	950,962.6	1,034,167.4	1,110,031.9	7.3
Life insurance	496,578.4	569,836.6	597,480.1	662,075.2	724,901.4	782,162.1	832,826.9	6.5
Non-life insurance	131,995.4	156,463.2	170,556.3	200,307.6	226,061.3	252,005.3	277,205.0	10.0

Note: 1) Based on the fiscal year from Jan. 1 to Dec.31. Before 2013, the standard fiscal year running from April 1 to March 31 of the next year was applied. For 2013, the fiscal year ran from April 1 to December 31.
Source: The Financial Supervisory Service, *Monthly Financial Statistics Bulletin*

14 Trade and International Balance of Payments

Trade Volume

The total trade volume in 2018 amounted to USD 1,140,060 million, an increase of 8.4 percent Year-on-year. The value of exports stood at USD 604,860 million, an increase of 5.4 percent from the previous year, while the value of imports was USD 535,200 million, an increase of 11.9 percent from 2017. Meanwhile, the trade surplus in 2018 was USD 69,660 million, a decrease of USD 25,560 million compared with the previous year.

Exports and Imports by Country

In 2018, China was Korea's biggest trade partner, recording USD 162.1 billion of exports and USD 106.5 billion of imports.

When looking at exports and imports by country in 2018, exports to China accounted for the greatest proportion, followed by the U.S.A., Vietnam, Hong Kong, and Japan; similarly, imports from China also accounted for the greatest share, followed by the U.S.A., Japan, Saudi Arabia, and Germany.

Table 14-1 Trade Volume

(USD 100 million)

	Total trade volume	Export volume	Import volume	Export-Import
2000	3,327.5	1,722.7	1,604.8	117.9
2005	5,456.6	2,844.2	2,612.4	231.8
2010	8,916.0	4,663.8	4,252.1	411.7
2013	10,752.2	5,596.3	5,155.9	440.5
2014	10,981.8	5,726.6	5,255.1	471.5
2015	9,632.6	5,267.6	4,365.0	902.6
2016	9,016.2	4,954.3	4,061.9	892.3
2017	10,521.7	5,736.9	4,784.8	952.2
2018	11,400.6	6,048.6	5,352.0	696.6
Year-on-year increase (%)	8.4	5.4	11.9	-

Source: The Korea International Trade Association

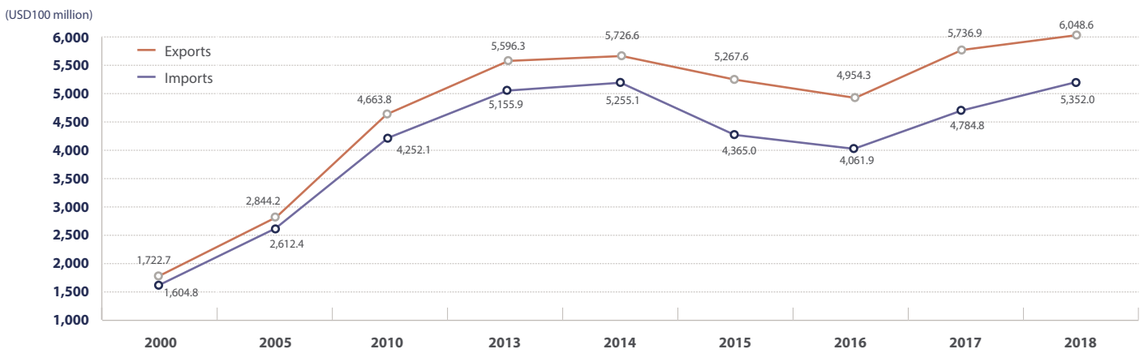
Table 14-2 Exports and Imports by Country (2018)[1)]

(USD 100 million)

Ranking	Country	Exports	Ranking	Country	Imports
	Total	**6,049**		**Total**	**5,352**
1	China	1,621	**1**	China	1,065
2	U.S.A.	727	**2**	U.S.A.	589
3	Vietnam	486	**3**	Japan	546
4	Hong Kong	460	**4**	Saudi Arabia	263
5	Japan	305	**5**	Germany	209
6	Taiwan	208	**6**	Australia	207
7	India	156	**7**	Vietnam	196
8	Philippines	120	**8**	Russia	175
9	Singapore	118	**9**	Taiwan	167
10	Mexico	115	**10**	Qatar	163

Note: 1) Excludes countries ranked lower than 10th place.
Source: The Korea International Trade Association

Figure 14-1 Trade Volume



Source: The Korea International Trade Association

Balance of International Payments

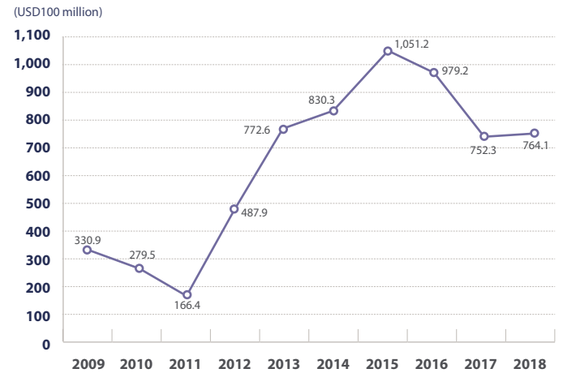
The current account surplus for 2018 showed a year-on-year increase of USD 1.180 million, having increased from USD 75,230 million to USD 76,410 million.

The goods account recorded a surplus of USD 111,870 million, continuing the previous year's trend, while the service balance recorded a deficit of USD 29,740 million, also continuing the previous year's trend.

Foreign Financial Assets and External Debts

At the end of 2018, Korea's foreign financial assets stood at USD 1,520,490 million, representing a 4.0 percent increase from the previous year, while the amount of external debts stood at USD 1,107,510 million, a decrease of 7.7 percent Year-on-year.

Figure 14-2 Current Account Balance



Source: Bank of Korea

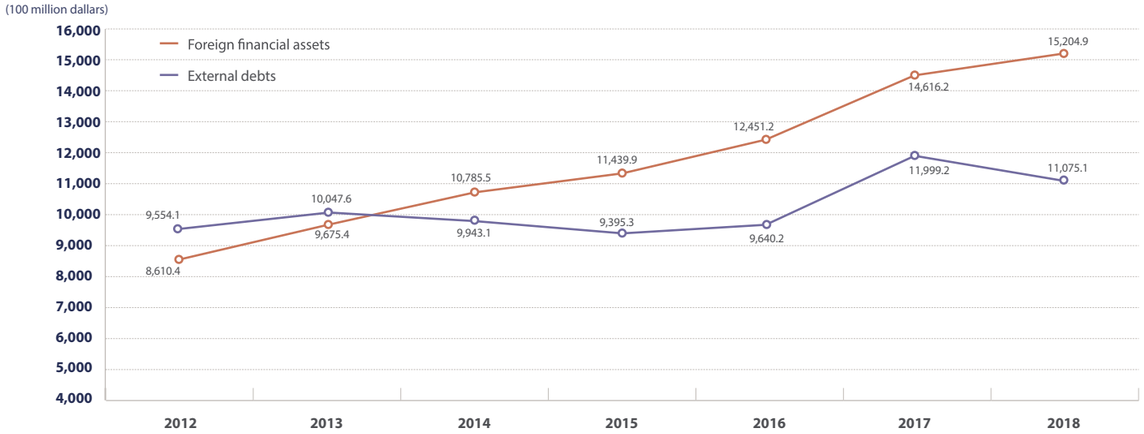
Table 14-3 Balance of Payments

(USD 100 million)

	2009	2010	2011	2012	2013	2014	2015	2016	2017[P)]	2018[P)]
Current account balance	330.9	279.5	166.4	487.9	772.6	830.3	1,051.2	979.2	752.3	764.1
Goods balance	480.6	479.3	280.1	485.9	802.6	861.5	1,202.8	1,164.6	1,135.9	1,118.7
Service balance	-93.4	-139.7	-120.6	-50.6	-63.3	-32.9	-146.3	-173.4	-367.3	-297.4
Income balance	-34.4	-6.9	54.0	107.3	75.2	51.6	44.5	45.7	53.4	27.8
Transfer balance	-21.9	-53.2	-47.2	-54.7	-41.9	-49.8	-49.9	-57.7	-69.6	-85.0
Capital balance	-0.7	-0.6	-1.1	-0.4	-0.3	-0.1	-0.6	-0.5	-0.3	1.9
Financial balance[1)]	271.8	215.2	229.2	483.9	782.6	863.5	1,027.8	998.1	844.3	704.9

Note: 1) Net assets (+) for an increase in assets/debts, (-) for a decrease in assets/debts).
Source: Bank of Korea

Figure 14-3 Foreign Financial Assets and External Debts



Source: Bank of Korea, *Monthly Statistical Bulletin*

Table 14-4 Foreign Financial Assets and External Debts

(USD 100 million)

	2012	2013	2014	2015	2016	2017	2018[P)]	Year-on-year increase (%)
Foreign financial assets (A)	8,610.4	9,675.4	10,785.5	11,439.9	12,451.2	14,616.2	15,204.9	4.0
External debts (B)	9,554.1	10,047.6	9,943.1	9,395.3	9,640.2	11,999.2	11,075.1	-7.7
Net International Investment position(A-B)	-943.7	-372.2	842.4	2,044.6	2,811.0	2,617.0	4,129.8	-

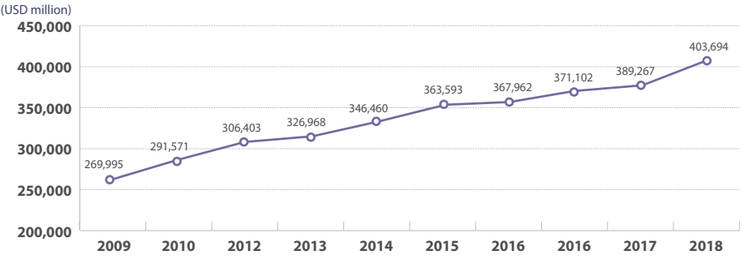
Source: Bank of Korea, *Monthly Statistical Bulletin*



Foreign Reserves

As of the end of 2018, Korea's foreign reserves amounted to USD 403,694 million, an increase of USD 14,427 million from the USD 389,267 million posted at the end of 2017.

Figure 14-4 Foreign Reserves



Source: Bank of Korea

Table 14-5 Foreign Reserves

(USD million)

	Total	Gold	Special drawing rights	IMF reserve position[1)]	Foreign currency reserves
2007	262,224	74	69	311	261,771
2008	201,223	76	86	583	200,479
2009	269,995	79	3,732	982	265,202
2010	291,571	80	3,540	1,025	286,926
2011	306,403	2,167	3,447	2,556	298,233
2012	326,968	3,761	3,527	2,784	316,898
2013	346,460	4,795	3,490	2,528	335,648
2014	363,593	4,795	3,281	1,917	353,601
2015	367,962	4,795	3,241	1,412	358,514
2016	371,102	4,795	2,878	1,728	361,701
2017	389,267	4,795	3,374	1,621	379,477
2018	403,694	4,795	3,427	2,140	393,332
Year-on-year increase (%)	3.7	0.0	1.6	32.0	3.7

Note: 1) Assets that can be drawn from the IMF on demand.
Source: Bank of Korea

15 Science and Culture

Research and Development Investment

South Korea's total expenditure on research and development (R&D) in 2016 amounted to KRW 69,406 billion, an increase of KRW 3,447 billion (5.2%) from the previous year. The amount of R&D investment as a proportion of GDP was 4.23 percent, representing an increase of 0.01 percent from the previous year (4.22%).

In 2016, the amount of R&D expenditure originating from government and public financial resources was KRW 16,410 billion. The ratio of R&D expenditure financed by the government/public sector to R&D expenditure financed by the private/foreign sectors was 24:76. By R&D stage, expenditure on basic R&D accounted for 16.0 percent; applied R&D, 22.5 percent; and development R&D, 61.5 percent.

Table 15-1 R&D Investment

(KRW 1 billion, %)

	R&D expenditures	By source			By research stage			R&D expenditure to GDP
		Government/Public	Private	Foreign	Basic	Applied	Development	
2001	16,111	27.1	72.5	0.47	12.6	25.3	62.1	2.34
2006	27,346	24.3	75.4	0.30	15.2	19.9	65.0	2.83
2011	49,890	26.1	73.7	0.22	18.1	20.3	61.7	3.74
2012	55,450	24.9	74.7	0.34	18.3	19.1	62.6	4.03
2013	59,301	24.0	75.7	0.30	18.0	19.1	62.9	4.15
2014	63,734	24.0	75.3	0.71	17.6	18.9	63.4	4.29
2015	65,959	24.7	74.5	0.75	17.2	20.8	61.9	4.22
2016	69,406	23.6	75.4	0.94	16.0	22.5	61.5	4.23
Year-on-year increase (%)	5.2	-1.1%p	0.9%p	0.19%p	-1.2%p	1.7%p	-0.4%p	0.01%p

Source: Ministry of Science and ICT, Korea Institute of Science and Technology Evaluation and Planning, *Survey of Research and Development in Korea*



Research and Development Manpower

In terms of total R&D manpower in 2016, the number of workers engaged in R&D was 624,910, an increase of 0.8 percent Year-on-year. Of those workers, 467,769 were researchers, an increase of 1.7 percent from the previous year.

By sector, the number of researchers working for universities and colleges increased by the greatest margin at 3.3 percent, followed by public research institutes (2.1 percent) and private companies (1.1 percent). Meanwhile, the proportion of doctorate degree holders against total researchers was 21.7 percent, the same as the previous year.

Table 15-2 Research and Development Manpower

(People)

	Total personnel engaged in R&D activities	Researchers	Doctors (%)	Number of researchers by agent of R&D		
				Public research institutions	Universities and colleges	Business enterprises
2001	261,802	178,937	26.1	13,921	53,717	111,299
2006	365,794	256,598	23.4	16,771	65,923	173,904
2011	531,131	375,176	22.6	28,800	95,750	250,626
2012	562,601	401,724	21.8	28,822	96,916	275,986
2013	569,333	410,333	21.7	31,140	97,319	281,874
2014	605,604	437,447	21.1	33,322	99,317	304,808
2015	619,907	453,262	21.7	35,550	99,870	317,842
2016	624,910	460,769	21.7	36,280	103,166	321,323
Year-on-year increase (%)	0.8	1.7	0.0%p	2.1	3.3	1.1

Source: Ministry of Science and ICT, Korea Institute of Science and Technology Evaluation and Planning, *Survey of Research and Development in Korea*

Tourism Balance

In 2018, the number of foreign tourists who visited Korea reached 15,347,000, an increase of 15.1 percent Year-on-year, due to such factors as an increase in the number of individual Chinese tourists, and a rise in the overall number of Japanese tourists coming to Korea. Meanwhile, the number of Korean departures overseas increased by 8.3 percent year-on-year to 28,696,000 in 2018.

In 2018, the tourism balance recorded a deficit of USD 13,200 million. More specifically, tourism receipts increased by 14.6 percent Year-on-year to record USD 15,200 million, while tourism expenditures rose by 1.6 percent to reach USD 28,400 million.

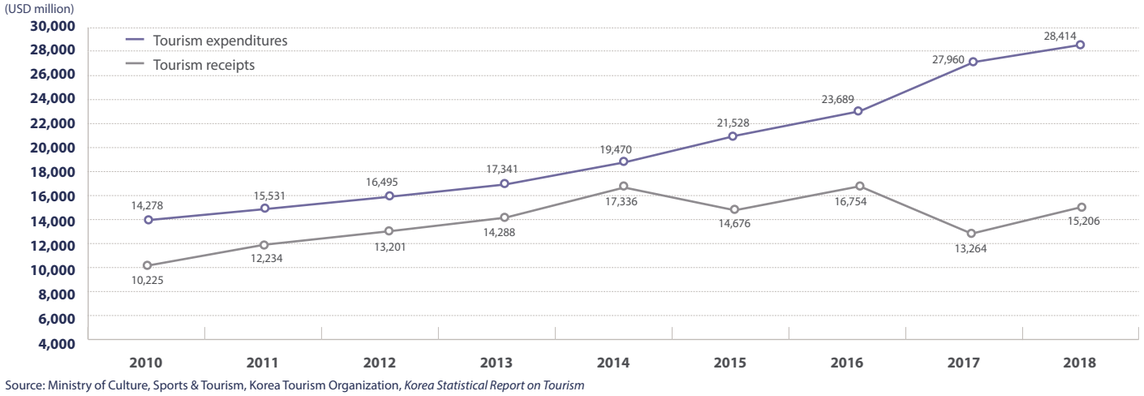
Table 15-3 Tourism Balance

(1,000 persons, USD million)

	Visitor arrivals	Korean[1] departures	Margin (Korean departures – Visitor arrivals)	Receipts	Expenditures	Tourism blaance[2] (import-export)
2010	8,798	12,488	3,690	10,225	14,278	-4,052
2011	9,795	12,694	3,899	12,234	15,531	-3,297
2012	11,140	13,737	2,597	13,201	16,495	-3,293
2013	12,176	14,846	2,670	14,288	17,341	-3,052
2014	14,202	16,081	1,879	17,336	19,470	-2,134
2015	13,232	19,310	6,078	14,676	21,528	-6,852
2016	17,242	22,383	5,141	16,754	23,689	-6,935
2017p)	13,336	26,496	13,160	13,264	27,960	-14,696
2018p)	15,347	28,696	13,349	15,206	28,414	-13,208
Year-on-year increase (%)	15.1	8.3	-	14.6	1.6	-

Note: 1) Including crew members.
2) Excluding expenses of students studying overseas.
Source: Ministry of Culture, Sports & Tourism, Korea Tourism Organization, *Korea Statistical Report on Tourism*, analysis in December, 2018 and tourism balance.

Figure 15-1 Tourism Balance



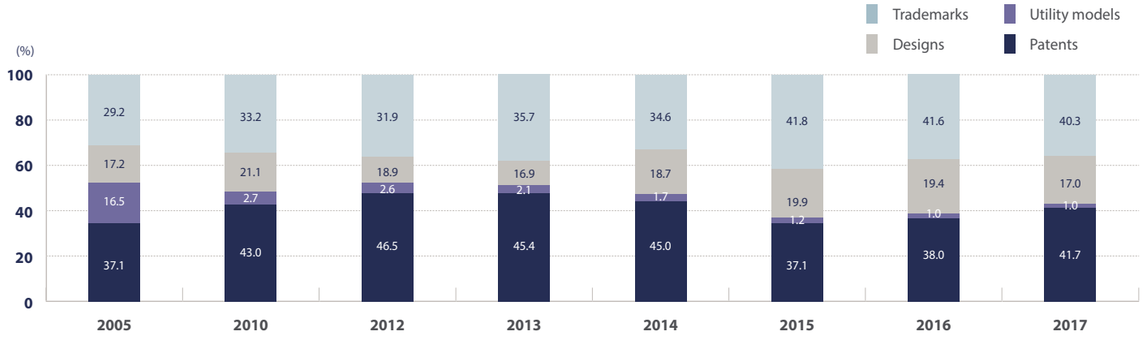
Source: Ministry of Culture, Sports & Tourism, Korea Tourism Organization, *Korea Statistical Report on Tourism*

16 Public Administration

Registration of Intellectual Property Rights

In 2017, a total of 289,656 intellectual property rights were registered, showing an increase of 1.1 percent over the previous year. In terms of the composition of registered intellectual property rights, patent registrations accounted for 41.7 percent, followed by trademark registrations, 40.3 percent; design registrations, 17.0 percent; and utility model registrations, 1.0 percent.

Figure 16-1 Composition of Intellectual Property Right Registrations



Source: Korea Intellectual Property Office, *Intellectual Property Statistics Yearbook*

Table 16-1 Intellectual Property Right Registration

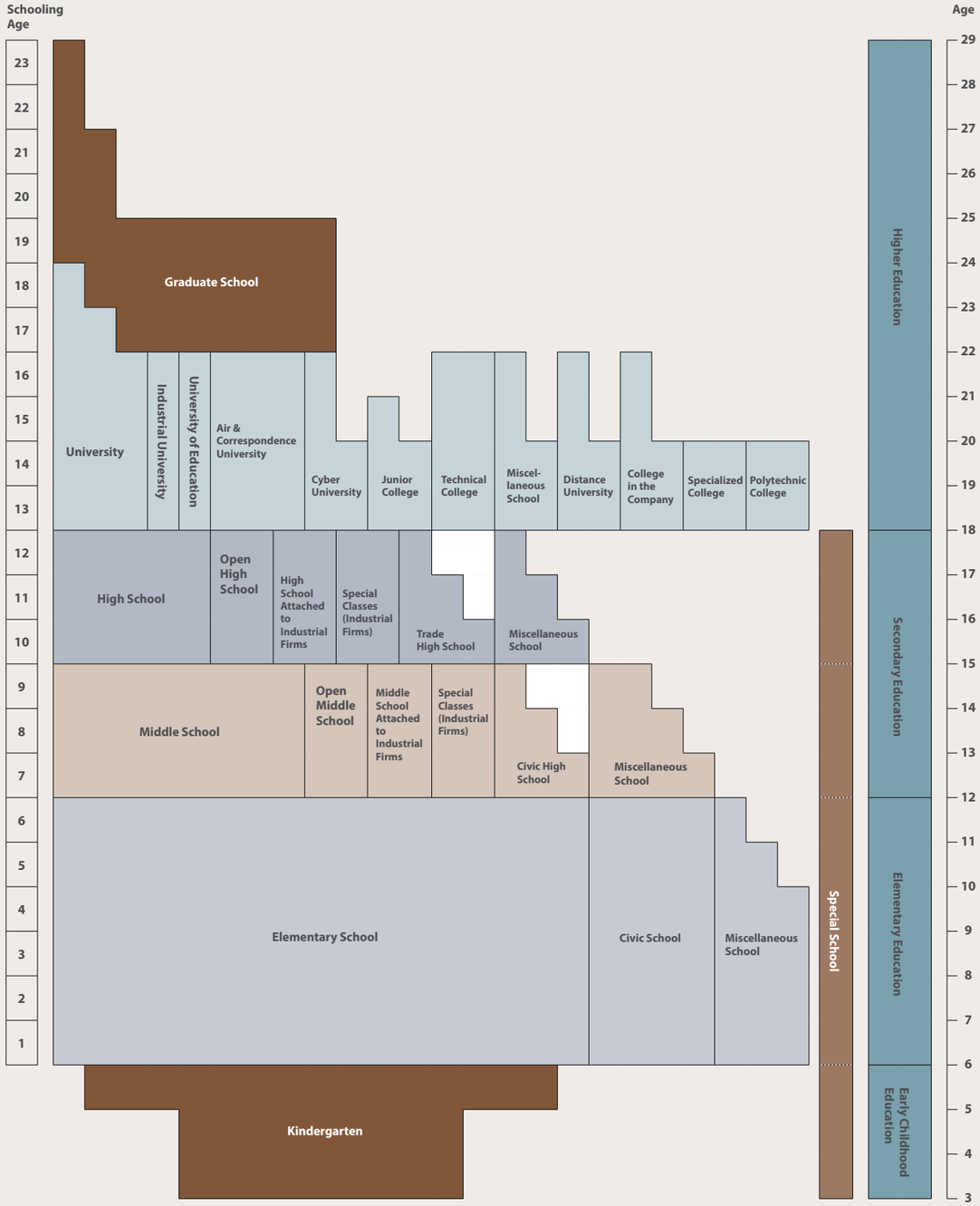
(EA)

	Total	Patent	Utility model	Design	Trademark
2005	198,094	73,512	32,716	33,993	57,873
2010	159,977	68,843	4,301	33,697	53,136
2012	243,869	113,467	6,353	46,146	77,903
2013	280,691	127,330	5,959	47,308	100,094
2014	288,542	129,786	4,955	54,010	99,791
2015	274,424	101,873	3,253	54,551	114,747
2016	286,586	108,875	2,854	55,602	119,255
2017	289,656	120,662	2,993	49,293	116,708
Composition (%)	100.0	41.7	1.0	17.0	40.3

Source: Korea Intellectual Property Office, *Intellectual Property Statistics Yearbook*

Statistics on Korean Education

1. School System



All statistics in this article refer to *2018 Brief Statistics on Korean Education.*





2. Schools, Students and Teachers(2018)

(Schools, Persons)

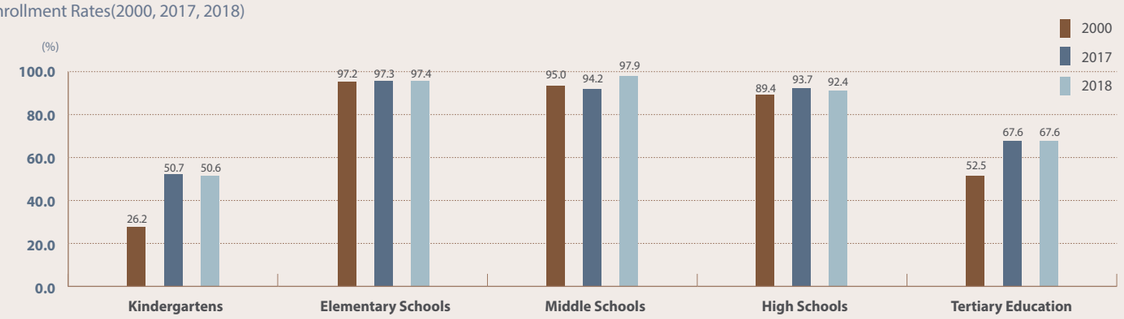
Classification		No. of Schools	No. of Students		No. of Teachers	
			Total	Female	Total	Female
Kindergartens, Elementary, Secondary Schools Subtotal		20,967	6,309,723	3,047,628	496,263	352,070
Kindergartens		9,021	675,998	333,501	54,892	53,951
Elementary Schools		6,064	2,711,385	1,315,080	186,684	144,055
Middle School Course	Subtotal	3,240	1,338,828	644,541	109,911	76,617
	Middle Schools	3,214	1,334,288	640,686	109,906	76,615
	Civic High Schools	3	64	39	5	2
	Air&Corr. Middle Schools	23	4,476	3,816	-	-
High School Course	Subtotal	2,407	1,549,109	740,629	134,312	70,366
	High Schools	2,358	1,538,576	733,769	134,227	70,339
	General High Schools	1,556	1,096,331	546,101	90,855	49,173
	Special-purpose High Schools	157	66,693	33,939	7,787	3,603
	Specialized High Schools	490	252,260	108,561	25,619	12,195
	Autonomous High Schools	155	123,292	45,168	9,966	5,368
	Trade High Schools	7	652	212	85	27
	Air&Corr. High Schools	42	9,881	6,648	-	-
Special Schools		175	25,860	8,852	9,250	6,337
Miscellaneous Schools		60	8,543	5,025	1,214	744
Special Classes Requested by Industrial Firms		[4]	[239]	-	[49]	-
Tertiary Education Subtotal		430	3,378,393	1,490,775	90,288	23,181
Junior College Course	Subtotal	157	708,196	287,736	13,798	5,170
	Junior Colleges	137	659,232	273,328	12,584	4,903
	Technical Colleges	-	10	-	-	-
	Miscellaneous Schools	-	-	-	-	-
	Distance Universities	1	1,822	1,202	14	6
	Cyber Universities	2	5,551	3,552	37	14
	College in the Company	5	246	34	4	-
	Specialized Colleges	3	13,310	7,826	262	165
	Polytechnic Colleges	9	28,025	1,794	897	82
Under Graduate Course	Subtotal	228	2,347,965	1,041,646	68,915	16,365
	Universities	191	2,030,033	841,808	66,863	15,656
	Universities of Education	10	15,788	10,948	835	237
	Industrial Universities	2	16,262	6,270	354	101
	Technical Colleges	1	84	29	-	-
	Air&Corr. Universities	1	164,325	111,519	152	51
	Miscellaneous Schools	2	3,470	2,114	147	51
	Distance Universities	1	950	441	8	4
	Cyber Universities	17	116,795	68,446	554	265
	Colleges in the Company	3	258	71	2	-
Graduate School Course	Subtotal	45	322,232	161,393	7,575	1,646
	Graduate School Colleges	45	10,361	5,210	1,341	239
	Graduate Schools	[1,153]	311,871	156,183	6,234	1,407

Note 1) Figures in [ ] are not included in the total
2) Special Classes Requested by Industrial Firms - only the total number of teachers is surveyed, regardless of gender

3. Enrollment and Advancement

A. Enrollment Rates

Enrollment Rates(2000, 2017, 2018)



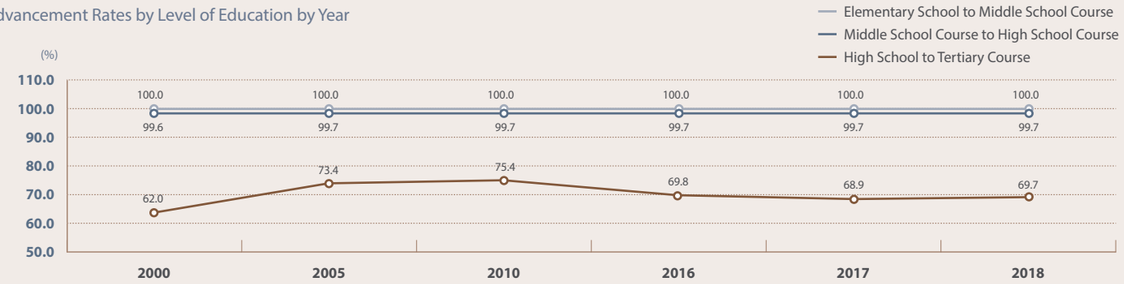
(%)

Classification	2000	2005	2010	2016	2017	2018
Kindergartens	26.2	31.1	40.3	49.8	50.7	50.6
Elementary Schools	97.2	98.8	99.1	98.6	97.3	97.4
Middle Schools	95.0	94.3	96.5	94.3	94.2	97.9
High Schools	89.4	92.1	91.7	93.1	93.7	92.4
Tertiary Education	52.5	66.1	69.3	67.4	67.6	67.6

Note 1) Enrollment Rates(%) = (The number of students of appropriate age / The number of people of appropriate age)×100
2) The basis for enrollment ages is taken from 'Population Projections for Korea', Korea National Statistical Office. The figures up to 2015 are fixed; the figures from 2016 are estimates.
3) Age of enrollment : 3-5 for Kindergartens, 6-11 for elementary schools, 12-14 for middle schools, 15-17 for high schools, and 18-21 for tertiary education institutions.
4) Tertiary education includes students who take leave of absence.
Source: Statistics Korea(http://kosis.kr), Population Projections and Summary indicators for Korea(date and year of reference is 1 December 2015).

B. Advancement Rates

Advancement Rates by Level of Education by Year



(%)

Classification		2000	2005	2010	2016	2017	2018
Elementary School to Middle School Courses		100.0	100.0	100.0	100.0	100.0	100.0
Middle School to High School Courses		99.6	99.7	99.7	99.7	99.7	99.7
High School to Tertiary Course	Total	62.0* (68.0)	73.4* (82.1)	75.4* (78.9)	69.8	68.9	69.7
	General High Schools	-	-	-	78.0	77.3	77.7
	Special-purposed High schools	-	-	-	55.9	56.9	57.7
	Specialized High Schools	-	-	-	35.0	32.8	36.0
	Autonomous High Schools	-	-	-	74.9	73.5	72.6
	General High Schools	(83.9)	(88.3)	(81.5)	-	-	-
	Vocational High Schools	(42.0)	(67.6)	(71.1)	-	-	-

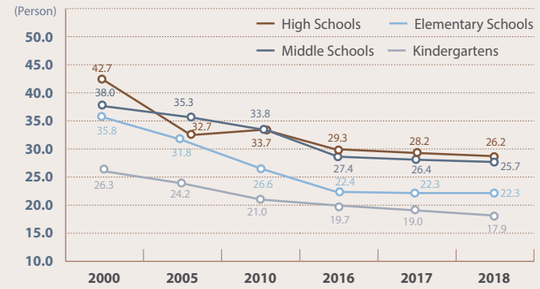
Note 1) Advancement Rates(%) = (Advanced among graduates in a given year/Graduates in a given year)×100
2) Advancement Rates are rounded off to two decimal places, 100.0% of Advancement Rates from Elementary School to Middle School Course is an approximate value.
3) Middle school course : middle schools and other schools equivalent to middle school.
4) High school course : high schools and other schools equivalent to a high school.
5) High school graduates : Students who graduated after 2014 are graduates of the amended high school types(in 2011).
6) Tertiary course advancement includes junior colleges, universities, industrial universities, universities of education, air & corr. universities, polytechnic colleges and miscellaneous schools (from 2005, outbound internationally mobile students are included).
7) Advanced students(High School → Tertiary Courses): Advanced students to tertiary courses as of 1st of April of the reference year(Source: Pre-primary, Primary and Secondary Education Statistics)
* : High school graduates among new entrants to tertiary courses as of March of the reference year(Source: Higher Education Statistics).
( ) : Advanced students into tertiary courses of the reference year(Source: Pre-primary, Primary and Secondary Education Statistics).

4. Major Indicators

A. Number of Students per Class by Year

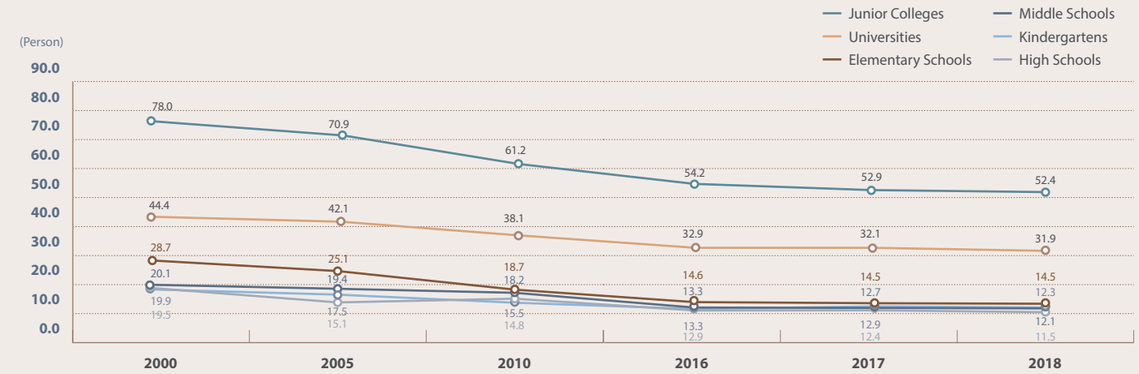
(Person)

Classification		2000	2005	2010	2016	2017	2018
Kindergartens		26.3	24.2	21.0	19.7	19.0	17.9
Elementary Schools		35.8	31.8	26.6	22.4	22.3	22.3
Middle Schools		38.0	35.3	33.8	27.4	26.4	25.7
High Schools	Total	42.7	32.7	33.7	29.3	28.2	26.2
	General High Schools	-	-	-	30.6	29.3	27.1
	Special-purposed High Schools	-	-	-	24.0	23.7	23.1
	Specialized High Schools	-	-	-	25.7	24.7	23.0
	Autonomous High Schools	-	-	-	30.2	29.6	28.1
	General High Schools	44.1	33.9	35.5	-	-	-
	Vocational High Schools	40.3	30.0	29.1	-	-	-



Note: Number of students per class = Number of students / Number of classes

B. The number of Students per Teacher by Year



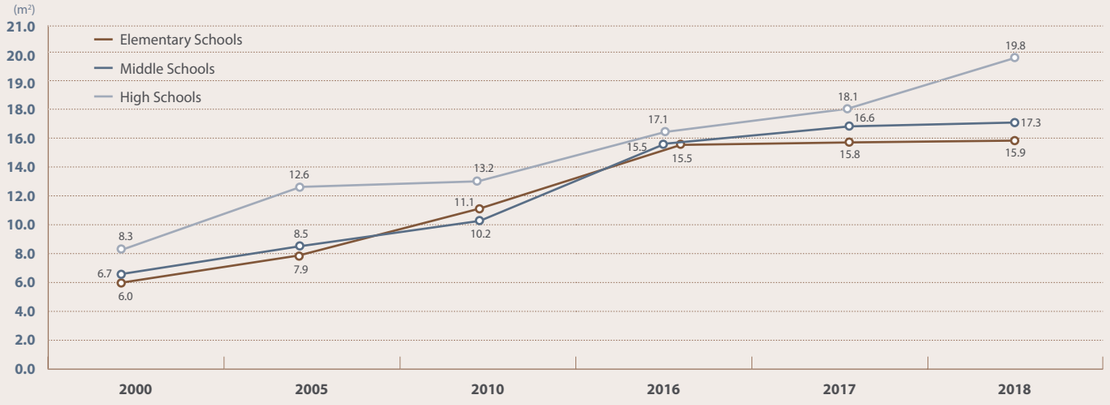
(Person)

Classification		2000	2005	2010	2016	2017	2018
Kindergartens		19.5	17.5	14.8	13.3	12.9	12.3
Elementary Schools		28.7	25.1	18.7	14.6	14.5	14.5
Middle Schools		20.1	19.4	18.2	13.3	12.7	12.1
High Schools	Total	19.9	15.1	15.5	12.9	12.4	11.5
	General High Schools	-	-	-	13.7	13.1	12.1
	Special- purpose High Schools	-	-	-	9.1	8.9	8.6
	Specialized High Schools	-	-	-	11.0	10.6	9.8
	Autonomous High Schools	-	-	-	13.5	13.2	12.4
	General High Schools	20.9	15.9	16.5	-	-	-
	Vocational High Schools	18.2	13.5	13.1	-	-	-
Tertiary Education	Total	58.4	53.1	46.9	38.9	37.8	37.4
		(39.9)	(36.1)	(32.7)	(28.0)	(27.3)	(27.2)
	Universities	44.4	42.1	38.1	32.9	32.1	31.9
		(31.8)	(29.5)	(27.0)	(24.2)	(23.6)	(23.6)
	Junior Colleges	78.0	70.9	61.2	54.2	52.9	52.4
		(51.2)	(44.1)	(39.4)	(35.5)	(34.7)	(35.0)

Note 1) Number of Students per Teacher = Number of enrolled students / Number of teachers
2) The figures in ( ) exclude the number of students on leave of absence.
3) University includes graduate school faculty and students.

C. Building / School Grounds / Gym Area per Student

Building Area per Student by Year



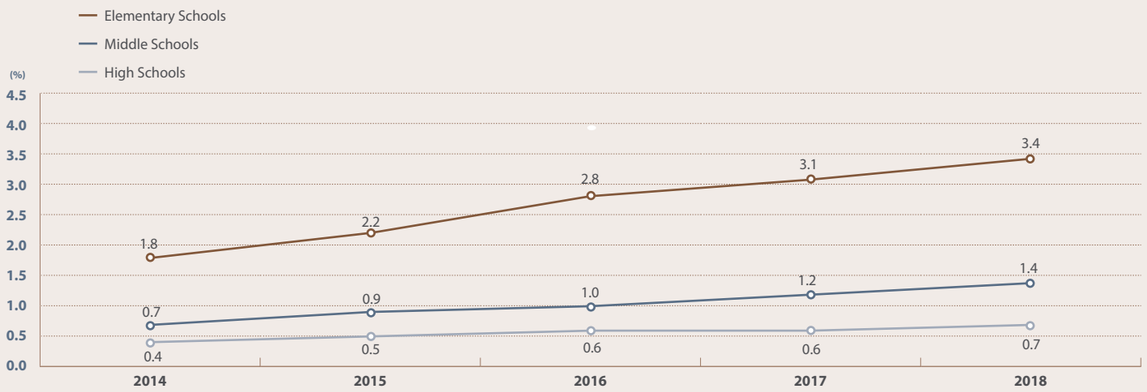
(m²)

Classification		2000	2005	2010	2016	2017	2018
Building Area	Elementary Schools	6.0	7.9	11.1	15.5	15.8	15.9
	Middle Schools	6.7	8.5	10.2	15.5	16.6	17.3
	High Schools	8.3	12.6	13.2	17.1	18.1	19.8
School Grounds Area	Elementary Schools	8.7	10.1	12.7	17.2	20.9	17.7
	Middle Schools	9.5	10.3	11.3	16.7	18.1	19.1
	High Schools	15.0	18.7	17.9	21.9	23.2	25.4
Gym Area	Elementary Schools	12.2	12.4	14.4	16.0	15.8	15.3
	Middle Schools	12.8	12.2	12.6	15.4	15.9	16.2
	High Schools	11.7	13.7	11.8	12.7	13.2	14.2

Note 1) Building area per student = Building area / Number of students
2) School ground area per student = School grounds area / Number of students
3) Gym area per student = Gym area / Number of students

5. Students from Multicultural Families

A. Percentage of Students from Multicultural Families by Year



B. Students from Multicultural Families by Type/School Level (2018)

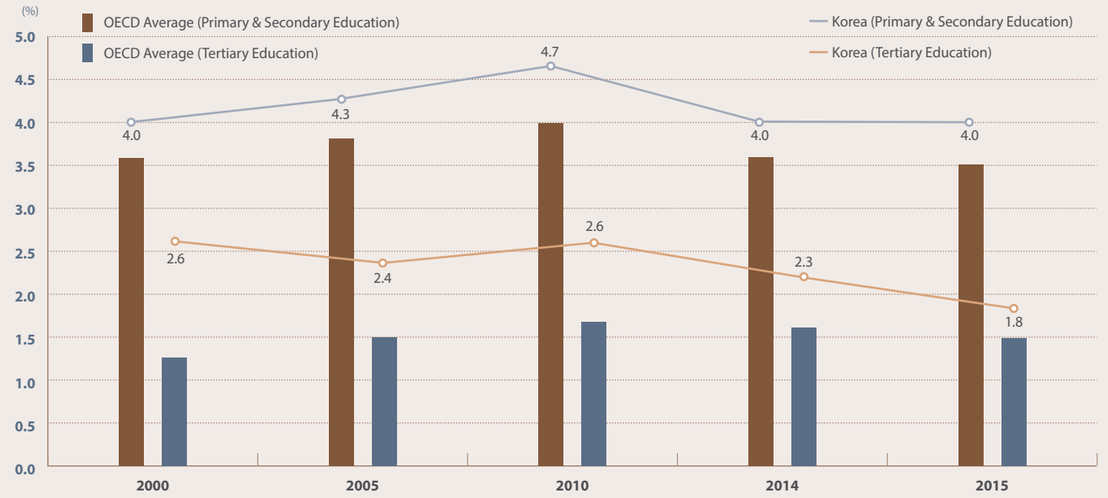
(Persons)

Classification	Elementary Schools	Middle Schools	High Schools	Miscellaneous Schools	Total
Total	93,027	18,068	10,688	429	122,212
National Birth	76,181	13,599	8,361	122	98,263
Immigrant	5,023	1,907	1,185	205	8,320
Foreign	11,823	2,562	1,142	102	15,629

Note 1) Students from multicultural families = Children of international marriages (National birth + Immigrant) + Foreign
2) National birth: Children born in Korea to a Korean national and a foreign spouse
3) Immigrant: Children who are born in a foreign country and immigrate to Korea with international-marriage parents.
4) Foreign: Children whose parents are foreign nationals.

6. Expenditure on Educational Institutions as a Percentage of GDP

Trends in Expenditure on Educational Institutions as a Percentage of GDP by Year



(%)

Classification		Primary & Secondary Education			Tertiary Education		
		Total	Public Sources	Private Sources	Total	Public Sources	Private Sources
2000 (2003)	Korea	4.0	3.3	0.7	2.6	0.6	1.9
	OECD Average	3.6	3.4	0.3	1.3	1.0	0.3
2005 (2008)	Korea	4.3	3.4	0.9	2.4	0.6	1.8
	OECD Average	3.8	3.5	0.3	1.5	1.1	0.4
2010 (2013)	Korea	4.7	3.9	0.9	2.6	0.7	1.9
	OECD Average	4.0	3.7	0.3	1.7	1.1	0.5
2013 (2016)	Korea	4.2	3.7	0.5	2.3	1.0	1.3
	OECD Average	3.7	*	*	1.6	1.1	0.5
2014 (2017)	Korea	4.0	3.5	0.5	2.3	1.0	1.2
	OECD Average	3.6	3.4	0.3	1.6	1.1	0.5
2015 (2018)	Korea	4.0	3.5	0.5	1.8	0.9	0.9
	OECD Average	3.5	3.2	0.3	1.5	1.1	0.4

Note 1) Expenditure on educational institutions as a percentage of GDP = [(expenditure from public sources + private sources + international sources) / GDP]*100
- The methodology has been updated to include international sources since the EAG 2018 version, and the total sum may differ because the figures have been rounded up. (Korean data do not include amounts of international sources).
- Korean data on public sources for the financial year 2015 are available at the OECD website, EAG web table and country notes.
2) Data refer to the financial year. The years in parentheses are the years of EAG(Education at a Glance) release.
3) Refer to 'Introductory Remarks' for more information about the level of education.
4) In Korea, carry-over and reserve from the previous year have been excluded from expenditure at the tertiary level since EAG 2018. However, in the case of early childhood, primary and secondary education, about 4.7 trillion won of the previous year's carry-over and reserve(about 0.3% of GDP) are still included.
5) The amount of expenditure which cannot be distinguished by educational level is divided by quota and included in each educational level since EAG 2017. - Korea's data for the financial years 2010 and 2013 are calculated by KEDI for time-series analysis.
6) * means unpublished figure. 'Primary & Secondary education' was divided into primary, lower secondary and upper secondary level in EAG 2016.
7) GDP of South Korea : KRW 522 trillion in 2000, KRW 811 trillion in 2005, KRW 1,173 trillion in 2010, KRW 1,429 trillion in 2013, KRW 1,486 trillion in 2014, and KRW 1,564 trillion in 2015. (Data refer to the financial year, in trillions of local currency)
Source: OECD(pertinent year), Education at a Glance: OECD Indicators(publications, web table, country notes).

Traditional Korean Villages

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Introduction

As humans made the transition to an agrarian lifestyle, they gradually settled in one place. Accordingly, they also created settlements, or collections of houses. The study of geography separates settlements into two categories: rural settlements and urban settlements. The criteria for this division include population size and density, administrative functions, foundation of the economy, and urban functions and facilities. In general, settlements which focus on primary sectors of the economy are called "rural," while settlements with a relatively higher population focusing on secondary or tertiary sectors of the economy are called "urban." Koreans call rural settlements "villages" (*ma-eul*).

In a village, the political, economic and social aspects of the inhabitants' lives are all conducted in the same place, and the characteristics of one generation are passed on to the next throughout history. Villages are also symbolic spaces where human values are projected. Villages are not only the basic unit of agricultural life; they are also communities that have been maintained for generations as the basic units of a traditional society. They are the cradle of traditional Korean culture and, as the main food producing regions in Korea, now play an important role in modern society as places of rest and relaxation for people who are exhausted by the hectic pace of urban life. On the other hand, the rapid growth of urban population and the ongoing changes in Korea's industrial structure in recent years have led to a decline in the cultural and economic importance of villages.

Villages are an important aspect of Korean society, and have long been studied and explained from various angles. This is because research on and explanations of traditional villages provide clues to understanding the current housing culture as well as Korean lifestyles and environmental awareness. In this article we will examine Korean villages according to the typical categories used in geography, such as location, form, landscape and spatial structure, and function. These perspectives will help us to understand the history and changes of Korean villages, as well as shedding light on the nature of such settlements in today's Korea.

Ideal location of a Korean village

The location of a village refers to the place where it is located. A village's location not only affects its size, form, and function, but also has a large influence on the formation of its landscape. In general, the conditions of any given location can be divided into natural conditions and human conditions. Natural conditions can then be further separated into topography, geology, climate, and vegetation; whereas human conditions can be divided into economy, transportation, politics, social conditions, and cultural traditions. It is not easy to inspect each one of these conditions separately because they act on each other and influence the creation of a village.

Generally speaking, the location of a village does not change significantly once it has been chosen and the village established. Therefore, we can understand the first inhabitants' value system with regard to the natural world and their way of life by looking closely at the location of their village. Because of these characteristics, it is important to evaluate the location of a village based on the mindset and ways of thinking of the inhabitants at the time the village was established, and not by today's standards.

So what were the most important factors for Koreans when choosing a place to build and live their lives in times past? There is a book titled *Taengniji* (擇里志), written by a scholar named I Junghwan (李重煥, 1690-1756) in the eighteenth century, which describes the conditions that Koreans in the pre-modern era considered in choosing their home. In his book I Junghwan asserts that "When choosing a place to live, you must first examine the geography, and then the physiology, the mind, and the surrounding scenery." According to modern theories, geography and scenery refer to natural conditions, while physiology refers to economic conditions, and the mind refers to cultural conditions such as customs. Here, we can see that natural conditions are emphasized more strongly.

The natural conditions to be considered when determining the location of a village included topography, climate, soil, and vegetation, with the most important of these being topography. In another book titled *Hanjeongnok* (閑情錄), which was written by a famous scholar named Heo Gyun (許筠, 1569-1618) who lived nearly 100 years before I Junghwan, the importance of geography is emphasized with these words: "Before choosing a way of life, you must first choose the geography." In that time, geography generally referred to topographical conditions. In this respect, the most important features were water conditions and the lay of the land.

Water is indispensable to human survival and agriculture. Conversely, it can also be the cause of catastrophic disasters that threaten agriculture and human life. Therefore, the perfect village should be built in a location where clean water is easily accessible but where the threat of flooding is remote. I Junghwan divided the locations for Korean villages into seaside locations, riverside locations, and valley locations. When considering the importance of water, it is understandable that I considered valleys to be the best locations for villages. He asserted that seaside locations were undesirable, stating, "While transportation is convenient and fish and salt are readily available, strong winds and illnesses are common, spring water is scarce, the soil contains salt, and murky sea waters can flood the land." As for riverside locations, he claimed that they were unsuitable for villages: "There are few such locations where one can reap agricultural benefits. As the land is low, crops cannot be harvested if the crops are flooded, and irritation is difficult if the river is deep and wide. Droughts and floods are prevalent." On the other hand, he argues that valley locations are ideal for villages: "There is calm beauty and clean scenery. Irrigation is convenient, and farming is profitable." To summarize, seaside and riverside areas are undesirable when



A village placed in the characteristic *baesan-imsu* type of location. It is located on a gentle slope against the side of a hill. ©Jung Chi-Young

considering water conditions—the former because clean water is scarce and because of the threat of damage from seawater, the latter because of the high possibility of floods or droughts. I Junghwan states that valleys are the best places to inhabit because they offer easy access to clean water.

Topography refers to the arrangement of mountains, fields, and water. Examining this, I Junghwan says, "When choosing a location, you must choose a field that is wide and cut off from water. However, it is easy to find a place that is blocked off from water on a mountain, but it is difficult to find such a place in a field." Heo Gyun said, "The topography is best in a place where water and land are complementary, so it is best to choose a place that has a mountain behind it and which looks out over water. However, one needs a place where the land is wide and blocked. In general, wide land is good for production, while blocked land ensures one can acquire greater wealth and profit."

When we put together the opinions of these two scholars, the best locations may be said to be places that face a river or a body of water, with mountains to their rear. In Korean, this type of place is called *baesan-imsu* (背山臨水) and has been valued as an ideal location for villages since ancient times. The best location would be spacious fields with a small entrance, surrounded by mountains and hills. The main reason why mountains were so important in Korean topography was because there are so many mountains in Korea. Some seventy percent of Korea's land is mountainous, which means that little of the peninsula is flat. However, there are not many high mountains (40% of the mountainous land ranges from 200 to 500 meters above sea level), and most of the land is covered by small mountains or hills.

After combining these two conditions of water and topography, the village site most favored by traditional Koreans was a valley beside a stream or a basin with a small river. These valleys or basins typically have a stream or river on one side, while the other three sides are surrounded by mountains or hills. In particular, people looked to build their village on flat land which met mountains or hills to the north and sloped gently down to the south. This type of location offered several advantages. First, the mountains to the north would provide shelter from cold winds in the winter. Korea has a temperate continental climate with very hot summers and very cold winters. As such, it is especially important to block out the cold northerly winds of winter, so mountains to the north of a village acted as a natural barrier. Second, if a village is located on a sloping field on the south side of a mountain, it will be sunny and warm, and drinking water will be accessible due to the low water table. Third, the risk of flooding can be avoided. The average annual rainfall in Korea is around 1,200 mm, and 60% of annual precipitation falls between June and September. Typhoons are also common in the summer months. There are many cases of flooding in which streams overflow during the summer rains, causing much damage. However, the threat of floods can be avoided by establishing a village on a gently sloping plain.



A village situated on an alluvial plain, @Jung Chi-Young

From an economic point of view, this type of place has plenty of arable land which is not only able to provide firewood and timber but also a variety of foods such as mushrooms and tree fruits. In addition, the stream flowing in front of the village, while smaller than a river, provides nutrient-rich alluvial soil that is suitable for farming.

Because rice has traditionally been the main staple of the Korean diet, rice farming was at the center of agriculture. And because rice grows in water, the success or failure of a rice crop depends on a sufficient water supply. However, in the traditional era when civil engineering techniques were not developed, valleys and basins were better suited to rice cultivation than plains beside a large river. This is because it is not easy to extract water from a large river, as mentioned above by I Junghwan. Thus, before the beginning of the twentieth century when large-scale irrigation facilities were developed, areas beside large rivers were often plagued by floods and droughts. Conversely, valleys or basins contained relatively smaller streams or creeks in which the local inhabitants could build barrages or dams to manage rice farming without excessive effort. A barrage is an irrigation technique in which a part or all of a stream is blocked, leaving a waterway at one end to direct water into the rice paddies. These structures could be built and managed with a small labor force at low cost. Considering the self-sufficient, agricultural economic system of the time, valleys and basins can be seen as the ideal location for a village in terms of the "physiological" factor as well.

Korea has also been attacked by external enemies many times throughout its history and has also experienced many domestic political and social upheavals. The intensified party struggles and massacres of scholars that occurred in the late fifteenth century led the ruling class to begin searching for a utopia. After the Japanese Invasion of Korea in 1592 (*Imjin Waeran*, 1592-1598) and the Manchu War of 1636 (*Byeongjahoran*, 1636-1637), the general public joined in this quest for a safe haven from war and disaster. Of course, these social trends also had a considerable impact on village locations.

The qualities of this safe space sought by Koreans in ancient times are described in the Legend of Cheonghakdong (青鶴洞 傳說), which tells of a Daoist utopia, as well as in prophecies like Jeonggamnok (鄭鑑錄), which was believed by many people. "Cheonghakdong" was supposedly a utopian village in Jirisan, a large mountain in southern Korea. In a book describing it, Cheonghakdong was located on a large plain surrounded by mountains on all sides, with a very small entrance. It was situated in a basin said to resemble a gourd-shaped bottle laid on its side. The prophecies describe "*bosinjiji*" (保身之地) as a safe place to live that protected inhabitants from war and social upheaval. It is also typically described as a gorge or basin surrounded by steep mountains on all sides, with a narrow, bottlenecked entrance connecting the village to the outside world, and where a stream flowed out of the gorge or basin through that narrow entrance. Thus, Daoism's Cheonghakdong and the *bosinjiji* of the prophecies are similar in geographical terms. Their entrance is narrow and steep, rendering the inside completely invisible from the outside; while the rest of the location is surrounded by steep mountains, making it easy to prevent access to outsiders. Although the inner area is not large, it is fairly flat and sufficiently large to farm enough food to sustain the village. It is clear that this is the best place for settlement and refuge.

This type of location also corresponds with the feng shui (風水) idea of "*myeongdang*" (明堂), which has had a profound influence on the locations of Korean villages throughout the centuries. Feng shui, a traditional ideology originating from China, was a guide to the use of land. Since ancient times *feng* shui has been used in Korea as an important criterion in choosing the locations of homes and villages, cities, the capital, and even the graves of the deceased. In feng shui, *myeongdang* essentially means "the best place to live." The topography of a myeongdang site generally consists of a main mountain situated directly behind the village, with a mountain range extending like a folding screen on each of its sides. Streams originating in the mountains flow down to the right and left of the *myeongdang*, joining the stream which flows in front of it. Beyond that, mountains block the path again. However, this kind of topography is difficult to find on wide plains or on the coast, and is mainly found in valleys or basins beside mountain streams or creeks.

So far, we have reviewed some of the conditions that Koreans considered important when choosing a place to live and the ideal location for a village. We can see that Koreans traditionally preferred to settle in a valley beside a mountain stream or a basin with a small stream. And in fact there are many villages in places like this. According to a survey dating from the early twentieth century which categorized 1,685 traditional villages by their geographical features, more than sixty percent of those villages (1,020) were located in such an environment. Further evidence that Koreans favored valleys as the location for their villages is the fact that many of the place names in Korea end in Korean words which mean valley, such as *gol*, *sil*, *gok* (谷), *dong* (洞), or *gye* (溪).

But not every village in Korea is located in a valley or a basin. There are villages located on the flood plains of large rivers, and these are categorized as riverside villages (as mentioned above). Because of the risk of flooding, especially during the summer season, riverside villages were not extensively developed before the construction of man-made riverbanks or embankments, although some villages were established on the relatively higher ground of natural levees. In addition, the economies of these villages were based more on water traffic than on agriculture. Flood plains, the alluvial plains beside large rivers, began to be developed as agricultural land starting in the sixteenth century, i.e. much later than valleys or basins, and their full-scale development was only accomplished after the Japanese colonial period by building artificial levees and irrigation systems. Since then, the alluvial plains of large rivers have become the representative rice growing regions of Korea, and consequently villages developed relatively late in these areas. However, even villages on alluvial plains were established on natural levees with a relatively higher



A village established beside a sandy beach. @Jung Chi-Young

altitude or beside hills to reduce the risk of flooding.

As Korea is surrounded by water on three sides, there are many villages on the coast. Many Korean seaside villages have a semi-agricultural and semi-fishery economy rather than relying on fishing alone. Among the villages that do rely mainly on fishing, most are located on stretches of rocky coastline with little arable land.

Rocky coasts are formed when bedrock is exposed by ocean waves in arable land beside the ocean, and the water in such areas is much deeper than elsewhere, which makes it easier to launch fishing boats. These coasts have good conditions for the development of fishing due to the abundance of fish and algae, and a greater abundance of fish due to the reefs on the sea floor. More specifically, Korean fishing villages developed best on headlands that protrude into the sea or on narrow flats of land between headlands. This is because headlands serve as a natural breakwater against rough waves and winds, protecting fishing boats during adverse weather conditions such as typhoons, and giving the inhabitants peace of mind in normal times. In addition, these villages are surrounded by hills or mountains (except for the side on the coast) and face south. This makes it possible to use the surrounding mountains, and it is also advantageous because they receive a great deal of sunlight, which is useful for the drying of fish and seaweed. On the other hand, villages located on sandy beaches have typically focused on agriculture rather than fishing. Because sandy beaches are also popular tourist destinations, many villages base their local economy on tourism.

Agglomerated village, the dominant form of Korean village

The form of a village refers to the way in which the houses of a village are arranged; and there are many different types of forms depending on the density of the houses and the overall geometric shape of a village. The form of a village is also dependent on the natural and historic background of the location and the social and economic conditions of the village itself. The form of a village develops over a long period of time after the first residents settle there, and its form continuously changes over time as families or parts of families enter or leave the village.

A village's form can be described as either a clustered rural settlement or a dispersed rural settlement based on the density of the houses. Clustered rural settlements can then be divided into agglomerated villages, row villages, and street villages according to the organization of the streets and the geometric shape of the village. In a clustered rural settlement, houses are closely gathered together in a location to form a group, while houses in a dispersed rural settlement are separated by distance. As there are no exact classification criteria - such as the distance between houses, the number of houses, or the size of the village - some villages naturally fall somewhere in between these two categories. However, if we use the strict definition of the dispersed rural settlement, wherein each house must be isolated, then this type of settlement is very scarce in Korea. In South Korea, they are limited to the Taebaek Mountains in Gangwon-do, the Taean Peninsula in Chungcheongnam-do, and the orchard area in Jeju-do. The history of villages in areas with dispersed rural settlements is relatively short compared to other areas, and dry-field farming was the main productive activity of such villages.

Predominately, homes in Korean villages are built close together, and most villages are considered agglomerated villages. Agglomerated villages consist of an irregular and disordered cluster of homes. In typical agglomerated villages, homes are built right next to each other, though separated by walls and fences, with meandering, narrow alleys in between them. Although the houses are small, the courtyards are typically large. The reasons why clustered rural settlements - and agglomerated villages in particular - were most common in Korea are as follows:

First, Korean villages are largely unplanned, that is, they spontaneously formed over long periods of time. Most villages in Korea were not built in in short periods of time as a result of collective relocations of a population. Instead, a village would start with one or two families at first and, perhaps over a period of hundreds of years, it would gradually take shape as their descendants built new houses and new families sporadically migrated to the village. Therefore, it was impossible to plan out the organization of the houses. Each time a new family needed a home, it would be built after considering the lay of the land and land ownership.

The second factor is the characteristics of land ownership and the inheritance system. This is a general characteristic of Korean farming regions, and it can be discussed according to two aspects: land for houses and land for farming. First, in the case of land for houses, it was common practice to build a house on land that was already owned when a son of a family got married, typically directly beside the parent's house. When this proved impossible, there was generally another space or plot of land in the village on which to build a new house. Following this pattern, however, houses became more clustered and disorganized as time went by. While there were other causes, the reason someone left their native village to start their own life elsewhere was because there was no more space in the village to build. In the case of land for farming, older villages had more small patches of land spread out over a large area. Because one person's farmland was spread over a large area, the expectation of receiving benefits from having one's home near or on the farmland was minimized. Such benefits might include saving time and efficiency of labor. Therefore, it



View of an agglomerated village. @Jung Chi-Young

was more reasonable to live near the center of all these dispersed plots of farmland, and this led to houses becoming even more clustered.

The third factor is the limited nature of land. As discussed above, the most desirable location for a village was a valley or a basin. As these locations are surrounded by mountains or hills, there is less land available to build houses on than on open plains. Furthermore, all flat land was cleared in order to secure as much farmland as possible, thereby reducing further still the amount of land available to build houses on. Houses were built nearly on top of each other, with fences marking the boundaries of each property. In addition, feng shui, which played such a large role in choosing the locations of villages, also promoted the agglomeration of villages. The type of place known as a *myeongdang* in feng shui tends to be very small, so the houses are very concentrated in these limited spaces.

Fourth is the relationship with agriculture. Korea has long been an agrarian society based on rice farming. This rice-based form of agriculture was an important factor in the concentration of houses. Rice farming requires an enormous amount of labor to construct and maintain irrigation systems. In particular, it requires concentrated and organized labor at specific times, such as the planting and harvesting seasons. Rice farming is impossible without the cooperation of an entire village. Thus rice farming led to the establishment of clustered rural settlements in Korea's agricultural areas.

Fifth, many Korean villages were based on Confucian principles and were inhabited by people of the same family. Let us call them "kinship villages." This also led to the formation of clustered rural settlements. In villages with longer histories, the trend to cluster homes was emphasized. In other words, villages with long histories are more likely to be clustered rural settlements, whereas villages with shorter histories are more likely to be dispersed rural settlements.

Although very few in number, there are examples of row villages (*yeolchon*) and street villages (*gachon*). Row villages are formed when houses are built in a line along a natural feature, such as the foot of a mountain or a shoreline, or along man-made structures such as roads or canals. Amongst these, settlements which have a close connection to roads and are built parallel to a road are called street village. Row villages are not a common type of settlement in Korea. There are a few examples of row villages among the planned settlements built on reclaimed land or along the coastline.

Street villages are located along a transportation route and have a commercial function, but they were not as developed in Korea as other countries. This was detrimental to commerce in traditional Korean society and led to poor road management. Also, Korean people were reluctant to live by the roadside. In "traditional" society people believed that roads were pathways for infectious or contagious diseases and evil spirits. They also saw them as pathways for the propagation of immoral things that would harm traditional culture. Therefore, street villages were only developed in earnest after the development of commerce in Korea in the eighteenth century.

The landscape and spatial structure of traditional Korean villages

The landscape of a village is formed over a long period of time by a combination of the lifestyle, values and social systems of the village's inhabitants and the natural environment. Therefore, it is difficult to make generalizations about landscapes because they take on many different forms depending on the characteristics of a village, such as the location, history, and social structure of the inhabitants. However, we will try to make a few generalizations regarding the structure of Korean villages by focusing on the similar landscape elements found in many villages.



A narrow alley: It may look like a dead end, but the lane leads to a house on the left. @Jung Chi-Young



A *doltap*, or stone pagoda, at a village entrance. @Jung Chi-Young



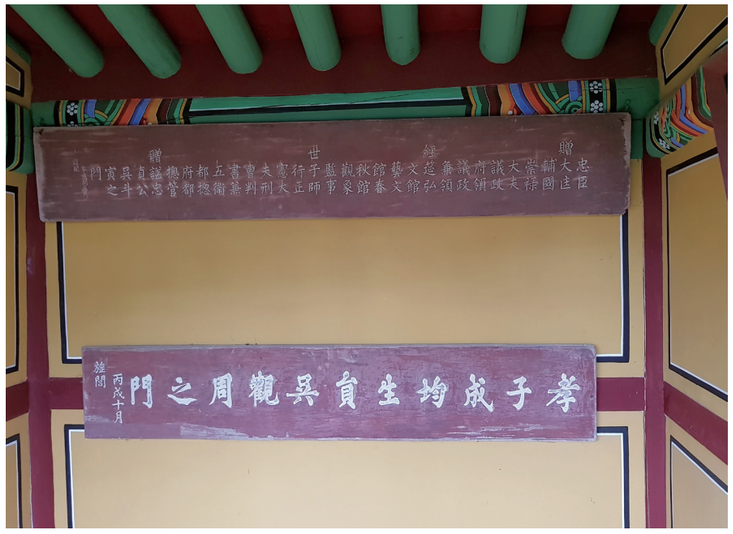
A *sotdae*, or pole. @Jung Chi-Young

Let's first look at roads which connect the village to the outside world or different areas inside the village. As previously mentioned, Koreans used to believe that roads were pathways for communicable diseases and evil spirits, as well as for the propagation of immoral things that would harm traditional culture. Because of this, Koreans built their villages as far away from large roads as possible, while smaller roads led to the entrance of the village.

These smaller roads were only wide enough to allow people or horses and cows to pass through, and it was common for them to twist and turn to follow the boundaries of plains or streams. In order to prevent outsiders from visiting a village without a purpose, the roads were intentionally built in such a way that the village could not easily be seen from the road. Also, it was common for such a path to cross a stream or go over a hill as it came closer to the village. Of course, this is partly because Koreans preferred locations in between mountains and streams. However, there are many cases in which the entrance route was intentionally made to pass through streams or over hills. Hilltops and streams are places in which a traveler commonly stops to rest, and so they acted as a sort of rite of passage into a sacred village.

The main road (*angil*) inside the village begins at the village entrance and connects the village's most important elements. It stretches to the rear border of the village. Side roads (*saetgil*) are connected to the main road and spread through the village to connect each house. In most traditional villages, the main roads and side roads are shaped like the trunk and branches of a tree, so there were no parallel or straight roads in the villages. In particular, the side roads often look like dead ends leading to house walls when looked at from the entrance. But if you follow these roads, many times you will eventually see that the road turns to reveal a narrow alley (*gosat*) that connects the side road to the front gate of a house. These narrow alleys are a means of keeping out intruders, and also play a role in preventing cold winds from entering a house during the winter. These side roads were commonly used as play areas by children, as gathering places by adults, or as places to dry crops in the fall, and they are still used in similar ways today. This shows that village streets were more than just a method of getting from one place to another. They also functioned as the yards of homes and as meeting places.

Various landscape elements with symbolic meaning can be seen at the entrance to each traditional village (*donggu*). These elements are a fusion of folk religion, feng shui, and Confucian ideology, all of which exerted considerable influence on the philosophy and way of life of Korean people. Examples of these include stone pagodas called *doltap*, tall poles called sotdae, Korean totem poles called *jangseung*, and ancient trees (often called sacred trees) or forests. According to feng shui these landscape elements held in the good energy of the *myeongdang*, while according to folk religion they served as an invisible barrier that prevented negative energy or disaster from entering the village from outside. These symbolic elements were placed to bring wellbeing and prosperity



A *jeongnye*, or memorial honoring a devoted son. @Jung Chi-Young

to the village, and the villagers would perform annual rituals dedicated to them. Let's examine the features and functions of each element. Stone pagodas are typically cone-shaped structures made from natural stones, and they were usually built near a place where water exits the village. This is especially connected with feng shui. A stone pagoda was meant to block a space that had been opened by water and stop good energy from leaving the village. A *sotdae* is a stone or wooden bird, usually a duck, placed on the top of a tall wooden pole or stone pillar. This tradition has its origins in the shamanism of northern Asia, and they were erected to prevent bad energy from entering the village and to represent the inhabitants' hopes for prosperity. A *jangseung* is a head-shaped pillar made of wood or stone, which acted as the village guardian. They also sometimes served as milestones or location markers. However, the most common feature found at the entrance to a traditional Korean village is a sacred tree or forest. Koreans believed that old trees and forests played a role in connecting people with the sky; and a tree with strong fertility and a long lifespan was seen as a sacred source of vitality. Aside from their symbolic meaning, such trees also served as a meeting place as well as a space for rest, relaxation, and play.

Because of the great influence that Confucianism had on the minds and lives of Koreans, there are also many landscape elements near village entrances which are based on Confucianism. Examples of these include the memorials called *hyojabi*, *yeollyeobi*, and *jeongnyeo*. *Hyojabi* are memorial stones erected to memorialize children who were faithful in their duties to their parents; yeollyeobi are also memorial stones and were erected to honor a woman who remained faithful; and *jeongnyeo* were built by the state as a kind of award to honor devout sons, virtuous women, and loyal subjects. These symbols were intended to instill in villagers a sense of loyalty and filial piety and to show outsiders the prestige of the village. The symbolic landscape elements that we have examined so far each have their own form. While in some cases these symbols may appear alone, it is common for two or more of these elements to appear as a composite in most villages.

As we saw above, most traditional Korean villages expanded organically and the houses are clustered in an unorganized way. Therefore, it is not easy to find distinguishing characteristics for all villages, but if you look closely at the inside of a village, you will perceive certain similarities in the landscape and spatial structure of villages. First, the largest and most well-built house is located in the center of the village or at the highest and sunniest point. Inhabitants of high social or economic status were able to obtain the best places according to feng shui principles. In the case of kinship villages, the main house of the family, the *jongga*, was built in this place and the successor of the head family lived there. On the other hand, the houses of inhabitants who were economically or socially inferior were located on the outskirts of the village and on relatively lower ground. In the past, it was possible to distinguish between these two groups simply on the basis of landscape.



A village's communal well. @Jung Chi-Young

There were also areas inside the village that were shared by all of the inhabitants, the most common examples being wells and mills. Wells served as the main source of drinking water. Because establishing a well was important at the time a village was built, many villages formed around the location of their wells. As a result, many villages have a well near their center. Wells were also used by women as an important place for exchanging information. The mills that remain in most villages are scenic indicators of the fact that traditional villages in Korea were based on a self-sustaining system of grain farming. Mills were most often found at the entrance to or center of a village, whereas watermills were located by nearby streams.

Beautiful buildings like shrines, pavilions, *seodang* (village school), and *seoweon* (school and shrine) were built in kinship villages or villages where *yangban*, the so-called ruling class of the pre-modern age, lived. Shrines are structures placed within the village limits where the inhabitants would perform rites for ancestors who had brought honor to the family through their loyalty, filial behavior, or scholarship. Pagodas are located in quiet places, somewhat apart from the village, near stream beds or in a forest. A pagoda was a place of rest for the inhabitants of a village as well as a place for educating the village children. *Sadang* and *seoweon* are private education institutions established for the education of a village's youth. *Seoweon* also served as a



View of a forest and a pagoda at the entrance of a village. @Jung Chi-Young



Hahoe village: Korea's most representative kinship village. @Jung Chi-Young

place to perform rites for ancient sages. Although these buildings had various practical uses, they were also intended to show the strength of the village and prestige of the family to outsiders.

Traditional villages in Korea are generally located in front of mountains or hills. It is common to see graves concentrated in sunny spots on these mountains or hills. The graves are shaped like the mountains of Korea. In kinship villages, buildings called *jaesil* (齋室) were built in between the graves and the village. These *jaesil* were used to prepare ritual foods for ancestral rites, and also served as lodgings for descendants who came to pay their respects.

Farming areas, the economic base of the inhabitants, are spread outside the village. Cropland development was almost entirely dependent on human labor using basic farm equipment such as plows and hoes. The land was shaped slowly over a long period of time, starting as soon as people settled in a location. As such, the landscape was influenced greatly by the topographical features of the land. Rice farming, the most common type of farming in Korean history, is more dependent on topographical features than dry-field farming. Farmers cultivated rice paddies one at a time by identifying land that was easy to level, as this made it possible to irrigate the fields and flood them with water. Therefore, the layout of the fields was very disorganized, and individual rice paddies varied in size. In the pre-modern era, fields could be distinguished by their shape: square, rectangular, trapezoidal, triangular, diamond, conical, crescent, horn-shaped, circular, serpentine, pentagonal, drum-shaped, etc. Fields in flat plains were relatively large, whereas fields in valleys or other places with steep slopes were small. In particular, terraced rice paddies in mountainous areas with high slopes frequently covered less than 30 square meters. Moreover, farming land was continuously divided by inheritance, transfer, or sale as the number of a village's inhabitants grew over time and migrants moved in or villagers had offspring. Before the land redevelopment plans of the 1960s, the farming landscape was a mixture of rice paddies of varying size and shape, intertwined with narrow and meandering ridges in between them. In villages with exceptional rice farming output, irrigation facilities, such as small reservoirs or irrigation pools and waterways connecting them to the rice fields, were added as important landscape features.

There were production spaces even in the inside of a village, which was mostly a living space. The most common of these was the vegetable garden. Vegetable gardens were located in the front and back yards of homes and even in between them. Anywhere a plot of empty land could be spared, gardens were planted to provide vegetables. These gardens were part of the traditional self-sufficient lifestyle; and, unlike the rice fields, they were typically looked after by women or the elderly. However, they were the most productive growing areas because of the close attention the women and elderly paid them.

The landscape and spatial structure described here have undergone, and are still undergoing, significant changes due to the urbanization and industrialization of Korea that began in the 1960s. In particular, the *Saema-eul* (new village) Movement project of the 1970s was an opportunity to reorganize the traditional landscape of villages all around the country. The Saema-eul Movement was in essence a national community development project. As part of the project, the roads leading to villages were widened and straightened, which inevitably changed the entrances to many villages, and many of the symbolic landscape elements were destroyed. In their place, village halls, communal warehouses, senior citizen centers, and other new landscape features were erected. The effects of rapid population decrease due to migration to cities and changes in the values of villagers were especially severe in kinship villages. The cooperative spirit declined in these villages, and many of the symbols of the kinship's power—the main family home, *jaesil*, pagoda, *seoweon*—lost their function or fell into ruin due to a lack of management. In the case of farmland, the size and shape of fields were standardized, and farm roads were constructed to make the land suitable for mechanized farming. Such practices completely changed the landscape of the land.

Villages with non-agricultural functions

Up until the 1960s, agriculture was the main sector of the Korean economy. Accordingly, the most prominent and numerous type of village was the agricultural village. However, there were villages with functions other than purely agricultural functions. First, there were fishing villages inhabited by people involved in the fishing industry. Along with farming and forestry, fishing is a primary industry, but the main production space consists of ocean and rivers rather than land. The products of the fishing industry are much more perishable than farmed goods, so they were used as bartering goods. Another important characteristic of fishing villages is that it is hard to live on fishing alone because of the uncertain nature of the industry. Consequently, the livelihood of most of the inhabitants of fishing villages consisted of both farming and fishing, with virtually no villages focusing solely on fishing.

The largest difference in terms of spatial structure between agricultural villages and fishing villages concerns production space. For an agricultural village, the production space is farmland, which either surrounds or is close to the farmers' houses. It is limited to the amount of land owned by the village or individual. Conversely, for a fishing village, the production space consists of fishing grounds that are completely separated from residential spaces, and for most coastal fishing grounds, their scope and ownership are nearly unlimited and can be continuously expanded by developing better fishing equipment and technology. This fundamental difference led to marked differences between the houses of fishing villages and those of agricultural villages.

Because most of the work in a fishing village is done on the beach or on boats, the houses of fishing villages do not need large, multipurpose courtyards of the kind used in agricultural villages to dry or thresh crops. Also, because production and storage in agriculture are separate processes, each farmhouse must have its own collection of harvesting and farming equipment, as well as storerooms or sheds and barns in which to raise livestock. Due to the nature of fishing, however, much of the work is done at the same time. And because the produce is not stored in the home, there is no need for auxiliary buildings at every house. Instead, many villages operated shared storehouses near the ocean to store things like fishing gear. Therefore, the houses in fishing villages are smaller than those in agricultural villages because they were simply places where fishermen lived and rested, rather than worked. In many cases, the houses are situated right next to each other without a fence.

There are differences in the spatial structure of fishing villages depending on their size and function. Small fishing villages are arranged in the following order from the sea: wharves, communal structures like village halls and warehouses, living spaces, and small plots of farmland. In these villages, there are no other fishing port facilities besides small wharfs. Large-scale fishing villages, on the other hand, are typically built in the following order from the sea: wharves, seaside processing and distribution facilities, communal structures like village halls and warehouses, with living areas and plots of farmland situated even further back. A large village might resemble a city in terms of size and landscape. In more detail, the wharf area of a village has a lighthouse, a breakwater to protect ships and facilities from heavy waves, and a lighter wharf for transporting fish. There are many shops and facilities along the beach including fish sellers, ship sellers, smithies, gasoline stations, processing plants, refrigerated plants, joint markets, fisherman's guild halls, and warehouses. Directly behind these lie public institutions like financial institutions, post offices, and health centers, as well as service facilities such as restaurants, inns, and bars. The living areas are located furthest away from the ocean, and the houses are much more clustered compared to small-scale fishing villages. Many such villages are built on terraced slopes.

Because Korea is surrounded on three sides by water and the seas were full of fish in the past, conditions were very favorable for the fishing industry. However, the amount of fishing in Korea remained very low until the nineteenth century, and the development of pure fishing villages was weak. This is because fishing was looked down on in comparison to farming, and there was low demand for fishing products. Above all, Korea's economy of the time was based on self-sufficiency, and it was impossible to be self-sufficient by fishing alone. The most-widely used method of fishing in pre-modern Korea consisted in erecting



View of a fishing village. @Jung Chi-Young

posts in tidal areas and using the ocean tide to catch fish in traps attached to the posts. As new fishing methods and supplies were introduced to Korea during the Japanese colonial period in the early twentieth century, the Korean fishery industry developed dramatically. The Japanese had already started taking control of Korea's coastal fishing industry in the late nineteenth century, and after Japan's annexation and colonization of Korea, they installed fishery facilities in the main fishing areas and began establishing pure fishing villages by importing fishermen.

During the Japanese colonial period, several large-scale fishing villages were developed, and the number of fishing households steadily increased. However, the majority of Korean fishermen could not escape from the small coastal fishing villages, so most of the villages retained their dual function as semi-fishing and semi-agricultural communities. Illegal fishing during the confusion of national liberation and the Korean War led to the depletion of fish stocks in the waters near the shores of the Korean peninsula, and the development of Korea's fishing villages faltered. The 1960s, however, brought a breakthrough for fishing villages. The number of purely fishing villages increased with the development of better fishing tools and larger boats, which meant that fishermen could venture further from the shore. Perhaps the most significant development was the aquaculture industry, and the number of villages which switched their function from traditional fishing to aquaculture rose dramatically. In recent years, the number of fishermen in Korea declined steadily due to marine pollution caused by industrialization and urbanization and the ongoing depletion of fish stocks. In addition, large-scale reclamation projects in the tidal plains on the west coast have caused many fishing villages to lose their function.

There are many mountain villages in Korea as seventy percent of the land is mountainous. However, the function of mountain villages is very similar to that of agricultural villages. A majority of these villages are focused on agriculture, with only a small number concentrating on industries particular to mountains, such as forestry and mining. Mountain villages are located in areas with a high degree of ecological change. Even villages that are near each other might have very different natural qualities due to differences in altitude. All of these factors affect the location and function of a village. In the past, many of these villages focused on self-sufficiency and rice farming because, unlike the agricultural villages of the plains, they had to deal with conditions that make farming more difficult, such as the steep incline of the land and unfavorable weather conditions. As such, these villages relied on the products of the forest industry, such as timber and firewood, to generate income.



View of a mountain village in Jiri-san, a representative mountain area in southern Korea. @Jung Chi-Young

Major changes came to these mountain villages starting in the 1960s with the development of natural resources. In particular, coal mining and limestone quarrying were developed in the Taebaek Mountains in eastern Korea, which naturally led to the establishment of mining settlements. Diverse developments were accomplished as railways and road networks were built to transport the anthracite and cement produced in the area. In the summer months, the temperate climate of the mountain region was well-suited to farming radish and cabbage, and alpine farming took off. Furthermore, livestock farming expanded as pastureland was developed. And in recent years, the tourism industry has been growing rapidly thanks to the area's unspoiled natural environment and beautiful scenery. With the boom in the sports and leisure industry, accompanied by the introduction of ski resorts, recreational forests, and condominiums, mountain villages have undergone substantial changes. The houses of mountain villages tend to be small due to the steep slope of the land, and are also built sturdily because mountainous areas have a relatively cooler climate and are susceptible to strong winds. Work which is done in the outside courtyards of agricultural villages is generally done inside the houses of mountain villages, and even stables are often located inside homes.

Villages have been established at major transportation points on roads or waterways, and these exhibit different characteristics from agricultural, fishing, and mountain villages. In this article, they are collectively referred to as "transit villages."

Amongst transit villages, there are villages built by water routes and villages established near land routes. Before the nineteenth century, water transportation using rivers and the ocean played a crucial role in the transportation sector because roads and railways were not as developed. In particular, large rivers were used as inland waterways for the transportation of goods and commodities, and served as a kind of artery connecting regions across the country. Therefore, shipping settlements were established in locations along large rivers traversed by boats for the loading and unloading of goods. Ferries were located in places where roads crossed rivers, and ford settlements were established at these ferries.

Station settlements were one kind of transit village built beside land transportation routes. Throughout the entire pre-modern period, waterways were mainly used for transporting cargo, while land routes were used as channels for administrative communication. The government set up and administered stations at important spots along the land routes, and villages naturally formed around these stations. In order to maintain the administrative communication network, these stations provided horses and manpower to administrators travelling on official business, and the settlements where these people lived were called "station villages." These villages were centered on inns called weon where administrators and regular travelers could rest. After the seventeenth century, however, weon started to become less popular, and taverns (*jumak*) sprang up in their place. A tavern is a business which provides alcohol and food and a place to sleep for traveling salesmen and travelers. Taverns would typically gather to form their own sort of town along the major traffic routes.

Transit villages are very different from agricultural, mountain or fishing villages not only in function but also in form. Agricultural, mountain and fishing villages are typically agglomerated villages consisting of disorganized clusters of houses. In transit villages, the layout of houses is relatively organized, forming a roadside village with most of the houses lined up along a roadside or waterway. In addition, the spatial structure of these villages is different. Whereas port and ford villages are centered on wharfs for transport ships, station and tavern villages are built around land transportation routes.

Port and ford settlements are often built on river embankments or hills that are accessible to the wharfs. The houses are either built in a line along the river or in lines along either side of the road leading from the river. In these villages, the ferry or docking wharf form the central structure of the village; and trees were planted or stone pillars were erected to secure ships, and a road was built up to the village on the embankment to allow the easy transportation of goods and people. The structure of these villages built on top of an embankment or beside a hill was relatively simple. Service and commercial facilities, such as inns and taverns, in which travelers could gather to rest or to barter, sell or store their goods, faced the roads or river, and behind them were the houses of the villagers including that of the ferryman.

Station settlements, as opposed to other transit villages, were typically agglomerated villages. These villages were planned by the government to provide comforts to people travelling on the roads, but the government also strictly regulated the commercial activity of the villages. The farmland provided by the government became the foundation of economic production in these towns, which in effect made them no different from the self-sufficient agricultural villages. Therefore, there was no need for houses to be lined along the road to boost commercial activity.

It is difficult to fully understand the structure of these settlements because *weon* villages and station villages began disappearing in the eighteenth and nineteenth century respectively. This was due to the fact that their functions were no longer needed. However, we can assume that their respective structures were very simple. Station villages were composed of houses for the station administrator and servants, which were built around the government office building and stables for the horses. *Weon* villages were composed of around 1-5 *weon* and a few normal houses. Tavern towns, which developed later on, were more like roadside villages in that the buildings were built along the village's main road, but the structure of these villages was also very simple because their history was so short.

The function of transit villages underwent extreme changes during the rapid social and economic changes that followed the Japanese colonial period. Station and *weon* villages were the first to experience change. *Weon* villages had already undergone changes in the eighteenth and nineteenth centuries, and many had become tavern villages or villages with purely agricultural functions. Station villages also declined, with the exception of those located in affluent areas or near ferries or ports.

Port and ferry villages maintained their functions longer than station or *weon* villages. Although the number of people using ferries decreased in the twentieth century with the introduction

of new roads and bridges, ferries were able to hold on as a form of local transportation thanks to the number of merchants and locals who still used the old routes when travelling to periodic markets. Therefore, many ford villages maintained their function throughout the 1960s, and only started declining thereafter as automobile travel became the norm and the number of road bridges increased. Some small ford villages were completely abandoned as the villagers lost their livelihood and scattered to make a living elsewhere. As for port villages, changes in their function are deeply connected with the construction of railroads during the Japanese colonial period. Railroads encroached on their function due to the railroad's ability to transport a far greater volume of goods than regular roads. Tavern towns also slowly disappeared as the main form of transportation changed from walking to the automobile. It is now only possible to find traces of these villages in place names.

Recent changes in Korean villages

With the beginning of full-scale industrialization in Korea in the 1960s, many people began moving from agricultural villages to cities. Economic, cultural, and educational gaps between villages and cities widened as the population became more concentrated in cities, which in turn led to even more people leaving the villages. As a result, all rural areas underwent a series of dramatic changes, but the nature of these changes differed depending on whether the rural areas were located near cities or far from cities.

The impact of urbanization and industrialization had a great impact on villages that are near cities. In villages near Korea's capital city, for instance, facilities such as factories and warehouses were built and housing for inhabitants was constructed. As the population of nearby villages increased, the number of shops, financial institutions, and other service industries also increased. Furthermore, with the increase in automobile transportation, large-scale commercial centers and service facilities such as restaurants were built near the main roadways connecting villages to larger cities.

As urbanization gained pace, the price of land in nearby villages increased. There has long been a trend for villagers with farmland to sell their land or build multi-unit dwellings to rent out. There has also been a rise in the number of people who have given up farming and now commute to the city to work, while others farm only on a part-time basis now. The houses and lifestyles of the inhabitants of these villages are almost identical to those in the city.

On the other hand, there are also farmers who intensively cultivate fresh vegetables, fruits, and flowers to sell to city dwellers. To this end, the farmers set up greenhouses and hothouses so they can produce various crops all year round. Some city dwellers also use their free time to farm here.

In settlements located far away from cities, cooperation between the inhabitants is usually strong because they have lived together for generations. They have performed various social and family ceremonies together and helped each other farm the land. However, changes to this order have come about as members of the community moved out of the village due to urbanization. The percentage of young and middle-aged adults who leave their native villages is particularly high, and this has caused a serious aging of the population in villages. Indeed, it has become difficult for village inhabitants to maintain their standard of living, and the productivity of such villages has declined significantly.

The further a village is from the city, the stronger these trends, and the more likely one is to find empty houses and unused fields. As the population shrinks, the number of classes taught in schools decreases, and schools close down. Hospitals, shops, and other cultural facilities also close or move to other locations, and bus routes are cancelled. The living conditions in the villages deteriorate in many ways and, in the worst cases, life in a village may vanish altogether.

Various measures are being taken to solve these problems. For example, there is a plan to resolve the income gap between urban and rural areas, and work is being done to attract or distribute various amenities and public institutions related to education, culture, and medical care to the countryside. Recently, consumer interest in eco-friendly agricultural products has spurred economic growth in the eco-friendly agriculture sector. New tourism resources are being created from the natural environment and traditional lifestyle of old villages, neither of which can be experienced in the city. Many villagers are now using these attractions to run tourism businesses such as bed and breakfasts and tourism farms. They also develop unique special products as a means of generating income. As a result, the number of villagers earning a decent income is increasing, and a new trend is forming—namely, that of leaving the cities and moving back to the countryside.



View of a ferry and an inn. ©Jung Chi-Young

Bibliography

Choi Changjo, 1984, *Korean Feng Shui Ideology*, Mineumsa.

Choi Yeongjun, 2004, *Yeongnamdaero: Old Streets in Korea*, Korea University Research Institute of Korean Studies.

Choi Yeongjun and Jung Chi-Young, 1997, "Settlements of the Gyeonggi Region," *Folk Culture of the Gyeonggi Region* (*Vol. 1*), Academy of Korean Studies, pp. 437-475.

Han Pilweon, 2004, *Korean Traditional Villages 1 · 2*, Boongnodeu.

Jung Chi-Young, 1999, "Settlements of Gyeongsangnamdo," *Folk Culture of Gyeongsangnamdo* (*Vol. 1*), Academy of Korean Studies, pp. 421-476.

____, 2006, *Research on the Agriculture and Settlements of Jiri Mountain*, Korea University Research Institute of Korean Studies.

Kwon Sangcheol et al., (Translated by Daniel Kane), 2016, *Geography of Korea*, The Academy of Korean Studies.

善生永助, 1933, 朝鮮の聚落 前篇, 朝鮮總督府.

李仁老,『破閑集』.

李重煥,『擇里志』.

丁若鏞,『經世遺表』.

許筠,『閑情錄』.

Modern Korean Living Spaces: The Rise of Apartment Complexes

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Living spaces or dwellings can be seen as physical spaces that tell a comprehensive story about a culture, but they are also cultural products with which people interact in their daily lives. Each society or culture has its own distinct forms of living spaces, which feature unique characteristics based on the historic context. During the nineteenth century, however, as most of the world came to be influenced by Western ideas, traditional dwellings came to be seen as unnatural in a globalized world based on Western culture. Korea was no exception. Along with explosive urbanization and industrialization in the mid-twentieth century, Korea quickly came to accept Western-style houses. However, the process of acceptance was different than in other countries and was based on modern Korea's unique political, economic, and social structures. The cultural product born from this process is Korea's representative living space: the apartment complex. The high-rise apartment complexes which now characterize the skylines of modern Korean cities can also be seen as the best way to view Korea's process of modernization and urbanization.

Table 1 Number of residences by type

(number of residences; %)

	1970	1975	1980	1985	1990	1995	2000	2005	2010
Detached house	4,154,902 (95.30)	4,381,772 (92.56)	4,652,127 (87.46)	4,719,464 (77.31)	4,726,933 (66.02)	4,337,105 (47.12)	4,069,463 (37.13)	3,984,954 (31.89)	3,797,112 (27.35)
Apartment	33,372 (0.77)	89,248 (1.89)	373,710 (7.03)	821,606 (13.46)	1,628,117 (22.74)	3,454,508 (37.53)	5,231,319 (47.73)	6,626,957 (53.04)	8,185,063 (58.96)
Townhouse / multiplex housing	146,220 (3.35)	164,718 (3.48)	161,795 (3.04)	349,985 (5.73)	602,855 (8.42)	1,070,528 (11.63)	1,265,989 (11.55)	1,684,563 (13.48)	1,750,116 (12.61)
Home in non-residential building	25,468 (0.58)	98,431 (2.08)	131,248 (2.47)	213,155 (3.49)	202,481 (2.83)	342,788 (3.72)	392,571 (3.58)	198,533 (1.59)	151,280 (1.09)
Total	4,433,962	4,816,413	5,434,176	6,271,265	7,357,287	9,570,395	11,472,401	12,494,827	13,883,571

Source: Additional information added to a table from Yun Juhyeon (editor), 2002, *Korean Housing*, Daejeon: Statistics Korea.

Of course, apartments were not the most representative living space in modern Korean society at first. Since 1970, the National Statistical Office of Korea has recorded the number of residences in Korea according to their physical features and styles. They have been categorized into four types: detached houses, apartments, townhouses or multiplex housing, and homes in non-residential buildings(See Table 1). Here, "detached house" refers to a typical style of residence in which one family lives in one home; "townhouse" and "multiplex housing" include buildings which are separated into several living areas to allow many families to live there; and "home in a non-residential building" refers to situations in which people live in non-residential buildings such as commercial shopping buildings, but the homes in these buildings feature certain aspects of other types of homes such as bedrooms, kitchens, or separate entrances.

Originally, the most common type of residence in Korea was the detached house. As shown in Table 1, an overwhelming majority of houses in Korea up until the beginning of the 1980s were detached houses. During the transitional period from traditional Korean-style houses to Western-style homes during the 1960s and 1970s, most of the traditional Korean houses were transformed into detached houses in the style of Western cities. This trend began to change in the 1970s as the government initiated projects involving the construction of large-scale apartment complexes, and the number of detached houses remained more or less the same or decreased while the number of apartments skyrocketed. By the latter half of the 1970s, a large majority of the new residences being built were apartments. As a result, apartments accounted for more than half of the homes in Korea starting in the 2000s through the present.

Apartment complexes were first suggested as a solution to the housing problems of low-income workers during the process of industrialization and urbanization in the Western world, but they have progressed in Korean society with a very different meaning. The construction of Mapo Apartments—Korea's first apartment complex—in the 1960s marked the beginning of the large-scale construction of apartment complexes under a government policy aimed at providing housing for the middle class. Thereafter, apartment complexes became the most common type of housing in Korean society. Amid this process, apartment complexes also became the most common way for the upper-middle class to accumulate wealth, while also acting as a social marker of one's social status. This phenomenon reached its peak with the construction of apartment complexes centered on luxury as represented by the emergence of so-called "brand apartments" in the 2000s.

This article seeks to examine the process through which the "apartment complex" became the most common and desired type of housing for urban dwellers in Korea by considering the historical context of apartments in Korea. First, we will review the features of the different types of apartments that emerged in Korea during the Japanese colonial period and the restoration period after the Korean War. Then, we will discuss the processes and meanings behind the expansion of uniform apartment complexes as part of the large-scale housing policies of the 1970s and 1980s—a period of rapid urbanization with the emphasis on efficiency. Next, we will examine the change in apartment complexes brought about by the rise of brand apartments in the 2000s. Finally, we will explain the values that Korean people have placed on the type of dwelling referred to as "apartments" in the context of the spread of apartment complexes.

Introduction of apartments to Korea and early apartments

The first instance of the word "apartment" in Korean literature can be found in an article published in 1925 under the title "Dojunkai (同潤會) Apartments" in the Construction News section of *Joseon gwa geonchuk* (Joseon and Architecture), the only technical architectural journal published during the colonial period(Shim et al. 2002: 161). In the 1930s the word began to appear not only in journals for architecture professionals but also in publications intended for the general public, starting with Volume 13 (March 1931) of the magazine *Samcheolli* (3000 *li*). This magazine introduced a one-story boarding house for women that was being built in Gyeongseong as an apartment building (Jang and Park 2009: 30). Meanwhile, *Shindong-a*, a magazine which explained new foreign loan words, defined "apartment" in the "Modern Words Roll Call" section (Volume 18, May 1933) as follows:

> Apartment: English. A type of inn or boarding house. These buildings with several rented out rooms are most widely developed in the USA as they are a product of the modern city. Occasionally, married couples may live together in an apartment, but the most common tenants are unmarried salarymen. In Japanese, the word has been shortened to "apa-tu."

This definition shows that Korean people thought of apartments as a sort of temporary living quarters. The new word "apartment" was thus spread to the literate class of colonialized Koreans in the 1930s around the same time that the buildings called apartments were actually being built in Gyeongseong. A few years before this, in the 1920s, multi-dwelling houses existed in Korea in the form of "transient housing" (府營住宅) that was built to relieve housing shortages caused by population growth in the cities or "dormitories" (Japanese: "ryo" 寮) built for Japanese laborers, but the construction of buildings under the designation of apartment only began in earnest after 1930. Some of the first

1 As of 2019, Chungjeong Apartment (1 floor underground, 4 floors aboveground) is the oldest "apartment" building in Korea. This was possible because the building was made of reinforced concrete, rather than the wood or brick used to construct most buildings in colonial Korea.



Chungjeong Apartments built in 1930. @Sung Yongjun

apartments were built during this period, including the Mikuni (三國) Apartments (1930) in Hoehyeon-dong and the Toyoda (豊田) Apartments (1930), which are now known as the Chungjeong Apartments.[1] Most of these were built with Japanese capital, and were generally intended for the small groups of Japanese people who were assigned to posts in colonial Korea. In addition, the housing crisis grew more serious during the 1940s due to a decline in construction during the Sino-Japanese War and World War II. All of these factors made it difficult for ordinary Koreans to experience apartments, directly or indirectly. It is important to note, however, that apartments were known to Koreans before national liberation both as a product of modern urban housing originating in the West and as the preferred type of residence of the socio-economically dominant Japanese of the time.

Apartments began to reappear in Korean society after national liberation and the Korean War with the construction of Haengchon Apartments (1956), Jong-am Apartments (1958), and Gaemyeong Apartments (1959). Haengchon Apartments, as the first apartments to be built in Korea after liberation,[2] were model apartments constructed by the Hanmi Foundation, one of the US aid agencies that were active in Korea after the Korean War. These apartments comprised three three-story buildings (plus one underground level) and included forty-eight housing units (each measuring 14 pyeong[3]). Jong-am Apartments, which were built two years later, were the first apartments to be built in Korea using domestic capital. These apartments also consisted of three buildings, each four or five stories tall, and 152 housing units (17.3 pyeong). The apartments were constructed by Jung Ang Industry (a private corporation) before being taken over and managed by the Korea Housing Corporation, the predecessor of the Korean National Housing Corporation (now the Korea Land and Housing Corporation). Jongam Apartments attracted attention because President Syngman Rhee cut the tape at the completion ceremony and because they had the first flush toilets in Korea. They are also significant as the apartments that ushered in the era of Western style housing in Korea (Jun et al. 2008: 201).

Various experimental methods were tested as these early apartments were being built, and this new type of housing was introduced to Korea during the late 1950s and early 1960s. Some of the results of state-led housing supply policies of the time include Mapo Apartments (1962), which are viewed as the beginning of standardized, uniform apartment complexes that lasted from the 1970s through the present, and citizen apartments built as a solution to the housing problems of the urban poor. At the same time, however, many small-scale apartments built by private construction companies exhibited more diverse planning elements and sought a permanent role in city housing. It is noteworthy that many of these apartments were built by private construction companies during the introduction of domestic apartments. Of the 217 apartment complexes built in Korea between 1960 and 1973, the Korea Housing Corporation was responsible for 9% of them, other public institutions and local governments were responsible for 24%, and private corporations were responsible for the remaining 67%. Sixty percent of all projects were one-building projects which did not require large-scale capital (see Park 2004: 27-29). In addition, the major domestic construction companies were focused on infrastructure projects and thus did not get involved in the construction of apartments in earnest until after the 1970s. With that in mind, it is easy to conjecture that many of the apartment projects through the 1960s were carried out by individuals and small businesses.

These small-scale apartments built in the 1960s and 1970s exhibited diversity in the way they used space and had different characteristics from apartments built at a later date (Jang and Park 2009). Small private companies had to build apartments using limited land and without the state-led redevelopment of large areas of the city. The apartments, therefore, were naturally assimilated without having a large effect on the existing street structure or the surrounding area. In addition, most of these apartments were small enough to either share community facilities with their neighbors or they didn't require separate community facilities, so damage to existing communities wasn't considered a large problem as it has been with the subsequent proliferation of apartments.

These characteristics are shown by the "block-style apartments" built in the late 1960s, such as Dongdaemun Apartments (1966), Hongje-dong Weon-il Apartments (1970), and Ahyeon-dong Hyundai Ahyeon Apartments (1970). These six-story, single-building apartments contained 20–40 housing units and



Exterior of Dongdaemun Apartments. @Sung Yongjun



Interior of Dongdaemun Apartments. @Sung Yongjun

2 According to Korean legal standards in 2019, some of the buildings at the Haengchon Apartments and Jong-am Apartments cannot technically be called "apartments." In the "Usage Categories for Buildings" in the Enforcement Decree of the Construction Act, Article 3-4 Attached Table 1 (revised on December 8, 2011), apartments are defined as multi-unit buildings "with five or more stories." However, when compared to the standards of the 1950s, when most dwellings were one-story buildings, the three- or four-story Haengchon Apartments or Jong-am Apartments were considered worthy of being called "apartments" as a symbol of the Western residential lifestyle.

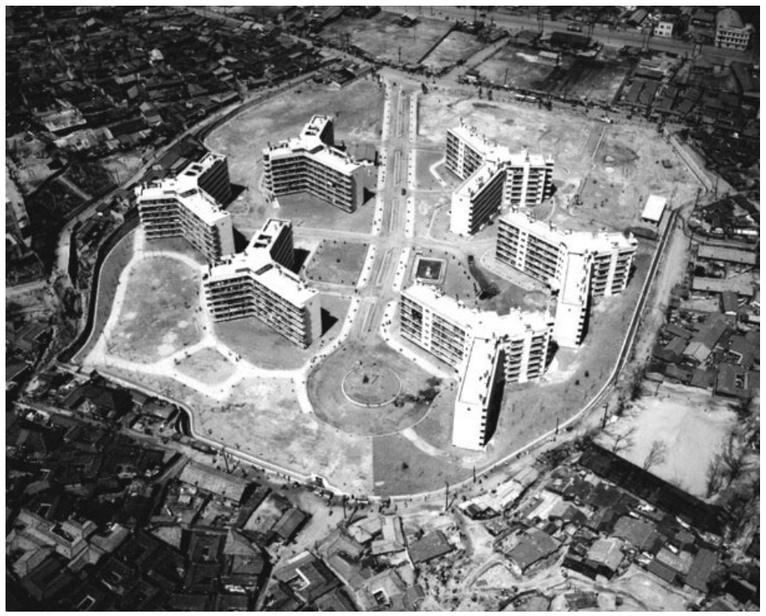
3 1 pyeong is equal to 3.3 square meters.

conformed to city streets, minimizing their impact on the city's existing landscape and social structure. The most important characteristic of these block-style apartments is an open space called the "middle courtyard." These courtyards "played the role of a natural transition space when entering one's home from the outside and also contributed to the formation of a community amongst the residents" (Jang and Park 2009: 83).

However, these various types of small-scale apartments gradually lost their influence with Korea's ongoing urbanization. Although these apartments, which featured innovative planning elements, had some influence on many aspects of the current uniform planning practices of apartments, their influence overall was limited due to the fact that they were one-off attempts by small capital and, with the exception of a small number of buildings still standing today, the poor construction technologies used by private companies caused them to be structurally weak. (See Jun 2010: 268-271.) Thus despite some advantages, they became tarred with the image of poorly-built, uncomfortable places to live, and they were unable to be progress as another form of small-scale urban housing. Otherwise, they might have coexisted with large apartment complexes as an alternative form of housing. Instead, large-scale, government-planned apartment complexes took center stage in modern Korea's urban environment starting in the 1970s. At the center of this change was the first apartment complex built by the Korea National Housing Corporation and the so-called "symbol of revolutionary Korea," namely, Mapo Apartments.

Construction of Mapo Apartments and citizen apartments

Mapo Apartments, Korea's first apartment complex, was built in December 1962 by the Korea National Housing Corporation, which had changed its name from the Korea Housing Corporation earlier that same year. This apartment complex was promoted as part of the first Five-Year Economic Development Plan (1962-1966) of the Park Chung-hee regime, which had come to power through a military coup on May 16, 1961. The original plans called for ten-story buildings with elevators and central heating. Such a large-scale apartment complex with extremely modern facilities was an ambitious goal for that time. However, the social atmosphere of the time was generally opposed to the construction of a planned apartment complex. The media expressed opposition regarding the elevators and central heating due to poor electrical conditions and the general lack of resources. Further controversy arose regarding the plans to install flushing toilets when drinking water in Seoul was still insufficient (Korea National Housing Corporation 1992:101). In the face of stiff public opposition, the original plans had to be amended. As a result, the buildings were reduced to six floors, the installation of elevators was abandoned, and the centralized heating system was changed to individual coal-powered boiler facilities for each household. Finally, an apartment complex consisting of ten six-story buildings (642 housing units) was constructed in Mapo-gu in the western area of Seoul.



Mapo Apartments at the time of their completion. @National Archives of Korea

Despite the changed plans, the newly-built Mapo Apartments had a comparative advantage over other residential areas in Korea at the time in terms of facilities and size. Unlike other abandoned plans, flushing toilets and modern kitchens were installed according to the original plan. Along with these symbols of the comforts of Western lifestyle, separate playgrounds and landscaping within the complex attracted the public eye. As can also be seen in Picture 4, the six story high-rise buildings were extremely impressive for the period, and the unique Y-shaped buildings were also very symbolic (Jun 2010: 260). These distinctions set Mapo Apartments apart from existing residential areas in Korea, and also reveal that Mapo Apartments complex, which was constructed for middle-class people, served as a model for the propagation of so-called modern housing.

The architecture of Mapo Apartments was influenced by the modernist architecture that came to dominate urban planning around the world starting in the West in the mid-twentieth century. This is confirmed in a 1964 article in the Korean Architectural Association's journal Architecture by Hong Sa-cheon, the construction director of the Korea National Housing Corporation around the time Mapo Apartments was built. In this article, Hong insists that growing dimensionally, that is upwards, is the only way to solve the traffic and housing problems brought about by high population density. The ideals of the French-Swiss architect Le Corbusier, who was known for his concept of "towers in the park," were applied to Korean urban planning. This meant that more apartment complexes had to be built to maximize the efficiency of use of space. At the same time, this also represented the Korea National Housing Corporation's determination to solve housing problems by building apartment complexes at the time.

Of course, the Korea National Housing Corporation's policies reflected the ideas and policy direction of the ruling party of the day. The residential sector could not be an exception for the Park Chung-hee regime as it sought to bring about major changes throughout the whole of society under the banner of industrialization and modernization. To that end, the regime strove to modernize all aspects of life by reorganizing spaces, especially apartments. For example, at the completion ceremony for Mapo Apartments, Park Chung-hee stated that the old way of living in Korea was "too uneconomical and illogical" and characterized it as a "makeshift and feudalistic lifestyle." He praised the completion of Mapo Apartments as an opportunity to "revolutionize lifestyles" and improve them. Apartment complexes were first developed in the West as a solution to the housing problem for people on low incomes. However, the introduction of apartment complexes in Korea was not just a way to provide housing; rather, they were presented as the catalyst to a fundamental transformation of the Korean lifestyle. Therefore, Mapo Apartments was perceived as being something much more than merely the first apartment complex to be built in Korea.

In several ways, Mapo Apartments "symbolized modern housing and represented the government's desire to spread it" (Jun et al. 2008: 195). They also lay at the root of the spatial exclusivity



Scene of the collapse of the Wa-u Apartment @National Archives of Korea



Scene of the collapse of the Wa-u Apartment @National Archives of Korea

found in Korean apartment complexes. Mapo Apartments was not only Korea's first apartment complex: They were also the first apartment complex in Korea to be surrounded by a wall that prevented outsiders from entering. (See Kim 2012: 10-12; Park 2006: 74.) We can see that from the outset, the norm for apartment complexes in Korea was to exclude outsiders by building walls or fences around their perimeters. This also shows that the construction of Mapo Apartments was the result of "first seeking innovation of the living culture and transformation of the housing culture in just one complex, rather than showing broader consideration or regard for urban or neighboring environments" (Jun et al, 2008: 194).

While the construction of Mapo Apartments was a success, there were several transitional stages that had to be passed before a full-fledged government-led supply of apartments for the middle class could be realized. Above all else, the problem of housing the urban poor was very serious, and it was not possible

to focus only on supplying the middle class with apartments as a priority. The number of people moving to Seoul increased greatly with urbanization, but the number of houses was severely lacking. Consequently, hundreds of thousands of poor people occupied more than 100,000 unauthorized buildings. Yet the bureaucrats of the time knew very well that the mass supply of apartments could be used as an efficient housing solution for low-income urban dwellers, just as it had been in the West, where apartment complexes first appeared.

Therefore, the administrative authorities began constructing apartments for low-income households, and not just the middle-class households for which the Mapo Apartments had been built. In September 1968, the Ministry of Construction announced its plans to focus on the construction of 5-8 pyeong apartments in slum areas and substandard housing districts to accommodate lower-income households (Park et al. 2005: 49). In Seoul, the capital city, where the housing crisis was most serious due to huge population growth, large-scale apartment projects called "citizen apartments" were begun with the goal of expanding the housing supply and solving the problem of clearing out unauthorized, substandard housing. Kim Hyun-ok became Seoul mayor in 1966 and soon came to be known as the "Bulldozer Mayor" due to his many construction projects. In 1969, Kim announced plans to build 2,000 apartment buildings as citizen apartments over the next three years in an effort to house some 90,000 poor households. This was a reflection of the social atmosphere at the time, when all solutions were inevitably focused on speed and quantity (Jun et al. 2008: 203).

However, a major problem was discovered regarding the citizen apartments policy less than a year after its implementation. Most of the sites of the citizen apartments were found to be undesirable because the substandard housing due for demolition and replacement was located on mountain ridges where it is difficult to build high-rise buildings. However, geological surveys of the construction sites were not carried out properly due to a lack of manpower and financial resources. On top of that, the amount of funds set aside to cover the construction costs was so absurdly low that the construction itself had no chance of being anything but shoddy. Eventually, one April morning in 1970, a major accident occurred in the vicinity of Wa-u Mountain in western Seoul. One building of the Wa-u Apartment collapsed, resulting in 33 deaths and 40 critically injured people. The ensuing police investigation uncovered bribery of government officials and shoddy work by unlicensed contractors. In all, it exposed overall weaknesses in the "citizen apartments" project. In the end, Kim Hyun-ok took responsibility for the disaster and resigned from office, and the government cancelled the citizen apartments plan.

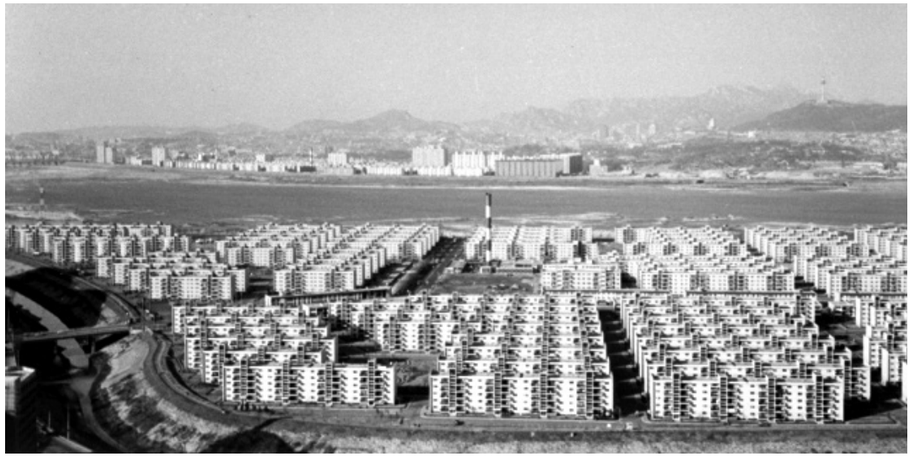
This disaster shows the dark side of the compressed devel -opment which marked Korean modernization, and it is also a major factor in why apartments in Korean society have a different role and meaning than in the West. After halting the construction of citizen apartments for low-income families, the government established housing policies focusing on building more expensive but safer apartments for the middle class. Korean society of that time was fully committed to "modernization," and the government didn't give up its belief in apartments as the preeminent symbol of modern housing. Instead of abandoning the idea of apartments and searching for another solution, the government devised a policy to build more durable and safer, high-quality apartments. This was the turning point which gave apartments in Korea a totally different image from that of the low-income housing apartments of the West. Ultimately, apartments have become the quality housing choice to which everyone aspires in Korean society. To most Koreans, economic success means having the "qualifications" to live in an apartment.

Formation of the apartment complex model and other housing types

The early 1970s were a major turning point in the history of apartments in Korea. The various "experiments" of the past were given up, and Korea fully embraced the path leading to the present large-scale apartment complex model. The plans to build citizen apartments for low-income families had been abandoned after the collapse of Wa-u Apartments in April 1970, and it was after this that apartments targeted the middle class and took on



Inside view of the Hankang Mansion Apartments complex @National Archives of Korea



Panoramic view of the Banpo Apartments complex @National Archives of Korea

the form of an independent "complex." Of course, even before the collapse of Wa-u Apartments, plans for the construction of middle-class apartments had been drawn up. After the success of Mapo Apartments, the construction of apartments in Korea had taken two directions—citizen apartments for the lower class and apartment complexes for the middle class. The unexpected collapse of Wa-u Apartments upset these plans, and the future of apartments in Korea was soon focused solely in one direction.

Apartments built by the Korea National Housing Corporation were the vanguard of the "apartment complex era" from the 1970s to the present. Among these apartments are Han-gang Mansion Apartments (1970) in Ichon-dong, Yeoui-do Model Apartments (1971), and Banpo Apartments (1972-1974), which opened up the era of Gangnam apartments. Of these, Han-gang Mansion Apartments (700 units) were the first to be constructed as full-fledged "luxury apartments," providing a standard model for the sale and construction of future apartment complexes. Han-gang Mansion Apartments were sold using a pre-sale method, employing "model houses" for the first time in Korea.[4] This was because the execution of such a project was a fairly risky undertaking. The construction of a luxury apartment complex such as Han-gang Mansion Apartments represented a considerable financial burden for the construction company concerned. Therefore, it started to advertise the sale of apartments before the complex was completed and, as part of that process, built model houses to display to the public (The Korea Housing Corporation 1992: 118-120). As a result, this method of securing construction funds—a "sell first, build second" model using model houses—became standard practice amongst even private construction companies.

In terms of complex structure, Han-gang Mansion Apartments were also the first to which the neighborhood unit theory[5] was fully applied. In fact, the neighborhood unit theory had already been considered during the planning phase of the Mapo Apartments. In the end, however, it was not fully implemented due to the relatively small size of the complex and the limitations of the final plan. The theory was implemented thoroughly in the "Han-gang Apartments," a group of apartment complexes built around the same time in Ichon-dong and comprising a total of 3,220 units. These complexes included Han-gang Foreigner's Apartments and Gongmuweon Apartments. The majority of subsequent apartment complexes also followed this model.

Introduced with the construction of Han-gang Mansion Apartments, the model of large-scale apartment complexes continued to spread with the construction of Banpo Apartments (1972-1973). This apartment complex was built to complement the development of Gangnam, a wealthy section of southern Seoul. Banpo Apartments were made of units ranging in size from 22-pyeong to 64-pyeong multi-story apartments and consolidated the position of apartments as dwellings for upper- and middle-class families. In particular, Banpo Apartments were the first of the "Gangnam apartments" that became the envy of the whole of Korean society starting from the late 1970s. As such, this apartment complex played a "pioneering role on the 'front line of apartment development' eastward from Dongjakdaegyo(Bridge) over the next ten years" (Gelézeau 2007: 37).

The Jamsil Complex (1975-1977), constructed in Gangnam by the Korea National Housing Corporation, is a representative example

4 In Korea, the term "model house" refers to a sample house that is built in advance to show the interior structure of an apartment to people who would like to purchase an apartment even before its actual construction. It is a very common practice in the Korean apartment market to tour model houses and purchase an apartment before its construction.

5 "Neighborhood unit" is a concept proposed by C. A. Perry in 1929 in the US. It refers to a complex which allows young children to avoid walking on dangerous streets when going to school (approximately 500 meters in radius, population 5,000 to 10,000) and is designed to maximize the convenience, comfort, and social interaction of its residents (Kim 2006: 111). Typically formed from a city block and surrounded by roads, these neighborhood units strive to incorporate all amenities which are essential for a community, including shops, safe pedestrian areas, etc.

of government-led housing land development and construction of large-scale apartment complexes. Having struggled to solve the middle-class housing crisis since the late 1960s, the government established a policy to disperse the crowded population in the Gangbuk area (north of the Han River) to the Gangnam area (south of the Han River) and promoted development by providing various benefits in the Gangnam area. First, the government completely banned the development of housing land in the Gangbuk area and granted tax benefits to land development in Gangnam. The government also focused on developing Gangnam by building a bridge connecting Gangbuk and Gangnam (the Third Han River Bridge—currently Hannamdaegyo Bridge—opened in December 1969), moving popular middle and high schools to the Gangnam area, etc. (Jun et al. 2008: 212). During this time, 4.4% of Seoul's residential areas were designated and developed as apartment districts (Jang 1994: 165-166). Jamsil Apartments 1 set a new record with the construction of 11,800 apartment units in just six months under the slogan of "Operation 180 Days of Homebuilding" (Jun 2010: 246). This is a reflection of the culture of the time in which all social and cultural norms were ignored in favor of speed and material supply.

In the 1970s, large-scale private construction companies which had grown during the 1960s by taking on large infrastructure projects took the lead from the Korea National Housing Corporation and also started developing apartment complexes in the Gangnam area. Hyundai Engineering and Construction, a rapidly-growing corporation at that time, ushered in an era of high-end apartments built by private companies with the construction of Apgujeong Hyundai Apartments in 1975. The apartments themselves were between 32 pyeong and 60 pyeong in size, and the apartment complex was recognized as the best "luxury apartments" built in the Gangnam area. Through the early 1980s, apartment complexes in Gangnam expanded west to east from Banpo to Apgujeong to Jamsil, and north to south from Apgujeong to Daechi to Dogok. In this way, the skyline of the southwestern area of Seoul was transformed into a forest of apartments.

However, despite the fact that apartment complex construction was actively promoted at the policy level and that apartments had emerged socially as the most desired form of housing of the time, the number of people living in apartments was still small compared to other types of housing. As of 1980, only a small minority of residences were apartments (about 7% of all housing). One big factor in the subsequent rapid increase in the number of apartments was policy factors such as government intervention. The number of apartments grew through the 1980s to 1.6 million in 1990 (22.7% of the total number of houses), and during the next ten years, the number of apartments rose to 5.23 million (by 2000), accounting for nearly half of all residences. Thus we can see that the political background was a major factor in the spread of apartment complexes during the 1980s and 1990s, after having taken root in the 1970s.

Spread of apartment complexes after the 1980s

After the assassination of Park Chung-hee, Chun Doo-hwan took power through another military coup d'état in 1979. The Chun regime established a large-scale housing construction plan as one way to appease public sentiment in a period of political and social turmoil. Most urban residents were still suffering from serious housing problems at that time, so the new military government announced a plan to "build 5 million new homes in 10 years." Through these policies, the government sought not only to resolve the housing problem, but also to provide social stability.



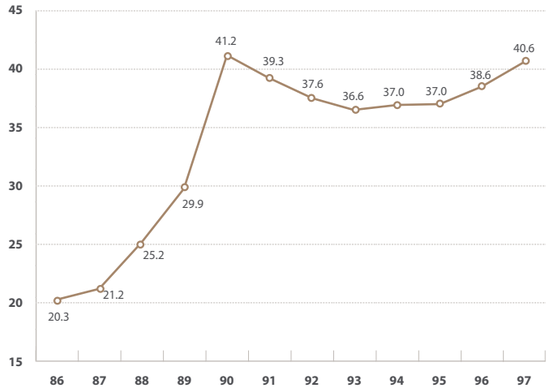
Apartment complexes in Bundang New Town @Yonhapnews

The plan aimed to raise the housing supply rate from 77% to 90% by building 5 million homes nationwide between 1981 and 1991 (Lim 2005: 101). However, this goal was realistically impossible. The government would need to build nearly as many homes as already existed in Korea (5.43 million in 1980), and ten years was clearly not a sufficiently long period of time in which to achieve such an ambitious goal. Notwithstanding such a difficulty, the Chun regime directly adopted the policies of the 1970s to "provide large quantities of multi-unit houses through the construction of apartment complexes," and the end result was the construction of apartment complexes not just in Gangnam, but throughout the whole country and especially in Seoul Metropolitan areas such as Mokdong, Sanggye-dong and Junggye-dong.

The housing supply remained insufficient in spite of the construction of apartment complexes through the housing supply policies of the early 1980s, and housing prices rose due to the high population density in the Seoul area and the liquidity of market capital caused by the economic boom of the 1980s. By the end of the 1980s, the prices of apartments and rents in Seoul had skyrocketed like never before. The Roh Tae-woo administration, established in 1988 after the Chun Doo Hwan regime, also strove to overcome the housing crisis through the mass construction of apartments. These policies led to the establishment of large-scale expansions of apartment complexes in the suburbs of Seoul, which were called "New Towns."

In a new housing construction plan titled "The Construction of Two Million Homes," the government planned to build nearly half of the target (900,000) in the Seoul area and the remainder in other cities by 1992. Furthermore, the main focus of the 900,000 apartments to be built in the Seoul area was five new towns which the government planned to establish in the suburbs of Seoul. Indeed, the government had already announced its plans to build the three new towns of Jungdong (Bucheon), Pyeongchon (Anyang) and Sanbon (Gunpo) as early as late 1988, followed by its announcement of plans to build the new towns of Bundang (Seongnam) and Ilsan (Goyang) in April 1989. With these plans, the government mobilized both the Korea National Housing Corporation and private construction companies to begin building the apartment complexes. As a result, the number of houses constructed annually, which averaged about 220,000 from 1980 to 1987, rose dramatically to 320,000 in 1988 and 460,000 in 1989. In 1990, some 750,000 homes were built, and the goal to build 2,000,000 homes was completed one year ahead of schedule (Lim 2005: 157).

However, building hundreds of thousands of apartments in new towns in a mere three to four years brought about unforeseen adverse effects. In a time when economy stabilizing policies were needed due to the unprecedented growth of the domestic economy, the growth of the construction market fanned the flames of an overheating economy. A rise in construction workers' wages led to a shortage of labor in the manufacturing sector and brought about a sharp increase in total wages (Lim 2005: 157). Additionally, a lack of resources led to incidents involving faulty concrete. Shoddy construction and building practices became such a common social problem that the phrase "Bundang sandcastle" was often used during that time. On top of this, the construction of five new towns in the Seoul area accelerated the inflow of population into the metropolitan area, causing Seoul to become even more extensive and bloated. Also, these new towns only provided a place to live for their residents and lacked the requirements needed to be considered self-sufficient. They were "bed towns" with hundreds of thousands of residents, in other words, "a resting place for people who tire themselves out in Seoul while all the cultural and occupational features remain in Seoul" (Jun et al. 2008: 286).



Price index of apartments in the Seoul area (1986-1997) (Nam 2011:51)
(Reference point, December 2008 = 100.0)

Nevertheless, the plan to build two million homes was somewhat successful from a long-term perspective because it accomplished its primary goal of stabilizing housing costs. Of course during the period spanning 1989 to early 1991 when the five new towns were being built, the sense of fantasy surrounding the new towns paradoxically encouraged a real estate boom, resulting in a surge in housing prices (See Figure 1). Despite the criticism, however, the inflated housing prices began to fall in April 1991 as people began moving into the new city apartments, and housing prices continued on a path of downward stabilization throughout 1997 (Yoon 2002: 17). This stabilization of housing prices was largely due to the continuous supply of apartment complexes after the construction of the five new towns. With these large-scale construction systems in place, the annual production of homes continued at a rate of roughly 600,000 homes per year. However, the stabilization of the housing market and the decades-long practice of building apartments underwent a major change after the onset of the 1997 Asian financial crisis.

The social significance of the spread of apartment complexes

One of the most important aspects of the supply of apartments centered in Seoul in the 1970s and 1980s is that for many Koreans

during this time, apartments became an object of real envy. This can be seen in the findings of Statistics Korea's "Social Index." When asked to indicate what type of housing they preferred, only 6.5% of the respondents answered "apartment" in 1979. However, this figure grew steadily to 18.3% in 1987 and to 34.2% in 1992 (Statistics Korea 1997: 304).[6] In particular, young people tended to prefer apartments. As of 1992, more than half of people under 30 years of age (52.8%) indicated that they preferred apartments. In addition, there was a sharp rise in preference for apartments amongst people who actually used housing finances to buy homes by the late 1980s. After 1990, apartments overtook detached houses as the most preferred type of housing.

One of the reasons for this rise in preference for apartments among Koreans is their perception that apartments provide a better lifestyle when compared to existing housing types. Apartments introduced a more Western lifestyle to Koreans due to their modern kitchens, flushing toilets, and centralized heating, and Koreans began to directly and indirectly experience the comforts which accompany this type of lifestyle. In addition, apartments became more convenient as industrialization led to population movement and changes in the family structure—and greater focus on the nuclear family in particular. Park Cheol-Soo (2010: 71), an architect who collected and analyzed the negative attributes of apartments as described in novels published after 1980, also notes that it is difficult to find criticisms of specific living conditions in apartments. He discovered that although there are many complaints regarding the spread of apartments in Korea, Koreans don't have negative perceptions about the living conditions themselves. He speculated that the comfort and convenience offered by apartments was accepted as an absolute and universal value by most Koreans. However, given the fact that housing choice was severely limited during Korea's rapid urbanization, the preference for apartments might have been brought about by their relative advantage over the dilapidated condition of the many detached houses available for purchase (Kwon 2012: 99-100).

The fact that apartments were preferred because of the limited amount of housing options brings to light another important meaning behind the spread of apartments in Korean society. As we have seen, the increase in the total number of houses in Korea in the 1970s and 1980s was achieved through the construction of apartments. At the center of this was the apartment-oriented housing supply policies targeting the middle class. The housing policy designed to solve the housing crisis by building massive apartment complexes was targeted at helping the middle and higher classes. From the end of the 1970s, low-income households that did not have sufficient capital were excluded from participating in Korea's unique apartment housing market.

From the end of the 1960s onwards, when apartments were first introduced in Korea, the government's housing policies were based on the "paradoxical market model" (Ha and Kim Yeonmyeong 1991: 31),"[7] and the position of apartments as unique products in Korean society caused the sale of apartments to become a model of wealth growth that any "qualified" person could exploit. The housing policy of the 1970s was based on the supply of new-built apartments. At that time, apartments were built on the assumption that the buyers would be able to pay for the construction. This means that the policies must be seen as being biased towards the middle class because they had the ability to pay. In addition, apartments were valued as more than just a place to live and became a product with a high exchange value—a kind of prestige good. This is largely due to the fact that supply never could meet demand and the image apartments enjoyed as a symbol of the modern Western lifestyle. Thus apartments became a status symbol for their owners based on location and size. Starting with the sale of Banpo Apartments in the early 1970s, apartments became objects of speculation. By the mid-1970s, each apartment that was put on sale attracted 40-70 prospective buyers and sale prices skyrocketed day by day (Jun et al. 2008: 259).

In spite of the housing subscription policy and price caps implemented in 1977 to solve the problems created by the exploding house prices, the government was unable to stop house prices from rising. In fact, housing speculation became more severe because the prices were set at about one third of the market price, making it easier for high-income earners to purchase and resell apartments (Jun et al., 2008: 260). In fact, the rising apartment prices only stabilized with the first construction of two million homes over a short period of time in the 1990s (as mentioned above). But many people made large profits during this process as well. In the end, Koreans were exposed directly or indirectly to decades of "success stories" of wealth accumulation through the purchase and sale of apartments. This has made the sale of apartments the most common means of accumulating wealth in Korea.

Researchers agree that the Korean government was directly involved in the change of asset accumulation in the form of apartments and the reorganization of lifestyles in Korea (e.g. Park 2006; Park 2011; Jun 2009; and Gelézeau 2007). Also, it is difficult to deny that the government was politically motivated to grow the middle class by supplying apartments in order to expand their base of support. According to Valerie Gelézeau, this expansion of the middle class has been achieved through the supply of apartments whose price is controlled by an authoritarian government. As a result, the government is able to concentrate the middle class in large apartment complexes while also giving them the benefits of home ownership and wealth accumulation, thereby gaining their political support (Gelézeau 2007: 147). In addition, Jun Sang-In (2009) argues that apartments, whether intentionally or not, played an ideological role in concealing contradictions and problems arising from the rapid growth of capitalism in Korea. He claims that in Korea's special situation, in which apartments were so important, the middle class "played the decisive role of a barrier preventing a political move to the left in Korean society" (Jun 2009: 136).[8]

In addition, apartment complexes contributed greatly to the formation of the identity of the "new middle class" which began to emerge in Korean society in the late 1970s. Apartments, which had become a highly desired form of housing, were also excellent at accommodating Koreans' desires for improvement in their daily lives. In Korea's urbanization process, there were several factors that distinguished the modern lifestyle from the traditional one, including modern kitchens, homes sized for nuclear families, and freedom from neighbors' prying eyes. Apartments were the most efficient residential means of satisfying the requirements of this new Western lifestyle.

As we have seen, apartment complexes in modern Korean society became the most popular type of housing under a policy aimed at supplying housing for the middle class. Right up until the end of the 1990s, there were no large changes in apartments in Korea. However, apartments made a huge leap in the 2000s, at the heart of which was the emergence of the so-called "brand apartment."

The Age of Brand Apartments

The "Construction of Two Million Homes" plan of the early 1990s created a mass-production system for the housing sector which continued producing around 600,000 homes a year (Yoon 2002: 17). However, the apartments built during this period were mostly expensive mid- to large-sized apartments, and the number of customers who could buy these apartments didn't grow as quickly as the supply. As a result, unsold and empty apartments were a common sight throughout all areas of Seoul from the mid-1990s onwards. At the end of 1997, the outbreak of the financial crisis (IMF bailout application) affected every aspect of the Korean economy. It was especially devastating to struggling construction companies, the majority of which owned many unsold apartments. As the economy froze, the demand and price of housing plummeted. By the end of the first year of the crisis in 1998, the cost of apartments in Seoul had dropped by nearly 20% compared to the previous year's peak. This marked the first time since the 1960s that apartment prices (which had always risen steadily) had fallen so dramatically. As the Korean economy fell into a deep recession, the government announced policies to revitalize the construction industry. In particular, the deregulation of residential complex buildings and the discontinuation of apartment sale price ceilings were influential in the history of apartments in Korea.

The government opened the way for the construction of large, high-rise residential complex apartments in different parts of the city by relaxing the existing regulations on construction. A "residential complex" is "a mixed-use architectural form designed to solve the problems of single-function buildings. It is mainly a residential space, but it also enables various activities such as business, commercial, amusement, shopping, and culture" (Ha and Jun 2003: 29). This type of housing was originally not favored in Korean society. By the late 1990s, though, it became the model for high-scale apartments as the government relaxed the regulations and construction companies sought ways to differentiate their apartments. Some of the most notable high-rise residential complexes built around the early 2000s include Daewoo E&C's 41-story Trump World (1999) in Yeoui-do, Samsung C&T's Tower Palace (2002), and Hyundai E&C's Hyperion (2003). These complexes lent a high-class image to the comforts of apartment living by introducing various advanced facilities, auxiliary facilities, and differentiated resident management systems (Hong and Chae 2004: 94).

The success of these high-rise apartment complexes also had a significant influence on other apartment types in that they accelerated the trend for apartments to become more "luxurious." High-rise residential complexes were equipped with electronic security devices to improve safety, and it wasn't long before these devices became standard features in regular apartment complexes as well. The marketing process was successful in diluting the natural fear which comes with living at great heights by emphasizing the view from high stories and instilling a sense of privilege in those living high up. In addition, the high-rise residential complexes were given fancy brand names such as "Tower Palace," boosting their image as a symbol of privilege. This was the beginning of the age of "brand apartments."[9]

In particular, the "branding" of apartments shows better than anything else the political, social, economic, and cultural changes that came to apartments around 2000, just after the IMF financial crisis. Because apartments were rare in the 1960s

6 On the other hand, the preference for detached houses decreased from 93.5% in 1979 to 79.3% in 1987 and 63.3% in 1992.This is a national survey which includes rural areas as well. When looking at just urban areas, the preference for apartments is much higher. Finally, the gap between preference for detached houses (48.6%) and apartments (47.9%) was closed by 2004 even on the national scale, and more than half of urban residents preferred apartments (53.6%) (Statistics Korea 2006: 366).

7 Ha Seong-Kyu and Kim Yeon-Myung used the term "paradoxical market model" to describe Korea's housing policies due to the fact that they relied on a market model but government intervention actually caused a widening of inequality amongst people from different income brackets. Korea's housing policies was close to a market model because the government wasn't involved much in mitigating the inequality derived from the market model and most housing supply was left up to market forces. However, it diverged from the market model in that the government sought to control housing prices and established a unique subscription system. Also, the public sector (Korea National Housing Corporation) actually played the role of the private sector. As Bourdieu (2005) points out in research about the French housing market, it is impossible for the housing sector to completely follow market principles because of the unique nature of the commodity of housing.

8 Although this claim might appear to be no more than hyperbole at first, the right-leaning political beliefs of middle-class residents in apartments are actually well documented. A series of empirical analyses conducted by anthropologists in the late 1980s (Moon Okpyo et al., 1992) revealing the political leanings of apartment residents (See Yim 1992), along with the fact that voting records from the 1990s and 2000s show that areas with a high concentration of apartments tended to vote for conservative parties, can be seen as evidence supporting this claim.



The representative apartment brands which emerged in the 2000s.

and 1970s, naming the apartments by adding the locality's name (e.g. Mapo Apartments or Jong-am Apartments) was enough to distinguish them. Even after private companies began building apartments in the mid-1970s, mixing the company name (e.g. Daewoo Apartments or Ssang-yong Aparments) with the locality name was sufficient for identification (e.g. Apgujeong Hyundai Apartments). Starting in 1998, as the apartment market started to become increasingly competitive, apartment construction companies began branding their apartments with unique names. As competition intensified among construction companies, each construction company focused on marketing strategies to differentiate and improve their brand. To that end, most construction companies who participated in the apartment market set aside large amounts of money for brand development and advertising costs. They also mobilized top stars and carried out fierce TV and newspaper advertising campaigns.

As a result, dozens of apartment brands have emerged in the years since 2000. To differentiate between them and project a luxurious image, the brand names are usually a mixture of difficult Hangeul sounds and various of foreign words. And, generally speaking, the meanings of these names are unclear unless one asks the person who made them. In this way, the value of these apartment brands went way beyond the actual apartment price and was based on "symbolic exchange and logic of desire" (Baudrillard 1998). These brands used advertising to stimulate consumers' desire for "luxury goods" and strengthened the existing social mechanisms of differentiation.

As government intervention decreased and the housing market shifted to a private corporation-led free market, apartment prices skyrocketed in the early and mid-2000s. Construction companies which gave their brands strange names to create a "luxurious feeling" enhanced the luxury aspects of their apartments by introducing advanced interior finishing materials and cutting-edge amenities. Other factors which contributed to the sharp rise in apartment prices included a continuation of low interest rates, a deepening of income inequality, an increase in the purchasing power of and demand among the baby-boomer generation for mid- and large-size apartments, and a rise in the reconstruction of older apartments. Apartment prices doubled in just five years from 2000 to 2005, and this trend was even more marked in Gangnam, the wealthiest region of Seoul. By 2007, the housing market boom had peaked with apartment prices being nearly 2.5 times higher than before the IMF financial crisis just ten years earlier.

In lieu of conclusion: Modern Korean society and apartments

This paper has shown that apartment complexes are not only recognized as the most prominent housing style in Korea but also the best means of building or accumulating wealth. However, this was not always the case. At first, apartments were seen as "low-income housing" or "low-quality housing," much like in the West, and this image only began to change in the 1970s (Korea National Housing Corporation 1992). As apartments began to be supplied for the middle class and above through government initiatives, they became popular as symbols of the Western lifestyle and as a tool to display one's social status.

Jun Sang-In (2009) claims that the reason the middle and upper class were attracted to apartments was because apartments in Korea are mostly bought and not rented. Trading in apartments, in other words, their commerciality began to become popular with the recognition that the profits made during the economic development process were concentrated in limited areas including Gangnam and the real estate industry. In fact, market returns on apartments grew five to six times in the 1970s. Even after the 1980s, investors could anticipate a twofold return on apartment trading. While the relative comfort of apartments played a role in the rise in demand for apartments at the time, the main factor driving this surge was the speculative aspect of apartments.

The real estate boom took off in earnest in the late 1970s as private companies increased their construction of apartments in areas like Gangnam and Yeoui-do. For example, competition rates for sales of Mokhwa Apartments in Yeoui-do by the private company Sam-ik Housing were 45:1, and the rates for their Hwarang Apartments were at least 70:1. At the time, presales were more important than the actual demand. There were several reasons for the surge in demand for apartments. First, in the mid and late 1970s, revenue from construction projects in the Middle East, coupled with government policies supporting the heavy chemical industry, brought about higher liquidity which in turn stimulated the real estate market. Also, the number of families with the means to purchase homes grew as a result of rising incomes due to economic growth. The number of families overall also grew as the nuclear family became more common during the ongoing process of urbanization. However, supply was not able to meet the surging demand, and supply and demand remained imbalanced in the housing market. While there were some ups and downs during the 1970s to 1990s, overall apartment sales rose steadily enough to create a perception that apartments are a major tool for accumulating wealth.

As a result, it is difficult to talk about the meaning of apartments in Korean society without discussing the real estate market. The view that apartments' exchange value is more important than their use value remained unchanged until the 2000s. As discussed above, even after the sharp decrease in prices due to the construction of the first new city in the early 1990s and the Asian financial crisis in the late 1990s, the overall belief in "overall increase" did not die easily. Rather, after the recovery from the economic crisis in the early 2000s, the price of apartments rose even higher than in the previous period, and "the rule that 'real estate speculation is an effective investment'" was only strengthened.

The 2000s, on the other hand, were a time in which the hitherto neglected "different values" of apartment complexes were emphasized. Originally, the value of apartment complexes was focused on their explicit real estate market value. After the introduction of brand apartments however, the value of the housing itself, along with the market value, began to be emphasized in a more elaborate manner. The signs of this trend started showing in the mid-1990s as construction companies began using differentiating strategies, which ultimately led to the introduction of brand apartments by each company in the 2000s. As a result, the competition over apartments spread not only to single homes but also to whole apartment complexes (Jun et al. 2008: 303). Architects started departing from the standardized model used in apartment building construction and started incorporating various facilities into apartments, while landscaping efforts were much more advanced than in previous times.

These changes can be seen in the change in TV advertisements for brand apartments. Up until the mid-2000s, images of famous celebrities were widely used in brand apartment advertisements, but the companies started changing their strategy around 2007. These advertisements faced social criticism because they didn't focus on the actual apartments and the increase in apartment prices due to high production costs. However, the new advertisements steered away from celebrity-based marketing campaigns and focused on the real "value" of brand apartments, such as family-centered middle class values, upper-class lifestyles, and "community activities." These advertisements represented an attempt to link living in a brand apartment with social success in the 2000s.



The differentiated exterior landscaping of brand apartments. ©Sung Yongjun

For example, one advertisement for brand apartments in 2008 painted the ideal life for middle-class nuclear families by showing images of a family living in their apartment (Kweon and Baek 2013: 110-111), while other advertisements emphasized sophisticated and warm "communities." This marked a departure from the reality of the time in which apartment residences were trying to restore a sense of community among their residents. These advertisements tried to convey the idea that the residents of their apartments were members of a privileged and envied community—a community which values "high-quality lifestyles" and "sophisticated tastes." They wanted the residents to see themselves as members of a "real" cultural elite and not simply as real estate speculators. Of course, the most important message

9 Except for "Trump World" which was named after purchasing the trademark from the Trump Group in the US, the first examples of brand apartments were actually not high-rise residential complexes. The first two examples were built in 1999, i.e. "Lotte Castle 84", which was built in Seocho-dong by Lotte E&C, and "Cherevil", built in Gu-ui-dong by Samsung Heavy Industries. However, the true launch of the brand apartment era in Korea occurred around 2002 with the social surge that followed the TV advertising for Samsung C&T's "Raemian Apartments" and "Xi Apartments" by GS E&C (which was LG E&C at that time). Also, it is hard to ignore the fact that the experience of acquiring privileged status (i.e. by creating a brand based on the unique qualities of a particular complex) in Tower Palace, a representative high-rise residential complex, was used here.



The differentiated exterior landscaping of brand apartments. @Sung Yongjun

was that this lifestyle can only be obtained by living in brand apartment complexes. This new message was more elaborate and sophisticated at connecting the physical space of the brand apartment with the values of life pursued by the middle and upper classes of Korean society (Bourdieu 1991).

Interestingly, the two factors which were most consistently emphasized as the ways in which these values of life could be achieved were the complexes' auxiliary facilities and their specialized landscaping. These aspects provided the opportunity to find relief from one's busy life, develop hobbies, and take part in activities with one's neighbors. This was closely related to the changes that had occurred in the physical landscape of apartment complexes since the appearance of brand apartments. The new apartment complexes included various kinds of amenities located inside the complex, and the landscaping provided the feeling of a park. These aspects created spatial conditions which instilled pride in the residents and spurred social interactions between them. The spatial elements which came with the introduction of brand apartments guaranteed the new values emphasized by the new apartment complexes.

Meanwhile, other types of apartments from much the same period started to be assigned a different type of value. The standardized structure of apartment complexes, originally built in a bid to maximize efficiency, were now criticized for being detrimental to the cityscape as well as being the main culprit in accelerating the fragmented city life by destroying feelings of community. In this atmosphere, apartment complexes started emphasizing more "traditional" community values. In reality, many different factors made it necessary for the apartment to become the main style of housing in Korean society, which meant that apartment complexes had to become places where the residents could live together as a community. To that end, activities to restore the sense of "community," which had been difficult to find in previous apartment complexes, were revitalized by local activists and local governments.

An example of this is the "Community Building Project" which started in Seoul and spread to other local governments. In particular, Seoul played an active part in providing administrative support for the "Seoul Community Support Project" starting in 2011. The project emphasized a future of apartment complexes in which the main focus is "restoration of community" as mentioned above.

It is too early fully to assess the effectiveness of these changes in 2019. Only a handful of apartment complexes have received support from these community building projects, and there are also doubts as to how many residents will respond to these efforts. It is noteworthy that by bringing up the issue of "community," which had been lost in discussions about apartments, these efforts are striving to change the value of apartments from merely a real estate perspective. However, the essence of social discourse about apartments in Korea is still their exchange value in the real estate market. It is difficult to say that the "residential value" shown in brand apartment advertisements (as discussed above) is completely different from the apartment's market value. In addition, apartment prices have begun to rise steadily since the mid-2010s, thereby confirming that apartments are still viewed mainly as commodities.

Nevertheless, the fact that apartments, which have for too long been regarded merely as objects for buying and selling, are being newly recognized and valued as places of living is an important change. A majority of Koreans live in apartment complexes, and they are a place where people must live together due to their physical structure. As a result, the residents of apartment complexes must face the issue of living in a community one way or another. Even now, negative reports regarding apartments are being published in the Korean media, and most of these reports are focused on the fact that apartments have been accepted merely as "commodities." In the end, though, as long as the social viewpoint of apartments as real estate market commodities remains fundamentally unchanged, it is difficult to see how a great change in the communities of apartment complexes can come about. Among the social conflicts caused by soaring apartment prices and the collective lifestyle of community living, what is the future of Korea's most common housing type, the apartment? The answer to that question will determine the future of urban residential life enjoyed by the many Koreans living in apartments.

Bibliography

Baudrillard, Jean, 1998, *The Consumer Society: Myths and Structures*, London: Thousand Oaks.

Bourdieu, Pierre, 1991, *Language and Symbolic Power*, trans. by G. Raymond & M. Adamson, Cambridge: Polity Press.

____, 2005, *The Social Structures of the Economy*, trans. by C. Turner, Cambridge & Malden: Polity.

Gelézeau, Valerie (trans. Kim Hyeyeon), 2007, *Apartment Republic: Korean Apartments as Seen by a French Geographer*, Seoul: Humanitaseu.

Ha, Seong-Kyu & Kim, Yeon-Myung, 1991, "Housing Policy and Ideology in Korea," *Journal of Korea Planning Association* 26(1): 23-40.

Ha, Seong-Kyu & Jun, Hee-Jung, 2003, "The Characteristics of Mixed Use Building Seoul Metropolitan Region," *Journal of the Korean Association for Housing Policy Studies* 11(1): 27-48.

Hong, Hyung-Ock & Chae, Hye-Won, 2004, "Attitude Differences on Common Space Management between Expecting Residents and Residents in High Rise Mixed-use Residential Building," *Journal of the Korean Home Management Association* 22(5): 123-132.

Jang, Leem-Jong and Park, Jin-Hee, 2009, *Korean Apartment Excavator: From Jong-am to Hiltap, a Record of First Generation Apartments*, Paju: Hyohyeong Publishing.

Jang, Seong-Su, 1994, "A Study on the Transition of the '60~70's Apartment Houses in Korea," Ph.D. dissertation from Department of Architecture, Seoul National University.

Jun, Nam-Il, 2010, *The Spatial History of Korean Dwellings*, Paju: Dolbege.

Jun, Nam-Il, Sohn, Sei-Kwan, Yang, Se-Hwa and Hong, Hyung-Ock, 2008, *The Social History of Korean Dwellings*, Paju: Dolbege.

Jun, Sang-In, 2009, *Crazy about Apartments: Sociology of Housing in Modern Korea*, Seoul: Isoop.

Kim, Choel-Soo, 2006, *The Understanding of Urban Space*, Seoul: Gimundang.

Kim, Ji-Eun, 2012, "Ecomomic and Social Effect of Physical Closure of Multi-family Housing Estate in Seoul," Ph.D. dissertation from Department of Environmental Studies, Seoul National University.

Korea National Housing Corporation, 1992, *The 30 Years History of Korea National Housing Corporation*, Seoul: Korea National Housing Corporation

Kwon, Hyun-Ah, 2012, "A Study on the Relationship between Commodification and Everyday Life in Korean Urban Housing," Ph.D. dissertation from Department of Architecture, Seoul National University.

Kwon, Hyun-Ah & Baek, Jin, 2013, "A Study on the Commodification of Apartment Brand based on Social Stratification: Focused on Samsung Raemian, GS Xi and Lotte Castle," *Journal of the Architectural Institute of Korea Planning & Design*, 29(12): 105-114.

Lim, Seo-Hwan, 2005, *50 Years of Housing Policy: Political and Economic Changes and the Development of Housing Policy*, Seoul: Gimundang.

Moon, Okpyo et al., 1992, *Urban Middle Class Living Culture*, Seongnam: The Academy of Korean Studies.

Nam, Uhyeon, 2011, *The Collapse of an Apartment*, Seoul: RHK.

Park, Cheol-Soo, 2006, *The Cultural History of Apartments*, Seoul, Sallim Publishing.

____, 2010, "Architectural Interpretations of Negative Attributes on Apartments in Korean Popular Novels," *Journal of the Architectural Institute of Korea Planning & Design*, 26(1): 65-75.

Park, Haecheon, 2011, *Concrete Utopia*, Seoul: Ja-eum gwa Mo-eum.

Park, Jin-Hee, 2004, "A study on the 'linear-type' housing from the 1960's to the early 1970's", Master's thesis from Department of Architecture, Yonsei University.

Park, Jong-Woo & Choi, Seong-Hwan & Yang, Young-Joon & Ha, Jong-Hyo & Lee, Sang-Jun & Jang, Leem-Jong, 2005, "A Study on the Hillside Affordable Housing of Seoul in Late 1960s Through Early 1970s: Focusing on Jeongneung-Sky Apartment Housing and Si-Min Apartments," *Journal of the Architectural Institute of Korea Planning & Design*, 21(12): 47-54.

Shim, Woo-Gab & Kang, Sang-Hoon & Yeo, Sang Jin, 2002, "Korean Apartment Housing from the Period of Japanese Occupation," *Journal of the Architectural Institute of Korea Planning & Design*, 18(9): 159-168.

Statistics Korea, 2006, *2006 Social Index of Korea*, Seoul: Tonggyecheong.

Yim, Bong Kil, 1992, "Lifestyles and Political Awareness of the Urban Middle Class," Moon Okpyo et al., *Urban Middle Class Living Culture*, Seongnam: The Academy of Korean Studies, pp. 105-141.

Yoon, Ju-Hyun (editor), 2002, *Korean Housing*, Daejeon: Tonggyecheong.

Founded in 1978, the Academy of Korean Studies (AKS) has established itself as a leader in Korean studies in the nation and around the world. The AKS is one of the world's most important research institutions as well as a distinguished learning environment for scholars and graduate students in Korean studies. For forty-two years, the AKS has been devoted to promoting a broader understanding of Korea. It seeks to support research and teaching on Korean issues in a range of scholarly fields, to forge strong academic relationships with many countries and regions, and to advance knowledge about, and raise public awareness of Korea.

As Korea is widely recognized thanks to its growing importance in current world affairs, people from all over the world are becoming greatly interested in diverse aspects of Korea, including its history, economy, politics, religion, literature, language, and culture. In order to fulfill our mission, the Center for International Affairs (CEFIA) has worked hard to promote a better understanding of Korea to the wider world. In this line of work, the Understanding Korea Project of the CEFIA has played a pivotal role in developing useful materials in foreign languages to integrate Korea into education in the broader context of the world. This magazine, *2019 InfoKorea*, presents the most recent data in diverse sectors, ranging from the Korean population to education, and contains two feature articles that offer detailed explanations of Traditional Korean Villages and Modern Korean Living Spaces. We hope that it will serve as a bridge between Korean studies and the most recent work of the international community. Our center will continue its work of improving understanding of Korea in order to promote a broader vision of Korea as a whole.

Center for International Affairs

The Academy of Korean Studies



Training Fellowships for Textbook Experts



The AKS's Understanding Korea Project has held six training fellowships for international educators in 2019. Textbook authors, publishers, and editors; government officials in charge of social studies; and professors and teachers of the subject in Uganda, the United States, Paraguay, Kazakhstan, and England, Montenegro were invited to the programs. The participants from those countries and Korea, including the researchers of the Understanding Korea Project, attended textbook seminars to exchange information about the educational environment and textbook systems of their respective countries and to share their ideas on how to improve mutual understanding through textbooks.

They also learned more about Korea's culture by visiting major museums in Korea, such as the National Museum of Korean Contemporary History and the Busan Modern History Museum, as well as some important historic sites including Gyeongbokgung Palace in Seoul and Bulguksa Temple in Gyeongju.

They also had opportunities to directly witness the rapidly-developing industries of Korea by visiting a number of major industrial facilities including Hyundai Motors. As such, the participants in the Understanding Korea Project's cultural education programs of 2019 were able to deepen their understanding of Korea and Korean culture and enrich their own viewpoints of Korea.

Building a Global Cooperative Network

The AKS's Understanding Korea Project built and promoted a global cooperative network in 2019 by visiting foreign government agencies in charge of education and influential publishers in many countries around the world, and by hosting and participating in major academic seminars and exhibitions.

In particular, this year the project built a cooperative network dedicated to improving the descriptions of Korea in foreign textbooks by inviting India's National Council of Educational Research and Training (NCERT).

The Understanding Korea Project also participated in the annual conference of the National Council for the Social Studies (NCSS) in the United States for the fourth consecutive year in 2019 to carry out activities aimed at deepening American and world educators' understanding and perception of Korea, as well as to build networks with them.

The 27th & 28th AKS Summer Program for International Students



The AKS Summer Program for International Students is a program of Korean studies lectures and cultural experiences designed for foreign college students who are interested in Korean studies. The lectures on Korean culture provide opportunities for foreign college students to expand their knowledge of Korea and to grow into next-generation Korean studies researchers by introducing them to Korean studies and offering them opportunities to directly learn and experience Korean culture.

As the number of applicants is increasing each year, the event has been held twice this year.

Twenty-three undergraduate students from 23 countries around the world participated in the 27th AKS Summer Program for International Students and twenty-five undergraduate students from 25 countries around the world participated in the 28th program hosted in 2019.

They attended lectures on Korea's history, culture, and food; took part in various field learning activities about Korean culture, such as cooking Korean food, gathering with Korean students, and learning about Korean decorum; and visited historic sites such as Deoksugung Palace and Panmunjeom (JSA).

Graduate School of Korean Studies

The AKS's Graduate School of Korean Studies was opened on March 5, 1980 for the purpose of promoting Korean culture and nurturing talented individuals who can contribute to the globalization of Korean studies based on research and teaching in the fields of humanities and social sciences related to Korea. The Graduate School of Korean Studies has made great efforts to foster new generations of scholars in the field of Korean studies over the forty years since its foundation.

Since the first graduation ceremony held in 1982, the school has produced more than 1,000 MA and 500 PhD graduates, who are laying solid foundations for the further development of Korean studies by carrying out teaching and research activities at major universities, research institutes, and cultural organizations across Korea and overseas.

A total of 268 students are currently enrolled on the school's MA and PhD programs, half of whom are foreign students from all around the world.