Explore Korea through Statistics 2018



Statistics Korea



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CHINA
Baekdusan
Dumangang River
Amnokgang River
Supung Dam
Myohyangsan
Daedonggang River
Pyeongyang
Geumgangsan
Imjingang River
Seoraksan
East Sea
Baengnyeongdo
Gaeseong
Soyanggang Dam
Gimpo Plain
Ganghwado
Seoul
Incheon
Hangang River
Ulleungdo
Dokdo
KOREA
Taebaeksan
Chungju Dam
Geumgang River
Yellow Sea
Daecheong Dam
Daejeon
Nakdonggang River
Daegu
Ulsan
Jirisan
Gimhae Plain
Gwangju
Busan
Yeongsangang River
Naju Plain
Seomjingang River
Geojedo
Korea Strait
Jindo
Hallasan
Jejudo
JAPAN
0 50 100Km
SCALE 1:5,200,000
LEGEND
Demarcation line
Capital
City
Mountain
Dam

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Statistics Korea

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Foreword

Statistics Korea publishes **Explore Korea through Statistics 2018** to help foreign readers to understand social and economic phenomena of Korea. Brief explanations are given with statistical tables, graphs and figures for better understanding of readers. The book presents various information on land, population, economy, society and culture to help readers grasp the Korean society easily.

If you need further details about the data in this book, please visit our website (http://kostat.go.kr) or refer to the other publications issued by Statistics Korea.

I hope that this book will serve as a good reference to your interest in Korea.

Thank you.

Commissioner
Statistics Korea

Kang Shin-Wook

Overview of Statistics Korea

History

Nov. 1948 Bureau of Statistics, Government Information Agency

The Bureau was composed of 1,000 officials in one office and 4 divisions such as General Affairs, Planning, Population Census and Vital Statistics Division.

Feb. 1955 Bureau of Statistics, Ministry of Home Affairs

The organization of the Bureau was reshuffled into 3 Divisions of Planning, Population Census and Vital Statistics (400 officials).

Jul. 1961 Bureau of Statistics under the Ministry of Economic Planning Board

The Bureau of Statistics was relocated to the EPB from the Ministry of Home Affairs. On the 29th of June 1962, the Division of Survey and Analysis was newly established.

Dec. 1990 National Statistical Office

The National Bureau of Statistics was enlarged and renamed as the National Statistical Office (NSO). The NSO included 3 bureaus, 14 divisions, 11 local statistics offices and 5 sub-local branch offices.

Jul. 1998 The Division of Agricultural & Fishery Statistics was newly made inside the Bureau of Social Statistics and 26 branch offices were newly launched.

Feb. 2008 AAccording to the revision of "Government Organization Act", agriculture and fishery statistics production work was transferred from the Ministry of Agriculture and Forestry and the Ministry of Maritime Affairs and Fisheries. Therefore, the Agriculture and Fisheries Production Statistics Division was newly founded. The Statistics Korea consists of 1office, 5 bureaus, 4 officers, 23 divisions and 7 teams in the headquarters. And the Statistics Korea has the Statistical Training Institute (2 divisions), Statistics Research Institute (3 divisions), 12 Local Statistics Offices and 65 Local Branch Offices.

Dec. 2017 Statistics Korea established a dedicated team (Strategy Performance Team) to strengthen customer-oriented sustainable performance and performance-oriented management.

The Organization of Statistics Korea :

Headquarters (1 director general, 5 bureaus, 1 deputy director general, 4 officers and 34divisions, 1 team and 1 secretariat), The Statistical Training Institute (2 divisions), The Statistical Research Institute (3 divisions), 5 Regional offices of Statistics and 34 District Offices of Statistics.

Mission & Vision

MISSION :

Leading the development of national statistics, producing reliable statistics and providing statistical information to economic entities

Statistics Korea coordinates, produces and disseminates national statistics in a decentralized statistical system.

Through statistical coordination activities, Statistics Korea manages the quality of national statistics to lead the development of official statistics.

Statistics Korea will be a central statistical agency that Koreans trust by improving the quality of statistics produced by Statistics Korea.

Statistics Korea carries out a mission to provide useful statistics to economic entities.

VISION :

Leading national policies and designing the future of the people through building open statistical hubs

Not only Statistics Korea but also governmental and public agencies produce official statistics. Statistical users are all economic entities such as enterprises and individuals as well as governmental agencies, which establish, enforce and evaluate national policies.

Statistics Korea provides users with open services by integrating not only statistics produced by Statistics Korea but also various administrative data and statistics produced by governmental agencies, public agencies or private organizations, and by building statistical hubs.

Statistics Korea contributes to making rational national policies by providing scientific basis, and helps Koreans design their future by providing essential data for decision making.

Core strategies :

Implementing high-quality statistical administration through reinforcing bases of national statistics

First, Statistics Korea improves institutional infrastructure for statistical production and leads the development of national statistics by strengthening planning and coordination activities of national statistics, establishing legal basis for sharing, standardizing and utilizing administrative data, improving the quality of national statistics, revising samples and establishing efficient statistical production environment.

Second, Statistics Korea builds data hubs and open platforms, and enhances statistical production and utilization by opening national statistics to users, expanding integrated services and providing customized services through convergence of statistical data.

Third, Statistics Korea produces statistics to meet changing statistical demand and supports national policies by improving statistical production environment, developing statistics customized for policy making, reflecting statistical reality, providing regional statistics and building up capability of local governments.

Fourth, Statistics Korea strengthens cooperation and collaboration networks within and outside Statistics Korea, and enhances statistical expertise by carrying out research to cope with future statistical environment, expanding training activities to increase statistical capability, strengthening international cooperation to nurture global statistical leaders and carrying out active promotion to improve the reliability of national statistics.

Organization Chart

As of January 2018, the Statistics Korea, a central organization for statistics under the Ministry of Strategy and Finance, has 1 director general, 5 bureaus, 1 deputy director general, 4 officers, 34 divisions, 1 team and 1 secretariat laboring in the headquarters. Statistics Korea also operates affiliated agencies including the Statistical Training Institute, the Statistical Research Institute, Regional Offices of Statistics and District offices of Statistics.

Korea Statistical Information on the Internet

1) News Release on the Homepage

http://kostat.go.kr

2) Statistical Data Produced by KOSTAT

KOSIS (on-line database): http://www.kosis.kr, http://www.kosis.kr/eng/

3) Statistical Geographical Information Service

SGIS: http://sgis.kostat.go.kr

4) Microdata Service System

MDIS: http://mdis.kostat.go.kr

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Land and Climate

Chapter 1

- Location
- Land Size
- Administrative Districts
- Topography
- Climate

Location

The territory of the Republic of Korea is comprised of a peninsula, about 1,000km long vertically and about 300km long horizontally, that extends south-westwards from the northeastern part of the Eurasian Continent, and about 3,358 nearby islands (as of 2015).

The territory is located between 33° 06′43″ to 43°00′42″ N and 124° 11′04″ to 131°52′21″E, extending about 10 degrees latitudinally and about 8 degrees longitudinally. The Republic of Korea is bordered by the Amnok and Duman Rivers to the north with China and Russia, and facing Japan to the east across the East Sea.

The name East Sea, which refers to the sea lying to the east of the Korean Peninsula, has been used by the Korean nation for about 2,000 years, and breathing with our history. Samguksagi (Historical Record of the Three Kingdoms), the country's oldest historical text,

records that the name East Sea was used from BC 37 onwards. The fact was clearly inscribed on the King Gwanggaeto Stele, which was built in 414.

Land Size

The land size of the Korean Peninsula comes to about 221,000km^2, while that of South Korea bordered by the military demarcation line comes to 100,300km^2, accounting for 45.4% of the entire peninsula. The size of the entire peninsula is similar to UK and Romania, accounting for 0.16% of global land mass. The size of South Korea is similar to that of Hungary, Portugal or Iceland, accounting for 0.07% of global land mass. Compared with its neighboring countries, the land size of Japan, China and Russia amounts to 1.7 times, 43.3 times and 77.4 times of the entire peninsula, and 3.8 times, 95.3 times and 170.5 times of South Korea, respectively.

<Table 1.1> Comparison with Land Size of Neighboring Countries (2017)

	World	Korea			Japan	China	Russia
			South Korea	North Korea			
Land Size (1,000km^2)	134,325	220.8	100.3	121.5	378	9,563	17,098
Ratio (%)	100.0	0.16	0.07	0.09	0.28	7.12	12.73

Source: World Bank

Administrative Districts

The Republic of Korea consists of 17 administrative districts; Seoul, Busan, Daegu, Incheon, Gwangju, Daejeon, Ulsan, Sejong, Gyeonggi-do, Gangwon-do, Chungcheongbuk-do, Chungcheongnam-do, Jeollabuk-do, Jeollanam-do, Gyeongsangbuk-do, Gyeongsangnam-do and Jeju Special Self-Governing Province. The borderlines between administrative districts are chiefly drawn along mountain ranges and rivers.

Seoul is the capital of the Republic of Korea, and located in the middle of the Korean Peninsula, spreading across the Han River to the north and south. Seoul has been the center of politics, economy, society and culture since 1394, the early days of the Chosun Dynasty's founding. It is also an international metropolis where held the Seoul Olympic Games in 1988, the Korea-Japan FIFA World Cup in 2002, the 2010 G20 Seoul Summit and the 2012 Seoul Nuclear Security Summit.

Topography

Mountainous area accounts for about three-quarters of the country's total land area. Most of the high mountains are located near the East Coast. Thus, the entire topography shows that the eastern section is higher than the western section, with the Taebaek Mountains in the South and the Nangrim Mountains in the North forming the backbone of the peninsula.

The Korean Peninsula is surrounded by the sea on three sides, whose total length of coastline is about 15,000km (including islands). Each of the East, West and South Coasts has its own unique characteristics.

The steep slopes of the Hamgyeong Mountains and Taebaek Mountains extend into the sea. Thus, the sea along the East Coast is deep and has monotonous shorelines. There are well-developed lines of sand dunes, lagoons and half-moon-shaped sandy beaches along the East Coast. Ulleungdo and Dokdo, both volcanic islands, are located in the East Sea far away from the coast.

The West Coast is comprised of relatively flat terrain. Wide reclaimed land has been formed along the coast by using the big difference between the rise and fall of the tide. The southern sea forms an archipelago comprised of 2,000 or more islands (mostly in the western section). Jesu Island, the largest island of the South Korea, is located in the southern sea.



Climate

The country is geographically located in the mid-latitudinal, temperate climate zones, and thus the climate has clear-cut temperature changes between the four seasons, with summer and winter longer than spring and fall. In winter, it is cold and dry under the influence of continental high pressure. In summer, the climate is hot and humid on the border of the North Pacific high pressure. In spring and fall, the weather is mostly sunny and clear under the influence of migratory high pressure.

With the exception of the mountainous areas in the midland of the country, the annual average temperature comes to 7~17°C, while it goes up to 23~32°C in August, the hottest month in the year. Monthly average temperature is 12~24°C in May, 10~21°C in October, and – 6 ~ 3°C in January, the coldest month in the year.

Annual precipitation stands at 800~1,600mm for southern areas, and 700~1,800mm for central areas. 50~60% of annual precipitation occurs in summer. Humidity is the highest in July at 80%.

Population

Chapter 2

- The 27th Largest Population in the World
- High Population Density Compared to Other Countries
- Population Ageing
- Shrinking Trend on the Natural Population Increase Rate
- The Lowest Total Fertility Rate (TFR) among OECD Countries
- Marriage and Divorce
- Stronger Trend Toward a Smaller Family

The 27th Largest population in the world

In 2017, the population of South Korea stands at 51,446,000, a 2.9% increase from 50,004,000 in 2012, and ranks 27th in the world, accounting for 0.7% of the global population of 7,550,260,000. The population of North Korea stands at 25,491,000, 49.5% of that of South Korea. Thus, the added population of the two Koreas stands at 76,937,000, ranking 20th in the world. The two Koreas follow Turkey whose population is about 80,745,000.



<Table 2.1> Each Country's Population (2017)

(Unit: 1,000)

Rank	Country	Population	Percentage	Rank	Country	Population	Percentage
	The world	7,550,262	100.0	15	Vietnam	95,541	1.3
1	China	1,409,517	18.7	16	Germany	82,114	1.1
2	India	1,339,180	17.7	17	DR Congo	81,340	1.1
3	USA	324,459	4.3	18	Iran	81,163	1.1
4	Indonesia	263,991	3.5	19	Turkey	80,745	1.1
5	Brazil	209,288	2.8	20	Thailand	69,038	0.9
6	Pakistan	197,016	2.6	21	UK	66,182	0.9
7	Nigeria	190,886	2.5	22	France	64,980	0.9
8	Bangladesh	164,670	2.2	23	Italy	59,360	0.8
9	Russia	143,990	1.9	24	Tanzania	57,310	0.8
10	Mexico	129,163	1.7	25	South Africa	56,717	0.8
11	Japan	127,484	1.7	26	Myanmar	53,371	0.7
12	Ethiopia	104,957	1.4	27	South Korea	51,446	0.7
13	Philippines	104,918	1.4	28	Kenya	49,700	0.7
14	Egypt	97,553	1.3	53	North Korea	25,491	0.3

Source: Statistics Korea <Population Projections>, UN <World Population Prospects>

High Population Density Compared to Other Countries

As for population density, which measures how many people live in the same land area, South Korea ranked high in the world with 511 persons/km^2 in 2016. Especially, with the exception of city states (Monaco, Singapore) and small island countries (Malta, Maldives), South Korea has a high population density in the world. Population density of North Korea stands at 197 persons/km^2, 2.6 times lower than that of South Korea.

<Table 2.2> Population Density (2016)

(Unit: Person/㎢)

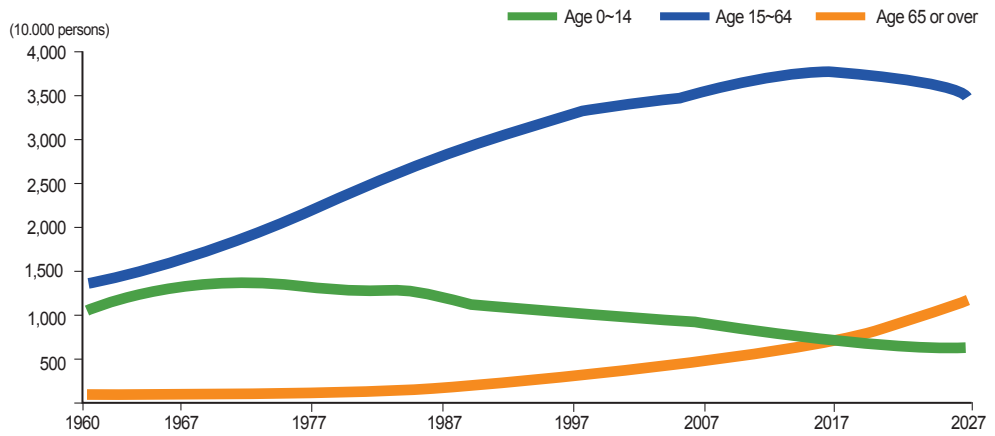
Rank[1)]	Country	Population Density[2)]	Rank[1)]	Country	Population Density[2)]
1	Monaco	19,100	7	Bermuda	1,164
2	Singapore	7,799	8	Bangladesh	1,090
3	Hong Kong	6,633	9	Guernsey	980
4	Bahrain	1,829	10	Jersey	898
5	Malta	1,378	13	**South Korea**	511
6	Maldives	1,167	-	North Korea[3)]	197

Note: 1) Rank of population density, 2) Estimated figure, 3) The same as the past data for North Korea (rank not available)
Source: UN Demographic Yearbook (2016)

Population Ageing

In connection with population composition for each age group, the population of youth under age 15 accounts for 13.1%, the working age population aged 15~64 73.1% and the elderly population aged over 65 13.8% of the total population in 2017. The demographic change shows a remarkable decrease in the proportion of youth, a gradual increase in the working age population and a sharp increase in the elderly population. This trend can lead to a decrease in the economically active population that will be responsible for production, and an increase in the dependent population.

<Figure 2.1> Population Composition (2017)



Source: Statistics Korea <Population Projections>

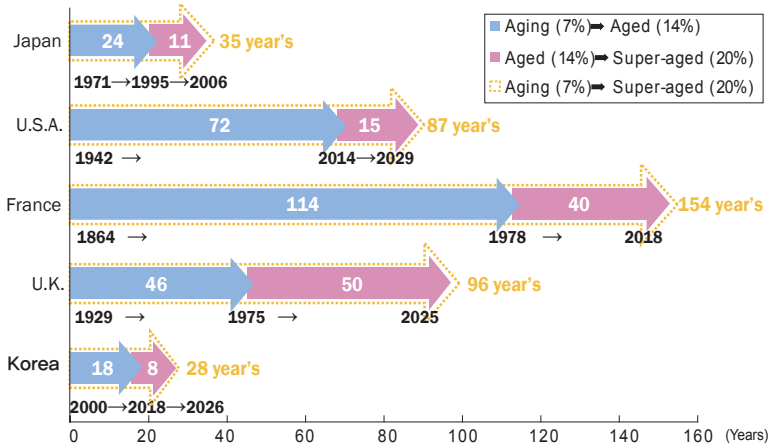
As of 2017, about 1.4 person out of every ten South Koreans is aged 65 or over. The aging index, which indicates the population aged 65 or over per 100 youngsters, stood at 54.6 in 2007, but 104.8 in 2017, which means the elderly population exceeds the youth population. The proportion of the elderly population in Korea is rapidly increasing from 9.8% in 2007 to 13.8% in 2017.

<Table 2.3> Size and Composition of Population

	Total population (1,000)	Population composition (%)			Median age	Average age	Aging index
		Age 0~14	Age 15~64	Age 65 or over			
1967	30,131	43.8	53.1	3.1	18.3	23.1	7.0
1977	36,412	36.5	60.0	3.6	20.5	25.1	9.9
1987	41,622	28.2	67.3	4.5	25.4	28.3	16.0
1992	43,748	24.7	70.0	5.4	27.9	30.2	21.7
1997	45,954	22.3	71.4	6.4	30.3	31.9	28.6
2002	47,645	20.4	71.7	7.9	32.9	34.0	38.6
2007	48,684	17.9	72.3	9.8	36.1	36.5	54.6
2012	50,200	15.1	73.4	11.5	39.1	38.8	76.1
2015	51,015	13.8	73.4	12.8	40.9	40.2	93.1
2016	51,246	13.4	73.4	13.2	41.5	40.7	98.6
2017	51,446	13.1	73.1	13.8	42.0	41.2	104.8

Source: Statistics Korea <Population Projections>

<Figure 2.2> Aging Speed of Major Countries (2017)



Source: UN <World Population Prospects: The 2017 Revision>

Shrinking Trend on the Natural Population Increase Rate

In 2017, the crude birth rate and the crude death rate stood at 7.0 and 5.6, respectively, and the natural population increase rate recorded 1.4.

The Lowest Total Fertility Rate (TFR) among OECD Countries

The TFR of Korean women fell to 2.99 in 1977, 1.53 in 1987 and 1.17 in 2002. The childbirth encouragement policy raised the TFR to 1.30 in 2012, but the TFR declined again to 1.05 in 2017.



<Table 2.4> Vital Statistics

	TFR	Crude birth rate (per 1,000 population)	Crude death rate (per 1,000 population)	Natural increase rate (per 1,000 population)	Crude marriage rate (per 1,000 population)	Crude divorce rate (per 1,000 population)	Life expectancy at birth		Average age at first marriage	
							Males	Females	Males	Females
1977	2.99	22.7	6.8	15.8	8.3	0.6	60.9	69.1	-	-
1987	1.53	15.0	5.9	9.1	9.4	1.0	65.9	74.3	-	-
1992	1.76	16.7	5.4	11.3	9.6	1.2	68.4	76.8	28.0	24.9
1997	1.52	14.4	5.2	9.2	8.4	2.0	70.7	78.7	28.6	25.7
2002	1.17	10.2	5.1	5.1	6.3	3.0	73.4	80.3	29.8	27.0
2007	1.25	10.0	5.0	5.1	7.0	2.5	75.9	82.5	31.1	28.1
2012	1.30	9.6	5.3	4.3	6.5	2.3	77.6	84.2	32.1	29.4
2015	1.24	8.6	5.4	3.2	5.9	2.1	79.0	85.2	32.6	30.0
2016	1.17	7.9	5.5	2.5	5.5	2.1	79.3	85.4	32.8	30.1
2017[p)]	1.05	7.0	5.6	1.4	5.2	2.1	-	-	32.9	30.2

Source: Statistics Korea <Vital Statistics>

Marriage and Divorce

The crude marriage rate (the number of marriages per 1,000 persons) marked the highest figure of 9.6 in 1992, and continued to decline. It increased to 7.0 in 2007, but started to decrease again to 5.2 in 2017.

The crude divorce rate (the number of divorces per 1,000 persons) has increased to 3.0 in 2002, but continued to decline to record 2.1 from 2015 under the impact of the decrease in the number of the married persons aged 15~49 and the adoption of a mandatory cooling-off period on divorce.

Stronger Trend Toward a Smaller Family

The number of ordinary households in Korea has continued to increase from 7,969,000 in 1980 to 14,312,000 in 2000 and to 19,368,000 in 2016. The increase in the number of households was caused by the combination of demographical factors and socioeconomic factors such as industrialization, urbanization and expansion of nuclear families. The average number of household members has decreased from 4.5 in 1980 to 3.1 in 2000 and 2.5 in 2016, showing a clear trend toward a smaller family.

One-generation and one-person households are continuously increasing. Whereas, two-generation households (the most common type) and three-generation or more households are continuously decreasing.

<Table 2.5> Generational Composition of Ordinary Households

	Number of households (1,000)	Percentage (%)					Average number of household members
		One generation	Two generation	Three generation	One-person households	Households of unrelated persons	
1980	7,969	8.3	68.5	16.5	4.8	1.5	4.5
1985	9,571	9.6	67.0	14.9	6.9	1.7	4.1
1990	11,355	10.7	66.3	12.5	9.0	1.5	3.7
1995	12,958	12.7	63.3	10.0	12.7	1.4	3.3
2000	14,312	14.2	60.8	8.4	15.5	1.1	3.1
2005	15,887	16.2	55.4	6.9	19.9	1.4	2.9
2010	17,339	17.5	51.3	6.1	23.9	1.2	2.7
2015	19,111	17.4	48.8	5.4	27.2	1.1	2.5
2016	19,368	17.2	48.3	5.2	27.9	1.4	2.5

Source: Statistics Korea <Population Census>

Labor

Chapter 3

- Economically Active Population
- Employment Structure
- Unemployment Structure by Age Group
- Wage Level
- Average Annual Working Hours

Economically Active Population

Statistics Korea carries out surveys on the economic activity status throughout a week, including the 15th of each month, for 32,000 sample households nationwide. These households are selected on the basis of the findings of the Population and Housing Census in accordance with criteria set by the International Labour Organization (ILO).

In 2017, the country's economically active population stood at 27,748,000, and 63.2% of the population aged 15 or over (43,931,000) participated in economic activities. 26,725,000 persons are employed and 1,023,000 persons are unemployed, leading to an unemployment rate of 3.7%. Due to the economic recovery and efforts to create jobs, the year-on-year increase in the number of the employed persons recorded 316,000, which increased by 1.2% compared to 2016.

<Table 3.1> Employment Trend

(Unit: 1,000 persons)

	Population aged 15 or over	Economically active population			Labor force participation rate (%)	Unemployment rate (%)
			Employed persons	Unemployed persons		
2002	37,014	22,982	22,232	751	62.1	3.3
2007	39,180	24,351	23,561	790	62.2	3.2
2012	41,857	25,781	24,955	826	61.6	3.2
2015	43,239	27,153	26,178	976	62.8	3.6
2016	43,606	27,418	26,409	1,009	62.9	3.7
2017	43,931	27,748	26,725	1,023	63.2	3.7

Note: The enlisted soldiers and policemen, public service workers and the convicted prisoners are excluded from the population aged 15 or over.
Source: Statistics Korea <Economically Active Population Survey>

Employment Structure

Compared the industrial employment structure in 2017 to that in 2013 (4 years ago), the component ratio of those employed in agriculture, forestry and fishery decreased by 1.2%p, those employed in the mining and manufacturing industries decreased by 0.1%p, but those employed in social overhead capital (SOC) and other service industries increased by 1.1%p. It appears that the number of persons employed in the information and communication technology industry will continue to increase.

The country's employment structure has changed in just 30~40 years to become very similar to that of more industrialized countries, as shown in the following figure.



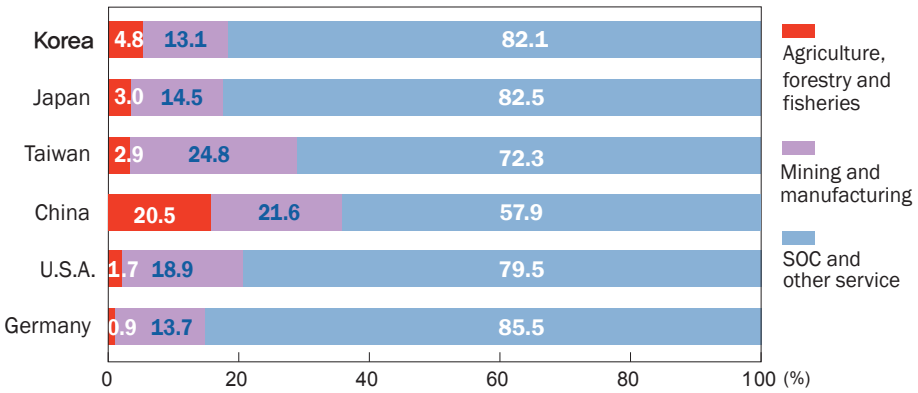
<Table 3.2> Distribution Ratio of the Employed Persons by Industry

(Unit: 1,000 persons, %)

	Total	Agriculture, Forestry and Fisheries		Mining and Manufacturing		SOC and other services	
			Percentage		Percentage		Percentage
2013	25,299	1,513	6.0	4,322	17.1	19,464	76.9
2014	25,897	1,446	5.6	4,471	17.3	19,980	77.2
2015	26,178	1,337	5.1	4,618	17.6	20,222	77.2
2016	26,409	1,273	4.8	4,603	17.4	20,534	77.8
2017	26,725	1,279	4.8	4,589	17.2	20,857	78.0

Note: In accordance with the Korean Standard Industrial Classification Rev. 10 (2017)
Source: Statistics Korea <Economically Active Population Survey>

<Figure 3.1> Distribution Ratio of the Employed Persons by Industry in Major Countries (2017)



Note: ILO modelled estimates
Source: ILO

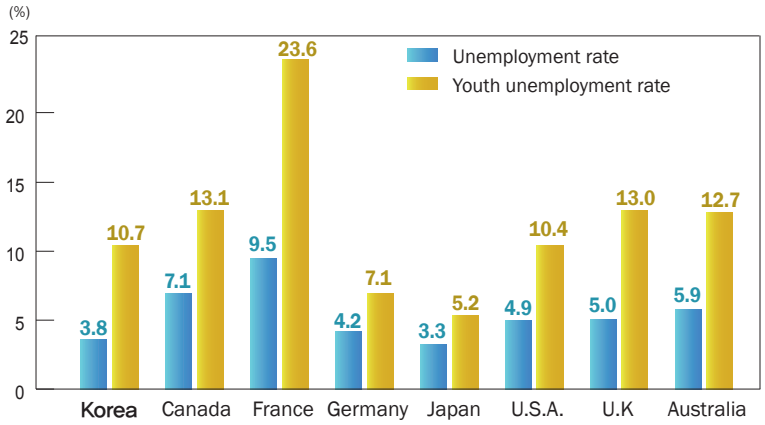
Unemployment Structure by Age Group

The biggest concern for economic activity is youth unemployment. It is a common phenomenon that the youth unemployment rate (for those aged 15~24) is higher than the total unemployment rate (for those aged 15~64) in OECD countries.

As of 2016, the youth unemployment rate (for those aged 15~24) in Korea stood at 10.7%, which is lower than that of France, Canada, UK and Australia, but the portion of youth employment rate (for those aged 15~29) is higher than the total unemployment rate.

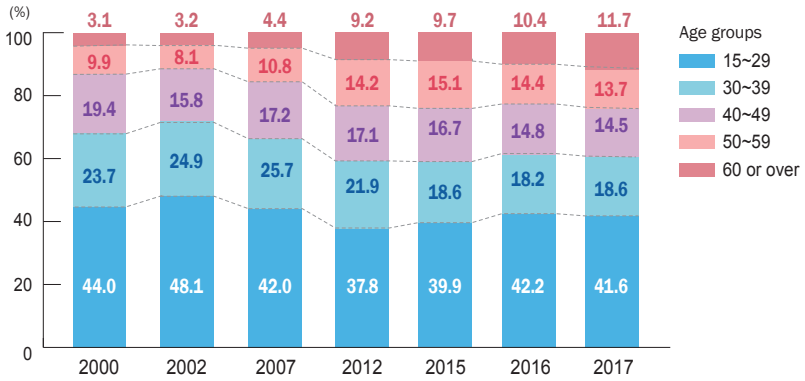
As of 2017, the unemployed persons aged 15~29 accounted for 41.6% of the total unemployed persons aged 15 or over.

<Figure 3.2> International Comparison of Unemployment rate (for those aged 15~64) and Youth Unemployment Rate (for those aged 15~24) (2016)



Source: OECD

<Figure 3.3> Percentage of Age Groups in the Total Unemployed Persons (%)



Source: Statistics Korea <Economically Active Population Survey>

Wage Level

Table 3.3 shows that the domestic wage index stood at 129.2 in 2017, rising nearly three times from 43.5 in 1997, 20 years ago. Over the same period, it showed a very high increase, compared to other countries' increase rate of 1.6 times or less, such as USA (1.59 times), Canada (1.48 times) and Japan (1.06 times). On the other hand, it also shows the country's wage level in the 1990s was considerably lower than that of other countries.

<Table 3.3> Hourly Wage Index (in Manufacturing)

	Korea	Japan	USA	Canada
1992	26.2	89.3	61.3	71.9
1997	43.5	99.3	70.6	78.7
2002	62.5	98.0	82.2	85.0
2007	90.9	103.9	92.8	98.7
2012	108.0	101.4	102.5	106.1
2015	121.5	103.4	107.0	111.8
2016	126.6	104.0	109.8	113.3
2017	129.2	105.0	112.3	116.7
Increase rate (2017/1992)	4.9	1.2	1.8	1.6

Note: 2010=100.0
Source: OECD

Average Annual Working Hours

In 2016, Korea's average annual working hours per worker stood at 2,069 hours, which was 329 hours longer than OECD average annual working hours. The five-day workweek system is expected to enable workers to have more time for leisure and hobby, improve the quality of their lives, enhance overall productivity through the development of human resources, increase women's social participation, develop service industry and reduce unemployment.

<Table 3.4> Average Annual Hours actually Worked per Worker in Major OECD Countries (2016)

(Unit: Hour)

Rank	Country	Work hours	Rank	Country	Work hours
1	Mexico	2,255	12	USA	1,783
2	Korea	2,069	17	Italy	1,730
3	Greece	2,035	18	Japan	1,713
4	Chile	1,974	30	Norway	1,424
5	Poland	1,928	31	Denmark	1,410
6	Latvia	1,910	32	Germany	1,363
7	Israel	1,889	-	OECD Average[1)]	1,740

Note: 1) Average of 32 countries having data among 35 member countries
Source: OECD

Price and Household Economy

Chapter 4

Price
- Consumer Price Index
- Producer Price Index

Household Economy
- Household Income
- Status of the Whole Household Income Distribution
- Houshold Consumption Expenditure
- Consumption Expenditure Pattern by Householder Age

Price

The price index calculated in Korea is composed of the Consumer Price Index (CPI), Producer Price Index (PPI), export and import price index, and Price Index of Commodities Received and Paid by Farmers.

Consumer Price Index

The annual average consumer price index (2015=100) was 102.9 in 2017, a 1.9% year-on-year rise. Prices for transportation increased by 3.6%, food and non-alcoholic beverages by 3.4%, other goods and services by 2.8%, food and accommodation by 2.4% and housing, water, electricity and fuel by 1.7%, which shows that prices have gone up in all items.

<Table 4.1> Consumer Price Index

	1987	1997	2002	2007	2012	2016	2017	Percent change (%)
Overall index	33.0	60.1	71.2	82.2	96.8	101.0	102.9	1.9
Food and non-alcoholic beverages	24.8	46.9	59.9	72.0	97.3	102.3	105.8	3.4
Alcoholic beverages and tobacco	24.0	40.8	52.5	62.8	65.6	100.7	102.2	1.5
Clothing and footwear	36.6	60.9	69.4	76.8	92.2	101.8	102.9	1.1
Housing, water, electricity and fuel	33.9	59.1	69.4	80.0	94.5	99.2	100.9	1.7
Household goods and housekeeping services	50.3	73.3	76.7	81.6	95.2	101.6	102.7	1.1
Health	40.4	64.3	81.7	89.8	97.7	101.0	101.9	0.9
Transportation	28.7	56.8	74.4	91.2	110.9	97.8	101.3	3.6
Communication	161.0	135.0	121.2	107.4	100.4	100.1	100.4	0.3
Recreation and culture	68.4	94.0	96.4	92.9	99.0	101.8	101.9	0.1
Education	19.8	53.3	64.9	84.0	95.8	101.6	102.8	1.2
Food and accommodation	26.0	63.9	70.6	80.7	94.9	102.5	105.0	2.4
Other goods and services	40.1	57.5	66.7	78.1	94.1	103.4	106.3	2.8

Note: 2015=100
Source: Statistics Korea <Consumer Price Survey>

Producer Price Index

In 2017, the producer price index stood at 102.5 (2010=100.0), a 3.4% year-on year rise, which showed an upward trend on all items. Agricultural, forestry and marine products recorded the largest rise of 6.5%, followed by mining products (4.9%), industrial products (4.7%), sanitation and resource recycling services (4.0%).



<Table 4.2> Producer Price Index

	1997	2002	2007	2012	2016	2017	Percent change (%)
Overall index	70.5	78.5	88.9	107.5	99.1	102.5	3.4
Agricultural, forestry and marine products	61.6	73.0	83.5	108.3	111.0	118.2	6.5
Mining products	50.5	61.9	75.5	105.7	115.3	121.0	4.9
Industrial products	70.0	76.4	87.1	108.6	92.8	97.2	4.7
Electricity, gas and water	56.7	73.9	86.4	113.7	106.9	108.0	1.0
Restaurant and lodging	81.2	99.1	95.6	109.4	118.1	120.9	2.4
Transportation	61.6	78.2	91.5	103.7	105.7	106.7	0.9
Communication	107.1	107.2	101.5	98.6	97.6	97.7	0.1
Information, publishing and image services	74.5	87.5	95.6	101.1	108.5	109.4	0.8
Finance and insurance	83.4	86.0	109.4	99.6	93.2	93.9	0.8
Real estate	83.3	85.0	93.5	104.5	111.5	113.1	1.4
Business-related services	69.9	76.7	88.4	105.0	110.5	112.8	2.1
Sanitation and resource recycling services	110.1	101.1	104.4	109.0	130.7	135.9	4.0
Educational services	-	-	-	108.0	119.4	121.2	1.5
Cultural and entertainment services	-	-	-	103.1	110.1	112.1	1.8
Other personal services	-	-	-	106.9	115.2	117.9	2.3

Note: 2010=100

Source: The Bank of Korea <Producer Price Survey>

Household Economy

Household Income

In 2016, the monthly average income per household with 2 or more persons stood at KRW4,399,000, a 0.6% (KRW26,000) increase from KRW4,373,000 in 2015. Current income increased by 1.1% (KRW48,000) to KRW4,270,000, while non-current income decreased by 14.6% (KRW2,200) to KRW129,000.



<Table 4.3> Monthly Average Income per Household[1)]

(Unit: KRW1,000, %)

	2006		2011		2015		2016	
	Amount	Component ratio	Amount	Component ratio	Amount	Component ratio	Amount	Component ratio
Income	3,038	100.0	3,842	100.0	4,373	100	4,399	100.0
Current income	2,906	95.6	3,705	96.5	4,222	96.5	4,270	97.1
Employment income	1,918	63.1	2,496	65.0	2,919	66.7	2,948	67.0
Self-employmont income	722	23.8	841	21.9	846	19.3	859	19.5
Property income	15	0.5	16	0.4	20	0.5	16	0.4
Transfer income	250	8.2	352	9.2	438	10.0	447	10.2
Non-current income	133	4.4	136	3.5	151	3.5	129	2.9

Note: 1) National, based on households with two or more members
Source: Statistics Korea <Household Income and Expenditure Survey>

Status of the Whole Household Income Distribution

In 2016, Gini coefficient based on the market income is 0.353, a 0.012 year-on-year increase from 0.341 in 2015.

<Table 4.4> Gini Coefficient of the Whole Households

	2011	2012	2013	2014	2015	2016
Based on the Market Income (A)	0.341	0.338	0.336	0.341	0.341	0.353
Based on the disposable income (B)	0.310	0.307	0.302	0.302	0.295	0.304
Improvement effect (A-B)	0.031	0.031	0.034	0.039	0.046	0.049

Source: Statistics Korea <Household Income and Expenditure Survey>

Household Consumption Expenditure

In 2016, the monthly average consumption expenditure per household with two or more members stood at KRW2,550,000, a 0.5% (KRW13,000) year-on-year decrease. A great part of household expenditure was in order of food and non-alcoholic beverages (13.7%), restaurants and hotels (13.5%), transportation (12.1%), education (11.1%) and housing, water, light and heat (10.7%)

<Table 4.5> Monthly Average Consumption Expenditure per Household

(Unit: KRW1,000, %)

	2006		2011		2015		2016	
	Amount	Component ratio	Amount	Component ratio	Amount	Component ratio	Amount	Component ratio
Consumption expenditure	1,945	100.0	2,393	100.0	2,563	100.0	2,550	100.0
Food and non-alcoholic beverages	276	14.2	339	14.2	354	13.8	349	13.7
Alcoholic beverages and tobacco	29	1.5	28	1.2	33	1.3	35	1.4
Clothing and footwear	123	6.3	157	6.5	162	6.3	158	6.2
Housing, water, light and heat	193	9.9	243	10.1	277	10.8	273	10.7
Household goods and housekeeping services	68	3.5	90	3.8	105	4.1	109	4.3
Health	120	6.2	156	6.5	174	6.8	177	7.0
Transportation	244	12.5	295	12.3	322	12.5	308	12.1
Communication	132	6.8	143	6.0	148	5.8	144	5.6
Entertainment and culture	104	5.4	129	5.4	150	5.8	150	5.9
Education	222	11.4	295	12.3	283	11.1	282	11.1
Restaurants and hotels	260	13.4	299	12.5	339	13.2	344	13.5
Other goods and services	173	8.9	219	9.2	215	8.4	220	8.6
Non-consumption expenditure	530	100.0	722	100.0	810	100.0	812	100.0

Note: Based on households with two or more members
Source: Statistics Korea <Household Income and Expenditure Survey>

Consumption Expenditure Pattern by Householder Age

All age groups spend their income on groceries, transportation, restaurants and hotels, but householders in their forties spend more on education and those in their sixties or more on groceries, housing and health, compared to other age groups.



<Table 4.6> Component Ratios of Consumption Expenditure Items by Householder's Age (2016)

(Unit: %)

	39 or under	40~49	50~59	60 or over
Consumption expenditure	100.0	100.0	100.0	100.0
Food and non-alcoholic beverages	12.5	12.4	12.8	19.3
House, water, light and heat	11.3	9.1	10.2	14.4
Health	6.3	5.5	6.9	11.1
Transportation	13.3	10.8	13.7	10.9
Education	7.9	17.9	9.7	1.5
Restaurants and hotels	13.9	13.5	14.1	12.0
Other	34.8	30.6	32.6	30.8

Note: National, based on households with two or more members
Source: Statistics Korea <Household Income and Expenditure Survey>

National Account

Chapter 5

- The World's 11th Largest Economy
- Per Capita Gross National Income: about $30,000
- Savings Rate
- Investment Ratio
- Industrial Structure

The World's 12th Largest Economy

Gross domestic product (nominal GDP) in 2017 was KRW1,730 trillion, gross national income was KRW1,731 trillion, and per capita gross national income was KRW33.64 million. Compared to 30 years ago, gross domestic product increased 14.4 times and per capita gross national income increased 11.8 times.



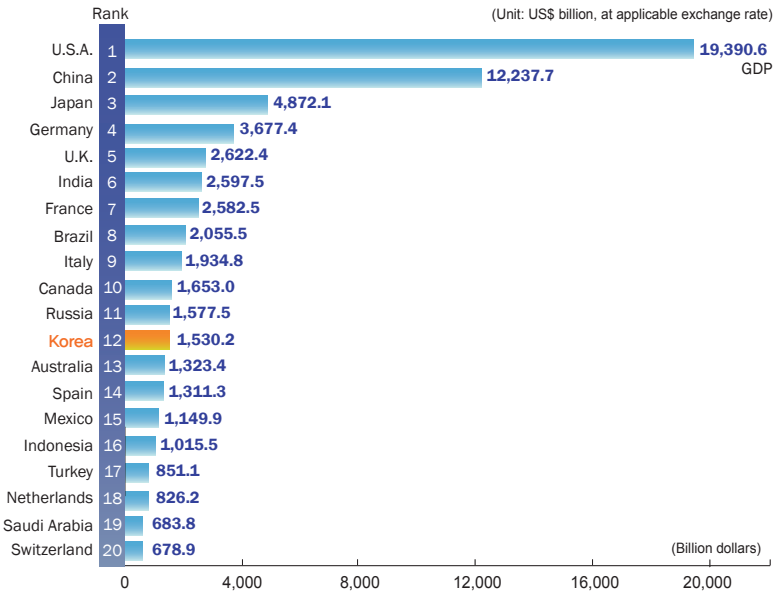
<Table 5.1> National Income

	GDP		GNI		Per capita GNI	
	trillion won	billion dollars	trillion won	billion dollars	ten thousand won	dollar
1977	18.5	38.3	18.5	38.1	50.7	1,047.0
1987	120.2	146.2	118.7	144.3	285.1	3,467.0
1992	273.3	350.0	272.7	349.3	623.4	7,983.0
1997	530.3	557.6	527.1	554.2	1,147.0	12,059.0
2002	761.9	608.9	758.9	606.5	1,592.8	12,729.4
2007	1,043.3	1,122.7	1,040.1	1,119.3	2,136.4	22,992.1
2012	1,377.5	1,222.4	1,391.6	1,234.9	2,772.1	24,599.9
2015	1,564.1	1,382.4	1,568.4	1,386.1	3,074.4	27,170.9
2016	1,641.8	1,414.7	1,646.2	1,418.5	3,212.4	27,681.0
2017	1,730.4	1,530.2	1,730.5	1,530.2	3,363.6	29,744.6

Source: The Bank of Korea <National Account>

In 2017, the gross domestic product of major countries was in the order of USA (USD19.3906 trillion), China (USD12.2377 trillion), Japan (USD4.8721 trillion), Germany (USD3.6774 trillion) and UK (USD2.6224 trillion), and Korea ranked the 12th place with USD1.5302 trillion.

<Figure 5.1> Gross Domestic Product of Major Countries (2017)



Source: Statistics Korea <International Statistical Yearbook (2017)>

Per Capita Gross National Income: about $30,000

According to the World Bank's announcement, per capita GNI of major countries in 2017 was in the order of Switzerland (USD81,209), Norway (USD78,315), Luxemburg (USD74,945), Iceland (USD71,532) and Qatar (USD63,347), and Korea ranked 29th place with USD29,745.

<Table 5.2> Per capita GNI of major countries (2017)

(Unit: USD)

Rank	Country	Per capita GNI	Rank	Country	Per capita GNI
1	Switzerland	81,209	11	Australia	52,673
2	Norway	78,315	12	Hong Kong	48,291
3	Luxemburg	74,945	13	Netherlands	48,221
4	Iceland	71,532	14	Austria	47,784
5	Qatar	63,347	15	Finland	46,147
6	USA	60,432	16	Germany	45,709
7	Denmark	57,799	17	Canada	44,520
8	Ireland	57,355	18	Belgium	43,468
9	Sweden	55,128	19	New Zealand	42,290
10	Singapore	54,720	29	**Korea**	29,745

Source: Statistics Korea <International Statistical Yearbook (2017)>

Savings Rate

In 2017, the gross savings ratio stood at 36.3%, similar to 36.4% in 1997. The gross savings ratio of the private sector recorded 27.9% in 2017, a 1.9%p increase from 26.0% in 1997. During the same period, the government's gross savings ratio declined by 2.0%p.



The gross savings ratio of the private sector recorded 27.9% in

2017, a 0.3%p decrease from 28.2% in 2016. During the same period, the government's gross savings ratio recorded 8.4% in 2017, a 0.5%p increase from 7.9% in 2016.

Investment Ratio

While the gross domestic investment ratio stood at 31.2% in 2017, a 6.4%p decrease from 37.6% in 20 years ago 1997, the self-reliance ratio of investment resources stood at 116.2% in 2017, a 19.5%p increase from 96.7% in 1997.

Compared to the previous year, the gross domestic investment ratio recorded 31.2% in 2017, a 1.9%p increase from 29.3% in 2016, and the self-reliance ratio of investment resources recorded 116.2% in 2017, a 7.0%p decrease from 123.2% in 2016.

<Table 5.3> Gross Savings Ratio and Investment Ratio

(Unit: %)

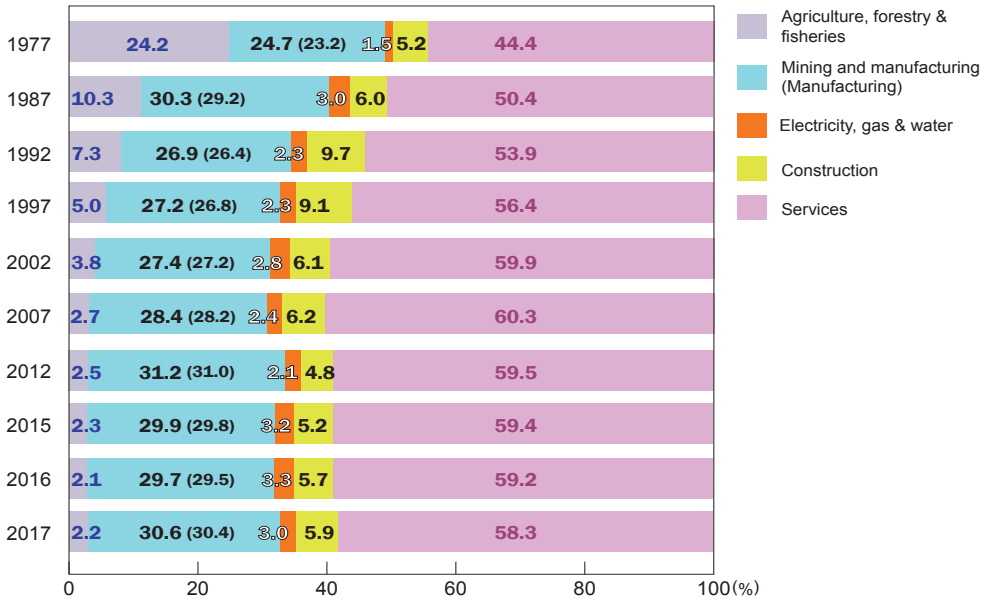
	1992	1997	2002	2007	2012	2015	2016	2017
Gross Savings Ratio	38.4	36.4	31.8	33.2	34.2	35.6	36.1	36.3
(Private sector)	30.7	26.0	21.3	22.4	26.6	28.6	28.2	27.9
(Government)	7.7	10.4	10.5	10.8	7.6	7.0	7.9	8.4
Gross domestic investment ratio	38.5	37.6	31.2	32.8	30.8	28.9	29.3	31.2
(Gross domestic fixed investment ratio)	37.4	36.2	30.6	30.7	29.4	29.3	29.7	31.3
Self-reliance ratio of investment resources	99.8	96.7	102.1	101.3	110.9	123.1	123.2	116.2

Source: The Bank of Korea

Industrial Structure

In connection with the share of each industry from GDP in 2017, the service industry recorded 58.3%, the mining and manufacturing industry 30.6%, having been steadily increasing for 30 years. Whereas, compared to other industries, agriculture, forestry and fisheries recorded a sharp decrease from 24.2% in 1977, 10.3% in 1987 to 2.2% in 2017.

<Figure 5.2> Industrial Structure



Note: Data before 2000 are based on 2005.

Source: The Bank of Korea

Explore Korea through Statistics

Agriculture, Forestry and Fisheries

Chapter

6

- Agriculture
- Forestry
- Fisheries

Agriculture

The farm household population stood at 2,420,000 (4.7%) in 2017, which was a large drop from 7,770,000 (18.7%) in 1987, due to a great influx of rural population into the cities resulting from the industrialization.

Whereas, the income per farm household in 2017 recorded about KRW38 million, a 5.9 times increase from KRW6.5 million in 30 years ago 1987.



<Table 6.1> Major Agricultural Indices

	Number of farm households (1,000)	Farm household population (1,000 persons)		Farm household population ratio (%)	Income per farm household (KRW1,000)
			Total population (1,000 persons)		
1977	2,304	12,309	36,412	33.8	1,433
1987	1,871	7,771	41,622	18.7	6,535
1992	1,641	5,707	43,748	13.0	14,505
1997	1,440	4,468	45,954	9.7	23,488
2002	1,280	3,591	47,645	7.5	24,475
2007	1,231	3,274	48,684	6.7	31,967
2012	1,151	2,912	50,200	5.8	31,031
2015	1,089	2,569	51,015	5.0	37,215
2016	1,068	2,496	51,246	4.9	37,197
2017	1,042	2,422	51,446	4.7	38,239

Source: Statistics Korea <Farm Household Economy Survey>

The area of arable land was 1,621,000ha in 2017, which decreased by 522ha (-24.3%) from 2,143,000ha in 1987 due to the expansion of housing & factory site and roads, but the area of arable land per farm household increased by 0.41ha.

Korea's degree of food self-sufficiency decreased from 58.3% in 2007 to 50.9% in 2016 in the aftermath of imports of agricultural products, but the high increase in self-sufficiency of rice, which is a staple diet of Koreans, seems to be influenced by the opening market to rice imports and sluggish rice consumption.



<Table 6.2> Area of Arable Land and Food Self-Sufficiency

	Arable land area (1,000 ha)	Arable land area per farm household (ha)	Food self-sufficiency (%)	
				Rice
1987	2,143	1.15	-	-
1992	2,070	1.26	-	-
1997	1,924	1.34	-	-
2002	1,863	1.45	58.3	107.0
2007	1,782	1.45	51.5	95.8
2012	1,730	1.50	45.7	86.6
2015	1,679	1.54	50.2	101.0
2016	1,644	1.54	50.9	104.7
2017	1,621	1.56	-	-

Note: In calculating self-sufficiency of rice, the rice for helping the North Korea was excluded. Data for 2016 are provisional.
Source: Statistics Korea, Ministry of Agriculture, Food and Rural Affairs

In 2017, the cultivated area of food crops stood at 920,000ha, which has decreased by 860,000ha (-48.3%) from 1,780,000ha in 30 years ago 1987. The cultivated area for rice, which is the staple food, stood at 750,000ha which has decreased by 510,000ha (-40.2%) from 1,260,000ha in 1987.

The cultivated area of vegetables stood at 210,000ha in 2017, which has decreased by 100,000ha (-32.3%) from 310,000ha in 1987, but slightly increased in comparison to the previous year.

The cultivated area of fruit trees, special and medical crops has continued to fluctuate, but has been on an increasing trend in recent years.



<Table 6.3> Cultivated area of major crops

(Unit: ha)

	Food crops		Vegetables	Fruit trees	Special/medical crops
		Rice			
1977	2,294,300	1,230,041	293,945	94,190	121,566
1982	1,907,515	1,188,073	342,967	101,273	123,607
1987	1,775,333	1,262,324	307,581	113,897	175,708
1992	1,477,651	1,156,885	306,054	146,244	129,541
1997	1,314,248	1,052,395	284,940	173,806	108,481
2002	1,298,815	1,053,186	249,441	162,450	94,450
2007	1,161,105	950,250	222,475	148,398	79,915
2012	1,050,355	849,172	216,111	152,387	76,101
2015	981,824	799,344	198,647	154,136	92,757
2016	960,327	778,734	196,587	158,662	97,670
2017	918,263	754,713	208,308	159,041	96,394

Note: Applicable to crops cultivated outdoors
Source: Statistics Korea <Agricultural Area Survey>

Forestry

In 2015, the country's forest area was 6,335,000ha, accounting for 64% of the nation's total land area and consisting of 25.5% for national forests and 74.5% for civil owned forests.

The country's average growing stock per ha has been on an increasing trend such as 9.55m^3 in 1960, 22.18m^3 in 1980, 63.46m^3 in 2000 and 145.99m^3 in 2015.

<Table 6.4> Forest Area and Growing Stock

	Size of forests (1,000 ha)			Growing stock	
	Total	National forest	Civil owned forest	Total (1,000m^3)	Growing stock/ha (m^3)
1960	6,701	-	-	63,995	9.55
1970	6,611	1,277	5,335	68,773	10.40
1980	6,571	1,307	5,256	145,694	22.18
1990	6,476	1,346	5,114	248,426	38.36
2000	6,422	1,433	4,989	407,576	63.46
2010	6,369	1,543	4,825	800,025	125.62
2015	6,335	1,618	4,717	924,810	145.99

Note: Forest area in 1980 is based on the end of 1979.
Source: Korea Forest Service <Statistical Yearbook of Forestry>

Fisheries

The number of fishery households in 2017 stood at 53,000, a 57.4% (71,000 households) decrease from 123,000 in 30 years ago 1987, the fishery household population stood at 122,000, a 78.1% (435,000) decrease, and the number of people engaged in fisheries stood at 88,000, a 62.1% (144,000) decrease. Whereas, the income per fishery household stood at KRW49 million in 2017, indicating a sharp increase of KRW43 million (694.9%) from KRW6 million in 30 years ago 1987.

In 2017, fishery production amounted to 3,749 thousand tons, a 12.5% (417 thousand tons) increase from 3,332 thousand tons in 30 years ago 1987 and a 14.7% (480 thousand tons) year-on-year increase from 3,269 thousand tons in the previous year. In spite of the depletion of fishery resources, fishery production has maintained a constant level for 30 years because of the shift from fishing to aquaculture. Consequently, the proportion of coastal aquaculture in fishery production has steadily increased, and the coastal aquaculture has contributed to the increase in income of fishery households.

<Table 6.5> Fishery-related Indices

	Fishery households[1)]	Fishery household population	Household members engaged in fishery	Income per fishery household (KRW1,000)	Fishery production (1,000 tons)	Coastal aquaculture (1,000 tons)	Ratio
1987	123,837	557,109	231,946	6,166	3,332	866	26.0
1992	116,165	424,939	206,624	12,371	3,201	935	29.2
1997	99,912	323,383	173,743	20,331	3,244	1,015	31.3
2002	73,124	215,174	127,694	21,816	2,476	782	31.6
2007	73,934	201,512	122,916	30,668	3,275	1,386	42.3
2012	61,493	153,106	100,173	37,381	3,183	1,489	46.8
2015	54,793	128,352	90,144	43,895	3,337	1,668	50.0
2016	53,221	125,660	88,214	47,077	3,269	1,872	57.3
2017[2)]	52,808	121,734	87,885	49,016	3,749	2,316	61.8

Note: 1) Only applicable to sea-level fishery households
2) Provisional data

Source: Statistics Korea <Agriculture, Forestry and Fishery Survey>

Manufacturing

Chapter 7

- Overview
- Korea's Crude Steel Production Capacity Ranks Sixth in the World.
- Information and Communication Industry is Leading the Domestic Economy
- Semiconductor
- Automobile Production

Overview

In 2016, the number of manufacturing businesses with 10 employees or more stood at 69,068, a 92.6% (33,199) increase from 35,869 in 30 years ago 1986. However, the number of employees stood at 2.96 million, an 8.8% (240,000) increase. The total shipment value in 2016 stood at KRW1,414 trillion, a 1,450.4% (KRW1,323 trillion) increase from KRW91 trillion in 1986. The value added stood at KRW505 trillion, a 1,419.3% (KRW472 trillion) increase from KRW33 trillion in 1986.

Compared to 2015, the number of businesses increased by 155 (0.2%), the number of employees increased by 16,000 (0.6%), value added increased by KRW9 trillion (1.8%), but the shipment value decreased by KRW16 trillion (-1.1%).

<Table 7.1> Major Manufacturing Indices

	Number of Businesses	Number of Employees	Shipment Value (KRW1 billion)	Value Added (KRW1 billion)
1976	15,652	1,729,524	11,493	4,143
1981	22,281	2,049,672	46,032	15,690
1986	35,869	2,724,623	91,214	33,227
1991	48,534	2,807,128	200,172	85,148
1996	53,765	2,635,949	383,472	167,598
2001	52,317	2,264,760	548,339	206,647
2006	58,928	2,484,405	856,135	304,134
2011	63,047	2,694,782	1,491,351	480,203
2015(A)	68,913	2,946,796	1,429,715	495,774
2016(B)	69,068	2,963,237	1,414,212	504,810
Change (B-A)	155	16,441	-15,503	9,036
year-on-year rate	0.2	0.6	-1.1	1.8

Note: Based on businesses with 10 employees or more
Source: Statistics Korea <Mining and Manufacturing Survey>

In relation to the structure of manufacturing industry in 2016 based on companies with 10 employees or more, the heavy and chemical industries accounted for 67.0% (46,306 companies) and their shipment amount accounted 84% (KRW1,188 trillion). Whereas, the light industries accounted for 33.0% (22,762 companies), but their shipment amount accounted for only 16% (KRW227 trillion).



Compared to 10 years ago 2006, in heavy and chemical industries, the number of companies increased by about 8,000 (20.9%), their shipment amount by KRW465 trillion (64.4%) respectively, while the number of companies increased by 4,000 (9.5%) but their shipment amount decreased by KRW106 trillion (-8.2%), in comparison to five years ago 2011.

<Table 7.2> Major Indices by Industrial Structure (based on companies with 10 employees or more)

	Number of companies	Light industries	Heavy and chemical industries	%	Shipment amount (KRW1 billion)	Light industries	Heavy and chemical industries	%
2001	52,317	22,038	30,279	57.9	548,339	111,055	437,284	79.7
2006	58,928	20,625	38,303	65.0	856,135	133,894	722,240	84.4
2011	63,047	20,758	42,289	67.1	1,491,351	197,874	1,293,477	86.7
2014	68,640	22,076	46,564	67.8	1,486,574	218,161	1,268,413	85.3
2016	69,068	22,762	46,306	67.0	1,414,212	226,614	1,187,598	84.0

Note: Based on companies with 10 employees or more. Data for 2015 are not aggregated due to the Economic Census.
Source: Statistics Korea

Korea's Crude Steel Production Capacity Ranks Sixth in the World

Since POSCO began operation in 1973 and its production reached one million tons, Korea has been maintaining the world's sixth-largest steel producer (as of 2016, based on crude steel production) due to the continuous expansion of steel production facilities and the increased high demand.

The crude steel production in 2016 stood at 68.576 million tons, a 76.3% (29.673 million tons) increase from 38.903 million tons in 20 years ago 1996, but decreased by 1.094 million tons (-1.6%) from 69.670 million tons in 2015.

In the world market share in 2016, China ranked the highest with 49.6%, followed by Japan with 6.4%, India with 5.9%, USA with 4.8% and Russia with 4.3%. South Korea ranked sixth with 4.2%.

In the past, the domestic steel industry sought to maximize profitability by mass production of general-purpose steel. However, China's rapid increase in supply led Korea to slow its production increase rate in 2000s. Korea is pushing for qualitative growth through product upgrade rather than quantitative growth.

<Table 7.3> Crude Steel Production Capacity and World Market Share by Country

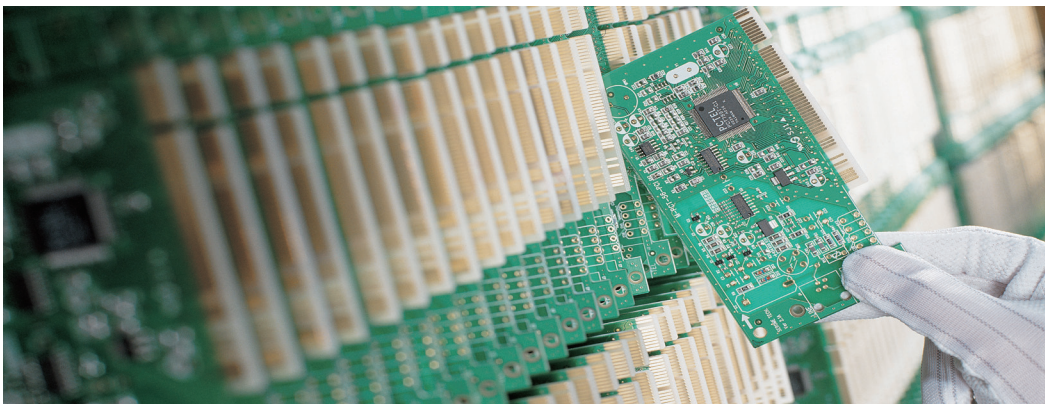
(Unit: 1,000 tons, %)

	1996	2001	2006	2011	2015	2016	Percentage
World total	750,016	851,073	1,250,098	1,538,003	1,620,006	1,629,616	100.0
China	101,237	151,634	421,024	701,968	803,830	808,370	49.6
Japan	98,801	102,866	116,226	107,601	105,134	104,775	6.4
India	23,753	27,291	49,450	73,471	89,026	95,618	5.9
USA	95,535	90,104	98,188	86,398	78,845	78,475	4.8
Russia	49,253	58,970	70,830	68,852	70,898	70,808	4.3
Korea	38,903	43,852	48,455	68,519	69,670	68,576	4.2
Germany	39,793	44,803	47,224	44,284	42,676	42,080	2.6
Turkey	13,624	14,981	23,315	34,107	31,517	33,163	2.0
Brazil	25,237	26,717	30,901	35,220	33,256	31,275	1.9
Ukraine	22,332	33,108	40,891	35,332	22,968	24,218	1.5

Source: Korea Iron & Steel Association <Statistical Yearbook for Iron and Steel>

Information and Communication Industry is Leading the Domestic Economy

GDP (real) of ICT industry stood at KRW169 trillion, a 97.8% (KRW84 trillion) increase from KRW86 trillion in 10 years ago 2007. Also, ICT industry accounted for 10.9% of GDP and increased by 3.4%, compared to 2007. Export amount of ICT industry stood at KRW273 trillion, a 142.0% increase (KRW160 trillion), compared to 10 years ago, which accounted 36.5% of the total exports, showing that ICT industry is leading the domestic economy.



<Table 7.4> Supply-Demand Trend in ICT Industry

(1Unit: KRW1 billion, %)

		2007	2012	2015	2016	2017
GDP(Real)	Total	1,147,311	1,341,967	1,466,788	1,509,755	1,555,995
	ICT	85,541	129,522	149,496	158,000	169,174
	Percentage	7.5	9.7	10.2	10.5	10.9
Investment in facilities (Including investment in intellectual property)	Total	162,012	201,472	223,005	224,732	246,808
	ICT	32,554	40,664	43,542	43,848	47,388
	Percentage	20.1	20.2	19.5	19.5	19.2
Private consumption	Total	600,758	667,781	707,493	725,362	744,284
	ICT	30,236	40,243	41,198	40,887	42,424
	Percentage	5.0	6.0	5.8	5.6	5.7
Export	Total	455,185	672,052	705,633	720,344	747,388
	ICT	112,699	216,700	234,295	252,303	272,679
	Percentage	24.8	32.2	33.2	35.0	36.5
Import	Total	421,627	576,060	590,927	610,578	655,904
	ICT	37,086	75,388	84,813	85,552	97,927
	Percentage	8.8	13.1	14.4	14.0	14.9

Source: The Bank of Korea

Semiconductor

Semiconductor production amounted to KRW66 trillion in 2016, a 274.6% (KRW49 trillion) increase from KRW18 trillion in 2001. The global market share stood at 16.6% in 2016, a 10.9%p increase from 5.7% in 2001, export amount stood at USD62.2 billion, a 336.4% (USD48 billion) increase compared to 2001 and import amount stood at USD36.6 billion, a 135.4%(USD21.1 billion) increase compared to 2001.

<Table 7.5> Semiconductor Production Trends

	1997	2001	2006	2011	2014	2015	2016
Production amount (trillion won)	19.9	17.7	34.6	61.5	72.0	68.6	66.3
Market share (%)	6.8	5.7	11.3	13.3	16.5	17.4	16.6
Export amount (USD1 billion)	17.16	14.26	37.36	50.15	62.65	62.92	62.23
Import amount (USD1 billion)	12.88	15.55	28.04	32.48	36.46	38.28	36.61
DRAM price ($)	5.91	1.84	4.20	1.83	3.14	2.14	2.00

Source: Korea Semiconductor Industry Association

Automobile Production

In 2017, automobile production stood at 4.12 million, a 46.0% (1.3 million) increase from 2.82 million in 20 years ago 1997. During the same period, passenger car production increased sharply to 1.43 million (61.8%), while commercial vehicles decreased by 130,000 (-25.5%).

In 2017, the number of vehicles sold in Korea stood at 1.56 million, a 3.1% (47,000) increase compared to 20 years ago 1997, but export of vehicles stood at 2.53 million, a 92.1% (1.21 million) large increase from 1.32 million in 1997.

Compared to 2016, the number of vehicles produced decreased by 114,000 (-2.7%), while domestic sales decreased by 40,000 (-2.5%) and exports by 92,000 (-3.5%).

<Table 7.6> Production and Supply-Demand of Automobiles

(Unit: 1,000)

	Production			Domestic demand			Export		
		Passenger cars	Commercial vehicles		Passenger cars	Commercial vehicles		Passenger cars	Commercial vehicles
1992	1,690	1,267	423	1,268	876	392	418	389	29
1997	2,818	2,308	510	1,513	1,151	362	1,317	1,156	161
2002	3,148	2,651	496	1,622	1,225	397	1,510	1,414	96
2007	4,086	3,723	363	1,219	986	233	2,847	2,719	129
2012	4,562	4,167	395	1,411	1,176	235	3,171	3,013	158
2015	4,556	4,135	421	1,589	1,327	263	2,974	2,822	152
2016	4,229	3,860	369	1,600	1,343	257	2,622	2,507	115
2017	4,115	3,735	380	1,560	1,297	263	2,530	2,416	114

Source: Korea Automobile Manufacturers Association

In 2017, automobile exports to North America accounted for 41.2%, followed by EU (20.1%), the Middle East (13.0%), Asia and Pacific (8.1%) and Latin America (7.8%). Exports to North America have remained stable, even though exports are continuing to decline due to an increase in automobile production in China, India and Mexico.

<Table 7.7> Korea's Automobile Exports

(Unit: 1,000)

	1992	1997	2002	2007	2012	2015	2016	2017	Percentage
Total	418	1,317	1,510	2,847	3,171	2,974	2,622	2,530	100.0
EU	111	497	413	635	399	384	403	508	20.1
Non-EU	9	53	30	362	282	72	68	96	3.8
Africa	13	53	54	177	197	100	65	65	2.6
Asia	30	57	46	90	179	134	90	87	3.4
Middle East	45	102	78	329	614	542	403	330	13.0
Pacific	21	117	55	118	161	172	190	204	8.1
North America	140	238	751	835	905	1,285	1,166	1,043	41.2
Latin America	49	201	83	301	433	285	237	198	7.8

Source: Korea Automobile Manufacturers Association

The number of vehicles in the world has steadily increased to 97,795,000 in 2017. While China, India and Mexico have been on the rise, automobile production in USA, Japan, Germany and Korea has been fluctuating. China is the largest producer of automobiles with 29.1%, followed by USA (11.4%), Japan (9.9%), Germany (6.2%) and India (4.9%). Korea was the world's fifth-largest automobile producer by 2015 with a 4.2% share, but was overtaken by India and pushed back to sixth since 2016.

<Table 7.8> Number of Vehicles produced by Country

(Unit: 1,000)

	1992	1997	2002	2007	2012	2015	2016	2017	Percentage
World Total	78,592	81,027	85,191	88,596	90,065	91,325	95,620	97,795	100.0
China	18,265	18,419	19,272	22,117	23,169	24,091	27,717	28,459	29.1
USA	7,743	8,662	10,336	11,066	11,661	12,106	12,180	11,190	11.4
Japan	9,629	8,399	9,941	9,630	9,775	9,278	9,205	9,690	9.9
Germany	5,906	6,302	5,798	5,877	6,051	6,186	6,211	6,070	6.2
India	3,557	3,934	4,201	3,933	3,842	4,126	4,489	4,780	4.9
Korea	4,272	4,657	4,562	4,521	4,525	4,556	4,229	4,115	4.2
Mexico	2,348	2,681	3,002	3,055	3,368	3,565	3,600	4,069	4.2
Spain	2,388	2,361	1,979	2,163	2,403	2,733	2,886	2,848	2.9
Canada	2,068	2,135	2,463	2,380	2,394	2,286	2,371	2,194	2.2
Brazil	3,647	3,443	3,431	3,738	3,173	2,454	2,175	2,700	2.8
France	2,229	2,278	2,010	1,784	1,854	2,017	2,133	2,279	2.3
Thailand	1,645	1,458	2,454	2,457	1,880	1,913	1,944	1,989	2.0
UK	1,394	1,464	1,577	1,597	1,599	1,682	1,817	1,749	1.8
Turkey	1,095	1,189	1,073	1,126	1,170	1,359	1,486	1,674	1.7
Czech	1,076	1,200	1,179	1,133	1,251	1,304	1,350	1,420	1.5

Source: Korea Automobile Manufacturers Association

Construction and Service Industry

Chapter 8

- Overview
- Housing Penetration Rate
- Overseas Construction
- Wholesale & Retail Trade, and Service Industry

Overview

In 2016, the number of construction companies stood at about 70,000, a 5.4 times increase from 13,000 in 1986, the number of employees stood at 1.573 million, a 1.9 times increase, and sales stood at KRW357 trillion, a 23 times increase. During the same period, the value added stood at KRW106 trillion, a 15.8 times increase, while the value added per employee stood at KRW70 million, a 9.4 times increase.

Compared to 2015, the number of companies increased by 1,611 (2.4%), the monthly average number of employees by 39,000 (2.5%), sales by KRW28 trillion (8.5%), the value added by KRW12 trillion (12.3%) and the value added per employee by KRW8 million (12.6%).

<Table 8.1> Major Construction Industry Indices

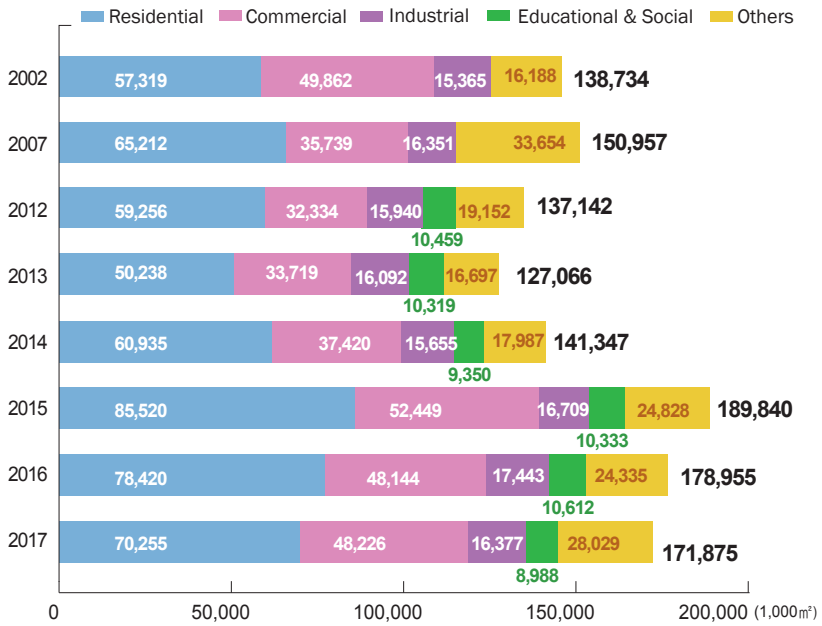
	Number of companies	Number of employees (1,000)	Sales (KRW1 billion)	Value added (KRW1 billion)	Value added per employee (KRW1,000)
1976	3,376	345	1,287	504	1,459
1981	5,494	640	11,349	4,721	7,374
1986	12,858	812	15,290	6,728	8,286
1991	19,477	1,077	40,414	20,061	18,622
1996	43,421	1,611	106,207	47,339	29,386
2001	59,186	1,423	105,349	45,951	32,300
2006	58,835	1,717	151,360	67,684	39,423
2011	65,469	1,575	293,172	77,225	49,045
2014	65,950	1,532	322,050	88,051	57,466
2015(A)	67,897	1,534	328,499	94,675	61,719
2016(B)	69,508	1,573	356,568	106,314	69,508
Change (B-A)	1,611	39	28,069	11,639	7,789
Year-on-year rate (%)	2.4	2.5	8.5	12.3	12.6

Source: Statistics Korea <Construction Survey>

The construction permission area, a leading indicator of construction investment, stood at 171,875,000m² in 2017, a 4.0% (7,080,000m²) year-on-year decrease from 178,955,000m² in 2016. In terms of construction use, the residential use decreased by 8,165,000m²(-10.4%), educational and social use by 1,624,000m²(-15.3%) and industrial use by 1,066,000m²(-15.3%), but the commercial use and other use increased by 0.2% and 15.2%, respectively.



<Figure 8.1> Area of Construction Permission



Source: Ministry of Land, Infrastructure and Transport <Statistics of Construction Permission and Work Commencement>

Housing Penetration Rate

The housing penetration rate in 2016 stood at 102.6%, a 16.6%p increase from 86.0% in 1995 and a 2.1%p increase from 100.5% in 2010, which largely mitigated the basic housing shortage problem due to the expansion of housing construction.

According to the register-based census in 2016, the housing penetration rate in Seoul and Gyeonggi-do stood at 96.1% and 99.1% respectively, which was less than 100% due to high demand in the region.



<Table 8.2> Housing Penetration Rate

	Number of households (1,000)	Number of houses (1,000)	Penetration rate (%)
1995	11,132.8	9,570.4	86.0
2000	11,928.1	11,472.4	96.2
2005	15,887.2	15,622.6	98.3
2010	17,655.7	17,738.8	100.5
2015	19,111.0	19,559.1	102.3
2016	19,367.7	19,877.1	102.6
Nationwide	19,367.7	19,877.1	102.6
Capital Area	9,332.0	9,161.4	98.2
Seoul	3,784.7	3,644.1	96.3
Gyeonggi-do	4,484.4	4,444.4	99.1
Local area	10,035.7	10,715.7	106.8

Note: Based on the register-based census since 2010
Source: Ministry of Land, Infrastructure and Transport <Housing Penetration Rate>

The housing penetration rate has exceeded 100% even before 2010, but the proportion of residents living in their own house stood at 57.7% in 2017. Compared to 2010, it increased by 3.4%p, but more than 40% of the population lives in the form of lease and monthly rent. Lease stood at 15.2% in 2017, a 6.5%p decrease from 21.7% in 2010, but the monthly rent stood at 22.5% in 2017, a 2.3% increase from 20.2% in 2010.



<Table 8.3> Housing Occupancy Type

(Unit: %)

	Owner occupancy	Lease	Monthly rent with security deposit	Monthly rent without security deposit	Month rent paid in advance	Rent-free
2006	55.6	22.4	15.1	2.1	1.8	3.1
2008	56.4	22.3	14.8	1.9	1.5	3.0
2010	54.3	21.7	18.2	2.0	1.3	2.7
2012	53.8	21.8	18.6	2.7	0.3	2.8
2014	53.6	19.6	21.8	1.4	0.7	2.8
2016	56.8	15.5	20.3	2.7	0.7	4.0
2017	57.7	15.2	19.9	2.6	0.8	3.9

Source: Ministry of Land, Infrastructure and Transport <Korea Housing Survey>

Overseas Construction

Korea has entered the overseas construction market since 1965, and its orders received for construction has peaked during the Middle East boom in 1980s, but has shown a low track record under the impact of the foreign currency crisis in 1997.

Korea enjoyed the second overseas construction boom as it has recorded a steep rise in receiving more than USD10 billion for the first time since 2005. Korea's orders received for overseas construction recorded USD64.9 billion in 2012, and then slumped to USD46.1 billion in 2015, USD 28.2 billion in 2016 and USD29 billion in 2017.

<Table 8.4> Orders Received for Overseas Construction

(Unit: USD1 million)

	Total	Civil engineering	Architecture	Plant	Electricity & communication	Service
1992	2,783	557	1,543	628	46	8
1997	14,032	2,614	6,124	4,957	329	8
2002	6,126	539	605	4,829	136	17
2007	39,788	5,232	8,201	25,244	730	381
2012	64,877	8,599	14,322	39,549	74	815
2015	46,144	8,504	7,110	26,490	1,040	3,001
2016	28,190	6,440	5,330	13,250	1,483	1,690
2017	29,005	5,139	2,408	19,912	709	835

Source: International Contractors Association of Korea <Overseas Construction Statistics>

<Table 8.5> Orders for Overseas Construction by Area (2017)

(Unit: USD1 million)

Part	Total	Middle East	Asia	Pacific, North America	Europe	Africa	Latin America
Amount of the orders received	29,006	14,578	12,492	555	320	698	362
Percentage (%)	100.0	50.3	43.1	1.9	1.1	2.4	1.2

Source: International Contractors Association of Korea <Overseas Construction Statistics>

Wholesale & Retail Trade, and Service Industry

The number of companies engaged in wholesale and retail trade stood at 1,019,000 in 2016, a 17.8% (154,000) increase from 865,000 in 2006. The number of employees stood at 3,148,000 in 2016, a 26.8% (666,000) increase from 2,482,000 in 2006. Sales stood at KRW1,150 trillion in 2016, a 110.5% (KRW604 trillion) increase from KRW547 trillion in 2006.

The number of businesses engaged in restaurants and hotels stood at 729,000 in 2016, a 17.2% (107,000) increase from 622,000 in 2006. The number of employees stood at 2,166,000 in 2016, a 29.5% (494,000) increase from 1,672,000 in 2006. Sales stood at KRW132 trillion in 2016, a 113.3% (KRW70 trillion) from KRW62 trillion in 2006.

The number of service businesses stood at 1,068,000 in 2016, a 44.3% (328,000) increase from 740,000 in 2006. The number of employees stood at 6,167,000 in 2016, an 88.5% (2,895,000) large increase from 3,272,000 in 2006. Sales stood at KRW626 trillion in 2016, a 200.9% (KRW418 trillion) large increase from KRW208 trillion in 2006.

<Table 8.6> Wholesale & Retail Trade and Service Industry

	Number of Businesses (1,000)			Number of Employees (1,000)			Sales (KRW one billion)		
	2006	2011	2016	2006	2011	2016	2006	2011	2016
Wholesale and retail trade	865	904	1,019	2,482	2,680	3,148	546,815	906,210	1,150,785
Hotels and restaurants	622	655	729	1,672	1,840	2,166	61,888	84,069	131,979
Service Industry	740	928	1,068	3,272	4,862	6,167	207,990	405,638	625,783

Source: Statistics Korea <Service Industry Survey>

Energy

Chapter 9

- Energy Consumption
- Consumption Structure by Primary Energy Source
- New and Renewable Energy

Energy Consumption

Energy consumption has increased dramatically in the 1990s, but has been stabilized due to the increase in the proportion of high value-added low-energy consumption industries such as information and communications since 2000s, and its increase rate was lowered in 2010s.

The primary energy consumption stood at 294,654,000 TOE in 2016, a 4.8 times increase from 61,462,000 TOE in 1986, and the final energy consumption stood at 225,681,000 TOE in 2016, a 4.5 times increase from 50,524,000 TOE in 1986.

Energy consumption per capita stood at 5.75 TOE in 2016, a 3.9 times increase from 1.49 TOE in 1986. Therefore, the dependence on energy import increased sharply

from 75.0% in 1981 to 97.3% in 2001 due to a steady increase in energy consumption. Afterwards, the dependence on energy imports was still high, maintaining around 95%.

<Table 9.1> Energy Consumption and Dependence on Imports

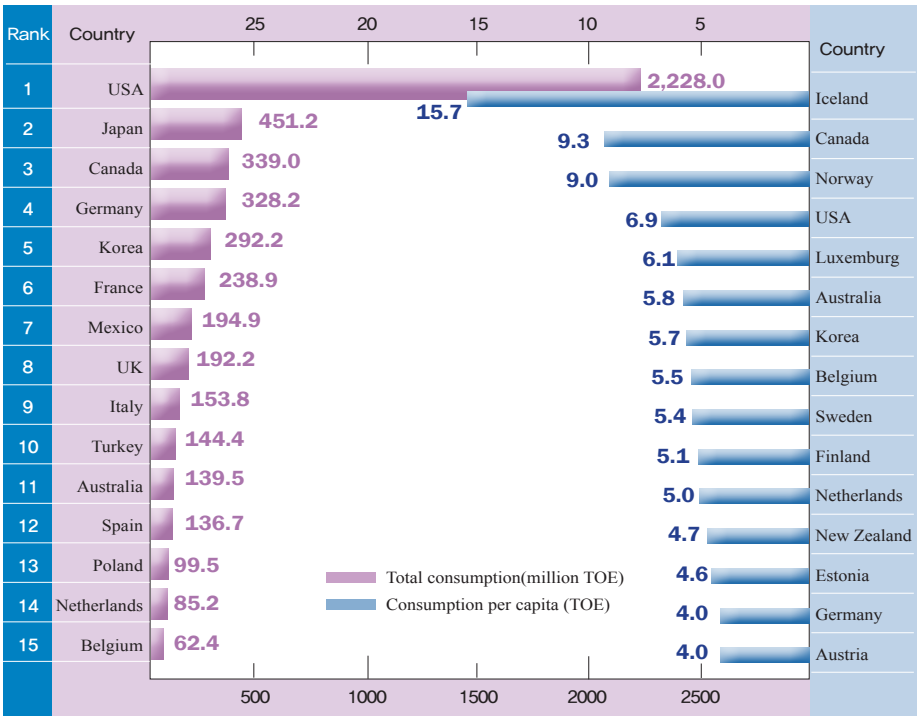
	Energy Consumption (1,000 TOE)				Total energy consumption per capita (TOE)	Dependence on imports[1] (%)
	Primary energy	Year-on-year rate	Final energy	Year-on-year rate		
1981	45,718	-	38,952	-	1.18	75.0
1986	61,462	34.4	50,524	29.7	1.49	78.2
1991	103,622	68.6	83,803	65.9	2.39	91.3
1996	165,212	59.4	132,033	57.6	3.63	97.3
2001	198,418	20.1	152,959	15.8	4.19	97.3
2006	233,374	17.6	173,586	13.5	4.82	96.5
2011	276,755	18.6	205,982	18.7	5.54	96.5
2014	283,092	2.3	213,843	3.8	5.58	95.2
2015	287,705	1.6	218,361	2.1	5.64	94.8
2016	294,654	2.4	225,681	3.4	5.75	94.7

Note: Dependence on imports: Excluding nuclear power generation
Source: Korea Energy Economics Institute <Energy Statistical Yearbook in 2017>

In 2016, the U.S. ranked first in energy consumption among major OECD countries with 2,280 million TOE, followed by Japan (451 million TOE), Canada (339 million TOE) and Germany (328 million TOE). Korea ranked fifth in terms of energy consumption among the major OECD countries with 292 million TOE. Korea's energy consumption per capita also ranked seventh, following Iceland (15.7 TOE), Canada (9.3 TOE) and Norway (9.0 TOE).



<Figure 9.1> Energy Consumption Per Capita of Major OECD Countries (2016)

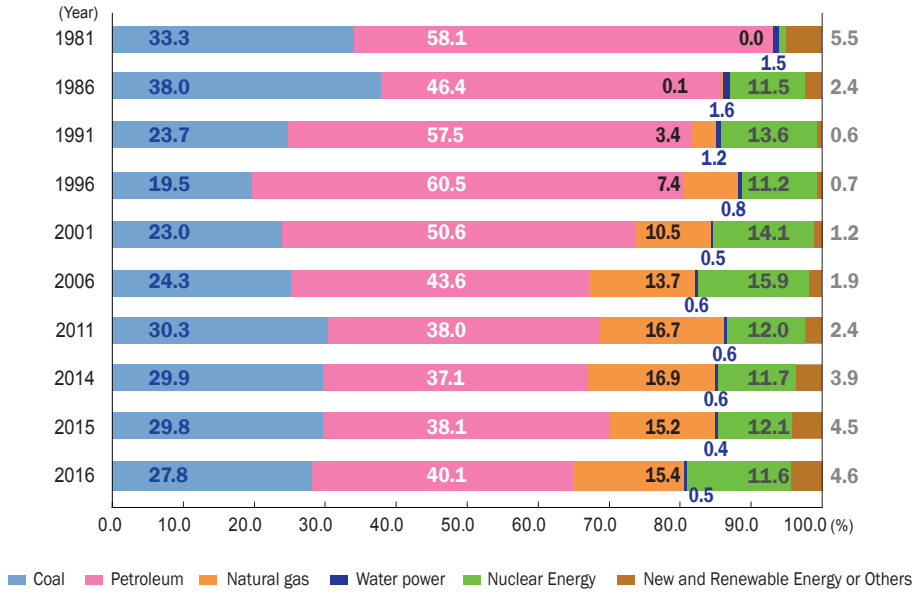


Source: OECD < Energy Consumption>

Consumption Structure by Primary Energy Source

In relation to the component ratio of primary energy source in 2016, petroleum is the highest at 40.1%, followed by coal at 27.8%, natural gas at 15.4%, nuclear power at 11.6% and new and renewable energy and other at 4.6%. From 1980s to 2016, the portion of petroleum and coal is still high, but the portion of LNG has also been increasing since 2000.

<Figure 9.2> Component Ratio of Primary Energy Source



Source: Korea Energy Economics Institute <Statistics of Energy Supply and Demand>

New and Renewable Energy

In 2016, the supply of new and renewable energy is composed of waste (61.7%), Biomass energy (19.5%), Solar photovoltaic power (7.7%) and Water power (4.3%). While the increase rates of waste, Biomass and Water power are gradually declining, the supply of Solar photovoltaic power, Wind power and Geothermal power are increasing, and the share of supply structure is diversifying.



<Table 9.2> Production of New and Renewable Energy

(Unit: 1,000 TOE)

	1991	1996	2001	2006	2011	2015	2016	Percentage
Total primary energy	103,623	165,209	198,410	233,372	276,636	287,479	294,547	-
Supply percentage of new and renewable energy (%)	0.40	0.70	1.24	2.24	2.74	4.62	4.81	-
Total new and renewable energy	412	1,160	2,453	5,225	7,583	13,293	14,178	100.0
Solar heat	-	32	37	33	27	28	28	0.2
Solar photovoltaic	-	1	2	8	197	849	1,093	7.7
Wind power	-	0	3	60	186	283	355	2.5
Water power	-	20	21	867	965	454	603	4.3
Tidal power	-	-	-	-	11	105	105	0.7
Geothermal power	-	-	-	6	48	135	162	1.1
Hydrothermal power	-	-	-	-	-	5	6	0.0
Biomass	-	50	82	274	963	2,766	2,765	19.5
Waste	-	1,056	2,308	3,975	5,122	8,436	8,743	61.7
Fuel cell	-	-	-	2	63	230	242	1.7
IGCC	-	-	-	-	-	1	76	0.5

Source: Korea Energy Agency <Survey of Track Record on Supply of New and Renewable Energy>

Transportation, Information and Communication

Chapter 10

- About Three People per Vehicle
- Passenger Transportation Share by Means of Transportation
- The Opening of the High-Speed Railway Enabled to Travel to all Destinations in the Country within Half a Day
- A Sharp Increase in the Air Transport Demand
- Increase in Port Cargo Handling Capacity
- Popularization of Internet Usage
- 1.23 Smartphones per 1 person

Software Industry

- Software and Digital Contents Developers and Producers
- Workers for Software and Digital Contents Developers and Producers
- Sales of Software and Digital Contents Developers and Producers

About Three People per Vehicle

As the national economy grew in size and the national income level rose, the use of transportation means has undergone a great change. The most noticeable change was the increase in the use of passenger cars, instead of the use of public transportation.

The number of the registered automobiles increased by one million a year from 1993 to 1996, but declined sharply in 1998 when the foreign exchange crisis hit, and gradually recovered after the foreign exchange crisis but slowed down again since 2003.

The growth rate in the number of the registered vehicles gradually recovered for the period from 2005 to 2007, which marked 8% until 2002, but was stagnant at 3% after 2005, indicating that the domestic automobile market has entered a maturity stage of slow growth. The number of the registered new vehicles rose 3.3% year-on-year in 2017 after the end of individual consumption tax cut for boosting domestic demand.

As of the end of 2017, the number of the registered automobiles was 22.53 million, and the population per automobile was 2.3.

<Table 10.1> Automobile Registration by Type

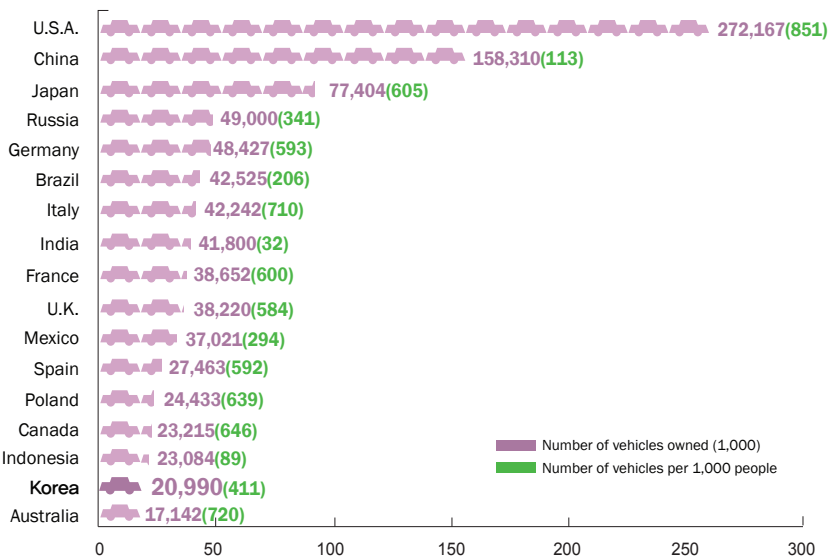
(Unit: 10,000)

	1987	1992	1997	2002	2007	2012	2015	2016	2017
Number of automobiles registered	161	523	1,041	1,395	1,643	1,887	2,099	2,180	2,253
Passenger cars	84	346	759	974	1,210	1,458	1,656	1,734	1,804
Passenger vans	20	48	72	128	110	99	92	89	87
Cargo trucks	55	126	207	289	317	324	343	349	354
Special purpose vehicles	2.0	2.5	3.6	4.2	5.2	6.3	7.4	8.0	8.6

Source: Ministry of Land, Infrastructure and Transport <Statistical Yearbook of Land, Infrastructure and Transport>

As of 2015, Korea had 21 million vehicles, ranking 16th in the world. The number of vehicles per 1,000 people was 411 in Korea. The number of vehicles per 1,000 people in the world's top car-owning countries stood at 851 in USA, 113 in China, 605 in Japan, 341 in Russia and 593 in Germany.

<Figure 10.1> Number of Vehicles Owned (2015)



Source: Korea Automobile Manufacturers Association <World Automotive Statistics>
Statistics Korea <International Statistical Yearbook> <Population Projections>

Passenger Transportation Share by Means of Transportation

In 2016, the number of the transported passengers in Korea stood at 13.7 billion, a 12.6% (1.5 billion) increase from 12.2 billion in 2006. During the same period, the passenger transportation share by means of transportation increased in order of railway (by 2.61%p), subway (by 1.61%p), air (by 0.09%p) and sea (by 0.02%p), but the common road decreased by 4.32%p.

As for the passenger transportation share by means of transportation in 2016, the common roads led the others with a share of 70.42%, followed by subway (18.68%) and railway (10.56%).

While the transportation share by railway and air has gradually increased due to the opening and route expansion of KTX in 2004, the increase in use of passenger cars and activation of domestic travel, the transportation by the common road is expected to decrease in the future.

Compared to the previous year, the transportation share by means of transportation increased in order of railway (by 1.34%p), subway (by 0.36%p), air (by 0.03%p) and passenger car (by 6.7%p), but the common road decreased by 1.72%p.

<Table 10.2> Domestic Passenger Transportation

	Passenger (Million people)	Passenger transportation share ratio (%)					Passenger cars (million people)
		Railroad	Subway	Road	Ship	Airplane	
2001	13,345	6.38	18.94	74.45	0.07	0.16	-
2004	12,154	7.58	16.73	75.45	0.09	0.16	-
2006	12,187	7.95	17.07	74.74	0.09	0.14	-
2008	12,990	7.84	16.49	75.43	0.11	0.13	-
2010	12,867	8.25	17.67	73.82	0.11	0.16	-
2011	13,420	8.34	17.58	73.83	0.11	0.16	16,036
2012	13,387	8.59	18.01	73.14	0.11	0.16	16,192
2013	13,593	9.01	18.22	72.49	0.12	0.16	16,474
2014	13,683	9.23	18.46	72.02	0.10	0.18	16,824
2015	13,768	9.22	18.32	72.14	0.11	0.20	17,262
2016	13,723	10.56	18.68	70.42	0.11	0.23	18,426

Source: Ministry of Land, Infrastructure and Transport <Statistical Yearbook of Land, Infrastructure and Transport> (2017)

The Opening of the High-Speed Railway Enabled to Travel to all Destinations in the Country within Half a Day

The opening of the high-speed railway in April 2004 made the country a half-day living zone from Seoul to Busan. Since the construction of the Gyeongbu High-Speed Railway began in 1992, the two-phase section has been fully opened in November 2010 from Daegu to Busan, subsequently to the first phase from Seoul to Daegu in April 2004. It is 412km long and takes 2 hours and 18 minutes from Seoul to Busan at 300km per hour.

In addition, the Honam High-Speed Railway began construction in May 2009 for the balanced development of national land and was opened in April 2015 to shorten the time from Yongsan Seoul to Songjeong Gwangju to 1 hour and 33 minutes.

As a result, the total number of passengers transported by the high-speed railway stood at 17.9% in 2004, 36.9% in 2010 and 44.7% in 2015, respectively.

The advent of the high-speed railway system connects the entire country to the 2-hour living zone. The high-speed railway is fast, comfortable and eco-friendly, and becomes a representative means of transportation for the next generation as the integrated result of high-tech.

<Table 10.3> Transportation Share Ratio of High-Speed Railway

	Passenger (Million people)	Number of passengers transported (1,000)	Transportation share ratio (%)			
			High-speed railway	Saemaeul	Mugunghwa	Other
1990	-	150,075	-	5.0	27.4	67.6
1995	-	135,653	-	10.3	37.8	51.9
2000	-	115,914	-	13.4	62.2	24.4
2004	13,971	111,214	17.9	11.2	57.2	13.7
2007	21,415	110,631	33.7	9.1	50.0	7.2
2010	23,344	112,093	36.9	9.7	52.2	1.1
2013	33,037	132,033	41.5	6.8	50.9	0.8
2014	32,821	134,442	42.3	7.3	49.8	0.5
2015	36,157	135,494	44.7	7.4	47.5	0.4

Source: KORAIL <Railway Statistics of Korea>

A Sharp Increase in the Air Transport Demand

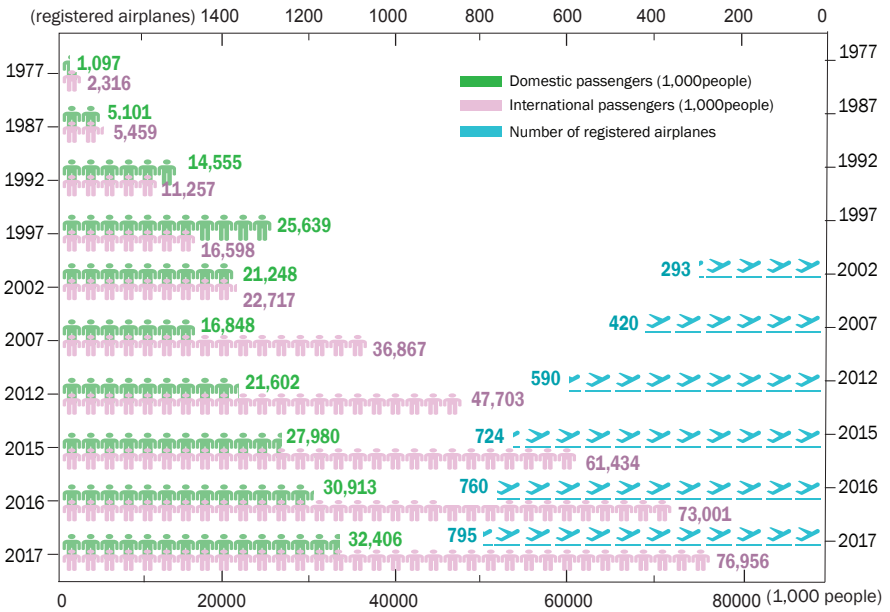
As of 2017, the number of passenger planes owned by domestic airlines stood at 795, an 89.3% (375) increase from 420 in 2007.

The number of passengers using domestic flights stood at 32,406,000 in 2017, a 92.3% (15,558,000) increase from 16,848,000 in 2007, and the number of passengers using international flights stood at 76,956,000 in 2017, a 108.7% (40,089,000) increase from 36,867,000 in 2007.

Air transport demand is expected to increase steadily as demand for travel increases due to the launch and expansion of low-cost air routes in 2008, increase in national income and leisure time.

Compared to the previous year, the number of airplanes increased by 35 (4.6%), the number of domestic passengers increased by 1,493,000 (4.8%) and the number of international passengers increased by 3,955,000 (5.4%).

<Figure 10.2> Registered Airplanes and Passengers



Source: Ministry of Land, Infrastructure and Transport <Air Transport Statistics>

Increase in Port Cargo Handling Capacity

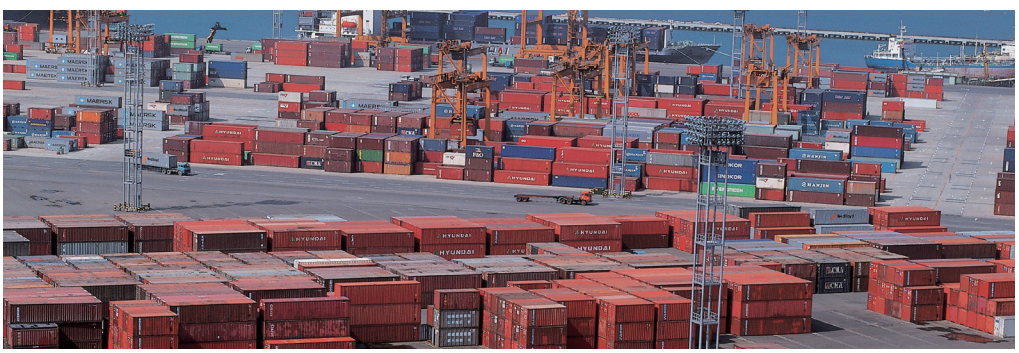
Port cargo handling capacity in 2017 stood at 1,164 million tons, a 1.6 times increase from 737 million tons in 2007. Compared to 1,141 million tons in the previous year, it increased by 23.653 million tons (2.1%).

In 2017, the national flag vessels stood at 45.729 million tons in tonnage, 51.447 million tons in DWT and 340,514TEU in containers. Compared to the previous year, it increased by 1.134 million tons (2.5%) in tonnage, by 965,000 tons (1.9%) in DWT and by 105,511TEU (44.9%) in containers.

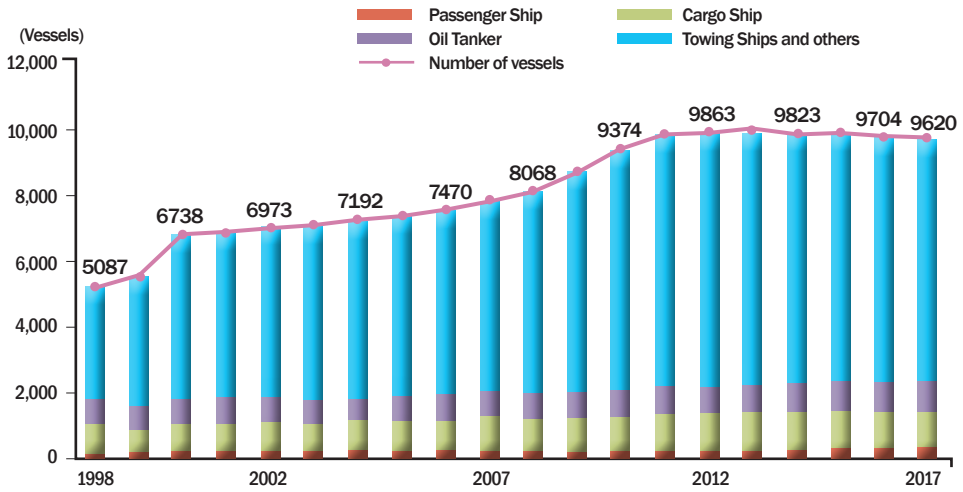
<Table 10.4> Port Cargo Handling Capacity and National Flag Vessels

	Port Cargo Handling Capacity (1,000 tons)	Number of National Flag Vessels		
		Tonnage (ton)	DWT(ton)	Containers (TEU)
2002	486,889	15,295,015	-	-
2007	737,456	24,139,666	-	-
2010	928,524	31,285,948	-	-
2012	1,017,190	40,128,889	-	-
2013	1,024,977	43,709,221	-	-
2014	1,109,669	46,196,572	50,378,310	471,976
2015	1,139,693	46,498,120	50,962,232	516,606
2016 (A)	1,140,799	44,595,009	50,482,148	235,003
2017 (B)	1,164,452	45,728,557	51,446,672	340,514
Change (B-A)	23,653	1,133,548	964,524	105,511
Rate of change (%)	2.1	2.5	1.9	44.9

Source: Ministry of Maritime Affairs and Fisheries <Port Cargo Handling Capacity>



<Figure 10.3> National Flag Vessels



Source: Ministry of Maritime Affairs and Fisheries <Vessel Statistics>

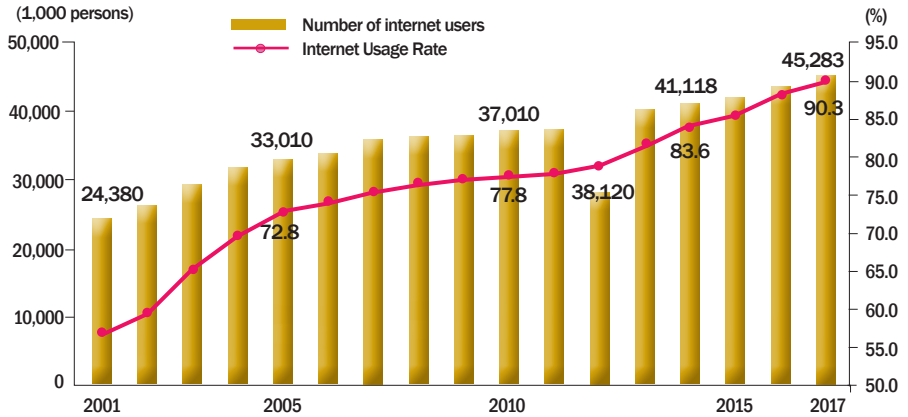
Popularization of Internet Usage

The number of internet users reached 30 million people in 2004, which has been 10 years after 1994 when the commercial service was launched. The number of internet users in 2017 stood at 45.283 million, which accounted for 90.3% of the population over age 6.

Internet usage has become common due to the building of nationwide high-speed internet network, the introduction of a competition system for internet access services and the reduction of service fee resulting there from. This was because the use of internet based on the commercial transaction such as internet banking and shopping became a part of everyday life.



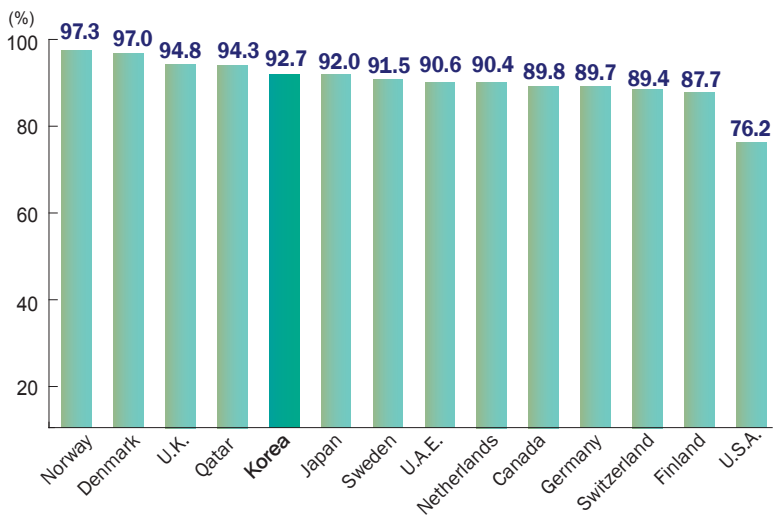
<Figure 10.4> Internet Users and Internet Usage Rate



Source: Ministry of Science and ICT, Korea Internet & Security Agency <Survey on the Internet Usage>

According to ITU data, Korea's internet usage rate was 92.7% in 2016, ranked fifth following Norway (97.3%), Denmark (97.0%), UK (94.8%) and Qatar (94.3%).

<Figure 10.5> Internet Usage Rate of Major Countries (2016)



Note: Percentage of people aged 16 to 74 who have used the internet more than once in the past year, except for city states with a population less than one million

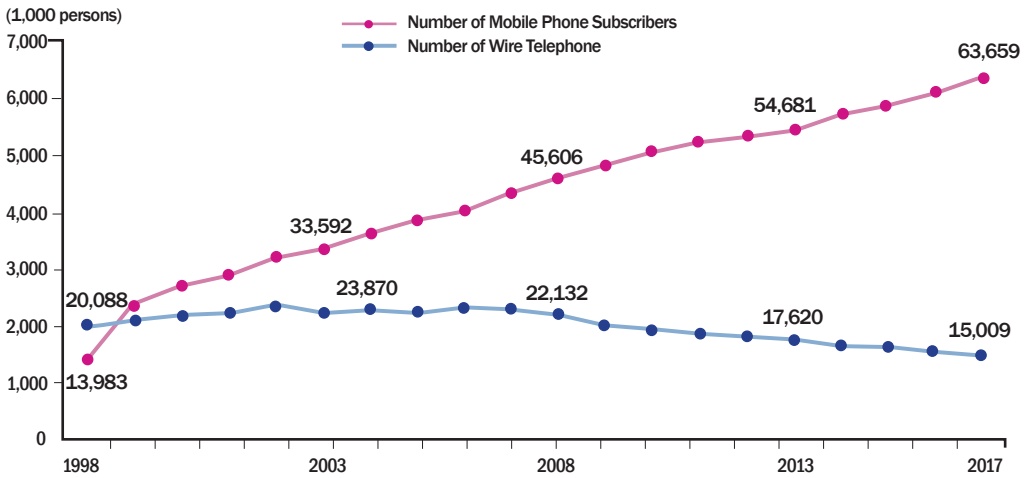
Source: ITU (International Telecommunication Union)

1.23 Smartphones per 1 person

Mobile phones, which were regarded as an exclusive property of some rich people, increased rapidly since the late 1990s, and the number of mobile phone users surpassed the number of wire telephone users in the 2000s. Mobile phones have advantage of being able to use without restriction of time and place. Moreover, smartphones come into wide use in the late 2000s were able to easily receive various information via wireless internet service, and its usage fee was continuously reduced and the performance of its handset was greatly improved.

In 2017, the number of mobile phone subscribers in Korea stood at 63,659,000, which recorded 1.23 smartphones per 1 person.

<Figure 10.6> Wire Telephone and Mobile Phone Subscribers



Source: Ministry of Science and ICT <Mobile phone subscribers>

In 2017, Korea ranked second in the world in the field of information and telecommunication technology. Aside from Korea, Hong Kong ranked 6th, followed by European countries: Iceland ranked first, Switzerland third, Denmark fourth and UK fifth. Japan ranked 10th and USA 16th.

<Table 10. 5> ITU's Top 30 Countries in ICT (Information Communication Technology) Development Index (2017)

Rank	Country	Points	Rank	Country	Points	Rank	Country	Points
1	Iceland	8.98	11	Sweden	8.41	21	Austria	8.02
2	Korea	8.85	12	Germany	8.39	22	Finland	7.88
3	Switzerland	8.74	13	New Zealand	8.33	23	Israel	7.88
4	Denmark	8.71	14	Australia	8.24	24	Malta	7.86
5	UK	8.65	15	France	8.24	25	Belgium	7.81
6	Hong Kong	8.61	16	USA	8.18	26	Macao	7.80
7	Netherlands	8.49	17	Estonia	8.14	27	Spain	7.79
8	Norway	8.47	18	Singapore	8.05	28	Kypros	7.77
9	Luxemburg	8.47	19	Monaco	8.05	29	Canada	7.77
10	Japan	8.43	20	Ireland	8.02	30	Andorra	7.71

Source: ITU <Measuring the Information Society Report 2017>

Software Industry

Software and Digital Contents Developers and Producers

The number of software and digital contents developers and producers stood at 21,556 in 2016, a 5.1 times increase from 4,259 in 1999. Looking at the detailed business categories, the number of package software developers and providers increased by 3 times, game software by 13.2 times and IT service businesses by 13.1 times.

For the percentage of the detailed business category, the package software developers and providers accounted for 83.2% in 1999, but dropped to 49.2% in 2017. On the other hand, the percentage of the game software developers and suppliers increased to 9.8% in 2017 from 3.8% in 1999 and IT service suppliers increased to 34.3% in 2017 from 13.0% in 1999.

The number of businesses increased by 332 (1.6%) compared to 21,224 in 2015. The number of package software developers and suppliers increased by 305 (3.0%), and the number of digital contents developers and producers increased 52 (3.7%), while the number of IT service providers decreased by 31 (-0.4%).

<Table 10.6> Software and Digital Contents Developers and Producers

(Unit : each, %)

	Total	Number of package software developers and producers	Percentage	Number of game software developers and providers	Percentage	Number of IT service providers	Percentage	Number of digital contents developers and producers	Percentage
1999	4,259	3,544	83.2	160	3.8	555	13.0	-	-
2000	6,264	5,534	88.3	220	3.5	510	8.1	-	-
2004	7,452	6,453	86.6	480	6.4	519	7.0	-	-
2008	8,300	5,267	63.5	629	7.6	2,404	29.0	-	-
2009	9,943	5,301	53.3	653	6.6	2,720	27.4	1,269	12.8
2012	15,960	7,849	49.2	1,354	8.5	5,379	33.7	1,378	8.6
2013	17,291	8,528	49.3	1,695	9.8	5,686	32.9	1,382	8.0
2014	20,593	10,047	48.8	2,244	10.9	6,928	33.6	1,374	6.7
2015 (A)	21,224	10,308	48.6	2,099	9.9	7,414	34.9	1,403	6.6
2016 (B)	21,556	10,613	49.2	2,105	9.8	7,383	34.3	1,455	6.7
Change (B-A)	332	305		6		-31		52	
Rate of change	1.6	3.0		0.3		-0.4		3.7	

Source: Ministry of Science and ICT <ICT Survey>

Workers for Software and Digital Contents Developers and Producers

In 2016, the number of workers for software and digital contents developers and producers stood at 290,726, a 4.9 times increase from 59,599 in 1999. Looking at the detailed business categories, the number of workers for package software developers and providers increased by 2.9 times, those for game software developers and providers increased by 17.8 times and those for IT service providers increased by 9.1 times.

For the percentage of the detailed business category, the number of workers for package software developers and providers accounted for 77.4% in 1999, but dropped to 46.3% in 2016. On the other hand, the number of workers for game software developers and providers accounted for 12.7% in 2016 from 3.5% in 1999, and those for IT service providers accounted for 35.7% in 2016 from 19.2% in 1999.

Compared to 2015 (294,871), the number of workers decreased by 4,109 (-1.4%). Looking at the detailed business category, the number of workers for IT service providers decreased 5,677 (-5.2%), while those for package/game software developers and providers and those for

digital contents developers and producers increased slightly by 2.4% and 4.6%, respectively.

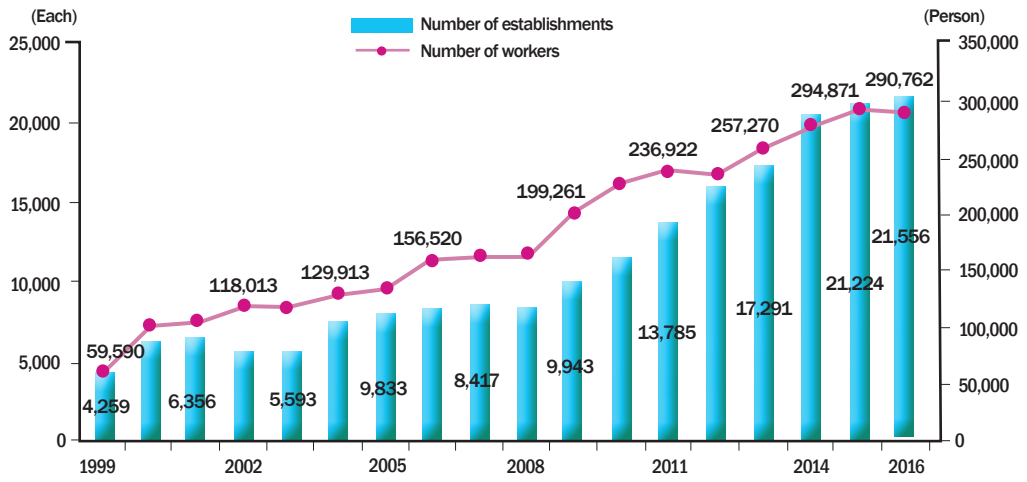
<Table 10.7> Workers for Software and Digital Contents Developers and Producers

(Unit: person, %)

	Total	Package software developers and providers	Percentage	Game software developers and providers	Percentage	IT service providers	Percentage	Digital contents developers and producers	Percentage
1999	59,599	46,119	77.4	2,065	3.5	11,415	19.2	-	
2000	102,652	84,731	82.5	3,994	3.9	13,927	13.6	-	
2004	129,913	98,868	76.1	8,385	6.5	22,660	17.4	-	
2008	164,760	97,992	59.5	19,503	11.8	47,265	28.7	-	
2012	236,662	113,572	48.0	31,964	13.5	77,829	32.9	13,297	5.6
2013	257,270	123,141	47.9	33,816	13.1	86,726	33.7	13,587	5.3
2014	278,115	128,502	46.2	35,674	12.8	99,797	35.9	14,142	5.1
2015 (A)	294,871	134,631	45.7	35,964	12.2	109,487	37.1	14,789	5.0
2016 (B)	290,762	134,677	46.3	36,812	12.7	103,810	35.7	15,463	5.3
Change (B-A)	-4,109	46	-	848	-	-5,677	-	674	-
Rate of change	-1.4	0.0	-	2.4	-	-5.2	-	4.6	-

Source: Ministry of Science and ICT <ICT Survey>

<Figure 10.7> Trend on Workers for Software and Digital Contents Developers and Producers



Source: Ministry of Science and ICT, ICT Survey

Sales of Software and Digital Contents Developers and Producers

Sales of software and digital contents developers and producers stood at KRW51,828.9 billion in 2016, an 8.2 times increase from KRW6,293.9 billion in 1999. Looking at the detailed business category, package software developers and producers increased by 6.1 times and IT service providers increased by 6.3 times.

Compared to 2015 (KRW49,580.1 billion), sales increased by KRW2,248.8 billion (4.5%). Looking at the detailed business category, sales of IT service providers increased by KRW2,171.3 billion (7.3%), sales of game software providers by KRW1,008.5 billion (11.2%) and sales of digital content developers and producers by KRW192.3 billion (8.4%), while sales of package software developers and providers decreased by KRW1,123.3 billion (-12.9%).

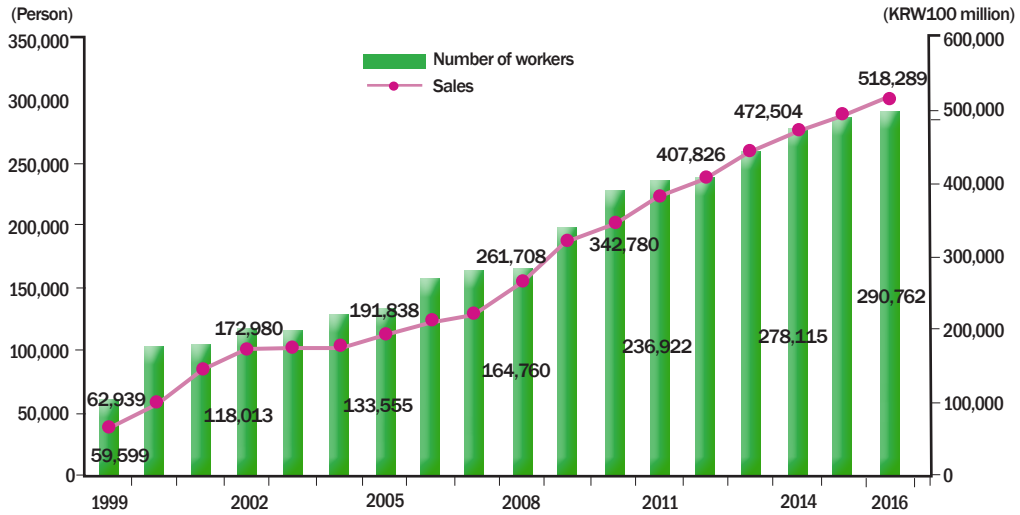
<Table 10.8> Sales of Software and Digital Contents Developers and Producers

(Unit: KRW100 million, %)

	Total	Package software developers and providers		Game software developers and providers		IT service providers		Digital contents developers and producers	
			Percentage		Percentage		Percentage		Percentage
1999	62,939	12,396	77.4	-	-	50,543	80.3	-	-
2000	102,621	20,173	82.5	-	-	82,448	80.3	-	-
2004	175,533	38,425	76.1	-	-	137,108	78.1	-	-
2008	261,709	34,064	59.5	-	-	227,645	87.0	-	-
2012	407,826	44,460	48.0	78,928	19.4	266,106	65.2	18,332	4.5
2013	443,199	64,758	47.9	79,941	18.0	278,816	62.9	19,684	4.4
2014	472,504	81,443	46.2	87,024	18.4	282,793	59.8	21,244	4.5
2015 (A)	495,801	86,843	45.7	90,162	18.2	295,833	59.7	22,963	4.6
2016 (B)	518,289	75,610	46.3	100,247	19.3	317,546	61.3	24,886	4.8
Change (B-A)	22,488	-11,233	-	10,085	-	21,713	-	1,923	-
Rate of change (%)	4.5	-12.9	-	11.2	-	7.3	-	8.4	-

Source: Ministry of Science and ICT <ICT Survey>

<Figure 10.8> Trend on Workers and Sales of Software and Digital Contents Developers and Producers



Source: Ministry of Science and ICT <ICT Survey>

Foreign Trade and Balance of Payments

Chapter 11

- Exports and Imports
- Major Export & Import Items
- Foreign Exchange Reserve
- Balance of Payments

Exports and Imports

In 2017, Korea's exports amounted to USD573.7 billion, a 12.1 times increase compared to 1987, and imports amounted to USD478.5 billion, an 11.7 times increase compared to 1987. Korea has maintained its balance of trade surplus due to the upswing in exports of flagship product after overcoming the IMF economic crisis.

The trade balance stood at USD95.2 billion in 2017, a 6.7% (USD6 billion) increase from USD89.2 in the previous year. Exports amounted to USD573.7 billion, a 15.8% increase (USD78.3 billion) from USD495.4 billion in the previous year, while imports increased by USD72.3 billion (17.8%).



<Table 11.1> Tendency of Imports and Export (based on Customs Clearance)

(Unit: USD one million)

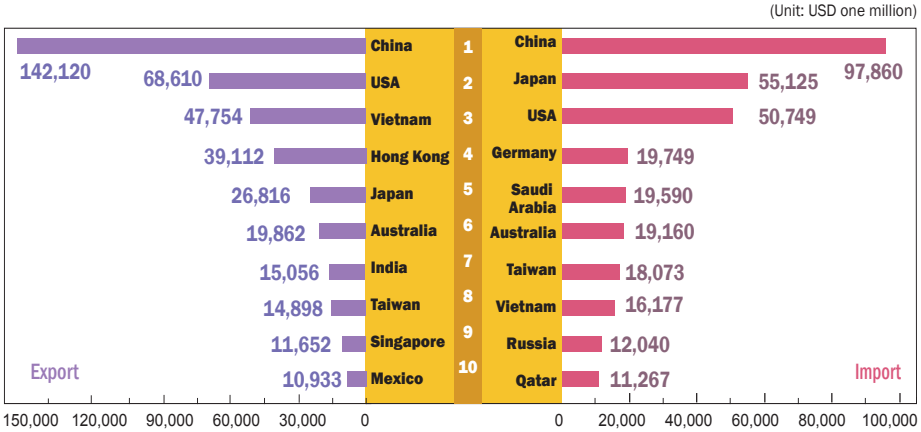
	Exports	Imports	Trade balance
1967	320	996	-676
1977	10,046	10,811	-765
1987	47,281	41,020	6,261
1992	76,632	81,775	-5,143
1997	136,164	144,616	-8,452
2002	162,471	152,126	10,345
2007	371,489	356,846	14,643
2012	547,870	519,584	28,286
2015	526,757	436,499	90,258
2016 (A)	495,426	406,193	89,233
2017 (B)	573,694	478,478	95,216
Change (B-A)	78,268	72,285	5,983
Rate of Change (%)	15.8	17.8	6.7

Source: Ministry of Trade, Industry and Energy <Foreign Trade Statistics>

Among Korea's top 10 trading partners, China accounted for 24.8% of Korea's exports in 2017, followed by USA (12.0%), Vietnam (8.3%) and Hong Kong (6.8%). China also accounted for 16.0% of Korea's imports, followed by Japan (9.0%), USA (8.3%) and Germany (3.2%). China, USA and Japan account for a relatively high proportion of exports and imports.

<Figure 11.1> International Trade with Top 10 Major Nations (2017, based on Customs Clearance)

(Unit: USD one million)

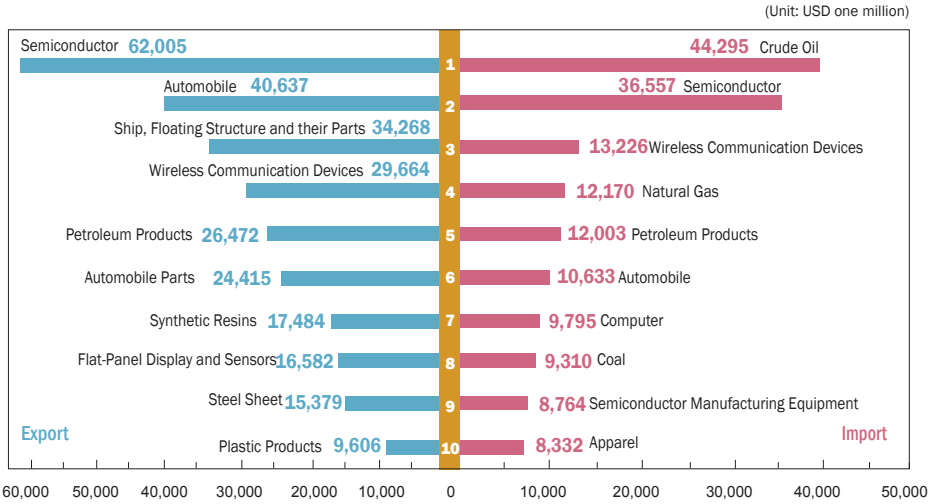


Source: Korea Customs Service <Exports and Imports Statistics>

Major Export & Import Items

Among Korea's top 10 export and import items, export of semiconductors amounted to USD62 billion in 2016, followed by automobiles (USD40.6 billion), ships, floating structures and their parts (USD34.3 billion) and wireless communication devices (USD29.7 billion). Import of crude oil amounted to USD44.3 billion, followed by semiconductors (USD36.6 billion), wireless communication devices (USD13.2 billion) and natural gas (USD12.2 billion).

<Figure 11.2> Korea's Top 10 Exports and Imports Items (2016)



Source: Korea Customs Service <Exports and Imports Statistics>

Foreign Exchange Reserves

Korea's foreign exchange reserves amounted to USD389.3 billion in 2017, a 19.1 times increase from USD20.4 billion in 1997. The portion of foreign exchange reserves to GDP increased by 21.7%p during the same period, while the portion of short-term external debts to foreign exchange reserves decreased by 256.5%p.

Foreign exchange reserves increased by USD18.2 billion (4.9%) in 2017 from USD371.1 billion in 2016, and the portion of short-term external debts to foreign exchange reserves

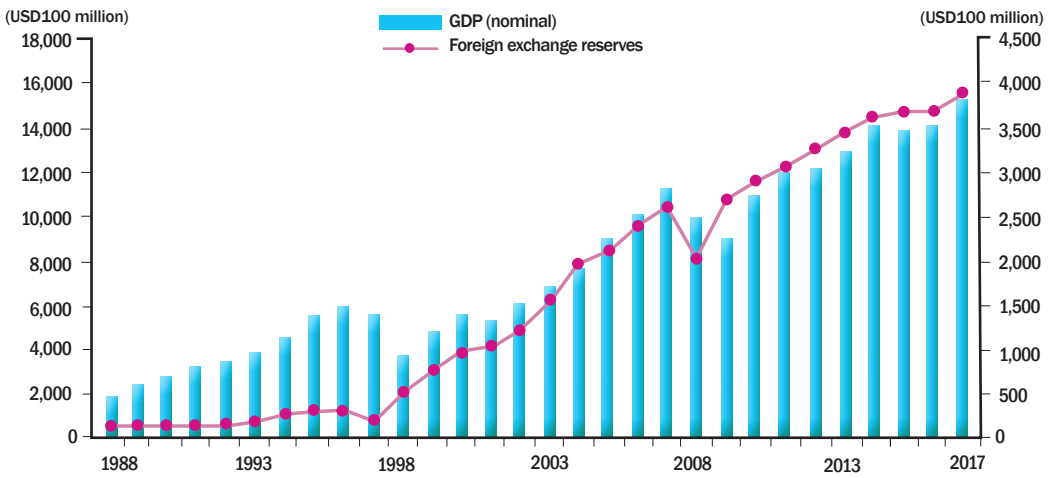
increased by 1.6%p, while the portion of foreign exchange reserves to GDP decreased by 0.8%p.

<Table 11.2> Foreign Exchange Reserves

	1992	1997	2002	2007	2012	2015	2016	2017
Foreign exchange reserve (USD100 million)	172	204	1,214	2,622	3,270	3,680	3,711	3,893
GDP (Nominal, USD100 million)	3,500	5,576	6,089	11,227	12,224	13,824	4,147	15,302
Foreign exchange reserve/GDP (%)	4.9	3.7	19.9	23.4	26.8	26.6	26.2	25.4
Short-term external debts (USD100 million)	-	584	445	1,659	1,280	1,043	1,047	1,159
Short-term external debts/ Foreign exchange reserve (%)	-	286.3	36.7	63.3	39.1	28.3	28.2	29.8

Source: The Bank of Korea

<Figure 11.3> Fluctuation of GDP and Foreign Exchange Reserves



Source: The Bank of Korea

Balance of Payments

The country's current account balance stood at USD78.5 billion in 2017, a 20.9% (USD2.1 billion) decrease from USD99.2 billion in the previous year. It resulted from a 96.8% (USD3.7

billion) decrease in primary income account, in spite of a 94.4% (USD16.7 billion) increase in service balance and a 22.7% (USD1.3 billion) in transfer income account.

The current account balance was largely a deficit before 1997, but has maintained a surplus after overcoming IMF economic crisis, and recorded the biggest surplus in 2015.

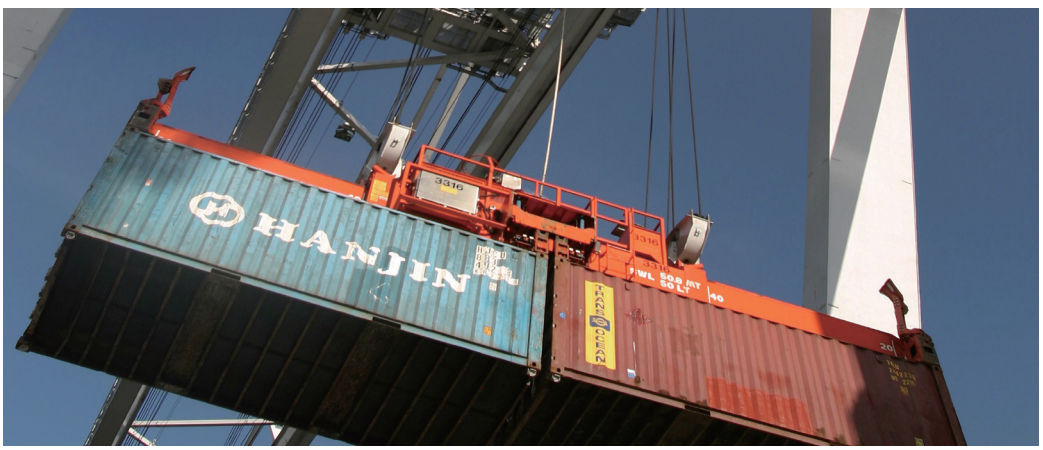
Capital account balance recorded USD31 million deficit in 2017, which decreased by USD15 million (-32.6%) from USD46 million in the previous year.

<Table 11.3> Balance of Payments

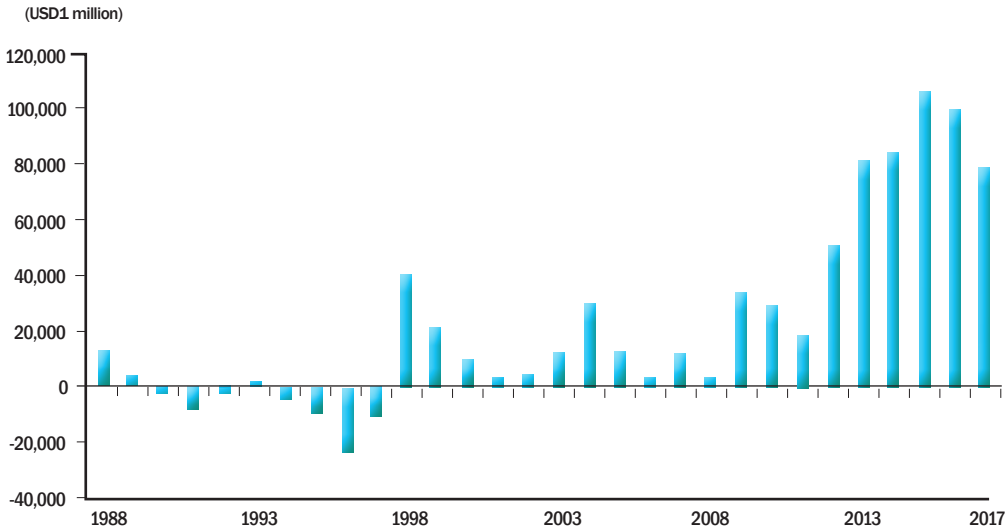
(Unit: USD one million)

	Current Balance					Capital account balance
		Goods balance	Service balance	Primary income balance	Transfer income balance	
1992	-2,432	-959	-1,876	-501	905	-
1997	-10,285	-6,217	-1,360	-3,053	345	-
2002	4,693	14,905	-5,939	-2,159	-2,114	-9
2007	11,795	32,838	-13,247	-3,409	-4,387	6
2012	50,835	49,406	-5,214	12,117	-5,474	-42
2015	105,940	122,269	-14,917	3,572	-4,985	-60
2016 (A)	99,243	118,895	-17,737	3,852	-5,767	-46
2017 (B)	78,460	119,889	-34,472	122	-7,078	-31
Change (B-A)	-20,783	994	-16,735	-3,730	-1,311	15
Rate of change (%)	-20.9	0.8	94.4	-96.8	22.7	-32.6

Source: The Bank of Korea <Balance of Payments Statistics>



<Figure 11.4> Fluctuation of Current Account Balance



Source: The Bank of Korea

Public Finance

Chapter 12

- Ratio of Public Finance to GDP: 21.8%
- The Country's Tax Burden Ratio is Lower than that of Advanced Countries
- Money Supply
- Securities

Ratio of Public Finance to GDP: 21.8%

The central government's consolidated fiscal scale stood at KRW369 trillion in 2017, a 1.8 times increase compared to 2007, and the total expenditure stood at KRW401 trillion, a 1.7 times increase during the same period.



The ratio of public finance to GDP stood at 21.8% in 2017, a

0.3%p decrease from 22.1% in the previous year.

Compared to the previous year, the central government's consolidated fiscal scale increased by KRW14 trillion (3.9%) and the central government's total expenditure increased by KRW15 trillion (3.9%).

<Table 12.1> The Central Government's Public Finance

(Unit: KRW one trillion, %)

	1977	1987	1992	1997	2002	2007	2012	2015	2016	2017
The central government's consolidated fiscal scale	4	19	46	100	136	210	294	344	355	369
% of GDP	20.4	16.7	18.5	20.4	19.9	23.3	22.0	21.6	22.1	21.8
The central government's total expenditure	-	-	-	-	-	238	325	375	386	401

Note: The central government's consolidated fiscal scale is based on settlement by 2007 and budget after 2008. The total expenditure is based on budget.
Source: Ministry of Economy and Finance <Korea's Consolidated Fiscal Balance> <Public Finance> <National Fiscal Management Plan>

The Country's Tax Burden Ratio is Lower than that of Advanced Countries

The country's tax burden ratio to GDP stood at 19.4% in 2016, a 0.9%p increase from 18.5% in the previous year. As the national income has increased, the tax burden ratio has also continued to rise.

Considering that the average tax burden ration of 30 OECD countries was 25.1% in 2014, it is lower than that of advanced countries. The total tax revenue as percentage of GDP, which is the sum of the national/local taxes and social security contributions, stood at 24.6% in 2014 and is also on a rising trend like the tax burden ratio, but lower than average level of major OECD countries, 34.2% in 2014.



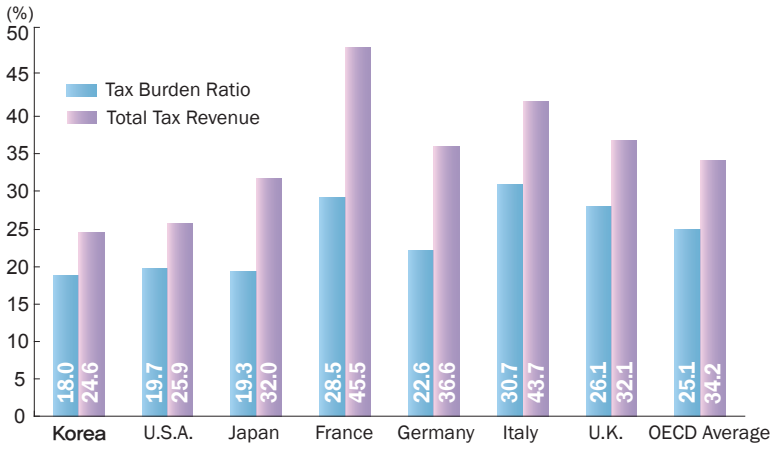
<Table 12.2> Tax Burden Ratio

(Unit: KRW one trillion)

	Tax Burden Ratio (%)	Nominal GDP	Taxes	National Taxes	Local Taxes
1991	16.1	238.9	38.4	30.3	8.0
1996	17.1	481.1	82.4	65.0	17.4
2001	17.8	688.2	122.5	95.8	26.7
2006	18.6	966.1	179.3	138.0	41.3
2011	18.4	1,332.7	244.7	192.4	52.3
2014	18.0	1,486.1	267.2	205.5	61.7
2015	18.5	1,564.1	288.9	217.9	71.0
2016	19.4	1,641.8	318.1	242.6	75.5

Note: Figures for 2016 are the provisional track records.
Source: National Tax Service, <Collection Report>, Ministry of Public Administration and Security <Local Tax Administration Yearbook>

<Figure 12.1> International Comparison of Tax Burden Ratio and Total Tax Revenue (2014)



Source: OECD <Revenue Statistics (2016)>

Money Supply

As of the end of 2017, the amount of currency in circulation stood at KRW107.9 trillion, a 10.8% (KRW10.5 trillion) increase from KRW97.4 trillion in the previous year. The supply of monetary base stood at KRW155.9 trillion, an 8.7% year-on year increase. M1 (narrow money) including demand deposits stood at KRW849.9 trillion, and M2 (broader money)

supply, the total liquidity including private savings deposit, stood at KRW2,530.4 trillion, and liquidity aggregates of financial institutions (Lf), including deposits in non-banking financial institutions, stood at KRW3,565.9 trillion.

<Table 12.3> Major Currency Indicators

(Unit: KRW one trillion)

	Amount of currency in circulation	Monetary base	M1	M2	Lf
1987	4.8	7.5	24.5	71.2	
1992	9.8	18.1	64.8	211.5	298.3
1997	17.8	22.5	128.9	517.3	700.3
2002	24.2	38.0	283.6	872.1	1,155.7
2007	29.3	56.4	316.4	1,273.6	1,691.6
2012	54.3	88.3	470.0	1,835.6	2,456.1
2015	86.8	131.4	708.5	2,247.4	3,098.9
2016	97.4	143.4	795.5	2,407.5	3,344.9
2017	107.9	155.9	849.9	2,530.4	3,565.9

Note: Based on closing balance
Source: The Bank of Korea <Monetary and Financial Statistics>

Securities

The number of listed companies in the securities market stood at 2,040 in 2017, a 2.7% (53) year-on-year increase, and the aggregate value of listed stocks stood at KRW1,889 trillion, a 25.1% (KRW379 trillion) increase from KRW1,510 trillion in the previous year. The number of listed companies in the securities market decreased by 5 (0.6%), but the aggregate value of listed stocks increased by KRW298 trillion (22.8%), and the number of listed companies and the aggregate value of listed stocks in KOSDAQ increased by 58 (4.8%) and KRW81 trillion (40.1%) compared to the previous year, respectively.

<Table 12.4> Listed Companies and Aggregate Value of Listed Stocks

	Number of listed companies				Aggregate value of listed stocks (KRW one trillion)			
	Total	Securities Market	Percentage	KOSDAQ	Total	Securities Market	Percentage	KOSDAQ
1997	1,135	776	68.4	359	78	71	91.0	7
2002	1,526	683	44.8	843	296	259	87.5	37
2007	1,769	746	42.2	1,023	1,052	952	90.5	100
2012	1,789	784	43.8	1,005	1,263	1,154	91.4	109
2015	1,922	770	40.1	1,152	1,445	1,243	86.0	202
2016 (A)	1,987	779	39.2	1,208	1,510	1,308	86.6	202
2017 (B)	2,040	774	37.9	1,266	1,889	1,606	85.0	283
Change (B-A)	53	-5	-	58	379	298	-	81
Rate of change (%)	2.7	-0.6	-	4.8	25.1	22.8	-	40.1

Source: Stock Exchange

Health and Welfare

Chapter 13

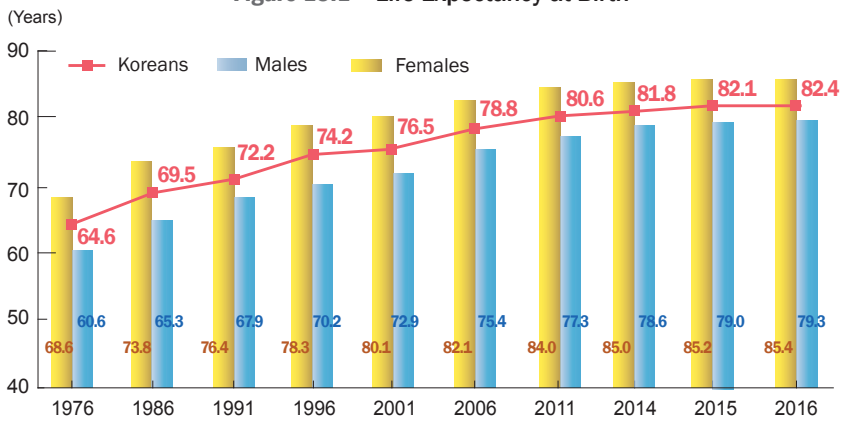
- Life Expectancy at Birth
- Leading Causes of Death
- Public Pension Recipients
- Medical Institutions
- Medical Personnel
- Medical Care Expenditure (% of GDP)
- Social Welfare Expenditure

Life Expectancy at Birth

In 2016, the life expectancy at birth of Koreans recorded 82.4 years. The life expectancy at birth of males marked 79.3 years, while that of females marked 85.4 years. These figures indicate that females live longer by 6.1 years than males. With the development of medical skills and enhancement of health-related consciousness, the life expectancy at birth of Koreans increased by 17.8 years from 64.6 years in 1976.



<Figure 13.1> Life Expectancy at Birth



Source: Statistics Korea <Life Tables>

Life expectancy at birth is a statistical measure of the average time a new-born child is expected to live, and a leading indicator for evaluating the level of health and development of a society. Although data production standard on life expectancy at birth differs from country to country, compared to OECD countries' data that are currently available, the life expectancy of Korean males is 77.9 in 2015, which is similar to OECD member countries (77.3), while that of Korean females is 84.4 which is 1.7 years longer than the average of OECD member countries (82.7). Compared to Japan, which is known as a country with the longest life expectancy, the life expectancy of Korean males is 2.1 years shorter, and that of Korean females is 2 years shorter.

<Table 13.1> Life Expectancy at Birth of Major OECD Countries (2015)

(Unit: Year)

Country	Male	Female	Difference (Female-Male)
Korea	77.9	84.4	6.5
Japan	80.0	86.4	6.4
Switzerland	80.5	84.8	4.3
Spain	79.6	85.3	5.7
Italy	79.9	84.7	4.8
UK	79.0	82.8	3.8
Germany	77.9	82.9	5.0
USA	76.5	81.3	4.8
OECD average	77.3	82.7	5.4

Source: OECD

Leading Causes of Death

For decades, malignant neoplasm and cerebrovascular diseases have been placed as leading causes of death. As for the top ten causes of death, in 2016, malignant neoplasm took first place with the death rate of 153.0% per 100,000 population. This figure was followed by heart diseases (58.2%), cerebrovascular diseases (45.8%) and pneumonia (32.2%). Suicide (25.6%) ranked fifth, implying social measures against suicide are needed.

<Table 13.2> Leading Causes of Death (1990~2016)

(Unit: Per 100,000 population, %)

Rank	1990		2000		2010		2016	
	Causes of death	Death rate	Causes of death	Death rate	Causes of death	Death rate	Causes of death	Death rate
1	Malignant neoplasm (cancer)	91.5	Malignant neoplasm (cancer)	121.4	Malignant neoplasm (cancer)	144.4	Malignant neoplasm (cancer)	153.0
2	Cerebrovascular diseases	63.1	Cerebrovascular diseases	73.1	Cerebrovascular diseases	53.2	Heart diseases	58.2
3	Heart diseases	39.6	Heart diseases	38.2	Heart diseases	46.9	Cerebrovascular diseases	45.8
4	Transport accidents	33.2	Transport accidents	25.3	Suicide	31.2	Pneumonia	32.2
5	Hypertensive diseases	29.7	Liver diseases	22.8	Diabetes	20.7	Suicide	25.6
6	Liver diseases	28.1	Diabetes	22.6	Pneumonia	14.9	Diabetes	19.2
7	Diabetes	9.9	Chronic lower respiratory diseases	16.7	Chronic lower respiratory diseases	14.2	Chronic lower respiratory diseases	13.7
8	Chronic lower respiratory diseases	8.9	Suicide	13.6	Liver diseases	13.8	Liver diseases	13.3
9	Suicide	7.6	Hypertensive diseases	8.9	Transport accidents	13.7	Hypertensive diseases	10.6
10	Pneumonia	5.2	Pneumonia	8.1	Hypertensive diseases	9.6	Transport accidents	10.1

Source: Statistics Korea <Causes of Death Statistics>

Public Pension Recipients

In 2016, public pension recipients totaled 4,992,000 persons, which increased by 367,000 persons (7.9%) from 4,625,000 persons in 2015. National pension recipients (an increase of 333,000 persons or 8.2%) and government employees pension recipients (an increase of 27,000 persons or 6.3%) contributed to the increase in the total public pension recipients.

In 2016, 49,662,000 persons were covered the health insurance system. This figure rose by 363,000 persons (0.7%) from 49,299,000 persons in 2015.

<Table 13.3> Public Pension Recipients and People Covered by Health Insurance

(Unit: 1,000 persons)

	Public pension						People covered by health insurance
		National pension	Government employees pension	Private school teachers pension	Soldiers pension	Post officers pension	
1991	455	383.3	29.7	1.7	40.4	0.0	-
1996	1,064	945.8	63.7	4.6	49.3	0.1	-
2001	1,189	955.8	160.7	14.6	57.4	0.3	46,379
2006	2,324	3,631	236.3	24.7	66.0	0.7	47,410
2011	3,631	3,184.6	326.5	40.6	78.1	1.1	47,820
2014	4,304	3,769.4	395.6	53.0	84.6	1.4	48,907
2015(A)	4,625	4,051.4	426.1	59.1	87.1	1.5	49,299
2016(B)	4,992	4,384.7	452.9	63.8	89.1	1.7	49,662
Change (B-A)	367	333.3	26.8	4.7	2.0	0.2	363
Percent change (%)	7.9	8.2	6.3	8.0	2.3	13.3	0.7

Note: '0.0' indicates 'Less than 100 persons'.

Source: Ministry of Health and Welfare <Annual Report of Health and Welfare Statistics>, National Health Insurance Corporation <National Health Insurance Statistics>

Medical Institutions

Owing to higher interest in health following an increase in income and enhancement of living standards, compared to 1990, the number of medical institutions increased by about 3 times to 64,999 in 2016.

The number of sickbeds rose by 10.4 persons from 3.1 persons in 1990 to 13.5 persons per 1,000 population in 2016. These figures show the drastic improvement in health care environment.



<Table 13.4> Number of Medical Institutions and Sickbeds

	Total	General hospitals & hospitals	Clinics & maternity clinics	Dental hospitals and clinics	Korean traditional medical hospitals and clinics	Number of sickbeds	Sickbeds per 1,000 population
1990	21,701	588	11,527	5,292	4,294	134,176	3.1
1995	29,773	706	14,766	8,304	5,997	197,032	4.4
2000	38,665	949	19,777	10,527	7,412	287,401	6.1
2001	40,276	867	20,919	10,616	7,630	288,952	6.1
2006	51,286	1,145	26,117	12,942	10,436	410,581	8.5
2011	58,496	1,564	27,945	15,201	12,483	564,572	11.3
2014	62,090	1,800	28,803	16,355	13,650	668,470	13.3
2015	63,419	1,829	29,394	16,797	13,865	674,541	13.5
2016	64,999	1,851	30,185	17,219	14,142	692,345	13.5

Source: Ministry of Health and Welfare <Annual Report of Health and Welfare Statistics>, Statistics Korea <Population Projections>

Medical Personnel

The number of medical doctors was 118,093 persons in 2016, rising by 2.8 times compared to 1990. The number of dentists was 29,503 persons in 2016, rising by 3.1 times compared to 1990. In 2016, the number of pharmacists and nurses increased by 1.8 times and 4 times, respectively, compared to 1990.

The number of persons per doctor sharply declined by 33.0% from 648 persons in 2000 to 434 persons in 2016, showing a remarkable improvement in medical care environment.

<Table 13.5> Medical Personnel[1)]

(Unit: Persons)

	Medical doctors[2)]	Dentists	Pharmacists	Nurses
1990	42,554	9,619	37,118	89,032
1995	57,188	13,681	43,269	120,415
2000	72,503	18,039	50,623	160,295
2001	75,295	18,874	51,872	170,845
2006	88,214	22,267	55,845	223,781
2011	104,397	26,098	62,245	282,656
2014	112,476	28,134	63,150	323,041
2015	116,045	28,953	65,510	338,629
2016	118,093	29,503	66,992	355,772

Note: 1) Including licensed doctors who don't open a clinic, and doctors who reside overseas
2) Including 'Conditionally qualified limited physicians' who are licensed in certain regions
Source: Ministry of Health and Welfare <Annual Report of Health and Welfare Statistics>

Looking at the status of medical resources in more advanced countries, the number of medical doctors (including traditional Korean medicine doctors) in Korea stood at 2.24 persons per 1,000 population in 2015. This figure is similar to the United States (2.57 persons), the UK (2.79 persons) and Japan (2.36 persons). In the meantime, the figure is lower than Norway (4.4 persons) and Austria (5.16 persons).

<Table 13.6> Medical Resources in Major Countries[1] (2015)

(Unit: Persons)

	Korea[2]	USA	UK	Japan[3]	Australia	Norway
Hospital beds (per 1,000 population)	11.53	2.83	2.61	13.17	7.55	3.76
Doctors (per 1,000 population)	2.24	2.57	2.79	2.36	5.16	4.4
Nurses (per 1,000 population)	5.94	-	7.9	10.96	8.05	17.34
CT scanners (per 1,000 population)	37.03	40.98	9.46	107.17	28.96	-
MRI equipment (per million population)	26.27	39	7.23	51.69	20.73	-
Medical school graduates (per 100,000 population)	7.85	7.49	12.83	6.39	14.69	11.18

Note: 1) Doctors are based on those currently practicing. Whereas, nurses are based on those currently practicing as well as license holders.
2) Doctors (including traditional Korean medicine doctors) are based on those currently practicing. Whereas, nurses are based on license holders.
* Japan: Data of doctors, nurses, CT scanners and MRI equipment refer to 2014.
* USA Data of hospital beds and doctors refer to 2014.
* Austria: Data of medical school graduates refer to 2014.

Source: OECD <OECD Health Data 2017>

Medical Care Expenditure (% of GDP)

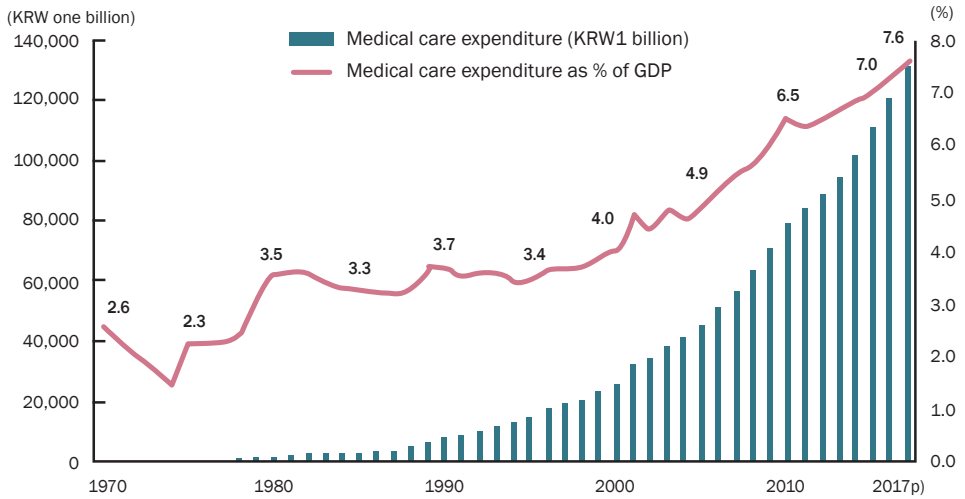
Due to a rise in income and a higher interest in health, medical care expenditures increased by 32.2 times from 3,737 billion won in 1987 to 120,467 billion won in 2017. Medical care expenditures as a percentage of GDP grew by 4.5%p from 3.1% in 1987 to 7.6% in 2017. In 2017, medical care expenditures increased by 10,208 billion won (9.3%) from 110,259 billion won in 2016.

<Table 13.7> Medical Care Expenditure as a Percentage of GDP

	1987	1997	2002	2007	2012	2015	2016	2017p)
Medical care expenditure (KRW1 billion)	3,737	9,958	19,135	33,486	56,597	88,669	110,259	120,467
Percentage of GDP(%)	3.1	3.6	4.4	5.4	6.4	7.0	7.3	7.6

Source: Ministry of Health and Welfare <Korean National Health Accounts>

<Figure 13.2> Trends in Medical Care Expenditure as a Percentage of GDP



Source: Ministry of Health and Welfare <Korean National Health Accounts>

Social Welfare Expenditure

According to the OECD guidelines, social welfare expenditures in Korea were estimated to record 156 trillion won in 2014, occupying 10.5% of nominal GDP. Owing to the foundation of a basic framework for social security (including national basic living security and the introduction and expansion of the social security system), social welfare expenditures rose by nearly 2 times from 5.35% in 2000 to 10.51% in 2014.

<Table 13.8> Social Welfare Expenditure as a Percentage of GDP

(Unit: %)

	1990	1995	2000	2005	2010	2011	2012	2013	2014
Social welfare expenditure (A+B)	2.98	3.46	5.35	6.75	8.86	8.83	9.44	10.01	10.51
Public sector (A)	2.69	3.07	4.53	6.14	8.23	8.17	8.70	9.27	9.69
Private sector (B)	0.30	0.39	0.82	0.61	0.63	0.65	0.74	0.74	0.83

1)Source: Ministry of Health and Welfare <Social Welfare Expenditure of Korea in 2014>

Environment

Chapter 14

- Environmental Improvement Record
- Emissions of Pollutants
- Waste Generation
- CO_2 Emissions
- Environmentally Friendly Products
- Endangered Species

Environmental Improvement Record

In 2016, the total amount of household waste recorded 53,772 tons. Amid people's positive participation in recycling, the recycling ratio rose from 56.6% in 2006 to 60% in 2016, while the landfill ratio dropped from 25.8% in 2006 to 14.7% in 2016.



On the other hand, concerted efforts to improve the water supply and sewage system resulted in the increase in the sewage supply rate from 85.5% in 2006 to 93.2% in 2016 and the piped water supply rate from 91.3% in 2006 to 96.4% in 2016.

<Table 14.1> Environmental Improvement Record

(Unit: Tons, %)

	Household waste disposal				Sewage supply rate	Piped water supply rate
	Total amount	Recycling	Incineration	Landfill		
2006	48,844	56.6	17.0	25.8	85.5	91.3
2011	48,934	59.1	23.7	17.1	90.9	94.6
2014	49,915	59.0	25.3	15.7	92.5	96.1
2015	51,247	59.2	25.7	15.1	92.9	96.5
2016	53,772	60.0	25.3	14.7	93.2	96.4

Source: Ministry of Environment <e-National Indicators>

Emissions of Pollutants

In 2015, the emissions of nitrogen oxides (NOx) recorded the highest figure of 1,158,000 tons, which was followed by volatile organic compounds (VOCs) (1,011,000 tons), CO (793,000 tons) and total suspended particles (TSP) (604,000 tons).

Compared to 2000, the emissions of sulphur oxides (SOx) and CO fell by 138,000 tons (-28.2%) and 108,000 tons (-12.0%), respectively. Whereas, the emissions of TSP, VOCs and NH3 increased by 522,000 tons (636.0%), 304,000 tons (43.0%) and 249,000 tons (512.9%), respectively.

Compared to 2014, the emissions of all pollutants showed an increase. TSP emissions marked the highest increase of 457,000 tons (310.5%), which was followed by CO (198,000 tons, 33.4%), PM10 (135,000 tons, 138.1%) and VOCs (105,000 tons, 11.6%).



<Table 14.2> Emissions of Pollutants

(Unit: Tons)

	CO	NOx	SOx	TSP	PM10[1)]	PM2.5[2)]	VOC	NH3
2000	900,569	1,122,844	490,761	82,101	61,719	-	706,915	48,484
2005	788,917	1,306,724	408,462	88,909	67,343	-	756,421	247,149
2010	766,269	1,061,210	401,741	177,601	116,808	-	866,358	289,766
2011	718,345	1,040,214	433,959	201,810	131,176	81,793	873,108	276,415
2012	703,586	1,075,207	417,645	182,744	119,980	76,287	911,322	303,463
2013	696,682	1,090,614	404,660	185,986	121,563	76,802	913,573	292,973
2014 (A)	594,454	1,135,743	343,161	147,194	97,918	63,286	905,803	292,501
2015 (B)	792,776	1,157,728	352,292	604,243	233,177	98,806	1,010,771	297,167
Change (B-A)	198,322	21,985	9,131	457,049	135,259	35,520	104,968	4,666
Percent change (%)	33.4	1.9	2.7	310.5	138.1	56.1	11.6	1.6

Note: 1) Excluding biogenic emissions
2) Since 2011, the emissions of PM2.5 have been calculated.
Source: National Institute of Environmental Research

Waste Generation

In 2016, the waste generation totaled 429,000 tons a day, rising by 2.4 times compared to two decades ago 1996. Construction waste recorded the highest figure of 199,000 tons (46.5%), which was followed by industrial waste (162,000 tons, 37.8%) and household waste (54,000 tons, 12.5%). The amount of household waste remains stable owing to the implementation of the pay-by-the-bag garbage disposal system.



<Table 14.3> Waste Generation

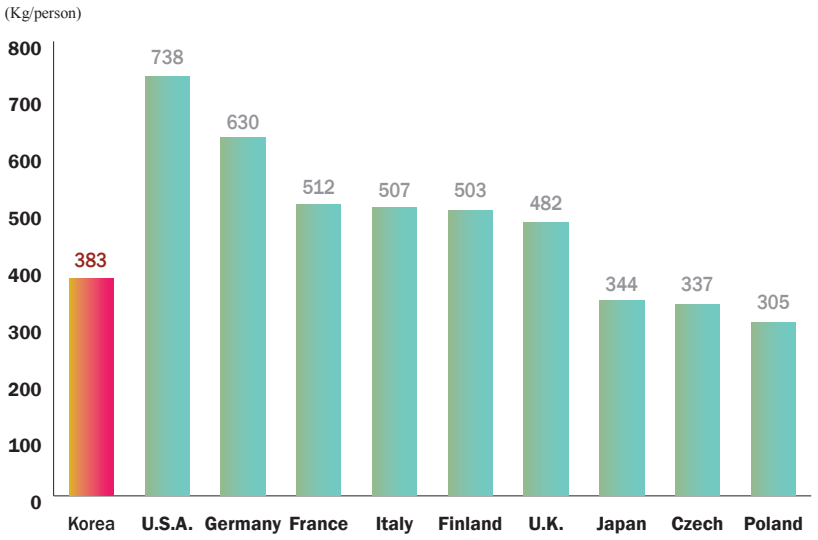
(Unit:1,000 tons/day)

	Total	Household waste		Industrial waste	Construction waste
			Per capita waste (kg/day)		
1996	180.57	49.93	1.10	96.98	28.43
2001	261.03	48.50	1.02	95.91	108.52
2006	328.95	48.84	1.01	101.10	168.99
2011	383.33	48.93	0.98	137.96	186.42
2014	401.66	49.92	0.98	153.19	185.38
2015	418.22	51.25	1.01	155.31	198.26
2016	429.14	53.77	1.05	162.13	199.44

Source: Ministry of Environment, e-National Indicators

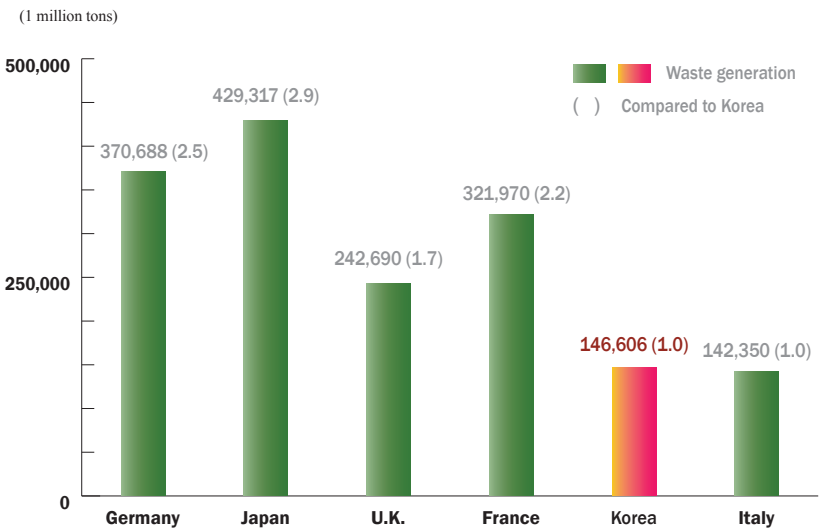
In 2016, the country's per capita household waste stood at 383kg. This figure was lower than the United States (738kg) and the United Kingdom (482kg).

<Figure 14.1> OECD Countries' Per Capital Annual Household Waste Generation (2016)



Note: 1) Per capita waste generation is calculated by annual household waste generation divided by the total population.
2) Data for the USArefers to 2014. Data for Japan refers to 2015.
Source: OECD, Ministry of Environment, <Status of Waste Generation and Disposal>

<Figure 14.2> Waste Generation-Comparison with OECD Countries (2014)



Note: Data for Japan refers to 2013.
Source: OECD

CO_2 Emissions

In 2015, the country's carbon dioxide emissions recorded 586 million tCO_2, increasing by 152.6% compared to 1990. During the same period, China (330.8%) recorded the highest increase in CO_2 emissions, which was followed by India (289.8%) and Korea (152.6%). In the meantime, more advanced countries showed a decrease in CO_2 emissions owing to positive policies to reduce CO_2 emissions and government's encouragement to reduce carbon footprint.



<Table 14.4> CO_2 Emissions of Major Countries (from Fuel Combustion)

(Million tons, %)

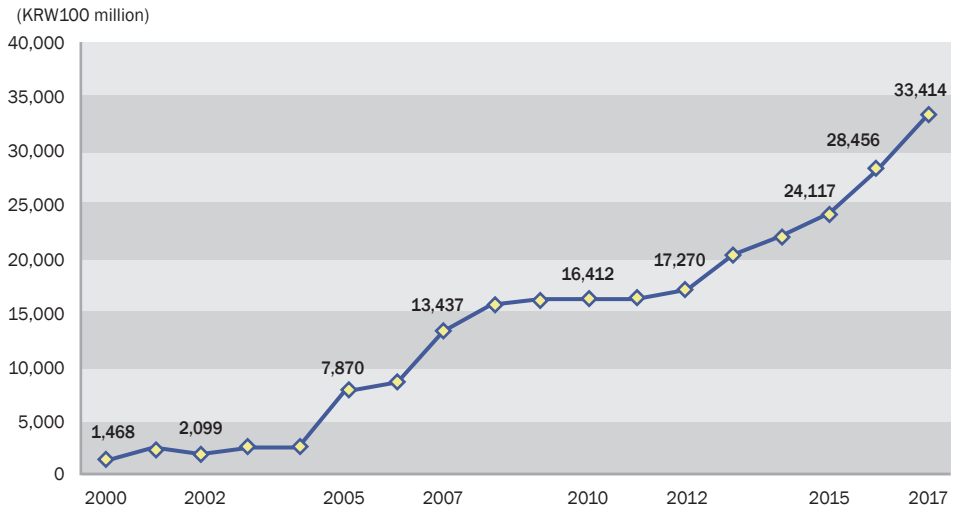
	1990 (A)	2000	2005	2010	2014	2015 (B)	Change (B-A)	Percent change
World	20,509	23,144	27,045	30,434	32,325	32,294	11,785	57.5
China	2,109	3,127	5,399	7,749	9,084	9,085	6,976	330.8
USA	4,803	5,643	5,702	5,347	5,168	4,998	195	4.1
Russia	2,163	1,474	1,482	1,529	1,487	1,469	-694	-32.1
India	530	890	1,080	1,594	2,019	2,066	1,536	289.8
Japan	1,042	1,141	1,178	1,112	1,184	1,142	100	9.6
Germany	940	812	787	759	723	730	-210	-22.3
Canada	420	516	541	528	554	549	129	30.7
UK	549	520	532	477	407	390	-159	-29
Korea	232	432	458	551	568	586	354	152.6
Italy	389	420	456	392	320	331	-58	-14.9
Mexico	257	360	412	440	434	442	185	72
Australia	260	335	372	389	373	381	121	46.5
France	346	365	372	341	284	291	-55	-15.9
Brazil	184	292	311	371	475	451	267	145.1
OECD	11,020	12,458	12,847	12,336	11,848	11,720	700	6.4

Source: IEA (International Energy Agency) <CO_2 Emissions from Fuel Combustion 2017>

Environmentally Friendly Products

In 2017, environmentally friendly products purchased by public agencies amounted to 3,341.4 billion won, which increased by 2.5 times from 1,343.7 billion won in 2007. The purchases of environmentally friendly products showed a continuously upward trend, which was attributable to the obligatory purchases of environmentally friendly products, purchase guidelines and training, and low carbon green growth-related government policy.

<Figure 14.3> Environmentally Friendly Products Purchased by Public Agencies



Source: Ministry of Environment <e-National Indicators>

Endangered Species

The number of species existing in the country is estimated to be about 100,000 based on the comparison with countries that have a land mass and environmental conditions similar to it, i.e. the UK and Japan.

As a result of the country's first literature-based survey carried out in 1997, the number of officially recorded species came to 28,462. This figure increased to 29,916 in 2005. The total number of species existing in Korea remains about a third of that of the UK or Japan. The number of mammals existing in Korea remains about half of Japan and 1.6 times that of the UK In 2005, the Government set up a comprehensive measure for the preservation of bio resources, including a survey of domestically available bio resources and exploration of indigenous species.

As of the end of 2016, the Ministry of Environment took a special care of 246 endangered wild animals and plants and pushed ahead with a program to increase or restore 54 species of wildlife, such as Asiatic black bears, sea lions (a flagship species in Dokdo), Abeliophyllum distichum, etc.

<Table 14.5> Status of Endangered Species (2016)

(Unit: Species)

	Total	Mammals	Birds	Amphibians and reptiles	Fish	Insects	Invertebrate animals	Plants	Seaweed	Higher fungi
South Korea	246	20	61	7	25	22	31	77	2	1
North Korea	183	36	100	14	33	-	-	-	-	-

Note: Data for North Korea refers to 2012.

Source: Ministry of Environment <e-National Indicators>

Education and R&D

Chapter 15

- Enrollment Ratio
- Number of Students per Teacher
- Public Education Expenditures
- R&D Investment Led by the Private Sector
- Researchers Engaged in R&D Activities
- International Comparison of R&D
- Registration of Industrial Property Rights

Enrollment Ratio

In 2017, the elementary school and middle school enrollment ratios stood at 97.3% and 94.2%, respectively. The enrollment ratio recorded 93.7% for high schools and 67.6% for higher education institutions. Whereas, the kindergarten enrollment ratio recorded 50.7%. This low percentage is attributable to the fact that many other private child care centers play a role similar to that of kindergartens.



<Table 15.1> Number of Schools and Enrollment Ratio by School Level

(Unit: Each, %)

	Kindergarten enrollment ratio	Elementary school		Middle school		High school		Higher education institution[1)]	
		Schools	Enrollment ratio	Schools	Enrollment ratio	Schools	Enrollment ratio	Schools	Enrollment ratio
2000	26.2	5,267	97.2	2,731	95.0	1,957	89.4	349	52.5
2002	28.4	5,384	97.6	2,809	95.4	1,995	89.0	352	54.1
2007	36.4	5,756	99.2	3,032	96.0	2,212	91.5	348	70.3
2012	44.2	5,895	98.5	3,162	95.6	2,303	92.2	343	69.0
2015	48.9	5,978	99.1	3,204	95.3	2,344	92.5	339	67.5
2016	49.8	6,001	98.6	3,209	94.3	2,353	93.1	339	67.4
2017	50.7	6,040	97.3	3,213	94.2	2,360	93.7	339	67.6

Note: Higher education institutions include 2-year or 3-year junior colleges, colleges of education, universities and other various schools (college and university courses).

Source: Ministry of Education, Korean Educational Development Institute

Number of Students per Teacher

In 2017, the student-teacher ratio stood at 14.5 students per teacher for elementary schools, 12.7 students for middle schools and 12.4 students for high schools. In 1987, the student-teacher ratio stood at 36.7 students per teacher for elementary schools, 35.5 students for middle schools and 29.4 students for high schools. These figures show that the country's educational environment has improved greatly for the past three decades.



<Table 15.2> Number of Teachers and Number of Students per Teacher

(Unit: 1,000 persons, persons)

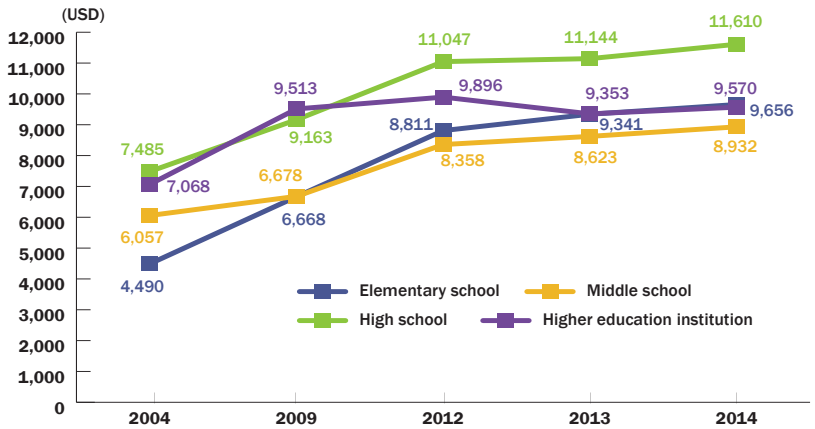
	Elementary school		Middle school		High school	
	Number of teachers	Students per teacher	Number of teachers	Students per teacher	Number of teachers	Students per teacher
1982	124.6	43.9	60.2	43.3	59.2	32.5
1987	130.1	36.7	74.9	35.5	76.0	29.4
1992	138.9	32.8	95.3	24.5	96.3	22.1
1997	138.7	27.3	97.9	22.3	104.4	22.4
2002	147.5	28.1	95.3	19.3	114.3	15.7
2007	167.2	22.9	108.0	19.1	120.2	15.3
2012	181.4	16.3	111.0	16.7	133.0	14.4
2015	182.7	14.9	111.2	14.3	135.0	13.2
2016	183.5	14.6	109.5	13.3	135.4	12.9
2017	184.4	14.5	109.1	12.7	134.8	12.4

Source: Korean Educational Development Institute <Analysis of Educational Statistics>

Public Education Expenditures

In 2014, the public education expenditures per student increased by 2.2 times for elementary schools, 1.5 times for middle schools, 1.6 times for high schools and 1.4 times for universities compared to 2004. The public education expenditures per student showed a steady upward trend with the government's efforts to expand educational finance.

<Figure 15.1> Public Education Expenditures per Student by School Level



Source: OECD <Education at a Glance>

In 2014, the ratio of public education expenditures to GDP stood at 6.3%, rather higher than the OECD average of 5.2%. The country's ratio was slightly higher than the United States (6.2%), yet much higher than France (5.3%), Finland (5.7%) and Japan (4.4%). In particular, compared to the government share (4.6%), the private share (1.7%) was much greater. The country's private share was 2 times higher than the OECD average (0.8%).

<Table 15.3> Ratio of Public Education Expenditure to GDP (2014)

(Unit: %)

	Total	Government share	Private share
OECD average	5.2	4.4	0.8
Korea	6.3	4.6	1.7
USA	6.2	4.2	2.1
UK	6.6	4.8	1.9
Japan	4.4	3.2	1.2
France	5.3	4.8	0.5
Finland	5.7	5.6	0.1
Canada	6.2	4.5	1.6

Source: OECD <OECD Education at a Glance>

R&D Investment Led by the Private Sector

In 2016, the total R&D investment in the science and technology sector stood at 69,406 billion won, a 39.1% increase from 49,890.4 billion won in 2011. The country's R&D investment in 2016 accounted for 4.24% of GDP. Compared to the previous year, the total R&D investment increased by 1.05%. Per capita R&D investment marked 1,354,000 won.

As for the R&D investment burden ratio, the private sector accounted for 76% in 2016, which was remarkably higher than the government (24%). This shows that the private sector plays a dominant role in R&D investment.

<Table 15.4> R&D Investment

(Unit: KRW1 billion, %)

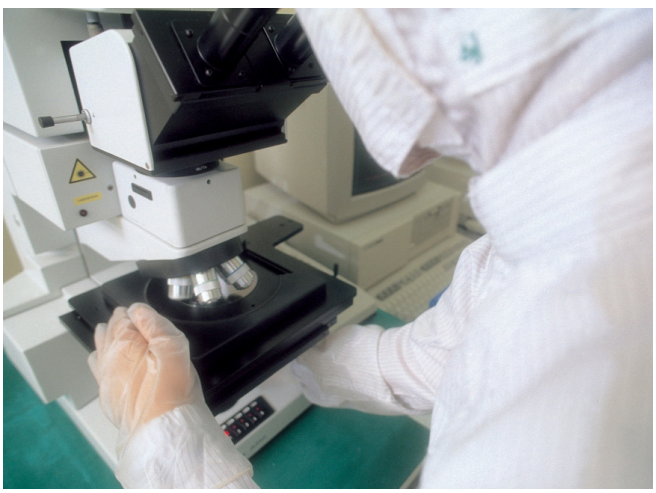
	Gross domestic product (GDP)	R&D investment	R&D ratio to GDP	R&D investment burden ratio	
				Government	Private sector
1991	231,428	4,158	1.80	19	81
1996	460,953	10,878	2.36	26	74
2001	651,415	16,111	2.47	27	73
2006	966,100	27,346	2.83	24	76
2011	1,332,700	49,890	3.74	26	74
2014	1,486,100	63,734	4.29	24	76
2015	1,564,100	65,959	4.22	25	75
2016	1,637,400	69,406	4.24	24	76

Source: Ministry of Science and ICT <Survey on R&D Activities>

Researchers Engaged in R&D Activities

In 2016, the number of researchers totaled 460,769 persons, rising by 6 times compared to 1991. During the same period, the number of researchers per 10,000 population increased by 5.1 times to 89.9 persons. The number of researchers increased by 7,507 persons (1.7%) from 453,262 persons in 2015.

As for researchers engaged in R&D activities by agency, private enterprises occupied the largest share at 69.7%, which was followed by universities (22.4%) and public agencies (7.9%). As for researchers engaged in R&D activities by degree, researchers with a doctoral degree accounted for 21.7% (99,980 persons). Researchers with a master's degree accounted for 28.8% (132,595 persons).



<Table 15.5> Researchers Engaged in R&D Activities

(Unit: Persons)

	Number of researchers		R&D performing agencies			By degree	
		Researchers per 10,000 population	Public agencies	Universities	Enterprises	Doctor	Master
1991	76,252	17.6	10,529	20,680	45,043	18,836	21,310
1996	132,023	29.0	15,503	45,327	71,193	36,106	46,537
2001	178,937	37.8	13,921	53,717	111,299	46,704	57,936
2006	256,598	53.0	16,771	65,923	173,904	60,013	83,380
2011	375,176	75.1	28,800	95,750	250,626	84,674	116,131
2014	437,447	86.2	33,322	99,317	304,808	92,155	129,409
2015	453,262	88.8	35,550	99,870	317,842	98,578	129,264
2016	460,769	89.9	36,280	103,166	321,323	99,980	132,595

Source: Ministry of Science and ICT <Survey on R&D Activities>

International Comparison of R&D

In 2016, the number of researchers stood at 13.3 persons per 1,000 economically active population or 70.5 persons per 10,000 population. This figure was higher than that of the United States, Germany, France or the United Kingdom. The continued increase in the number of researchers per 1,000 economically active population, or 10,000 people, attests to the supplementation of R&D capabilities and an increase in the demand for researchers amid the sophistication of the industrial structure.



<Table 15.6> International Comparison of R&D (based on MSTI) (2016)

	Number of researchers (FTE)	Researchers per 1,000 economically active persons	R&D expenditures per person (USD)	Share of gross domestic expenditures on R&D (%)
Korea	361,291.5	13.3	1,548.5	4.2
USA	1,379,977.2	8.7	1,580.4	2.7
Japan	665,566.0	10.0	1,328.3	3.1
Germany	400,821.0	9.3	1,434.9	2.9
UK	291,416.0	8.8	719.7	1.7
France	277,631.5	9.4	929.7	2.2
Italy	126,674.0	4.9	493.4	1.3
Spain	126,633.0	5.5	430.7	1.2
Turkey	100,158.4	3.3	242.4	0.9
China	1,692,175.8	2.1	326.3	2.1
Russia	428,884.0	5.6	277.0	1.1
Taiwan	147,709.8	12.6	1,519.0	3.2
OECD member countries	4,770,739.0	7.7	985.72	2.3

Note: 1) FTE (Full Time Equivalent)
2) As for the number of researchers and researchers per 1,000 economically active population, data for the United States, France and OECD member countries refers to 2015. Data for the number of researchers refers to the total of OECD member countries, while data for researchers per 1,000 economi cally active population, R&D expenditures per person and the share of gross domestic expenditures on R&D refers to the OECD average.

Source: OECD <Main Science and Technology Indicators 2016>

Registration of Industrial Property Rights

In 2016, the number of industrial property rights registered stood at 286,586 cases, increasing by 10.1 times from 28,398 cases in three decades ago 1986. The number of industrial property rights registered increased by 12,162 cases (4.4%) from 274,424 cases in 2015.

As for the registration of industrial property rights, trademarks occupied the largest share at 41.6%, which was followed by patents (38.0%), designs (19.4%) and utility models (1.0%).

<Table 15.7> Registration of Industrial Property Rights

(Unit: Each, %)

	Registrations	Patents	Percentage	Utility models	Percentage	Designs	Percentage	Trademarks	Percentage
1981	13,999	1,808	12.9	1,691	12.1	3,731	26.7	6,769	48.4
1986	28,398	1,894	6.7	2,758	9.7	8,660	30.5	15,086	53.1
1991	54,659	8,690	15.9	8,370	15.3	13,723	25.1	23,876	43.7
1996	72,363	16,516	22.8	9,191	12.7	20,192	27.9	26,464	36.6
2001	130,850	34,675	26.5	43,842	33.5	18,650	14.3	33,683	25.7
2006	250,557	120,790	48.2	29,736	11.9	34,206	13.7	65,825	26.3
2011	226,909	94,720	41.7	5,853	2.6	55,081	24.3	71,255	31.4
2014	288,542	129,786	45.0	4,955	1.7	54,010	18.7	99,791	34.6
2015	274,424	101,873	37.1	3,253	1.2	54,551	19.9	114,747	41.8
2016	286,586	108,875	38.0	2,854	1.0	55,602	19.4	119,255	41.6

Source: Korean Intellectual Property Office

Exchanges between the two Koreas

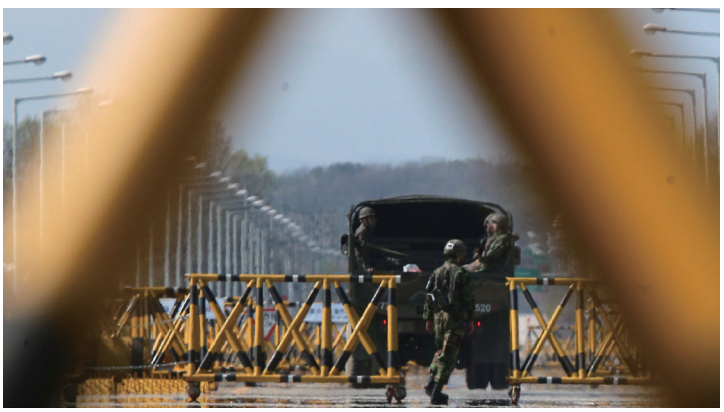
Chapter

16

- Human Exchanges and Trade between the Two Koreas
- Inter-Korean Exchange for Peace, Prosperity and Unification

Human Exchanges and Trade between the Two Koreas

Human exchanges between the two Koreas showed a steady increase during the 1990-2015 period. However, in 2016, Southerners visiting the North decreased by 86,051 persons (85.3%) from 100,838 persons in 2006 to 14,787 persons in 2016.



The trade between the two Koreas jumped by

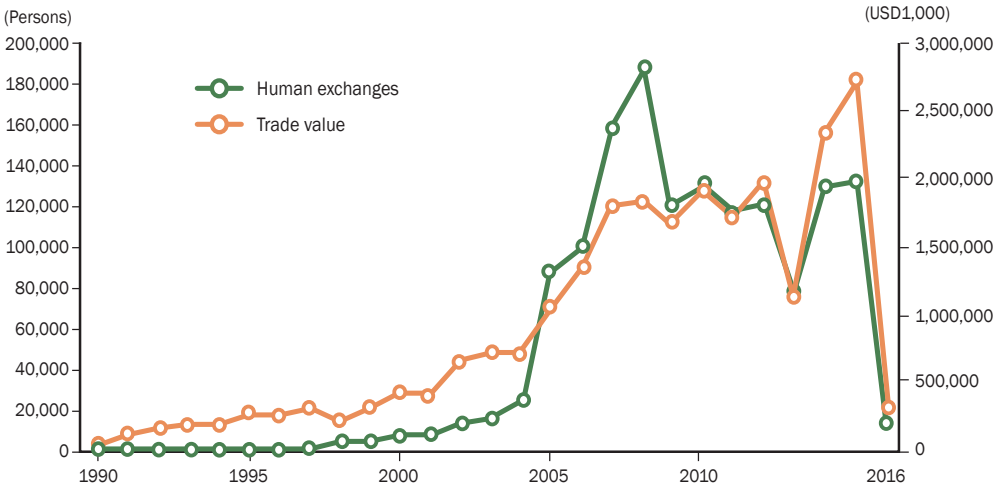
24.4 times from $111 million in 1991 to $2,714 million in 2015. However, the inter-Korea trade showed a sharp decline to $332 million in 2016 due to the shutdown of the Gaeseong Industrial Complex.

<Table 16.1> Human Exchanges and Trade between the two Koreas

	Southerners visiting the North		Northers visiting the South		Bilateral trade		
	Number of visits	Number of visi-tors	Number of visits	Number of visitors	Number of trades	Number of items	Trade value ($1,000)
1991	10	237	3	175	323	57	111,266
1996	28	146	-	-	3,383	258	252,039
2001	698	8,551	5	191	7,754	549	402,957
2006	12,468	100,838	41	870	33,451	757	1,349,739
2011	114,738	116,047	2	14	73,918	702	1,713,855
2014	126,006	129,028	5	366	86,158	718	2,342,639
2015	128,657	132,097	1	4	100,907	742	2,714,476
2016	14,787	14,787	-	-	11,424	489	332,561

Source: Ministry of Unification

<Figure 16.1> Trends in Human Exchanges and Trade between the Two Koreas



Note: Excluding Southerners who visit the North for tourism (e.g. Mt. Geumgang)
Source: Ministry of Unification

However, the two Koreas agreed to continue the operations of the Gaeseong Industrial Complex and Mt. Geumgang Tourism Projects according to the Pyeongyang Declaration, which was announced at the inter-Korean summit in September 2018.

Inter-Korean Exchange for Peace, Prosperity and Unification

On April 27, 2018, the South-North summit was held at the Peace House on the South Korean side of Panmunjom. In the summit, President Moon Jae-in and Kim Jong-un, leader of North Korea announced the Panmunjom Declaration for peace, prosperity and unification of the Korean Peninsula. The two leaders declared to the world that no more war would be on the Korean Peninsula and a new era of peace was opened.



On September 18-20, 2018, President Moon Jae-in visited Pyeongyang and resumed the summit with Kim Jong-un. Korean leaders held hands high atop Baekdusan Mountain and announced a joint declaration in Pyeongyang. The two Koreas decided to link railways of the East Sea and the West Sea as well as roads for mutual exchange.

<Table 16.2> Inter-Korean talks by sector

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Politics	10	5	2	10	5	13	-	-	-	-	-	1	2	3	-	-	17
Military	9	6	5	3	4	11	2	-	1	1	-	-	1	-	-	-	3
Economy	14	17	13	11	8	22	3	4	3	-	-	22	3	1	-	-	3
Humanitarian cooperation	3	7	2	4	3	3	-	2	4	-	-	1	1	1	-	-	1
Social and cultural exchange	2	1	1	6	3	6	1	-	-	-	-	-	1	-	-	-	5
Total	32	36	23	34	23	55	6	6	8	1	-	24	8	5	-	-	29

Source: Ministry of Unification

North Korea shut down its Punggye-ri nuclear test site on May 24, 2018 to demonstrate its commitment to denuclearization. On June 12, the North Korea-United States summit, the fist-ever meeting, which was held in Singapore, reconfirmed the denuclearization of the Korean Peninsula. South Korea follows the UN sanctions against North Korea and at the same time tries to secure peace of the Korean Peninsula through the total denuclearization of North Korea.

The two Koreas agreed not to take military operations, to demilitarize the Joint Security Area and to withdraw Guard Posts within the Demilitarized Zone. In addition, North and South Korea decided to establish a peace zone in Western Sea to prevent accidental clashes and secure safe fishing activities.



Culture and Tourism

Chapter 17

- Workers in the Content Industry
- Sales in the Content Industry
- Exports in the Content Industry
- Establishments in the Tourism Industry
- Workers in the Tourism Industry
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Workers in the Content Industry

In 2017, the number of workers in the content industry was 642,048 persons, which increased by 10,591 persons (1.7%) from 631,457 persons in 2016. Compared to the previous year, the number of workers recorded an increase in most of sub-industries. As for workers by sub-industry, the knowledge information industry showed the highest year-on-year increase of 3,540 persons (4.4%), which was followed by the gaming (3,347 persons, 4.5%) and advertising (1,965 persons, 3.0%) industries. In the meantime, the publishing industry marked a year-on-year decrease of 3,979 persons (-2.2%).

With respect to the proportion of workers by sub-industry, the publishing industry showed the highest proportion of 28.2%, which was followed by the knowledge information (13.1%), music (12.4%) and gaming (12.0%) industries.

<Table 17.1> Workers in the Content Industry

(Unit: Persons, %)

	2013	2014	2015	2016 (A)	2017 (B)	Proportion	Change (B-A)	Percent change
Total	619,438	616,459	621,928	631,457	642,048	100.0	10,591	1.7
Publishing	193,613	191,033	190,277	185,001	181,022	28.2	-3,979	-2.2
Cartoon	10,077	10,066	10,003	10,127	10,359	1.6	232	2.3
Music	77,456	77,637	77,490	78,393	79,852	12.4	1,459	1.9
Gaming	91,893	87,281	80,388	73,993	77,340	12.0	3,347	4.5
Film	30,238	29,646	30,100	28,974	29,641	4.6	667	2.3
Animation	4,502	4,505	4,728	5,142	5,285	0.8	143	2.8
Broadcasting	41,522	41,397	42,378	43,662	44,548	6.9	886	2.0
Advertising	49,114	46,918	52,971	65,072	67,037	10.4	1,965	3.0
Character	27,701	29,039	30,128	33,323	34,657	5.4	1,334	4.0
Knowledge information	71,591	75,142	77,809	80,396	83,936	13.1	3,540	4.4
Content solution	21,731	23,795	25,656	27,374	28,371	4.4	997	3.6

Source: Ministry of Culture, Sports and Tourism, Korea Creative Content Agency <Content Industry Statistics>

Sales in the Content Industry

The sales in the content industry in 2017 increased by 5,023.4 billion won (4.8%) from 105,510.7 billion won in 2016 to 110,534.1 billion won in 2017. Compared to the previous year, sales recorded an increase in most of sub-industries including the gaming (1,345.8 billion won, 12.4%), knowledge information (1,233.4 billion won, 9.2%), broadcasting (621.3 billion won, 3.6%) and character (500.8 billion won, 4.5%) industries. In the meantime, the publishing industry marked a year-on-year decrease of 11.5 billion won (-0.1%).

As for the share of sales in 2017, the publishing industry occupied the largest share at 18.8%, which was followed by the broadcasting (16.2%), advertising (14.1%) and knowledge information (13.3%) industries.

<Table 17.2> Sales in the Content Industry

(Unit: KRW one billion, %)

	2013	2014	2015	2016 (A)	2017 (B)	Proportion	Change (B-A)	Percent change
Total	91,209.6	94,947.2	100,486.3	105,510.7	110,534.1	100.0	5,023.4	4.8
Publishing	20,799.8	20,586.8	20,509.8	20,765.9	20,754.4	18.8	-11.5	-0.1
Cartoon	797.6	854.8	919.4	976.3	1,006.1	0.9	29.8	3.1
Music	4,277.2	4,606.9	4,975.2	5,308.2	5,738.0	5.2	429.8	8.1
Gaming	9,719.7	9,970.6	10,722.3	10,894.5	12,240.3	11.1	1,345.8	12.4
Film	4,664.7	4,565.1	5,112.2	5,256.1	5,488.8	5.0	232.7	4.4
Animation	520.5	560.2	610.2	677.0	700.1	0.6	23.1	3.4
Broadcasting	14,940.9	15,774.6	16,463.0	17,331.1	17,952.4	16.2	621.3	3.6
Advertising	13,356.4	13,737.0	14,439.9	15,189.7	15,591.9	14.1	402.2	2.6
Character	8,306.8	9,052.7	10,080.7	11,066.2	11,567.0	10.5	500.8	4.5
Knowledge information	10,388.2	11,343.6	12,342.1	13,462.3	14,695.7	13.3	1,233.4	9.2
Content solution	3,437.8	3,894.7	4,311.6	4,583.5	4,799.4	4.3	215.9	4.7

Source: Ministry of Culture, Sports and Tourism, Korea Creative Content Agency <Content Industry Statistics>

Exports in the Content Industry

The export amount in the content industry in 2017 increased by 14.7% from USD6,008 million in 2016 to USD6,892 million in 2017. The export amount of the gaming, broadcasting and knowledge information industries rose by USD629 million (19.2%), USD82 million (20.0%) and USD64 million (11.2%), respectively. Whereas, the export amount of the film industry fell by USD3 million (-7.2%).

As for the share of export amount in 2017, the gaming industry occupied the largest share at 56.7%, which was followed by the character (9.4%), knowledge information (9.1%) and broadcasting (7.2%) industries.

<Table 17.3> Exports in the Content Industry

(Unit: USD1,000, %)

	2013	2014	2015	2016 (A)	2017 (B)	Proportion	Change (B-A)	Percent change
Total	4,923,100	5,273,519	5,661,368	6,008,063	6,892,203	100.0	884,140	14.7
Publishing	291,863	247,268	222,736	187,388	220,951	3.2	33,563	17.9
Cartoon	20,982	25,562	29,354	32,482	37,683	0.5	5,201	16
Music	277,328	335,650	381,023	442,566	455,386	6.6	12,820	2.9
Gaming	2,715,400	2,973,834	3,214,627	3,277,346	3,905,851	56.7	628,505	19.2
Film	37,071	26,380	29,374	43,894	40,726	0.6	-3,168	-7.2
Animation	109,845	115,652	126,570	135,622	145,802	2.1	10,180	7.5
Broadcasting	309,399	336,019	320,434	411,212	493,390	7.2	82,178	20.0
Advertising	102,881	76,407	94,508	109,804	116,683	1.7	6,879	6.3
Character	446,219	489,234	551,456	612,842	648,881	9.4	36,039	5.9
Knowledge information	456,911	479,653	515,703	566,412	629,928	9.1	63,516	11.2
Content solution	155,201	167,860	175,583	188,495	196,921	2.9	8,426	4.5

Source: Ministry of Culture, Sports and Tourism, Korea Creative Content Agency <Content Industry Statistics>

Establishments in the Tourism Industry

The number of tourism establishments was 27,696 in 2016, rising by 3,822 (16.0%) from 23,874 in 2015. Travel business occupied the largest share at 60.0% of the total tourism establishments, which was followed by tourist convenience facility business (13.4%) and tourist-use facility business (11.4%) and tourist accommodation business (6.2%).



<Table 17.4> Establishments in the Tourism Industry

(Unit: Each, %)

	2013	2014	2015 (A)	2016 (B)	Proportion	Change (B-A)	Percent change
Total	18,441	20,769	23,874	27,696	100.0	3,822	16.0
Travel business	11,722	12,854	14,607	16,605	60.0	1,998	13.7
Tourist accommodation business	1,074	1,278	1,503	1,716	6.2	213	14.2
Tourist-use facility business	385	336	1,213	3,168	11.4	1,955	161.2
International conference business	508	677	619	700	2.5	81	13.1
Casino business	16	17	17	17	0.1	0	0.0
Amusement facility business	358	593	1,060	1,782	6.4	722	68.1
Tourist convenience facility business	4,378	5,014	4,855	3,708	13.4	-1,147	-23.6

Source: Ministry of Culture, Sports and Tourism <Census on Basic Characteristics of Tourism Establishments>

Workers in the Tourism Industry

The number of workers in the tourism industry was 261,978 persons in 2016, rising by 26,374 persons (11.2%) from 235,604 persons in 2015. Compared to the previous year, workers showed an increase in travel business (13,863 persons, 16.4%), amusement facility business (6,459 persons, 37.5%) and tourist-use facility business (6,356 persons, 57.4%). Whereas, workers showed a decrease in international conference business (2,535 persons, -16.8%) and tourist convenience facility business (792 persons, -2.8%).

Travel business showed the highest share at 37.6% of the total workers in the tourism industry. This figure was followed by tourist accommodation business (28.1%), tourist convenience facility business (10.3%) and tourist-use facility business (6.6%).

<Table 17.5> Workers in the Tourism Industry

(Unit: Persons, %)

	2013	2014	2015 (A)	2016 (B)	Proportion	Change (B-A)	Percent change
Total	227,135	230,334	235,604	261,978	100.0	26,374	11.2
Travel business	70,574	69,400	84,558	98,421	37.6	13,863	16.4
Tourist accommodation business	63,899	67,465	70,305	73,631	28.1	3,326	4.7
Tourist-use facility business	13,528	10,671	11,065	17,421	6.6	6,356	57.4
International conference business	14,092	17,330	15,131	12,596	4.8	-2,535	-16.8
Casino business	8,452	8,931	9,418	9,115	3.5	-303	-3.2
Amusement facility business	14,441	17,031	17,224	23,683	9.0	6,459	37.5
Tourist convenience facility business	42,150	39,506	27,902	27,110	10.3	-792	-2.8

Source: Ministry of Culture, Sports and Tourism <Census on Basic Characteristics of Tourism Establishments>

Sales in the Tourism Industry

In 2016, sales in the tourism industry totaled 25,036 billion won, which increased by 2,677.8 billion won (12.0%) from 22,358.2 billion won in 2015. Sales showed an increase in all tourism industries including travel business (1,170.1 billion won, 18.1%), tourist convenience facility business (436 billion won, 38.5%) and tourist accommodation business (408.7 billion won, 5.2%).

Tourist accommodation business occupied the largest share at 33.0% of the total sales in the tourism industry, which was followed by travel business (30.5%), casino business (11.6%) and amusement facility business (7.7%).

<Table 17.6> Sales in the Tourism Industry

(Unit: KRW one billion, %)

	2013	2014	2015 (A)	2016 (B)	Proportion	Change (B-A)	Percent change
Total	23,289.0	22,567.2	22,358.2	25,036.0	100.0	2,677.8	12.0
Travel business	5,798.8	5,322.0	6,472.6	7,642.7	30.5	1,170.1	18.1
Tourist accommodation business	7,085.5	7,930.6	7,859.6	8,268.3	33.0	408.7	5.2
Tourist-use facility business	2,166.8	814.1	789.1	885.2	3.5	96.1	12.2
International conference business	2,408.3	2,442.4	1,760.3	1,837.7	7.3	77.4	4.4
Casino business	2,631.0	2,799.2	2,804.4	2,903.3	11.6	98.9	3.5
Amusement facility business	1,324.1	1,498.2	1,538.7	1,929.2	7.7	390.5	25.4
Tourist convenience facility business	1,874.4	1,760.7	1,133.6	1,569.6	6.3	436.0	38.5

Source: Ministry of Culture, Sports and Tourism <Census on Basic Characteristics of Tourism Establishments>

Tourism Balance

In 2017, revenue in the tourism industry recorded USD13,324 million, which increased by 6 times from USD2,213 million in 1987. Expenditure in the tourism industry recorded USD27,073 million in 2017, which increased by 43.8 times from USD618 million in 1987.

Compared to 2016, in the tourism industry, revenue fell by USD3,876 million (-22.5%), while expenditure grew by USD3,384 million (14.3%).

In 2017, tourism balance recorded a deficit of USD13,749 million. Compared to 2016, the deficit showed a sharp increase of USD7,260 million (111.9%).



In 2017, average revenue per capita marked USD999,000, which rose by USD1,000 (0.1%) from USD998,000 in 2016. Average expenditure per capita marked USD1,022,000 in 2017, which declined by USD36,000 (-3.4%) from USD1,058,000 in 2016.

<Table 17.7> Trends in Tourism Balance

(Unit: USD1,000)

	Revenue		Expenditure		Tourism account balance
		AEPC*		AEPC*	
1977	370,030	390	102,714	490	267,316
1987	2,212,500	1,180	617,600	1,210	1,594,900
1992	2,689,500	832	3,212,500	1,572	-523,000
1997	4,710,200	1,205	5,829,800	1,283	-1,119,600
2002	5,918,800	1,107	9,037,900	1,269	-3,119,100
2007	6,071,400	942	16,931,500	1,271	-10,860,100
2012	13,356,700	1,199	16,494,500	1,201	-3,137,800
2015	15,091,700	1,141	21,528,000	1,115	-6,436,300
2016	17,199,700	998	23,688,600	1,058	-6,488,900
2017	13,323,700	999	27,072,900	1,022	-13,749,200

Note: AEPC: Average Expenditure Per Capita
Source: Korea Tourism Organization