



Chapter 1

Introduction

1. The Land and Population
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Chapter 1. Introduction

Korea is a country situated on the Korean Peninsula at the eastern end of the Asian continent. It has a history of about 5,000 years. In the early 20th century the Korean Peninsula had gone through colonial rule by imperialist Japan. After World War II, Korea experienced a division by the military stationing of the United States and the Soviet Union, and the Korean War caused the division of the peninsula into South Korea and North Korea. In the south, the Republic of Korea was established in 1948, and in 2015 the country observed its 70th Independence Day.

Korea is located on the mid-latitude of the globe. It has a temperate climate. Its four seasons are distinct as it has a continental climate with a large climate range with seasonal winds blowing from the Asian continent and broad seasonal differences of precipitation. In the summer, temperature and humidity are high. And, in the winter, the country is cold and dry. Although the country is small in size, it is extensively mountainous. And it has the geographical features of a peninsula in that the three sides of the peninsula are coastlines. Due to these characteristics, there are rather big changes in the weather in the four areas of the east, west, south, and the north.

With the backdrop of Asia's monsoon climate of high temperature and humidity in the summer, rice farming was developed early. Historically, the 'agriculture first' principle, which considered farming as the foundation of the country, had prevailed. Because there had been little agricultural land while there were a lot of farmers, the country could hardly escape from small-scale

farming. In the modern times, the number of farmers leaving agriculture rose during the industrialization process, and agricultural restructuring is currently underway. To cope with the globalization era of the 21st century, the country is pursuing agricultural policies and systems in consideration of its distinct characteristics while complying with international norms.

Before taking up the main subject, we will provide an overview of Korean agriculture with respect to the country's territory, population, economic development and changes in agriculture and agricultural policy.

1. The Land and Population

Area and Topography

The Korean Peninsula is located at 33-43 degrees north latitude and 124-132 degrees east longitude. The Korean Peninsula stretches from north to south and there are about 3,400 islands. On the northern border, there are Amnok and Tumen rivers. On the eastern side, there is the East Sea and, to the south, the South Sea. To the west, there is the Yellow Sea lying between mainland China and the Korean Peninsula.

The total area of the Korean Peninsula is 223,000km², with South Korea occupying 100,284km² of the land. Farmland makes up 17.1% of the country, forests 63.5% and others 19.4%. During the past 50 years, the total land area increased by 6%, whereas farmland has declined 24%. The decline in the forest area has been stagnant recently.

The total length of coastline of South and North Korea combined is 14,963 km. Of this, the coastline of land excluding islands reaches

Figure 1-1 South Korea in the Map of Northeast Asia



7,753 km. The elevation of the land rises from west to the east and thus high mountains are found mostly on the eastern side of the peninsula. Rivers flow to the west and south along mountain slopes. At the mid- and lower streams of rivers, there are relatively wide plain regions.

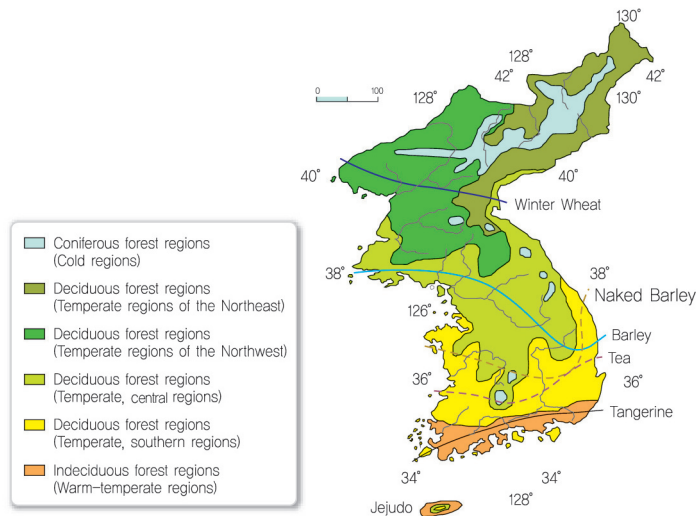
Climate

Geographically positioned in the mid-latitudes of the northern hemisphere, Korea has a temperate climate. The four seasons of spring, summer, autumn, and winter are distinct. Situated between the Asian continent and the Pacific Ocean, the country has a

continental climate that is influenced very much by seasonal winds. As a result, and unlike the seasonal changes of West European countries and other mid-latitude countries, the Korean winter is comparatively cold and the summer is very hot. In the spring and autumn, there are many clear and dry days due to migratory anticyclones. The average annual temperature ranges from 6°C to 16°C and the regional differences in average annual temperature are rather dramatic. If the mountainous areas are excluded, the distribution ranges from 10°C to 16°C. The monthly average temperature of August, which is the hottest month of the year, is 25°C. And the monthly average temperature of January, which is the coldest month of the year, is -0.7°C.

The annual amount of precipitation is 1,500mm in the southern region and 1,300mm in the central region. By season, about 50% to 60% of annual precipitation falls in the summer and 5% to 10% falls in the winter. Northwesterly seasonal winds are generally stronger than the southwesterly winds and especially from December to February, northwesterly winds are strong. The months of September and October are in the fall season when southwesterly winds change into northwesterly winds. Normally winds are weak and the effect of land and sea breezes becomes clear in coastal regions. Humidity is the highest in July. The humidity nationwide ranges from 80% to 90%. The months with the lowest humidity are January and April during which humidity ranges from about 30% to 50%. September and October are pleasant with humidity around 75%.

The torrential rain during the rainy season starts from the south coastal region in late June, gradually reaches the central region, and continues for about 30 days. Occasionally the fall rainy season

Figure 1-2 The Climate and Distribution of Vegetation in Korea

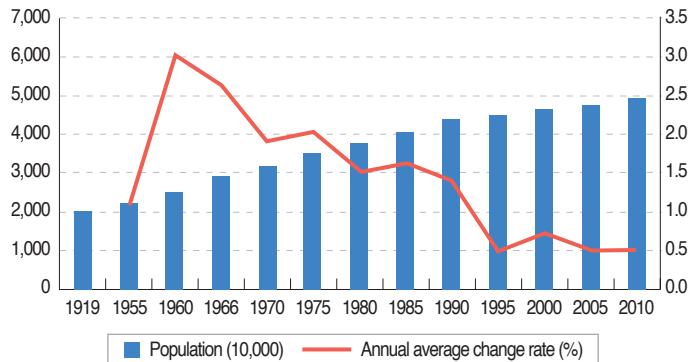
comes in early September. The typhoons from outside of Korea are mainly created between June and October, and about two or three of them directly or indirectly affect Korea.

Population

In 2015, the population of South Korea is 50.62 million, or 0.7% of the world's 7.32 billion, ranking 27th in the world. South Korea's population has multiplied 2.3 times during the 60 years since the country's founding in 1948. The population growth rate had gradually declined from about 2% in 1970 to 0.5% after 1990. In terms of population density, Korea ranked third in the world in 2010 with a population density of 486 persons/km².

According to the population census of 2010, those aged less than 14 (children) accounted for 16.2%, those aged between 15

Figure 1-3 The Population Trends of South Korea



Source: Statistics Korea.

and 64 (youths and the middle-aged) accounted for 72.5%, and those aged 65 or older (the elderly) accounted for 11.3%. In terms of population structure, one of the main characteristics that have appeared recently is the aging population. The aging index (the elder-child ratio) has steadily been rising from 6.9% in 1960 to 69.7% in 2010. During the same period, the cost of supporting the old (old population/youth and middle-aged population) has increased from 5.3% to 15.6%. The difference between the aging indices of cities and rural areas has been widening greatly. In 2010, the aging indices of cities (*Dong*) and rural areas (*Eup* and *Myeon*) were 55.7% and 145.7%, respectively.

The farm population in 2014 was 2.75 million, which accounted for 5.5% of the total population. And the number of farm households was 1.12 million. Although the number of farm households had increased to 2.6 million in the latter half of the 1960s, it started to decrease afterwards and became quickly reduced. The main causes were the industrialization and urbanization that had taken

place in the process of rapid economic development. The ratio of farm household population has gradually been shifting to that of advanced countries, such as the United States, Japan, France, Germany, and Australia, where the ratio of farm households stands between 2% and 4%.

The economically active population accounted for 52.6% of the total population in 2014. The number of people working in agriculture and forestry was 1.45 million, or 5.5% of the total population. The number and percentage of those working in agriculture and forestry have been falling.

2. The National Economy and Agriculture

An Overview of Korean Economy

The modern era of Korea began in a depressing way. In the beginning of the 20th century, when Korea had sought a change from a feudalistic system to a western-style economic system, the country had to cry out loud about the colonial rule of the imperialist Japan. Afterward, the country had to experience the Korean War that began in 1950. The country had to rebuild the economic foundation that had been ruined.

Korea pursued economic growth in the 1960s led by the government and established the Economic Planning Board in 1961. The government established the agency to formulate five-year economic development plans for advancement of industrial structure and increase in exports. It increased domestic industrial investment to support economic development and improved export financing and the export supporting system to increase Korean exports.

The high growth in the 1960s and 70s supported both the government's intervention in the market and the leadership role in efficiently distributing resources. There had been much room for the government to play a positive role during the initial phase of economic development, when market competition had not been intensive. However, the government's excessive intervention led to inefficient distribution of resources and economic instability.

At the end of the 1970s, the Korean economy did not show the ripple effects that should have followed the heavy chemical industry. Instead, the second oil shock and the death of former President Park Chunghee induced the Korean economy to go through a crisis of

unstable commodity price and negative growth. Taking this crisis experienced during the high growth period as an opportunity, the government had emphasized economic stability, financial market reform, and industrial restructuring. Thanks to the successful implementation of such policy, the increase rate of commodity prices was lowered from 21% in 1981 to 2% in 1984, and the economic growth rate rose from 6% to 9%.

From the mid-1980s, the so-called era of “triple lows” began with a drastic fall in the value of US dollar, oil prices, and international interest rates. In this environment, the Korean economy enjoyed a prosperous time by seizing the ‘three rabbits’ of large-scale current account surplus, high levels of growth, and stabilization of commodity prices for the first time since the founding of the country. Nevertheless, the demand for economic democratization by social echelons who had been alienated during the economic development started to grow fierce. In 1987, the government began to emphasize the importance of fairness and welfare together with efficiency and growth. Due to the increasingly vocal demands by the Korean society for democracy, large-scale labor-management disputes occurred frequently and wages rose sharply. In 1990, the current account balance turned to a deficit.

In the presidential election of 1992, a civilian government took power. In order to differentiate itself from the military regime of the past, the civilian government announced ‘The Five-Year Plan for a New Economy,’ and had emphasized participation and creativity of citizens instead of governmental control. It closed down the Economic Planning Board, which had been a symbol of economic development, and pursued market economy through economic

reforms and liberalization. Korea became a member of the World Trade Organization (WTO) and the Organization for Economic Cooperation and Development (OECD). However, despite such efforts, Korea had gone through a financial crisis at the end of 1997. Consequently, it requested a financial bailout from the International Monetary Fund (IMF), and the foundation of Korea's high levels of economic growth was fundamentally changed.

A new government was installed in 1998 and it sought to restructure the overall society aggressively. Thanks to such effort by the new government, the Korean economy quickly escaped the shock of the financial crisis. In August 2001, Korea completely came out of the IMF's bailout program. Unlike the situation in which Korea's foreign currency reserves were nearly exhausted 17 years ago, the amount of foreign currency reserves in 2015 rose to be the world's sixth largest.

After the financial crisis, the Korean government abolished the economic management practice of the industrialization period and followed a path of simultaneously achieving market competition, economic democratization, growth, and distribution. With the world economy in recession recently, the Korean economy, too, has slowed down. As a result, recovery of growth potential and creation of employment have arisen as policy tasks.

According to the World Bank's 'World Development Indicators 2015,' the nominal gross domestic product (GDP) of Korea in 2014 was approximately US\$1 trillion 410.4 billion. It ranked 13th, overtaking Spain. Furthermore, Korea's average GDP growth rate in 2009-14 was approximately 3.7%. Korea's per capita GNI in 2013 was US\$25,870, 33rd among 186 countries surveyed.

Table 1-1 Main Indices of National Accounts

Year	Nominal GDP (US\$1 billion)	per capita GNI (US\$)	Growth Rates (%)		The exchange rate against the US dollar (won/US dollar)
			Gross Domestic Product (GDP)	Gross National Income (GNI)	
1970	8.1	254	-	-	311
1980	63.8	1,645	-1.5	-4.2	607
1990	263.7	6,147	9.2	8.9	708
2000	511.8	10,841	8.5	5.5	1,131
2005	791.9	16,413	4.2	0.7	1,024
2010	1,265.3	22,170	6.5	7.0	1,156
2014	1,410.0	28,180	3.3	3.8	1,053

Source: The Bank of Korea, National Accounts.

Economic Development and Role of Agriculture

Korea has walked the path of modernization and industrialization in the past 60 years, and it has grown to become an economic power that ranks approximately 10th in the world. When we look at the economic structure of Korea, we can briefly describe it as having grown through primary, secondary, and tertiary industries. Although there were not enough statistics available at the time of the country's establishment, the working population in the primary industry, which includes agriculture, must have reached at least 80 to 90%. However, the population of workers in agriculture, forestry, and fisheries in 2014 was about 1.45 million, which was merely about 5.5% of the total economically active population.

The reduction in agricultural workforce resulting from economic advancement is a common phenomenon among advanced countries. Nonetheless, Korea had experienced changes in its industrial structure at a speed that had been two to five times quicker than

those of advanced countries. For example, the advanced countries of Europe and America had gone through an industrialization process that lasted about 100 years. However, in Korea, the transformation of industrial structure had taken place over merely 30 years. The average time needed for the ratio of agricultural GDP to total GDP to be reduced from 40% to 5% was as follows: 120 years for the 5 European countries of Great Britain, Germany, France, the Netherlands, and Denmark; 95 years for the United States; 75 years for Japan; and 30 years for Korea.

The Korean economy is often said to be on the level of advanced countries, but its agriculture is in fact on the level of developing countries. If the relative ratio of agriculture in OECD countries is considered, which was about 1% in 2014, Korea's figure shows a level that is about two times higher. And the same is true for the relative ratio of number of farmers to total population, which was about 2 to 3 percent in OECD countries.

The ratio of agricultural GDP to total GDP decreased over time, from 25.4% in 1970 to 13.7% in 1980, 7.5% in 1990, and 2.0% in 2014. With respect to agricultural workforce, the ratio of number of farmers to total population decreased from 49.5% in 1970 to 32.4% in 1980, 17.1% in 1990, 10.2% in 2000, and to 5.7% in 2014. In this way, the agricultural GDP ratio was reduced quickly, whereas the ratio of those employed in the agricultural sector was reduced relatively slowly. For that reason, overemployment became apparent in the agricultural sector.

Such changes in industrial structure can be considered a decline of agriculture. But these are industrial changes in a comparative sense, and there is no need to stretch the meaning to indicate a

Table 1-2 The Changes in the National Economic Status of Agriculture

Unit: %

Classification	The relative ratios in GDP				The relative ratios of employment		
	Agriculture, forestry, and fisheries	Agriculture	Forestry	Fisheries	Agriculture, forestry, and fisheries	Agriculture and forestry	Fisheries
1970	29.1	25.4	2.0	1.7	50.4	49.5	0.9
1980	16.0	13.7	1.1	1.2	34.0	32.4	1.6
1990	8.7	7.5	0.4	0.8	17.9	17.1	0.8
2000	4.4	3.7	0.2	0.4	10.6	10.2	0.4
2005	3.1	2.7	0.1	0.3	7.9	7.6	0.3
2010	2.5	2.0	0.2	0.3	6.6	-	-
2014	2.3	2.0	0.1	0.2	5.7	-	-

Note: Since 2009, workers in agriculture and forestry and those in fisheries have not been classified.
Source: The Bank of Korea, National Accounts.

definite reduction in industrial scale.

In most countries, the dynamic force for industrialization was found in agriculture during the initial phase of economic development regardless of type of national system. The ground for capital formation was laid through the dissolution of pre-modern land ownership, which had been the production base for agriculture. And the high levels of growth had been achieved through the supply of cheap labor from rural villages. Such cases are the empirical facts experienced by a number of countries, including the U.K., which had gone through the Industrial Revolution in earlier days, and Japan that had emerged as an industrially advanced country in the 20th century.

The roles of agriculture in the Korean economy can be summarized as follows:

First, agriculture plays the role of producing and supplying

food. The fact that Korea achieved self-sufficiency in rice production in 1978 through the Green Revolution was a big achievement considering that the staple grain of Korea is rice. Although its self-sufficiency rate of food has continued to fall since then, stable supply of food has been firmly established as an important role to be played by agriculture.

Second, agriculture contributes to the development of other industries. It brought forth the advancement of commerce and transportation through the exchange of agricultural products with other daily necessities, and industrial crops and livestock products have been supplied as industrial raw materials, thus forming a part of the manufacturing industry. The agricultural materials industry, which is related with the production of fertilizer, agricultural chemicals, machinery, etc., has been developed as an upstream industry, while the food industry has been developed as a downstream industry where agricultural produce is processed.

Third, agriculture plays the role of preserving the natural environment and the national territory. Agriculture is basically an environment-friendly industry. In the modern times, agriculture has caused some pollution problems with the use of synthetic chemicals. Even so, there are more positive functions in agriculture in terms of environmental preservation. Green plants refine air, and the green space has been providing amenities. Recently, non-economic functions of agriculture, such as flood control, water resource development, air purification, and land preservation, have been emphasized. Evidence has also been found repeatedly that the economic values of such “public good” functions are much greater than the amount of agricultural production.

Fourth, agriculture promotes the preservation of genetic resources. At present, there are over one million species living on Earth. Such a diversity of biological species plays an important role both in maintaining the harmony of nature and in achieving the serenity of the natural world. In the case of Korea, in particular, it can be said that the country with its four distinct seasons is blessed by heaven. The country has the world's sixth largest genetic resources of plants. The potential of advancing bioindustries by utilizing agricultural genetic resources is very high.

Fifth, agriculture promotes economic and social stability. Food is an indispensable element for humans to live. Therefore, a decline of agriculture will soon bring about a decline of related industries and thus make the nation's economic and social life unstable. In addition, agriculture maintains the population of rural villages through the creation of income by employing their labor force. When rural communities collapse, urban problems will be more serious accordingly, and it is a matter of course that the traditional culture of rural villages disappears. The natural scenery, which provides rest to citizens, can only be maintained through the continued existence of agriculture, forestry, and fisheries.

3. Transition of Agriculture and Main Policy Direction

Korea was freed from the Japanese colonial rule in 1945 when the Second World War ended. However, the conflict in ideologies between capitalism and communism resulted in the two separate governments in the north and the south. Korea was in the forefront of the global Cold War while it had the destructive three-year war. Since then, North and South Korea began to follow separate paths in the political, economic, and social system, and the division of Korea became permanent. In the following section, an overview of the agricultural policies of the Republic of Korea will be provided.

Korea's agricultural policies have changed substantially over the course of history.

Korea was a largely agrarian society during the pre-industrialization period (from the establishment of the government to the 1950s). Agriculture was supposed to provide food and jobs to the Korean people, but due to the low agricultural productivity, Korea had to receive food aid from the United States. During the industrialization period (up to the mid-1980s), the agricultural sector provided inexpensive labor to the manufacturing industry, helping it to thrive. During that period, food self-sufficiency was achieved through the Green Revolution, and the Saemaul Movement was launched to make progress in rural development.

The late 1980s and subsequent years are characterized as globalization and agricultural policy reforms. The Korean economy became integrated into a global trend of trade liberalization, and the nation's agricultural sector had to open the imports market in accordance with the international rules. The Korean government

has pushed through a number of agricultural policy reforms, reorganizing related laws and programs in order to make them more market-oriented.

Agricultural Policies of the Pre-industrial Times (Until the 1950s)

Establishment of Owner Farming System through Farmland Reforms

The Korean economy was centered on agriculture when it was liberated from the Japanese colonial rule in 1945. South Korea was a typical agrarian society with more than 80% of the population engaging in farming.

At that time, Korea's agricultural structure was based on large-scale landlord-tenant farming and small-scale farming by petty farmers and the two-thirds of South Korean farmland were tenanted. About 85% of farm households engaged in the tenant farming, whether it was large or small scale, suffering from difficulties in managing their own small farmland of even less than 1 hectare due to low productivity and high farm rents, and failed to produce food enough for home-use.

One of the most urgent issues to the newly established government was carrying out farmland reforms, which could lead to economic stability of the farmers who were the largest demographic group of the time, and increase the agricultural productivity.

The first Constitution of the Republic of Korea (1948) states "Farmland shall be distributed to farmers," laying the base to implement farmland reforms. The Farmland Reform Act was proclaimed in June of 1949 and the farmland reforms began in

earnest from early 1950. Farmland not cultivated by its owner and farms over 3 hectares were subject to the compulsory purchase by the government and distributed at a cost to tenant farmers and small farmers.

About 585,000 hectares of land were distributed in aggregate, and if the 713,000 hectares of farmland arbitrarily sold by landowners are included, ownership of 60% of South Korea's farmland was transferred to farmers through the farmland reform.

The farmland reform has its significance in the establishment of the independent owner farming system, which put in place the minimum safety net for the rural economy. Education for children of farmers was translated into the supplying of brilliant labor, which served as the engine of the economic development of Korea. The reform was meaningful in that one of the barriers to the development of capitalism in Korea was removed by eliminating the landowning classes.

Food Shortages and the Grain Aid through PL 480

Korea's agricultural productivity in the 1950s was extremely low. In particular, productivity of food crops was a fourth to third of today's, and productivity of rice, the biggest crop in quantity, was around 160 kg per 10 ares only. The low productivity was mainly due to lack of technology, infrastructure, and factors of production such as fertilizers, pesticides, and farming tools. Worse yet, the Korean War that lasted for three years exacerbated the food shortage issue. The focus of the agricultural policies, therefore, was on the securing of grains controlled by the government, and on addressing the food shortage issues. The government introduced

and implemented the purchase system for grains and programs to increase food production domestically, while it continued to receive surplus agricultural commodities from the U.S. in the form of food aid. A large amount of American grains arrived in Korea between 1956 and 1964 under the Agricultural Trade Development and Assistant Act — or Public Law (P.L.) — of the United States.

Though the agricultural products from the U.S. aid were of great help to address the food shortage in Korea of the time, there are negative reviews on the aid as it brought down the prices of grains and reduced agricultural income, resulting in the depression of the long-term grain production in Korea. In particular, the production base of wheat, which had weak price competitiveness, was nearly collapsed, thus causing Korea's continued dependence on imports of wheat after the American aid ended.

Agricultural Policies during the Industrialization Period

Agricultural Policies to Expand Production of Staple Grains

The military regime that assumed power through the coup in 1961 attempted to justify its seizure of power and to win popularity through economic development. However, the regime had the imminent issues of solving the livelihood of the public. The government injected public funds in 1961 to remove parts of the private loans that had plagued farmers with high interest rates of over 50%, and established, in the same year, the “Price Maintenance of Agricultural Products Act” aimed at covering the production cost of agricultural products for farmers.

The National Agricultural Cooperative Federation, into which the Agricultural Bank and agricultural cooperatives were integrated, was

set up in August 1961 in order to direct various projects for financial services, economic development, and training in the agricultural sector. This integration of the Agricultural Bank and cooperatives served as an opportunity for many agricultural projects and agro-finance to thrive, but some say that agricultural cooperatives were reduced to another non-autonomous organizations controlled by the central government. The government established the Rural Development Administration in 1962, and reorganized organizations of provinces, cities, and counties to prepare an agricultural education system that would provide guidance in farming and help to improve life of farmers.

The “First 5-Year Economic Development Plan,” which began in 1962, was the first comprehensive economic development plan in the Korean history. Since this plan was initiated, the nation’s economy grew exponentially for the next 30 years, achieving the nation’s modernization.

To achieve food self-sufficiency through greater productivity of agricultural products was one of the main goals of the agricultural sector in the First 5-year Economic Development Plan. Various projects under this goal included reclamation to expand farmland; readjustment of arable land; irrigation system improvement; and research and education to increase agricultural productivity.

Under the “Second 5-Year Economic Development Plan” that began in 1967, the government implemented a massive agricultural development project to increase food production and various price policies were carried out including the high-price policy for rice and the dual price system for barley. Meanwhile, the parallel development policy for agriculture and industry, in which regional

agricultural products were processed and sold to markets in and out of Korea, was prepared and implemented in an attempt to achieve advancement of both agricultural and industrial sectors, but it was ended with limited success.

The national economy rapidly grew by an average of 10% while the First and Second 5-year Economic Development Plans were implemented. However, the gap between urban and rural areas and between agriculture and industry was widened due to unbalanced growth of industrial sectors, resulting in the flight of rural people from the agricultural sector in droves. The rural population started to decrease in 1967 when it peaked with 16 million (53% of the total population).

Green Revolution and Saemaul Movement

As the urban/rural gap was ever-widening, the goals of the economic development were shifted to achieve balance between growth and stability. Utilizing the economic power accumulated during the past years, the government prepared a variety of policies to promote balance among various sectors, but to increase food production remained the most important goal. To this end, the government implemented a number of large-scale comprehensive projects for agricultural development, while it engaged in the development and distribution of “*tongil* (unification in Korean) rice,” a high-yield rice variety. The government also carried through the mechanization of farming and introduced the farm price-support system.

The “*tongil* rice,” developed through a partnership with the International Rice Research Institute (IRRI) in 1971, contributed to

the exponential increase in the rice production in Korea. Together with the supplying of *tongil* rice, installation of protected nurseries, early cultivation, fertilizing on time, and thorough pest control contributed enormously to the rise in rice yield per unit area. As a result, the rice production, which was a mere 3.5 million tons in the late 1960s, soared to over 5 million tons in the late 1970s, achieving self-sufficiency of rice, one of the main staple grains in Korea.

The Saemaul Movement (New Village Development Movement), launched in 1970 by President Park Chunghee, had a great influence on the rural communities in Korea. The Saemaul Movement, an initiative with an emphasis on diligence, self-help, and collaboration, started with projects to improve the environment of the rural villages. In order to implement various projects such as broadening the access to villages, improving roof types, building village centers, and maintaining small streams, the government provided necessary raw materials such as cement and steel bars with villagers, and they provided labor in return to complete the projects.

With a strategy to stimulate the rural population's desire to enhance the standard of living, the Saemaul Movement succeeded in transforming what the rural towns looked like. Though the movement was initiated by the government, it won massive participation of farmers, thereby achieving outright changes in the rural areas, and the movement, as a model for rural development, has attracted huge global attention until now.

Policies to Expand Non-farm Incomes

High growth in the non-agricultural sector widened the disparity between the agricultural sector and non-agricultural sector. The

Korean economy as a whole grew by 8.4% on yearly average between 1977 and 1988, but the growth rate of the agricultural sector remained at 1.0%. The share of agriculture in GDP fell from 24.8% to 10.5% over the same period. The focus of economic policies was gradually shifted from high growth and market protection to stable growth and market liberalization.

The focus of agricultural policies started to move away from self-sufficiency of staple grains. The policies centered on production increase and price support changed into ones that focused on increasing rural household incomes through developing cash crops and sources of non-agricultural income.

Low prices of agricultural products were maintained through the valorization schemes implemented by the government. The purchase price of rice, which jumped during the 1970s, was frozen or increased by a small margin during the 1980s. The government needed to ease the financial burden from the double-price system by lowering the purchasing prices and by heightening the release prices. Imports of agricultural products also rapidly increased. Among the import items were chili, garlic, onion, and sesame, whose prices soared temporarily due to bad harvest, and beef, whose demand was growing at home.

Artificially depressed prices and growing imports of agricultural products adversely affected the farm household economy at a rapid pace. Recognizing that increasing agricultural income had limits, the government introduced policies to create small-scale industrial complexes in rural and fishing regions in order to boost non-agricultural income. As many as 122 agro-industrial complexes were formed between 1984 and 1988, but those complexes did not thrive

due to a number of poor conditions.

The farm household economy deteriorated at a brisk pace, and the issue of farm household debt came to the fore in the late 1980s. The government announced a series of debt-alleviation measures including plans to expand agricultural and non-agricultural income, plans to relieve debts, and plans to improve living conditions of rural regions. These comprehensive measures were meaningful in that they were the first of the kind that tried to address slow growth of the agricultural sector, but they were fundamentally limited as they sought solutions to the poor agricultural income issues in debt relief and non-agricultural income increase, rather than in improvement in competitiveness of agricultural products.

Agricultural Policies in the Age of Globalization

Liberalization of Agricultural Imports

While the Uruguay Round of trade negotiations that began in 1986 made slow progress, pressure from agricultural product exporters to open the Korean agricultural market was ever-increased. Against this backdrop, Korea announced the “Three-year Plan for the Import Liberalization of Agricultural and Fishery Products” in

1989. Under this plan, imports of 243 agricultural, livestock, and aquatic food items would be liberalized between 1989 and 1991, thus raising the market’s liberalization rate up to 88.5%.

Before long, Korea became no longer able to cite Section B of



The Uruguay Round (Geneva)

Article 18 (a.k.a. Balance of Payment (BOP) Article) of the General Agreement on Tariffs and Trade (GATT), which allowed developing countries to restrict the quantity of imports in order to maintain the trade balance. In principle, the countries that do not fall under the category of BOP article cannot restrict imports of any goods including agricultural and livestock products, but Korea was allowed to have a grace period of eight years and to liberalize imports of 273 items gradually. In 1991, Korea released the first list of 131 items to be imported between 1992 and 1994.

In 1989, the United States, Australia, and New Zealand filed a complaint against Korea with the GATT for Korea's outright restriction on beef imports following the cow price shock in 1984. After a series of bilateral negotiations with these three countries, Korea decided to increase the quota for beef imports every year.

As seen above, the Korean agricultural market was opened during the period from the late 1980s to the early 1990s. As a result, the focus of the Korean agricultural policies was shifted to respond to issues that would occur by the imports market opening.

Agricultural Policies to Improve Agricultural Structure

As the imports of agricultural and fishery products increased, the government came up with a number of policies in response to that. The government announced the "Plan for the Structural Improvement of Agricultural and Fishing Villages" in 1991. Under the plan, a total of 42 trillion won was to be invested for ten years from 1992 to 2001 to enhance agricultural competitiveness and to improve the living conditions in rural and fishing villages.

However, the restructuring of rural villages did not begin in

earnest until the Uruguay Round Agreement on Agriculture was concluded in 1994. The principle of “tariffication without exception” was carried through, and the agreement was concluded to open the Korean agricultural market for every agricultural item with the exception for rice. Korea could secure time to prepare for the opening of the rice market thanks to the ten-year grace period for tariffication of rice imports, and the GATT recognition of Korea’s developing country status.

In 1994, the government established the “Agricultural and Rural Development Committee,” composed of 30 civilian experts, to prepare for the upcoming changes that would occur by the UR Agreement. The committee submitted to the president a report that reflected extensive opinions collected from all walks of life, and based on this report, the government prepared comprehensive plans that included programs for overhaul of production base, modernization of production and distribution facilities, the nurturing of farming successors, expansion of professional farmers, improvement in rural living conditions, and expansion of rural welfare. The government introduced the “Special Rural Development Tax” in 1994, to secure funds to implement these plans, and 1.5 trillion won would be invested each year for ten years to achieve the goals. The Special Rural Development Tax was extended in 2004 for another ten years.

The agricultural policies during this period were centered on the expansion of farming to raise competitiveness and the fostering of experts on agriculture. Despite the largest-ever investment in the agricultural sector, the agricultural competitiveness did not increase substantially. The agricultural growth rate that remained negative in

the late 1980s increased to 1-3% in the early and mid-1990s. In spite of this growth, Korea's food self-sufficiency rate continued to fall to 26.7% in 1996 from 43.1% in 1990.

Complementary Policies: Expansion of the Direct Payment System and the Fostering of Environmentally Friendly Agriculture

At the end of 1997, Korea was hit by a financial crisis that left it to seek the bailout loan from the International Monetary Fund (IMF). Prices of goods in Korea, foreign exchange rates, interest rates, and the nation's economic policies were placed under the control of the IMF. The national economy contracted rapidly and recorded minus growth in 1998. The won/US\$ exchange rate soared from the pre-crisis level of 900 won against the US dollar to 2,000 won. Prices of imported raw materials including oil as well as consumer prices shoot up. Interest rates between 10% and 13% soared as high as 30%, leaving numerous companies to collapse, and the number of the unemployed increased to 2 million from around half million due to business restructuring and ensuing labor cuts.

The agricultural sector was not immune to the aftermaths of the 1997 financial crisis. Prices of imported feed rocketed due to the exchange rate and the cow prices plummeted due to the reduced demand for beef. The price of a calf fell from one million won to 100,000~150,000 won per head. Farmers, who engaged in vegetable and flower cultivation using greenhouses, were also hit hard by rising oil prices. Farms with debt suffered a double whammy of the high interest rates and falling demands for their products. As the farm management became increasingly unstable, the agricultural

policies were centered on continuation of the agricultural production through stabilization.

Measures to foster environmentally friendly agriculture and to introduce the direct payment system and disaster insurance were among the major agricultural policies of that time. In other words, the agricultural policies in the late 1990s and the early 2000s were characterized as the government's attempts to stabilize the life of small and medium-sized farms.



Environmentally Friendly Agriculture

The agricultural policies focused on the expansion of large-scale farmers before, but the policies on environmentally friendly agriculture were more suitable for small and medium-sized farmers. In 1997, the government created the “Environmentally Friendly Agriculture Promotion Act,” and introduced in 1999 the “Environmentally Friendly Agriculture Direct Payment System,” which enabled farmers, residing in environmentally regulated regions including water supply protection areas, to switch their farming methods to environmentally friendly farming.

As an income preservation plan in preparation for the WTO regime, the government had conducted a feasibility study on the direct payment system from the mid-1990s. The direct payment system for farming transfer was first introduced in 1998 to promote the early retirement of aged farmers, and then the full-scale direct payment system was implemented, targeting farmers who owned rice paddies. This direct payment system for paddy land was

designed to prevent an increase in rice production, and the paddies used for rice farming between 1998 and 2000 were the target of this system. In the first year of the implementation of the system, 250,000 won per hectare up to 2 hectares per farm was paid, but the amount of compensation gradually increased to 1 million won per hectare in 2015. The direct payment system was implemented for parts of dry field farming from 2012, and it was expanded to cover all dry field farming in the nation in 2015. In addition, various direct payment programs for environmentally friendly farming, for regions with unfavorable conditions, for environmentally friendly livestock farming, and for rural landscape conservation are being carried out, but their scale and budget is relatively small.

In 1999, the government established the “Framework Act on Agriculture and Rural Community,” which has served as the basis for the nation’s every agricultural policy. The law redefined agriculture, farmers, and rural villages to be in tune with the times, and laid out directions for Korean agriculture as a whole. The law also provides legal basis in supporting plans for agricultural investment and loans in the future.

Negotiations to Extend Grace Period for Rice Tariffication and Changes in Related Policies

In the Uruguay Round Agreement on Agriculture of 1994, Korea received special treatment for rice, which permitted the suspension of the introduction of a tariff system for ten years from 1995 to 2004. Instead, Korea was mandated to start in 1995 to import rice equivalent to 1 percent of average annual rice consumption between 1988 and 1990, and the amount of imports should be raised to 4

percent by 2004 under the import quota system called the Minimum Market Access (MMA).

Korea's deferment of tariffication for rice was extended for another ten years through bilateral negotiations with the countries directly involved.

Instead, it was concluded in the negotiations that the import quota of MMA should be increased from the previous 4% to 7.96% gradually, and the import quota for staple rice was to be raised from 10% of MMA amount in 2005 to 30% of that from 2010.

Korea formally notified the WTO of its plan to liberalize the rice market via tariffication in 2014 when the second grace period ended. In response to a series of negotiations on rice tariffication, the framework of the nation's rice policies, namely the government purchase system and the direct payment system, underwent the fundamental changes. The government's rice purchase program, which had lasted for nearly 50 years since the establishment of the government, was abolished. And the public reserve system for rice was introduced for food security. The direct payment programs were strengthened in response to the reduced government intervention and a drop in prices following the opening of markets. In addition to the existing fixed direct payment, which is a subsidy per hectare paid to farmers engaged in rice cultivation, a variable direct payment that compensates for parts of the difference between the target price and the market price (by deducting the fixed direct payment from 85% of the difference) was introduced. The target price is determined by calculating the average rice price of the previous three years, after excluding the highest and the lowest prices from the prices of the past five years. The target price between 2005 and 2012 was set

at 170,083 won per 80kg, and it was increased to 188,000 won per 80kg in 2013. If the sum of the market price and the fixed direct payment exceeds the target price, the variable direct payment is not to be made.

The fixed direct payment falls under the WTO's category of "Green Box," or permitted subsidies, as it is not linked to production or prices. However, the variable direct payment is categorized as the "Amber Box," subsidies to be reduced, as it is directly linked to the market price and the payment is made to farmers who cultivated rice in their farmland in the year in question.

Free Trade Agreements (FTAs) and Response of the Agricultural Sector

Amid the global trend of trade liberalization, free trade agreements began to make progress. Korea was inactive about FTAs initially. But as the country signed the first FTA with Chile in 2002, it started to actively seek negotiations for further FTAs. As of August 2015, as many as twelve FTAs with Chile, ASEAN countries, EU, the US, Australia, and Canada entered into force, and four FTAs including the Korea-China FTA were either concluded or signed already, slated to take effect soon. As the Korean economy is highly dependent on international trade, it is inevitable for Korea to actively respond to the multilateral trade negotiations and FTAs. Prices of agricultural products are expected to fall and agricultural production will also contract as trade liberalization proceeds. In response to these changes, the Korean government has implemented short-term policies including direct compensation for damage by imports, while it has promoted various long-term policies to enhance agricultural

competitiveness.

The FTAs with Chile, the US, and China will be explained briefly in the following section.

The FTA with Chile was the first FTA to Korea. The negotiation with Chile was concluded in October 2002, but it wasn't ratified by the national assembly until February 2004 due to the fierce resistance from the agricultural industry. The FTA entered into effect in April 2004.

As the first FTA for Korea, the agreement with Chile created serious fear to farms. The fear that Korean farmers had was extremely deep, as the agricultural sector as a whole had already experienced difficulties from the effects of the URAA since the mid-1990s. Farm households, who became increasingly resistant to liberalization itself, lodged violent protests on a national scale.

In order to dispel the fear of these farmers, the government pushed forward policies that would compensate any agricultural damage and policies to enhance the competitiveness of the agricultural sector. First, the "Special Act on Assistance to Farmers, Fishermen, etc. Following the Conclusion of Free Trade Agreements" was established. In particular, various compensation schemes for the closure of orchards and for price cuts were created for the fruit industry, where ramifications of the FTA would be devastating.

Negotiations for an FTA with the United States started in February 2006. In addition to the agricultural sector, there were many manufacturing sectors where interests of the two countries were sharply conflicting. Opposition from farmers to the South Korea-United States Free Trade Agreement (KORUS FTA) grew significantly. Many thought that aftermath of the KORUS FTA would

be much more serious than that of the Korea-Chile FTA in that nearly all the agricultural products including grains, livestock products, vegetables, and fruits can be imported from the U.S.

The Korean government stated that rice would be excluded from the items for the FTA from the early stage of the negotiation, and succeeded in carrying through its position. The negotiation over beef, however, was not without difficulties. Imports of American beef had been in the suspension following the outbreak of bovine spongiform encephalopathy (BSE), or mad cow disease, in 2004. Thus, the U.S. government strived to resume beef exports to Korea as soon as possible through the FTA. This issue was resolved by the announcement of the Korean president that the country would cooperate with the U.S. for the earliest possible resumption of beef imports, and the negotiation was settled and the agreement was signed in 2007.

However, ratification of the negotiation on automobiles was postponed due to additional requests by the U.S., and the additional negotiation on some items including automobiles and pork was settled on December 3, 2010, after many twists and turns. The agreement went into effect as of March 15, 2012, after ratification by the National Assembly of each country.

China, Korea's biggest trading partner, and Korea started a joint research on an FTA between the two countries, and negotiation between the two governments was started from 2012. The FTA with



Signing of the Korea-U.S. FTA

China was particularly meaningful for Korea as it would serve as an opportunity to secure growth engines for the nation's economy by achieving dominance in the fast-growing Chinese market. However, Korea's agricultural sector, competing with China for most of agricultural products, had to concern about possible damage from the opening of the Korean market.

China was also worried about loss in industrial products including automobiles. Therefore, the two countries ended up to classify items into highly sensitive items, sensitive items, and general items, and began negotiations.

Korea's liberalization rate for agricultural products in the Korea-China FTA is 64%, and it is relatively low compared to the Korea-US FTA or the Korea-EU FTA. In particular, major fresh produce such as rice, chili, garlic, onion, radish, napa cabbage, tangerine, beef, pork, ginseng, and mushroom was excluded in the items for tariff elimination, seemingly not to seriously affect the agriculture in Korea.

A Paradigm Shift of Agricultural Policies and Industrialization of Agriculture

To find a way out for Korean agriculture and the rural communities, which had deteriorated due to the growth gap between agriculture and industry, and agricultural products import openings, was one of the main purposes of agricultural policies. However, the paradigm of agricultural policies has changed fast since the mid-2000s. Among the major changes are their focusing on the vitalization of the food industry, expansion of agriculture for exports, and fosterage of the local industry through the 6th

Industrialization.

The Lee Myungbak administration reorganized the Ministry of Agriculture and Forestry as the Ministry for Food, Agriculture, Forestry and Fisheries in 2008, and implemented policies to vitalize the food industry. In other words, the government decided to nurture the food industry, once a target of regulation and control for food safety, as a higher value-added industry. The “Food Industry Promotion Act” was enacted and the “Comprehensive Plan to Develop the Food Industry” was established. And the government started to expand R&D investment and make agriculture efficient, and carried out various policies to develop a knowledge-based agro-food industry.

Efforts to secure overseas markets for Korean agricultural products have also been made. Together with exports of the commodities products including vegetables and fruits grown in facilities, exports of processed food also grew fast, resulting in an average annual increase of 13% for the total export amount of agricultural, forestry, and livestock products, which was 1.5 billion dollars in 2000, and 6.2 billion dollars in 2014. The export destination, which was mainly Japan, has been diversified to include China and ASEAN regions.

Recently, the Korean government puts emphasis on the vitalization of the rural economy through the sixth industrialization of agriculture, which includes development of food processing, local food, and rural tourism. The government makes efforts to create a specialized regional cluster in which related projects are connected and collaborated around the regional agriculture. To this end, unnecessary regulations have been overhauled and comprehensive

supports have been intensified. The government has also aimed to foster the rural tourism. Previously, the rural tours were made briefly when tourists passed by the rural areas, but the government wants to change this pattern by connecting tourism infrastructure such as horse-riding courses and healing forest with rural resources, so that the tourists can stay in the rural areas longer.

