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STATE SPONSORSHIP OF AGRICULTURE – AN INITIAL CONDITION OF PROVIDING OF FOOD SAFETY OF THE COUNTRY (ON THE EXAMPLE OF SOUTH KOREA)

Abstract. The article considers the problem of ensuring food security and the role of public financial support as important conditions of its providing. Currently, the national food system trends impact on a planetary scale, contributing to the formation of potential threats to food security and the need for state financial support to the agricultural sector of the economy. The role of the state is considered in providing of food safety on the example of South Korea.

Key words: agriculture, food safety, investments, subsidies, state financing, import, export.

There is no doubt that the problem of food safety is important for any country and on the different stages of socio-economic development. Its providing is necessary not only with economic but also with social and political positions. The key problems of the economy, the real tendencies of development of agricultural production, food market, changes its degree of dependence on the world market, the social situation, solvency of the population as a whole and consumers in different regions are connected in the field of food security of the state.

Presently the tendencies of planetary scale impact on national food systems, stipulating forming of potential threats of food safety and necessity of state sponsorship of agrarian sector of economy. Economists and politicians name the number of arguments of a global nature in favor of such support.

Hasty economic growth and increase of population in many countries with developing economy. Passing ahead rates of height of solvent demand of population on food as compared to suggestion in such countries, as China, India, Brazil and other new industrially developed states, are violated balance in the global food system. As you know, demand, exceeding supply, conduces to the price advance. A price increase on food undermines the process of development of country, that causes slowing down of increase of production of agricultural goods, especially in the economically developed countries, which are its basic exporters. Thus world demand on food will always increase, as a population annually increases by 80 million people or by 1.4 % [1, p. 13]. About the same, the number of poor and hungry people annually increases. They become more every year, and food is less. In addition, the increase of prices on food exacerbates poverty, there are increases in social tensions and stratification of society.

Accelerated development of production and use of biofuels. The use of agricultural raw material for the production of liquid biofuels assists the height of demand on an agricultural produce, and also influences to the markets of other agricultural commodities. The height of production of biofuels not only has influence on the costs of the agricultural cultures, used for its production, but also conduces to the origin of potential connection between price changes on oil and agricultural raw material for an industrial production and other food stuffs. We will note that in recent years, price advance on oil is contributed to price increase on such food cultures, as wheat, corn, seed of oil-bearing cultures, and is resulted in retail price advance on basic food stuffs.

The rapid development of the production and use of biofuels is caused a reduction in food supplies on the world market, especially grain, which is a basic food product, not renewable due to the increase of agricultural production in the countries-importers. In recent years in foreign countries farmers mass abbreviate the sowing areas of food grain-crops in behalf on a corn and rape. About 80 % of EU biofuel is produced from rape. Among developing countries a leader in its production due to the grown cheap sugar-cane is Brazil. It is expected that world production of ethanol and biodiesel will increase rapidly [2, p. 548].

Reduction of level of world supplies of food, and, first of all, transitory supplies of grain.

The global change of climate. Over the past 100 years, the average global temperature on earth has increased by 0.3–0.6°C. In the future, as it is expected to rise by 1.5–4.5°C. The global change of climate will substantially influence on agriculture and cattle breeding, will strengthen degradation of soil and water resources, will considerably hamper providing of food safety. The increase of average annual temperature can lead to a reduction of the global volume of food production and cause the increase of prices. Thus, the decline of amount of fallouts and productivity is forecast in the countries of south group, and in the countries of north group, the productivity can grow.

Thus, the considered modern global calls of food safety are major arguments in behalf on the necessity of state sponsorship of agrarian sector of economy.

In this connection, the actual is a study of experience of foreign countries in area of financing of development of agriculture for providing of food safety of national economy. We will consider experience of South Korea in financing of agrarian sector of economy.

The structural transformation of Korea's agriculture was pursued with the rapid growth in Korea's economy and industrialization in the late 1960s, and also through the interaction between the agricultural and manufacturing sectors. The acceleration of urbanization due to economic growth led to an increase in the demand for agricultural products, and the farmers awakened witnessing the development of manufacturing and other industrial sectors, and the relevant advanced technologies were spread to the agricultural sector [3, 4].

Investment in social overhead capital such as roads, in the process of economic development, led to easier transportation of agricultural products, and the supply of farming materials such as fertilizers, thanks to the development of industry, contributed to the enhancement of agricultural productivity.

Korea's agricultural and rural development went through a 3-staged development process as seen in table 1. From the 1960s to 1970s, in the early stage of development during the pursuit of sustainable economic growth, the government directed policy concentrating on food production and self-sufficiency in staple grains to address food shortages and poverty [5-8]. From the 1980s to mid – 1990s, in the latter stage of development, the government focused on the enhancement of agricultural productivity, increasing agricultural household income, and the improvement of the agricultural structure. After 2000, Korea's agriculture entered the 'global era' and faced the new environment of market opening and trade liberalization in agricultural products, and the government had to go through a major transformation in its policies such as reducing subsidies on agricultural products [9].

Table 1 – Agricultural development of Korea by period

	Earlier Development (1960s–1970s)	Later Development (1980s–1990s)	Globalization Era (2000s–)
Economic policy	Poverty reduction Self-reliance econom	Economic growth Industrial developmen	Economic maturation Knowledge-based society
Goal of agricultural development	Agricultural production Self-sufficiency in staple food-grains	Enhancing agricultural productivity Creating farmers' income	Strengthening agricultural competitiveness Enhancing quality of rural life
Strategy of agricultural Developmen	Seed improvement, Technology development and extension Food production	Fostering commercial farms Increasing off-farm income	Promoting sustainable agriculture Integrated rural development

Source: KSP team based on the literature.

Korea's agriculture experienced a rural exodus due to rapid economic development in the 1970s, but managed to respond to the reduction in the rural workforce by increasing capital investment [5, 6]. In other words, without major changes in land input, the government increased the input of intermediary goods along with the input of capital. From 1970 to 2012, total agricultural output increased annually with the slow relative increase rate of output. As result, Korea's actual labour productivity per household in agriculture was KRW 2,465 per hour in 1970 and KRW 13,972 per hour in 2012, showing an increase index with 5.67 times in table 2.

Table 2 – Trend of agricultural productivity in Korea

	1970	1980	1994	1995	2000	2010	2012
Labor productivity per household (KRW/hour)	2,465	3,506	10,540	9,593	11,017	15,480	13,972
(index)	(100)	(142)	(427)	(389)	(46)	(628)	(567)
Source: NH Economic Research Institute 2013.							

Continuous public investment in agricultural and rural development areas led to support in agricultural development and structural transformation. When formulating budgets, the government strengthened investment in agricultural infrastructure, such as the consolidation of arable land and agricultural irrigation, and conducted a dual pricing system for rice production with the aim of achieving income stability, higher production motivation for farmers, and the stabilization of inflation. In Korea's agricultural development and structural transformation, the improvement and strengthening of agricultural cooperatives' functions led to a nationwide agricultural financing and rural household credit system [10].

As a result of 40-year-long comprehensive economic and agricultural development projects undertaken since the 1960s, Korea could achieve a remarkable agricultural structural transformation as well as economic development as seen in Table 3. Due to economic growth, the rural population ratio of the total population was reduced from 58.2% in 1960 to 8.6% n 2000, and the agricultural production proportion of GDP was reduced from 36.8% in 1960 to 4.9% in 2000 [11].

Moreover, the agriculture employment ratio was reduced from 63% in 1960 to 10.5% during the same period. Concurrently, due to the restructuring of farmland, cultivation area per agricultural household increased from 0.9 ha per household in 1960 to 1.4 ha per household in 2000 [12].

Compared to other advanced countries, Korea's agriculture went through a relatively drastic structural transformation in a short period of time. The structural transformation was accelerated with market internationalization and opening that started in the 1990s. As seen in Table 3, agricultural structural transformation in advanced countries was achieved gradually over 40 to 70 years; in Korea, however, this was achieved within 25 years along with industrialization. Dramatic growth in Korea's economy enabled rapid structural transformation in agriculture; even though the contribution of agriculture to the nation's economy has decreased dramatically [13].

Table 3 – Korea's economic development and agricultural structural transformation

	1960	1980	2000
Economic growth rate (annual average, %)	2,3	-1,7	8,9
Per capita GDP (USD)	79	1,713	11,951
Proportion of rural population (%)	58,2	28,4	8,6
GDP share of agricultural production (%)	36,8	16,2	4,9
Proportion of employment in agriculture (%)	63,0	34,0	10,5
Cultivated acreage per farm household (ha)	0,9	1,0	1,4
Source: Korea Rural Economy Institute, National Statistics Office, and the Bank of Korea.			