

## Role of Import Substitution in Provision of Food Security of Modern Russia

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### Abstract

*The article is devoted to solving the problem of provision of food security of modern Russia. The purpose of the article is finding the solution to this problem and determination of the role of import substitution in provision of food security of modern Russia. This purpose is achieved with the following tasks: analysis of the influence of the Russian production on provision of economic security of modern Russia, allocation of the problem of development of food production in Russia, and development of the strategy of import substitution for provision of food security of modern Russia. The authors use the method of factor analysis for determination of the role of import substitution in provision of food security in modern Russia. In order to determine the perspectives of the increase of food security of modern Russian by means of import substitution, the authors use the method of economic & mathematical modeling and forecast which allows forming the model of the Russian food market as of now and forecast its changes in future within the framework of implementation of the import substitution strategy. As a result of the research, the authors develop the strategy of import substitution and build a graphical scheme of its realization in modern Russia. A key conclusion of the conducted research is a proof that import substitution plays an important role in provision of food security of modern Russia, as it allows reducing the dependence from import and develop the internal food production under the condition of the payback of invested assets, which reflects high effectiveness of the import substitution tool in provision of food security of modern Russia.*

**Keywords:** import substitution, food security, economic security, agribusiness, modern Russia.

### 1. Introduction

Modern Russia is currently in a very complicated economic and geopolitical situation, the development of which cannot be predicted due to large number of factors and many changes in future. Under these conditions, the issue of national security and provision of the country's capability for independent satisfaction of its most important needs, among which is the need for food, is the most topical.

Initial financial sanctions from a variety of the countries, which began in 2014, led to return sanctions from Russia, in a form of embargo on certain food products. The sanctions for Russia led to economic consequences and the threat to national food security. The solution of this problem is the main precondition for Russia's capability for preservation of national sovereignty and promotion of its policy in the international scene, which determines high topicality of research in this sphere.

The purpose of the article is to find the solution to this problem and to determine the role of import substitution in provision of food security of modern Russia. This purpose is achieved with the following tasks: analysis of the influence of the Russian production on provision of economic security of modern Russia, allocation of the problems of development of food production in Russia, and development of the strategy of import substitution for provision of food security of modern Russia.

### 2. Method

Analysis of publications in the sphere of food security allowed distinguishing two main directions of the research:

theoretical and practical. Theoretical direction is oriented at the study of general issues of food security – definition of its sense and idea, analysis of the factors and causes of emergence of threat to food security, and determination of perspectives of solving the problem of food security in global scale; among the representatives of this direction, it is possible to distinguish the following: (Bannikova et al., 2015), (Jacknowitz et al., 2015), (Mazaeva & Rogachev, 2012), (Medernach and Burnod, 2013), (Popkova et al., 2015a), (Popkova et al., 2015b), etc.

Within the practical direction, the scientists study national peculiarities of food security by the example of various countries of the world, determine specific problems of provision of food security in specific economic systems, analyze the causes of emergence of threats to economic security at the national level, and search for perspective tools of elimination of existing threats and solution to the problem of food security in the studied countries; the representatives of this direction include (Bernardes, 2015), (Garthwaite et al., 2015), (Grouiez, 2012), (He, 2015), (Maitra and Rao, 2015), etc.

Therefore, it is possible to conclude that there are many studies devoted to the issue of food security, which allows determining the high level of popularity of this research among the scientists. However, at the same time, only a small number of works of modern scientists are devoted to the specifics of provision of food security in modern Russia, which causes the necessity for conduct of further research in this sphere – which is done by this article.

In order to determine the role of import substitution in provision of food security of modern Russia, the method of factor analysis is used. Mathematical model of food security has the following form:

$$FS = RP - IF \tag{1}$$

where FS – food security;

RP – Russian production of food;

IF – import of food.

Formula (1) shows that food security is a difference between Russian food production and food import. This expression reflects the sense of food security which consists in economic system's capability to independently satisfy its needs for food. Conduct analysis of the food security requires the data on dynamics of Russian production of food and food import. The data is put in a special table (Table 1).

**Table 1.** Dynamics of indicators for factor analysis of food security

Indicators	Russian food production	Food import
Food security (0)	RP <sub>0</sub>	RP <sub>0</sub>
Food security (RP)	RP <sub>1</sub>	RP <sub>0</sub>
Food security (1)	RP <sub>1</sub>	RP <sub>1</sub>

In Table 1, index "0" means that the value of indicator in the initial year is provided, and index "1" means that the value of indicator in the final year is provided. Based on the current indicators, the calculation of food security, depending on changes of indicators (factors), is performed according to the following formulas:

$$\Delta FS_{PR} = FS(RP) - FS_{2013} \tag{2}$$

$$\Delta FS_{IF} = FS_{2014} - FS(RP) \tag{3}$$

In order to determine the perspectives of the increase of food security of modern Russia by means of import substitution, the authors use the method of economic and mathematical modeling and forecast which allows forming the model of Russian food market at present and predict it changes in future within the framework of implementation of import substitution strategy.

### 3. Results

Let us conduct factor analysis of economic security of modern Russia. The data is taken from official statistics of the Federal State Statistics Service on the sources of formation of offer and consumption of food in Russia (Table 2).

**Table 2.** Dynamics of indicators for factor analysis of food security in Russia for 2013-2014, USD billion

Indicators	Russian food production	Food import
Food security (2013)	92.5	43.1
Food security (RP)	90.1	43.1
Food security (2014)	90.1	46.4

Changes in food security of modern Russia due to changes in the internal food production are calculated in the following way:

$$\Delta FS_{RP} = (90.1 - 43.1) - (92.5 - 43.1) = \text{USD } -2.4 \text{ billion.}$$

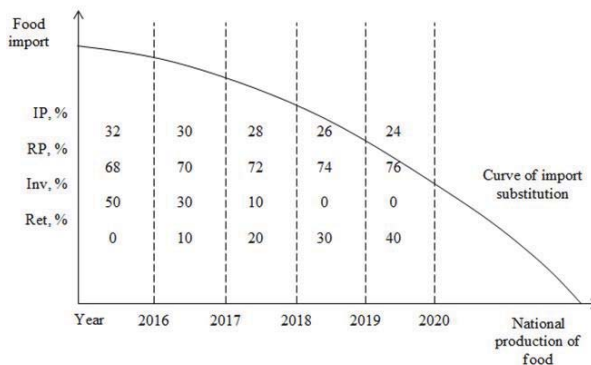
Changes in food security in modern Russia due to changes in food import are calculated in the following way:

$$\Delta FS_{RP} = (90.1 - 46.4) - (90.1 - 43.1) = \text{USD } -3.3 \text{ billion.}$$

Thus, it is possible to conclude that as a result of reduction of internal food production, food security reduced by USD 2.4 billion, and the growth of food import led to reduction of food security by USD 3.3 billion. Therefore, in order to increase food security of modern Russia, it is necessary to reduce food import and develop national food production.

It should be noted that Russian food production reduced in 2014 by 2.6% (USD 2.4 billion), while the volumes of food import increased by 2.2% - from 31.8% in 2013 to 34.0% in 2014. Apart from structural changes in the sphere of offer in the Russian food market, there were certain changes in the volumes of consumption. Thus, total volume of the food market in Russia in 2013 constituted USD 135.6 billion, and in 2014 - USD 136.5 billion. The dynamics of demand for the stated period constituted around USD 1 billion (0.7% per year).

According to market laws, growth of demand should lead to the increase of offer and development of national production. However, that is not the case in modern Russia due to peculiarities of transitional economy, in which the influence of market mechanism is limited, and unfavorable macro-economic situation, in which conditions for development of business are not good. These are the reasons for development of national food production in modern Russia being impossible without state's participation. This participation can be expressed within the framework of implementation of import substitution strategy, the scheme of which is shown in Fig. 1.



**Figure 1.** Scheme of implementation of import substitution strategy in modern Russia

Fig. 1 uses the following legend: IP – share of imported products in the structure of food offer in the Russian food market, RP – share of Russian products in the structure of food offer in the Russian food market. Inv – volume of investments into implementation of the import substitution strategy (expenses of state budget for agribusiness development), Ret – volume of return of investments, all indicators are measured in per cent.

As is seen, the import substitution strategy supposes gradual reduction of the share of import and increase of the Russian production in the Russian food market during the following five years. This strategy supposes that by 2020, the share of import will constitute 24%, and the share of national production will constitute 76%. During the first three years, the volume of investments is maximal, but then the need for them reduces, and investments start to be repaid beginning from the 2<sup>nd</sup> year of implementation of the import substitution strategy.

#### 4. Conclusions

Thus, it is possible to conclude that import substitution plays an important role in provision of food security of modern Russia. Taking into account that conditions for agriculture in Russia are not favorable due to natural & climate peculiarities and general conditions for conduct of business are difficult due to a high level of inflation, taxation, corruption, and instability of political situation, it is no wonder that national food production in Russia reduces without serious support from the state, which leads to problems with provision of food security.

In order to solve this problem, it is advisable to use import substitution, which supposes active state support and creation of favorable conditions for development of national food production. The developed strategy of import substitution supposes that investments into development of national food production are long-term but could be returned. This, initial expenses of the state budget will be returned due to growth of tax revenues from food companies which will no longer need state support and will become profitable and competitive in the internal market (Skiter et al., 2015a).

It can be concluded that despite the fact that import substitution causes certain state expenses related to provision to companies that are involved with food production of subsidies, tax exemptions, etc., it positively influences the general macro-economic situation in the country, as it stipulates the reduction of unemployment and development of business. That's why import substitution in Russia plays an important role not only in solution of the problem of food security but in provision of economic growth and increase of national competitiveness (Skiter et al., 2015b).

The conducted research is limited by study of only one factor of provision of food security – import substitution. Taking into account high dynamics of modern market environment, effectiveness of this tool may reduce with time, and possibilities of use of this tool can exhaust with expansion of its use. Therefore, a perspective direction of conduct of further research is allocation of other factors, analysis of their influence on food security, and search for means of effective influence on them for the purpose of their turn into effective tools of food security provision.

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