Effective Import Substitution in the Agro-industrial Complex: Competition or Monopoly?

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Abstract. The purpose of this article is to determine the preferential market structure in the agro-industrial complex for provision of higher effectiveness of its import substitution and to develop practical recommendations for formation and support for optimal structure of this market. The methodology is based on the method of comparative analysis, which is used for comparing competition and monopoly as the variants of the market structure of the Russian agro-industrial complex. The authors use the method of analysis of statistical information for studying the state of the Russian agro-industrial complex. The authors have developed the method of evaluating the effectiveness of import substitution, which is also used in this research. The article studies the key factors that restrain the development of the process of import substitution of the Russian agro-industrial complex in 2016 and proves that oligopoly provides a very high quality of products with acceptable prices, as the market is presented by large companies that are easy to control, including the price control. In addition to this, they possess large resources, which, with the right management, allows achieving their high innovative activity and sustainability. Due to this, the market structure of oligopoly is the most effective as to import substitutions in the agro-industrial complex. As a result, the authors recommend application of flexible and preferential tools for stimulating the development of the process of import substitution in the agro-industrial complex, which should be based on the agro-industrial special economic areas.

Keywords: Effective import substitution · Agro-industrial complex
Competition · Monopoly · Special economic areas · Modern Russia

1 Introduction

At present, the model of economic development of modern Russia is reconsidered. On the path of creation of a theoretically perfect model of the post-industrial economy, the Russian economic system faced a range of problems that predetermined its

© Springer International Publishing AG, part of Springer Nature 2018
E. G. Popkova (Ed.): HOSMC 2017, AISC 622, pp. 30–36, 2018.
https://doi.org/10.1007/978-3-319-75383-6_3

inaccessibility in practice. The main such problem is violation of the international division of labor in the conditions of disintegration of economic systems under the influence of crisis phenomena of various nature.

Non-optimality of the conditions – primarily, in the external environment – for development of the post-industrial economy, which made the Russian economic system unstable and vulnerable against the influence of the smallest changes in the geo-political situation, is a substantial basis for change of the model of development. Mixed (diversified) economy was selected for such model, based on industry, with highly-developed service sphere which forms a half of gross domestic product.

In the process of post-industrialization of the Russian economy, the tertiary sector of economy has been developing, while the real sector was characterized by the deficit of investments and low innovational activity, which led to critical reduction of its competitiveness and high dependence of Russia on the import of industrial products.

If the dependence on import of most industrial products does not contradict the new model of Russia's economic development, import of agro-industrial products is unacceptable due to its strategic significance for provision of the national food security. The most important tool of overcoming the dependence on import of agro-industrial products, which is an essential aspect for creation of a new model of development of the Russian economy, is import substitution.

This actualizes the problem of search for the means of achieving high effectiveness of import substitution in agro-industrial complex (AIC). An important role here belongs to determining the optimal market structrure. The purpose of the article is to determine the preferential market structrure in AIC for provision of high effectiveness of its import substitution and to develop practical recommendations for formation and support of the optimal structure of this market.

2 Materials and Method

Methodology of this research is based on the method of comparative analysis, with the help of which competition and monopoly are compares, as variants of the market structure of the Russian agro-industrial complex. The authors also use the method of analysis of statistical information for studying the state of the Russian agro-industrial complex. The basic indicators and their values for the recent years are given in Table 1.

We developed the proprietary method of evaluating the effectiveness of import substitution, which is also used in this research. It supposes the usage of the following formula:

$$\text{Eis} = (\text{QP}/\text{PP}) * \text{Cinn} * \text{Csus} \quad (1)$$

where Eis – indicator of effectiveness of import substitution in the market;
QP – average market quality of products;
PP – average market level of prices for products;
Cinn – coefficient of innovativeness of enterprises in the market;
Csus – coefficient of sustainability of enterprises against crises.

Table 1. Dynamics of indicators of development of the Russian agro-industrial complex in 2011–2016

Indicators	Values of indicators for the years					
	2011	2012	2013	2014	2015	2016
The volume of supplied goods of own production, RUB billion	3,262	3,602	4,001	4,272	4,840	5,861
Volume of import, RUB billion	2,184	2,550	2,442	2,598	2,394	1,590
Total volume of consumption, RUB billion	5,446	6,152	6,443	6,870	7,234	7,451
Share of domestic production, %	60	59	62	62	67	79
Level of using production capacities, %	66	70	69	66	67	74
Share of innovations-active enterprises, %	9.5	9.6	9.3	9	10.3	10.2
Number of enterprises	52,266	51,464	50,848	49,985	49,992	51,387
Concentration of production, %	15.1	16.3	14.6	21.2	22.6	18

Source: compiled by the authors on the basis of: (Federal State Statistics Service 2016), (Voronin 2017).

As is seen from Formula (1), the basis of measuring the effectiveness of import substitution is the ratio of products' quality in the market to the average level of prices. The indicators QP and PP are measures in points. The indicator QP can take the values from 1 (minimum value) to 10 (maximum value), and the indicator PP – from 10 (maximum price) to 1 (minimum price).

This ratio is multiplied by two coefficients. The coefficients Cinn and Csus are measures in points (in tenths of 1) and take values from 0.1 (minimum innovativeness/sustainability) to 2.0 (maximum innovativeness/sustainability). Therefore, the indicator Eis can take values from 0.001 to 10. The higher its value, the higher the effectiveness of import substitution in the studied market. The developed method may be applied to any market, but in the context of this article it is applied for determining the effectiveness of various market structures in the market of AIC.

3 Discussion

The issues of effectiveness of import substitution in the AIC are studied in the works by (Bogoviz and Mezhov 2015), (Popkova et al. 2016), (Sadovnikova et al. 2013), (Popova et al. 2015), (Dudukalov et al. 2016), (Bogoviz et al. 2017), (Sandu et al. 2017), and (Przhedetskaya and Akopova 2015). However, despite the high level of elaboration of these issues, such aspects and the optimal sectorial structure, which stimulates maximization of effectiveness of import substitution in AIC, are not sufficiently studied in the existing publications and require deeper consideration.

4 Results

The results of analysis of data from Table 1 showed that in 2016 the share of the Russian products in the structure of offer in the AIC market constituted 79%, growing by 31.6% as compared to 2011 (in 2011 it constituted 60%). The tendency for strengthening the positions of the Russian enterprises in the AIC market is accompanied by the growth of the level of using the production capacities, which constituted 74% in 2016, growing by 12.1% as compared to 2011 (66%).

In the quantitative expression, growth of the number of enterprises of AIC was negative in the recent years. In 2016, their number constituted 51,387, reducing by 2.7% as compared to 2011 (52, 266). This is accompanied by growth of concentration of products in the AIC market – i.e., its monopolization. The level of concentration of 2016 constituted 18%, growing by 19.2%, as compared to 2011 (15.1%).

That is, at present, the structure of the Russian market of AIC can be characterized as monopolistic competition. The results of the performed comparative analysis of various market structures from the point of their effectiveness in the sphere of AIC are given in Table 2.

Table 2. Results of comparative analysis of various market structures from the point of view of effectiveness of import substitution in AIC

Criteria of comparison	Oligopoly	Monopolistic competition	Perfect competition
QP	8	6	5
PP	4	2	1
Cinn	1.0	1.5	0.3
Csus	2.0	0.2	0.1
Eis	4.0	0.9	0.15

Source: compiled by the authors.

As is seen from Table 2, we viewed three market structures: existing monopolistic competition in the Russian market of AIC, oligopoly as a manifestation of monopoly, the extreme level of which cannot be achieved in this market, and perfect competition. The existing structure of the AIC market – monopolistic competition – showed average effectiveness as to import substitution in this market.

Due to the complete action of the mechanism of competition and the enterprises' possession the minimum set of resources – as with the perfect competition – the monopolistic competition ensures the acceptable quality of products with low prices. However, due to the fact that market players represent a lot of small and medium companies, the accessible set of resources is not minimal but very small, so their innovational activity and sustainability is rather small. At this market structure, the indicator of effectiveness of import substitution in the AIC took the value of 0.9 points.

Despite the minimum level of prices, the market structure of competition leads to low quality of products, and the companies are characterized by low innovational

capabilities and low sustainability die to minimum set of resources. Due to that, the market structure of competition leads to low effectiveness of import substitution in the AIC – 0.15 points.

Oligopoly provides a very high quality of products with acceptable prices, as the market is represented by large companies, which are easy to manage, including the price control. In addition to this, they possess large resources, which, with right management, allows achieving their high innovative activity and sustainability. Due to this, the market structure of oligopoly became most effective as to import substitution in AIC.

That's why for the purpose of achieving high effectiveness of import substitution in AIC we recommend to stimulate the realization of the started tendency of monopolization of this market, up to establishment of oligopoly. At that, it is necessary to form and support favorable conditions for getting maximum advantages from this market structure. In order to determine such conditions, let us use Fig. 1.

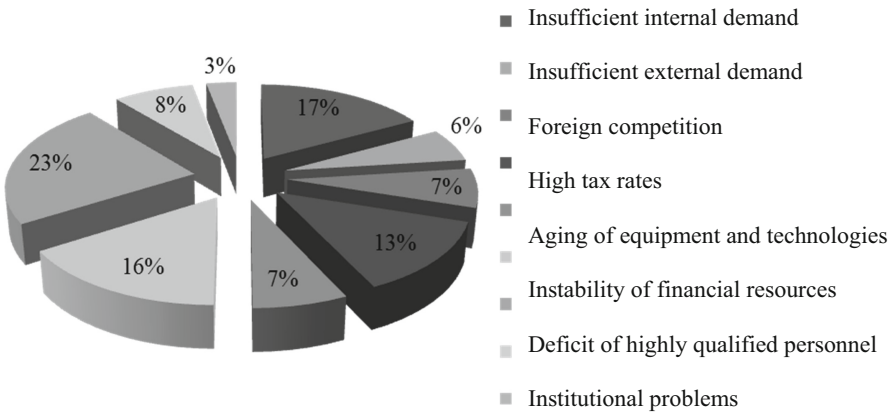

Fig. 1. The system of factors that restrain the development of the process of import substitution of AIC in Russian in 2016. Source: compiled by the authors on the basis of: (Federal State Statistics Service 2016).

As is seen from Fig. 1, the key factors that restrained the development of the process of import substitution of AIC in Russia in 2016 were high tax rates, instability of economic situation, inaccessibility of financial assets, etc. We recommend creation of agro-industrial special economic areas as a measure of influencing these factors in the interests of their transformation into the sources of growth and development of the Russian entrepreneurship in the AIC.

The special economic areas have tax preferences, financial assets are more accessible, and the economic situation is characterized by higher stability. At present, there are no special economic areas for enterprises of the AIC in Russia, which, in our opinion, hinders their development. This market is of high priority for the Russian economy, so the companies of the AIC have to receive access to the preferences provided within the special economic areas.

As compared to the current Russian policy for supporting the AIC companies, which supposes high expenses of the federal and territorial budgets for subsidizing, special economic areas are based on private investments. Moreover, unifying the companies of the AIC into special economic areas, the government will receive wider possibilities for their regulation, as, according to the Russian law, such possibilities do now allow setting strict requirements to the quality of products, innovative activity, and prices, which differs special economic areas.

5 Conclusions

It should be emphasized that AIC is not just a market, but has a strategic role for the Russian economy – especially in the conditions of unfavorable geo-political situation. This is a basis for application of flexible and preferential tools for stimulating the development of the process of import substitution into AIC, which should be based on agro-industrial economic areas.

The performed analysis showed that monopoly which is expressed in the form of oligopoly is the most preferable market structure in the AIC. The perfect competition, which is traditionally viewed as the most perspective market structure, showed the lowest effectiveness as to import substitution in the AIC. The perspectives of further scientific research in this sphere are seen in the context of specifying the tools of managing the process of restructuring the AIC market in favor of establishment of oligopoly.

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