

# Potential of Export-Oriented Import Substitution in the Eurasian Economic Union: the Case Study of the Agro-Industrial Complex

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*Abstract:* - Digitalization offers great opportunities for the development of economic potential. This is especially true for members of the Eurasian Economic Union (EEU) who face fierce competition in international markets from the developed countries. The purpose of this article is to substantiate the possibilities of the most complete use of the potential of export-oriented import substitution in the EEU in the agro-industrial sector under the conditions of digitalization of the economy. To achieve the goal of the study, the approach was used based on a combination of methods for the comprehensive analysis of the areas of strategic development of agro-industrial enterprises and statistical analysis. To establish economic interrelations, the matrix of import and export of various types of agricultural products in the EEU member countries has been proposed.

*Key-Words:* - import-substituting policy, integration, agriculture, import dependency restructuring strategies.

## 1 Introduction

Trade and economic integration is a key factor in improving the efficiency of the economy. The global market is constantly changing; it accelerates the speed of product development and introduction of new technologies. There are processes of active penetration of digital technologies in various spheres of society, which radically change their technological

mode [1]. One of the manifestations is the increase in e-commerce, creation of electronic trading platforms as universal intermediaries between producers and consumers. E-commerce very quickly occupied a prominent place in many product markets.

The relevance of the study of problems of digitalization of the economy, e-commerce, and related phenomena is determined by the fact that the share of industries (based on digital technology) is

constantly growing. The impact of digitalization on international trade has several manifestations. Such an impact can be seen as a qualitative change in the technological basis and organizational structure of international trade, as well as an increase in the share of sectors using digital technologies. Qualitative transformations are expressed in changing the principles of building a management structure, interaction between participants in trade relations, formation a market infrastructure. Therefore, data mining in the real-time mode will be in demand not only for faster decision-making but also for coping with unexpected market risks. Conventional sectors of the economy and public administration can also benefit from the introduction of analytical services using full information and analytical tools [2]. The modern business environment has contributed to the adoption of information systems to overcome operational shortcomings [3]. The processing system of internal control of organizations is primarily associated with the management of individual information elements that accumulate information on quantitative and qualitative indicators [4]. It is worth noting that multi-subject information platforms have become noticeably widespread as a business model that creates value by allowing direct interaction between several different groups of subjects [5].

Possibilities of the digital economy according to many researchers (Babkin *et al.* [6], Bolshakov *et al.* [7], Kapranova [8], Panshin [9]) should be used in any areas of socio-economic activity, for example, for developing the potential of export-oriented import substitution (Manin [10], Shaldaeva [11]). The analysis of statistical data shows that the majority of the EEU member countries are exporters and importers of agricultural products. At the same time, the share of mutual trade in the EEU is insufficient [12]. In this connection, the purpose of the study is to explore the possibilities of developing the potential of export-oriented import substitution in the countries of the Eurasian Economic Union.

## 2 Literature review

Prospects for the development of international trade, trends in import and export of various countries have been the subject of scientific discussions. Smith explained the possibilities of trade specialization by “absolute advantages”, which are differences in the costs of production [13]. Later, Ricardo began to consider the priority of comparative advantages for

trade specialization [14]. Ohlin and Heckscher have revealed the benefits of large-scale production [15, 16]. Linder argued that the state’s export specialization is linked to domestic demand for the products in question [17].

Conventional theories of international trade considered various factors influencing the processes of world trade. Today, there is a digital transformation of the economy, under the influence of which the role of information and communication technologies is increasing. The tools provided by digitalization radically change many areas of business [18]. Tapscott [19], Samuelson [20], Dixit and Nalebuff [21], Atkinson and Stiglitz [22] were the first who introduced the term digitalization into scientific use. Nowadays, this topic has expanded significantly. The impact of the digital economy on the labor market and the form of work organization is noticeable [23]. One can agree with Meltzer that the global digital economy is at the stage of active growth, the rapid development of innovation and widespread use of digital technologies [23].

Internetization and digitalization of the economy can give a powerful impetus to competitiveness. The development of digital space is necessary to ensure the free movement of goods, services, money, and labor [24]. Therefore, digital technologies should be an important part of the integration of countries [12]. In this connection, the interest of researchers in the strategy of import substitution arose within the EEU countries, because they faced the problem of a negative balance of foreign trade and the problem of low competitiveness of national goods in foreign markets (Reshetilo [25], Temroková [26]).

Earlier, the policy of import substitution was considered as a policy of industrialization; today, the import substitution is meant to be the change of certain production processes, the introduction of new mechanisms that will allow developing own production [27] with subsequent access to foreign markets. It should be noted that import substitution strategies are determined by its goals and conditions of macroeconomic development of governments. Thus, at different times, import substitution implied a combination of government methods within the framework of the theory of a mercantile system (protecting domestic producers through tax benefits, tariffs, quotas, etc.), the transition from the export of raw materials to the production of high value-added products (Latin American countries), as well as strong desire to enter foreign markets [28]. That is, at the

present stage of development, autarky cannot be considered as the only correct solution since it is incompatible with the features of the modern global economy. Most researchers agree that it is impossible to achieve great economic success because of economic closeness [29, 30, 31]. Development of ideas on dynamic security has led to a defined “floating” balance, when the market due to its movement inertia crosses an equilibrium point, from a condition of relative deficit to an account surplus of supply and demand, and vice versa [32].

The next logical thing for making an informed management decision on the formation of the strategy of import substitution is the need to conduct a continuous step-by-step analysis of supply and demand for products within the EEU.

### 3 Materials and Methods

The research methodology is based on a systematic approach, which implies a combination of tools of the

modified matrix method of import and export of trade flows between the EEU member countries, as well as a comprehensive analysis of trends – a strategic analysis of the external environment of the EEU agro-industrial enterprises. This combination is effective in studying some structural problems. The result of the research is a set of different development ways: characteristics of restructuring strategies for industry dependence on imports, parameters for influencing various factors on this process, etc.

In order to establish economic interrelations, the results of foreign trade activities for each type of product were grouped by country and type of product (Table 1). The matrix of interrelations of import and export of various types of agricultural products was developed on the basis of the methodology by Leontiev [33]. It is assumed that such a matrix can be the basis for calculating the volumes of produced agricultural products, the volumes of demanded products in the EEU member countries.

**Table 1.** Matrix of interrelations of import and export of various types of agricultural products in the EEU member countries

Manufacturers	Consumers				
	Russia	Belarus	Kazakhstan	Armenia	Others
Russia	$V_{min,t+1ij}^{calcul}$	$V_{min,t+1ij}^{calcul}$	$V_{min,t+1ij}^{calcul}$	$V_{min,t+1ij}^{calcul}$	$V_{min,t+1ij}^{calcul}$
Belorussia	$V_{min,t+1ij}^{calcul}$	$V_{min,t+1ij}^{calcul}$	$V_{min,t+1ij}^{calcul}$	$V_{min,t+1ij}^{calcul}$	$V_{min,t+1ij}^{calcul}$
Kazakhstan	$V_{min,t+1ij}^{calcul}$	$V_{min,t+1ij}^{calcul}$	$V_{min,t+1ij}^{calcul}$	$V_{min,t+1ij}^{calcul}$	$V_{min,t+1ij}^{calcul}$
Armenia	$V_{min,t+1ij}^{calcul}$	$V_{min,t+1ij}^{calcul}$	$V_{min,t+1ij}^{calcul}$	$V_{min,t+1ij}^{calcul}$	$V_{min,t+1ij}^{calcul}$
Others	$V_{min,t+1ij}^{calcul}$	$V_{min,t+1ij}^{calcul}$	$V_{min,t+1ij}^{calcul}$	$V_{min,t+1ij}^{calcul}$	$V_{min,t+1ij}^{calcul}$
TOTAL	$\sum_{i=1}^n V_{min,t+1ij}^{calcul}$	$\sum_{i=1}^n V_{min,t+1ij}^{calcul}$	$\sum_{i=1}^n V_{min,t+1ij}^{calcul}$	$\sum_{i=1}^n V_{min,t+1ij}^{calcul}$	$\sum_{i=1}^n V_{min,t+1ij}^{calcul}$

Estimated production volumes in the context of all types of products are taken into account when calculating the balance for each type for the next accounting period ( $V_{min,t+1i}^{calcul}$ ) according to the formula

$$V_{min,t+1i}^{calcul} = V_{ti}^{agr/pr produced} - V_{ti}^{agr/pr consumed} - V_{ti}^{agr/pr exp} + V_{ti}^{agr/pr imp} \quad (1)$$

where  $V_{ti}^{agr/pr produced}$  – volume of agricultural production in the  $i$ -th government;  $V_{ti}^{agr/pr consumed}$  – volume of consumed agricultural products in the  $i$ -th government;  $V_{ti}^{agr/pr exp}$  – volume of exported agricultural products in the  $i$ -th government;  $V_{ti}^{agr/pr imp}$  – volume of agricultural products in the  $i$ -

th government, which can be brought from one of the EEU countries;  $t$  is the base period selected for calculations;  $t + 1$  – predicted period for calculations;  $i$  is the index of the country of origin;  $j$  is the consumer country index,  $n$  is the number of countries.

The goal of the export-import linkage is to accurately identify the sectors of the agro-industrial complex that are of interest for import substitution using the existing export potential.

The authors used foreign trade statistics during the study, which is based on electronic customs declarations. Data analysis provides a whole picture of the size and structure of the agro-industrial market within the territory of the EEU member countries, and

the regional and commodity structure of trade in agricultural products in general.

The final result of the use of the methods and materials described above should be the prioritization of various scenarios for implementation of the export potential of import substitution for all criteria, taking into account their importance and production capabilities of the interacting countries.

**Table 2.** Matrix of interrelations of import and export of agricultural products in the EEU member countries in 2017 (million US dollars)

Exporters	Importers					Total produced
	Russia	Belarus	Kazakhstan	Armenia	Other countries	
Russia	227,500			1,873	128,427	357,800
Belarus		29,267				29,267
Kazakhstan		4,964	29,600		13,939	48,503
Armenia				2,224		2,224
TOTAL consumed	227,500	34,231	29,600	4,097	142,366	437,794

Data source: Official site of the Interstate Statistical Committee of the Commonwealth of Independent States [34]

The results show that Russia and Kazakhstan are exporting countries in the EEU. Calculation of deviations between the export and import of agricultural products is shown in Table 3.

**Table 3.** Deviations of the flows of import and export of agricultural products (million US dollars)

Region	TOTAL exports	TOTAL import	Deviation
Russia	357,800	227,500	130,300
Belarus	29,267	34,231	-4,964
Kazakhstan	48,503	29,600	18,903
Armenia	2,224	4,097	-1,873
TOTAL	437,794	295,428	142,366

Data source: [13]

The calculation results showed that for Russia, the exports of which by \$130.3 billion exceed imports, Armenia (\$1.9 billion) and other countries not included in the integration grouping may be off-takers (+\$128.43 billion). Belarus, which consumes more than it produces, can import agricultural products from Kazakhstan (-\$5 billion). Thus, it is possible to calculate the possibilities of mutual international trade in all types of agricultural products produced within the territory of the EEU. If the volume of any species is not enough, then they can be exported from other countries.

## 4 Results

Based on statistical data about export and import of products from the EEU countries, the matrix of interrelations of import and export of agricultural products in the EEU member countries was calculated.

The final document should be the matrix of interrelations of import and export of various types of agricultural products in the EEU member countries. It shows the balance of opportunities and needs in agro-industrial production with their distribution within the EEU member countries. Within this matrix, the balance of needs and capabilities of the agro-industrial capacities of each of the EEU member countries will be calculated and distributed by the territory.

## 5 Discussion

Thus, it can be assumed that the proposed approach to the formation of the matrix of interrelations between import and export of various types of agricultural products opens up new prospects for export-oriented import substitution, as well as the growth of regional and global competitiveness.

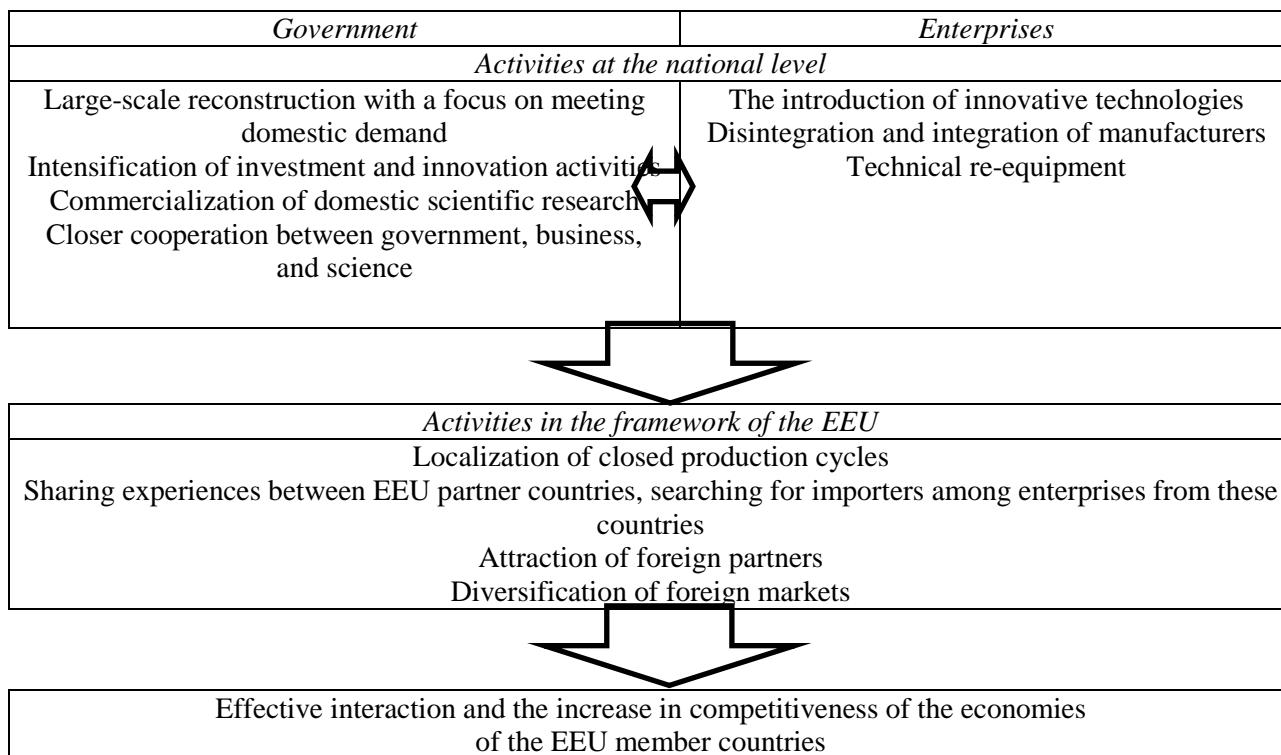
The authors believe that the results of the study of developing the potential of export-oriented import substitution in the EEU (using the agro-industrial complex as an example) under the conditions of digitalization of the economy will allow implementing a "smart import-substituting policy". In the process of developing the potential of export-oriented import substitution within the territory of the EEU, it is proposed to use standard strategies for the restructuring of industry-specific import dependency, the characteristics of which are shown in Table 2.

They are based on sustainable strategies of marketing communications of companies within the framework of import-substituting behavior in the market [35].

**Table 2.** Characteristics of restructuring strategies for sectoral import dependency

<i>State of import dependency</i>	<i>Type of strategy</i>	<i>Characteristics of the strategy</i>
Safety (up to 30.0%)	Competitive development strategy	Increase in productivity and efficiency of using of industry potential and export of products for which an excess of production exist (focus is on final products with high added value) Constant monitoring of world experience and maximum development of innovative technologies and products, development of new segments of the domestic/foreign markets and increasing in the number of contractors. Minimization of import and the organization of agricultural production, which has reached a critical point of import
Moderate crisis (30.0-50.0%)	Push strategy	Optimization of the production structure, attraction of investments and alternative financial tools in order to modernize production and reduce production costs Diversification of the range focusing on different segments of consumers and improving product quality Rational use of existing resource potential (production and export of products with high added value will also affect supply in the domestic market). Control of export of limiting products
Deep crisis (50.0-80.0%)	Aggressive recovery strategy	Large-scale reconstruction with a focus on meeting domestic demand Disintegration and integration of manufacturers Diversification of foreign markets Activation of investment and innovation activities and technical re-equipment (focus on reducing the underrun and bringing domestic producers to the next level) using all possible options: process acquisition, purchase of a license, use of foreign scientific and technological potential, commercialization of domestic scientific research and closer cooperation between government, business, and science, attraction of foreign partners Gradual localization of closed production cycles To overcome import dependency on unusual types of goods and insufficient resources – introduction of innovative technologies, sharing experiences between EEU partner countries, search for importers among the enterprises from these countries
Protracted crisis (over 80.0%)	Revivification strategy	Development of a long-term integrated inter-sectoral policy with the involvement of the state, scientific and educational spheres and business; long-term measures for the development of domestic raw materials base; maximum government support and development of long-term investment crediting mechanisms The elimination of unprofitable agricultural enterprises and the maximum orientation to the uncovering, support, and effective use of possible development reserves with the subsequent restoration of other components of the industry

In the authors' opinion, it is necessary for Russia to take advantage of an aggressive recovery strategy. Its implementation scheme is shown in Figure 1.



**Figure 1.** Implementation scheme for the strategy of aggressive recovery

## 4 Conclusion

Summing up, one of the most effective directions of economic development for the economies of Russia and the EEU countries is the implementation of import substitution policy. The matrix of interrelations of import and export of various types of agricultural products proposed in this article will make it possible to use the existing resource advantages for realizing the potential of export-oriented import substitution. Such a matrix can serve as a basis for determining promising directions for the development of export-oriented potential.

The features of typical strategies for restructuring the sectoral import dependency that are formulated in the article can be used to identify the development directions of each of the EEU countries. The proposed measures will improve the efficiency and effectiveness of managerial decisions while estimating economic relationships between the EEU member countries and significantly increase the potential of export-oriented import substitution in the agricultural sector.

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### References:

- [1] Digital Transformation of Industries: In Collaboration with Accenture, 2016. <http://reports.weforum.org/digital-transformation/wp-content/blogs.dir/94/mp/files/pages/files/digital-enterprise-narrative-final-january-2016.pdf>
- [2] Gasanov, T.A., Gasanov, G.A., Digital Economy as a New Direction of Economic Theory, Regional Problems of Transforming the Economy, No. 6(80), 2017, pp. 4-10.

- [3] Akhter, F., Unlocking Digital Entrepreneurship through Technical Business Process, *Entrepreneurship and Sustainability Issues*, Vol. 5, No. 1, 2017, pp. 36-42. [https://doi.org/10.9770/jesi.2017.5.1\(3\)](https://doi.org/10.9770/jesi.2017.5.1(3))
- [4] Bychkova, S.M., Makarova, N.N., Zhidkova, E.A. Measurement of Information in the Subsystem of Internal Control of the Controlling System of Organizations of the Agro-Industrial Complex, *Entrepreneurship and Sustainability Issues*, Vol. 6, No. 1, 2018, pp. 35-43. [https://doi.org/10.9770/jesi.2018.6.1\(3\)](https://doi.org/10.9770/jesi.2018.6.1(3))
- [5] Lynch, P., Power, J., Hickey, R., Messervey, T., Business Model Strategies: Flexibility Trade in Emerging Low Voltage Distribution Networks, *Entrepreneurship and Sustainability Issues*, Vol. 4, No. 3, 2017, pp. 380-391. [https://doi.org/10.9770/jesi.2017.4.3S\(12\)](https://doi.org/10.9770/jesi.2017.4.3S(12))
- [6] Babkin, A.V., Burkaltseva, D.D., Kosten, D.G., Vorobev, Yu.N., Formation of the Digital Economy in Russia: Essence, Features, Technical Normalization, Development Problems, Scientific and Technical Statements of the St. Petersburg State Polytechnic University. *Economics*, No. 3, 2017, pp. 9-25.
- [7] Bolshakov, S.N., Leskova, I.V., Bolshakova, Yu.M., Digital Economy as a Component of the Technological Platform of Public Policy and Management, *Issues of Management*, No. 1(44), 2017, pp. 64-70.
- [8] Kapranova, L.D., Digital Economy in Russia: State and Development Prospects, *Economy. Taxes. Law*, No. 2, 2018, pp. 58-69.
- [9] Panshin, B., Digital Economy: Features and Development Trends. *Science and Innovation*, No. 3(157), 2016, pp. 17-20.
- [10] Manin, P.V., Mechanism of Management of the Export Potential of Industrial Enterprises, *Vestnik VUiT*, No. 3(34), 2015, pp. 32-40.
- [11] Shaldaeva, L.I., The Role of Export Potential in the Socio-Economic System, Collection of Scientific Works of VNIIOK, No. 7, 2014, pp. 639-643.
- [12] Eurasian Economic Integration: Facts and Figures, 2015. [http://www.eurasiancommission.org/en/Documents/broshura26\\_ENGL\\_2014.pdf](http://www.eurasiancommission.org/en/Documents/broshura26_ENGL_2014.pdf)
- [13] Smith, A. *History of Economic Thought. An Inquiry into the Nature and Causes of the Wealth of Nations*, Moscow, Eksmo, 2007.
- [14] Ricardo, D., *The Principles of Political Economy and Taxation*. Vol. 1, Ch.7. [http://www.seinstitute.ru/Files/Veh6-08\\_Ricardo.pdf](http://www.seinstitute.ru/Files/Veh6-08_Ricardo.pdf)
- [15] Hecksher, E., *The Effects of Foreign Trade on the Distribution of Income*, 1917.
- [16] Ohlin, B., *Interregional and International Trade*, Moscow: Delo, 2004.
- [17] Linder, S.B., *An Essay on Trade and Transformation*. Uppsala: Almqvist & Wiksells Boktryckeri AB, 1961, pp. 82-87.
- [18] The Global E-Commerce Market will Grow by the End of 2017 by 17%, 2017. <https://www.retail-loyalty.org/news/mirovoy-rynok-elektronnoy-kommertsii-vyrastet-po-itogam-2017-goda-na-17/>
- [19] Tapscott, D., *Blockchain Revolution* (Trans. from English by K. Shashkova, E. Ryakhina), Eksmo, 2017.
- [20] Samuelson, P.A., *Economics. Manual* (Trans. from English), Sevastopol: Akhtiar, 1995.
- [21] Dixit, A.K., Nalebuff, B.J., *The Art of Strategy: A Game Theorist's Guide to Success in Business and Life*, W.W. Norton & Company, 2010.
- [22] Atkinson, A.B., Stiglitz, J.E., *Lectures on Public Economics*, McGraw-Hill, 1980.
- [23] Meltzer, J.P., *Digital Trade and Its Impacts on Foreign Trade in Services*, n.d. [http://www.mdic.gov.br/images/REPOSITORIO/scs/decin/Eventos/Joshua\\_Meltzer.pdf](http://www.mdic.gov.br/images/REPOSITORIO/scs/decin/Eventos/Joshua_Meltzer.pdf)
- [24] World Bank Group, *The EAEU 2025 Digital Agenda: Prospects and Recommendations Overview Report*, 2018. <http://documents.worldbank.org/curated/en/850581522435806724/pdf/EAEU-Overview-Full-ENG-Final.pdf>
- [25] Reshetilo, T.V., Import Substitution in Russia: Problems and Prospects, *Vestnik TIUiE*, No. 2(24), 2016, pp. 3-5.
- [26] Temroкова, A.Kh., Import Substitution in Modern Conditions of Overcoming Economic Sanctions, *Scientific News*, No. 7, 2017, pp. 42-47.
- [27] Sokolova, O.Yu., Kolotyryn, E.A., Skvortsova, V.A., Import Substitution as an Industrial Policy Strategy, *News of High Schools. Volga Region. Social Science*, No. 1(41), 2017, pp.130-139.
- [28] Bezpалov, V.V., Import Substitution: Analysis of Approaches to the Definition of the Concept, *Management of Economic Systems*, No. 11(93), 2016, p. 9.

- [29] Ivanov, O.B., Bukhvald, E.M., Problems of Import Substitution in the Development Strategies of the Russian Regions, ETAP, No. 4, 2017, pp. 24-41.
- [30] Ilyukhov, A.A., Forced Closed Economy: Historical Experience, Actual Problems of Economics and Law, No. 1(33), 2015, pp. 26-31.
- [31] Kuzmin, E.A., Theoretical and Empirical Study of Economic Security in the Liberalization of Trade Relations: Part 3. Theoretical Expansion of the Perception of Fragmentary Economic Security. National Security/Nota Bene, No. 3, 2013, pp. 436-445.
- [32] Kuzmin, E.A., Sustainable Food Security: Floating Balance of Markets, International Journal of Economics and Financial Issues, Vol. 6, No. 1, 2016, pp. 37-44.
- [33] Leontiev, V., Factor Proportions and the Structure of American Trade, Further Theoretical and Empirical Analysis, The review of Economics and Statistics, No. 4, 1956, pp. 390-399.
- [34] Official Website of the Interstate Statistical Committee of the Commonwealth of Independent States, 2018. <http://www.cisstat.com/>
- [35] Chernova, V.Y., Zobov, A.M., Starostin, V.S., Butkovskaya, G.V., Sustainable Marketing Communication Strategies of Russian Companies under the Import Substitution Policy, Entrepreneurship and Sustainability Issues, Vol. 5, No. 2, 2017, pp. 223-230. [https://doi.org/10.9770/jesi.2017.5.2\(5\)](https://doi.org/10.9770/jesi.2017.5.2(5))