



## **Topical Issues of the Theory and Practice of Import Substitution in the Russian Federation**

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### **ABSTRACT**

The article analyzes the status and prospects of development of the activities of governing bodies and industries in the Russian Federation in the field of import substitution. It is shown that after the crisis of 1998, the first significant measures to reduce the volume of imports by development of domestic production were taken in Russia. Then, the process of import substitution slowed. This problem greatly exacerbated due to the introduction of economic sanctions by the West and by the Russian counter-measures to restrict imports, mainly food. In this connection, dependence of a number of important sectors of the economy on imports and the lack of measures taken at all levels of management of the economy to improve the efficiency of import substitution are shown. One reason for this situation is weak development of scientific and methodological foundations of this economic phenomenon. The elements of the theory of import substitution and practical recommendations on the use of program-target method for planning work on import substitution through the development and implementation of targeted programs at the federal, regional and enterprise levels were proposed.

**Keywords:** Import Substitution, Import Replacement, Competitiveness, Quality, Targeted Programs

**JEL Classifications:** L10, L16, F51, B41, D24

### **1. INTRODUCTION**

The term "import substitution" is one of the leaders in the number of mentions on the Internet: Search on "import substitution" in Yandex generates 2 million results. This is understandable, because the problem of import substitution is discussed intensively at different venues and from different points of view. In his annual address to the Federal Assembly, Russian President Putin noted a reasonable import substitution – this is our long-term priority, regardless of external circumstances (Putin, 2014).

The scientific, technical and economic literature discusses the issues of import substitution in relation to specific sectors, less often – to the regions. The issues of how to avoid distortions and realize the potential of import substitution in Russia were

addressed in the discussions at the Moscow economic forum in 2014 and 2015.

The authors of this article also contributed to the discussion of this issue (Antonova and Belobragin, 2015; Belobragin and Zvorykina, 2015).

However, many methodological issues in the debate remained unclear: How to ensure the comprehensiveness of the decisions taken by the federal authorities, regions, business communities; where, at what time and what cost the plans of import substitution will be implemented; there is no established terminology in this area of activity. In other words, a theory of import substitution in the framework of the science of strategic management is required.

Some important issues of the theory and practice of import substitution, its impact on competitiveness and sustainable development of enterprises, industries, regions and the country as a whole will be considered from a systemic position by the authors in this article.

## 2. METHODOLOGY

### 2.1. Historical Background and Elements of the Theory of Import Substitution

Import substitution as a phenomenon first emerged after the Second World War, when the colonial system collapsed and new states of the former colonies and dominions gained relative economic independence. The problems of replacing imported goods supplied by the metropolises for economic and employment recovery emerged. In subsequent years, import substitution was carried out by Latin America and by developed countries as a non-market way to improve the competitiveness of products through providing various preferences to business from the state. (Kadochnikov, 2005).

This practice was carried out in a number of industries in the USSR. In post-Soviet Russia, the first visible steps on import substitution were made after the devaluation of the ruble in 1998, when the volume of imports to Russia declined significantly, which was the most important factor in economic growth, especially in manufacturing, in 1999-2000.

For example, with the participation of the Russian Meat Union, back in 2002, protective measures against imports of finished meat products were developed simultaneously with the introduction of a package of measures to improve product quality. Today, foreign sausage and ham are rare on supermarket displays. Russian meat processing plants produce even sausages that are complex in the production, such as Brunswick. The share of the remaining imports in this group of products does not exceed 5% (Petrov 2015a; Petrov, 2015b).

At the beginning of the 2000s, Russian steel plants did not produce large-diameter pipes for the laying of main oil and gas pipelines, and Transneft, Gazprom and other companies purchased them abroad. As part of the program of import substitution, the United Metallurgical Company in collaboration with a group of peer companies has mastered modern integrated production of this type of pipes by 2008. As a result, today the share of domestic pipes used by Gazprom in the construction of gas transportation routes is up to 95%.

Then the process of import substitution slowed.

At the same time, the practice of import substitution before the last crisis in 2014 has identified a number of significant gaps in some industries. In the automotive industry, the share of imports dropped from 59% in 2009 to 25.4% in 2013 thanks to foreign firms setting up manufacturing facilities in Russia. However, this is mostly a “screwdriver” production. The legislative requirement to increase the share of purchase of auto components of the Russian manufacturers has not been established. As a result, the

share of the car components of domestic manufacturers is < 10% (Brooks, 2013).

The so-called localization primarily involves the production of simple car elements (for example, the frame for “Volvo” truck assembled at the plant in Kaluga, in the Moscow region, is made of Swedish steel using the foreign equipment and “Volvo” technology).

The Russian authorities did not demand technology transfer from foreign investors to Russian companies (Naude et al., 2013; Sonway and Barber, 2000).

The problem of import substitution exacerbated due to economic or political upheavals, such as the economic crisis of 2008-2009, a significant depreciation of the ruble in late 2013 and in 2014, and the introduction of strict sanctions against the Russian economy in relation to the events in Ukraine.

The situation in 2014 activated the process of import substitution in Russia, including at the level of state policy.

### 2.2 Methodical Approach to Import Substitution in a Variety of Industries

Let's consider the state of import dependence in a number of sectors of the economy that can hardly be called something other than critical. Almost 18% of the GDP of the country is directly linked to imports (Tsvetkov, 2010). The policy of the 90s of the last century has almost led to the elimination of the entire industry sectors – production of the electronic component base; production in the light industry was largely reduced, which is particularly alarming; machine-tool industry collapsed – 99% of machines for mechanical engineering are imported from abroad. Shopping malls, warehouses of goods, service stations for foreign cars are now located on the grounds of the famous Moscow machine-tool plants named after Ordzhonikidze, “red proletarian,” grinders, Leningrad plant named after Sverdlov. Krasnodar and Ivanovo machine-tool plants can barely survive.

An important area of IT is 90% dependent on imports: 94% of software and 99% of computers. In instrument making industry, the import of medical and industrial automation devices is 80-90%. One reason for this situation is the lack of the modern component base.

The share of imported components in engineering depending on the machine type ranges from 25% to 100%, the data on car components is listed above.

The share of imports in the pharmaceutical and medical technology segment is 80%, and for some products it reaches 100%.

The services are the result of direct interaction between the consumer and the performer and the result of the independent activity of the performer to meet the needs of customers (GOST ISO 9000-2011), their provision is interconnected not only with production, but also with the process of interaction. Provision

of services involves the use of technical equipment, chemicals, measurement means and methods, innovative technologies, etc. Research conducted at the institute of regional economic studies has shown that up to 80% of foreign drugs, materials and equipment is used in the provision of some services, such as beauty services (hairdressing, spa services), cleaning services, dry-cleaning and laundry services.

It is advisable to take advantage of this opportunity and suggest a strategy of independent development of services based on the application of innovative technologies for import substitution in order to achieve a leading position in the provision of services.

A problem of import substitution in the shipbuilding industry is very acute. The participation of Russian producers in the supply of equipment for the construction of ships is excluded already at the stage of preparation of the technical documentation.

Rural producers are almost 100% dependent on imports of corn seeds and breeding livestock. We will especially consider the status of the import substitution of food, the import share of which reaches 39% (Petrov, 2015; Tsvetkov, 2010).

The dependence of the domestic processing industry and trade on supplies from abroad is particularly evident in view of the fact that the Government of the Russian Federation responded to Western sanctions on August 7, 2014 and limited the export to Russia of a number of products, introduced a complete ban on imports of beef, pork, poultry, and partially finished meat products, fish, cheese, milk, fruits and vegetables from Australia, Canada, the EU, the US and Norway for 1 year (Fedolyak, 2014). Total annual import of the restricted production was at the time estimated at \$9.1 bln.

Analysis of the food sector of the Russian economy has shown that in an average year, our country imports food products for \$50 bln, of which \$37 bln falls on imports from non-CIS countries. The expenses of \$11 bln are understandable. But how can we explain the import of fish and fish products worth \$2.5 bln, import of 750 thousand tons of potatoes and up to 15% of the total sales of onions and carrots?

Before turning to the analysis and generalization of measures on import substitution, it is necessary to state the position of the authors on some of the elements of the theory of import substitution on the assumption that such area of economic activity as import substitution cannot develop without scientific and methodical bases.

On the one hand, the theory contributes to the production of new knowledge, on the other hand, it is enriched by the sum of the knowledge gained from experiments and practical experience.

The starting position is that import is one of the parties to the international division of labor. It is impossible to produce a whole range of products – for example, engineering products – in one country or grow tropical products grown in the North. Ricardo's classical theory of comparative advantage is also valid (Ricardo, 1955).

Therefore, the extent of the need for import and import sufficiency should be assessed in every sector and region (Semenov, 2012). Import of the unique equipment and new technologies should be preserved while keeping adapting to the conditions of the Western embargo. The recommendations of the Soviet economists from 1989 on the import policy are interesting: Target for the austerity, prudent use of monetary funds, refusal to purchase products that are not necessary (Brief Dictionary of Economics, 1984).

### 3. RESULTS OF RESEARCH

#### 3.1. Ensuring Comprehensiveness in Addressing the Problems of Import Substitution

We will illustrate this thesis with an example of mastering the production of the machine capable to displace foreign manufacturers of similar equipment from the market. High precision machining requires that the most important components and details of the future competitive machine – for example, bearings – also have a higher precision class. Many related problems have to be solved simultaneously: Where to find engineers who can design it; particularly hard special steels that are indispensable in the production of key components of high-precision machines; high quality and perfect electronics; high quality masters able to work on such equipment.

Accurate classification of the forms of import substitution. According to the authors, two types of import substitution should be considered: The organization of the own production and the replacement of one importing country with another.

#### 3.2. Import Substitution by Organizing the Own Production

There are three areas:

- Import substitution of relatively simple products, which requires development of new technologies and modern production taking into account the cost-effective use of resources. This can be implemented within a year;
- Import substitution and organization of mass (serial) production of complex products that require modernization of production, development of critical technologies, organization of mass training. It will take 2-3 years;
- Import substitution of complex products, the production of which requires research, long design and development cycle, and construction of new production facilities while significantly reducing resource intensity. It will take at least 3-5 years.

To implement these three areas, the measures of the federal and regional level on import substitution should be developed, and, of course, additional funding is required. According to Glazyev, average production for import substitution worth 1 mln rubles will require no <500 thousand. Rubles in investment.

#### 3.3. Import Substitution by Replacing One Importing Country with Another

We propose to introduce a new term and call this approach “import replacement.” It should be considered in two ways:

- Enforced, when importing country for any reason can

no longer supply the products (in the final result, import replacement is transformed into import substitution);

- For commercial reasons.

In the case of import replacement, it is important to conduct an audit of the fund of standards and adopt measures to tighten the conformity assessment procedures (certification, testing and monitoring).

### 3.4. Import Substitution in the Service Sector

In the area of activity close to the authors, the services sector, given the urgency and scale of the operations for the implementation of import substitution and normative legal acts entered into force, it is necessary to conduct research to identify the primary and the medium- and long-term challenges for ranking the problems faced by the industry of consumer services. For instance, all supplies should be started to produce a lot earlier than the equipment used. The entire range of materials used, equipment, etc. should be worked through. The study will have the following tasks:

- Research of the services market of Russia and its interaction with other foreign countries;
- Analysis of domestic production and identical products of the foreign counterparts;
- Research of professional and higher education institutions for the presence of professionals who can work in this field and the development of professional standards for these specialties.

After solving this problem, the industry will be independent of foreign countries and Russia will have its own developed industrial base and new jobs. Thus, complex research will form the strategy of import substitution in one of the most socially important sectors of the economy – the services sector.

### 3.5. Current and Future Issues of Import Substitution

When solving the current and future issues of import substitution, two factors should be taken into account:

- Import substitution as a non-market mechanism objectively affects the decrease of competitiveness;
- Import substitution policy promotes economic growth in the short term, in the best case – in the medium term.

Long-term strategy (taking into account import substitution policy) should be built on the basis of improving the competitiveness at all economic levels – federal, regional, enterprises (organizations). The authors propose to formulate strategic goals for sustainable development of import substitution by using the ideas proposed by the professors of the French business school INSEAD Kim and Mauborgne and described in the paper “blue ocean strategy.” This book was the result of a study of more than thirty sectors in the last 100 years.

By analyzing the data obtained, the authors found a certain sequence of strategic thinking that preceded the creation of a new market or industry. They called it a blue ocean strategy. Kim and Mauborgne include all industries that currently do not exist in the blue ocean; they call them an unknown market space, free from competition. In blue oceans, according to the scientists, the demand is created rather than is the subject of a

fierce struggle. There is ample opportunity for the company to develop, increase profits and rapidly grow (Kim and Mauborgne, 2008).

The logic of the blue ocean strategy differs from traditional strategies that focus their attention on the struggle in the existing market space, which the authors called a scarlet ocean. The researchers say that the scarlet oceans represent all the industries of today – a known market space. The boundaries of the sector are clearly defined and are not contested, and the rules of competition are absolutely clear. Under these rules, companies are trying to outdo each other to get the right to meet as much of the existing demand as possible. With the increased competition in this market, the growth and profit prospects for the company are becoming increasingly questionable. New items are transformed into mass consumer goods, and the growing competition, as Kim and Mauborgne say, colors the waters of this business ocean into blood red (Kim and Mauborgne, 2008). The main differences of the strategies identified by Kim and Mauborgne are presented in the Table 1.

Kim and Mauborgne believe that in the long term, the blue oceans will become the main source of economic growth, and the potential of the majority of the segments of the scarlet oceans will be gradually reduced. This will be possible thanks to the fact that technological advances provide only an increase in productivity of the industry, allowing providers to create a wide range of goods and services.

Import substitution is an important lever for the economy, designed to solve a number of acute and urgent issues of the country’s exit from the crisis. However, at the same time, it is necessary to solve a strategic task – move from import substitution to the export-oriented economy, i.e., focused on the “blue ocean strategy,” gradually displacing the “scarlet ocean” of import substitution.

## 4. DISCUSSION

### 4.1. Strategic Measures to Focus the Systemic Work on Import Substitution

The participants of the process of import substitution, primarily investors, need basic and unambiguous prospects for this activity

**Table 1: The scarlet ocean strategy against the blue ocean strategy**

Scarlet ocean strategy	Blue ocean strategy
Struggle in the existing market space	Creating a free competitive market space
Victory over competitors	Ability to be not afraid of competition
Exploiting existing demand	Creation and mastery of new demand
Value/costs compromise	Destruction of the value/costs compromise
Construction of the entire system of the company activity based on the strategic choices focused either on differentiation or low costs	Construction of the entire system of the company activity in accordance with the objective of simultaneously achieving differentiation and cost reduction

and stable conditions and rules of the game (Peregrodieva, 2012). “Even our retaliatory sanctions” are not new stable conditions for decades, but only temporary restrictions for... 1 year (Boldyrev, 2014; Burko, 2013).

In such circumstances, investment becomes very risky. Therefore, the main incentive for small and medium businesses, in particular for the farmer, is to ensure sales.

#### 4.2. Setting Priorities

Setting priorities with limited resources is special in times of economic crisis. “Due to the modernization of industry, construction of new enterprises, localization of competitive production in Russia, we will be able ... to significantly reduce the import of many items, give our market back to domestic producers,” – said Putin. “This includes the production of software, electronic equipment, power equipment, textile industry and, of course, the food market. I consider it necessary in the short term to analyze the possibilities of competitive import substitution in the industry and agriculture ....”

Analysis of the initiatives of the federal and regional governments, unions, associations and other organizations conducted by the authors showed that the timing of a number of programs, plans and projects is greatly underestimated, and at first can be defined as “an arrogant faith in success.” There are statements by the persons responsible for this area of activity that in case of non-delivery for the embargo of products for civilian objects, they can be mastered by our industry in a period of 6 months to 2 years.

Let’s consider a hypothetical real term of mastering the propulsive system as part of a vehicle:

- Development of technical specifications and the project – 6 months;
- Design – 3 years;
- Bringing to the design parameters – at least a year;
- Preparation for production, including personnel, even it is carried out in parallel with the design – 1 year.

As a result, the cycle is not < 5 years.

For simple products for machine building, the timing in the official’s statement is real.

Creation of fixed assets for the modern high-tech, knowledge-intensive industries should be started from scratch. There is no hope for import substitution in agricultural production in the short term.

Import substitution in the meat food sector will require up to 7 years, with greater efforts in the area of beef cattle, associated with a long investment cycle and livestock farms payback.

Import substitution with domestic fruit will require a long time as well – 8-10 years for apples.

At the same time, import substitution for the “Borscht set” – potatoes, cabbage, carrots, beets and onions – is possible in the short term (Belobragin and Zvorykina, 2015).

#### 4.3. Investments

The costs of implementation of the import substitution program are not entirely clear yet. There are different opinions. Economic Development Minister of the Russian Federation Ulyukayev offers to use state funds that some believe are absolutely inviolable. Chubais believes that it is relatively painless to increase the public debt.

President of the association “Rosagromash” Babkin believes that “you need to change lending policy under which loans cost 25-25%, reducing them to 3%. Reduce taxes. Expand the tax maneuver in the opposite direction – the resources in the domestic market should be cheaper. Organize a system of support for non-commodity exports” (Babkin, 2014).

The industry development fund established in accordance with the Federal Law “On Industrial Policy of the Russian Federation” may become an important source of lending to enterprises in import substitution. The fund provides for the use of the mechanism of recurrent financing at reduced rates for investment projects of the medium-sized businesses. The Russian Ministry of Industry has already worked out the fund operation scheme and has planned about 19 bln. Rubles in the budget of 2014-2017 for its funding.

#### 4.4. State Support for Import Substitution

According to the Government of the Russian Federation, government costs on import substitution through to 2020 will amount to 1.265 trillion rubles (about 23 billion euros). The Ministry of Industry and Trade has approved more than 2 thousand projects designed to reduce Russia’s dependence on imports in various sectors.

In support of these projects, a powerful mechanism for standardization will be used. Rosstandart adopted a standardization sheet for 2015-2017 in the field of import substitution. It includes the development of specific national standards for industries that will receive state support in the work on import substitution. The sheet is based on a direct order from the ministries, especially the Ministry of Industry and Trade of Russia.

500 standards will be developed in the first stage of 2015-2017, which will close the need for regulations on the program of the Ministry of Industry and Trade of Russia. Emphasis will be placed on the machines and oil and gas equipment. They will allow companies to establish commercial production of goods, where the dependence on imports proved critical. 400 documents are based equally on the international and European standards; they include some American ASTM standards for test methods. The remaining standards are the original design.

There are cases when the company urgently needs legal and technical documentation to launch the production of important products for the country. In this case, it can work with translated documents.

Then, requirements that are more stringent than international will be introduced in the standards. In practice, it is a “pulled”

standardization, as was done with the classes of motor fuel – from Euro-2 to Euro-5 (Antonova and Belobragin, 2015).

Brand new rules were introduced in the Federal Law “On Standardization in the Russian Federation,” which allows the Russian Ministry of Industry and other ministries conducting the work on import substitution to refer to the existing standards. It was enforced on July 1, 2015. This will set out the text of the standard that will simplify the process of its development, coordination and assessment in the legal act (Antonova and Belobragin, 2015).

#### 4.5. Real Situation in Import Substitution and Ways to Improve Efficiency in this Area

Unfortunately, the authors have no access to summarized material on the country, so we use information on individual sectors and industries.

It was noted above that the Russian Ministry of Industry has developed a detailed plan of import substitution in the industry. The Ministry of Agriculture of Russia and individual corporations and associations have similar plans.

Taking into account previous work, we can say that the fundamental issues of import substitution were addressed in the field of military shipbuilding on missile carriers “Borei-A” and multi-purpose nuclear submarines “Yasen-M” with the use of exclusively Russian technology. The practice of public procurement of imported products is implemented only when there are no domestic counterparts.

In 2015, “Gazprom Neftekhim Salavat” is going to finish the construction of the complex for the production of acrylic acid and acrylates – a basis for the production of many hygiene products; so far, almost the entire required volume of these products is purchased abroad. After entering the full production capacity at the plant “Tobolsk-propylene,” which belongs to the group of companies “Titan,” Russia will turn from an importer into an exporter of this product.

For example, the association “Soyuzmoloko” developed the program of development of the industry for the coming years after the imposition of sanctions. Dairy industry expects to receive 60 bln rubles of additional budget funding in 2015-2020. During this period, it is expected to completely eliminate dependence on imports, which currently stands at 40%. State aid, according to industry executives, should be provided not only in “monetary terms.” Even in the case of the lifting of sanctions, the government should protect dairy producers from large-scale imports, for example, by tightening phytosanitary requirements, more stringent quality control of imports.

Let’s consider the regional problem on the example of the Republic of Tatarstan. The Ministry of Industry and Trade of the Republic believes that the potential for import substitution in the country is \$4 bln in machinery and \$540 mln in chemistry and petrochemistry products. The ministry’s website has a list of petrochemical products, the production of which should be developed in the

Republic of Tatarstan. It is also advisable to pay attention to the development of instrument engineering in the republic. For example, Kazan Medical Instruments Plant could increase output by three times as part of the import substitution program. But it needs to build the sterilization center on the territory of the plant. Today, the company needs state support, preferential loans and building permits.

According to the Ministry of Construction, Architecture and Housing of the Republic of Tatarstan, the republic imports cement, ceramic tiles, clinker bricks and plate glass in full, and soft roofing waterproofing materials, dry building mixes, plasterboard, sanitary ware, linoleum, wallpaper in large volumes. However, the capacities of the republican enterprises for these types of goods are not fully loaded. For example, plants of dry mixes in Almetyevsk and Kazan could fully supply all the businesses and contracting works in the republic. However, the promoted brands are purchased today.

As for agriculture, according to the relevant ministry, Tatarstan is able to provide itself with food in full. For example, in 2013 it produced 318 thousand tons of meat, while consumption was slightly < 300 thousand tons. The republic needs to increase the production of meat products and sausages, the quality of which would satisfy the consumer, and to resolve the issue with the placement of domestic products in retail chains.

According to the Minister of Agriculture of the republic, the balance of import and export of agricultural products in 2013 amounted to +24 bln rubles. Surplus of milk, meat, potatoes and sugar, according to the minister, is the potential for access to foreign markets.

The bottleneck in the agriculture of the republic is the fruit and berry area. Ministry has just started to develop the program “Gardens of Tatarstan” and create clusters in berry area. So far, Tatarstan annually imports fruit and vegetable production for 1.2 bln rubles.

The possibility of a balanced policy of import substitution, which takes into account the effects in the short and long term and consistent with the basic strategic priorities of the Republic of Tatarstan, was discussed in September 2014 in Moscow as part of the strategic session “import substitution in the Republic of Tatarstan: Diagnosis, programs, implementation mechanisms.” The outcome of the session was the following conclusions:

- The main problem of import substitution is the inability of the state to create the conditions for a stable internal demand for substitutable products;
- The most promising model of development of high-tech small and medium enterprises in the framework of the policy of import substitution is corporate venturing;
- Priority areas of import substitution are the development in food production to ensure food security in the region and the export-oriented industrial production;
- Financial resources allocated to regional science should be concentrated in the areas that will ensure the implementation of priority development projects;

- It is necessary to conduct a comprehensive analysis of the list of imported goods in comparison with similar products produced in the Republic of Tatarstan, and to assess the potential of import substitution for each significant position;
- It is desirable to establish a single information system in order to ensure the management of the implementation of the industrial policy of the Republic of Tatarstan;
- It is necessary to analyze the global commodity markets in terms of outstanding needs (with significant prospective capacity), which can help determine products that are in priority for the industry development (Antonova and Belobragin, 2015).

#### 4.6. Problems Arising in the Course of the Practical Implementation of Import Substitution

One of the most acute problems that have emerged in the process of import substitution is the failure of the state to create the conditions for a stable internal demand for substitutable products in the economic crisis.

The lack of the required number of workers and professionals. They are required in all stages of the process of import substitution. The demographic situation is that there is a rapid decrease in the number of the younger generation, i.e., people entering the labor market, the reduction in staff qualification. Can the highest quality from design to product be ensured at such qualifications? There is an acute shortage of engineers and technologists in the industry. Many experts moved abroad, university graduates who studied at the institution with Bologna system come to production poorly prepared, with a low level of knowledge. 4 years are not enough to prepare a good engineer. The enterprises don't need bachelors with a poor level of knowledge. Unemployment shows a positive trend and is about 3%. HRs of companies have extremely narrow range of highly skilled workers in these conditions. Ensuring the competitiveness of the export-oriented products requires a high level of scientific and technological developments. However, the industry science is almost completely destroyed, and the recovery of the scientific school will require 15-20 years.

High wear of production capacity, which is 60-70%, requires investments, including in the development of the machine-tool industry. Statistics show that over the past 15 years, the share of corporate profits in GDP has declined in Russia; as a result, they have less funds to invest. In terms of financial stagnation in the economy, reducing GDP growth to near zero, the state support for modernization is limited. Another source – loans, with a high interest, as much as 20% – is limited for most companies.

Imitation of import substitution. There is a tendency of increase in the volume of production of the overseas developments assembled from imported components (Efanova, 2015). Industrial assembly is the most primitive form of import substitution, which does not allow to create a domestic technological base, while the intellectual rent remains abroad, and Russian enterprises have to deal with low-skill work on assembly of machines from ready components and assemblies (Nikolaev, 2014). It is necessary to develop domestic technological base through the transfer of technology as a whole,

purchase of licenses and renewal of the best technical solutions, based on its scientific and technical potential. Even at the level of programs and plans for import substitution, the export-oriented projects are rare.

A very acute problem is the quality of import-substituting products. We will illustrate this problem with the import substitution and import replacement of food. Let's consider this issue in more detail.

Following the results of audits of public organizations, such as Roscontrol, a significant portion of import-substituting products is not tested for quality and safety. The list includes cottage cheese, sour cream, sausages, salted salmon, red caviar, bottled water, chicken fillet. New producers and products that are designed to replace imports do not meet the regulatory requirements for quality and safety ([www.kachestvo.ru](http://www.kachestvo.ru)).

The quality of our usual products began to fall sharply just after the ban on imports. The market was flooded with new manufacturers and products that were designed to replace imports by quantity, but according to research, not by quality. Input control exercised by retailers does not cope with the increased number of new products, and the phenomenon of state control has almost lost its meaning in recent years, under the action of the Federal Law No. 293. According to the chairman of the Consumer Rights Protection Society M. Anshakov, it is a paradoxical situation – manufacturers can produce sausages without meat and call them meat products without any liability.

Volume of the forged food products on the St. Petersburg market after the embargo has increased by 10%. Situation in the meat and dairy industries is especially tense. “The most expensive ingredient in meat products is beef. Analyzing ten kinds of dumplings where it was stated on the package, we found that only three samples really contained beef. The others used cheaper raw materials – chicken, sometimes pork. It wasn't like that a year ago”, – says the chairman of the St. Petersburg consumer organization “Public control” Vsevolod Vishnevetskiy.

The manufacturers change the ingredients in dairy products just as willingly. The undisputed leader in forging is butter. Following the results of the inspection, 15 of the 30 samples proved to be counterfeit. The content of milk fat in some was no more than 5% (Russian Newspaper 2015, April 7).

During the rating assessment of the quality of bread in Krasnoyarsk, the experts rejected 40% of the samples: Some of them had the potato disease or mold colonization.

Especially worrisome situation is with the quality of products that were import substitution of the EU countries and the United States for goods produced in Asia and China.

According to A. Popova from the Federal Service on customers' rights protection and human well-being surveillance, the volume of imported meat, dairy products, fish, vegetables and confectionery rejected during inspection by sanitary doctors

increased significantly compared with the year before last. By the way, if you consider each product separately, the most complaints are about confectionery products (the percentage of rejections has grown 24-fold, fruits and berries – 12-fold, dairy products – 4-fold, fish – 1.5 times).

What are the main directions of improving the quality and safety of food? We noted the need for stricter requirements when assessing compliance on the part of state bodies and public organizations above (Petrov, 2015a). The same measures should be carried out by the trade links as well.

It is important to clearly comply with the requirements of technical regulations of the Customs Union (TR CU). 11 TR CU in the area of food safety are currently approved and entered into force, including “on food safety” (TR CU -021/2011), “food products in part of marking” (TR CU -022/2011), “on the safety of meat and meat products” (TR CU -034/2013), “on the safety of milk and dairy products” (TR CU -033/2013).

The information and comments on the introduction of technical regulations are placed in the monthly editions of the magazine “standards and quality” under the heading “technical regulation in the customs union.”

The compliance with the requirements of technical regulations on a voluntary basis is provided by the interstate and national standards, lists of which are approved for each technical regulations, as well as lists of standards on the rules and methods of researches (tests) and measurements, including on the rules of sampling necessary for the application and enforcement of the requirements of the TR. Thus, TR and standards on products and test methods form a tandem that ensures the safety of agricultural products, their trade advantages and competitiveness.

For example, a list of standards for “milk” TR contains more than 100 documents on standardization, for the “meat” TR – 270 standards, including 138 on production and 152 on the test methods.

As of January 1, 2015, the fund of national and interstate standards in the field of agro-industrial complex is about 3,900 documents, of which 44% set quality requirements, 48% set requirements to the test methods of production, 3% set requirements to baby foods.

Renewability of the standards in the field of agro-industrial complex in recent years has averaged 180 standards per year, while 361 standards were approved in 2013 and more than 300 standards were approved in 2014, of which about 280 were interstate standards adopted by the interstate council. The standards are developed at the modern scientific and technical level, ensure the unity of methods to control the quality and safety of agricultural products, contribute to the reduction of technical barriers to trade between the CIS countries and form a common approach to consumer and environmental protection.

Food safety system ensures the safety requirements at all levels of the food chain, is based on the ISO standards of 22000 series, including HACCP requirements, prerequisite and traceability programs. The main standard from this series ISO 22000:2005 is widely used around the world. As of the end of December 2013, 26,847 certificates were issued in 142 countries. China is in the first place with 9,406 certificates, Russia occupies a modest place with 279 certificates.

The HACCP system elements are included in the TR CU “on food safety,” Article 10 Part 3, and provide control in all stages of food production where a dangerous situation may emerge.

## 5. CONCLUSION

The above analysis of the quality of products shows that the import substitution of the food group was implemented defectively, without the participation of requirements of the consumer market. However, the quality factor is important from the point of access of domestic products to foreign markets. Foreign researchers noted that the qualitative characteristics define competitiveness by 60-70% (Versan, 2014a). Its other components are also important – price, ease of maintenance, cost of consumption, but in terms of import substitution in connection with the sanctions, they are secondary in relation to quality.

With regard to agricultural products, it is necessary to ensure the supply of the quality products throughout the supply chain to the consumer – from field to counter. This is possible with the development of program management principles, as mentioned by Putin in his message to the federal assembly (Putin, 2014).

In order to successfully meet the challenges of import substitution and export growth, it is advisable to use three types of programs: Federal, regional and enterprise programs. Federal programs are financed from the federal budget, regional programs are financed from local budgets, enterprise programs are financed from the funds allocated to them as the participants of the program, as well as from their own funds.

At the federal level, a list of products should be drawn up, for which improving the competitiveness is a priority for import substitution. State support for the development and implementation of targeted programs for these types of products should be carried out by targeted incentives not only for the enterprise producing finished products, but, if necessary, to other participants in the program, and provide the control of the targeted use of provided funds.

As part of the program, measures to encourage import substitution and export growth in relation to the above targets should be proposed, including the reduction of loan rates and tariffs for energy resources and services of natural monopolies, tax incentives, support for achieving the objectives through the measures of technical regulation and standardization, simplification of administrative procedures, etc.



Methodical, information and consultation assistance in the organization of this work, employees education and training, making best practices available to businesses, etc. should be provided. It is required to ensure an adequate public significance of the problem of import substitution and state supervision over the quality of products. At the regional level, it is advisable to develop the domestic programs on import substitution of products for a significant increase in gross regional product and solution of social problems. At this, regional capabilities to support operations should be used, including use of the opportunities of the region to assist businesses in dealing with personnel issues, implementation of infrastructure measures, organizational and methodological assistance in improving the quality, exchange of best practices, regional benefits in rent, advertising, and the conditions for fair competition. Enterprise targeted programs should have clear tasks to ensure the required level of product quality, increase in productivity, standardization, resource provision, as well as creation of effective quality management system at enterprises, organization of partnerships with suppliers on the basis of mutual interest, cooperation with all interested parties (state, regional and local authorities, NGOs, investors, etc.).

The scientific developments of the scientific research institute of certification can be used to develop programs of all levels (Versan, 2014b), as it made recommendations for regions on the organization of development (with the support of regional administrations) of product programs to improve the quality of competitive products at the enterprise. One of the authors of the article took part in the creation of these documents.

1. Import is one of the parties to the international division of labor. It is impossible to produce a whole range of products – for example, engineering products – in one country or grow tropical products grown in the North. But the policy of the 1990s has almost led to the elimination of the entire industry sectors.  
The problem of import substitution worried the economists and industrialists in the past, but the response of the Government of the Russian Federation to Western sanctions that have restricted exports to Russia of a number of goods, mainly food, has exacerbated this problem (Buchwald et al., 1994).
2. Work on import substitution of products is very important for modern Russia. The issues of import substitution must be tackled in a systematic way.
3. It is necessary to study and solve a number of theoretical problems, clarify the objective function of import substitution, determine the conditions of the transition from import substitution to export-oriented economy.
4. Import substitution is extremely expensive, own funds of the enterprise are not enough, a strong government support and a solid injection of funds are required.
5. The task of import substitution is, without exaggeration, the task of creating an entirely new industry, able to solve much more complex technical problems at a completely new organizational and qualitative level.
6. Without resolution of quality problems in the broadest sense of the word – quality of the products, high-quality

training of specialists and officials, business focused on quality, quality of program management, – we cannot solve the problem of increasing our competitiveness and import substitution, this should be an essential component of our economic and social development strategy at the present stage.

7. The mechanism of implementation of the principles of program management by the development and implementation of federal, regional and enterprise programs on import substitution is proposed for the practical implementation of the tasks of import substitution and export growth at the present stage.

## REFERENCES

- Antonova, I.I., Belobragin, V.Y. (2015), Quality and import substitution. *Standards and Quality*, 3. 68-70.
- Babkin, K. (2014), Moscow Economic Forum on Fiscal Policy for 2015-2017. Available from: [http://www.me-forum.ru/media/news/2721/?sphrase\\_id=6790](http://www.me-forum.ru/media/news/2721/?sphrase_id=6790).
- Belobragin, V.Y., Zvorykina, T.I. (2015), Import substitution, competitiveness, quality. In: *Continuous Improvement Activities of the Organization*. Saint-Petersburg: MISiS.
- Boldyrev, Y. (2014), Import Substitution in Politics and State. Soviet Russia. Available from: <http://www.sovross.ru/modules.php?name=News&file=article&sid=598017>.
- Brief Dictionary of Economics. (1984), 2<sup>nd</sup> ed. Moscow: Politizdat.
- Brooks, G. (2013), Localising production in Russia. *Automotive Manufacturing Solution (AMS)*, 14(4), 15.
- Buchwald, E., Glovatskaya, N., Lazurenko, S. (1994), Macroaspects of the economic security: Factors, criteria and indicators. *Economy Issues*, 12, 25-35.
- Burko, R.A. (2013), Role of import substitution in the Russian economy. *Young Scientists*, 11, 301-303.
- Efanova, I.B. (2015), Import substitution in instrument-making industry: Problems and prospects. *Standards and Quality*, 2, 68-70.
- Fedolyak, F.S. (2014), Import Substitution Strategy of Structural Shifts in the Russian Economy. Moscow: SIC Infra.
- Kadochnikov, P.A. (2005). Impact of import substitution on the process of economic growth in the transition economy (Unpublished Doctoral Dissertation). Institute for the Economy in Transition. Available from: <http://www.dissercat.com/content/vliyanie-importozameshcheniya-na-protsessy-ekonomicheskogo-rosta-v-perekhodnoi-ekonomike>.
- Kim, W.C., Mauborgne, R. (2008), *Blue Ocean Strategy* (Translated from English). Moscow: Hippo.
- Naude, W., Szirmai, A., Lavopa, A. (2013), Industrialisation Lessons From BRICS: A Comparative Analysis. IZA Discussion Paper. p7543.
- Nikolaev, S.N. (2014), Ideology of the successful development. *Standards and Quality*, 8, 58-61; 9, 72-76.
- Peregrodieva, L.N. (2012), Import substitution strategy in Russia. *Economics*, 1. Available from: <http://www.protestirui.ru/pravo/49>.
- Petrov, N.I. (2015a), Is it very good that we still feel bad? *Standards and Quality*, 1, 50-55.
- Petrov, N.I. (2015b), Will we do without foreign products on our table? *Standards and Quality*, 2, 62-67.
- Putin, V.V. (2014), Address of the President of the Russian Federation to the Federal Assembly. *Russian News Paper*, 278(6550).
- Ricardo, D. (1955), *The Works and Correspondence*. Vol. 7. Moscow: Gospolitizdat.
- Semenov, A.M. (2012), Study of the effect of the strategy of import substitution on the budget to support the population of Russia with

- medications (on the example of thrombolytic medications: Actilise and Fortelisin). *Journal Herald of the Russian Academy of Natural Sciences, Economic Series*, 12(2), 117-122.
- Sonway, G., Barber, E. (2000), *After the Green Revolution. Sustainable Agriculture for Development (Leningrad)*, 60.
- Tsvetkov, V.V. (2010), *Program of import substitution is required. Course N: Econometric Weekly Paper*, 22, 6-8.
- Versan, V.G. (2014a), *Once again about import substitution, quality and state support. Standards and Quality*, 10, 64-68.
- Versan, V.G. (2014b), *Problems of growth of the real economy. Management by objectives. Economics and Management: Problems and Solution*, 2, 11-18.