Import substitution as encouragement method of industrial production of Volgograd region

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Abstract. The import substitution development which contributes to the encouragement of national industrial production under foreign sanctions is capable of providing the sustainability of enterprises in Russian regions. Herewith the measures which are taken today for the import substitution encouragement do not allow fully displaying the potential of its stimulating constituent. The goal of the research is the development of measures for import substitution growth as a method of import production in Volgograd region. The system approach, statistical analysis and dialectical method were used during the research. Volgograd region was taken as the example and the modern situation in import substitution was analyzed. The SWOT analysis of industrial enterprises was conducted what allowed presenting the measures aimed at import substitution growth as a method of encouragement of regional industrial enterprises. The authors made the conclusion about the necessity of an optimal combination of import substitution and export orientation which was based on the creation and development of enterprises which are focused on the world practice and which are profitable in global competition. This allows eliminating a number of drawbacks of import substitution which deal with the problem of a limited volume of the domestic market, construction of new industrial facilities, optimization of production processes, reduction of the monopolism, illegal economy and corruption. Key words: import replacement, efficiency, industrial production, encouragement, measures, enterprise, Volgograd region

1. Introduction

Under modern conditions the import substitution is one of strategic directions of the public policy of the Russian Federation and its regions which is meant to provide a sustainable industrial production. In this case we can speak about the reduction or cessation of imports of definite products by means of manufacturing of the same or analogous production (import-substituting products). Herewith according to the President’s Address to Parliament dated 04.12.2014 [1], import substitution is a long term priority which is expected to work for the establishment of a big number of new industrial enterprises without regard to external conditions.

The import substitution is the state program of the Russian Federation [2], the monitoring of which since 2015 is carried out by a special governmental commission [3] which is directed to the creation of conditions for the national production of goods in the industries where a high degree of import

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dependence remains.

During the crisis the Ministry of Economic Development of the Russian Federation analyzed the structure of consumption and the inventory coverage of the imported equipment and goods which are necessary for the provision of stable employment and national economy development. The Ministry also studied the existing industrial, technical and technological restrictions of the corresponding industries.

In the result the critical types of production were found and the priority industries for the development of import substitution were identified, i.e.:

- components and equipment for food industry;
- heavy, power, oil and gas engineering, electrochemical and cable industry;
- machine tool industry, shipbuilding equipment;
- chemical and petrochemical industry;
- pharmaceutical and medical industry;
- production of conventional weapons, civil aviation, engines, components and equipment for transport engineering [4].

In the result the intensification of work of executive authorities for the development of import-substituting technologies and plants lead to the situation when today we can speak about certain success in this field which is mainly manifested in such industries as:

- chemical industry;
- vehicle manufacturing industry;
- medical industry;
- oil and gas production and others.

It is important to note that the development of a set of measures for the acceleration of the process of import substitution is a determining vector of modern government industrial policy of the Russian Federation and its regions. Herewith an important role here has the provision of an optimal correlation between the import substitution as a result of sanctions’ overcoming and the diversification growth of national economy on the one hand and large scale industrial policy which reflects long term interests of the development of Russia as a country which on the other hand pretends to have the leader’s ambitions in the world.

Under these circumstances the regions of the Russian Federation, taking into account industrial and technological, institutional, social, economic and other features of regional industry and also the potential of their development identify a system of import substitution priorities at the implementation of industrial policy which do not contradict but complement the similar positions at the federal level. One of such regions, which is actively involved in this process is the Volgograd region. The peculiarity of its industrial development is a large share of processing industries (more than 85%), including oil refining, chemical, metallurgical and machine-building industries [5].

The regional authorities have approved and they are implementing the Concept of import substitution in the Volgograd region for 2015 – 2020 and a plan of actions encouraging the import substitution in the Volgograd region [6]. Also, in order to ensure the transparency of import substitution measures an advisory council on import substitution was established [7].

The increase of import-substituting products is one of the strategic goals of industrial development of the Volgograd region. The priority sectors for import substitution are machine-building, chemical, metallurgical industries, military-industrial and agricultural complexes, as well as light industry. In 2018, 58 enterprises in the region produced 80 types of import-substituting products for an amount exceeding 57 billion rubles. The output growth was 9.3%. At the same time, in 2017, 53 enterprises were involved in the import substitution and they produced 75 types of import-substituting products [8]. It should be noted that the growth of import substitution became possible due to the implementation of large investment projects and the planned modernization of industrial complexes. However, in some cases, the industrial enterprises in the region face with a lack of capital, technology, labor, fixed assets, what in turn requires the removal of all these restrictions to the maximum extent and the creation of the necessary conditions for the growth of production volumes.
Thus, today the need for the development of a set of measures which improve the existing mechanism of import substitution which would contribute to sustainable development of national industrial production becomes relevant.

A significant contribution to the study of the mechanism of import substitution and the features of its implementation was made by Plotnikov V.A., Vertakova Yu.V. [9], Polovinkin V.N., Fomichev A.B. [10], Yakovlev G.I. [11] and by some other authors.

However, the analysis of the degree of development of this subject area indicates the absence of a unified approach to the formation and implementation of the import substitution mechanism in modern conditions of industrial enterprises’ work. This does not contribute fully to their sustainable development and, therefore, the realization of the production potential of the country and its regions. The relevance of the problem under analysis and the insufficient level of its study determined the goal (development of recommendations for the efficiency growth of import substitution as a method of encouragement of industrial enterprises’ work). This does not contribute fully to their sustainable development and, therefore, the realization of the production potential of the country and its regions. The results of the study can be used by public authorities at the implementation of the import substitution policy in industrial enterprises.

2. Materials and Methods (Model)
The methodological base of the study is presented by theoretical and applied scientific papers of modern authors devoted to the problems of the implementation of import substitution mechanism; information published in periodicals and on the Internet. During the research a systemic approach, method of statistical analysis and the dialectical method of study by means of the application of general scientific methods and techniques (observation, synthesis and comparison methods, grouping technique, generalization of theoretical and practical material) were used.

In order to determine the directions of efficiency growth of import substitution, we used the SWOT analysis, which allowed us to identify the strengths and weaknesses, opportunities and threats for industrial enterprises.

3. Results and Discussion

3.1. The analysis of statistical data characterizing the results of import substitution in the Volgograd region [12] allowed us to draw the following conclusions:
- in 2018 the region was in the top ten of the leading constituent entities of the Russian Federation in the production of import-substituting products;
- from 2015 to 2017 the regional enterprises shipped import-substituting products at the amount of 128 billion rubles. At the same time, if in 2015 the share of these products in the total volume of shipped products by enterprises of the manufacturing industry was 4.8%, then in 2017 it was 7.3%. In 2018, 58 enterprises of the region produced 80 types of import-substituting products at the amount of more than 57 billion rubles, while in 2017, 75 types of these products were produced by 53 enterprises participating in the import substitution (Table 1).

At the same time, in 2018 the volume of production of heating radiators doubled. The volume of production of pipes for oil and gas production grew by 75.8%, the production of polyester fiber increased by 32.1%. The production of ceramic tiles increased by 4.7%, the production of cotton fabrics grew by 7.9%, and the production of silicon carbide increased by 9.2%.

The positive dynamics of import substitution indicators is facilitated by the implementation of investment projects and the modernization of industrial sites. Over the past five years, 50 new facilities were established in the region, 163 billion rubles were allocated for the development of existing firms and for the creation of new enterprises. The implementation of projects with investment funds and state support gives a positive result. According to the results of 2018, the total volume of
industrial production in the region for the first time exceeded a trillion rubles.

**Table 1. Volume of import-substituting products shipped by enterprises of Volgograd region in 2017**

| Industry                      | Number of enterprises involved in import substitution | Volume of shipped products obtained in the process of import substitution, billion rubles |
|-------------------------------|------------------------------------------------------|----------------------------------------------------------------------------------------|
| Chemical industry             | 16                                                   | 27.3                                                                                    |
| Machine-building industry     | 16                                                   | 7.9                                                                                    |
| Metallurgy                    | 7                                                    | 11.6                                                                                   |
| Shipbuilding, timber industry complex, medical industry, children's products industry | 7 | 0.014                                                                                  |
| Light industry                | 5                                                    | 2.28                                                                                   |
| Manufacture of building materials | 2                              | 2.98                                                                                   |

The chemical industry of the region continues to lead in the volume of shipped import-substituting products. According to the results of nine months of 2018, 16 chemical enterprises of the region produced import-substituting products (tires for agricultural machinery, polyester fibers, plastic products, insulating polymer composites, hydroxide and magnesium oxide, petroleum-polymer aromatic resins and more) at the amount of 23.6 billion rubles.

One of the key tasks of the industrial development of the region is the import substitution of equipment.

An important role in the solution of this problem has the “Volgogradneftejemash” company which fills the domestic market for gas, oil and petrochemical industries with technological gas equipment. The “Kamyshin experimental plant” produces installations for the bottom discharge of oil and oil products, railroad equipment. The plant “Neftegazmash” produces tube block furnaces, pistons, blow out prevention equipment and spare parts. The steelplant "Akhtuba" produces metal structures.

According to the results of 2018, the largest growth in the production of import-substituting products in comparison with 2017 showed the following enterprises. The “RUSAL Volgograd Aluminum Plant” produced (calcined petroleum coke, aluminum powders and pastes, components for the manufacture of car engines and more). The firm “Zika” produced cement-based fast-hardening compounds and cement and polymer-based anchoring compounds. The “Fortе-Prom” produced heating radiators. The firm “Sealed Air Kaustik” produced multilayer barrier coextrusion film made from polyamide, multilayer polymer packaging with printing for food, medicines, household chemicals and personal care products. The “Raduga Zink List” produced galvanized and color coated rolled product. The “Volzhsky pipe plant” produced stainless seamless pipes, pipes for gas stations, pipes for oil and gas. The “EPK Volzhsky” produced large-sized, thin-walled special ball bearings, bearings of high-loaded units, roller wheel bearing. The “Stekloplast” company produced fittings for special environments.

3.2. Without humiliating the significance of the achieved success in the import substitution program at the industrial enterprises of the Volgograd Region, it should be borne in mind that the largest part of these enterprises significantly depends on foreign supplies.

In the manufacture of import-substituting products, the imported materials, components, technologies, machines, software is used to a large extent. Accordingly the tasks of efficiency growth of import substitution should be solved, not only by means of the expansion of the volume of products,
but also by means of the use of domestic capabilities.

It should also be mentioned that there is a staff problem that the industrial enterprises of the region face at import substitution. In this case, it is spoken about the migration of skilled labor to enterprises with more favorable remuneration. Another problem with the personnel is the absence of the necessary qualifications in the labor market.

At the same time, it is possible to train highly qualified and stable personnel in the industrial enterprises of the region only with a high salary, employment benefits, professional training, education and advanced vocational training.

It is worth adding to the mentioned above that, when the import substitution is implemented, the industrial enterprises are characterized by a large volume of accounts receivable. In some cases, the generated portfolio of orders consists of contracts with the following payment for shipped products or with minimal advance financing. According to a number of contracts, under which the targeted credit financing is attracted for the purchase of raw materials needed for the implementation of orders, then the contractual delivery periods are increasing without extending the terms of credit contracts. At the same time, only if the work is carried out constantly in order to accelerate the turnover of receivables, it is possible to release the additional cash and to reduce the need of industrial enterprises in borrowed funds.

3.3. To determine the directions of efficiency growth of import substitution as a method of encouragement of industrial enterprises in the Volgograd region, we will use one of the research methods or the SWOT analysis, which allows you to identify the strengths and weaknesses, opportunities and threats for these enterprises in the region (Table 2).

In our SWOT analysis, we emphasized a sufficient number of weaknesses and threats what indicates the importance of taking a number of measures by executive authorities for their reduction (elimination) in order to stimulate the development of industrial enterprises in the region by means of import substitution.

Table 2. SWOT-analysis of industrial enterprises of Volgograd region

| Strengths | Weaknesses |
|-----------|------------|
| Diversity of industrial production. In the structure of industrial production, the largest share has the basic branches of manufacturing, the products of which have a significant competitive market value. Growth prospects for oil production and gas production. Favorable geographical position. River and rail links. | High wear and low technical sophistication of fixed assets. Inconsistency of the quantity and quality of labor potential with the needs of industrial development. A high proportion of the energy component in production. High-interest rates on borrowed funds. |

Opportunities

| Opportunities | Threats |
|--------------|---------|
| Sufficient volume and diversity of mineral resources. Growth of educational level of labor resources. Increase of scientific and technical potential. | Natural decline and drain of the working-age population. Dependence of products on imported raw materials and equipment. Tariffs in the energy and transport sectors, fluctuations in world prices. Poor infrastructure development. |

The experience of industrial enterprises of the Volgograd region shows the importance of tax incentives for the development of production of import-substituting products. First of all, we are talking about a direct investment incentive. A part of the tax base for income tax is exempt from the
taxation if it is invested in the expansion or restoration of fixed assets for industrial purposes in fixed
directions. The reduction of the tax burden on income tax makes it possible to accumulate funds for
the modernization of production capacities and it allows increasing the budget revenues from the
growth of turnover taxes (for example, VAT). Currently, the tax policy is focused on the
implementation of the fiscal function, while the potential of the stimulating function, creating the
conditions for investment in the development of import-substituting production remains practically
unused.

In general, in our opinion, the import substitution should be combined with the export orientation,
based on the creation and development of industries focused to the world market and profitable at
global competition since the export orientation can eliminate a number of disadvantages of import
substitution. They are as follows:

- Narrowness of domestic market is eliminated;
- New production facilities are created taking into account the comparative advantages regard of
  the international division of labor;
- Production processes are improved under the influence of competition in foreign and domestic
  markets;
- The monopolism scale, the informal sector and corruption reduce.

It seems that the import substitution at an optimal combination with export orientation should be
implemented in three areas:

- modernization of production ensuring the growth of output of imported industrial products,
  analogues of which are not produced in Russia in sufficient quantities;
- development of imported industrial products during a short period of time, but its import
  substitution is economically profitable or possible due to some objective reasons;
- search for ways to substitute indirectly the imported industrial products that are not
  manufactured in Russia, since the import substitution is economically unprofitable or impossible due
to objective reasons.

The implementation of these measures implies the solution of a number of key tasks:

- analysis of the region’s commercial industrial turnover in recent years, identification of the
  most critical imported products in the context of specific industries of the regional economy;
- study of the production, scientific and technical potential of industrial enterprises in the region
  that produce goods which would compete with imported goods. They can be also good substitutes.
  The assessment of a load of production capacities and depreciation of fixed assets;
- development of a list of equipment and technologies necessary for industrial enterprises in the
  region and the assessment of the economic feasibility of their production in the region [13];
- development of technical specifications for the production of equipment subject to import
  substitution by means of an open discussion of these documents with the consumers of products, i.e.
  industrial enterprises of the region;
- identification of the list of products, the needs of which the region can satisfy by means of the
  increase of the own production using the existing resources and by means of the government support
  of industrial enterprises.

4. Conclusion

4.1. The analysis of statistical data on the implementation of the import substitution program in
Volgograd region allowed to make the following conclusions. The Volgograd region is among the ten
leading federal entities of the Russian Federation in the production of import-substituting products. In
2018 58 enterprises of the region produced 80 types of import-substituting products at the amount of
more than 57 billion rubles, while in 2017 only 75 types of these products were produced by 53
enterprises participating in import substitution. The implementation of investment projects and the
modernization of industrial sites contribute to the positive dynamics of import substitution indicators.
According to the volume of shipped import-substituting products, the regional chemical complex
continues to lead among the enterprises, taking part in import substitution.

4.2. Without humiliating the significance of positive results of the implementation of import substitution in industrial enterprises of Volgograd region, it is necessary to mention that there are problems of legal, resource, personnel, financial and other nature that impede the full disclosure of the potential of the encouraging component of import substitution in the development of the region's industry.

4.3. Having used the tools of the SWOT analysis, we came to the conclusion that it is necessary to combine optimally the import substitution with the export orientation at industrial enterprises of Volgograd region what should be implemented in three areas. The first direction is the modernization of production in order to ensure an increase in the output of imported industrial products, analogues of which are not produced in Russia in sufficient quantities. The second direction consists in the development in a short time of production of imported industrial products that are not produced in Russia, but their import substitution is economically profitable or possible due to objective reasons. The third area of activities is the search for ways of an indirect replacement of imported industrial products that are not produced in Russia since its import substitution is economically unprofitable or impossible due to objective reasons. The implementation of these measures providing an efficiency increase of import substitution involves the solution of a number of key tasks: analysis of the region's commercial industrial turnover in recent years, identification of the most critical imported products in specific sectors of the regional economy; study of the production, scientific and technical potential of industrial enterprises in the region that produce commodities that compete with imports or substituting goods; assessment of the utilization level of their production capacities and depreciation of fixed assets.

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