Import substitution in the industrial sector: analysis and facts

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Abstract. Sanctions policy against Russia is one of the most pressing political and economic issues since 2014. This format of international relations, of course, created a number of problems, but also allowed to make a breakthrough in the domestic industrial sector. Import substitution has become the main vector of movement of almost all sectors of the Russian economy. Currently, there are more than 1,100 import substitution projects in Russia in critical industries, 342 of which have reached the stage of serial production, and more than 760 are still “at the final stage” of implementation.

1. Introduction
Sanctions policy against Russia is one of the most pressing political and economic issues since 2014. This format of international relations, of course, created a number of problems, but also allowed to make a breakthrough in the domestic industrial sector. Import substitution has become the main vector of movement of almost all sectors of the Russian economy. Currently, there are more than 1,100 import substitution projects in Russia in critical industries, 342 of which have reached the stage of serial production, and more than 760 are still “at the final stage” of implementation.

2. Methodology
The State is engaged in financing the replacement of imported goods, so the authorities are looking for sources to co-finance the program. The problem is that today the banking system is designed in such a way that it is extremely unprofitable for banks to finance national programs, which is why the authorities are launching an initiative to support banking organizations that back the import substitution program [1].

In general, the program works, as imported goods continue to get replaced by domestic ones. However, we have to wait several years to understand how successful the chosen path is.

For decades, the Russian Federation has been developing the scientific, technical and production potential of its industry, ensuring Russia's place as one of the leading powers in the world. Industry is the most valuable asset of the State and its excellent characteristics and properties of products make it popular all over the world. Industry cooperation in the country provides a large number of specialists who use during the process extremely high quality, reliable and modernized technologies, machinery and equipment. Also, they introduce innovative technologies and methods that are inextricably linked by scientific developments [7].

The use of new and accurate technologies and expensive specialized equipment leads to the need of large financial investments from the State and the creation of special research centers to keep up with the level of other countries. All this requires highly qualified professionals with high wages [2].

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Since the beginning of the Ukrainian crisis and the introduction of Western sanctions against Russia, import substitution has become one of the most discussed topics. The government approved replacement schedules for products imported from Ukraine and NATO countries. The most critical situation regards the engines for helicopters that were imported from Ukraine. The launch of production of these engines in Russia is one of the largest import substitution programs.

The problem was solved: JSC "Klimov" (part of the United motor-building Corporation) plant near St. Petersburg produced the first similar engines. In 2017 and 2018, it was planned to completely cover 100% of the needs for these engines. Replacement schedules for other aircraft components imported from Ukraine (engines for cruise missiles, separate systems of radio-electronic equipment, sets of general-flight systems...) have been developed and implemented, and financing schemes have been developed at the expense of the budget or subsidized loans [4].

The situation is more complex in the civil sector, whose products can only be competitive if they are exported. In this case, the support from the State can be provided in the form of interest rate subsidies and in the form of co-investment, but procurement should be absolutely competitive. This requires investment in both development and certification. It is fabulously expensive, which is why it is so difficult to change suppliers of components [3].

The holding "Technodinamika", which belongs to the State corporation «Rostech», was established in 2009. The company consists of 35 Russian factories and research institutes of aviation and space industries, which employ more than 30 thousand people. In the aircraft industry, "Technodinamika" uses three models of interaction with foreign partners. First, a fire-fighting system has been developed in cooperation with American partners. In this project, partners help in its certification according to international standards and promotion to the world market. This system will be produced in Russia with the predominant use of Russian components. The second model is working with the Safran group and its subsidiary Microturbo to create an auxiliary power plant for helicopters. Safran will be the holder of the certificate of the developer and manufacturer of the installation, but a significant part of the components will be produced in Russia. And the third model is the transition to production in Russia from Sukhoi Superjet components. We are talking about what "Technodinamika" is, and not about the need to reproduce the Western system, because the cost of certification of the latter case would make the project meaningless. We see that it is difficult and unprofitable to develop truly globally competitive products without cooperation with Western companies. In a few years "Technodinamika" plans to enter the top five world's largest manufacturers of aviation equipment and partly solve the problem of import substitution. However, not all aircraft manufacturers are ready to switch to domestic components [11].

Why import substitution has become a stumbling block?

For example, the Russian-made aircraft headlight is three times more expensive than the foreign one, taking into account all the expenses, despite the loud announcements about large-scale plans to replace the foreign with the domestic one. Perhaps this happens due the fact that they belong to different corporations. Equipment manufacturers are part of Rostech and aircraft builders are part of the United Aircraft Corporation (UAC). This corporation, which has been historically independent, used to be dedicated to assembling, while the creation of units and engines were outsourced. But Boeing also buys equipment from third-party manufacturers. Experts believe that to bring down the price of its own equipment it’s necessary to establish mass production of domestic aircraft. But expensive components make the aircraft industry not competitive and mass production is left out of the question [6].

In the markets of military aviation Russia ranks second after the United States. In the civil sector, we are lagging behind the EU, the US, Canada and Brazil, because in the last two decades Russia has almost lost its domestic civil aircraft market. Every year the country buys 5-6 billion dollars of civil aviation equipment abroad. At the same time, Russian exports of military aircraft are about 4-6 billion dollars. This is an encouraging balance [10].

If we talk about import substitution as a process that covered many areas of activity, it all began with a list of additional instructions approved by Vladimir Putin in May 2014.

The document lists specific steps to stimulate economic growth, including work on import substitution in various industries and the agricultural sector. In order to prevent the growth of the deficit
on goods prohibited for import to Russia, decisions on import substitution in agriculture were made urgently. The program for this reason was developed and adopted earlier than others, in October of the same year [5].

The next stage is already in 2015, when 20 programs for the most needy sectors of the civil industry were developed. The seriousness of this problem is evidenced by the involvement of leading employees of the ministries of Transport, Energy, Communication and Industry and trade, apart from other authorities, research companies, payment centers, etc [9].

In one of his speeches, Dmitry Medvedev announced a list of industries in urgent need of a Russian manufacturer. In total, since June 2015, according to the website Sdelanounas.ru and other resources, more than 951 import substitution projects have been implemented in Russia. The targets of import substitution by industry are shown in figure 1 [13].

For example, the import substitution program has closely touched the Russian automotive industry. The automotive industry is experiencing a Renaissance, and this place has always been considered "sick" for Russia. In 2017, the country produced 1.4 million cars (+21% compared to last year), exports abroad grew by 47% and exceeded the bar of $ 1 billion. revenues.

Expected results of the policy of import substitution:
- Import substitution measures have been implemented for key priority projects
- Critical dependence on strategically important technologies and components has been eliminated
- The level of import dependence of the Russian economy for most industries is less than 50%

The ways and means of implementation of import substitution are dependent on financial support:
- State subsidies, co-financing of research.
- Provision of grants and preferences to hold companies’ participations in public procurement.

The main requirement for obtaining financial support on favorable terms is the need to locate production in one of the regions of the Russian Federation [12].

The State offers large targeted loans from the Federal budget, partial financing of enterprises at the production stage and special measures to stimulate import substitution through national (municipal)
purchases. These measures limit the State purchases of raw materials and finished products from foreign manufacturers. The embargo also applies to the procurement of certain groups of essential goods. These are medicines, clothing, equipment manufactured by engineering companies, technical means and components for defense enterprises [8].

3. Results
Currently, there are more than 1,100 import substitution projects in Russia in critical industries, 342 of which have reached the stage of serial production, and more than 760 are still "at the final stage" of implementation. The total budget of import-substituting programs was initially estimated at 159 billion rubles. However, taking into account tariff protectionism, the increase of the cost of State orders and the expansion of the list of planned programs, the costs may be higher.

The production of Russian computers and components increased during 2017, reaching 32.6 billion rubles (+16.4%). The intensive growth of electronics production is happening due to the fact that a number of large foreign companies, such as LG Electronics, are transferring their production to Russia in recent years.

4. Conclusions
For the successful operation of such programs of import substitution in the future, it is necessary to provide:

- a favorable market environment;
- continuous support for export-oriented industries.

In general, we can talk about positive trends and an effective mechanism for the implementation of the import substitution strategy in Russia. However, the process of transformation and creation of a new national market on the basis of import substitution is not yet complete and, in addition to the prospects, there are a number of threats. And when replacing imports with domestically produced goods, half of them can be avoided if the State continues to keep the chosen course, reacting in a timely manner to market fluctuations.

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