

NEW PRODUCTION IN RUSSIA FOR THE PERIOD FROM 2014 TO 2019 YEARS

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Abstract: The paper is devoted to the peculiarities and patterns of distribution and analysis of the arrangement of new industries in Russia in the period from 2014 to 2019, analysis of trends in new technologies to prevent the consequences of negative impact on the environment, as well as analogues of import-substituting production to support local producers and the development of Russian science and industry. Special economic zones, territories of advanced socio-economic development, and various technological and industrial parks are actively being created in entities that have economic potential or are already actively developed in this regard. They increase their investment attractiveness. Most enterprises that do not require huge areas and are not tied to a specific location choose places for construction on these sites.

Keywords: New Production, Import Substitution, Industries, Companies, Regions of Russia

1 Introduction

First of all, the products of Russia, in general, should be investigated. The main product of this country is oil, as its geographical location is capable of many natural gas and minerals and oil at the top of them. Having this advantage, Russia also was known in other industrial product. The products and benefit of them always depend on the policy approved by the Perelman.

The production of the Russian Federation has always been represented by many industries and enterprises. Our state is one of the main industrial powers in the world and one of the few countries capable of producing almost any type of industrial goods. After the collapse of the USSR and the beginning of the existence of Russia as an independent state, there was a serious decline in production. Since 2000, the Russian industry has been increasing its pace restoring closed enterprises, modernizing outdated ones, and introducing new technologies (<https://sdelanounas.ru>; <https://productcenter.ru>; <https://www.radidomapro.ru>; <https://ac.gov.ru>).

Period from 2014 to 2019 was chosen due to the fact that since 2014 the state has acquired new territories, and also this year was marked by the introduction of the foreign economic policy of sanctions against imports in almost all industries.

In these days Russian famous for the following competitive industries: oil and gas, mining, processing precious stones and metals, aircraft building, aerospace production, weapons and military machinery manufacture, electrical engineering, pulp-and-paper production, automotive industry, transport, road and agriculture machinery production, light and foodstuffs industries.

Machine building is the first industry in Russia, which is focused mostly in Moscow, the capital of Russia, St. Petersburg, the Urals, Volga region, and Westerns Siberia. The goal is providing all other industries with equipment and machinery. The share of machine building in the Russian economy is almost 30%, so it plays a vital role. Machine building industries have a complicated structure consisting of many branches. The most important are electronics, computers, robotics, instrument building, agricultural and transport machine building, railway cars manufacture, aircraft building, shipbuilding etc (The impact

of import substitution processes on competitiveness in the Russian agricultural sector).

Thus, it was held a course for import substitution and support of domestic producers. Every large and developed country has production and exports, of which Russia is no exception. It can be said with confidence that Russia is making progress in the field of production year by year. Russian production and exports can be divided into several parts:

- Machine industry
- Agriculture industry
- Chemical industry
- Health care industry
- Metalworking industry
- Wood industry
- Construction

The above cover Russian products. The following is a description of some of the above, which can acquaint you with Russian production and exports.

The machine-building industry is one of the things that Russia exports in addition to production. The machine-building industry is an important part of non-commodity and non-energy exports to Russia. Technology is advancing rapidly in Russia; For this reason, Russia is known as the backbone of technology and has taken its first place. The second rank is production and export to the agricultural industry, and the third rank is to the machine-building industry.

Machine building is not limited to cars and automobiles, but also includes other machines, such as machines that usually run on electricity. Railway equipment and motor vehicle parts are in high demand in the labor market, and exports of consumer electronics are also increasing, especially washing machines. Three years ago, total exports of washing machines did not exceed 40 to 50 units per month, while in 2016, their average monthly exports reached 150,000 units.

Kamaz trucks made in Russia are very popular, accounting for about 60% of the total supply of trucks in 2016. Russia also produces equipment for 5D entertainment. These entertainment systems are exported to countries such as Europe, Latin America and Africa.

2 Methods

The empirical base of the study were news reports, statistics of the Ministry of Agriculture, Industry of the Russian Federation, and separately by regions for a selected period of time (<https://sdelanounas.ru>; <https://productcenter.ru>; <https://www.radidomapro.ru>; <https://ac.gov.ru>; The impact of import substitution processes on competitiveness in the Russian agricultural sector).

When considering your manufacturing options, there's a number of production methods, with each offering its own unique set of benefits depending on product type and market size. All businesses follow their own set of operation, so it's essential to know the differences between various production methods to ensure that you are selecting the most suitable and cost-effective solutions for you.

It's also important to understand that while one production method may work the best for your production needs today, a different method may be required to keep costs low and to reach a larger customer base. The most successful manufacturers will realize the importance of flexibility with how their operating processes are designed, as well as how easily their facility can adapt to potential future changes.

Methodological base of the research consists of comparative method, statistical method, and cartographic method.

First, it is necessary to investigate the methods of producing a product based on global standards, which involve the production of single, individual items. For example, a boat-builder might get an order to make a one-off yacht, or a hairdresser may be asked to create a style for one person for a special occasion.

Firms might specialize in producing one-off jobs such as customized motorbikes.

2.1 Batch production

Batch production is when a facility manufactures specific groups of pieces or completed products in small preset batch sizes. This kind of production method is usually adopted by small companies as its capable of reducing the initial capital outlay. Batch production makes it easier to control the quality and schedule of production as everything from designs to material requirements are standardized for specific product variations well before production begins.

Often times batch production methods are used to create elements of a final product which will go through multiple stages before the final product itself is completed. This also gives the manufacturer the capability to produce several products in different variations.

For example, a production order for 1,000 socks of the same dimensions, where half are required to be white and the other half red, batch production is the best option. It allows the manufacturer to create 500 white socks and then quickly retool the line, in this case, change the dye color, to produce 500 red socks. Although, this also has its own set of drawbacks as the production line must be put to a halt and reconfigured between each batch.

While materials will be cheaper due to order in bulk and labor costs will be lower as batch production doesn't require a highly skilled team, there will be drawbacks when it comes to storing your products. Warehousing costs can quickly add up, so it's crucial that companies order only as much product as they need for the time in between production runs.

2.2 Flow production

Involves passing sub-assemblies/parts from one stage of production to another in a regular flow. Each step adds to the products. For example, a modern bottling plant used by Coca-Cola or Cadbury Schweppes would use this approach.

Mass production involves manufacturing products on a large scale. This matter sometimes requires flow production. However, there may be only one stage in the production process. Of mass-produced products using continuous flow techniques include:

- bottling plant, e.g. Coca-Cola
- car manufacturing, e.g. Audi
- printing, e.g. Polestar
- construction, e.g. Portakabin.

3 Results and Discussion

The result of the number of opened enterprises was presented in the form of a summary table, which reflects the total and the annual number of new enterprises (Table 1).

Table 1: The number of enterprises opened in the period 2014-2019. by year and industry

	2014	2015	2016	2017	2018	2019	TOTAL
Overall q-ty	237	287	262	165	216	219	1386
incl. by industries:							
Mechanical engineering and metalworking	60	58	60	47	71	61	357
Building materials and building repair	40	43	28	35	38	42	226
Chemical industry	18	23	21	13	31	24	130
Electronics and electrical engineering, equipment	30	32	32	23	22	21	160
Medicine and pharmaceuticals	15	11	16	11	16	16	85
Textile industry	1	6	9	14	13	16	59
Extractive industry	6	10	6	0	0	1	23
Woodworking industry	3	10	5	0	0	4	22
Other	26	39	27	22	25	34	173
Food industry	35	47	42	0	0	0	124
Industrial gases	3	7	8	0	0	0	18
Packaging production	0	1	8	0	0	0	9

Analyzing the data in the table, we have noted that the largest number of industries was opened in the field of mechanical engineering and metalworking throughout the entire period. This indicates an acute shortage of products in this industry in the country. This is followed by alternating construction materials and products related to repairs, and then the food industry.

The analysis of the regional distribution showed that the leaders in the number of open enterprises are the Moscow region, the Republic of Tatarstan, Samara, Leningrad, and Sverdlovsk regions, as well as St. Petersburg. However, a number of constituent entities of the Russian Federation did not open a single enterprise throughout the period under study: these are the republics of the North Caucasus and the regions of the Far

Eastern Federal District. Such territorial differentiation testifies to a number of problems in these regions that hinder economic development.

In addition, the investment component of new industries was analyzed for individual years of opening in the period under study. So, in 2014, the most expensive was the joint project of SIBUR and the Belgian company SolVin for the production of polyvinyl chloride at the RusVinyl plant with an investment of 60 billion roubles. The second place is taken by the installation for the production of polymer-modified bitumen and bitumen emulsions of a new generation at the JSC Gazpromneft-Moscow Oil Refinery with an investment of 50 billion roubles. Third place goes to OJSC TATNEFT, which launched a combined hydrocracking unit at TANECO in the Republic of Tatarstan worth 40 billion roubles (<https://ac.gov.ru>).

In 2015, the most expensive was the launch of the second start-up complex forming the third stage of construction of JSC Antipinsky Oil Refinery with an investment of 72.2 billion roubles. The second place was occupied by the Omsk plant owned by the group of companies "Titan" for the production of combined feeds of the entire spectrum worth 47 billion roubles. The third-place goes to LUKOIL-Nizhegorodnefteorgsintez, which launched the second catalytic cracking complex of vacuum gas oil worth 32 billion roubles for the production of gasoline of the fifth ecological class and propylene.

In 2016, the most expensive project was Lukoil's project to put into operation the first start-up complex of a gas processing unit (GPU-1) at the Stavrolen plant with an investment of 150 billion roubles. The second place was occupied by the first Russian shipyard for the construction of large-tonnage navigation facilities, which will be engaged in the extraction of natural resources on the continental shelf in the Primorsky Territory worth 145.5 billion roubles. The third-place goes to the Novy Potok group of companies, which launched a combined two-section unit for deep processing of heavy fuel oil in the Tyumen Region at the Antipinsky Oil Refinery JSC, worth 100 billion roubles (Betelin, 2016; Kuznetsova, 2016).

In 2017, the most expensive project was the NOVATEK project for the production of liquefied gas at the Yamal LNG plant with an investment of 1.5 trillion roubles. In the second place, there is the Bashkir plant owned by Gazprom Neftekhim Salavat intended for the production of acrylic paint and butalacrylate worth 40 billion roubles. The third-place goes to Metalloinvest, which launched a complex for the production of hot briquetted iron in the Belgorod region worth 35 billion roubles at the Lebedinsky Mining and Processing Plant.

The first place in terms of investment in 2018 is occupied by the ammonia plant (Togliatti) worth 20 billion roubles. The next position is taken by the Tula complex "Shchekinoazot" for methanol-ammonia production with a total investment of 18.5 billion roubles. The third place is the blast furnace launched at the Nizhniy Tagil Metallurgical Plant and the TANECO complex with two units for hydrotreating kerosene and diesel fuel, worth 15 billion roubles each. In addition, 5 production facilities were opened, investments of which averaged 10 billion roubles (Fomin, 2018).

The 2019 record holder is the Boguchansky Aluminum Smelter (Krasnoyarsk Territory) with a total investment of over 100 billion roubles. This plant is part of the Boguchansky Metallurgical Association. The second place is taken by a plant located in the Leningrad region; it produces ammonia. Its investment value amounted to 78 billion roubles. The third place is occupied by the Tula Metallurgical Plant of the Industrial Metallurgical Holding Company, which was launched in July.

Investment in construction amounted to 55 billion roubles (Consumer price dynamics: 2019 results; Kuznetsova & Cedilin, 2019; Savinov et al., 2019).

All funding sources were divided into "foreign" and "Russian or mixed". We have noted that most of the enterprises have Russian or mixed capital. This breakdown suggests that foreign investment is present, but not dominant. At the same time, there is no prohibition for foreign investors to create their own enterprises on the territory of Russia, while there is no special influence from imported capital and foreign concerns. This, in turn, proves that modern production can develop with the predominance of the Russian source of capital.

4 Discussion

However, not every open company has a multi-billion dollar investment. The reasons for this are the lack of transparency in the investment of specific projects on the one hand, as well as the immediate absence of the need for large investments, on the other. Most often, this applies to import-substituting enterprises, for example, thermal paper for a cash register receipt, which our country previously imported completely from abroad. In 2019, 63 large production facilities were opened in Russia, a third of which (28%) had investments of more than 1 billion roubles. In addition, there were opened ten production facilities, investments of which amounted to an average of 10 billion roubles. Investments of 63 largest enterprises were 517,382 billion roubles, while 548 billion were invested in just a year; therefore, 94% of the known amount falls on the share of large industries. This means that the remaining 156 enterprises received 356 million each.

The rate of the annual opening of new enterprises in Russia demonstrates that, on average, each new enterprise was opened every 1.6 days.

Over the past five years, the foreign economic policy of Russia has been highly dependent on the policy of sanctions applied to our country by the Western states and the use of retaliatory measures. But at the same time, the course of import substitution was introduced in Russia several years earlier and was noted as a method of supporting the local industry and economy.

But at the same time, one should not forget about the international division of labour. Therefore the introduced measures can be considered a method for reviving domestic agricultural production and industry as an increase in their investment attractiveness and quality level, as well as a way to replace imported products with local ones.

In total, for the period from 2014 to 2019, 1386, enterprises in various industries were opened on the territory of Russia. A relatively equal number of production facilities were opened annually, i.e. more than 200. 2017 was an exception.

The Moscow region has become the record holder region: 116 production facilities in 4 years. The second place belongs to the Republic of Tatarstan, or 80. The third place is shared by the Samara and Sverdlovsk regions: 49 production units in each region (Fig. 1). That is, in total, 21% of the total number of enterprises were opened on the territory of these 4 regions during the study period. Since these regions are located in the most economically developed regions, that is, they have the greatest investment and economic attractiveness. Also, tendencies were identified for the opening of new enterprises in the regions that already have a developed material and technical base for the construction of other industries. In turn, the established enterprises do not contradict the historical specialization of Russian regions.

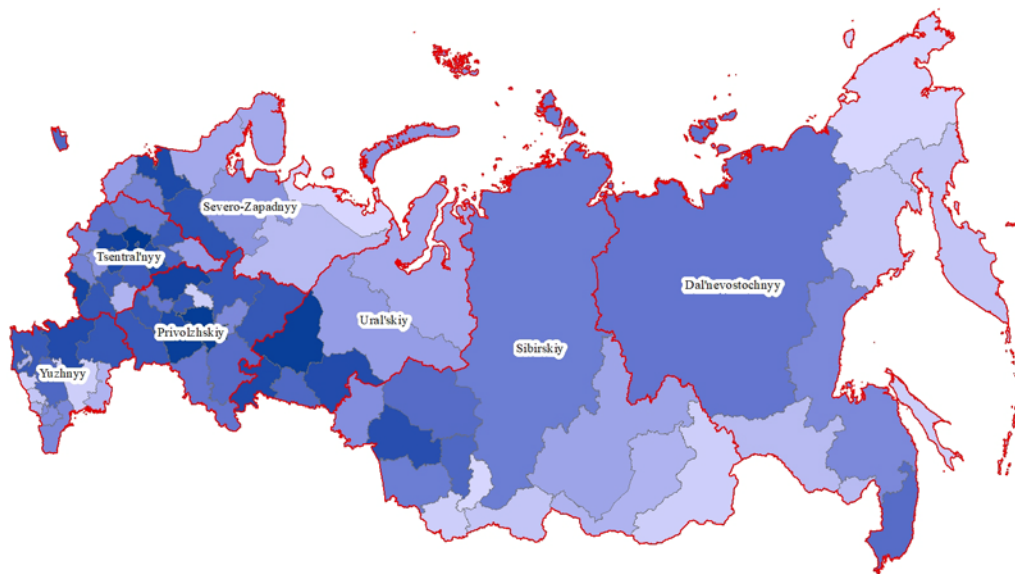


Fig. 1: The number of open enterprises for the period of 2014-2019

Not a single production facility has been put into operation on the territory of three regions for 6 years: these are the Republic of Khakassia, the Nenets and Chukotka Autonomous Districts. These regions are in the priority development areas program, but this has not yielded results so far.

The industries most dependent on imports are mechanical engineering, IT-industry, machine-tool building, as well as these industries significantly affect the further modernization of the Russian economy. The leading industry for the opening of new production was mechanical engineering and metalworking: this is 357 enterprises or almost every fourth enterprise. All this speaks of two things: 1) Russia is experiencing a deficit in the products of this industry; 2) Russia has a sufficient amount of unused resources to open these enterprises. And this also speaks that the state is trying to change its agro-industrial and mining vector of development to machine-building and metal-working. The second place is taken by the industry of construction and repair materials: they were 226 productions in 6 years or every sixth. This can be explained by the fact that the state during the period of import substitution policy needs resources for the construction of buildings and sites of new enterprises, regardless of specialization. The third-place belongs to the production of electronics and electrical engineering: there were 160 of them. The food and chemical industries come next with 124 and 130 industries, respectively.

5 Conclusion

The growth of food industry enterprises was most active in the first 3 years since food imports of Russia earlier accounted for its largest part. And its consequences were observed after: as a result, the following outcomes were obtained in the food industry: domestic production of pork, frozen fruits and vegetables, cheeses and cheese products increased. And also record grain harvests allowed the country to start massive export and enter the list of world leaders. For example, in 2018, Russia produced cattle meat by 60% more than in 2014, pork - by 85%, poultry - by 22%, frozen fruits and vegetables - by 22%, cheese and cheese products - by 8%. Although the growth in other products was more modest; the growth in production of fish, sausages, and certain types of dairy products did not occur [8]. Most of the new enterprises were opened on the territory of special economic zones, territories of advanced socio-economic development, technoparks, industrial parks and zones since special conditions have been created at the listed facilities for better development of new industries. Here, a favourable geographical position, free construction sites, the possibility of

attracting additional personnel and investments, a convenient location of the necessary infrastructure, as well as preferential lending, a financial support program, and special tax conditions for residents are calculated in advance.

New enterprises are characterized not only by a course towards import substitution but also pay special attention to labour protection, processing and disposal of production waste. Additional funds are allocated for this from the budget, as well as treatment facilities and processing plants are being built.

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Literature:

1. Betelin, V.B.: On the problem of import substitution and an alternative model of economic development of Russia [Electronic resource]. *Strategic priorities*, 1(9), 2016. 16-24. - Access mode: <https://www.niisi.ru/vb/026.pdf> (accessed date: 27.03.2020).
2. Bulletins on current trends in the Russian economy [Electronic resource] // Analytical Center for the Government of the Russian Federation. - Access mode: <https://ac.gov.ru/publications/topics/topic/5478> (accessed date: 29.03.2020).
3. Consumer price dynamics: 2019 results [Electronic resource]. Analytical Center for the Government of the Russian Federation. - Access mode: https://ac.gov.ru/uploads/2-Publications/rus_jan_2020.pdf (accessed date: 29.03.2020).
4. Fomin, A.A.: Ensuring the efficient and rational use of agricultural land. *Moscow Economic Journal*, 2018. 1(1).
5. Industrial map of Russia [Electronic resource]. Production of Russia. - Access mode: <https://productcenter.ru/map> (accessed date: 01.05.2020).
6. Industrial map of Russia: rating of manufacturers of building materials [Electronic resource] // Radi Doma PRO. - Access mode: <https://www.radiodomapro.ru> (accessed date: 01.05.2020).
7. Kuznetsova, G.V.: Problems of implementing the course of Russia on import substitution. *East analytics*. 4(3): 2016, 19-37.
8. Kuznetsova, G.V., & Cedilin, L.I.: Import substitution: preliminary policy results for five years. *Russian Foreign Economic Bulletin*, 10, 2019. P. 891.

9. Overview of new industries [Electronic resource]. Made with us. - Access mode: <https://sdelanounas.ru/blogs/> (accessed date: 02.05.2020).

10. Results of 2014 [Electronic resource] // Analytical center under the government of the Russian Federation. - Access mode: <https://ac.gov.ru/publications/topics/topic/5478> (accessed date: 09.04.2020).

11. Savinov, Yu.A., Zelenyuk, A.N., Orlova, G.I., & Skurova, A.V.: Strengthening protectionism in the foreign trade of Russia. *Russian Foreign Economic Bulletin*, 1, 2019. 36-51.

12. The impact of import substitution processes on competitiveness in the Russian agricultural sector. [Electronic resource] // Russian Academy of Sciences. - 2017. - Access mode: [https:// C: /Users/User/Downloads/15%20maslova.pdf](https://C:/Users/User/Downloads/15%20maslova.pdf) (accessed date: 27.03.2020).

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