

Models for Adaptation of Foreign Economic Activity of Russian Companies in the Context of Sanctions Pressure



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Abstract. Investigating models for adapting foreign economic activity of Russian companies to the sanctions pressure of unfriendly countries is relevant, since it is necessary to form approaches to obtaining data on trends and priority strategies for overcoming negative consequences in the current situation. The aim of the work is to assess trends in the use of models that help to adjust foreign economic activity of Russian companies to the sanctions pressure. Research methodology is based on economic analysis methods; application of foreign economic activity adaptation models is reflected using objective indicators that characterize the dynamics of revenue, net profit and investments of companies after the application of restrictions in connection with the economic sanctions of unfriendly countries. The research findings indicate that the inability to replace a large number of raw materials included in the value-added chain has maintained the level of demand for export goods and formed a high motivation for mediation in foreign economic transactions, which made it possible for Russian companies to implement an adaptive export switching model. Adaptation to import restrictions, based on differentiated high-value goods, is carried out bypassing sanctions by companies from unfriendly countries due to the lack of alternative sales markets. Despite the generally favorable position of Russian companies, about a third of enterprises were unable to successfully reorient product sales to new international destinations, which led to a reduction in revenue by the end of 2023. Also, about a third of the companies that showed revenue growth compared to 2021 experienced a reduction in financial performance, which indirectly indicates an increase in costs due to the use of the import switching model. Although the import figures show a pre-crisis level in general, the cost of imports has increased significantly, due to the complexity of logistics and the formation of a chain of intermediaries. Data on the use of the adaptation model of international cooperation show that large enterprises do not use this mechanism due to the risks of secondary sanctions for foreign partners. The findings contribute to the methodology for studying models of companies' adaptation to sanctions pressure by forming methodological foundations for determining the directions to adjust foreign economic activity based on the current system of statistical observation. The developed methodological foundations, along with survey methods for obtaining information related to models for Russian companies' adaptation to sanctions, can be used to monitor the identified issues and verify research on relevant topics.

Key words: adaptation models, international cooperation, export switching, import switching, economic sanctions.

Introduction

The modern stage of economic development is characterized by the active application of measures of direct institutional regulation in the world trading system. Economic sanctions are becoming a popular tool for limiting the economic growth of countries and a way to defend their interests in international policy issues. Most authors define sanctions as a set of direct regulation measures, including various kinds of restrictions and an absolute trade embargo on resident companies in the targeted countries. The main objective of economic sanctions is to reduce the output of the targeted countries' economies through restrictions on exports and imports, restrictions on the provision of financial, technological and investment resources, which should result in such secondary effects as the inability to produce certain types of products, economic recession (Portela, Mora-Sanguinetti, 2023), poverty (Ganjoui, Iranmanesh, 2023), the formation of an unstable social environment (Rodríguez, 2024), political crisis, etc.

Active adaptation of companies to the sanctions pressure is a natural reaction to the existing environment. The models for adapting companies' foreign economic activity include changes in the directions of export and import of products, creation of new systems of settlements with partners, formation of new stable partnerships with entrepreneurs – residents of neutralist states. In accordance with the outlined agenda it is necessary to fill the gap concerning the study of models that help to adjust foreign economic activity of Russian companies to the sanctions pressure, to form a research methodology that allows promptly assessing the directions of adaptation on the basis of objective economic indicators, taking into account the available information sources.

Thus, the aim of the work is to assess the trends in the use of models for adapting foreign economic

activity of Russian companies to the sanctions pressure.

To achieve it, the following tasks were set and solved:

- to analyze the existing methodological approaches to the assessment of models that help to adjust foreign economic activity of Russian companies to the sanctions pressure;
- to substantiate the selection of indicators characterizing the use of adaptation models of export switching, import switching and international cooperation;
- to form the information base of the research using data on foreign trade operations of companies;
- to estimate the use of adaptation models by the companies included in the information base of the research by testing the following hypotheses (Fig. 1).

Figure 1. Hypotheses of the research

Assessment of the adaptive export switching model	H1.1: The growth of 2023 revenue volume over 2021 levels indicates the successful use of the export switching model		
Assessment of the adaptive import switching model	H2.1: The growth/maintenance of 2023 net profit volume compared to 2021, while maintaining revenue volume at 2021 levels, indicates the successful use of the import switching model	H2.2: The decrease of 2023 net profit volume compared to 2021, while maintaining revenue volume at 2021 levels, indicates the increased costs when switching imports	H2.3: The presence of imported investment goods in the company's investment program indicates the effectiveness of the import switching model
Assessment of the adaptive international cooperation model	H3: The setting-up of controlled foreign companies in the period 2022-2023 by the companies included in the information base of the research indicates the successful use of the international cooperation strategy		

Source: own compilation.

The novelty of the research is in the development of methodological foundations for determining the directions to adjust foreign economic activity based on the current system of statistical observation. The developed methodological foundations, along with survey methods for obtaining information related to models for Russian companies' adaptation to sanctions, can be used to monitor the identified issues and verify research on relevant topics.

Degree of elaboration of the problem

Economic sanctions have a direct influence on companies operating at the micro level of the economy. Secondary effects associated with the decrease of the gross domestic product, the growth of social strain and political tension make themselves evident, provided that adaptation to economic sanctions at the micro level is insufficient. Accordingly, successful models for adaptation of companies in the context of the sanctions pressure allow reducing secondary negative effects.

It is worth noting that most researches analyzing the consequences of the first (2014) and second (2022) sanctions waves focus on assessing the consequences for the national economy as a whole, using general economic indicators (Simachev et al., 2024; Kuzyk, Simachev, 2023; Kaempfer, Lowenberg, 2007) with subsequent branch detailing. A grave disadvantage of this approach is an insufficiently detailed analysis of the consequences of the sanctions pressure at the micro level (Whang, 2010). This circumstance largely explains the divergent conclusions made by the authors about the consequences and effectiveness of economic sanctions. If we avoid the political aspect of these researches, then in the works where the methodological part focuses on the impact of economic sanctions on macroeconomic indicators (Gutmann et al., 2023; Schott, 2023), it is concluded that sanctions are highly effective in putting pressure on targeted countries. In researches assessing the effects of sanctions on the micro level, the

conclusions are not so clear, the authors (Huynh et al., 2023; Gaur et al., 2023) come to understand the inevitability of adapting to sanctions and declining in efficiency of their pressure on targeted countries. Among the works on the impact of the second wave of economic sanctions on Russian companies, it is necessary to highlight the article (Kovalin, 2022), which assesses the first consequences of the shocks of spring 2022 based on the results of the enterprises' representatives survey made by the Institute of Economic Forecasting of RAS, and also analyzes the increase in output of certain branches of the Russian economy in January – August 2022 compared to the same period in 2021.

Among the works describing the methodologies for the assessment of sanctions pressure impact on companies in terms of economic indicators impact, the following should be highlighted. The first group of methods aims at determining the reduction in the company's turnover due to the restrictions put on product export (Keerati, 2022). These assessments are often supplemented by the description of the results of sanctions restrictions on imports of raw materials, half-finished goods, technologies, as well as servicing equipment supplied by unfriendly countries in previous years (Golikova, Kuznetsov, 2021).

The second group of works embraces the consequences of financial turnover restrictions between partners during export and import transactions (Gurvich, Prilepsky, 2016). The analyzed results relate to both direct refusal to provide financial services and restrictions on access for Russian companies to the capital market, and in some cases to the possibility of transferring equity from offshore parent companies (Evsin, 2022; Mirkin, 2015).

The third group of works is aimed at assessing the results of restrictions on specific resources, such as key information and digital technologies,

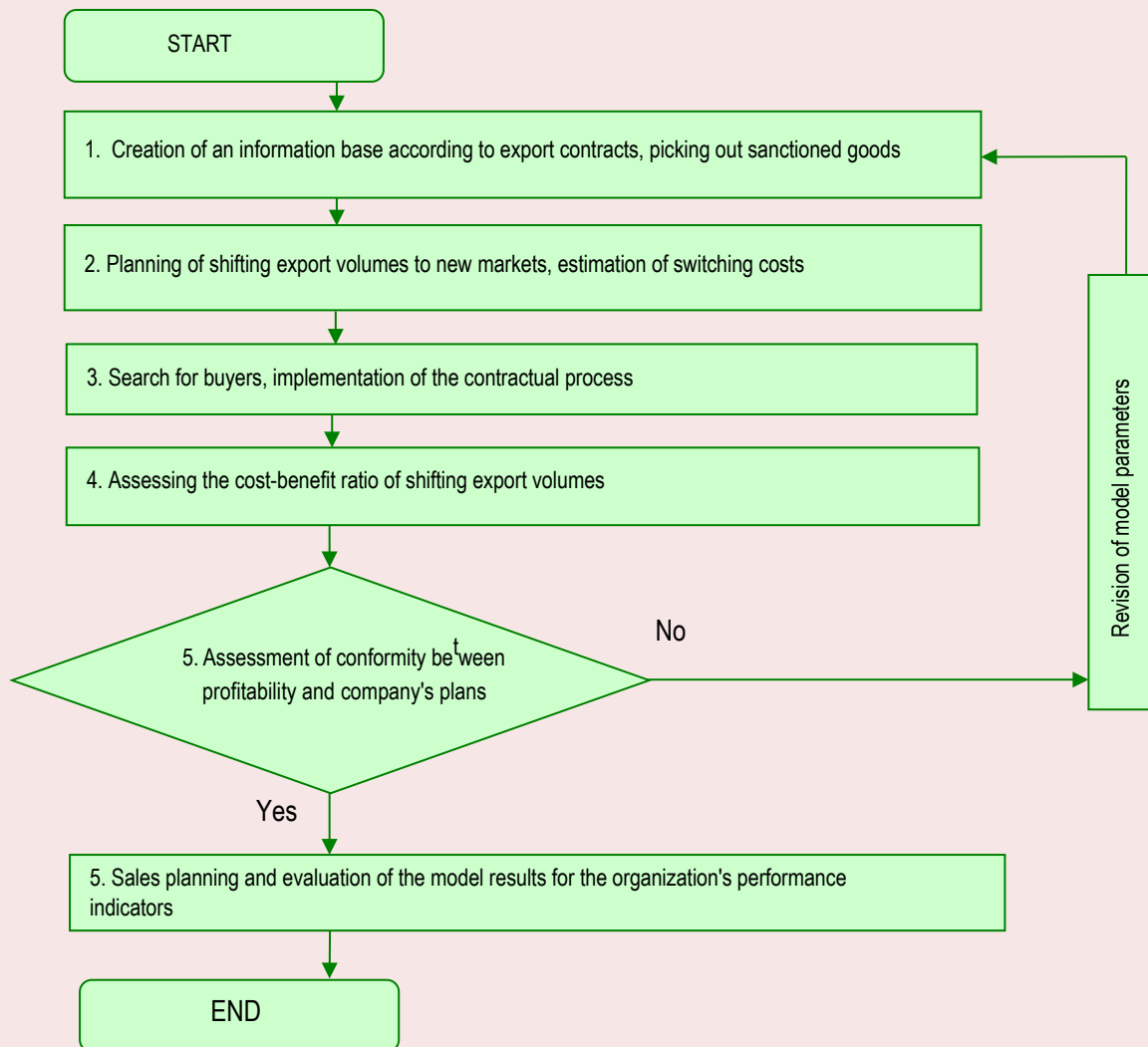
specific types of equipment, and the possibility of training employees in a number of specialties. These restrictions cause systemic damage to the infrastructural branches of the Russian economy and carry the risk of technological lag, the formation of technological gaps (Kokovikhin et al., 2023; Lukin, Shirokova, 2023).

The analysis of research on the strategy choice for adjusting foreign economic activity of Russian

companies to the sanctions pressure allowed us to identify the following models used by companies to overcome the barriers of sanctions and further economic development.

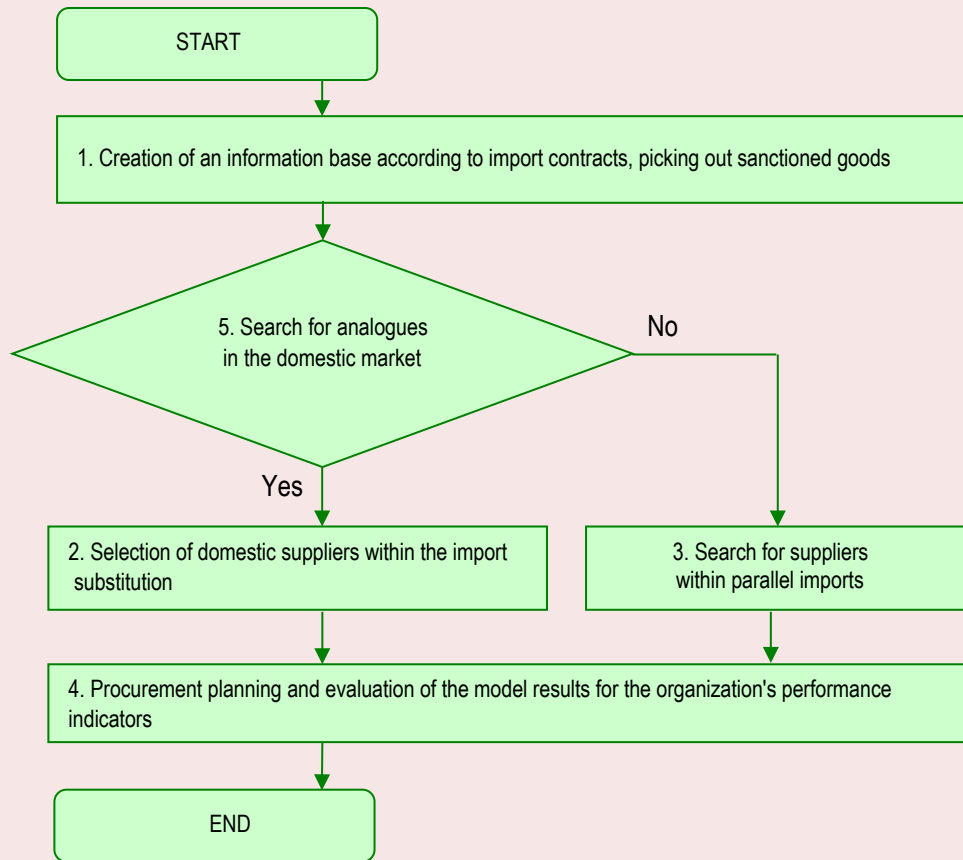
The first strategy is based on the simultaneous use of export switching (Ostrovsky, 2018) and import substitution (Smorodinskaya, Katukov, 2022; Dmitriev, 2023). These adaptation models are represented in *Figures 2, 3*.

Figure 2. Adaptative export switching model



Source: own compilation.

Figure 3. Adaptative import switching model



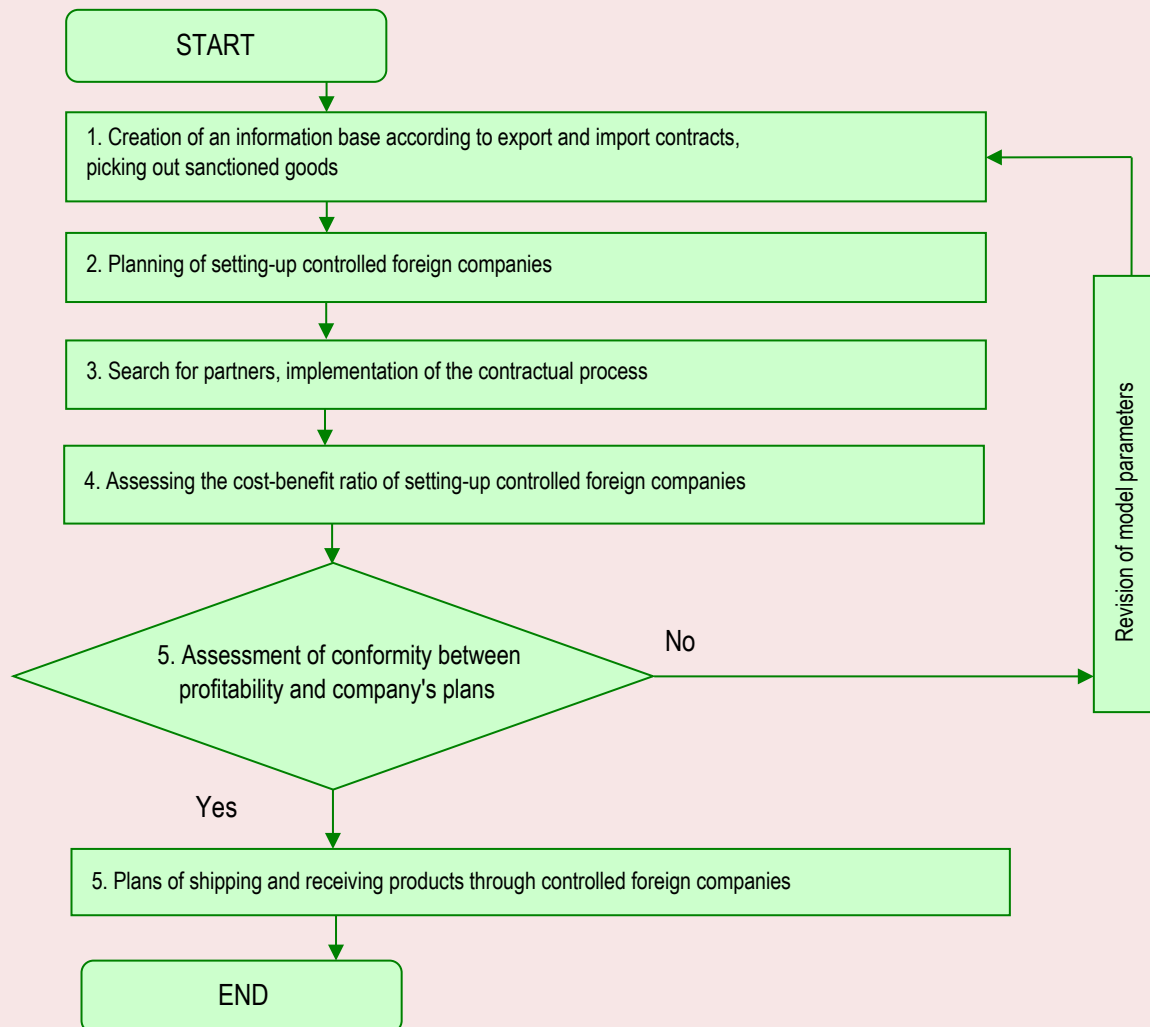
Source: own compilation.

The result of analytical procedures in accordance with the presented model allows obtaining data on current export directions, volumetric indicators of lost income. Next, alternative sales plans are projected, currently including markets in Asia and the Middle East. Companies can use territorial and product diversification to overcome restrictions, since most of the goods exported by companies in the Russian Federation belong to the category of industrial goods and, on the one hand, are weakly differentiable by consumers, and on the other hand, often have no substitution in established value-added chains (Smorodinskaya, Katukov, 2017).

A key characteristic of potential markets is their stability to secondary sanctions threat.

The strategy of import switching is implemented in two directions: first, domestic producers capable of replacing sanctioned goods are selected, and secondly, an alternative supply chain is formed – “parallel imports” (Kostin, Evdokimova, 2023). The first direction’s steps are aimed at studying the technological requirements for the substituted products and the possibilities of integrating domestic substitutes into production processes. The second one requires the creation of a normative base for intellectual property and technology transfer (Kostin, Evdokimova, 2023).

Figure 4. Adaptation model of international cooperation



Source: own compilation.

An alternative to the export and import switching strategy is the adaptation model of international cooperation (Fig. 4).

The adaptation model of international cooperation allows contracting out a number of functions exercised in the company system of business processes to a friendly foreign jurisdiction, which makes it possible to remove the processes of product selling and procurement of necessary goods from

the sanctions (Maksimtsev et al., 2023), as well as to maintain control over the chain of conditional intermediaries in the course of changing the identity of sold and purchased goods.

At the moment, the use of one of these models or a combination of them is dynamic, since there is a constant change in the regulatory field and relevant factors for both Russian companies and companies in friendly foreign jurisdictions.

As a rule, the application of the adaptation model is justified by the involvement of specialists in foreign economic activities in the relevant region. In particular, the justification of the adaptation model for switching exports and international cooperation in the Middle East region requires taking into consideration factors such as the level of customs duties ranging from 5 to 20% on technical products, the cost of delivery and the commission of a local sales agent amounting to 15–30%.

Besides the additional costs, the export switching strategy is accompanied by difficulties associated with financial arrangements, since transactions in US dollars or euros with Russian companies are prohibited, and transactions in yuan are at risk, since the yuan does not have a stable value such as the US dollar or euro. At the same time, the localization strategy assumes a significant amount of seed capital and a fairly large time lag for the start of production.

Research methods

The research methods include the following steps.

1. Creation of a database of foreign trade transactions in 2021 with the adjustments:

- the volume of sales exceeds 5 billion rubles per year;
- the company's products fall under restrictions imposed during the second wave of sanctions (2022); since restrictions on the import of certain goods and services to the Russian Federation concern almost all business entities, and often individuals, this allows us to limit the research sample to determine the models for adapting activity of companies to the sanctions pressure.

The created information base of the research includes 539 companies with the following industry distribution: agriculture – 145, fuel and energy complex – 169, mechanical engineering – 53, metallurgy – 34, woodworking – 10, chemical industry – 128 companies. The territorial distribu-

tion corresponds to the traditional localization of the production complexes of the respective industries.

2. The assessment of the use of the adaptive export switching model is based on an analysis of the revenue growth rate in 2023 compared with this indicator in 2021 for the selected analysis units. The growth rate, which indicates the maintenance or growth of revenue volume compared to the level of 2021, is a proof of the use of a successful export switching model.

3. The assessment of the use of the adaptive import switching model is based on an indirect indicator – the change in net profit compared to 2021. This indicator, while maintaining revenue level of 2021, will demonstrate an increase in expenses, due, among other things, to the need to overcome restrictions on the import of goods. An additional utilization indicator of the adaptive import switching model is the presence of imported investment goods in the company's investment program, estimated by checking corporate reports.

4. The assessment of the use of the adaptive international cooperation model is made by checking the creation of controlled foreign companies in the period 2022–2023 by companies included in the information base of the research according to the international database Dun & Bradstreet.

Research results

Assessment of consequences of sanctions pressure on the foreign trade activities of the Russian Federation

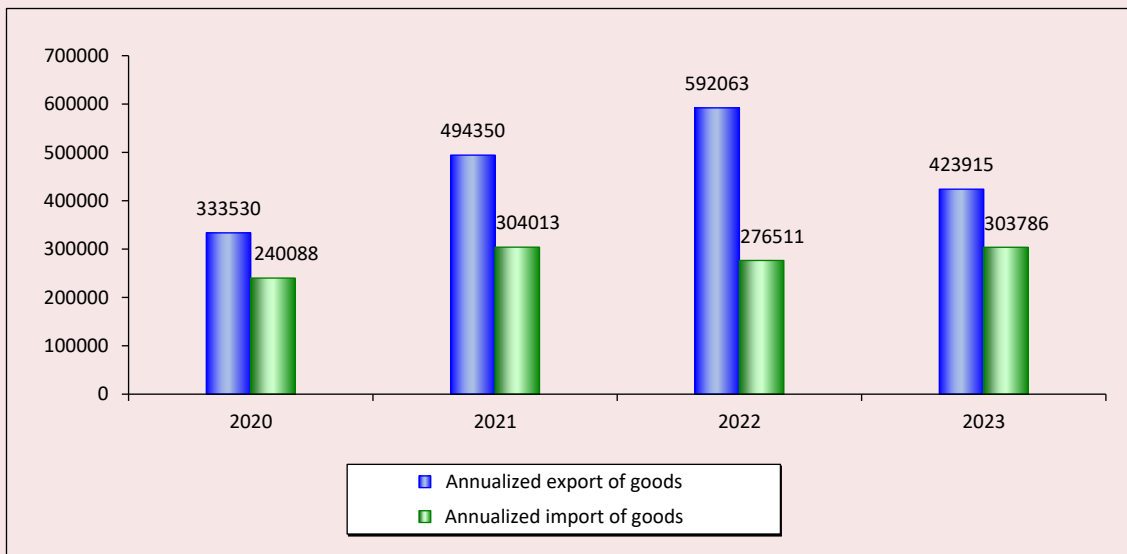
Finding volume of exports and imports trends by industries makes it possible to assess the overall impact of restrictions on the national economy and the initial adaptation results. *Figure 5* shows the indicators of exports and imports of goods of the Russian Federation for 2020–2023 according to the WTO.

According to the data, the overall export indicators, after a sharp increase in 2022, stabilized in 2023, showing a decrease by 14% compared to the 2021 level. The import indicator characterizes the recovery of total imports in 2023 to the 2021 level, which demonstrates the effectiveness of the first wave of

adaptation measures. Data on the dynamics of export indicators by industry are presented in *Table 1*.

According to the information, it can be concluded that the restrictions had a negative impact on the export of wood – 42%, chemical industry products – 28% and raw leather – 30%.

Figure 5. Indicators of exports and imports of goods of the Russian Federation for 2020–2023, million USD



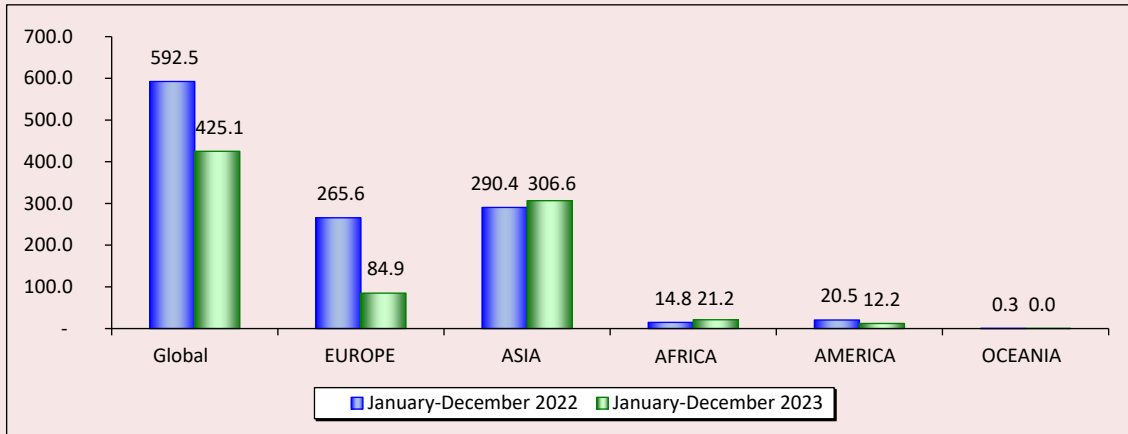
Own compilation based on: WTO Stats. Available at: <https://stats.wto.org/>

Table 1. Exports of goods by the Russian Federation, 2021–2023

Industry	Exports, billion USD			Growth rate, %		
	2021	2022	2023	2022 to 2021	2023 to 2022	2023 to 2021
Total, including:	493.0	592.5	425.1	120.2	71.7	86.2
01–24 – Food products and agricultural raw materials (except textiles)	36.0	41.3	43.1	114.7	104.3	119.6
25–27 – Mineral products	277.0	391.6	260.1	141.4	66.4	93.9
28–40 – Chemical industry products, rubber	37.8	42.0	27.2	111.1	64.8	72.0
41–43 – Raw leather, furs, leather and fur goods	0.2	0.2	0.1	111.5	62.8	70.0
44–49 – Wood, pulp and paper goods	17.0	14.0	9.9	82.5	70.3	58.0
50–67 – Textiles and footwear	1.7	1.9	1.7	110.2	93.2	102.7
71–83 – Metals, metal goods	53.6	70.7	60.0	131.9	84.9	112.0
68–70, 84–97 – Machinery, equipment and vehicles and other goods	29.3	30.8	22.9	105.1	74.5	78.2

Own compilation based on: Exports and imports of goods of the Russian Federation. Available at: <https://customs.gov.ru/statistic/vneshn-torg/vneshn-torg-countries>

Figure 6. Exports of goods by the Russian Federation to country groups, 2022–2023, billion USD



Own compilation based on: Exports and imports of goods of the Russian Federation. Available at: <https://customs.gov.ru/statistic/vneshn-torg/vneshn-torg-countries>

The main products of Russian exports, namely hydrocarbons and metals, have practically not lost their positions. The figures demonstrate the effectiveness of the general adaptive export switching model.

According to *Figure 6*, there was a reorientation of sales from Europe and North America to Asia and Africa during the analyzed period.

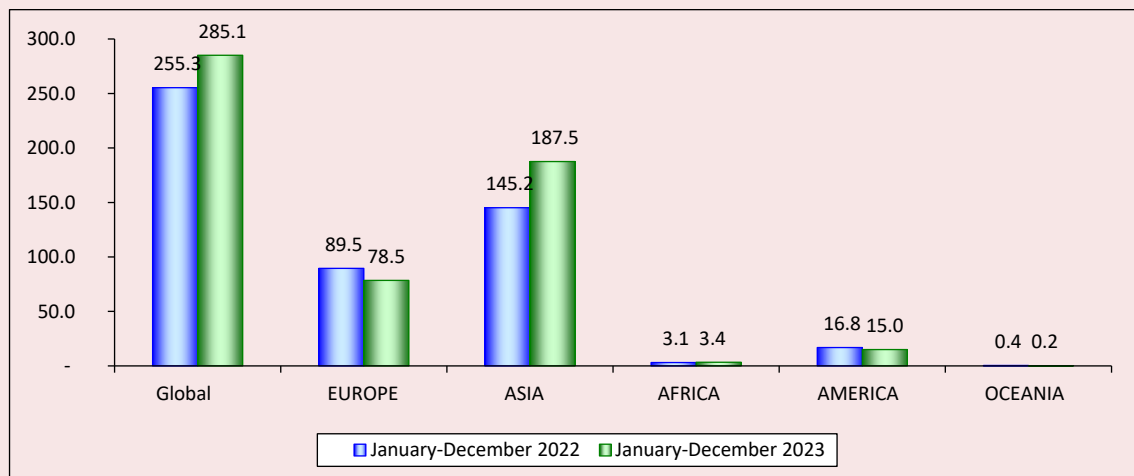
Farther, let us consider the results of changes in imports by industry (*Tab. 2*).

Table 2. Imports of goods to the Russian Federation, 2021–2023

Industry	Imports, billion USD			Growth rate, %		
	2021	2022	2023	2022 to 2021	2023 to 2022	2023 to 2021
Total, including:	293.5	255.3	285.1	87.0	111.7	97.1
01–24 – Food products and agricultural raw materials (except textiles)	34.0	35.8	35.1	105.2	98.3	103.4
25–27 – Mineral products	5.6	5.3	5.6	94.4	105.1	99.1
28–40 – Chemical industry products, rubber	53.8	57.1	55.7	106.1	97.6	103.5
41–43 – Raw leather, furs, leather and fur goods	1.3	1.0	1.2	75.5	122.2	92.2
44–49 – Wood, pulp and paper goods	5.2	3.9	3.4	74.5	86.6	64.6
50–67 – Textiles and footwear	17.0	15.8	19.1	92.7	121.4	112.5
71–83 – Metals, metal goods	22.7	19.1	19.2	84.2	100.4	84.6
68–70, 84–97 – Machinery, equipment and vehicles and other goods	144.8	117.5	145.8	81.1	124.1	100.7

Own compilation based on: Exports and imports of goods of the Russian Federation. Available at: <https://customs.gov.ru/statistic/vneshn-torg/vneshn-torg-countries>

Figure 7. Imports of goods to the Russian Federation by country groups, 2022–2023, billion USD



Own compilation based on: Exports and imports of goods of the Russian Federation. Available at: <https://customs.gov.ru/statistic/vneshn-torg/vneshn-torg-countries>

As mentioned above, the adaptation mechanisms involved during 2022 and 2023 allowed returning import indicators to pre-crisis levels. This circumstance was in no small way facilitated by traditional suppliers, including those from unfriendly states, who could not find alternative markets under constraints. This situation is determined by the high differentiation of high-value goods traditionally supplied to Russia, for which alternative markets are highly competitive. The importing regions structure has changed (*Fig. 7*).

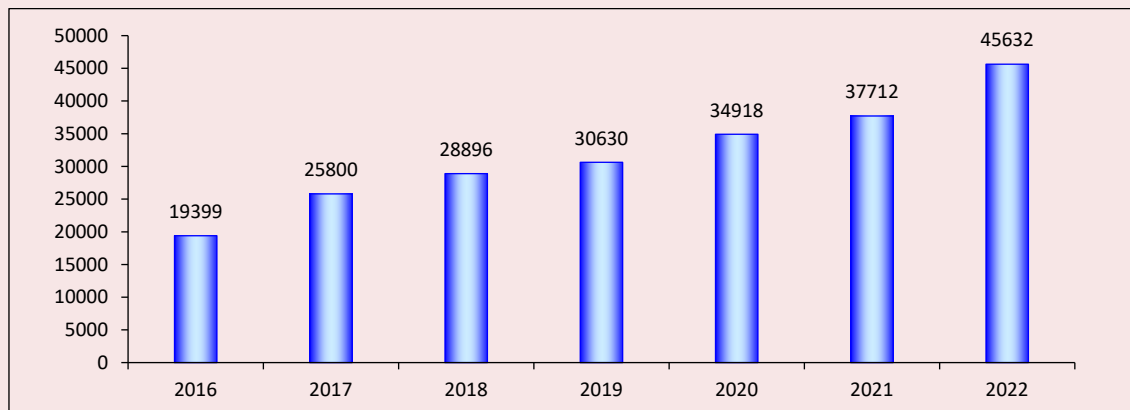
The importing regions structure has changed as well as exporting regions one. Thus, the implementation of adaptive models for switching exports and imports to friendly locations allowed preserving the economic capacity of the Russian Federation. At the same time, a considerable effort was stimulated to form technological sovereignty in significant infrastructure sectors of the economy, own production facilities in electronics, computer

technology, telecommunications equipment industries, etc.

The adaptive international cooperation model also had great sway in the implementation of export and import switching mechanisms. One of the indicators of its implementation is the growth of foreign companies controlled by Russian participants. *Figure 8* shows data on the number of controlled foreign companies in the period from 2016 to 2022.

Based on the available data, during the crisis year 2022, the number of foreign companies controlled by Russian participants increased by 21%. Most of them (82%) are controlled by individuals, which is due to the active recognition of foreign assets caused by the need for them to be transferred to Russian jurisdiction. The other controlled foreign companies (18%) are created to carry out a number of foreign trade operations, and these companies are actively migrating from unfriendly countries. To summarize the overall

Figure 8. Number of controlled foreign companies, 2016–2022, units



Own compilation based on: Results of the activities of the Federal Tax Service of Russia. Available at: https://data.nalog.ru/html/sites/www.new.nalog.ru/files/related_activities/statistics_and_analytics/effectiveness/itog23.pdf

results of the implementation of adaptation models, it is worth noting that the characteristics of differentiation of exported and imported products have formed a more favorable position for Russian companies and, accordingly, the Russian economy. The inability to replace a large number of raw materials included in almost all value-added chains has maintained the level of demand for these goods and formed a certain group of intermediary companies, and in some cases, states. On the other hand, imported goods, often produced in friendly countries (for example, China), are sold bypassing sanctions by companies that have no alternative due to national governments position (lack of compensation for lost demand).

Adaptation trends of foreign economic activity of Russian companies to the sanctions pressure

Russian companies acting under sanctions pressure are implementing models for adapting foreign economic activity according to basic conditions, including the importance of exports in revenue, the presence of imported components in

products, the importance of international contacts and the possibility of receiving government support. The observation of the companies selected in the information base of the research showed the following results (*Tab. 3*).

As is seen from Table 3, most of the large companies that have been sanctioned since 2022 have implemented a successful export switching strategy, maintaining and increasing revenue compared to 2021. The enterprises of the agricultural sectors that were initially oriented to export markets of Asia, Africa and the Middle East have adapted most successfully. Among the new marketing outlets, grain supplies to Algeria and Saudi Arabia, livestock products to Vietnam and China are highlighted. Export of the Russian fuel and energy complex products was reoriented in the following directions: oil tanker shipping was destined to India and the countries of the Middle East, which handled secondary sales to traditional consumers of Russian oil, sales of oil transported by pipelines has been increased by the People's Republic of China, coal exports were redirected to the countries of the

Table 3. Testing data on the hypotheses of the research

		H1.1	H1.2	H2.1	H2.2	H2.2	H3
Industry	Companies total	The number of companies that showed an increase in revenue compared to 2021	The number of companies that showed a decrease in revenue compared to 2021	The number of companies that showed a decrease in profits compared to 2021 with a revenue maintenance	The number of companies that showed a decrease in profits compared to 2021 with a decrease in revenue	The presence of imported investment goods in the company's investment program	The number of companies that set up controlled foreign companies in the period 2022, 2023
Crop production	47	40	7	14	6	5	-
Animal husbandry	98	87	11	11	7	7	-
Metallurgy	34	19	15	11	14	-	-
Oil refining	83	63	20	32	18	4	1
Coal	68	37	31	19	30	4	1
Natural gas	18	15	3	7	4	-	-
Chemical industry	128	87	41	12	3	7	2
Mechanical engineering	53	44	9	22	29	-	1
Woodworking products	10	4	6	3	6	-	-
Total	539	396	143	131	117	27	5

Source: own compilation.

Asia-Pacific region. Metallurgical and mechanical engineering enterprises work positively due to the growth of the domestic market. The reorientation of export of these industries, as well as woodworking products, faces logistical constraints, various types of goods compete for the capacity of existing routes. Meanwhile, it should be noted that about a third of enterprises were unable to successfully redirect products to new international destinations, which led to a decline in revenue. About a third of the companies that showed an increase in revenue compared to 2021 demonstrated a decrease in financial results, which indicates an increase in expenses in the new economic situation. Mainly these expenses increased in the oil refining and mechanical engineering industries. Despite the

fact that import indicators show a pre-crisis level in the total mass, the cost of imports has increased significantly, due to the complexity of logistics and the emergence of intermediaries.

The information obtained from the financial statements allowed identifying 27 companies that used foreign investment goods during the accounting period. This information is indirect, based on data on the implementation of investment projects, since there are reasonable concerns about possible sanctions aimed at foreign suppliers. Primarily, imported investment goods include production complexes, machinery, equipment, and transport vehicles. The difficulty of this process has increased for Russian companies since March 2023, when restrictive measures aimed at foreign

partners became obvious. In particular, Chinese banks fearing secondary sanctions have imposed restrictions on Russian companies. An active transition to domestic products characterizes the investment program of IT industry, which until recently formed the basis of corporate information systems of the largest Russian enterprises. In particular, Rusagro Group refuses SAP platform products during the digital development program, EVRAZ replaced the vulnerability scanner and integrated it into the IRP/SOAR system.

The analysis shows that the result of the adaptive models that companies applied due to the sanctions pressure is not clearly industry-specific. In most cases, large companies included in the information base of the research demonstrated the maintenance of revenue volumes and a positive financial result.

Discussion

Our research continues a series of works aimed at determining the consequences of the imposition of economic sanctions for both individual companies and the national economy. It is worth noting that at the moment there is an active discussion about the nature of the consequences of the imposition of sanctions, a sufficient number of works with contradictory assessments and recommendations on the expediency and effectiveness of the sanctions impact are presented in the research field.

Primarily, it is necessary to highlight a number of works by foreign authors, who can be divided into those who state the high effectiveness of sanctions and those who elicit the high adaptability of Russian companies in overcoming sanctions. The former ones note the possible consequences of the imposition of sanctions, representing the high effectiveness of sanctions pressure on the Russian economy.

The article (Hosoe, 2023), published in March 2023, presents the preliminary assessment of the effects of economic sanctions. According to the author, these sanctions should have led to a decrease in Russia's GDP by 3–7%, and the GDP losses of the countries imposing sanctions should not have exceeded 0.2% for European countries and not more than 0.05% for other Western countries and Japan. As seen in practice, the forecast did not materialize and is not reliable enough in the context of the results of our research.

The article (Gutman et al., 2023) draws a similar conclusion about the negative impact of economic sanctions on GDP growth, trade and foreign direct investments. At the same time, the authors talk about the greatest impact of sanctions during the first years of use, since in subsequent periods the economies of the targeted countries adapt, which reduces the effectiveness of sanctions. Indeed, our research data indicate that the use of well-known models of adaptation to the sanctions pressure, even for two years, leads to the maintenance and increase in the performance of companies that have been restricted.

The work (Schott, 2023) states that sanctions will lead to a sharp decline in imports, which will increase costs for Russian companies, and in the future reduce the revenue budget. This conclusion is in harmony with the research results: difficulties with import substitution led to an increase in costs for a third of the surveyed companies, mainly in the oil refining and mechanical engineering industries.

Analyzing the few works of foreign authors whose research produced conclusions about the high adaptability of Russian companies in overcoming sanctions, the following can be summarized.

In the work (Huynh et al., 2023) it was noted that the effectiveness of sanctions is sectoral. In particular, the authors concluded that the sanctions do not affect companies in the fuel and energy complex, but at the same time undermine the work of companies from other industries. The authors also talk about a successful strategy for adapting export switching to the markets of Asia and the Middle East. Having agreed, according to our research results, with the conclusion about the effectiveness of the adaptive export switching model, we see an explicit contradiction in the sectoral features of adaptation. Government support does not directly affect revenue and profit indicators, respectively, these characteristics rather objectively indicate problems for a number of companies in the fuel and energy industry as well.

As a result of a sufficiently detailed research (Gaur et al., 2023), based on an analysis of the Russian companies adaptation after the first wave of sanctions (2014), the authors conclude that in some cases, companies that have been sanctioned have higher performance indicators than their counterparts that have not. There is an adaptation at the company level that goes beyond the protective activities of the Russian government. In fact, Russian companies are ready for sanctions and have responded to them with a set of strategic and non-strategic actions that have allowed dealing effectively with any potential negative consequences of sanctions. This conclusion generally is in harmony with our research results. Indeed, a number of large companies in key industries of the Russian economy have passed stress testing during the first wave of sanctions and developed adaptation tools.

Russian scientists are also studying the issues of assessing the consequences and using adaptive models for Russian companies against economic sanctions. Primarily, we should note the results

of the large-scale work carried out by researchers at the Higher School of Economics (Simachev et al., 2023). According to the authors, the second wave of sanctions (2022) affected companies with foreign participation, innovatively active companies, exporters and importers, and while the consequences for companies with foreign participation and importers are mainly negative, for exporters they are positive. This conclusion corresponds to our research results. Indeed, dependence on imports has had a more serious impact on the financial performance of the analyzed companies.

Summing up the discussion with foreign authors, we would like to draw several conclusions regarding the research methods. In our opinion, possible divergence is due to the research focus on macroeconomic parameters and the analysis of their changes as a result of economic sanctions. Shifting the research focus to the micro level makes it obvious that the use of adaptation strategies by companies allows them to successfully counteract the negative effects of sanctions.

Conclusion

Studying the consequences of using models for adapting foreign economic activity of Russian companies to the sanctions pressure is one of the main directions for assessing the consequences and justifying the necessity of using economic sanctions to put pressure on targeted countries. This issue is of keen interest in the scientific community due to the active application of restrictions on economic activity used by Western countries since the beginning of the 21st century. The analysis of works allowed identifying the basic models for adapting companies to the sanctions pressure, which is in switching exports, imports and using international cooperation.

The success of the implementation of these models for Russian companies depends on the

differentiation status of products that form the basis of exports and imports. In the case of the Russian Federation, the low differentiation of export products and the high differentiation of import ones have formed a favorable position for Russian companies and, consequently, the Russian economy. The inability to replace a large number of raw materials included in almost all value-added chains has maintained the level of demand for these goods and formed a certain group of intermediary companies, and in some cases, states. On the other hand, imported goods, often produced in friendly countries (for example, China), are sold bypassing sanctions by companies that have no alternative due to national governments position (lack of compensation for lost demand).

The research findings showed that, despite the generally favorable position, about a third of enterprises were unable to successfully redirect products to new international destinations, which led to a decline in revenue. Also, about a third of the companies that showed an increase in revenue compared to 2021 demonstrated a decrease in financial results, which indicates an increase in expenses due to the implementation of the import switching model. Although the import indicators show a pre-crisis level in general, the cost of imports has increased significantly, due to the complexity of logistics and the emergence of intermediaries. Data on the use of the adaptive international cooperation model show that large enterprises avoid using this mechanism due to the risks of restrictions associated with sanctions.

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