The Impact of External Sanctions Pressure on the Sustainability of Economic Growth in the Region (on the Example of the Republic of Tatarstan)

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Abstract: In the context of severe sanction pressure on the Russian economy, the study of import substitution issues is becoming essential for understanding emerging trends, the potential for the national economy, regions and industry economic development in the new economic conditions. The aim of the work is to develop and test methodological approaches for identifying the region critical imports in the context of sanction restrictions concerning transnational supplies of goods and raw materials. The basis of the study is the methods of systematization and grouping of the commodity nomenclature of imports concerning final and intermediate consumption goods according to the level of criticality of its localization in the reproduction processes of the studied sectors of the region economy. The results of the study consist in the identified risks of sustainable economic growth development of the Republic of Tatarstan within the framework of a possible limitation of critical imports to the region. The implemented estimates can serve as a basis for developing mechanisms of predictive model construction of the gross regional product in the context of simulation modeling of import supplies correction from abroad and the implementation of adaptation programs for import substitution.

1 INTRODUCTION

The geopolitical situation in the world that worsened in 2022 significantly affected the formation of cross-border supply chains and the sustainability of the Russian economy development. Sanction pressure and restrictions imposed on the Russian Federation by a number of Western countries have significantly transformed foreign trade turnover and led to perturbations in the system of foreign economic relations. Against this background, the issues about the need to form technological sovereignty and reduce the dependence of the Russian economy on imports of goods and components from the so-called unfriendly countries have come to the fore. Their solution is of a very non-trivial nature and requires the use of an integrated approach: starting from the development of scientific and technological development programs with the aim of import substitution of foreign technologies and ending with such aspects as the development of mechanisms for "parallel" imports and the reorientation of cross-border trade relations to the East. At the same time, it should be noted that in the overwhelming majority of cases, their content is concentrated on heuristic and descriptive methods of analysis, which does not allow an objective look at the horizons of upcoming changes in the future. Meanwhile, in order to form high-quality mechanisms for state regulation of

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socio-economic processes, an empirical, economic and mathematical basis is required for the development of effective management decisions. In this regard, the following seems to be an extremely important agenda for the current day - the concentration of research in the field of appropriate methodological tool development.

It is important to note that the problem of this article concerning maintaining the sustainable development of the national economic system in the conditions of sanction restrictions is not new, of course. Close attention is given to the solution of such problems by both foreign and Russian scientists and research teams of leading development institutions (Higher School of Economics [1], Central Economics and Mathematics Institute of the Russian Academy of Sciences [2], Center for Macroeconomic Analysis and Short-term Forecasting [3], Federal State Budgetary Institution of Science "Institute of Economics of the Russian Academy of Sciences" [4], etc.). In their works, one can find a very wide range of methodological approaches to modeling and forecasting economic growth, including under conditions of uncertainty. At the same time, methodological tools that reveal the features of economic dynamics modeling in the context of the transformation of foreign economic relations and systemic transformations at the regional level are not found almost. Also, as in a rather limited format, one can find the studies that reveal the features of economic growth in the context of the localization of imports and a large-scale disruption of foreign trade supply chains.

In this regard, it seems extremely relevant, both from a practical and scientific point of view, to develop further the relevant methodological tools in the context of regional development prospects, based on the use of economic and mathematical tools.

It is also important to note that the issues of theoretical and applied understanding and research of import substitution policy have received considerable attention in recent years among foreign researchers as well. The most notable studies include the works by Bali [5], Deringer [6], Bas [7], Stone [8], Zhang [9], etc.

At the same time, despite the presented review of scientific works, it must be stated that at the current time, the issues of empirical substantiation of import substitution models have not been properly developed at the regional and sectoral levels. This causes and actualizes the need for further research in this area to fill the existing vacuum. These issues are especially acute on the current agenda of the Russian Federation and its regions, which are faced with restrictions in the supply of imports and the need to find trends and mechanisms to stimulate the policy of import substitution and ensure technological sovereignty, primarily in the industrial sectors of the economy.

At the same time, it should be noted that the solution of the issue of finding mechanisms that ensure the sustainability of the economic system development in the context of systemic transformations should be preceded by a methodological basis that substantiates the key points of focusing on economy state regulation measures, taking into account the new reality. In accordance with this approach, there is a need to search for and develop tools that provide the ability to identify the most vulnerable types of economic activity from some reduction in imports and develop predictive estimates of their development in a new institutional and market environment. This, in turn, will largely contribute to the development of effective solutions in the field of building optimal settings for the regional economy and its adaptation to new economic conditions.

2 METHODS

The research methodology involves a multidimensional analysis of statistical data in the context of commodity groups and their respective types of economic activity. A distinctive feature of the proposed methodology is the basing of its calculations on open federal statistical data, which ensures the verifiability and objectivity of the presented results. , The methodology includes a dynamic analysis of imports by product groups, regions and country, a structural analysis of import commodity items and the types of economic activity present in the assessed territory, a comparative analysis by product groups and the types of economic activity by region.

The most important methodological basis of the study is the search for patterns of economic development in the new reality, the definition on this basis of the prospects for emerging new trends in the economic dynamics of the regions of the Russian Federation and the potential positive and negative consequences.

The key step in the study of the issues raised about the risks of economic growth in the conditions of external pressure and import restrictions is the assessment and systematization of data characterizing the quantitative and cost flows of products and services imported into the region in the context of their nomenclature and supplier countries. Besides, the most important methodological aspect in the study

of the sustainable development of regional economic systems is the identification of import supplies from the standpoint of their criticality for the economic security provision of a constituent entity of the Russian Federation.

In addition, an important aspect of assessing the risks of sustainable development of the region under sanction restrictions is the need to localize the research focus to the level of commodity groups of imported products and services, taking into account their categorization into imports from friendly and unfriendly countries . This scaling is required both for the formation of a comprehensive, holistic concerning the development prospects of individual sectors of the regional economy, dependent on external supply chains of individual final and intermediate consumption goods. The same is true for understanding the prospects and possibilities for substituting foreign products as part of the reorientation of supplies to friendly countries in order to understand the criticality of emerging foreign economic trade trends.

In accordance with the proposed approaches to the study, statistical information and subsequent estimates and calculations formed on its basis are based on federal statistical data (Federal Customs Service of the Russian Federation3). The methodology includes a dynamic analysis of imports in the context of commodity groups and supplying countries, a structural analysis of commodity items of imports consumed in the region, a comparative analysis in the context of commodity groups and types of economic activity in the context of the region, systematization of supply chains in the context of such criteria as:

- supplier country (friendly/unfriendly country). In this study, a friendly country is understood as a country with which the Russian Federation has the most favored regime in trade relations, and also with respect to which there are no restrictions on import supplies;
- criticality (vulnerability) of the regional economy from import supplies in the context of commodity groups.

The analysis assumes the use of a classifier of commodity groups according to the nomenclature of foreign economic activity of the TN VED, which includes 97 commodity groups. Such accounting will allow the transition from the regional level of statistics to the level of individual economic entities (organizations), which requires additional analysis of enterprises operating in the region in order to understand the production potential of the territory.

3 RESULTS AND DISCUSSION

With regard to the Republic of Tatarstan, relying on the processed array of information concerning the supply of imports to the territory of the region in the context of commodity groups (according to the Federal Customs Service), as well as being guided by the proposed methodological tools, Table 1 presents the summarized results of the implemented assessments.

In accordance with the results obtained concerning the critical import of goods, the possibility of replacing which within the existing supply chains with partner countries seems difficult for the Republic of Tatarstan, should include:

- live animals (CN code 01);
- other chemical products (CN code 38);
- optical, photographic, cinematographic, measuring, control, precision, medical or surgical instruments and apparatus (CN code 90).

In turn, critical imports, the product range of which can be substituted within the framework of strengthening partner trade relations of the Republic of Tatarstan with friendly countries - current suppliers of similar products to the region, should include:

- milk products; bird eggs; natural honey; food products of animal origin (CN code 04);
- organic chemical compounds (CN code 29);
- plastics and plastic products (CN code 39);
- caoutchouc, rubber and products from them (CN code 40);
- products made of ferrous metals (CN code 73);
- tools, fixtures (CN code 82);
- electrical machines and equipment; sound recording and reproducing equipment, equipment for recording and reproducing television images and sound (CN code 85).

Table 1: Import of goods from unfriendly countries to the Republic of Tatarstan by the level of critical impact on the sustainable development of the regional economy.

	01 - PCS - LIVE ANIMALS	04 - DAIRY PRODUCTS; BIRD EGGS; NATURAL HONEY; FOOD PRODUCTS OF ANIMAL ORIGIN	27 - MINERAL FUEL, OIL AND PRODUCTS OF THEIR DISTILLATION; BITUMINOUS SUBSTANCES; MINERAL WAXES	29 - ORGANIC CHEMICAL COMPOUNDS	38 - OTHER CHEMICAL PRODUCTS	39 - PLASTICS AND PLASTIC PRODUCTS	40 - CAOUTCHOUC, RUBBER AND PRODUCTS MADE OF THEM	73 - PRODUCTS OF FERROUS METALS	82 - TOOLS, EQUIPMENT	83 - OTHER BASE METAL PRODUCTS	85 - ELECTRIC MACHINES AND EQUIPMENT; SOUND RECORDING AND REPRODUCING EQUIPMENT, APPARATUS FOR RECORDING AND REPLAYING TV IMAGES AND SOUND ACCESSORIES	87 - MEANS OF GROUND TRANSPORT OTHER THAN RAILWAY OR TRAMWAY ROLLING STOCK AND THEIR PARTS AND ACCESSORIES	90 - OPTICAL, PHOTOGRAPHIC, CINEMATOGRAPHIC, MEASURING, CONTROL, PRECISION, MEDICAL OR SURGICAL INSTRUMENTS AND APPARATUS	94 - FURNITURE; BED DRESS; LAMPS AND LIGHTING EQUIPMENT, PREFABRICATED BUILDING STRUCTURES
Critical / non-critical import	2	2	1	2	2	2	2	2	2	1	2	1	2	1
Change of geographic supply chains	2.2	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.2	2.1	2.2	2.2	2.1

1 - Non-critical import of goods
2 - Critical import of goods
2.1 - Possibility of import substitution by changing the geography of supplies (reorientation of supply chains to friendly countries)

2.2 Lack of possibility of import substitution within the framework of supplies reorientation concept to friendly countries

4 CONCLUSIONS

The scientific results obtained after testing the proposed methodology make it possible to develop effective import substitution mechanisms that take into account the peculiarities and trends of the regional market. The estimates obtained, revealing the peculiarities of deliveries of the so-called critical imports to the region, indicate the need to intensify state policy measures in the field of import substitution. For example, the share of hardly renewable imports in the Republic of Tatarstan reaches 13%, which undoubtedly carries significant risks for its sustainable development. And given that this group of imports is involved in the creation of added value in such important regional economic activities as agriculture, the production of chemical products, etc., the vulnerability of the sustainable development of the Russian Federation subject under consideration can be characterized as significant.

5 SUMMARY

The estimates obtained, revealing the risks of sustainable development of certain sectors of the economy of the Republic of Tatarstan within the ongoing perturbations in the transnational supply chains of imports of final and intermediate consumption goods, determine the basis not only concerning the prospects for their sustainable development in the context of sanction restrictions, but also largely contribute to understanding the future, short-term trends in the formation of regional economic growth.

Thus, it is also important to pay attention to the fact that the proposed methodological tools can complement the existing theoretical approaches to regional economic growth modeling in the context of systemic transformations. And its testing on the example of all subjects of the Russian Federation can form a very unambiguous "picture" of risks and opportunities for the country region development. Besides, it opens up a new perspective on the study of the sustainable development of regional economic systems in the current conditions of deglobalization and disruption of cross-border supply chains of goods.

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REFERENCES

Rating of Russian regions by import dependence of their specializations. High School of Economics. URL: https://issek.hse.ru/mirror/pubs/share/821903380.pdf (Accessed on 16.06.2023)

Ermakova, Ya.M., Larin, S.N., Khrustalev, E.Y., 2022. Identification of competitive advantages in the implementation of sectoral import substitution strategies . Proceedings of the International University Scientific Forum “Practice Oriented Science: UAE – RUSSIA – INDIA”. Part 1 (June 17, 2022. UAE). pages 42-48.

Russian economy trends. April 2023. Center for macroeconomic analysis and short-term forecasting. URL: www.forecast.ru/_ARCHIVE/SocMon/2023/Mon042023.pdf (Accessed on 10.06.2023)

Koshovets, O.B., 2023. Images of economic reality in science, politics and public space: trends of the 21st century. M.: IE RAN. 376 p.

Bali, M., Rapelanoro, N., 2021. How to simulate international economic sanctions: A multipurpose index modelling illustrated with EU sanctions against Russia. International Economics, vol. 168, pp. 25-39.

Deringer, H., Erixon, F., Lamprecht, Ph., van der Marel, E., 2018. The Economic Impact of Local Content Requirements: A Case Study of Heavy Vehicles. Retrieved from https://ecipe.org/publications/the-economic-impact-of-local-content-requirements/ (last accessed 5.03.2021).

Bas, M., Strauss-Kahn, V., 2014. Does Importing More Inputs Raise Exports? Firm-Level Evidence from France. Review of World Economics, 150(2), 241-275.

Stone, S., Messent, J. and Flaig, D., 2015. Emerging Policy Issues: Localization Barriers to Trade. OECD Trade Policy Papers, no. 180. Paris, OECD Publishing. 10.1787/5js1m6v5qd5j-en (last accessed 07.03.2021).

Zhang, T., Huang, Z., 2021. Blockchain and central bank digital currency. ICT Express.

Aksyanova, A. V., Shakirova, A. I., Elshin, L. A., 2011. Evaluation of business activity in the region using a composite leading index. *Bulletin of the Kazan Technological University*, No. 8. pages 263-268.