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Russian Presidential Academy of National Economy and Public Administration

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**Theory and Practice of the Development and Implementation of a
New Model of Industrial Policy**

Specialisation 5.2.3 – Regional and Industrial Economics

THESIS BRIEF
for the Doctor of Economic Science Degree

Moscow, Russia – 2022

Core results of the thesis by Denis Manturov
Theory and Practice of the Development and Implementation of a New
Model of Industrial Policy

The Doctor of Economic Science thesis (Specialisation 5.2.3 – Regional and Industrial Economics) by Denis Manturov is an integrated study of problems and possible improvements and systematisation of approaches to industrial policy management at the current stage.

Urgency of the research follows from the social and economic development challenges that require a new model of state industrial policy implementation formed by incorporating both Russian and international experience.

In particular, in his message to the Federal Assembly of the Russian Federation on 15 January 2020, the Russian President pointed to the crucial importance of addressing the large-scale social, economic, and technological challenges the country is facing. President of the Russian Federation stressed that "...we need to launch a new investment cycle, dramatically increase investment in creating and upgrading jobs and infrastructure, in industry, agriculture and service sector development". Russian Presidential Executive Order No. 204 of 7 May 2018, *On National Goals and Strategic Objectives of the Russian Federation Development through to 2024*, identifies the need to create "high-productivity export-oriented businesses based on modern technology and staffed with highly qualified employees" in the basic sectors of the economy, primarily, in manufacturing. Russian Presidential Executive Order No. 474 of 21 July 2020, *On the National Development Goals of the Russian Federation through to 2030*, additionally specifies these goals. They are defined by the present-day national and global challenges, which, above others, include energy transition, sanction restrictions, and epidemiological conditions. Nevertheless, long-term models that would meet such challenges have not yet been formed.

Over the last 25 years, Russian industry has been through the periods of ups and downs, which resulted from internal and external macroeconomic impacts, including from the state industrial policy. The current state of industry development is still trying to approach the target level. For example, certain sectors considerably depend on imports, or identify great potential of added value growth by advancing the processing stage for export-oriented products.

As part of new model development, an integrated study of theoretical and practical problems of industrial policy regulation and research into the role of the state as the subject of industrial policy formation and implementation are required both at the federal and regional levels, in order to use the identified problems and approaches to their solution to work out the main parameters of the target model of industrial policy implementation in the long run.

The target model of industrial policy implementation formed as a result of the research should set the optimal trajectory for Russian industry to transition from its current state into the target state by eliminating structural imbalances, forming appropriate responses to major external challenges, and mitigating key risks.

A significant amount of theoretical and practical research, including in the import substitution/phaseout area, is dedicated to certain aspects of industrial policy formation and implementation in the Russian Federation (including industrial policy models). However, there is a lack of up-to-date works on how to establish the parameters of target long-term models of industrial policy implementation based on the analysis of its theoretical and practical regulation problems; as a consequence, there are no target long-term models of industrial policy implementation that would meet the present-day challenges.

These background conditions indicate the need for conducting a scientific study of theoretical and practical problems of industrial policy regulation and predetermine the urgency of the chosen subject of the dissertation.

Object of the research is the role of the state in forming and implementing industrial policies both in retrospective models and in the target model of industrial policy implementation in the long run.

Subject of the research is the economic relations formed between the participants during the formation and implementation of an industrial policy.

Objective of the research is to perform a comprehensive analysis of theoretical and practical problems of industrial policy regulation in order to further identify the main parameters of the target model of industrial policy implementation in the long run.

The following **tasks** have been set to achieve the goal:

1. Cover the main approaches of researchers to understanding the concept of 'industrial policy', update the role of import substitution as a priority area of industrial policy implementation.
2. Describe the possibilities and limitations of using international experience in forming and implementing industrial policies in the Russian Federation.
3. Describe the stages in industrial development of the Russian Federation in the 1990s, 2000s and 2010s and identify the factors of success and failure in implementing industrial policies at each of the historic stages.
4. Cover the features and content of evolution of tools for state management of industry.
5. Substantiate the role of the state as an investor in implementing industrial investment projects and analyse how it changes at different stages of the country's industrial development.
6. Develop approaches to the design of specialised tools of industrial policy that ensure the result, efficiency, transparency and control of implemented projects.
7. Describe the stages and identify the key development trends in approaches to implementing regional industrial policies; identify the problems and

mechanisms of coordinating industrial development priorities on the regional and national scale.

8. Define the role of regulatory tools in forming and implementing industrial policies at the current development stage and substantiate the prospects of its modification.

9. Identify the problems and results of import substitution plans implementation and set out the possibilities of using the project-product-based approach as a tool to support national producers.

10. Substantiate the need, content and direction of implementing the regional component of the federal industrial policy.

11. Develop the author's target model of state industrial policy implementation through to 2030 (long run).

Scientific novelty of the research is the fact this is the first comprehensive dissertation that studies the main stages and approaches to implementing the industrial policy models over the period from 1990 to 2019 that works out the main parameters of the target model of industrial policy implementation in the long run.

More detailed, scientific novelty of the research includes the following thesis statements to be defended:

1. Approaches to the nature of 'industrial policy' have been defined and covered. The concept of 'industrial policy' and relationship between the terms 'industrial policy', 'sector-specific policy' and 'structural policy' have been updated. Based on the analysis of the current approaches to import substitution as a possible area of industrial policy implementation, arguments have been put forward to support the conclusion that import substitution should be united with 'export combination' and obtain the features of 'additive outsourcing' on the condition of developing the mechanism of private-public partnerships and cooperation with international companies that possess unique competences. In this capacity, import substitution should become one of the characteristics of the target model of industrial policy implementation in the Russian Federation.

2. The analysis of international experience in industrial policy implementation has shown that for all industrially-developed countries, with respect to their political organisation, legal regulation and original position on the global market, the variety of industrial policy tools, in some ways, always aims to stimulate domestic production while further inevitably pursuing export, product sales in the world market of goods. The intergovernmental limitations banning prohibitive measures or direct financial incentives to national companies are overcome by adjusting activities and finding indirect tools to support national industry. A conclusion has been made that the possibility of employing the measures and tools that proved efficient in other countries is therefore defined by the degree of similarity between legal regulation, institutional conditions, economic situation and readiness of the state to face the consequences (including negative ones) of employing a certain measure with the ultimate objective of conquering positions in the global market remaining unchanged.

It has been identified that the possibility of adapting foreign experience to the Russian conditions of refurbishing and location of industrial enterprises depends above all on offering sufficient credit to the enterprises that develop their production capacities and make export supplies, and providing foreign trade guarantees.

3. The study of state industrial policies over the period since 1990 up to the present moment has made it possible to identify the following characteristics of the three stages of industrial policy development in the modern Russian history:

- the 1990s, when state efforts were largely focused on stabilising the macroeconomic situation by applying monetary, credit and budgetary policies, while the concepts adopted for industrial policy implementation remained declarations. There was no completeness of industrial policy as a combination of regulations and resources to implement the initiatives.

- the 2000s, which saw political and economic stabilisation, though industrial regulations remained inconsistent and insufficiently coordinated in terms of decisions made coupled with the absence of proper legal regulation of the main

instruments of industrial policy. There was a shift in the focus of industrial policies from developing science-intensive sectors to the supporting nature of industry towards the oil and gas sector; the 'horizontal' industrial policy was first transformed into isolated, vertically-oriented projects, then, in essence, into manual management of individual sectors.

– the 2010s, when there was a substantial increase in coordination of efforts between the state bodies in charge of making industrial decisions, which led to the formation of a more integral industrial policy. The mechanisms made proved their efficiency and allowed the country, on the one hand, to prevent a severe crisis in certain sectors due to the increasing external turbulence (car making, aircraft, shipbuilding, pharmaceutical industries), while on the other hand, to create the background for identifying and supporting promising investment projects.

4. The features and content of evolution of tools for state management of industry have been covered. As a result of analysis performed, the scientific problem of multi-vector nature of industrial policy goals has been solved: industrial policy, which was originally seen as a tool to structurally re-build the industrial sector by supporting individual branches, is at the current stage a comprehensive system of regulation measures aimed at achieving a long-term economic growth, including by means of modernising and improving the technological level of industry and supporting promising investment projects. To implement the new system of target priorities, a broad spectrum of industrial policy tools (including 'adapted' ones) never employed in the Russian Federation has been put forward: state programmes, specialised subsidies, special investment contracts and state funds for industry development.

At the same time, the 'vertical' system of measures that still prevails today, coupled with the absence of unified industrial development priorities and limited financial resources for an integrated modernisation of Russia's industry, stand in the way of effective implementation of industrial policy.

5. The role of the state as an investor during industrial investment project implementation. The research has demonstrated that owing to the unique legal

position of the state as a 'special' investor, industrial investment activities include not only such specific tools as subsidies or public investments, but also the establishment of vertically integrated structures and specialised industry support and development institutions, and creation of favourable conditions for investment activities.

A conclusion has been made that the financial incentives system for industrial production has become significantly more complex: subsidies have been put in compliance with international regulations; new mechanisms of funding have appeared due to the establishment of state corporations and development institutions; financial support has on the whole become more targeted as a result of orientation towards specific strategically important projects selected through competitions. The role of the state as an active investor has simultaneously evolved: from implementing individual targeted projects to direct intervention in industrial activity and again, towards the reduction of the amounts of state property and active investment participation. This has also seen, to a certain extent, cyclicity in ideas and methods of their implementation: while pursuing state investment goals, the same tools were used as before, but with a higher level of technological and institutional support.

6. Approaches to the design of specialised tools of industrial policy have been developed. The author proves that the industry support tools used by the state as a 'special investor' should be developed based on the following principles:

- adaptation to the changes in strategic priorities and present-day industry development challenges;
- possibility to combine them with the existing financial and non-financial tools;
- focus on inter-sectoral and social effects in the economy: contribution to increasing living standards, creation of potential in science and technology due to the integration of science and technology, development of human resources potential in a variety of areas, etc.;

- focus on achieving specific, measurable economic results, which ties providing finance to the guarantees of achieving results;
- maximum transparency in selecting the projects to support.

These principles should be used not only for subsidies or repayment financing, but also for the tools that are traditionally not related directly to results or project approach. These include contributions to the equity capital of joint-stock companies crucial to ensure stable operation of cross-industry and priority sectors of the Russian economy, asset contributions to state corporations, or public investments, including within the framework of state industrial programmes.

7. Stages and key development trends in approaches to implementing regional industrial policies have been identified; problems and mechanisms of coordinating industrial development priorities on the regional and national scale have been described. It has been substantiated that the developing system of industrial activity regulation in the subjects of the Russian Federation aims to address objectives not only of regional, but also of federal importance. The experience of implementing industrial policies accumulated over the years from 1995 to 2015 has shown that their formation has a bilateral nature, to some extent, even cyclical (regions — centre — regions). In the coming years, this cyclicity may form the foundation to further advance industrial regulation mechanisms: based on yet another review of implementing regional industry development initiatives, an industrial policy implementation rating in Russian regions has already been developed. Evaluation criteria for industrial policy implementation levels have been formed; they reflect to which extent Russian regions employ industry development mechanisms and the widths of their spectra. The rating has been used to classify the Russian Federation subjects by quality of industrial policy implementation.

8. The role of regulatory tools in forming and implementing industrial policies at the current development stage has been defined, while the prospects of its modification have been substantiated. The adopted Federal Law *On Industrial Policy in the Russian Federation* has proved to define the vector of industrial

relations between the state and economic entities (incentives have a priority over bans and orders) and to form the foundation for further application of the industrial policy tools set forth in the law.

In the regulatory groundwork for industrial policies, the law plays the role of identifying the legal status of the tools used to provide industrial policy stimulation measures, i.e. to increase the competitiveness of Russian jurisdiction for investment in industry.

Other conditions for effective application of industrial incentives (especially in terms of controlling the right distribution of benefits and preferences, and the inevitable application of penalties for violations) have not yet been fully defined, while their legal regulation remains a priority for the state as the main regulator of economic relations in industry.

9. The problems and results of import substitution plans implementation have been identified, while the possibilities of using the project- and product-based approach as a tool to support national producers have been set out. It has been demonstrated that industry's interest in the import substitution projects implemented with governmental support since 2014 has activated investment in import substitution projects despite the overall reduction in investment activity. The development of import substitution has, first of all, prevented the negative scenario in target sectors and technology areas, and secondly, made it possible to test the new technology of project-product-based approach to supporting national producers. However, in the short run, import substitution as it is can and should be looked at not only as a tool to mitigate political risks, but also as a way of ensuring export-oriented development of industry. The factors to be accounted for while developing import substitution plans have been updated: production of priority and essential types of goods for the domestic market — above all, for industrial consumers; presence of domestic demand and market capacity; further export potential of the products to be made. The latter is particularly important since if production is organised successfully, import substitution becomes the first step towards entering overseas markets.

10. The need, content and direction of implementing the regional component of the federal industrial policy have been substantiated. The author has developed his proprietary classification, which subdivides the federal industrial policy into two interacting components, sectoral and regional. The principles of forming regional industrial policies at the federal level have been stated; they are used in integrated revisions of industry sectors' strategic planning documents and reflect the features of the present-day industrial policy of the Russian Federation. These principles formed the foundation for setting the main directions of the regional component of the industrial policy at the federal level; specifically:

- selectivity through the promotion of project selection and implementation mechanisms in regional legal regulations;
- wireframe cluster approach through the development of a network of industrial parks, technoparks and clusters;
- assistance in engaging foreign partners through special investment contracts (SICs) or for import substitution projects;
- assistance in diversifying the business activities of industrial enterprises, especially those operating in 'mono-towns';
- implementation of unified approaches to staffing the regional industrial development institutions.

11. Main parameters have been developed for the target model of industrial policy implementation, which should set the optimal trajectory for Russian industry to transition from its current state into the target state while eliminating structural imbalances, forming appropriate responses to present-day challenges, and mitigating key risks. It has been proved that industrial policy implementation is exposed to a great number of risks; a particular importance in industrial policy implementation should be paid to the global risks of reinforcing sanctions and internal operational risks related to delays in passing the legal regulations essential for industrial policy implementation.

The possible functional types of industrial policy identified in the research boil down to one role or a combination of the following roles of processing industry:

1. tool for addressing internal tasks;
2. tool for supporting extractive industries;
3. basis for economic development and key source of budget revenues;
4. tool for risk diversification in the Russian economy.

It has been established that the intermediate type between ‘basis for economic development and key source of budget revenues’ and ‘tool for risk diversification in the Russian economy’ is the preferred option to be implemented.

The target model of industrial policy is a combination of the industrial policy development areas that respond to present-day challenges and risks. To effectively implement the target model of industrial policy, it is particularly important to transition from sector-based to platform-based management principles. Investment policy is a result of choosing a set of possible support tools, evaluating industry needs for finance, and identifying and eliminating non-financial obstacles to investment.

Theoretical importance of the research involves the development of a theory of industrial policy development based on an integrated study of relevant Russian and international experience and the justification of its key implementation tools taking into account the present-day challenges to the Russian economy, such as energy transition, sanction restrictions, and epidemiological conditions.

The scientific statements and recommendations elaborated in this thesis can be used in the development of strategic planning and project management documents for industry as well as for federal and regional government bodies to work out legal regulatory measures.

In addition, the research materials can be used for education purposes to study national economy management.

Practical significance of the research involves the possibility of applying the industrial policy implementation model, which has been developed by the author, in the Russian Federation. The introduction of the model can further improve the work of government bodies by adopting the project-product-based and cluster approaches and by systematising the industrial policy regulation and implementation mechanisms at the objective-oriented level and the project management level. The model envisages platform-based management principles to be applied throughout; their adoption and popularisation will increase the compliance of Russia's industrial policy with the world's best practices of innovative technological development.

The research has also developed new methodological principles to identify the challenges that arise during industrial policy implementation and to work out the mechanisms of addressing them in a timely manner. Such approaches can be used in strategic planning and to implement development strategies for the economy as a whole as well as branches of industry and cross-industry sectors, both at the federal and regional levels.

Research results testing and evaluation. The results of the research were used by the Ministry of Industry and Trade of Russia to develop Federal Law No. 488-FZ of 31 December 2014 *On Industrial Policy in the Russian Federation* (hereinafter, No. 488-FZ) and regulations adopted to ensure its implementation as well as to develop and fine-tune such strategic planning documents as: State Programme of the Russian Federation *Industry Development and Improving Industrial Competitiveness* approved by the Decree of the Russian Government No. 328 of 15 April 2014, *Export Development Strategy for Civil Aviation Industry Products of the Russian Federation through to 2025* approved by the Russian Government's Executive Order No. 1997-r of 18 September 2017, *Export Development Strategy for the Car Industry in the Russian Federation through to 2025* approved by the Russian Government's Executive Order No. 1877-r of 31 August 2017, *Import Substitution Plans for Civil Sectors of Industry* approved by orders of the Russian Ministry of Industry and Trade, and *Consolidated*

Development Strategy for the Processing Industry in the Russian Federation through to 2024 and to 2035 approved by the Russian Government's Executive Order No. 1512-r of 6 June 2020.

The author's model, recommendations and other results of the research are currently being used in the Russian Ministry of Industry and Trade to back up managerial decisions to implement and further improve the industrial policy of the Russian Federation. In the future, the statements put forward in the thesis will be used to develop new financial and non-financial instruments of state support to industry.

The statements of the thesis have been presented to the President of the Russian Federation, discussed with the Russian Government, State Duma, Federation Council, governmental bodies, and found practical application at every level of industrial policy implementation in the Russian Federation.

The author has also tested and evaluated the research while giving lectures as part of his educational activities at the Moscow Institute of Physics and Technology (State University), Peter the Great St. Petersburg Polytechnic University, Lomonosov Moscow State University, Volgograd State Technical University, Bauman Moscow State Technical University, and the Russian Foreign Trade Academy under the Ministry of Economic Development of the Russian Federation.

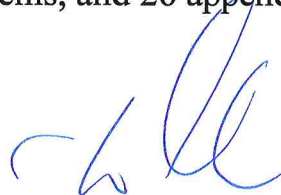
The main statements of the dissertation have been presented at Russian and international conferences and public events: *ARMY* International Military-Technical Forum (Moscow, annually), *Innoprom* International Industrial Trade Fair (Yekaterinburg and other cities, annually), Industrial Policy and Military Industrial Complex Development Issues under the Military Academy of the General Staff of the Armed Forces of the Russian Federation (Moscow, 2021), 8th Conference on Strategic Cooperation between Russia and Germany organised by the Russian-German Chamber of Commerce (Hanover, Lower Saxony, 2021), Government Hour (On National Industry Development Objectives in the Current Social and Economic Conditions) (Moscow, 2021), Ecomference Rupost Retail

Week Forum (Moscow, 2021), BioTechMed Forum (Gelendzhik, 2021), *ADIPEC* Exhibition and Conference (Abu Dhabi, 2021), Government Hour (On Industry Support Measures in the Russian Federation in the Modified Economic Conditions) (Moscow, 2020), 3rd Industrial Forum *LPK 360°: From All Points of View* (Moscow, 2019), All-Russian Light Industry Forum (Moscow, 2017), *BRICS* Global University Summit (Moscow, 2015), International Conference *New Industrial Environment: New Industrial Sectors, New Development Vectors* (Moscow, 2014).

The results of the dissertation have therefore been fully put to practice in the work of state governmental bodies, development institutions, and industrial policy facilities, including the subjects of the Russian Federation, industrial enterprises, innovative infrastructure facilities, etc.

Publications. 19 research papers have been published on the topic of the thesis, which reflected the main content of the dissertation, including 10 – in publications recommended by the Higher Qualification Committee under the Ministry of Education and Science of the Russian Federation, and 8 publications in journals recommended by the RANEPa scientific council to publish articles on economic science.

Structurally, taking into account the logic of the research, the thesis consists of the introduction, five chapters, and the conclusion; the paper includes 64 figures, 23 tables, bibliography with a list of 390 items, and 26 appendices.



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