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ECONOMIC EFFECTS OF REALIZATION OF THE STATE PROGRAMS OF INDUSTRIAL DEVELOPMENT

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Abstract. The relevance of the research topic is determined by the implementation of industrial policy in the Russian Federation within the framework of the program-target approach, the need to develop methods for assessing the effectiveness of state programs for the development of industry, the complex structure of the effects of state programs and, consequently, the complexity of assessing their effectiveness. The purpose of the study is to elaborate a structure of economic effects of the implementation of state programs of industrial development. Research method: mathematical modeling. Research results: The author structures the positive effects of the state programs of industry development. The novelty of the proposed structure is to separate the effects of micro-, meso- and macro-levels, as well as in the developed system of indicators for assessing the effectiveness of the implementation of state programs for the development of industry by subjects and objects of management of structural changes. The author defines the conditions for effective implementation of structural changes in industry, leading to the achievement of economic development goals. The feature of the author's position is to take into account such factors as the quality and consistency of strategic planning documents, the type of distribution of functions in the management of structural changes and others. The author sees the directions of further research in the adaptation of methods for assessing the effectiveness of state programs for individual subjects (types of subjects) of management of structural changes in the industry of the Russian Federation and individual objects (types of objects) of management of structural changes in the framework of the program-target approach to the implementation of industrial policy.

Keywords: state programs, industrial development, economic effects, structural changes.

INTRODUCTION

The relevance of the research topic is due to the implementation of industrial policy in the Russian Federation within the framework of the program-target approach, the complex structure of the effects of state programs and, consequently, the complexity of assessing their effectiveness. Industrial policy dedicated to the works of A. G. Aganbegyan, M. A. Bendikov, R. S. Greenberg, V. E. Dementyev, G. B. Kleiner [1], R. M. Kachalov, E. B. Lenchuk, O. A. Romanova, O. S. Sukharev [2], A. I. Tatarkin [3] and other authors. Methodological issues of state program management, evaluation of effectiveness and efficiency of state programs revealed in the works by M. A. Bendikov, V. V. Ivanter, S. Y. Glazyev, V. E. Dementiev [4], V. N. Leksin [5], B. N. Porfiryev [6],

V. M. Kapitsyn [7], V. V. Karpov [8] A. Y. Lagzdin, K. K. Loginov [9] A. A. Korableva, A. G. Breusova, S. M. Markov [10] and other authors.

The state program of development as an instrument of industrial policy has a complex structure, a large number of tasks, instruments of influence and stimulation, and, as a result, a complex structure of effects. The state program can plan to achieve the effects of production growth, import substitution, development and introduction of innovations, increase the share of production with the use of new materials and technologies, increase productivity, investment, increase the share of manufactured goods and high-tech goods in commodity exports, etc. The instruments of the state program have a different level of availability for enterprises – recipients

of state support, a different share of budget expenditures in the total volume of planned and actual expenditures for the solution of certain tasks of the state program, different levels of complexity, resource intensity and achievability of the tasks at the given resources and for the planned period.

The purpose of the study: to elaborate a structure of economic effects of the implementation of state programs of industrial development.

$$E_{govprogs\sub} = \sum_{k=1}^l E_{enterprise} + \sum_{j=1}^m E_{branche} + \sum_{i=1}^n E_{reg} + E_{st} \quad (1)$$

$\sum_{k=1}^l E_{enterprise}$ - the amount of positive effects of implementation of the state program for individual enterprises, members of the state program, where k is the number of companies; $\sum_{j=1}^m E_{branche}$ - is a sum of positive effects of implementation of the state program for certain sectors, where m is the number of branches (effects that are not included in the sum of effects for individual enterprises); $\sum_{i=1}^n E_{reg}$ - sum of positive effects of implementation of the state program for the individual regions,

$$E_{govprogob} = E_{growth} + E_{inv} + E_{techdev} + E_{efrise} + E_{stabdev} + E_{safe} + E_{imp} + E_{qol} + \dots + E_{stchange} \quad (2),$$

(E_{growth}) - the effect of increasing the volume of production; (E_{inv}) - the effect of the inflow of private investment; ($E_{techdev}$) - the effect of technical and technological development; (E_{efrise}) - the effect of increasing the efficiency of the economy (industry); ($E_{stabdev}$) - the effect of increasing the sustainability of development; (E_{safe}) - the effect of ensuring the safety of the functioning of the economy, the industrial complex, the life of the population; (E_{imp}) - the effect of import substitution; (E_{qol}) - the effect of improving the quality of life of the population; ($E_{stchange}$) - the effect of other structural changes not included in the above effects.

Efficiency is also proposed to be calculated for individual entities and objects.

METHODS AND RESULTS OF THE STUDY

Research method: mathematical modeling. Depending on the objectives of the study, there are different types of structures of positive effects of the state program: a) subject structure (by subjects of economic activity and/or subjects of management, their groups); b) object structure (by objects of management). According to the subject structure, the sum of positive effects of the state development program ($E_{govprogs\sub}$) consists of the following components:

where n is the number of regions (effects that are not included in the sum of effects for individual businesses industries); E_{st} - sum of positive effects of implementation of the state program for the state (effects that are not included in the sum of effects for individual enterprises, industries, regions).

The planned amount of positive effects of the state development program ($E_{govprogob}$) in accordance with the object structure consists of the following components:

$$\text{On subjects: } Ef_{sub} = \frac{E_{sub}}{C_{sub}} \quad (3),$$

Ef_{sub} - the effectiveness of the state program for a particular entity; E_{sub} - the positive effect of the implementation of the state program for a particular subject; C_{sub} - expenses of a particular entity for participation in the state program, for example,

$$\text{a) } Ef_{st} = \frac{E_{st}}{C_{st}} \quad (4),$$

Ef_{st} - the effectiveness of the state program for the state; E_{st} - the sum of the positive effects of the state program for the state; C_{st} - the state expenses for the implementation of the state program, etc.

On objects of management (separate tasks or groups of tasks of the state program):

$$Ef_{ob} = \frac{E_{ob}}{C_{ob}} \quad (5)$$

Ef_{ob} – the efficiency of the solution of the separate task (group of tasks) of the state program (in total or for the specific subject);

E_{ob} – the positive effect of solving a separate task (group of tasks) of the state program (collectively or for a particular subject);

C_{ob} – the actual expenses for the solution of the separate task (group of tasks) of the state program (in total or for the specific subject).

For example, the efficiency of solving the problem of increasing production (Ef_{growth}) is calculated as the ratio of the effect of increasing production (absolute growth) (E_{growth}) to the actual cost of solving this problem (C_{growth}):

$$Ef_{growth} = \frac{E_{growth}}{C_{growth}} \quad (6).$$

Condition for the effective implementation of structural changes (including in the framework of implementation of state programs), leading to the achievement of the objectives of economic development, the study's author believes the formation and functioning of the system including:

1) strategy of socio-economic and industrial development, determine the criteria, principles, directions, objectives and tasks of structural changes at the macro-level and for individual subsystems of the economy; 2) developed and accepted, adequate, systematic, consistent tools: the regulatory framework of structural changes; methodological documents that ensure the effectiveness of the process of management of structural changes; 3) sufficient information base of the process of management of structural changes; 4) sufficient financial resources for the implementation of the planned structural changes; 5) honesty, responsibility, professionalism of the subjects of management of structural changes; 6) monitoring and evaluation of the effectiveness of the subjects of management of structural changes.

The author sees *the directions of further research* in the adaptation of the methodology for assessing the effectiveness of state programs for individual subjects (types of subjects) and individual objects (types of objects) of management of structural changes in the industry of the Russian Federation in the framework of the program-target approach to the implementation of industrial policy.

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