Mechanism of Functioning of Agriculture: Classification Aspect of Modern Research for the Purpose of Improvement

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Abstract

The problem of providing the population of Russia with food is being addressed by all economic entities concerned with its solution, including the owners and managers of enterprises – representatives of ministries and departments, academic economists. They see the solution of this problem in the establishment of an adequate mechanism of functioning of agrarian production branches, which would influence these branches and thus increase their effectiveness. However, the existing developments and the utilized mechanism are not perfect and do not reflect the ability to significantly improve the situation in the field of agriculture. In this regard, a task of improving the existing mechanism by focusing its action on the radical improvement of the situation in agriculture remains relevant. The improvement process is not simple. It implies a coherent implementation of the following stages: study of the existing developments of the mechanism of agriculture for their presence; characteristics of the features of the selected criteria and the internal structure of the mechanism elements; classification of these developments according to research purposes and elements included in the mechanism; identification of the shortcomings of the created models using the evaluation of the rational correlation of internal components; justification of the choice of the areas of improvements based on the establishment of classification groups of the mechanism models. This publication implements the named steps that aim to improve the mechanism of functioning of agriculture.

Keywords: Mechanism; Agriculture; Elements; Internal Structure; Classification Features; Types of Developments; Evaluation of the Rationality of Functioning; Areas of Improvement

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INTRODUCTION

The authors set themselves the task to study the models of the modern mechanism of agriculture presented in 81 sources of scientific literature describing 91 economics entities in the agrarian sector. The mechanism models are developed by many academic economists, but not all of them are used in practice. The practicians – the owners and managers of agricultural enterprises of different types and sizes: large, medium and small agricultural enterprises, peasant farms, individual farms – are also involved in creating the models of the mechanism of the sectors of agriculture. In addition, representatives of federal and regional public authorities and employees of local governments also work on their creation. The mechanisms created by them are more often implemented in the practical area of activity.

The authors put the emphasis on the study of the mechanism models of the academic economists, as they take into account the historical experience of the agrarians,
accumulate information on the models created in the implementation of practical activities, find flaws and improve algorithms of the impacts of the mechanism of agriculture at the enterprises within the industry in either the state of crisis or the state of development and growth.


We have cited the developments of only a few academic economists and the areas of their research in the field of shaping the means to improve the state of agriculture, in order to show the diversity of these areas and interest of significant scientific forces in solving problems of improving the efficiency of production branches. There are also many other studies, no less important for the agrarian field of activity, which greatly contributed to the support of agricultural production. At the same time, the works of scholars are also worthy of attention of basic science in this field, because they enrich it and, at the same time, bring the theorists closer to the field of management and control, acting as a link between the practice of research and life practice.

**ELEMENTS OF THE MECHANISM OF AGRICULTURE FUNCTIONING AND MODELS OF ITS IMPROVEMENT**

An important base of the solution to the problem of improving the established and functioning mechanism of agriculture is the study of its structure. This research position
contributed to setting of the problem of adding the following thesis to the armory: such a study should be based on the determination of the composition of elements of the aggregate mechanism of one of the dominant units of material production. It is obvious that the most important elements in this structure are goals, objectives, subjects, objects, internal resources and external field, legal framework, methods and tools of the mechanism (Figure 1).

The goal is a fundamental element of the mechanism of functioning. As known, the goal reflects the perfect representation of the result of the activity which it directs and controls. In general, the economic goal is to increase the efficiency of the resource utilization. Precise goals of the mechanism of agriculture can be defined by the current situation, but as a rule, they do not contradict other goals and are reflected in the title of the models of the mechanism of functioning presented in the scientific literature. They are implemented through decisions and actions of the agricultural enterprises, which form their goals to provide factors of production, favorable positioning in the food market, use of favorable market conditions, to achieve synergies of integration, the effect of reduction in the transaction costs of the mergers of the companies in the sector, respect for nature, and adequate use of the established legal environment. These goals are set and achieved in connection with the necessity of solving the urgent problems in the agrarian sector of the economy.

The objectives are more specific elements of the mechanism of functioning in comparison with the goals that are subordinated to them and determined by them. In other words, each objective is the need to address the problem to achieve a certain goal. The objectives of the mechanism inevitably meet the goals and are definitely aimed at achieving them. If they are considered at the level of state regulation of the mechanism of functioning of agriculture, they are aimed at the creation and full use of the legal framework, shaping a favorable fiscal and monetary policies, implementation of the functions of all types of management, search for funding the development of the sector, formation of integrated structures and infrastructure of agriculture, development of innovative activities, increasing the number, improvement of quality and optimization of the resources used, at the search of the ways to adapt agricultural producers to the market, ensuring food security, qualitative changes in the finished product, use of the methods to assess the state of the sector, sustainable

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**Figure 1:** Elements of the agriculture functioning mechanism.
nature management, at the support of social and demographic well-being, formation of the system of agricultural education, cooperation with international organizations, at the regulation of foreign economic activity.

The subjects take action to achieve the goals set and address the objectives delineated on their basis. In economy, the subject is committed to improving their effectiveness by affecting its certain areas. The subjects of the mechanism of agriculture have various levels – first and foremost, it is the state, then regional and municipal authorities, and managers of enterprises of agribusiness. As a rule, they influence the agricultural sector itself or its individual components – crop and animal husbandry, with the status of priority development within agribusiness. The subjects of the mechanism of agriculture perform actions that influence the primary economic entities, which act as objects – the main field of application of their forces [14-16].

Internal resources are an integral part of the list of elements of the mechanism of functioning of the agrarian economy. In the broad sense of the word, the internal resources of enterprises and branches of production refer to anything that is used for the production of goods and services. It is known that agriculture, in interpretation of Sereda [17], Tenkovskaya [18] and others, consumes labor, information, capital, land, and other business or technology resources. Potential resources and sources for the factors of production to be used by an enterprise in any sector are state funds, either proprietary or borrowed. The resources are an essential element in the mechanism models that reflect the functioning of the production processes in agriculture.

The external conditions, often representing the uncontrollable forces, are a special element in the mechanism of agriculture. The external conditions include a combination of factors that influence agriculture, which the authors of this publication divided into 9 groups: economic, political, social, technological, informational, military, natural, environmental and legal. Virtually all of them are presented in the mechanism models under study, but these models do not account for many of the internal components in each group. The positive part is that the developed models of the mechanism of agriculture take into account such influencing factors as external conditions, fiscal, monetary and foreign policy, prices in the markets of factors of production, conditions in the food market, investment, information and innovative conditions, climate, ecology, demographic, social and cultural areas of the external national level.

The legal framework is certainly and inevitably the operating element of the mechanism of functioning of agriculture. This is a set of formal written (published) documents that are accepted in a certain form by the legislative bodies of the federal, regional and municipal levels. The legal framework of the mechanism of agriculture is presented with a very extensive list of documents: the Constitution of the Russian Federation (the highest normative legal act); rules and regulations of the World Trade Organization, trade agreements signed by most countries and ratified by their parliaments; Codes of the Russian Federation (Budget, Civil, Land, Tax, Labor); federal laws (issued by the federal body of the Russian legislature and governing the most important and
fundamental parts of public relations and public life); presidential decrees (legal acts issued by the President of the Russian Federation within his competence); Russian government resolutions (management acts of general normative content issued by the government of the Russian Federation within its competence on the basis and in pursuance of the Constitution of the Russian Federation, federal constitutional laws, federal laws and decrees of the President of the Russian Federation); Russian government decrees (administrative acts, which are designed to solve operational issues, do not contain any legal relations, have limited application, involve a single segment of human activity, are limited in time, subject to immediate execution by the persons to whom they apply); decisions and orders of the Ministry of Agriculture and the Ministry of Finance of the Russian Federation; laws of subjects of the Russian Federation (normative legal acts of higher legal force, adopted by the legislative (representative) bodies of state power of the subjects of the Russian Federation on issues within the jurisdiction of the subjects of the Russian Federation and within the joint jurisdiction of the Federation and its subjects or directly by the people (voters) residing on the territory of the Russian Federation by referendum – constitutions of the republics; charters of territories, regions, federal cities, current (common) laws adopted within the jurisdiction of the subjects of the Russian Federation); regulations of the local authorities (official written documents adopted by officials of local government, directly by the local population) for the regulation of local issues in the interest of the local population, containing the provisions of a normative, general or individual nature, recognized and protected by the state).

Methods as an element of the mechanism of agriculture act in two ways. In the first way, the methods can justifiably be considered as methods to study the effect of the elements of the mechanism and the creation of models, i.e. they are study methods. In the second way, they can be considered as methods of influence on the behavior of economic entities. They are methods of regulation. Taken as a whole, methods are a systematic set of actions, which are aimed at addressing specific problems and hence the defined goal. The methods are created by the scientific and managerial schools and their representatives. They tend to become obsolete, convert to other methods, develop in accordance with time, achievements of the technical and scientific thought, and the needs of society.

The methods as an element of the mechanism of agriculture combine the two named ways and include the methods of economic analysis (e.g. identification of trends, forecasting), economic (fiscal, monetary regulation), organizational (formation of integration structures), administrative (issuance of legal acts) and socio-psychological (creation of a favorable moral and psychological climate in the team, in the region, in the state).

Finally, the tools are an economic category that is consciously and purposefully used in the interests of economic entities and the state, providing qualitative or quantitative impact on the public production. The tools of the mechanism of agriculture are presented by the functions of the state, municipal and corporate management;
concepts, state programs, national projects, development strategies; instructions, guidelines, regulations, agreements, adopted rules and standards; information guides; enforcement; arbitration; subsidies; lending; taxation; investment; grants system; pricing; capitalization; clustering; insurance; elements of the innovative infrastructure, social and service sectors; specialization, concentration, cooperation; partnership; intensification; information technology; foreign economic relations, quoting, marketplace trading, stock issue.

Formation of the concept of the mechanism of agriculture, in the named (Figure 1) and briefly described composition of the elements, has enabled the authors to use the general classification and introduce three models of improving the mechanism of agriculture in the further text. These models reflect the most important aspects of the mechanism of agriculture in the light of solving the problems that exist in the agrarian economy as a whole, in the main sectors that carry out agrarian production, directly in the primary goods-producing economic entities – enterprises of various forms of economic activity.

A two-level classification of the hierarchical type was formed on the basis of the element-by-element study of the mechanism of agriculture. The first level is represented by three models (Figure 2), each of which includes a certain set of elements of the mechanism of agriculture. The first type includes elements forming the internal resources as a part of the first classification level, the second includes the elements of the mechanism of agriculture in the multi-factor external conditions, and the third includes the elements of the development and state support of agricultural production branches.

**Figure 2:** Types of models of improvement of the mechanism of agriculture.

Determination of the composition of the basic elements in each model represents the next hierarchical level of classification, which aims to streamline and specify the composition of the mechanism of functioning of agriculture focused at development through allocating the action of the more progressive incentive processes both from the part of the state and from commodity production entities.

The first model of the formation of internal agricultural resources includes the following elements of the mechanism: reproduction, improvement of basic tools and technologies for their use; use of land resources; formation and use of labor resources; innovative development; improvement of financial management. The elements of the mechanism
of reproduction, improvement of fixed assets of agriculture and technologies of their use are aimed at technological equipment of the sector as a result of the improvement of managing their technological processes, modernization, ensuring the reproduction of labor (Figure 3).

**Figure 3:** Model of formation and improvement of internal agricultural resources.

Effect of the elements of the mechanism of land use in agriculture serves the purpose of more efficient use of the primary means of production in the sector. Innovative development of agriculture requires the support of agricultural innovations, their promotion, implementation, development and accounting. The elements of the financial management mechanism as a part of the model of formation of internal resources influence the agriculture sectors as a whole, using the tools of public policy, financing of reproduction of fixed and current assets, land and mortgage lending, formation of corporate finances, stimulating production, sale and use of agricultural production, operation of the financial and credit system, insurance and innovative financing. The elements of this model of improvement of the mechanism are multiple and varied. This is due to the large number of different types of resources used in the agrarian sector. The models of this type of the mechanism are presented in scientific works of
Abdalimov [1], Ableeva [2], Altukhov [4], Bortnikova [8], Voiku [9], Grebenshchikov [11], Kudryavtseva [14], Mordovchenkova and Nikolenko [15], Putnikova [16], Sereda [17].

**Figure 4:** Model of improvement of the functioning of agriculture in the multi-factor external conditions.

The second model of the mechanism of functioning of agriculture in the multi-factor external conditions includes elements of the mechanism of the markets of food and agricultural raw materials, pricing, improvement of the competitiveness of agricultural enterprises, agricultural integration and cooperation, environmental management and orientation, formation of the legal conditions, management of transaction costs. Their effect is aimed at increasing the volume of sales of products of agrarian sectors and the search for the most available resources for this purpose, ensuring parity of product prices and sector resources, optimization of the price and food quality, achieving effects of scale through the merger of agrarian enterprises, environmental protection, creation of legal protection, and reduction of costs associated with the use of external factors (Figure 4). This type of models of improvement of the mechanism of functioning of agriculture was developed to a lesser extent, but still exists in the writings of academic economists such as Barybina [5], Borisovskaya [7], Voronkova [10], Juraev [12], Dordzhieva [13] and others.

The third model of development and state support of agriculture includes multiple elements of the mechanism of a sustainable and efficient development of agriculture on the basis of state regulation. The effect of this model is aimed at finding reserves of increasing the volumes of the national and regional sectoral production, both for domestic consumption and for the sale of products on the world market. The
mechanism of the state regulation of agriculture is based on the state aid and the development of strategies for its implementation (Figure 5). Professionals of public and corporate governance, as well as academic economists – Alborov [3], Belousov [6] and others – are engaged in their formation.

![Figure 5: Model of development and state support of agriculture.](image)

Classification of the elements of the mechanism of agriculture with the help of the three presented models is aimed at the distribution of their composition into homogeneous groups by the features determined by the model names. This contributes to the most accurate identification of deficiencies in the functioning of both the models and their individual elements that together constitute the mechanism of functioning of the agrarian economy and its real material foundation – the agricultural production.

Study of the mechanism of agriculture through determination of its element structure with the classification based on this allows to make conclusions about the relationships between the constituent elements. All the presented models have subjects and objects of impact, internal and external factors, and regulatory operating conditions. However, they all differ by goals and objectives, methods and tools. Thus, depending on the goals and objectives, the mixture of the following mechanism elements can be considered interrelated: reproduction, improvement of the fixed assets and technologies of use, innovative development, functioning of the food and agricultural raw materials markets, pricing, and raising the competitiveness of agricultural enterprises. Depending on the methods and tools used in the working process, the following elements are complementary: agricultural integration, cooperation and regulation of the transaction costs; sustainable, efficient development and state regulation of agriculture. Since the
presented types of models and many elements in the mechanism of improvement have common components, the prospect and feasibility of the characteristics of a single set of influencing factors are evident. The mechanism including the models shown in the publication (Figure 2) is aimed at the formation and rational consumption of resources, the use of the positive and elimination of the negative influence of the external conditions with the help of the state and business regulation.

CONCLUSION

The two-level classification of the elements of the mechanism of improvement of agriculture, through the selection of the three most fully characterized models, followed by determination of the composition of the elements in each of them, reveals the existence of problems in the agrarian economy. This becomes obvious after the logical analysis of real effect of each element of the mechanism of improvement. However, the assessment of the impact of the elements of the current mechanism of functioning that are substantially characterized in the text of this publication and graphically presented in Figure 1 still remains valid. This assessment was made by the authors on the basis of the analysis of a large number of available publications of domestic and foreign scientists, which made it possible to identify the insufficient account of the external conditions in the current mechanism of agriculture.

Special analysis of the content of the available studies of this kind was performed using the author's methodology, which involved a consistent grouping of coverage of the factors of external conditions by substantive features (economic, political, etc.) and by the expansion of influence in the global, national, regional and sector-wide scale (global, national, etc.). An aggregate of the indicators of the grouping presented in the table describes the composition and structure of coverage of the factors of external conditions.

The processes of the targeted integration of the world community members into a single economic system have the most profound effect on Russian agriculture. The result of a detailed analysis of a large body of information about the coverage of the impact of the factors of external conditions is shown in Table 1 as the number of factors under study in the distribution across the named groups and the percentage that determines the degree of coverage of the factors in each group at a certain level of analysis. The calculations have shown the feasibility of the following conclusion. First, the study of economic factors takes the highest share among the factors of groups selected on the basis of a substantive feature – 59% of the total mixture; political factors are on the second place – 23%; and other factors account for 1% to 7%. Secondly, the national factors in the study of the factors related to different levels of coverage are better characterized in the scientific literature and make up 39% of the total mixture of the factors under study; coverage of the factors of a largest-scale level – global – is on the second place (32%); coverage of the sectoral (16%) and regional (12%) levels take the third and the forth places. Thirdly, the national level takes an important place by the number of studied economic factors (44% of all economic factors), as well the global
(28%) and the sectoral (18%). Coverage of the factors of the global level prevails among the political factors (42%); the regional level has a high percentage of coverage among the social factors (31%); the technological factors are studied more thoroughly at the national (36%) and global (33%) levels; information and military factors – at the global level (53% and 84%, respectively); natural factors are best covered at the sectoral level (34%); factors of external conditions – on a global and national scale (31% each), and, finally, the legal factors are better covered at the national level (62%).

Table 1: Composition and structure of coverage of the factors of external conditions.

<table>
<thead>
<tr>
<th>Groups of factors</th>
<th>Levels of coverage</th>
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<tr>
<td></td>
<td>Global pc. %</td>
<td>National pc. %</td>
<td>Regional pc. %</td>
<td>Sectoral pc. %</td>
<td>Total Factors pc. %</td>
<td>Structure of coverage of factors %</td>
<td></td>
</tr>
<tr>
<td>Economic</td>
<td>370 28</td>
<td>582 44</td>
<td>141 11</td>
<td>234 18</td>
<td>1327 100</td>
<td>59</td>
<td></td>
</tr>
<tr>
<td>Political</td>
<td>218 42</td>
<td>173 34</td>
<td>48 9</td>
<td>74 14</td>
<td>513 100</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>Social</td>
<td>44 28</td>
<td>43 28</td>
<td>48 31</td>
<td>21 13</td>
<td>156 100</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Technological</td>
<td>40 33</td>
<td>43 36</td>
<td>12 10</td>
<td>25 21</td>
<td>120 100</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Information</td>
<td>21 53</td>
<td>13 33</td>
<td>5 13</td>
<td>1 3</td>
<td>40 100</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Military</td>
<td>16 84</td>
<td>3 16</td>
<td>0 0</td>
<td>0 0</td>
<td>19 100</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Natural</td>
<td>7 22</td>
<td>6 19</td>
<td>8 25</td>
<td>11 34</td>
<td>32 100</td>
<td>1</td>
<td></td>
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<tr>
<td>Environmental</td>
<td>4 31</td>
<td>4 31</td>
<td>3 23</td>
<td>2 15</td>
<td>13 100</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Legal</td>
<td>3 8</td>
<td>24 62</td>
<td>10 26</td>
<td>2 5</td>
<td>39 100</td>
<td>2</td>
<td></td>
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<tr>
<td>Total</td>
<td>723 32</td>
<td>891 39</td>
<td>275 12</td>
<td>370 16</td>
<td>2259 100</td>
<td>100</td>
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Based on the modern study of the problem of the mechanism of agriculture, the following conclusion is justified: the further development of the agrarian economy of Russia and branches of its agriculture will feel the biggest impact from the global political, informational, military, and environmental factors; economic, technological, environmental, and legal factors will be the most significant at the national level; and social, natural and environmental factors – at the regional level. From our point of view, the further study of the impact of the regional social and economic factors on agriculture is important for improving the mechanism of regulating agriculture. Method of the assessment may include, in particular, the study of settlement systems, social systems and their degree of stability, analysis of the external conditions of the primary subjects of the economy of rural areas for the purpose of the foreign economic activity. These ways of study of the effects of the external conditions on agriculture in some aspects are presented in the works of Michurina [19], Sharygina [20] and Rozhentseva [21] and other scholars. Further efforts of the scientists will help create a more perfect mechanism of regulation of the functioning and development of agriculture.
This study has resulted in a number of conclusions. Firstly, based on the relationships between the elements of the mechanism of agriculture and the degree of their coverage, the need was identified to create a single mechanism, which would be aimed at the efficient use of internal resources and optimization of the impact of the external conditions with the help of public and other means at the disposal of economic entities of different scope and activities. Secondly, it is important to take into account to a greater extent the influence of the plurality of components of the external conditions of the global, national, sectoral and regional levels in the unified mechanism being developed for improving the functioning of agriculture. Thirdly, it is advisable to develop new and improve already used methods and tools to enhance the positive and diminish the negative effects of the factors of external conditions of the agricultural sectors of economy.

REFERENCES


