METHODICAL ASPECTS ESTIMATES INNOVATIVE POTENTIAL OF THE AGRO-INDUSTRIAL COMPLEX OF THE REGION

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—————————————— ABSTRACT ——————————————
The purpose of the study is to develop theoretical and methodological provisions and substantiate practical recommendations for improving the management of the innovative potential of the agro-industrial complex. According to the goal, the following tasks of the work were solved: to identify the features of managing the innovative potential of the agro-industrial complex; to give an economic assessment of the current state of the agro-industrial complex of the region; explore the innovative potential of the agro-industrial complex and the organization of its management.
KEYWORDS. *Innovation, development, regional agro-industrial complex, state support, hydroponics, techno park.*

INTRODUCTION

At the present stage of development of the economy of Uzbekistan, the issues of assessing the innovative potential of the agro-industrial complex at the regional level are being updated. The republican structure of the economy of Uzbekistan leads to the decentralization of public administration and an increase in the independence of the regional sector. Therefore, the formation of effective innovation systems in the regions and the use of progressive methods for assessing the innovative potential of the agro-industrial complex are of particular importance [6, 7].

A deep and comprehensive consideration of various aspects of the essence of the innovative potential of the agro-industrial complex of the region makes it possible to single out domestic and foreign methods for assessing the innovative potential of the agro-industrial complex of the region [8,9, 10].

MATERIALS AND METHODS

The purpose of the study is to develop theoretical and methodological provisions and substantiate practical recommendations for improving the management of the innovative potential of the agro-industrial complex. According to the goal set, the following tasks of the dissertation work were solved: to clarify the conceptual and methodological model of the formation of the innovative potential of the agro-industrial complex; explore methodological approaches to assessing regional innovation potential;

RESULTS AND DISCUSSION

To assess the innovative potential of the agro-industrial complex of the region, national and foreign methods are used. Known methods include the following:

1. Methodology of the World Bank "knowledge for development", focused on calculating the degree of readiness of the country for the transition to innovative development.
2. Calculation regional total innovative index (MERIT, The Netherlands).
3. Statistical model of regression analysis of innovative activity Savina T.N. [1].
4. The methodology for calculating the integral indicator of the innovative potential of the agro-industrial complex of the region, proposed by Panshin B. and Kurpayanidi K.I., Ashurov M.S. [2, 3].
5. Factor analysis of the innovative potential of the region (Khodiyev B. Yu. and Tapscott D) [4, 5].
6. Methodology holding structural analysis innovative activity of the territory of Skvortsov D. A. [13].

When assessing the innovative potential of the agro-industrial complex of the region, Frohn, C. and Prause, L. [15, 16] use a factor analysis based on government statistics. In this technique, the integrated indicator is calculated using the principal component method.

Formation effective innovative politician's region depends from an adequate assessment of the level of innovative potential at the regional level. In domestic science, there are two main methodological approaches to the definition of innovative potential of the agro-industrial complex of the region. As part of

the institutional approach, when assessing the innovative potential of the agro-industrial complex of the region, it is necessary to consider innovative system. According to Medennikov V. I. [18], the innovation system of the region is presented as a set of institutions endowed with certain functions of innovation activity. A number of methodological solutions for assessing the innovative potential of the agro-industrial complex focuses on the study of the qualitative parameters of the innovative processes of economic entities of the agro-industrial complex. In most cases, to assess the regional innovation potential, a certain set of indicators is used, the composition and number of which may vary in existing methods. In particular:

— the share of enterprises implementing technological innovations in the total number of surveyed enterprises;

— the number of employees involved in the development of innovative activities and engaged in research and development;

— number units created advanced technologies;

— an indicator of innovative activity in the region, that is, the share of organizations implementing innovations;

— the share of innovative goods (products, services) in the total value of industrial production;

— the amount of development costs per person employed in research work;

— the sum of expenses for applied and fundamental research per one employed in research work, etc.

The difference between the methods for assessing the innovative potential of the agro-industrial complex of the region lies in the set of key indicators that quantitatively evaluate the elements of the innovative potential of the agro-industrial complex of the region, and the nature of the relationship between the indicators.

The resource component of the innovative potential of the agro-industrial complex of the region is associated with the accumulation of material and technical support, the availability of financial resources, the developed regulatory framework, that is, the totality of the components necessary to activate innovative processes in the region. The resulting component is manifested in the process of introducing innovative technologies and innovative products and services.

When comparing two components, in particular, resources, processes and results obtained, allows you to create a system of indicators for evaluation.

According to the developers of this methodology, the generalizing indicators are recognized as identical. It is important to determine the integral parameter of innovative development through the arithmetic sum of the rating values of the indicators of the formation and use of innovative potential [11, 12, 14, 17,19].

It is assumed that the lower the value of the rating indicator, the higher the level of the region's innovative potential.

A number of studies involve assessing the innovative potential of the agro-industrial complex of the region based on the calculation of the coefficient, which is defined as the ratio of the value of research and development costs to the gross output of the agricultural sector in value terms.

The model of the region's readiness for innovative development is schematically presented in Figure 1. This technique involves the calculation of indicators for the following main groups: intellectual assets; factors risk; production factors; labor resources; consumer factors; financial opportunities; economic forces; institutional possibilities.

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Source: compiled by the author

Figure 1 - Methodological features of determining the index of readiness of the region for innovative development

The first stage of the methodology provides for normalization by the maximum element, then, depending on the study of the influence of factors, summation takes place normalized elements and rankings. This model of grouping districts is used to develop a strategy for the innovative development of the region.

In the studies of Durmanov, A., [25] and Tkachenko, S., [26] propose to use indicators in such areas as intellectual and professional potential, scientific and technological potential, financial and economic potential, organizational and managerial potential, and information and communication potential when assessing innovative potential.

The methodology discussed above is focused on assessing the innovative potential of the agro-industrial complex of the region, assessing the innovative activity of enterprises in the region, and also allows you to determine the main directions for building up regional innovative potential. When characterizing the values of the coefficients, a unit is assigned only to the best coefficient by value, and the share of the best coefficient is determined for the rest of the indicators.

When assessing the innovative potential of the agro-industrial complex of the region, it is necessary to analyze the innovative potential of agricultural enterprises. A comprehensive analysis of the existing methodological recommendations made it possible to dwell on the following methods in more detail.

The results of our analysis of theoretical approaches to assessing the innovative potential of an agricultural enterprise allow us to draw some particular conclusions:

— A number of studies present a detailed approach to assessing the level of innovative potential. An approach suggests development of a system of indicators for assessing the level of innovative potential to search for opportunities to implement an investment project;

— Diagnostic approach focused on expert methods. This approach allows you to analyze the current state of the enterprise in terms of internal and external parameters.

Thus, the main goal in assessing the innovative potential of an agricultural enterprise is to identify operational and strategic goals for the development of innovative potential for transit to the highest level and the production of competitive products.

The literature presents different approaches to assessing the innovative potential of an agricultural enterprise. Approaches to assessing innovative potential can be divided into four groups according to goals (Figure 2):

— In compliance with requirements market environment;

— In compliance with targeted installations;

— Depending on the conceptual approach to innovation potential;

— Logical orientation results.

The institutional approach to assessing the innovative potential of an agricultural enterprise is focused on studying the nature of industrial relations between the subjects of the innovation process. resource an approach suggests evaluation resource capacity agricultural enterprises. The habilitation approach is focused on studying the final result formed by the productive forces of an agricultural enterprise.

Figure 3 shows the key indicators of Drobyazko, S., Shulga, O., Durmanov, A. S., Tillaev, A. X., Omelyanenko, V., V.G. Matveikin [25, 26, 27, 28, 29, 30] to assess the innovative potential of an enterprise.
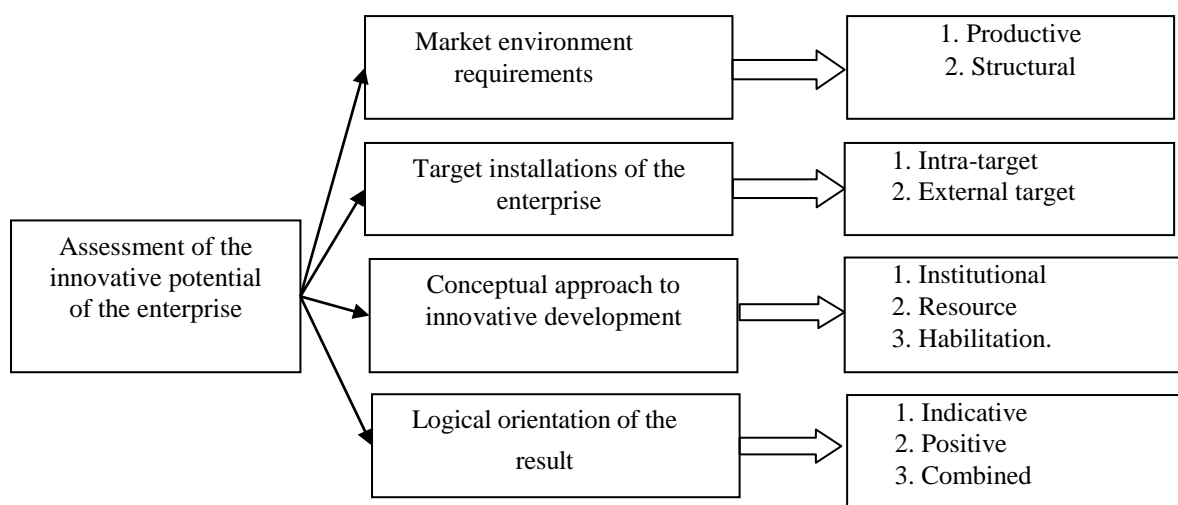
Source: drawn up author

Picture 2 - Approaches to evaluation innovative the potential of an agricultural enterprise
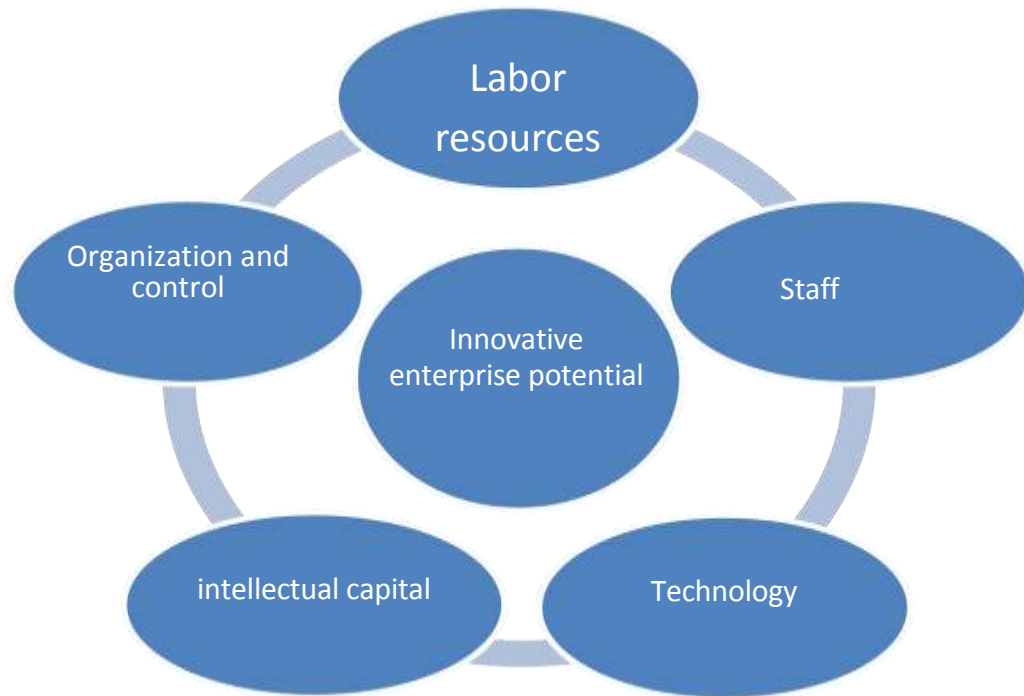
Source: drawn up on the basis [31, 32, 33]

Picture 3 - Components for estimates innovative capacity enterprises

Consider the methodology for assessing the innovative potential of an agricultural enterprise, developed at the

"Tashkent Institute of Irrigation and Agricultural Mechanization Engineers" National Research University [34, 35, 36, 37, 38, 39]. This technique is based on the use of cluster analysis, which allows for the totality of agricultural enterprises build homogeneous groups - clusters on innovative potential and development of enterprises. For each enterprise, a set of indicators of innovative activity was determined, which all agricultural enterprises are endowed with.

When clustering agricultural enterprises, the authors calculate the performance indicators of innovative activity. The next stage of this technique is the ranking of enterprises in terms of a set of indicators. Further, using the method of hierarchies, weight indicators are determined, which were ranked in the first set of agricultural enterprises - a cluster with a high level of innovative development.

In the studies of Atakhanova, N. E., Almuradova, D. M., Khakimov, G. A., Usmonova, S. T., presented a combined approach to assessing the innovative potential of an agricultural enterprise. The first indicator that is planned to be calculated within the framework of the methodology is "the coefficient of substitution of state products, focused on building the ratio of substitutional and state products" [40].

At the next stage, the total costs of operations with innovative potential are calculated, and these costs include the costs of managing the innovative potential and the costs of ensuring the innovative potential. Further, the authors propose to take into account costs when calculating the indicator of financial potential. This indicator is based on the indicator of financial stability. The ability of an enterprise to meet its obligations after spending on innovation potential reflects an indicator of financial potential.

The next stage is characterized by the calculation of the coefficient of market susceptibility to an innovative product. The calculation of the indicator depends on the type of needs that are planned to be met. The next stage is related to the assessment of the activities of an agricultural enterprise using the methods of segmentation and allocation of structural elements.

Shaulska, L., propose to evaluate the innovative potential of an agricultural enterprise by the segments [41] that make it up:

— production and technological potential (equipment with new equipment, the share of obsolete equipment, the level of automation);

— scientific and technical potential (the effectiveness of the introduction of new technologies, products, the share of new products, the number of

patents and licenses for innovative types of products, the length of time for development, the state of the experimental design base);

− personnel potential (share of employees engaged in innovative activities, skill level, expenses for advanced training, employee motivation);

− financial potential (cash fund for innovation, creditworthiness of the enterprise, the structure of sources of financing for innovation, investment attractiveness);

− organizational and managerial potential (the effectiveness of the organizational structure, the level of integration, the level of interaction between departments, the level of information provision);

− marketing potential (the company's focus on the production of innovative products, the cost of marketing research, the degree of promotion of innovative products).

Approach Shamborovskyi, G., Shelukhin, M., Allayarov, S., Khaustova, Y., & Breus, S. (2020). is similar to the above method, as it belongs to the resource category [42]. This author assumes a number of indicators in relative terms, the personnel potential in this methodology is called the research component.

The final stage involves the formation of a correlation model with the determination of the corresponding coefficients due to geometric quantities.

CONCLUSION

As a result, the analysis of existing methods for assessing innovative potential agro-industrial complex and enterprises not takes into account the dynamic nature of the indicators does not allow comparison of the levels of innovative potential for enterprises in different industries, does not take into account the influence of the capital structure, changes in the external environment.

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