

RESEARCH OF FACTORS OF COMPETITIVENESS OF ENTERPRISES OF THE AGRO-FOOD COMPLEX

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Abstract

The article discusses the methodological approaches to the analysis and evaluation of the competitiveness of agri-food enterprises and innovative products produced in it. Systematic and classified external and internal factors affecting competitiveness, conducted and their ranking. The presented factors are divided into internal and external. The dynamics of changes in the ratio of the influence of factors in each group using exponential weights is shown. A methodology has been developed for assessing the competitiveness of innovative products of the agri-food complex, developed using the balanced scorecard, which makes it possible to clarify the strategy for the further development of enterprises, detailing the necessary measures for its optimization. The proposed approach to assessing the competitiveness of both enterprises of the agri-food complex and products allows us to ensure internal consistency in the functioning of all actors and participants in the innovation process. The developed approaches will allow to increase the efficiency of managing the production of the demanded products and optimize the distribution of costs for the introduction of the most promising innovations of the agri-food complex in the sectoral and regional sections in accordance with the obtained results of the expert assessment.

Key words: innovative development, agri-food complex, competitiveness, expert assessment, ranking, balanced scorecard

INTRODUCTION

With the current globalization of the world economy, the level of export potential achieved determines the prospects for further economic growth of national economies. The tasks of creating an effective market for innovative products of regional agrosystems and creating effective mechanisms to stimulate demand for it, along with improving competitiveness and ensuring food security, are the most important on the way to innovative development.

Increasing the level of competitiveness is an important task for many agro-industrial enterprises of all countries [7]. The priority of this task and its relevance are associated with the globalization of the market and the steady growth of competition in the agri-food complex. Achieving the desired level of competitiveness contributes to the growth of business profitability and strengthening its position in the market.

In the current conditions of increasing globalization of the world economy, the achieved level of export potential determines the prospects for further economic growth of national economies.

The tasks of creating an effective market for innovative products in the agro-industrial complex and creating effective mechanisms to stimulate demand for it along with improving competitiveness and ensuring food security are priorities in improving the investment and innovation processes in the agro-food complex of the country [8].

The issues of assessing the level of competitiveness are reflected in the works of such scholars as J. Keynes, C. Marx, A. Marshall, J. Mill, A. Pigou, M. Porter, D. Ricardo, P. Samuelson A. Smith, R. Solow, S. Fisher, F. Hayek, E. Chamberlin, J. Schumpeter et al. [15]. Competitiveness as an economic category is investigated by experts in various sectors of the economy. M. Porter believes that competitiveness is a property of a product, service, a subject of market

relations, to act on the market on a par with the similar goods present there, services or competing subjects of market relations. A. Barinov notes that the competitiveness of objects consists of the competitiveness of its elements and their organization and coordination to achieve the goal [2]. P. Zavyalov notes that competitiveness is the position of a commodity producer in the domestic and foreign markets, determined by economic, social, political factors, reflected through indicators (indicators) that adequately characterize such a state and its dynamics [16].

The current situation in the agro-food complex of countries dictates the need to adjust the methods for studying its competitiveness. Also deserves special attention the assessment of factors affecting the competitiveness of all subjects of the innovation process from the developer of the idea to the introduction of scientific development in the production process. [13].

MATERIALS AND METHODS

Foreign and Russian scientists are paying close attention to theoretical and methodological foundations that could serve as a basis for assessing the competitiveness of the enterprise. The economic literature discusses various methods, they are adapted to enterprises of various industries, including enterprises of the agri-food complex. Such methods include a differentiated method, a complex method, analytical and prognostic, graphical. The differential method for assessing the level of competitiveness of agri-food enterprises consists in comparing individual parameters of the analyzed company with reference or analog parameters of a highly efficient basic enterprise. The complex method is based on the use of mixed, group, integral indicators. The assessment of the level of competitiveness of the agri-food enterprise is also carried out by comparison with the base or reference enterprise. When applying this method, a complex or a generalized indicator is determined, which serves as an evaluation indicator. Analytical

and prognostic methods allow to take into account various environmental factors and at the same time produce a comprehensive analysis of market conditions, technology and products [14]. They also include the use of an enterprise valuation method based on sales level, market share, etc. Graphic methods, which include the pie chart method, the histogram method, the competitiveness polygon, allow to illustrate the position that an enterprise occupies when correlating it with its competitors [3]. In addition to the above methods, there are specialized methods, these include analytical methods. The composition of such methods includes those that allow to assess the competitiveness of the enterprise using an integral indicator. They are based on the use of market share, rating, assessment based on consumer value, assessment of the use of resources [6]. All these methods give a certain result and have the right to exist. The environment in which enterprises operate is complex and competitive, and therefore, to evaluate it, using only one method is not always rational. To obtain a more accurate and unbiased assessment, it is necessary to combine existing methods. The combination of elements of analytical and graphical methods, and others, taking into account the advantages and disadvantages of each of them, will allow you to identify and show the real place of the enterprise in the competitive space. Improving the methodology of research, analysis and evaluation of the level of competitiveness of the agri-food complex in our study is based on the use of an extended range of indicators and an increase in the degree of objectivity of the studied factors. The study of the level of competitiveness is based on a complex of both external and internal factors affecting it. It is possible to influence internal factors of competitiveness of agri-food enterprises and products within the company, it is impossible to influence external factors. Internal factors determining competitiveness can be managed [4]. The complex of internal factors influences the growth of competitiveness of agri-food enterprises.

According to the results of expert surveys at agrifood enterprises of the Saratov region of the Russian Federation, external and internal factors that accelerate and restrain competitiveness are systematized and classified.

The state of the material and technical base of the enterprise is determined by technological factors. In assessing the influence of the technological factor on the growth of competitiveness of an agri-food enterprise, capital intensity, labor intensity and labor productivity, the size and condition of fixed assets of the enterprise, raw materials reserves, and land productivity are taken into account [1].

Personnel factors determine the degree of formation of personnel policy of enterprises, level of the current state of affairs with the staff of the organization. Factors are assessed by indicators: the number of employees, the qualifications of specialists, the level of remuneration, the size of incentive payments, employee productivity, staff turnover, etc.

Financial factors determine the company's solvency for obligations and its financial capabilities. Financial factors are assessed by indicators: absolute liquidity, current liquidity, financial stability, solvency, etc.

Marketing factors determine the degree of efficiency of the marketing strategy, the implementation of the sales plan by the sales department and generating a planned amount of profit [11]. Marketing factors are assessed by such economic indicators as product price, sales, etc., as well as non-economic indicators: customer loyalty, effectiveness of measures to increase sales, the effectiveness of the sales department, etc.

Investment factors characterize an enterprise's ability to raise funds for development, including modernization, re-equipment, expansion of production, etc. The indicators for evaluating investment factors include: the presence of investors, financial stability, financial autonomy, funding, investment projects, payables, etc.

Information factors determine the information equipment of enterprises. Assessment of the factor is made on the basis of indicators:

software of the production process, automated service programs, devices for accounting and control of work and rest schedules, etc.

Innovative factors determine the level of innovation activity of enterprises of the agri-food complex, the effectiveness of the implementation of innovation management strategies. Indicators for evaluating innovation factors: the innovation budget, the return on investment of innovations, the payback period of investments, the volume of renewal, etc.

Under the influence of organizational factors, the type of management structure of the agri-food enterprise is formed, the mission and goals are formed. To assess the impact of organizational factors on the competitiveness of enterprises and products, they apply indicators of the level of uninterrupted functioning of interaction processes in the production chain, the ratio of labor costs for managers and ordinary workers, performance indicators and work efficiency, the amount of costs for the maintenance of the management department.

Evaluation of factors of competitiveness of the enterprise is made on the basis of the developed pool of indicators by the method of ranking. Based on the expert evaluation, a diagram of factors of competitiveness of an agri-food complex enterprise of innovative type is proposed (Fig. 1).

As can be seen from the presented diagram (Fig. 1) of the evaluation results, the weighting factor of the innovation factor of competitiveness is of greater importance, relative to other factors. As a rule, in practice the situation is the same. This is due to the fact that competitiveness is determined by the ability of an enterprise to catch fluctuations and changes in the external environment, and in its main part - changes in the needs of potential customers, the emergence of a new market demand and transformation to these innovative changes [5].

Figures 2 and 3 show the dynamics of changes in the ratios of external and internal factors constraining the growth of competitiveness of enterprises actively introducing innovations, with the ranking of indicative weights of each of them according

to the results of expert surveys of heads of agri-food enterprises in the Saratov region of the Russian Federation for the period 2014-2018.

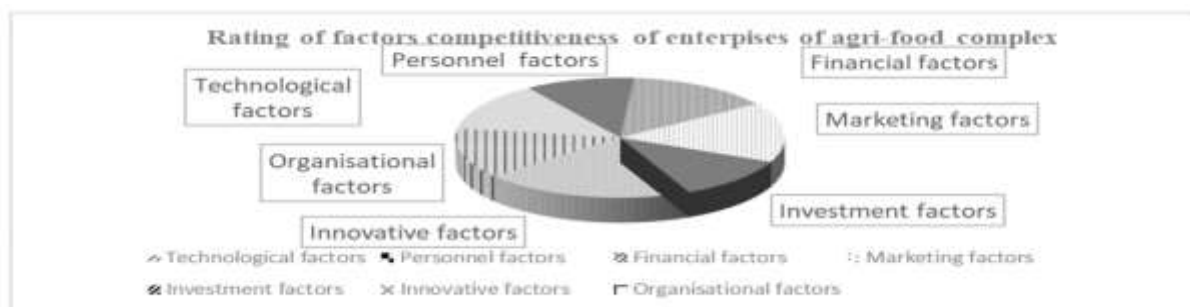


Fig. 1. Diagram of the results of the assessment of factors of competitiveness of enterprises of the agri-food complex
 Source: Own determination.

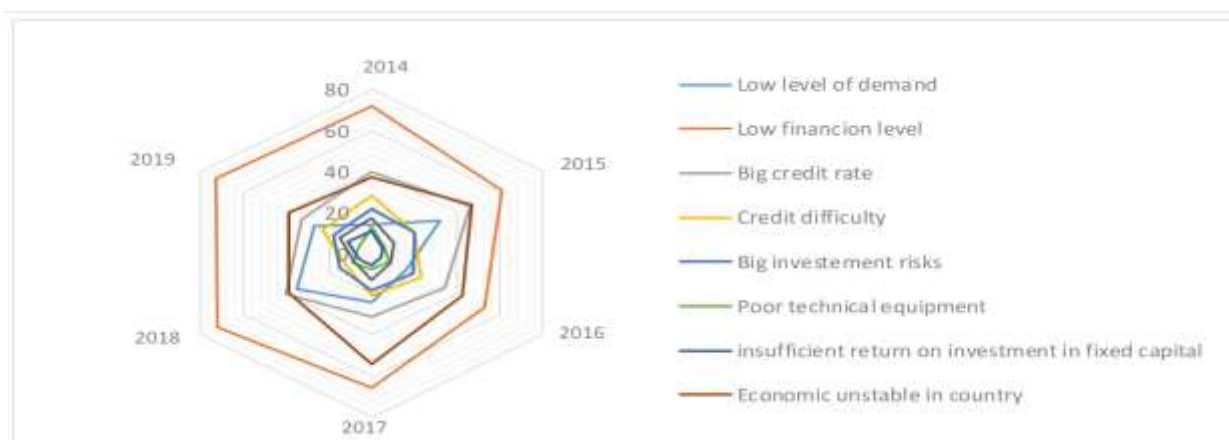


Fig.2. Dynamics of external factors that constrain the growth of competitiveness of agri-food enterprises in the Saratov region of the Russian Federation for the period 2014-2018.
 Source: Own determination.

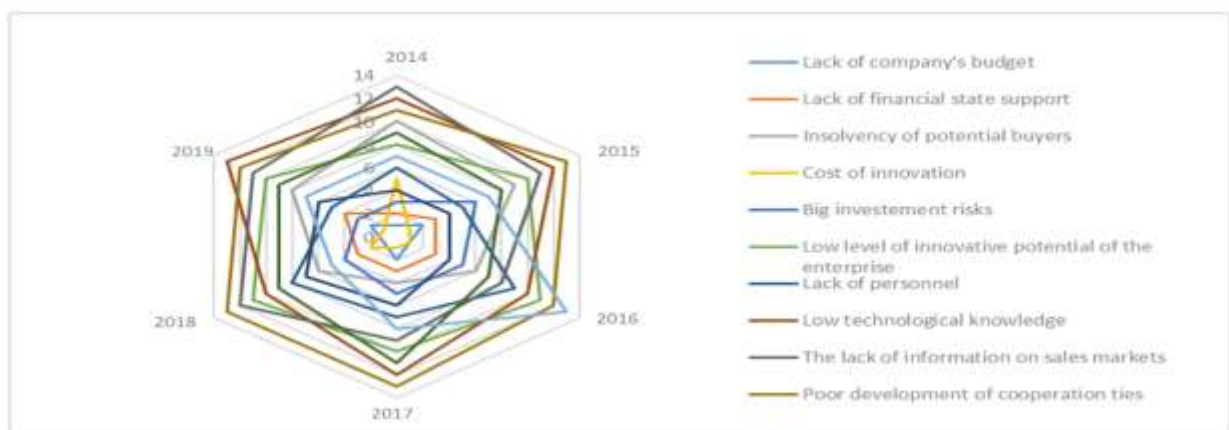


Fig. 3. Dynamics of Internal factors constraining the growth of competitiveness of agri-food enterprises in the Saratov region of the Russian Federation for the period 2014-2018.
 Source: Own determination.

As it can be seen from Figure 2, the ratio in the influence of restraining external factors with time practically does not change. For the most part this is due to the conditions that have formed in the external, in relation to the

enterprise, environment for which there are practically no opportunities for active influence [10]. At the same time throughout the period under review, the most negative factor affecting the level of competitiveness

of an enterprise is the lack of funding. In contrast to external factors, the ratio in the influence of internal factors (Fig. 3) turns out to be quite mobile, given the existence of a real possibility of their control and leverage [12]. Against this background, the most stable in terms of influence factors with significant weight coefficients were the poor development of cooperative ties and the availability of minimal information about technologies.

RESULTS AND DISCUSSIONS

Increasing the competitiveness of agri-food enterprises is inextricably linked to increasing the competitive advantages of products created using various types of innovations. Among the factors of competitiveness of traditional products we highlight:
 Price factor - pricing policy of the enterprise;
 The production factor is the technical equipment of production, the technologies used, the raw materials; production time, organization and perfection of the production process;

Sales factor - the presence of sales channels, advertising budget, channels to attract new customers;
 Service factor - the quality of service and work with clients;
 Market factor - the level of competition in this market sector, market share, demand;
 Marketing factor - brand recognition;
 The quality factor is product certification, quality control work, warranty periods.
 Thus, the competitiveness of agri-food enterprises and the products produced in them is determined on the basis of a complex of external and internal factors (Fig. 4).
 The following steps can be distinguished in the implementation of the competitiveness management system of agro-food enterprises and the products manufactured in them: identification of issues that reduce the level of competitiveness; making appropriate management decisions; elimination of problem points; control of competitiveness; conducting innovative and marketing activities.

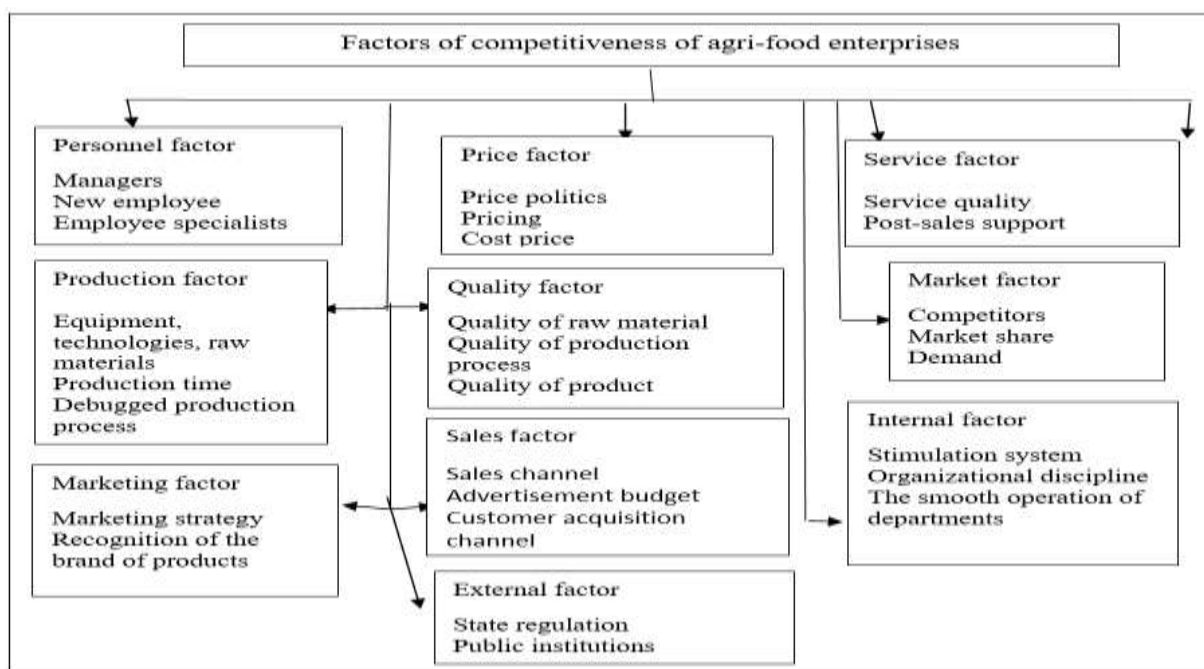


Fig. 4. Factors of competitiveness of agri-food enterprises
 Source: Own determination.

Based on the study of factors of development of methodological approaches to competitiveness, proposals for the assessing the competitiveness of enterprises

and products [9] using a balanced scorecard based on the results of expert surveys are proposed (Table 1).

As a result of the application of this technique, the orderliness of the activities

carried out is achieved, the internal consistency of functioning is ensured, the interests of all participants of the innovation process are taken into account.

Table 1. Balanced indicators characterizing the growth of competitiveness of enterprises of the agri-food complex

Innovative	Innovations of administrative device	Innovations of production process	Service innovations	Infrastructure innovations	Organizational innovations
1	0.20	0.20	0.15	0.15	0.15
Financial	Attracting new investments	Increase in profit	Optimizing costs, increasing productivity	Increasing the efficiency of the use of assets in innovation activities	-
1	0.25	0.30	0.29	0.16	-
Client's	Relations with clients	Qualified product characteristics	Business reputation	-	-
1	0.25	0.50	0.25	-	-
Personnel	Qualified personnel	Strategic planning	Motivation of employees, initiative	-	-
1	0.50	0.25	0.25	-	-
Processes	Strategy realization	Manufacturing process	Processes of interaction with customers	Processes of state regulation	-
1	0.45	0.30	0.16	0.10	-

Source: Own determination.

CONCLUSIONS

The proposed methodology includes a list of indicators that determine the innovative nature of management with assigning them a threshold value ranging from 1 to -1. As a summary of the data, weights are used.

The methodological approaches to assessing the competitiveness of agri-food enterprises and products presented in the work help to increase the efficiency of managing the production of marketable products and optimize the distribution of the costs of introducing the most promising innovations the industry and regional perspectives, and developing key strategies for the development of agri-food enterprises.

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