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CRITERIA FOR ASSESSING COMPETITIVENESS OF MEAT PROCESSING ENTERPRISE

ЕТТІ ҚАЙТА ӨҢДЕУ КӘСІПОРЫНДАРЫНЫҢ БӘСЕКЕЛЕСТІК ҚАБІЛЕТІН БАҒАЛАУ КӨРСЕТКІШТЕРІ

КРИТЕРИИ ОЦЕНКИ КОНКУРЕНТОСПОСОБНОСТИ МЯСОПЕРЕРАБАТЫВАЮЩЕГО ПРЕДПРИЯТИЯ

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Abstract. Issues of improvement of competitiveness of meat processing sector in AIC of Kazakhstan have been considered. Methodology of its evaluation for meat production enterprise using integral-index method of constructing its model has been presented. Determination of competitiveness level is based on calculation of indices (coefficients) of enterprise operation efficiency, its innovation and adaptability. The proposed method of evaluation of competitiveness level of meat processing enterprises is a tool which is possible to use widely in theoretical research and practical economic analysis.

Аңдатпа. Қазақстан АӨК етті қайта өңдеу секторының бәсекелестік қабілетін арттыру проблемалары қарастырылған. Ет өнімдерін өндіру бағытындағы кәсіпорындар үшін оның үлгісін құруда интегральды-индексті әдісін қолдана отырып бағалаудың әдістемелігі көрсетілген. Бәсекеге қабілеттік деңгейін анықтау кәсіпорындар қызметі операциялық тиімділігінің индекстерін (коэффициенттерін), оның инновациялығы мен бейімделулігіне есептеуге негізделген. Ұсынылған ет қайта өңдеу кәсіпорындарының бәсекелестік қабілеті деңгейін бағалау әдісі теориялық зерттеулерде және экономикалық талдау тәжірибесінде кеңінен қолдануға мүмкін болатын инструмент (құрал) болып саналады.

Аннотация. Рассмотрены проблемы повышения конкурентоспособности мясоперерабатывающего сектора АПК Казахстана. Представлена методика ее оценки для предприятия по производству мясной продукции с применением интегрально-индексного метода построения его модели. Определение уровня конкурентоспособности основано на расчете индексов (коэффициентов) операционной эффективности деятельности предприятия, его инновационности и адаптивности. Предлагаемый метод оценки уровня конкурентоспособности мясоперерабатывающих предприятий является инструментом, широкое применение которого возможно в теоретических исследованиях и практике экономического анализа.

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Key An important factor of the successful economic development of Kazakhstan is an incensement of the overall level of competitiveness of the country's economy, including the agricultural sector.

Problems relating to practical evaluation of the competitiveness of economic entities are being discussed in the economic literature for a long time. However, despite the many published materials, textbooks and manuals on the subject, the universally recognized methodology of complex estimation of competitiveness of the economic entity does not currently exist.

This fact is explained by the complexity of the issues. Indeed, each branch of production is made up of tens or hundreds of large, medium and small producers associated with each other technologically, organizationally or through financial relationships. Each of the enterprises within the industry pursues its own interests, competing toughly with rival parties in the battle for consumer preference. In turn, the mass of consumers are interested in purchasing high–quality goods at low prices. In such circumstances, it is important not to get lost in countless factors, to some extent determining the success of the functioning of economic entities, or drown in their diversity and contradictions, select the underlying entities and cut less significant ones. In view of the foregoing, each researcher who has studied the problem of assessing of the competitiveness of enterprises, as a priority set itself the task of finding reasonable criteria of this assessment, which, ultimately, form the proposed method.

Meat processing – is a specialized branch of the food industry in Kazakhstan. Investment and innovation play an important role in the modern development of the industry. Particularly necessary and important government support for the development of the industry is provided in the framework of the State program of development of agrarian and industrial complex in the Republic of Kazakhstan for 2013–2020 years «Agribusiness–2020», subsidies and economic incentives for the production of high–quality and competitive products [1].

The analysis of the potential import and export of agricultural products was conduct by The Ministry of Agriculture in 2014. As a result, it identifies the following 10 priority sectors of processing: milk processing; meat processing; production of oil and fat products; deep processing of grain; processing of fruit and vegetables; production of confectionery products; fish processing; primary processing of furs of farm animals; production of sugar; primary processing of wool. The main constraints of the processing sector in Kazakhstan are:

* poor quality and scarcity of raw materials, as well as the underdevelopment of the logistics of the harvesting, transportation and storage of raw materials, which leads to incomplete utilization of refining capacity;

* lack of development of trade and logistics infrastructure, which contributes to the functioning of the food market of many small entities and unjustified increase in the cost of production;

* low competitiveness of domestic agricultural products and processed products in the domestic and foreign markets;

* difficulties with the implementation of the domestic food production in the domestic market due to the presence of a significant volume of the import.

Meat processing enterprises, where production is based on the principle of comprehensive utilization of raw materials, are the main type of enterprise of meat industry. Slaughter, meat production, processing co–products (offal, fat, blood, etc.) are produced in the meat processing plants, however industrial processing of meat – sausage products, meat semi–finished products, canned meat, as well as the production of fodder and technical products (dry animal feed, fodder and technical fat and etc.) – is mainly produced.

The Head of State instructed to attract foreign companies for implementation of breakthrough investment projects in the food industry at the XVI Congress of the Party «Nur Otan». Ministry of Agriculture has worked out investment proposals for 15 projects. In particular, the Ministry proposed to implement the project on creation of 4 clusters in meat cattle breeding with the participation of Austrian and German companies. For example, «Eurasia Agro Holding» LLC plans to build a meat pro-cessing complex with capacity of 17 thousand tons of processed meat per year, including a line for processing industrial waste [2].

There are no doubts that the competitive advantages of production of meat–processing enterprises are an essential component of its competitiveness as a whole. This fair statement explains the essence of the approach to the asessment of the competitiveness of the economic entity, based on the account of the characteristics of its products, among which the ratio of money and quality of manufactured goods takes central part.

Among other methods P.B. Zabelin method seems quite original, which is used to assess the competitiveness of the economic entity additive property, i.e., greatness of property, consisting in the fact that the value of the quantity corresponding to the whole object is the sum of values of the values corresponding to its parts, no matter what way the object was splitted. Zabelin method (as well as other complex methods) has a distinct advantage in an attempt to take into account not only the level of competi-

tiveness of the enterprise achieved at the moment, but also its possible increment (or decrease) in the long term.

The analysis of the competitiveness assessment methods of meat processing enterprises shortcomings identified by us underlines the relevance of such an approach to solving the identified problem, which is, above all, would be aimed at practical use in analytical work. This means that the basis for its implementation should be based on a comprehensive evaluation of enterprises, based on current statistical information which must be familiar to economists. At the same time, the assessment should reflect not only the current situation of an economic entity in the market, but also take into account the prospects of its development as far as possible. It is particularly important that the assessment of the competitiveness of meat processing enterprises must have broad application boundaries, i.e. it must have a certain degree of flexibility.

The socio–economic role of enterprise in market conditions leads eventually to meet the needs of people or objects of economic relations through the conquest of their steady and growing recognition, in the production and sale of the qualitative composition of the goods and services, which should be the result of the excess of revenues over expenditures, i.e. profit of purposeful activity, covering both operational efficiency efforts and seeking strategic increment of potential enterprise opportunities. From the logical chain stated above it follows that the efficient use of available economic resources of the enterprise can be characterized and ultimately reduced to the evaluation of its operating efficiency, innovation activity and market adaptability. It is clear that such an assessment is impossible without comparison of relevant indicators of the investigated economic entity and taking into account the competition [3].

In order to account the impact of operational efficiency, innovation activity and market adaptability on the level of competitiveness, measured by using a single criterion index, the integrated–index method of constructing the model should be used. The essence of this method drives to the calculation of the indices (coefficients) of the operating efficiency of the enterprise, its innovation and adaptability, their subsequent integration (multiplication) and extracting the root of the corresponding degree.

Thus, the model for calculating the criterion, providing a comprehensive quantitative assessment of the level of competitiveness of a meat processing enterprise, will be as follows:

$$C = \sqrt[3]{C_E \cdot C_I \cdot C_A} \ , \qquad (1)$$

where C – criterion of assessment of enterprise competitiveness level;

C_E – operating efficiency coefficient;

C_I – innovation coefficient;

C_A – adaptability coefficient.

The first coefficient (index) in the expression (1) reflects the operating efficiency of the enterprise, the result of which is in products and services offered by it. The success of these activities is determined by the amount that consumers are willing to pay for the enterprise's products. And if the amount of revenue from sales exceeds the total cost of all the necessary activities for its production and sales, the enterprise operates profitably, indicating an acceptable level of its operational efficiency.

Based on these considerations, the most universal indicator of the enterprise operating efficiency can be made as a ratio of income from all its activities to the expenditures incurred in this case:

$$P = \frac{I}{E} \ , \qquad (2)$$

where P – the operating efficiency of the enterprise;

I – the income of the enterprise from all types of activity;

E – the production expenses of selected activities.

The indicator of operating efficiency for a selection of enterprises will be as follows:

$$P^\Sigma = \frac{I^\Sigma}{E^\Sigma} \ , \qquad (3)$$

where P^Σ – the operating efficiency of the selected enterprises;

I^Σ – the income from all activities of the selected enterprises;

E^Σ – total expenditures of selected enterprises.

Note that a selection is to be understood as a composition of competitors, which in the course of a specific economic analysis is needed for comparison with the considered economic entity. In this regard, the selection may consist of a single enterprise – in this case the index of competitiveness of the test enterprise is determined in comparison with the selected competitor; if of several enterprises – then the competitiveness of enterprises is considered from the competition group; of all existing enterprises in the industry – industry competitiveness index of the economic entity should be established [3].

To determine the operating efficiency of an enterprise it is necessary to compare the value of the calculated index of an economic entity with the corresponding indicator of selected enterprises:

$$C_E = \frac{P}{P^\Sigma}, \qquad (4)$$

where C_E – the coefficient of operational efficiency of enterprise.

The following two coefficients (indices) in the expression (1) characterize the strategic positioning of the economic entity in conjunction, including the impact of ongoing innovation processes and market adaptability of the enterprise. The basis of adaptability is active innovative activity affecting the research, production, organizational, financial and other aspects of the functioning of the modern enterprise and relating to all innovations, providing savings in production expenditures and additional profit. As for the impact of innovation, it is reflected in the assessment of the market adaptability of an enterprise, to a detailed description of which we will turn below.

Thus, the degree of innovation activity of an economic entity may be represented by the ratio of the share of innovation spendings in the total expenditures of the enterprise in the reporting period compared to the same indicator of the previous period:

$$I = \frac{E_I}{E} : \frac{E_{IO}}{E_O}, \qquad (5)$$

and where I – the degree of innovation activity of the enterprise;

E_I, E_{IO} – innovative expenditures of an enterprise in the reporting and previous periods, respectively;

E, E_O – general operating expenditures of the enterprise for the same periods of time.

The index of innovative activity of the enterprises that make up the selection, calculated as follows:

$$I^\Sigma = \frac{E_I^\Sigma}{E^\Sigma} : \frac{E_{IO}^\Sigma}{E_O^\Sigma}, \qquad (6)$$

where I^Σ – the degree of innovation activity of the enterprises of the selection;

E_I^Σ, E_{IO}^Σ – total expenditures of innovative enterprises in the reporting and previous periods, respectively;

E^Σ, E_O^Σ – total production costs of the enterprises of the selection the same periods of time.

Comparison of expressions (5) and (6) gives the desired coefficient (index) of innovation of the economic entity:

$$C_I = \frac{I}{I^\Sigma}, \qquad (7)$$

where C_I – coefficient of enterprise innovation.

The logic of further arguments in assessing the competitiveness of a meat processing enterprise connects previously discussed innovational and operational efficiency of an economic entity with performance of their display on the external environment. Enterprise's relationship with the environment is monitored through an indicator of its market adaptability which characterizes the position that an entity holds in the market. High adaptability presupposes the existence of an adequate market share, which, in the opinion of a plurality of economists, one of the main indicators of competitiveness, taking into account the enterprise scale of production and efficiency of its operations. However, a comparison of direct market shares (revenue volume) of compared meat–processing entities– competitors can lead to the fact that the dominant criterion for assessing the competitiveness of the economic entity will be exactly this indicator.

Having said that, the ratio of market share of the parties competing in absolute terms should not be considered as an indicator of the market adaptability of an enterprise, but the ratio of change in the market share of the studied economic entity in comparison with the previous period to the same indicator of the selection of the enterprises.

Share of the market of the enterprise can be defined by the following relationship:

$$S = \frac{I_1}{V}, \qquad (8)$$

where S – the market share of the enterprise;

I_1 – income of the enterprise from all types of activity;

V – the market volume.

The share on the market of the selected enterprises market can be written as:

$$S^\Sigma = \frac{I_1^\Sigma}{V}, \qquad (9)$$

where S^Σ – market share of the selected enterprises;

I_1^Σ – the total income from the selection of enterprises;

V – the market volume.

The change in the market share of the considered enterprise can be found by the formula:

$$\Delta S = \frac{I_1}{V} : \frac{I_O}{V_O}, \qquad (10)$$

where I_O – the income of the enterprise from all its activities in the previous period;

V_O – the volume of the market in the previous period.

The change in the market share of the enterprise can be defined as:

$$\Delta S^\Sigma = \frac{I_1^\Sigma}{V} : \frac{I_O^\Sigma}{V_O}, \qquad (11)$$

where I_O^Σ – the income from the selection of enterprises in the previous period.

Then the ratio of changes in market share of the studied enterprise and enterprises–competitors of the selection can be written as follows:

$$\frac{\Delta S}{\Delta S^\Sigma} = \frac{I_1}{I_O} : \frac{I_1^\Sigma}{I_O^\Sigma} , \qquad (12)$$

Note that the ratio of the income of the analyzed period to the total revenues in the previous period is index of the change in income.

Consequently, the ratio of the change in market shares in the expression (12) is identical to the ratio of indices of income changes. This outcome suggests that the ratio of the indices of income changes of an economic entity and the selection of enterprises characterizes the dynamics of the position of the entity at the market, reflecting the rate of its market adaptability. Thus, the coefficient (index) of the enterprise in terms of adaptability (1) has the following form

$$C_A = \frac{\Delta_{I_1}}{\Delta_{I_O}^\Sigma} , \qquad (13)$$

where $\Delta_I - \dfrac{I_1}{I_O}$ – the index of the change in the volume of income of the enterprise in the analyzed and prior periods;

$\Delta_I^\Sigma - \dfrac{I_1^\Sigma}{I_O^\Sigma}$ – identical index for the selection of the enterprises.

Analyzing the expression represented by the formula (13), you should pay attention to the need to adjust the volume of revenue (sales) in the figure, taking into account the degree of compliance with the enterprise and its competitors contractual obligations for the supply of goods (by volume, nomenclature and terms of delivery):

1. The coefficient characterizing the degree of customer satisfaction in terms of volume and range of provided of contracts of meat products:

$$C_N = 1 - \frac{\sum_{i=1}^{n}(V_{Ci} - V_{Ai})}{\sum_{i=1}^{n}V_{Ci}} , \qquad (14)$$

where C_N – coefficient of compliance rate in terms of contractual obligations and nomenclature of supplied meat products;

i – type of meat products supplied;

V_{Ai}, V_{Ci} – volume of i – type products actually delivered (realized) and required under the contracts for the supply.

Thus, the numerator of the expression (14) is nothing than the deviation of the actual volume of meat deliveries of the i–th name of the volume required under the contracts. In other words, this difference represents the number of the i–th output undersupplied to consumers. The ratio of this difference, calculated over the entire range of products to the total of its volume, provided by contractual obligations reflects the share of undelivered goods to the total weight of the need for it. Consequently, the C_I will assess the degree of fulfillment of obligations under contracts and the volume and range of products.

In a situation where $V_{Ai} < V_{Ci}$, $C_I < 1$ ratio. If $V_{Ai} = V_{Ci}$, then $C_I = 1$.

2. The coefficient of compliance of contractual obligations under the terms of supply of meat products:

$$C_T = \frac{\sum_{j=1}^{m} V_{Cj} \cdot T_{Aj}}{\sum_{j=1}^{N} V_{Cj} \cdot T_{Cj}} , \qquad (15)$$

where C_T – coefficient of performance of the timing of deliveries of meat products, stipulated by agreements;

j – the delivery number;

m – the total actual number of deliveries;

N – total number of supply envisaged by the contract;

V_{Cj} – volume of the j–th delivery under the contracts;

T_{Cj} – period of time from the date of the j–th supply provided by contract until the end of the billing period;

T_{Aj} – period of time from the date of the j–th actual delivery to the end of the billing period.

In cases where delivery times by agreements are violated, T_{Aj} will be less T_{Cj}, because the delay reduces the length of time from the date of the j–th delivery the end of the billing period. And then the C_T value will be less than 1. In strict compliance of the terms of supply the $C_T = 1$. An indicator taking into account the degree of fulfillment of all the contractual obligations is calculated on the basis of the above coefficients C_N and C_T:

$$C_{UP} = \sqrt{C_N \cdot C_T} , \qquad (16)$$

The amounts of income of products are adjusted with C_{UP} index help when determining the coefficient (index) adaptability C_A. Obligation to such adjustment is dictated by a number of important circumstances.

Firstly, because the volume of sales (income, sales) is accounted when calculating the dynamics of the enterprise position in the market, it should be determined only on the basis of commitments in accordance with the concluded agreements to exclude the possibility of taking

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into account sales volumes as a result of using dumping prices, unfair competition, etc.

Secondly, the economic essence and content of sales as an indicator of the effect of the production is considered to be products which are not only produced, but also in the required amount, the desired range, the required quality and strictly delivered to its consumers and paid by them by the terms of contract. Summing up the presentation, we note that the above coefficients, reflecting operational efficiency, innovation activity and market adaptability of an enterprise, collectively characterize the competitiveness of a meat processing economic entity. Indeed, the integral index, which represents the aggregated form of the above coefficients, incorporates the most important end–competitive criterion of profitability, strategic innovation investments and the share of the enterprise on market. These criteria are, in our view, combine the absolute majority of the factors influencing the activity of the enterprise in market conditions and determining the prospects of its operation and development, with the result that provides the maximum reliability of the expected results. Thus, the proposed method of the level of competitiveness of meat processing enterprises is the universal tool, the widespread use of which is possible in both theoretical research and practice of economic analysis.

According to the State program «Agribusiness–2020», in order to increase the internal and external market expansion of domestic production and food processing industry, the following steps should be taken in cooperation with the competent concerned authorities: to protect the domestic market from the hidden dumping of imports; to strengthen the control over observance of legislation in the field of technical regulation; to ensure compliance of the legal requirements in terms of priority of purchase of domestic foods; to improve the mechanism of access of domestic products on the shelves of retail chains; to develop trade and logistics infrastructure; to promote domestic products to foreign markets; to develop related industries; to conduct advocacy [4].

The creation and development of interstate clusters are actual topics nowadays what involves the active participation of the state in the production chain by improving the tax, customs and tariff policies. Implementation of cluster mechanism of the country's economic development will be an important factor in improving the competitiveness of agricultural enterprises and their products, will promote the active involvement of investments and introduction of advanced technologies in the agricultural sector of the economy and in creating of job vacancies.

On results 2015 production of food and processing industry volumes made 1074 milliards of tenge monetary, including the production of dair-

ies made 184 milliards of tenge (17%), processing and canning of meat and production of the manufactured meats are 149,8 milliards of tenge (14%). In 2015 as compared to 2014 the production of hard cheese increased on 1,7% (from 2926 there are to 2976 tons), on 4,9% (from 8783 there are to 9211 tons) – canned meat, on 4,1% (from 179785 there are to 187123 tons) - sour-milk products. But at the same time on 3,5% production of sausage products reduced, on 15,8% of canned cereal food, on 1,3% of processed milk, on 9% of dairy butter, on 26% of spissated milk [5].

To our opinion, this reducing in a production is constrained, foremost, with the decline of purchaser ability of consumers and presence of inflationary biases in the economy of country, negatively influencing in totality on the dynamics of consumption of basic food products, included in a consumer basket of population.

The analysis of data showed on food security of country, that the indicator of security internal market on the basic types of food due to a domestic production made more than 80%. However, there are products on that enough low security of internal market due to domestic production, they are: dairy butter - 78,1%, vegetable oil - 70,7%, granulated sugar - 62,4%, cheeses and cottage cheese - 17,6%, sausage products - 55,3%, meat of bird - 48,9%, fruit - 48,4%, vegetables - on all kinds - 24,2%, fish - 56,6% [6].

In conclusion, we note that it is especially important to create conditions to stimulate the production of organic products through the introduction of an international certification scheme at the present time. It is necessary to implement measures to further market saturation with products of domestic production through the development of logistics storage and delivery of products to consumers, the establishment of settlements on the harvesting, processing and storage through cooperation of agricultural producers and focus efforts on maintaining commercial production to agro–industrial complex entities with high productivity, which will increase competitiveness, intensify and increase the value of domestic production.

List of the used sources

1 Государственная программа по развитию агропромышленного комплекса в Республике Казахстан на 2013-2020 годы «Агробизнес-2020».

2 Доклад министра сельского хозяйства РК на заседание Правительства РК http://www.minagri.gov.kz. (дата обращения 08.06.2016). [Электронный ресурс].-2015:

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3 Забелин П.В., Моисеева Н.К. Основы стратегического управления: учебное пособие. – М.: «Маркетинг», 1998. – С. 195-198.

4 Данные официального интернет–ресурса Министерства сельского хозяйства РК. – http://www.minagri.gov.kz. (дата обращения 15.06.2016).

5 Аюлов А.М., Кожахметова Г.А., Есмагулова Н.Д. Развитие пищевой и перерабатывающей промышленности Республики Казахстан // Проблемы агрорынка. – Алматы.-2016.- №1.-С.-78-83

6 Нарынбаева А.С., Батыргужинов С.Б. Международный опыт обеспечения продовольственной безопасности // Проблемы агрорынка. – Алматы.-2015.- №4.-С.-28-30

Spisok ispolzovannyh istochnikov

1 Gosudarstvennaja programma po razvitiju agropromyshlennogo kompleksa v Respublike Kazahstan na 2013-2020 gody «Agrobiznes–2020».

2 Doklad ministra sel'skogo hozjajstva RK na zasedanie Pravitel'stva RK ot 12 maja 2015g. – http://www.minagri.gov.kz. (data obrashhenija 10.06.2016).

3 Zabelin P.V., Moiseeva N.K. Osnovy strategicheskogo upravlenija: uchebnoe posobie. – M.: «Marketing», 1998. – S. 195-198.

4 Dannye oficial'nogo internet–resursa Ministerstva sel'skogo hozjajstva RK. – http://www.minagri.gov.kz. (data obrashhenija 15.06.2016).

5 Ajulov A.M., Kozhahmetova G.A., Esmagulova N.D. Razvitie pishhevoj i pererabatyvajushhej promyshlennosti Respubliki Kazahstan // Problemy agrorynka. – Almaty: KazNII jekonomiki APK i razvitija sel'skih territorij, 2016 (janvar'-mart). – S. 80.

6 Narynbaeva A.S., Batyrguzhinov S.B. Mezhdunarodnyj opyt obespechenija prodovol'stvennoj bezopasnosti // Problemy agrorynka. – Almaty: KazNII jekonomiki APK i razvitija sel'skih territorij, 2015 (oktjabr'-dekabr'). – S. 28.

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