

Bozhyday I.

JUSTIFICATION OF THE COMPETITION STRATEGY SELECTION FOR AGRICULTURAL ENTERPRISES

Об'єктом дослідження є процес формування конкурентної стратегії підприємств агропромислового комплексу, на прикладі групи компаній «Агротрейд» (м. Харків, Україна). Одним з найбільш проблемних місць стратегічного управління компанії є постійний аналіз конкурентного оточення. Процес формування конкурентної стратегії пов'язаний з систематичним моніторингом змін в зовнішньому та внутрішньому середовищах.

В ході дослідження використовувалися методи аналізу, синтезу, групування, узагальнення, абстрактно-логічні, економіко-математичні та графічний метод. Процес визначення конкурентної стратегії для підприємств агропромислового комплексу повинен враховувати специфіку галузі та особливості функціонування національного ринку. Він передбачає визначення власної конкурентної позиції та пріоритетних напрямів розвитку, на засадах бенчмаркінгу, а ґрунтуючись на ключових показниках матриці стратегій, за допомогою кореляційно-регресивного аналізу, – значущих показників консолідованої фінансової звітності підприємства. Обґрунтування вибору показників доцільно проводити за допомогою регресії, що дозволяє визначити якісні моделі та повноту пояснювальних факторів. Визначення стратегічних показників діяльності підприємства дозволяє адаптувати та оптимізувати діяльність компанії, акумулювати необхідні ресурси задля досягнення визначеної мети.

На основі результатів аналізу конкурентного середовища та визначення у ньому місця групи компаній «Агротрейд», визначено два пріоритетні вектори розвитку, що відповідають матриці І. Ансоффа «товар-ринок». Методи економіко-математичного аналізу дозволили обґрунтувати доцільність впровадження конкурентної стратегії інноваційного розвитку продукції. Визначена стратегія дозволить, за умови збільшення чистого прибутку щонайменше на 22,1%, суттєво покращити власне конкурентне положення та перейти до іншого, більш привабливого кластеру, що характеризується високими показниками ефективності діяльності та ґрунтується на засадах інноваційного та технологічного розвитку.

Формування ефективної конкурентної стратегії є необхідною складовою успішної діяльності підприємства та запорукою встановлення високого рівня конкурентоспроможності галузі, що відкриває нові перспективи на міжнародному ринку.

Ключові слова: конкурентна стратегія, специфіка галузі, функціонування національного ринку, підприємства агропромислового комплексу.

Received date: 17.06.2019

Accepted date: 04.07.2019

Published date: 30.10.2019

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1. Introduction

The current economic situation of Ukraine is adaptive, which corresponds to the integration processes of the state in the European and world economic community, and is aimed at Sister family development. In this context, the key role is played by the agro-industrial complex (AIC), as the leading sector of the economy, which provides the population with food, industry with raw materials, determines the standard of living of the population and affects the health of the nation. Moreover, the share of its exports is approximately 40% [1].

Based on the above, improving the efficiency of agricultural enterprises is a priority issue today for strategic management. It also requires new approaches to functioning in a competitive environment, ensuring competitive positions and competitive advantages, which are defined directly in competitive strategies.

For this reason, the processes of determining the priority vectors of company development and the formation of competitive strategies at the enterprises of the agro-industrial complex deserve special attention, taking into account their characteristics and the specifics of their activities.

2. The object of research and its technological audit

The object of research is the process of forming a competitive strategy of an enterprise using the example of the «Agrotrade» Group of Companies (Kharkiv, Ukraine).

However, the introduction of long-term strategic management of the agricultural enterprise is a rather problematic issue, due to the specifics of the industry and the rapid changes in the functioning of the national agricultural market in the context of its rapid adaptation to European and world trends. Because of this, the priority is

in managing the company in a less immediate perspective through the formation of an effective competitive strategy. A competitive strategy determines the vector of a company's development in a particular market or segment, is characterized by the principles of adaptability, mobility, consistency, coherence, balance, etc. [2].

Consequently, the formation of a competitive strategy in modern integration processes, taking into account the peculiarities of the functioning of the national market and the specifics of the industry, which is aimed at sustainable development of companies and the industry as a whole.

3. The aim and objectives of research

The aim of research is substantiation of the theoretical and practical aspects of the formation of a competitive strategy for agricultural enterprises. To achieve this aim it is necessary to solve the following objectives:

1. To form a matrix of strategies based on the results of the analysis of the competitive environment of the industry.
2. To define a competitive strategy and its corresponding key indicators.

4. Research of exiting solutions of the problem

In modern economic conditions, the principles of effective management of enterprises are gaining new significance [2], and the agro-industrial complex as the leading link in the Ukrainian industry determines the priority for the formation of effective competitive strategies specifically for agro-industrial enterprises.

Theoretical provisions regarding the competitive strategies of agricultural enterprises are widely covered in modern economic science. So, in [3] a comprehensive system of methods for analyzing the competitive environment is presented and the foundations for converting the results of this analysis to the competitive strategy of a particular business are determined. An alternative point of view is presented in [4], where the author defines four main growth alternatives for companies according to competitive conditions when planning their development. Research [5] is focused on creating a model for the formation of competitive strategic decisions and the ability to solve problems of business change caused by the development of information and communication technologies. The above works determine the methods, but do not take into account the specifics of the functioning of the agricultural market. Features of the functioning and evolution of agricultural cooperatives as part of the analysis of competitive strategies are reflected in [6]. A study of the relationship between the goals of agricultural enterprises and their corresponding sources of competitive advantage is highlighted in [7]. In [8], agricultural structures, success factors, obstacles, customer expectations, and policy wishes between specialized, differentiated, and diversified farms are compared. The adaptation of the principles of strategic management for the agricultural production sector for changing conditions is substantiated in [9]. The listed scientific works are aimed at solving the specifics of the functioning of agricultural enterprises and ensuring competitive advantages, but the methodology for the formation of a competitive strategy remains unresolved. In general, the problems of the formation of competitive strategies in the face of uncertainty in

the domestic market are reflected in [10]. The theoretical aspects of the formation of competitive strategies of agricultural enterprises are reflected in [11], and in [12] – the competitiveness of agricultural enterprises. But these are only theoretical aspects of the features of the competitive strategies of Ukrainian agricultural enterprises.

Thus, the results of the analysis allow to conclude that the question remains unresolved regarding the features of the formation of competitive strategies of enterprises of the agricultural sector of Ukraine.

5. Methods of research

During the research, the following methods were used:

- abstract logical – when forming a matrix of strategies in accordance with the formed homogeneous groups of enterprises;
- economic and mathematical methods – when performing calculations and the feasibility of using indicators to justify the choice of a competitive strategy;
- analysis and synthesis – in determining the problems and tasks of forming a competitive strategy for agricultural enterprises;
- grouping and generalization – in the formation of homogeneous groups of enterprises within the matrix of strategies, the determination of significant indicators of the resulting values;
- graphical method – to visualize the research results.

6. Research results

The process of formation of an effective competitive strategy of an enterprise should correspond to the state of internal and external environment, be based on its own competitive position within the competitive environment. A detailed analysis of the market environment allows to determine direct competitors and market leaders, and based on benchmarking to form possible priority vectors for the development of companies.

The analysis of the competitive environment of the agricultural sector of Ukraine, based on the classification criteria for agricultural enterprises [13], identifies 44 significant market players [14]. Based on clustering, certain enterprises are grouped into four homogeneous groups (clusters) according to two criteria: EBITDA per hectare and number of employees (Table 1).

Table 1
Clustering criteria for agricultural companies of Ukraine

Cluster No.	Number of participants	Criteria	
Cluster 1	13 enterprises	EBITDA per hectare The number of employees	$0 < x < 113.9$ $197 < x < 4500$
Cluster 2	18 enterprises	EBITDA per hectare The number of employees	$159 < x < 380$ $415 < x < 6500$
Cluster 3	8 enterprises	EBITDA per hectare The number of employees	$423 < x < 700$ $336 < x < 3500$
Cluster 4	5 enterprises	EBITDA per hectare The number of employees	$177.4 < x < 486$ $3000 < x < 16000$

Note: built on the basis of data [14]. EBITDA is a universal indicator of the operating result of an enterprise, defined as profit before interest, taxes and depreciation charges. EBITDA primarily demonstrates the profitability of a particular area of work and the company's ability to work and earn in this area. EBITDA per hectare allows to compare the performance of agricultural enterprises without regard to their scale of activity

Based on the results of clustering [14], a matrix of strategies is formed, which consists of four quadrants, in accordance with specific clusters (Fig. 1).

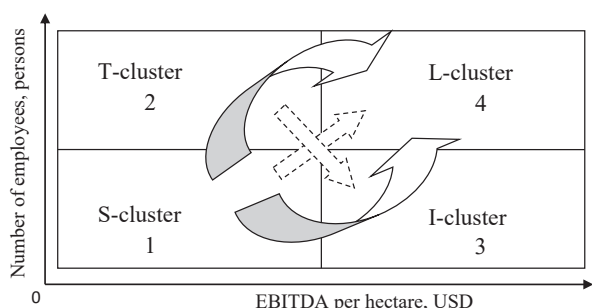


Fig. 1. Strategy matrix

Let's summarize the following characteristic of the existing quadrants of the matrix:

1. The smallest in terms of performance is S-cluster (Small). It is noted: specialization of activities, development and promotion of a specific product and its derivatives, the presence of distribution networks.

2. T-cluster (Turtle) is characterized by significant size – a large number of employees; wide geographical diversification and diversification of activities with focus on the leading direction. It occupies a leading position in a certain segment of the Ukrainian market. Partially, enterprises are represented on the international market. A significant number of enterprises are close in their indicators to the L- and I-cluster.

3. I-cluster (Innovation) includes smaller enterprises with high performance indicators based on the principles of innovative and technological development. Features of the activity are: geographical locality, specialization in a specific market segment, foreign trade in agricultural products, the presence of specialized programs (for example, soybeans without GMOs, organic products, etc.).

4. L-cluster (Leader) is small in the number of enterprises, characterized by the largest size and efficiency. This group includes enterprises that are leaders in the selected industry/field of activity. Among the common features it should be noted: activities in the international market, significant coverage of the territory of Ukraine, a high level of strategic management and planning, innovative, technological development, logistics, social responsibility programs.

Based on the generalized information about the existing quadrant of the strategy matrix, it is possible to substantiate the possibility of the transition of agricultural enterprises from one cluster to another. This transition is possible subject to the formation and implementation of effective management strategies based on key indicators and specific features of any enterprise, aimed at improving certain criteria for their activities. Using the current effective model of strategic management or its constituent industry leaders to increase their own level of competitiveness is justified on the basis of benchmarking. This is a strategic orientation to the best achievements through a comparison of performance and methods of work with the standard. It covers the processes of technology research, organization of production and marketing, management and marketing methods at a reference object to identify innovative experience and its implementation in a particular business [15].

It is proposed to investigate the process of forming a competitive strategy of an enterprise using the example of «Agrotrade» Group of Companies. This enterprise is a leading domestic supplier of grain and seed. Its production assets are located in the Kharkiv, Poltava, Chernihiv, Sumy and Dnipropetrovsk regions of Ukraine, which are the most attractive for agricultural activities. It is the leader in Ukraine in the production and sale of reproductive hybrid seeds of foreign and domestic selection crops, controls 3 % of the grain export market, and is actively developing the direction of organic production. It is also a leader among Ukrainian companies in the effective use of IT technologies [16].

The company is selected on the basis of the values of indicators that form the basis of clustering [14]. «Agrotrade» Group of Companies, in accordance with the results of economic and mathematical analysis, belongs to the T-cluster, but in terms of EBITDA per hectare and the number of employees it corresponds to the L-cluster and is close to the I-cluster.

It is proposed to conduct a detailed analysis of the competitive position of the enterprise, establish a priority development direction and form a competitive strategy on its basis.

Graphically, the location of a sample of enterprises within the clusters, with a notification of the position of the «Agrotrade» group of companies is shown in Fig. 2.

The coordinates of «Agrotrade» (380; 3000) coincide with the lower boundary of the L-cluster along the OY axis and are the upper boundary of the T-cluster along the OX axis. The company has two main development paths: the transition to the L-cluster that is, primarily due to an increase in the number of employees, or to the I-cluster – increasing the efficiency of using a land bank (EBITDA).

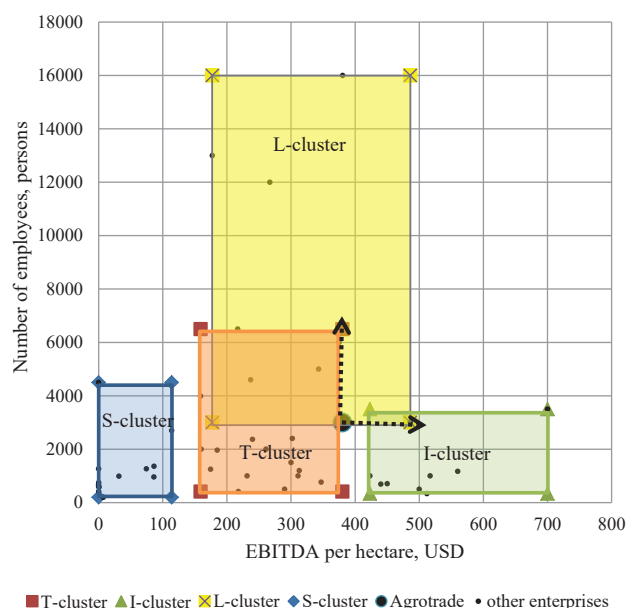


Fig. 2. Placement on the coordinate axis of clusters and companies within them

Since $\min EBITDA_{L\text{-cluster}}(177.4) < EBITDA_{\text{«Agrotrade»}}(380)$, and the number of employees $\min E_{I\text{-cluster}}(336) < E_{\text{«Agrotrade»}}(3000)$, let's determine the lower boundary of the intervals at the level of the values of the indicators of the «Agrotrade» Group of Companies.

So, to move to another cluster of «Agrotrade» Group of Companies, it is necessary to change your indicators as follows:

$$\begin{aligned} \text{I-cluster: } & \begin{cases} \Delta \text{EBITDA} = [\min(43); \max(320)], \\ \Delta E = [\min(0); \max(500)]; \end{cases} \\ \text{L-cluster: } & \begin{cases} \Delta \text{EBITDA} = [\min(0); \max(106)], \\ \Delta E = [\min(0); \max(1300)]. \end{cases} \end{aligned}$$

Thus, increasing the efficiency of the enterprise determines the innovative vector of the development of «Agrotrade» Group of Companies – the transition to I-cluster. And the transition to the L-cluster is an increase in the scale of activity, primarily due to an increase in the number of employees for processing a large land bank, associated with the geographical expansion of the sales market, both within the region and outside it. These two directions of strategic choice correspond to the product development strategy and the strategy of expanding the boundaries of the I. Ansoff «product-market» matrix, which is very common [4].

Variants of possible competitive strategies for the «Agrotrade» Group of Companies are integrated graphically into I. Ansoff «product-market» matrix (Fig. 3).

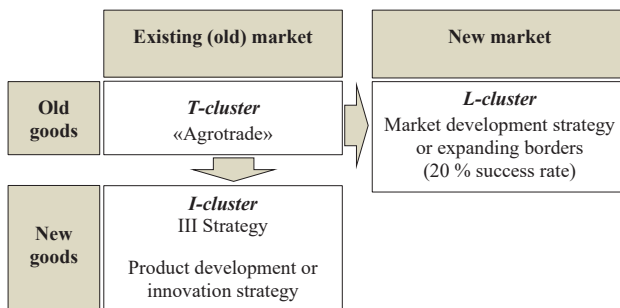


Fig. 3. Competitive strategies of the «Agrotrade» Group of Companies (Kharkiv, Ukraine) by I. Ansoff matrix

A market development strategy or expanding borders is aimed at finding new markets/market segments for already developed goods. Such a strategy is associated with significant costs and high risk [17]. This is a cautious strategy, targeted financing in «key» sources, with a probability of success of 20 % [18].

A product development strategy is a strategy for developing new/improving existing products in order to increase sales. Such a strategy is better in terms of minimizing risk, since the company operates in a familiar market. Possible options for the implementation of the strategy may be the addition of consumer characteristics of the product (focused niche) or the expansion of the product range and product range [17]. This is an innovative strategy, the source of growth for the company is the growth in demand for new products. The probability of success is 33 % [18].

Based on the likelihood of success in implementing strategic alternatives and the need to change the number of employees and EBITDA, it is advisable to state the advantage of introducing an innovation strategy for «Agrotrade»

Group of Companies (transition to I-cluster). Thus, for the transition of «Agrotrade» Group of Companies from the T-cluster to the I-cluster, it is necessary to increase the EBITDA by at least 11.3 %, and at most by 84.2 %. Therefore, it is proposed through a correlation and regression analysis to determine the linear dependence of this indicator on the main indicators of the consolidated financial statements of the company.

Indicators used for EBITDA per hectare calculations are:

- net profit;
- income tax expenses;
- income tax reimbursed;
- extraordinary expenses;
- extraordinary income;
- interest paid or received;
- depreciation deductions;
- the cost of revaluation of assets;
- the size of the land bank.

It is also proposed to supplement this list with other indicators for enterprise reporting: revenue, cost, assets, capital, long-term and short-term liabilities and the number of employees. Let’s analyze these indicators of enterprise performance for the period from 2011 to 2018 [16] and determine their degree of correlation using the IBM SPSS Statistics trial software product.

The existing correlation matrix reflects the existing relationships between indicators (Table 2).

To construct a linear dependence equation based on correlation and regression analysis, it is necessary to exclude multicollinearity. Based on the significance level and correlation coefficient, it is advisable to take into account the amount of net profit and the size of the land bank, which have the greatest degree of influence on the EBITDA per hectare.

Let’s calculate two possible options (Fig. 4):

- 1) based on the «Net profit» indicators;
- 2) based on the «Net profit» and «Land bank» indicators.

Table 2

Correlation of certain performance indicators of the «Agrotrade» Group of Companies (Kharkiv, Ukraine)

Indicators		Net profit	Capital	Depreciation of fixed assets	Land bank	EBITDA
Net profit	Pearson correlation	1	-0.362	-0.533	-0.689	0.862
	Significance (2 Side)	–	0.378	0.174	0.059	0.006
Capital	Pearson correlation	-0.362	1	0.834	0.810	-0.707
	Significance (2 Side)	0.378	–	0.010	0.015	0.050
Depreciation of fixed assets	Pearson correlation	-0.533	0.834	1	0.877	-0.823
	Significance (2 Side)	0.174	0.010	–	0.004	0.012
Land bank	Pearson correlation	-0.689	0.810	0.877	1	-0.955
	Significance (2 Side)	0.059	0.015	0.004	–	0.000
EBITDA	Pearson correlation	0.862	-0.707	-0.823	-0.955	1
	Significance (2 Side)	0.006	0.050	0.012	0.000	–

Note: the allocation of numbers in the table means the presence of multicollinearity between the selected indicators

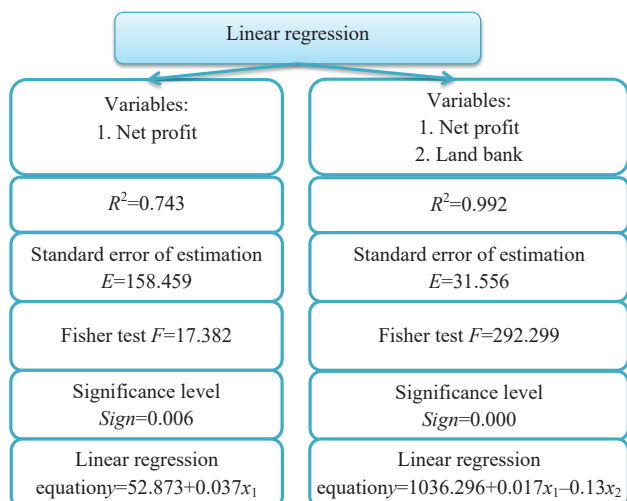


Fig. 4. The rationale for choosing a linear regression model

The choice of a correlation-regression analysis model constructed with two independent variables is adequate, since it has a high base estimate ($0.992 > 0.743$), a significantly lower standard error of the estimate compared to a model with one independent change ($31.556 < 158.459$). Also, the zero level of significance according to the second model indicates that the hypothesis of the simultaneous equality of all regression coefficients to zero is rejected, and a regression model is possible, unlike the first model. Based on the calculated coefficient coefficients that are not standardized, there is the linear regression equation:

$$y = 1036.296 + 0.017x_1 - 0.13x_2 \quad (1)$$

After calculations, in accordance with the linear regression equation, the minimum, average and maximum values of the net profit of the «Agrotrade» Group of Companies are determined, which are necessary for the transition to the priority I-cluster, provided that the size of the land bank remains unchanged. The results are presented graphically (Fig. 5).

So, for the transition of «Agrotrade» Group of Companies to I-cluster, it is necessary to increase the amount of net profit from 14438 thousand USD minimum to 17629.8 thousand USD (by 22.1 %), an average of 25765.1 thousand USD (78.5 %), and up to a maximum of 33923.94 thousand USD (135 %).

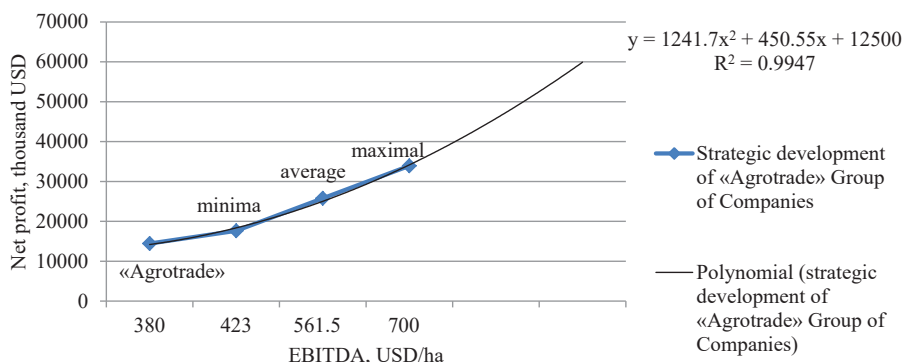


Fig. 5. The strategic importance of the «Agrotrade» Group of Companies (Kharkiv, Ukraine) for the transition to I-cluster

Thus, the effectiveness of the introduction of a competitive strategy for innovative development of the products of the «Agrotrade» Group of Companies is aimed at:

- an increase in its market share;
- an improvement of the competitive position, entering the market leaders, is justified by the transition from T-cluster to I-cluster, due to an increase in EBITDA per hectare.

This is expressed, first of all, due to an increase in the company's net profit.

7. SWOT analysis of research results

Strengths. The proposed methodology for choosing a competitive strategy greatly simplifies the analysis of the competitive field and the determination of one's own competitive position. It also allows to identify key indicators that affect the improvement of competitiveness, and their dependent variables. Optimization of management activities.

Weaknesses. Constant monitoring of the external environment and the results of competitors, generalization of the results.

Opportunities. Formation of a database with the subsequent possibility of quick adjustment of incoming information and automatic reorientation of the vector of development of the company in a competitive environment.

Threats. Threats to the research results are:

- legislative changes in the functioning of the agricultural sector of Ukraine;
- quick change of major market players.

8. Conclusions

1. The author has created a matrix of strategies, built on the results of clustering of leading enterprises in the agricultural sector of Ukraine. The review presents four quadrants of the matrix corresponding to specific clusters and clustering rates. Based on benchmarking, priority vectors of enterprise development within the framework of the strategy matrix are determined.

2. Based on the provisions of the «Agrotrade» Group of Companies, the strategic plane for the implementation of alternative competitive strategies in numerical terms is determined. In accordance with the obtained values and prospects of competitive strategies in the context of I. Ansoff «product-market» matrix, the feasibility of choosing a product development strategy is substantiated. Based on the

methods of economic and mathematical modeling, the influence of financial reporting indicators on the resulting clustering criterion is determined. A correlation-regression model is built, with the help of which the desired strategic values of net profit indicators are calculated for a positive change in the EBITDA of «Agrotrade» Group of Companies for transition to a more attractive cluster (increasing market share, increasing the level of enterprise competitiveness, etc.). The dependence of indicators is determined that will allow the

enterprise to accumulate its own strengths and direct them towards achieving strategic goals.

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Bogiday Irina, Assistant, Department of Economics, Kharkiv National University of Construction and Architecture, Ukraine, ORCID: <http://orcid.org/0000-0003-2227-219X>, e-mail: bogiday@ur.net