

Methodology and mechanisms of sustainable development of agricultural companies on the basis of competitive advantages

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Abstract. The problems of ensuring sustainable development of agricultural companies on the basis of their competitive advantages have been studied. The methodology of formation and development of mechanisms of sustainable development of the company on the basis of its competitive advantages is developed and the block diagram of the algorithm realising the proposed methodology is drawn up. The developed methodology is based on the comparison of indicators of the managed and the leading company of the agro-industrial complex and the elimination of the difference on the basis of the development of sustainable development mechanisms and competitive advantages. The concept of sustainability of agricultural companies, which defines the state of continuous, dynamic development and ensures the current and future market demand for quality agricultural products, The mechanisms of sustainable development of the company are considered as an organisational subsystem of the campaign, implementing its activities to ensure sustainable development. The originality of the study lies in the development of an algorithm for the implementation of the proposed methodology for the formation of the mechanism of sustainable development of the company, providing sustainable development of the company on the basis of its competitive advantages and benchmarking.

1 Introduction

Nowadays, like companies in other industries, agricultural companies, in order to develop their business effectively, need to implement innovative methods to ensure their sustainable development based on their competitive advantages. Therefore, agricultural companies need to realise solutions to the complex task of ensuring: prompt and flexible response to changes in market requirements; formation and further development of the company's competitive

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advantages for many years to come. [1]. Since strategic and tactical actions are often characterised by contradictions, it is difficult to solve this complex problem. In this regard, the task of studying the mechanisms of sustainable development of agricultural companies on the basis of their strategic competitive advantages is currently an important and urgent task of the economy of the agro-industrial complex [2–4]. In countries with developed economies, the issues of sustainable development of a company at the present stage are primarily considered in connection with competitiveness and opportunities to avoid bankruptcy.

The articles [5-7] analysed and disclosed the contents of the mechanism of sustainable development, highlighted their basic components of sustainable development of agricultural and other enterprises. Factors, strategy, potentials of sustainable development of agro-industrial complex and assessment of sustainable development of agricultural enterprises are studied in the works [8–11]. The author of [12] studied indicators for monitoring the sustainable development of agro-industrial complex. In the article [13] the model of the mechanism of sustainable development of the company by regulating innovation activity is proposed and built. Modern scientific approaches to the construction of an integral indicator of enterprise sustainability are analysed in [14]. The problems of sustainable development of agricultural companies in Kazakhstan are considered in the work [15].

Based on the results of literature analysis on the research topic, we can conclude that the sustainability of a company is determined by the state of its dynamic development, when its economic, environmental and social indicators characterising it at any perturbations in the market maintain the necessary equilibrium.

2 Materials and methods

The materials of the study are external and internal factors that influence the mechanisms that enable the sustainability of agricultural companies and data to identify their specific advantages. The company AgroCapital of the Republic of Kazakhstan (Pavlodar), engaged in the cultivation and sale of vegetable legumes and cereals, is considered as a specific object of research. The main competitive advantage of the company is the black soil of its sown areas. This allows AgroCapital to grow and sell quality agricultural products to consumers in the regions of Kazakhstan with timely delivery. In addition, the company's competitive advantages include its own storage facilities for vegetables and wheat with large volumes and automated temperature and humidity control systems. AgroCapital is constantly improving its irrigation system based on science-based methods [16-19], has its own water lines of sufficient length and pumping stations.

To ensure quality irrigation, the company applies the Reinke circular irrigation system, which allows not to depend on weather conditions, which is also an undeniable advantage. Regularly introduces new system and machinery to improve the efficiency of field operations, planting, harvesting and storage processes. Based on its competitive advantages and opportunities, AgroCapital is steadily developing, increasing its planting areas, putting into operation additional storage facilities for agricultural products and expanding the geography of sales of quality products outside the Republic of Kazakhstan. The main methods of the study are methods of economic analysis [20], allowing systematic study, measurement and generalisation of the impact of various factors on the implementation of the strategy of sustainable development of the company, econometric and statistical methods of analysis of the state and development of the company [21]. In addition, general scientific methods of sustainable development, methods of system analysis and expert assessments are used to comprehensively determine the company's development prospects and to identify competitive advantages. [22,23].

3 Results

The market economy and globalisation of the economy, which has a systemic character, pose new important challenges for any companies, including agricultural companies, to ensure their sustainable development. Practice shows that companies with well-developed sustainability mechanisms usually develop more successfully and achieve high results. This statement is confirmed by the results of Harvard Business School (HBS) [24] and is illustrated in the figure below 1.

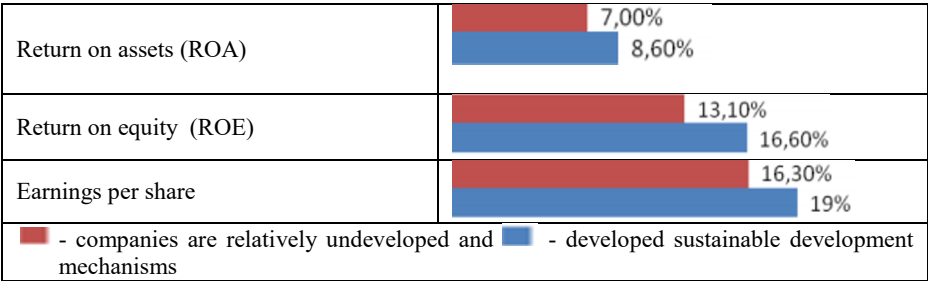


Fig. 1. Comparative performance of a company with relatively undeveloped and developed sustainability mechanisms

Sustainable development mechanisms means an organisational subsystem of the company that implements activities aimed at ensuring its sustainable development. For this purpose, the company creates a structure whose employees work in accordance with certain regulations, and the product of their activities is the proposed measures that ensure the sustainable development of the company. The meaning of the formation of sustainable development mechanisms of the company (MCSD) is to design the company's activities aimed at ensuring its sustainable development. Accordingly, in order to solve the problem of forming MCSD it is necessary to apply known methods and tools of organisational design.

Let us clarify the definition of the notion "sustainable development mechanism of the company" used in this paper. The MCSD is an organisational system, which consists of a set of subdivisions, instructions, regulations, which are mandatory for all employees of the company, the implementation of which ensures the sustainability of the company. The supporting subsystems of the MCSD consist of functional, organisational, information, technical and software support. The functional subsystem plays a leading role in the MCSD, as it is the subsystem that develops and implements measures aimed at preventing possible crises or eliminating their consequences.

The following organisational formats are more appropriate for the implementation of MCSD:

- formation of a special division within the company's management apparatus, e.g., a sustainability division or department;
- formation of an "interdepartmental" project group dealing with sustainable development of the company;
- defining and assigning to an authorised officer the responsibility for coordinating work to ensure the company's sustainable development.

The following methodology based on benchmarking, i.e. borrowing the experience of the leader in the agro-industrial complex, has been developed and proposed for the formation of the MCSD of agricultural companies. The proposed methodology compares the company with the best companies in the field of activity. Then, based on the results of the comparison, actions are developed aimed at closing the gap between the managed and leading companies through the formation and implementation of MCSD and using their competitive advantages.

The block diagram of the algorithm of implementation of the proposed methodology of formation and development of MCSD on the basis of the company's competitive advantages is shown in the figure below 2.

There is a strong link between the sustainability of a company's development and its key performance indicators. Based on the MCSD, it is possible to objectively assess the level of the company's sustainable development and make a decision on the need to reorient the company's development strategy and management to form its sustainable development. The MCSD intra-organisational system consists of the following mechanisms: management organisation; innovation; financial; technical; corporate planning; self-sustainability; and information mechanisms. At that, individual mechanisms are oriented towards solving specific tasks of the company's work, and their system is the MCSD. Thus, the MCSD system is a set of interconnected internal structural units of the company that ensure its viability and increase in economic efficiency, environmental and social sustainability, taking into account possible threats and various external factors. The following types of constituent mechanisms can be included in the MCSD framework.

1. *Social mechanisms*, a system of rules and tools that ensure the development of individual potential of the company's personnel, in turn. which ensures the sustainability of the company's development;

2. *Economic Mechanisms*, tools and rules, usually opposing control and management requirements and policies. Economic mechanisms are categorised on the basis of the number of instruments, on the basis of price documents and on the basis of information instruments;

3. *Ecological Mechanisms*, also called clean development mechanisms, are the most flexible mechanisms that develop both the means to reduce emissions, waste and minimise pollution. These mechanisms are also instruments that enable investment in clean technologies.

Based on the results obtained, it can be concluded that the sustainable development of agricultural companies is their multidimensional state achieved through control, coordination, regulation and continuous improvement of development strategies and . In this case, sustainable development can be ensured with the help of the proposed methodology through the formation and development of MCSD on the basis of their competitive advantages of the company.

Competitive advantage is the ability of a company to promptly provide customers and consumers with quality products that are in current and future market demand. For example, the main competitive advantages of an agricultural company are as follows «AgroCapital» can be singled out:

- black soil of the company's sown areas, allowing it to grow and sell quality agricultural products to consumers in the regions of Kazakhstan and other countries;
- availability of modern in-house storage facilities for vegetables and wheat with automated temperature and humidity control systems to ensure that products are stored while maintaining their quality;
- availability of own logistics systems with necessary facilities, allowing timely delivery of agricultural products without losing their quality to consumers and customers;
- improved irrigation system based on scientific methods, availability of own water conduits and pumping stations ensuring efficient irrigation of cropped areas.

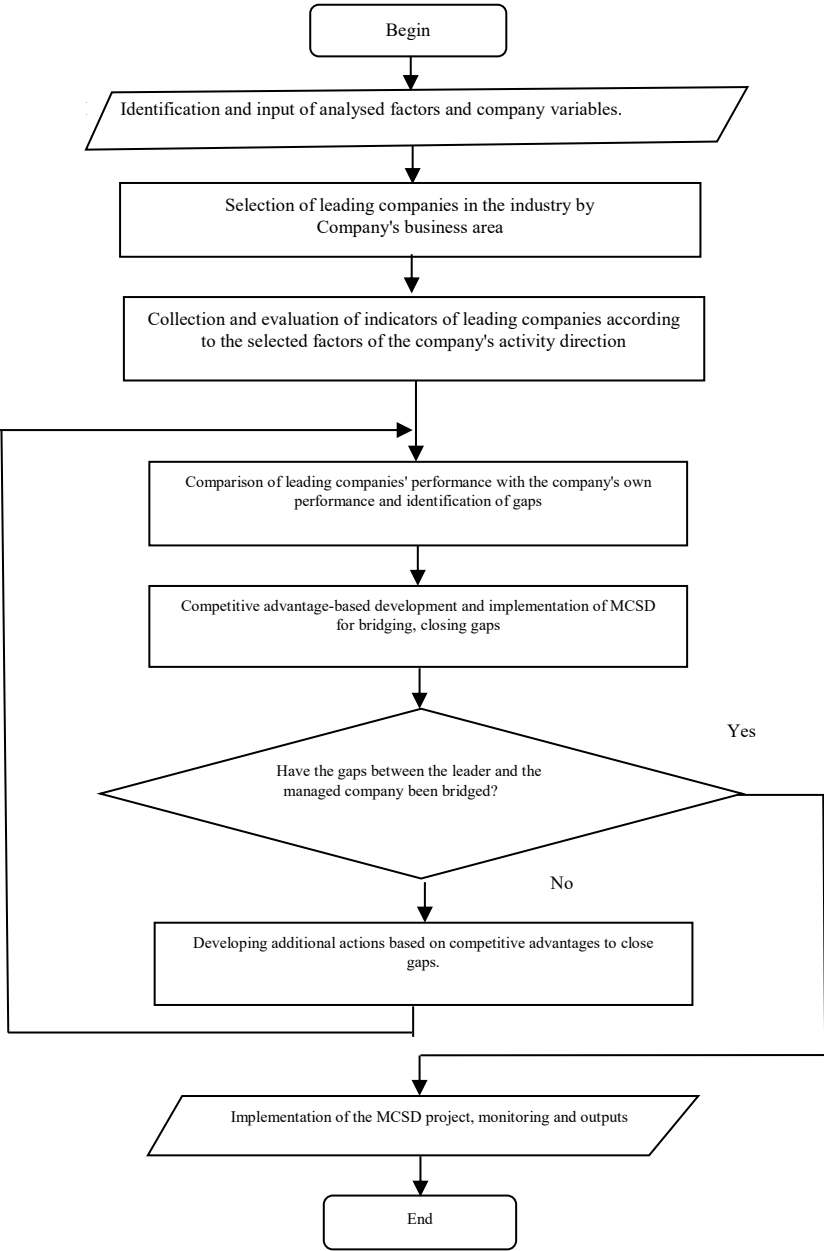


Fig. 2. Block diagram of the algorithm of implementation of the proposed methodology of formation and development of MURC on the basis of competitive advantages company

4 Discussion

The authors' interpretation of the concept of sustainable development of agricultural companies is to ensure their dynamic development, economic, environmental and social indicators that maintain the necessary equilibrium under any external and internal perturbations. Sustainable development should take into account the needs of present and

future generations. The created block diagram of the algorithm realising the developed in the work methodology of formation and development of mechanisms of sustainable development of the company is based on competitive advantages of the company. And the proposed methodology is an improvement, modification and adaptation of benchmarking, the methodology of borrowing the experience of the leading company of the agro-industrial complex. On the basis of the proposed methodology, the sustainable development of the company is provided by their competitive advantages on the basis of the formation and development of the mechanism of sustainable development of the company. Competitive advantages of the company are interpreted as the company's ability to promptly provide consumers with quality products that are in demand in the present and future market.

Mechanisms of sustainable development of the company is considered as its organisational subsystem, which implements the company's activities aimed at ensuring sustainable development of the company. For this purpose, companies create structures that work according to certain regulations and develop proposals and measures that ensure sustainable development of the company. Then the essence of the formation of mechanisms of sustainable development of the company lies in the design of the company's activities aimed at ensuring its sustainable development, implemented by methods and means of organisational design. Based on the above definition of the concept of "mechanism of sustainable development of the company" is specified as a set of units, instructions, plans, regulations, which are mandatory for all employees of the company, the implementation of which ensure the sustainability of the company.

5 Conclusion

Based on the conducted research, the paper proposes a methodology of formation and development of mechanisms of sustainable development of the company on the basis of their competitive advantages and creates a block diagram of the algorithm of implementation of the proposed methodology. The issues of application of the obtained results to ensure sustainable development of an agricultural company are considered AgroCapital. Based on the findings of the study, the following conclusions can be drawn:

- the concept of sustainability of agricultural companies has been clarified, which means its state of dynamic development, allowing to provide current and future consumers with quality agricultural products, as well as to maintain equilibrium under any perturbations of the external and internal environment.;
- the author's definition of the concept of sustainable development mechanisms of the company, means the organisational subsystem of the campaign, which implements its activities to ensure sustainable development;
- the proposed methodology of formation and development of mechanisms for sustainable development of agricultural companies, based on their competitive advantages and benchmarking. When implementing the proposed methodology, the company's indicators are compared with the indicators of the best companies in the field of activity. Based on the results of the comparison, actions are developed and implemented aimed at closing the gap between the relevant indicators through the formation and implementation of sustainable development mechanisms and using the company's competitive advantages

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