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## COMPETITIVENESS MANAGEMENT SYSTEM FOR A SMALL PRODUCTION ENTERPRISE

*This paper considers company's competitiveness in the interrelation of certain aspects of its activity. The expediency to create an integrated system for competitiveness management is grounded. The article offers a conceptual approach to establishing the system of competitiveness management for a small production enterprise under the conditions of considerable dynamism of competitive environment.*

*Keywords:* small enterprise; competitiveness management; dynamic capabilities, innovations, quality.

*JEL classification:* D21; L19; L29; M11; O32.

Віталій В. Луцяк

## СИСТЕМА УПРАВЛІННЯ КОНКУРЕНТОСПРОМОЖНІСТЮ МАЛОГО ВИРОБНИЧОГО ПІДПРИЄМСТВА

*У статті розглянуто конкурентоспроможність підприємства у взаємозв'язку окремих аспектів його діяльності. Доведено доцільність створення на підприємстві інтегрованої системи управління конкурентоспроможністю. Теоретично обґрунтовано та запропоновано концептуальний підхід до формування системи управління конкурентоспроможністю малого виробничого підприємства в умовах значного динамізму конкурентного середовища.*

*Ключові слова:* мале підприємство; управління конкурентоспроможністю; динамічні можливості, інновації, якість.

*Рис. 4. Літ. 14.*

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## СИСТЕМА УПРАВЛЕНИЯ КОНКУРЕНТОСПОСОБНОСТЬЮ МАЛОГО ПРОИЗВОДСТВЕННОГО ПРЕДПРИЯТИЯ

*В статье рассмотрена конкурентоспособность предприятия во взаимосвязи отдельных аспектов его деятельности. Доказана целесообразность создания на предприятии интегрированной системы управления конкурентоспособностью. Теоретически обоснован и предложен концептуальный подход к формированию системы управления конкурентоспособностью малого производственного предприятия в условиях значительного динамизма конкурентной среды.*

*Ключевые слова:* малое предприятие; управление конкурентоспособностью; динамические возможности, инновации, качество.

**Problem statement.** Analysis of small business development showed that by their number, Ukraine reaches the average level of the EU countries, but on the qualitative level small enterprises are far behind their European counterparts (Lutsyak, 2014).

It is determined that at present small enterprises are an important element of market economic systems (Varnaliy, 2001; Voynarenko et al., 2011). Thanks to dynamism and flexibility they serve as an effective means of solving many economic and social problems. Creating new workplaces, they significantly reduce social tension, providing a considerable share of revenue to budgets in the form of taxes and are subject to innovations. It was established that small enterprises have a number of strengths that ensure their stability at national markets, but under certain conditions

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they can turn into weaknesses that hinder their development. Thus, on the one hand, sensitivity of small enterprises to changes in environmental conditions makes them more mobile and adaptive, but on the other, they are also sensitive to market volatility, the dynamics of external social, economic and political conditions.

Small production enterprises, as a rule, are engaged in small-scale production, focusing their full potential on a particular business area.

For successful operation and development of small production enterprises it is necessary to develop an integrated system of competitiveness management, which should be determined by external and internal factors in relation to enterprise environment, particularly: type of economic activity, type of ownership, professional qualification features of managers (owners), market conditions etc.

**Recent researches and publications analysis.** Ukrainian and foreign scientists always pay great attention to the competitiveness of small enterprises that manufacture products. Some problematic aspects of business competitiveness management system were studied by national and foreign scientists. Z.S. Varnaliy (2001), M.P. Voynarenko et al. (2011) and other famous scientists gave attention to theoretical and practical problems of small business development efficiency in Ukraine. In the process of studying the essence of business competitiveness different scientists studied its various aspects. The research on sources of competitive advantages in the form of dynamic organizational capabilities studies was carried out by such scientists as K. Eisenhardt (1989), D. Teece (2009) and others. Innovations as a factor of competitiveness were studied by M. Merezhko et al. (2010), Y. Shumpeter (1982), I.V. Fedulova (2010). Problems of products quality in the process of enterprise competitiveness formation was studied by R.A. Fathutdinov (1995, 2000) and other foreign and domestic scientists.

The task of contemporary management in small business is the search for progressive organizational and economic mechanisms of business competitiveness management (Krekotun, 2012). Such mechanisms and the systems based on them should be able to ensure effective operations of small production enterprises under European integration and consequent market expansion. However, the market purpose of such mechanisms and systems should be customer satisfaction by quality products and services under affordable enough prices.

Despite a large number of scientific papers written by both foreign and domestic scientists on business competitiveness management, the conceptual bases for creating a competitiveness management system for small production enterprises under considerable dynamism of competitive environment remains a controversial issue.

**The objective of this article** is to develop a certain concept of forming competitiveness management system for small production enterprises under the conditions of contemporary competitive environment and its practical implementation at small production enterprises of Ukraine.

**Key research findings.** Under today's turbulent conditions the issue of business competitiveness is always a challenge. Rapidly changing environmental factors require adequate operational, tactical and strategic responses from enterprises. It is difficult to predict which environmental factors can be decisive for competition: negative (political situation, economic crisis etc.) or vice versa positive (creation of high-quality innovations at enterprises, substantial growth of own share at markets of goods or services).

Aggravation of competition together with other problematic aspects in enterprise activity leads to the need to develop and implement an integrated system of business competitiveness management. Since competitiveness as an integral part of market economic system is constantly developing, such system should be based on the newest understanding of how to carry out competitive activities and also on an appropriate methodology of effective management of various aspects in enterprise production activity that could be used to mobilize the enterprise potential and improve its competitiveness.

To provide operations and effective development of an enterprise its management system must be integrated, covering its various subsystems. The effectiveness of such an integrated system will grow due to synergy effect.

Integration of competitiveness management system into sort of internal environment and the construction of such system on the basis of relationships with external environment allows affirming the consistency of competitiveness management.

Different authors offer own approaches to studying the nature of business competitiveness management (Mansurov, 2006). The existing approaches can be summarized as:

- the aspect of performing general managerial functions;
- a set of actuators and methods of influence on the creation and implementation of competitive products;
- a set of administrative actions;
- systematic, orderly and purpose-driven influence on the system of competitiveness;
- management function.

The studied approaches to defining the nature of business competitiveness management suggest that business competitiveness management is one of the key management functions, implemented through managerial influence on the processes of creation and sale of goods (services). Therefore, the management system of enterprise competitiveness should be built according to the ideas about the mechanisms of market development and include the main sources of competitive strengths.

Enterprises' competitiveness is determined by the competitiveness and quality of its goods and services (Denysova and Ulyakhyn, 2006; Fathutdinov, 1995; Merezko et al., 2010). Consumer advantages of enterprise products before the goods of competitors shall be determined by qualitative and cost factors in meeting the specific needs of consumers.

The standard ISO 9000-2001 "Quality Management System. The main provisions and glossary" presents 8 principles to be used by company management to improve its activities (DSTU ISO 9000-2007, 2008). 2 of these 8 principles are directly related to human factors.

According to the principle "Leadership" leaders of an organization set the goals and the direction of organization's activity. They need to create conditions and an appropriate climate to motivate employees achieve the objectives of the organization. The advantages of using this principle include:

- better understanding and motivation of employees to achieve the objectives;
- reducing the number of violations that occur in the process of communication at different levels of the organization.

In accordance with the principle "involvement of employees" employees at all levels, who are interested in the implementation of its objectives, allow using their abilities to achieve the following benefits for the organization:

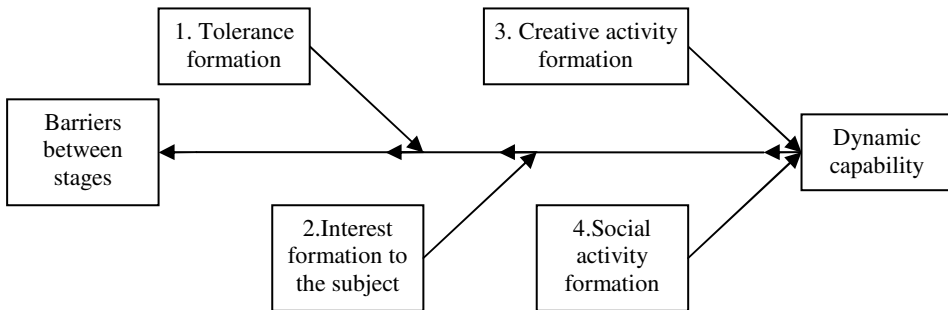
- creativity of employees in achieving the objectives;
- increase of responsibility for the work performed;
- more interest in the process of continuous improvement.

The increasing role of scientific knowledge and its impact on the acceleration of innovation processes requires from managers special skills and creative approaches to solving complex practical problems.

Small businesses are largely able to adapt to changes in the environment and in market requirements. Unique organizational capabilities serve as the key factor as they provide stable and strategically important competitive advantages, as well as updating competitive advantages according to environmental changes (Teece, 2009; Eisenhardt, 1989).

Dynamic capabilities are the source of competitive advantages of an enterprise. This means that based on the constant updating of knowledge (skills inside the enterprise) competitive advantages are created. A specific mechanism for creating competitive advantages is based not only on the already existing knowledge inside an enterprise, and, above all, on the abilities to obtain economic benefits the knowledge as an asset in close connection with the process of lifelong learning. The concept of dynamic capabilities brings to the forefront organizational (strategic) management competencies that can help an enterprise to achieve competitive advantages through the transfer of knowledge and technology, modifying continuously their support (Teece, 2009).

Formation of dynamic abilities is appropriate to be carried out under a particular algorithm in accordance with specific purposes and contents of the set tasks. For example, formation of dynamic capabilities in the process of continuous learning should be carried out in separate stages (Figure 1).



**Figure 1. Model of dynamic capabilities formation and barriers that exist between the stages in the process of learning and action, author's own development**

There should be 4 such stages: the first stage – the formation of diligence, the second – the formation of scientific interest to solving problems, the third stage – formation of creative activity in solving specific problems and the fourth – formation of socially active person by actually creating, testing and implementing innovations.

Evaluation of dynamic capabilities of research groups according to the established criteria have shown that there is a substantial reserve increase of their dynamic abilities.

It is important to take into account that personal interest in work not only stimulates labor efficiency and active participation in innovative changes, but also creates favorable orientations on the whole set of social values, and on the opposite the lack of interest becomes a social-psychological basis for various forms of negative behavior.

At the current competitive market the struggle between enterprises, countries is carried out not for material values, resources, and the ability to create new products, but for permanently updating technologies (Shumpeter, 1982).

Innovative potential of an enterprise means the presence of necessary resources and intensity of their use for innovative development (Fedulova, 2010). Under market economy main source of success is the amount of knowledge owned by an enterprise – the so-called innovation potential, the main component of which is intellectual property.

An important part of innovation potential, in the first place, is intellectual potential of a person. That is why, in contemporary production at the forefront stands the task of mobilizing knowledge, experience, human resources. Strategic innovation potential of a company is the ability to nominate competitive ideas in creating new products, technologies and organization of production of goods and services that are in demand.

The idea of creating innovations should be based on scientific principles and innovative strategies. Innovation strategy is a complex of long-term measures that include the design of new products, most effective activities and introduction of new technologies, methods of production management and provision of services aimed at rapid development of enterprises. Ideally, the goal is to create products for mass use by studying consumer preferences formation.

We can conclude that for production enterprises it is necessary to have at least 3 main components in an integrated system of competitiveness management (Figure 2): 1 – dynamic capabilities (D); 2 – innovation potential (I); 3 – quality of products and services (Q).

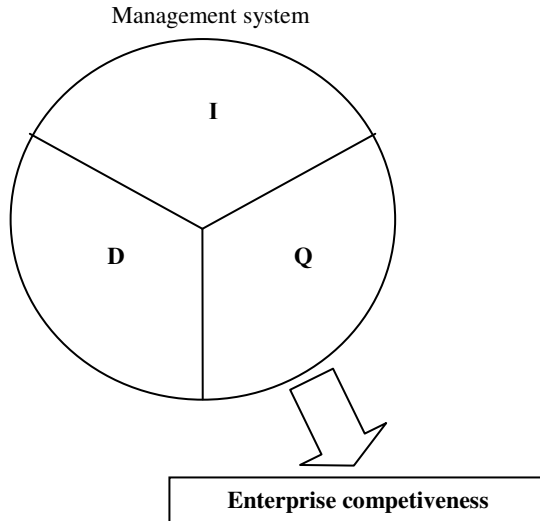
In order to improve competitiveness and quality of production positioning under competitive dynamic environment a conceptual approach is offered to the formation of management system for enterprise's competitiveness through the usage of its key elements: the system of creation and development of dynamic capabilities at an enterprise (D); the system of development and use of innovative potential of an enterprise (I); the system of products quality creation (Q).

It is also useful to identify the main principles for the construction of an integrated management system for competitive capacity of enterprises:

- Scientific character is to be the basis of the latest scientific achievements. It is used to correct factual errors and organize the search and correction of such errors, applying experimental techniques, algorithms for solving inventive tasks, reference materials, archival documents and primary sources.
- Complexity means here a comprehensive, multiple-aspect, multifactorial system examination (of an enterprise or its products), as diverse and interrelated set of

components, selectively involved according to the DIQ concept, which coordinated operation aims to achieve common goals.

- Systemacity is the examination of an enterprise and its end products based on the perceptions of constituent components ability (subsystems of an enterprise and production components), as a result of which the integral properties of the system (model) can be generated.



*Figure 2. The model of integrated management system for enterprise's competitiveness – DIQ, author's own idea*

The implementation of these principles at small manufacturing enterprise under consideration has been carried out in its partial (product development) and also more general (development of activity programs within the national framework) forms. Let us consider the implementation of the described principles.

Testing of the integrated system DIQ in detail has been performed at small and medium-sized production enterprises. High competitiveness of these products is confirmed at international, national and regional exhibitions and export of products abroad.

Development of dynamic capabilities at the enterprise is ensured through the subsystem of company learning that provides constant knowledge update by the selected sectors and types of economic activity. Effectiveness of development and implementation of dynamic capabilities is determined on the basis of index that defines specific net product per period of time spent by a manager. This index shows the level of effectiveness of manager's own dynamic capabilities implementation.

Development of dynamic capabilities is the basis for creating innovative products and goods. Figure 3 shows the model of innovation development at small production enterprise of food industry with dynamic capabilities. The main activity of this company is the production of walnut oil, flour and products containing this oil and flour as main ingredients. Company's management is in the process of lifelong learning, the main production equipment was developed by enterprise founders themselves and is therefore unique and the assortment of enterprise is innovative and is characterized by

high quality levels. Product 0 – walnut kernels processing technology; product 1 – flour out of walnut kernels; product 2 – walnut kernels oil; product 3 – a mill for oil production from walnut kernels; product 4 – nut and honey sorbet; product 5 – walnut ice cream; product 6 – pumpkin-nut flour; product 7 – "Heroic" oil (concentrated mixture of pumpkin and walnut oils); product 8 – salad oil; product 9 – "Nutritious" oil (blended with corn oil mixture of pumpkin and walnut oils); product 10 – nut coffee; product 11 – nut milk; product 12 – nut chocolate; product 13 – nutritious oil; product 14 – massage oil; product 15 – "Balm of Emperor" (alcohol tincture of green walnuts); product 16 – a product prepared according to prescription of monks.

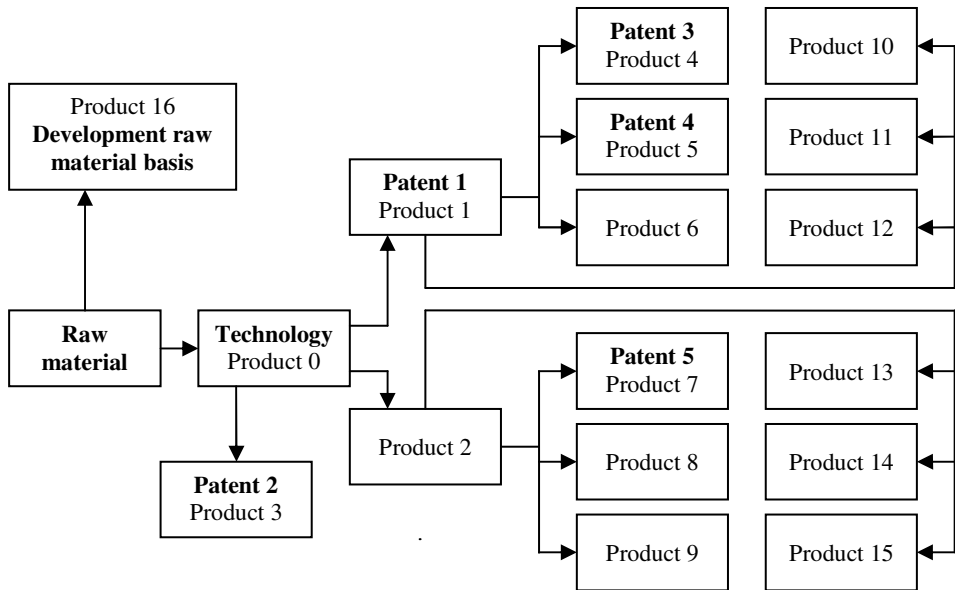


Figure 3. Model for innovation development of a small production enterprise and TM "Food of Heroes", author's own development

Innovative products and goods can have diversified quality. Diversification of quality allows controlling the demand and maintaining competitive advantages in conducting different types of competitive struggle: price and non-price.

The enterprise under study offers for sale special equipment for processing of raw materials. In order to cover a larger market segment the range of equipment is differentiated.

The given enterprise developed a processing technology on the basis of integrated use of raw materials, which can significantly save on production and expand the product range at the same time.

The given enterprise developed one and a half dozens of innovative products. Qualitative features of the developed products include the main indicators of competitive capacity – functional, environmental, safety and patent-related legal ones. Besides, the developed products have a number of competitive advantages due to work experience (15 years at the market of Ukraine and neighboring countries) and also due to high quality (according to numerous analytical comparisons with competing products).

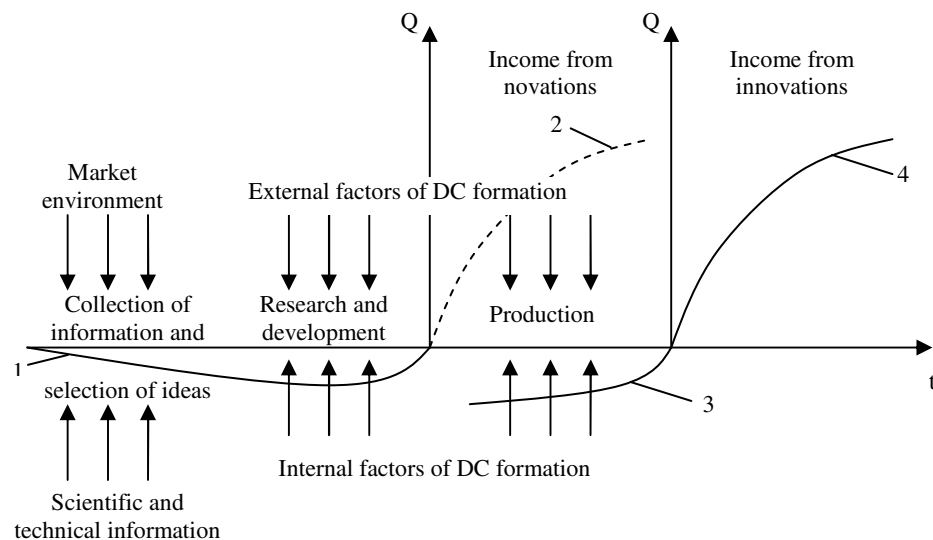
For marketing support the given enterprise registered its TM "Food of Heroe" that carries information about the individuality and the value system for buyers. In the process of brand development they used stable consumer associations and consumer expectations

The enterprise worked out a program for raw materials base development in the central region of Ukraine (Vinnytsia, Chernivtsi, Zhytomyr and Khmelnytskyi regions), which would allow receiving up to 2 bln UAH of revenues per year (at current prices) by one-time investments in 0.1% amount of revenues.

The enterprise own experience shows that the increased demand for nut products at foreign markets and the competitive capacity of these products would very soon allow posing the question concerning the creation of separate subsectors in the agricultural complex of Ukraine.

On the basis of product range development, raw materials and the creation of the subsector of oil and fat industry the enterprise has developed a socioeconomic project to provide population of Ukraine with biologically active innovative food products.

An important feature of this small enterprise is that the establishment, operations and creation of a significant number of innovations is carried out on the basis of own investments. The model for development of enterprise production in money-time coordinates includes the connection between the factors forming dynamic capabilities (DC) and innovation (Figure 4). In the structure of the studied enterprise the impact of DC on productivity is carried out indirectly through research and development work, production and sales.



Notes: 1 – costs for innovative development (own savings & prepayment); 2 – revenue from sale of novations; 3 – costs for production (prepayment); 4 – revenue from innovations sale; t – time; Q – income and expenses.

Figure 4. Process model of a small production enterprise, author's own development



Some development stages of the model are characterized by different levels of costs and revenues. The stage of finding information, selecting ideas and creating is determinative for the perception of market innovations, it requires significant investments and determines future revenues. This stage at the studied enterprise is funded by enterprise own savings. The R&D stage is performed independently by the enterprise at the expense of accumulated human capital and the use of dynamic capabilities, as a rule, it is generally funded by additional contractual terms and prepayment. Thus, the creation of innovative products by business is done under rather short terms. Financing of own production and receipt of some revenues may be carried out by exercising intellectual property rights. Commercialisation of innovations by the enterprise is the defining stage which can provide most revenues.

**Conclusions.** Implementation of the proposed concept would allow solving the problem of ensuring enterprise competitiveness under high dynamics of business environment taking into the use of dynamic capabilities, investments, innovations and quality (under DIQ model).

The integrated system of DIQ is the methodological basis for competitiveness and development management at an enterprise.

The integrated system "DIQ" is an open system, which can be supplemented by other logically related subsystems, for example: the system of environmental management based on ISO standards, the system of product quality improvement etc. objective and subjective factors of external and internal environments influence on the opportunity for an optimal choice of subsystems within an integrated system of competitiveness management at production enterprises and service enterprises. The integrated system "DIQ" is implemented into the general structure of the enterprise to be using members both full-time and part-time employees.

Using the described models based on the DIQ concept will reduce the need for investments, intensify marketing of innovations, optimize distribution, reduce the time when goods appear at the market and time before receiving first revenues.

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