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DETERMINING THE IMPACT OF THE SYNERGIC-EMERGENT APPROACH TO IDENTIFICATION OF THE MATRIX-VECTOR LEVEL ON THE DEVELOPMENT OF THE COMPETITIVENESS POTENTIAL OF INDUSTRIAL ENTERPRISES

The object of the study is the synergistic-emergent approach to identifying the matrix-vector level of development of the competitiveness potential of industrial enterprises. The problem of the study, which is solved in the course of the work, is the lack of a clear algorithm for identifying the matrix-vector level of development of the competitiveness potential of industrial enterprises.

The work develops a synergistic-emergent approach to identifying the matrix-vector level of development of the competitiveness potential of industrial enterprises. The state and current problems of forming the competitiveness potential of industrial enterprises are studied. The importance of making effective management decisions to respond to market needs and changes in the external environment is substantiated, since their solution is a necessary condition for restoring the ability of enterprises to generate profit. Internal and external factors related to the nature and efficiency of operational, investment and financial activities, as well as influencing the level of development of the competitiveness potential of industrial enterprises, are identified. According to the calculations, it was found that the management function in most cases is implemented through the mobilization of opportunities and can contribute to increasing the competitiveness of industrial enterprises in the context of using available financial and potential resources.

The practical significance of the research results is that by applying the developed synergistic-emergent approach to identifying the matrix-vector level of development of competitiveness potential, industrial enterprises will be able to improve their activities in competitive segments and maintain their competitive advantages, developing their potential taking into account the economic interests of all market participants.

Keywords: *vector development, strategic directions, management resources, renovation factors, restructuring transformations, synergistic system.*

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1. Introduction

The deepening processes of reducing the volume of national production and the instability of the operating conditions of industrial enterprises require the development of new mechanisms for the development of competitive potential in the long term. To achieve stable synergistic-emergent development of industrial enterprises, comprehensive actions are necessary on the part of their management. These actions include an assessment of the matrix-vector state of development, identification of ways to attract the necessary managerial and organizational resources, as well as the development of measures to form a high level of competitive potential. In modern conditions of intensifying competition between industrial enterprises and increasing pressure from foreign competitors, the question arises of highlighting the competitiveness of potential as one of the most important criteria for the effectiveness of industrial enterprises. Objective reality requires enterprises not only to ensure the effective and stable functioning of all components of internal potential, but also to search for and gain competitive advantages. And also requires the ability to maintain competitive advantages and develop them in the long term under the influence of external factors. Competitive advantages are formed, maintained and increased due to the effective implementation of the potential for competitiveness and high quality of management decisions in comparison with competitors, which provides the enterprise with a high competitive position in the market and forms a stable competitive status. Thus, in work [1] the development of the potential for competitiveness of enterprises is defined as a set of all available cognitive modes, perspectives and operational resources that can be applied in a specific area or industry. In the study [2] it is emphasized that the development of enterprises also takes into account their level of production costs. However, in the article [3] there remained unresolved issues related to the hidden strategic capabilities of enterprises, which can manifest themselves under certain conditions of synergy. It is these approaches to the hidden strategic conditions in the functioning of enterprises that

were analyzed in work [4]. The introduction of qualitative analysis of the development of potential into the activities of enterprises is considered in studies [5–8] with an emphasis on level ranks. For example, in work [5] the corresponding emergent level of financial and economic stability is determined; in the study [6] – innovative development; in the work [7] – the target strategic-matrix level of profitability; and in [8] – the emergence of the level of enterprise development. In the article [9], the creation of an information-adaptive platform is considered, which ensures the flexibility of the potential management system. The problem of ensuring strategic conditions for the development of enterprises is substantiated in detail in the work [10]. Supporters of the so-called "general definition of the dominants of potential development" [11] argue that the transparency of enterprise development is a set of necessary economic resources for their functioning and growth. However, such a focus on the resource provision of enterprises can reduce the significance of their strategic use [12]. In the work [13] it is noted that the study of the development of competitiveness potential should be based not only on the analysis of the dispersion level of use of general financial and economic resources. Therefore, in the work [14] it is emphasized that the study of enterprise development should also take into account potential strategic prospects for the effective use of resources. This is due to the fact that the synergistic approach involves the analysis of the transparency of enterprise development as a set of interconnected dominants that function as a single whole [15]. The author's approaches to the development of mechanisms for the mutual influence of development dominants are presented in the study [16]. Innovative strategies related to the implementation of the results of the vector level of development in the activities of enterprises are set out in the works [17, 18]. However, the authors of the studies [19, 20] did not pay attention to determining the mutual influence of strategic dominants on the emergence of enterprise development. The works [21, 22] indicate that the potential for enterprise development has several types of manifestations that are interconnected within a certain production system. The emergence of enterprise development is a system, and for its structuring of management, it is necessary to apply a systemic approach. All this indicates the feasibility of conducting a study that will focus on building a synergistic-emergent approach to identifying the matrix-vector level of development of the competitiveness potential of industrial enterprises.

The aim of research is to build a synergistic-emergent approach to identifying the matrix-vector level of development of the competitiveness potential of industrial enterprises. To achieve the stated aim of research, the following scientific objective have been defined:

1) synergistic-emergent approach to identifying the matrix-vector level of development of the competitiveness potential of industrial enterprises;

2) the main factors that directly influence the formation of each of the presented areas of potential (compliance with the norms of hierarchy, autonomy of the organizational structure of management units, decentralization of the management structure, efficiency of management systems), with the aim of further using them to predict the possible state of competitiveness;

3) the main factors of an external and internal nature that directly influence production, financial, marketing and social competitiveness.

2. Materials and Methods

The object of research is the process of managing the development of the competitive potential of industrial enterprises.

To study the process of the synergistic-emergent approach to identifying the matrix-vector level of development of the competitive potential of industrial enterprises, the following methods were used:

1) comparative analysis, structural-decomposition and semantic analysis – for formalization of concepts;

2) logical, historical and systemic approaches, as well as methods of generalization, comparison, analysis and synthesis – for identification of the features of the formation of the managing the competitive potential of enterprises;

3) system-structural analysis – for development of theoretical and methodological recommendations for improving management decisions aimed at optimizing the synergistic-emergent approach to identifying the matrix-vector level of development of the competitive potential of industrial enterprises;

4) hierarchy analysis method – for identification of industrial enterprises by the level of development of competitive potential.

The initial information base of research was made up of legislative and regulatory acts of Ukraine, scientific publications of scientists, and statistical data from the reports of industrial enterprises of Ukraine.

3. Results and Discussion

The evolution of competitive concepts and business conditions determined the theoretical content and practical nature of forms of competition, as well as the essence of competitive advantages, which was due to the peculiarities of the historical period. It is comparative advantages that are the basis of the competitiveness potential of an enterprise and are determined by the availability and effective use of production factors. This leads to lower costs and greater economic benefits compared to competitors. However, the speed of globalization and integration processes, the level of development of innovations and competition indicate that market share, low costs, quality of service and other traditional advantages no longer guarantee the unconditional leadership of an industrial enterprise in the market. Therefore, the concept of comparative advantages is being replaced by a new paradigm of competitive advantages, which consists of a set of relative characteristics of an enterprise that positively distinguish it from competitors for a limited time and in a certain market segment. Competitive advantages can be defined as a unique combination of all available and potential resources, competencies and skills of an enterprise that ensure its adaptability, flexibility and competitive position in the market. In addition, in the process of evolution of this paradigm, views on the sources of ensuring the potential of competitive advantages of the enterprise have changed. Initially, the emphasis was on finding profit in the external environment, and later on the use of internal resources and improving key competencies that distinguish the enterprise from others. This means that competitive advantages in modern conditions must be "dynamic" (constant updating of management methods, production technologies, timely introduction of innovations, improvement of organizational structures, etc.). And they must also be resistant to the negative impact of globalization and integration processes of the macro- and mesoenvironment, which will ensure the synergistic competitiveness of industrial enterprises. Synergetic laws determine the dominant conditions under which self-organization processes can occur in the system. The dominant conditions are the complexity of the system and openness, which ensures the exchange of information with the environment; the nonlinearity of the system dynamics; the presence of feedback; and the presence of fluctuations, which are a prerequisite for the development of the system. Today, synergetics is also used as a method for solving specific tasks to increase the level of development of the competitive potential, which leads to a reassessment of the entire previous system of knowledge through a new way of perception.

Based on the foundations of the synergistic-emergent paradigm and taking into account that the competitive potential of an enterprise is a complex systemic formation when identifying the matrix-vector level of development, when developing research hypotheses, it is important to adhere to the principles of openness, dynamism, nonlinearity of development and integrity. In addition, the basis of many complex processes, such as the formation of the organizational and managerial

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potential of the competitive potential of an enterprise, are the principles of interaction and cooperation of system-forming elements. Also, from the standpoint of synergetics, the principles of bifurcation, emergence and system effect should be highlighted, when new systemic qualities arise at the level of a holistic system that do not manifest themselves among the properties of individual elements that make up a certain system (Fig. 1). The synergetic-emergent approach is considered as a holistic system of responses to the challenges of constant crises of modernity. It changes the value-oriented synergetic basis of enterprise development, capable of influencing various circumstances and emergence, transforming and adjusting the perception of information and analytical data. This allows to strategically determine the direction of development of processes and phenomena in the spatial-process dimension. The synergetic-emergent approach has a significant impact on the final results of the implementation of certain processes, creates space for ideological influence, which contributes to the introduction of institutional innovation into the philosophy of managerial thinking through the prism of the diffusion of the emergence of results and the synergy of expected effects.

To develop adequate regulators that ensure the necessary level of development of the competitiveness potential of industrial enterprises, it is advisable to substantiate the composition of external and internal factors that influence its formation, as well as to assess the intensity of their influence. The need to highlight key factors is due to the multifaceted nature of the enterprise's activities and numerous destabilizing factors that negatively affect its functioning and development. On the one hand, the wider the spectrum of threats, the higher the probability of early detection of crisis situations and the use of appropriate management synergistic-emergent tools. On the other hand, the implementation of such an approach has its limitations. Since some of the indicators that reflect the intensity of the influence of factors do not have sufficient information support. And the other part can lead to information overload and complicate the choice of acceptable models of enterprise behavior. Therefore, it is advisable to highlight the most significant, dominant factors at this stage of development. The matrix-vector level is based on the parameterization of enterprise performance indicators. This involves analytical ordering of vertical and horizontal relationships in a multi-level and multifunctional management decision-making system, taking into account the interdependent influence and determination of critical vector points for the most important safety parameters of matrix individual trajectories. The system synthesizes a set of actions to perform tactical tasks, implementing them on the basis of information received from local matrix phases of the enterprise. It performs the functions of recognizing and identifying the compatibility of matrix-vector phases with the level of development of the enterprise, which allows industrial enterprises to achieve the maximum permissible level of transparency of development under the condition of effective formation of polyvector matrix models.

To implement the tasks set in the work, it is proposed to apply the Analytic Hierarchy Process (AHP) method, which is used to solve general decision-making tasks. This method involves the procedures of synthesizing numerous judgments, determining the priority of criteria and searching for alternative solutions.

Expert procedures based on the method of hierarchy analysis allow taking into account the hidden relationships between indicators, using the experience, knowledge and intuition of specialists in the relevant field. This makes it possible to form a list of indicators that reflect the most important aspects of the enterprise's competitiveness potential. In the context of the task, the issue of determining dominant factors is proposed to be divided into two components:

1) to determine the main factors that directly influence the formation of each of the presented areas of potential (compliance with the norms of the hierarchy, autonomy of the divisions of the organizational structure of management, decentralization of the management structure, efficiency of management systems), in order to further use them to predict the possible state of competitiveness;

2) to determine the main factors of an external and internal nature that directly affect production, financial, marketing and social competitiveness.

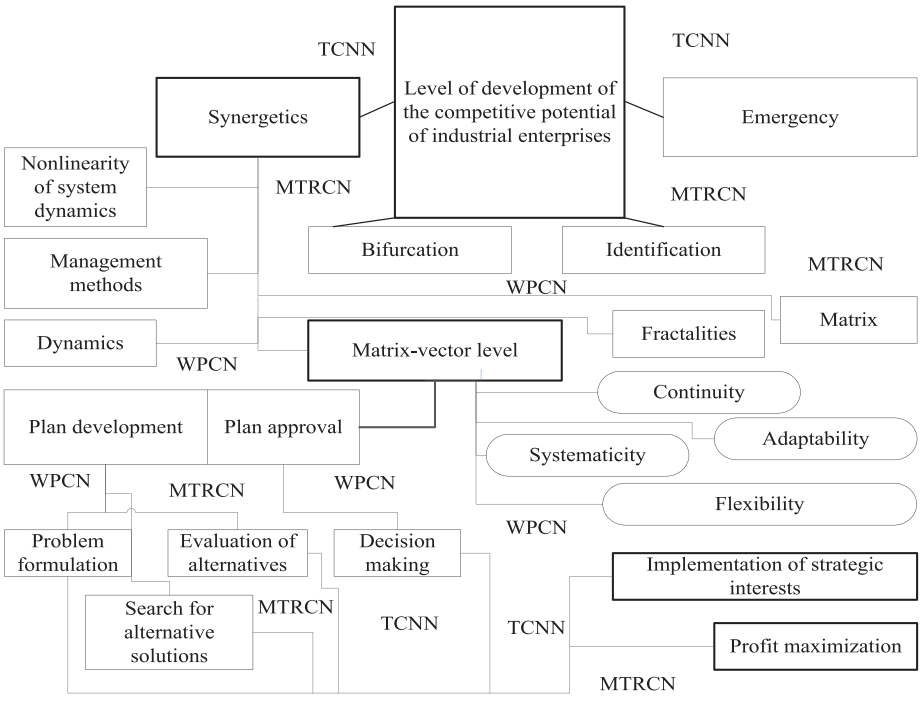

Fig. 1. Synergetic-emergent approach to identifying the matrix-vector level of development of the competitiveness potential of industrial enterprises, where TCNN – target connection; WPCN – vector-directed connection; MTRCN – matrix-directed connection

Based on the results of pairwise comparison of classes of factors with each other, a matrix is formed, which has the following form:

$$A_0 = \begin{array}{c|ccccccc} & A_2 & \dots & A_k & \dots & A_n \\ A_1 & a_{11} & a_{12} & \dots & a_{1k} & \dots & a_{1n} \\ A_2 & a_{21} & a_{22} & \dots & a_{2k} & \dots & a_{2n} \\ \vdots & \vdots & \vdots & & \vdots & & \vdots \\ A_i & a_{i1} & a_{i2} & \dots & a_{ik} & \dots & a_{in} \\ \vdots & \vdots & \vdots & & \vdots & & \vdots \\ A_n & a_{n1} & a_{n2} & \dots & a_{nk} & \dots & a_{nn} \end{array}.$$

The matrix A_0 aggregates the opinions of experts on the mutual priority of factors (U_i $i=\overline{1,n}$). The elements of the matrix are formed as follows:

$$a_n = \begin{cases} 1 & \text{equal importance of classes,} \\ 3 & \text{moderate advantage of "m"-th class over "n"-th,} \\ 5 & \text{significant advantage,} \\ 7 & \text{strong advantage,} \\ 9 & \text{greatest advantage,} \\ 2,\ 4,\ 6,\ 8 & \text{intermediate values.} \end{cases}$$

The ranking of factors within the class is carried out on the basis of matrix vectors of local priorities $w_0 = (w_1^0, ..., w_n^o)$ obtained as a result of processing the matrices of pairwise comparisons $[A]$. The set of factors influencing compliance with the norms of the synergistic-emergent hierarchy in the field of competitiveness potential management is denoted by $UX \in \{UX_{11}, UX_{12}, ..., UX_{18}\}$ (Fig. 2). According to the results, the most influential factors in forming the level of development of the competitiveness potential of industrial enterprises are: the nature of the activity, the variety of tasks and methods of solving them; the level of knowledge of management, the qualifications of subordinates and their interest in the results of work; the presence of unexpected and uncertain situations, as well as the degree of standardization of procedures and the lack of technical support for managerial activities.

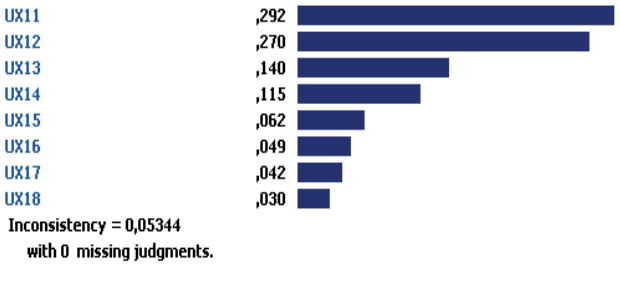

Fig. 2. Ranking of factors of the class of compliance with the norms of the hierarchy regarding the formation of the level of development of the competitive potential of industrial enterprises: UX_{11} – nature of activity, variety of tasks and methods of their solution; UX_{12} – level of knowledge of management, qualification of subordinates and their interest in the results of work; UX_{13} – presence of unexpected and uncertain situations; UX_{14} – standardization of procedures, lack of technical support of management activities; UX_{15} – level of reliability of communications, efficiency of activity and clarity of tasks; UX_{16} – level of organizational culture and culture of interpersonal relations; UX_{17} – territorial dispersion of performers; UX_{18} – scope of management powers

The "Inconsistency" indicator has a low level ($BO \leq 0.1$), which gives grounds to assert the consistency of the results.

The most important factor in the development of the competitive potential of industrial enterprises is positive changes in the external environment (Fig. 3). The second place in terms of influence is occupied by the crisis state of the national economy, which mainly contributes to an increase in the level of centralization of management. The level of importance of decisions made at lower levels of management is rated third in terms of influence.

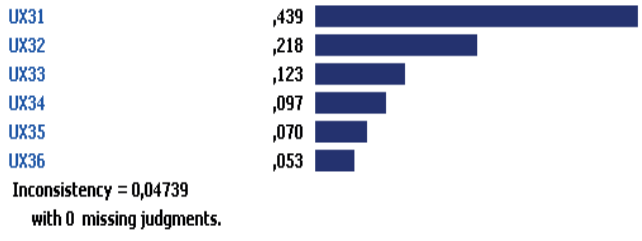

Fig. 3. Ranking of factors of decentralization of management structure: UX_{31} – changes and uncertainties of external environment; UX_{32} – crisis state of national economy; UX_{33} – level of importance of decisions made at lower levels of management; UX_{34} – consequences of decisions made at lower levels of management; UX_{35} – level of control over work of subordinates; UX_{36} – level/degree of delegation of powers by top management

The level of competitiveness of industrial enterprises is mainly formed on the basis of presence or absence of overdue accounts payable and receivable, as well as level of profitability of production (Fig. 4). The reputation of the enterprise and its products occupies the most important place among factors influencing marketing competitiveness. The second and third places are occupied by possible losses of sales markets due to high competition and search for effective channels of product promotion. According to the results of the examination, the contribution of other factors to ensuring stable competitive positions is very insignificant.

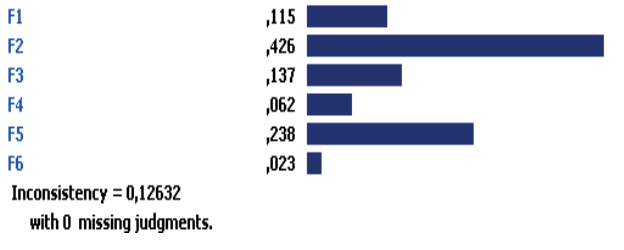

Fig. 4. Ranking of factors of the competitiveness potential of industrial enterprises: F_1 – cost of production; F_2 – presence/absence of overdue accounts payable and receivable; F_3 – instability of exchange rates; F_4 – availability of own working capital; F_5 – level of profitability of production; F_6 – implementation of state support programs for the national manufacturer

Management of the development of the competitiveness potential of industrial enterprises involves the ability of management to assess the most advantageous strategic position of the enterprise, the attractiveness of the industry in which it operates, as well as its competitiveness in the market. Therefore, when choosing mechanisms to ensure interests, it is important to take into account their compliance with the situation of enterprises. The main method for assessing the effectiveness of management of the development of the competitiveness potential of industrial enterprises is the matrix of strategic position and assessment of actions (SPACE). This method allows determining the matrix-vector strategic position of enterprises, based on their internal and external environment using four groups of factors: stability of the development potential of enterprises (AD), increasing the intensification of management of the competitiveness potential of enterprises (AB), competitive advantages of enterprises (AS), attractiveness of enterprises' activities (AA) (Fig. 5, 6).

Thus, based on the information provided in Fig. 5 for "Bar Machine-Building Plant" PJSC (Ukraine), the quantitative measurement of the level of influence of competitiveness on the level of potential is determined by the influence also due to the action of management potential on the material intensity of products, assortment shifts, overall liquidity and stability of economic growth.

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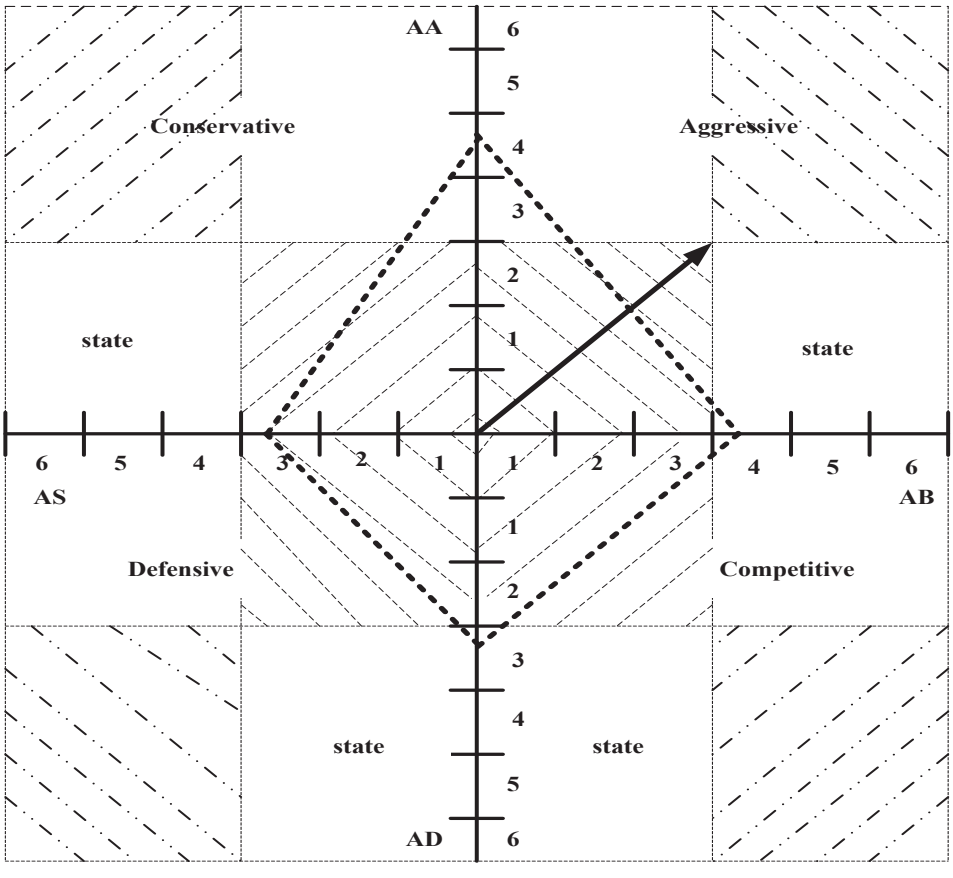

Fig. 5. Matrix of strategic position of management efficiency of competitive potential development of "Bar Machine-Building Plant" PJSC

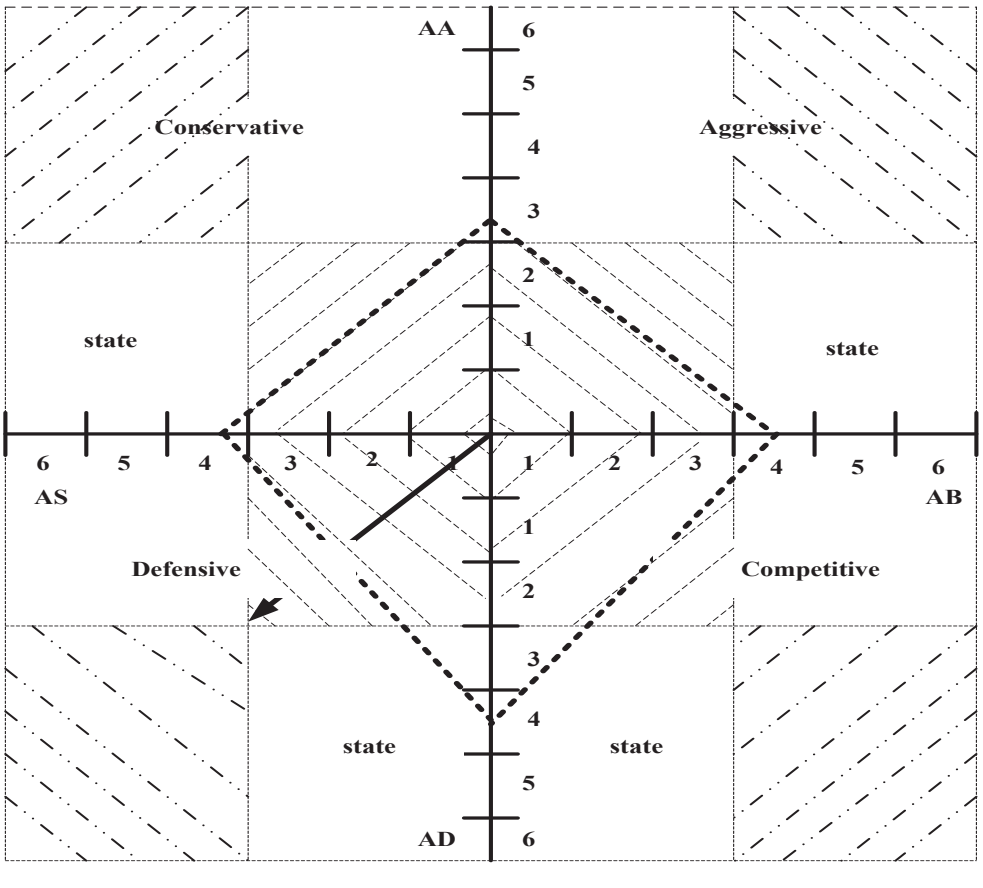

Fig. 6. Matrix of strategic position of management efficiency of competitive potential development of "Turbiv Machine-Building Plant" LLC

There is no significant impact of potential on the following indicators of the potential of "Bar Machine-Building Plant" PJSC: the ratio of expenses on marketing research to the total volume of products sold, the ratio of the average salary to the industry average and the coefficient of personnel stability. This may be due to a number of factors, in particular, the low level of potential realization. Thus, based on Fig. 6, "Turbiv Machine-Building Plant" LLC (Ukraine) had the largest specific weight of a high level of marketing sustainability, which was accompanied by a fairly high level of production sustainability and an average level of product competitiveness. However, there was a significant share of a low level of production and social competitiveness, which indicates underutilization of production potential. The assessment of the strategic position of the effectiveness of management of the development of competitiveness potential at "Bar Machine-Building Plant" PJSC and "Turbiv Machine-Building Plant" LLC indicates that, in general, the potential has a fairly significant impact on the competitiveness of certain enterprises and vice versa. So, it is possible to say that management policy in most cases was able to realize its role in increasing the competitiveness of economic activity through the mobilization of all its capabilities and resources and become a source of development. So, as can be seen from the matrices of the strategic position of the effectiveness of management of the development of the competitive potential of "Bar Machine-Building Plant" PJSC and "Turbiv Machine-Building Plant" LLC, the development of enterprises in mechanical engineering depends on their ability to effectively respond to external influences. When analyzing the external situation, it is important to highlight the most significant factors for a specific period. A comprehensive consideration of these factors in combination with the capabilities of enterprises allows solving emerging problems. When solving tasks of different levels, it is necessary to clearly understand whether critical factors are subject to control by the enterprise. It is important to determine whether these factors are internal or external, whether they can change due to the efforts of the enterprise, or whether they are external events over which the enterprise has no influence. The matrix of opportunities showed that the most favorable opportunities include expanding product sales markets to support this sector of the economy, attracting investors and introducing innovative technologies at the enterprise. An important aspect is also the attraction of young specialists to enterprises, which contributes to improving management and resource management. In practice, the possibilities of significantly increasing the volume of own resources in the development process are limited. Therefore, the main direction of achieving the strategic potential balance of the enterprise is to reduce the consumption of financial resources. Measures to improve the financial situation are unique for each enterprise, taking into account product groups, market conditions, regional infrastructure, management system, structure of production and management costs, as well as potential features and other factors.

So, the matrix-vector level of development of the potential of competitiveness of industrial enterprises for the dominant direction, taking into account the synergistic-emergent approach, has the form: $S\{v; f; m; c\} = (0.38; 0.30; 0.28; 0.04)$. This indicates that the level of development of the potential of competitiveness of industrial enterprises depends on the level at which management tasks are solved, as well as on the consistency and harmony of the actions of the performers. This, in turn, is directly related to the development of potential, which is a key element in the performance of coordinating and regulating functions aimed at achieving the general strategic goal of an industrial enterprise. The structure of the specified potential is formed under the influence of a number of synergistic-emergent factors. which determine the entire spectrum of the enterprise's activities. And also determines the degree of regression feedback between the financial competitiveness of the enterprise and the indicator of the autonomy of the divisions of the organizational structure of management, and the social and economic efficiency of management systems. That is why, for most indicators characterizing the level of development of the competitive potential of enterprises, the level of influence of organizational and managerial potential is statistically significant. The most significant indicators are: product profitability, sales profitability, assortment shift ratio and material intensity of production. This indicates that industrial enterprises in modern business conditions, along with other factors, sufficiently use the appropriate levers of financial potential to influence competitiveness. The synergistic-emergent approach to identifying the matrix-vector level of development of the competitive potential of industrial enterprises (Fig. 1) consists of a set of measures that ensure the receipt of timely and reliable external and internal information necessary for conducting a comprehensive diagnosis and assessment of the state of the competitive potential of an industrial enterprise. This also includes support in making balanced and effective management and strategic decisions regarding the formation of competitive potential, taking into account interaction with the external environment. The work shows that the speed of transformation processes in the national economy, the growth of the influence of globalization processes and hyper-competition, characterized by a sufficiently high level of uncertainty, pose a dominant task for enterprises to constantly ensure the development of their potential (Fig. 5, 6). This problem must be considered from the point of view of the synergistic-emergent aspect, since it is precisely on the competitive potential of the enterprise that the strategic quality of development and the effectiveness of the implementation of management decisions depend. In addition, the too high speed of evolution of economic systems leads to the fact that the synergistic-emergent foundations for ensuring the competitive potential of enterprises have not yet been formulated in the scientific literature. Since synergetics studies the mechanisms of interaction of system elements during its self-organization and self-development. It studies complex systems consisting of many subsystems of various nature, in order to identify how the interaction of these subsystems leads to the formation of new stable spatial, temporal or spatio-temporal structures or modes of functioning (Fig. 2–4). In addition, synergetics analyzes the characteristic scales and speeds of transient processes. The functioning and development of systems capable of self-organization occurs in accordance with the general laws and principles of synergetics. Synergetic-emergent support is a set of specific developments, recommendations, materials and tools that contribute to the achievement of specific goals. This is a complex system of structured stages of scientific research, which are carried out using selected tools, methods and techniques.

The practical significance of the research results is that by applying the developed synergistic-emergent approach to identifying the matrix-vector level of development of competitiveness potential, industrial enterprises will be able to improve their activities in competitive segments and maintain their competitive advantages, developing their potential taking into account the economic interests of all market participants.

The limitations of research are that, in addition to effective directions for increasing the degree of transparency of enterprise development, taking into account the variability of the level of dominants, it is also necessary to look for internal adaptive reserves. This is important for achieving break-even activity of enterprises through a more comprehensive use of material, labor and financial and economic resources.

Modern industrial enterprises in today's conditions of martial law have a significant decrease in demand for their goods and services. Entrepreneurs are faced with problems associated with the absence or significant delays in payments. An important factor affecting the situation is the lack of financing. A significant part of Ukrainian enterprises needs additional working capital, which they lack due to current significant restrictions in bank lending. All this affects the future level of development of the competitiveness potential of industrial enterprises. Therefore, to identify problem areas of variability in the level of such strategic dominants of transparency of the development of the competitiveness potential of enterprises, its general level is

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determined. This allows to systematically establish quantitative and qualitative relationships between strategic dominants, the level of transparency of the development of potential and competitiveness of industrial enterprises.

Prospects for further research are the development of a methodology for synergistic-emergent management strategic effects in the context of achieving and ensuring the optimal level of transparency of the development of the competitiveness potential of industrial enterprises. The specified methodology will emphasize the matrix-vector semantics of quantitative data through the formalization of the model of their representativeness and standardization for calculating resource-strategic reserves. This will allow to determine the variable-functional differentials of the effects of the combination of vector-matrix management functions by the level of development of the competitiveness potential of industrial enterprises.

4. Conclusions

The proposed synergistic-emergent approach to identifying the matrix-vector level of development of the competitive potential of industrial enterprises is based on the principles of the synergistic paradigm and the provisions of the concept of competitive advantages, which are key elements for ensuring competitiveness. In addition, the specifics of the study are taken into account, in particular the emergent and matrix-vector aspects of the formation of the competitive potential of industrial enterprises. Thus, enterprises need to create a system for ensuring a high level of development of the competitive potential, which is a set of elements that form strategic norms, the stability and effectiveness of their functioning depend on the quality of managerial competencies and available organizational capabilities. That is why, taking into account the concept of the formation of the competitive potential of an enterprise, it can be noted that it is based on the modern paradigm of competitive advantages, which states that the prospects of a management entity are determined by its leadership in future markets. Practical activities on the synergistic-emergent approach to identifying the matrix-vector level of development of the competitiveness potential of industrial enterprises form a number of ideals and norms – paradigms, which serve as the basis for creating a new strategic-vector vision, methods and models for scientific and practical work.

The work identifies the main factors that directly influence the formation of each of the presented areas of potential (compliance with the norms of hierarchy, autonomy of units of the organizational structure of management, decentralization of the management structure, efficiency of management systems), with the aim of their further use to predict the possible state of competitiveness. In order to achieve appropriate conditions for the development of the competitiveness potential, it is recommended to focus on creating a resource base, which includes the consolidation of intellectual resources and managerial competencies, the formation of information-analytical and material resources, as well as on building coordinated connections between the elements of the organizational structure. In addition, it is important to create a regulatory framework for regulating financial and economic activities aimed at the progressive development of industrial enterprises. The study formed a matrix of the strategic position of the effectiveness of management of the development of the competitive potential of industrial enterprises. According to this matrix, it is advisable to implement mixed strategies that combine the balanced use of financial and investment resources. This will ensure the sustainability of the development of the competitive potential of enterprises in strategic periods and achieve a high level of transparency, which is a key parameter for measuring the convergence of investment processes. The main external and internal factors that directly affect production, financial, marketing and social competitiveness are presented. Therefore, based on the study of external and internal environmental factors that directly or indirectly affect the competitive potential of an enterprise, the dominant principles of the development and implementation of a synergistic-emergent approach were determined. The specified principles consist in ensuring a sustainable competitive status of the enterprise in the long term (maximization of the level of competitiveness) by developing and implementing effective management decisions. These management decisions should be aimed at the systematic and adequate distribution and use of competitive potential and competitive advantages, taking into account the matrix-vector level of development of industrial enterprises. This emphasizes the need for a comprehensive analysis of the cause-and-effect relationships between changes in the level of transparency of the development of the potential of industrial enterprises and the activation of competitive positions. It is important to develop a further strategy of management decisions that will ensure the optimal ratio and interaction between development and recursive changes. This will create an effective management system in a changing external environment and will contribute to attracting investments in the context of identifying the matrix-vector level of development of the potential of competitiveness of industrial enterprises.

Conflict of interest

The authors declare that they have no conflict of interest regarding this study, including financial, personal, authorship or other nature, which could affect the study and its results presented in this article.

Financing

The study was conducted without financial support.

Data availability

The manuscript has no related data.

Use of artificial intelligence

The authors confirm that they did not use artificial intelligence technologies when creating the presented work.

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