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CHANGES IMPACT ON THE DEVELOPMENT POTENTIAL OF THE ENTERPRISE

ABSTRACT

The article examines the impact of changes on the development potential of the enterprise. Possible reactions to changes are considered in detail. The definition of resting potential and action potential is given. Rest potential is not a static indicator of enterprise development, but has a slower pace than action potential. We know that all enterprises are in constant search and improvement, even crises can be perceived as an impetus to action. The authors identified the need to take into account changes in the external environment and the inverse reaction to the external environment, the strength of the impact of changes on the enterprise development potential. The relationship between changes and the potential of the enterprise is identified through a system of sets that helps to establish the relationship and consistency of factors influencing changes, taking into account cross-influences. Among the main factors, we will pay attention to the following: organization, personnel, marketing, technology, novelty degree of equipment and technologies, product update frequency, availability of patents and licenses, product, resources, finances, organizational culture, as well as the main characteristics of the external environment: complexity, mobility, uncertainty and inter-relationship of factors. We proposed to use mathematical functions and tuples of the full combination to describe the relationship between changes and enterprise development potential.

Keywords: potential, changes, development, management

JEL Classification: C63, D21, M10

INTRODUCTION

The activity of modern enterprises as socio-economic systems is very intense and dynamic. Enterprises are constantly under the influence of changes taking place both in the external and in their internal environment. Changes can occur not only locally, but simultaneously in several areas of operation of entities, not only entrepreneurship, and have different cause-and-effect relationships. Moreover, enterprises that have chosen to increase their capabilities and competencies as a general priority through the use of opportunities contained within change, achieve a clear competitive advantage over enterprises that ignore this approach. Purposeful and programmed organizational changes are consistent with the effective impact on enterprise development. Therefore, the formed potential of enterprise development objectively serves as a generalizing indicator of the enterprises' efficiency and includes the results of actions and efforts of various production, service, management units, subsystems and resources used, the realization of hidden opportunities. Formation, implementation, and increase of the potential becomes a strategic management imperative for principals, which contributes to long-term competitiveness.

LITERATURE REVIEW

The importance of changes in the enterprise has already been proven by the experience of both Ukrainian and international enterprises. It should be noted that change management has become an independent activity, relatively recently. It is necessary to note the impact of the works on the development of change management by such foreign scientists as J. Weber [1] who considered changes in society and the economy to be

important. J. Weber was one of the first to pay attention to the need to predict changes. M. Porter determined that it is impossible to maintain victory due to the oversaturation of the market with goods without pronounced competitive advantages. All enterprises of the modern world must remain flexible, mobile and able to adapt to changes in the external environment constantly improving [2]. According to P. Drucker, enterprise changes management is a process that has stages: changes planning, changes policy development, changes initiation, implementation of a pilot project, identification of risks and additional opportunities from the introduction of changes, changes implementation, ensuring a balance between changes and stability based on the reward system, relations with partners and internal organizational relations [3]. J. Kotter [4] claims that change management is a management method aimed at stimulating organizations and individuals to effectively resist changes occurring in their activities [5, p. 275]. Stetseva S. believes that the concept of "changes" can have several meanings in entrepreneurship. On the one hand, these are changes in technology, consumer tastes, competitive conditions, and various social, political and other factors. On the other hand, the term "changes" characterizes internal changes that occur as a result of the need for the enterprise to adapt to the conditions of the external environment in a specific industry [6, p. 161]. V.V. Stadnyk and M.A. Yohn believed that management is an activity based on purposeful influence on the enterprise personnel with the aim of coordinating their actions to achieve results [6]. According to the interpretation of A.P. Mishchenko, changes are the organization's assimilation of new ideas or models of behaviour [8, p. 47]. That is, one of the main and most difficult tasks of managers is the process of finding and solving problems, which is change management. Modern researchers of change management, Esther Cameron and Mike Green [10], unanimously noted that the timely implementation of changes in the enterprise will help the enterprise to form and maintain its potential and the potential of enterprise development. The relationships between changes that occur or should occur in the external and internal environment of the enterprise, and accordingly affect the development potential of the enterprise, are insufficiently studied today.

PURPOSE OF THE RESEARCH

The purpose of the article is to determine the means of controlling influence on changes in the external and internal environment to ensure the formation, implementation, and capacity building of the enterprise.

METHODS AND METHODOLOGY

We used the system analysis method to fulfil the tasks and determine the unresolved theoretical problems of managing the enterprises' development potential. Retrospective and cause-and-effect analysis and economic-mathematical modelling were used in the study of patterns and features of the management system formation for enterprise development.

The mechanism for managing the company's development potential is built on the principles of active-initiative management methodology, which creates an institutional space for research and determines the dynamic state of the company's management systems and the combinational variability of the synergistic concentration of its competencies and management tools. The methodological principles of the active-initiative management model of enterprises form the basis for the full and indisputable use of their development potential, the active search for opportunities to prevent conflicts and problems, and provide the possibility of using the entire set of intensive and extensive management technologies, the maximum concentration of the living space of the enterprise on compliance with the policy of parallel-sequential development of abilities timely satisfy the interests of society and one's own interests, which are development-forming and development-providing factors.

RESULTS

The positioning of the enterprise in the system-teleological space is connected with a continuous search for the optimal (according to a given criterion) position in the general economic system of material and technical flows, financial, informational, and labour resources. Metaphorically, this process can be represented as follows: global and macroeconomic resource flows to form a complex multidimensional network, each "node" (tuple) of which provides a certain economic (social, administrative, etc.) effect. The structure of the network is constantly changing, which in particular leads to fluctuations in inefficiency in its various components - "nodes" (cartridges). The realization of the global and local goals of the enterprise is possible only if it occupies a certain "node" (tuple) or a set of "nodes" (tuples). If the enterprise is described in terms of state, and the process of functioning as a shift in the space of states, then the network will correspond to the coordinate axes of n-dimensional space. The essence of enterprise management is that not only the enterprise "moves"

to the target state but also the space in which the movement takes place changes (i.e. it is a dynamic coordinate system). Continuous monitoring of the environment allows responding promptly to changes in many exogenous parameters.

In classical theory, the optimal understanding of the concept of "state" is defined as some characteristic of the system, the value of which now determines the current value of the original value and has an impact on its future. Despite a certain vagueness of this definition, it notes an important point. Certainly, any organization from these positions has a certain stable state, which is an "insulator" for a certain period. If you enter the "impulse" in the middle of the organization in the form of changes and changes that take place outside the organization, you can see the impetus to use the potential of the enterprise. If changes occur simultaneously and in one direction, the enterprise can use the "resting potential." The resting potential of the enterprise is a state of the organization when it is necessary to use the opportunities accumulated in the process of formation. The need to use this potential arises primarily because the penetration of changes from the outside is slower than from the inside. It is clearly defined that changes within the organization can lead to changes in the external environment of the organization, but this is not a necessary condition. External changes mostly affect the internal components of the organization. In reality, the resting potential of the enterprise should help the organization identify channels to influence changes and possible reactions and use previous experience to address current issues, both by individual parts of the organization and by the organization as a whole.

The constant influence of environmental factors leads to the exit of the organization from a stable state or a state of rest. During such processes, there is a need to use the "potential of enterprise development". The potential of enterprise development is hidden and unrealized opportunities of the organization. If the effect of changes is insignificant, then the response of the enterprise potential may have slight fluctuations, without a need to look for hidden opportunities. Otherwise, when the impact is sufficient, the response of the organization's action potential reaches a critical state when all hidden or unused opportunities are sought. It will force the organization to respond to changes in the external environment. With the significant impact of changes in the external environment, the organization may reach the stage of negative realization of development potential, when knowing what to do and how, the organization's management does not have enough qualified staff to implement some actions, or there is a high degree of resistance to changes or use of change potential. Therefore, a combination of process-oriented and event-based approaches allows us to build a correct model of enterprise management.

The mechanism of using the potential of enterprise development is as follows - when reaching a critical state of change, the need to use the potential increases, but the state of the organization may not be ready for this and therefore there is a sharp decline and impossibility of further use of potential. The resting potential is a state that requires less effort from management and employees. The potential of enterprise development is a more dynamic indicator, which has many influences and possible results. In the general case, the development potential should be determined by the following main characteristics: 1) the scale and socio-economic results of the enterprise; 2) the strategic importance of the enterprise (belonging to the structure-forming industry, sharing in the structure-forming industry); 3) geographical location of the enterprise and its controlled structures; 4) control over the media; 5) development of an institutional (commercial and social) structure; 6) personal qualities and achievements (in particular, socio-political) of the management or the enterprise owners. Therefore, for a more detailed analysis we should pay attention to the analysis of the following factors:

- organization (structure of powers and responsibilities, the system of planning and control, etc.);
- staff (attitudes, professional competencies, number);
- marketing (seller's strength, knowledge of consumers, consumer properties of products, range, quality of service, reputation);
- technology (installation of equipment, production technology);
- the degree of moral novelty of equipment and technology, product upgrades, the availability of patents and licenses);
- product (quality and novelty of the product, stage of the life cycle, efficiency, prospects);
- resources (material, financial, informational, intellectual, labour, features of access to resources);
- finance (turnover, profitability, investment, the ability to repay loans);
- organizational culture (value of production, value of the team, features of culture).

When analyzing the external environment, it is necessary to take into account its main characteristics: complexity (number of factors to be responded to, as well as the level of variability of each factor), mobility (the rate of changes in the environment), uncertainty (relative amount of information about the environment, its relevance, reliability, completeness)

and the relationship of factors (the level of force with which changes in one factor affect the change of another factor). There is always a need for external accelerators to implement changes, but at the same time, accelerators may not be enough arguments to start changes. Senior managers are also a must, and they must keep track of changes outside the enterprise. In any case, a reverse reaction is required if the manager deems it necessary to continue to exist in the market. The modern external environment is characterized by several features:

- the consumer decides what, when and in what form he wants to get;
- competition in the market due to globalization is significantly intensified;
- consumer needs and market situation are changing rapidly;
- acceleration of scientific and technological progress creates a rapid flow of new technologies, tools, software, management methods, and information technology;
- instability of the resource market creates an additional need for change.

Internal factors are also important for the analysis of change sources. The analysis of internal factors should help the company to find or strengthen competitive advantages. It is the competitive advantage that helps the company to remain competitive in the market for a long time.

To better understand the meaning of change categories, it is necessary to understand the meaning of key types of changes. The main types of changes that belong to the category of changes in the system include process-oriented changes, the purpose of which is to increase labour productivity. Process-oriented changes affect how an enterprise provides services, manufactures products, or processes modern business practices [14]. Changing the system means accepting the changes that the company is going through, and the changes in the heart of the company. Such change is systematic and requires time, planning, and patience. Changes in the enterprise cannot be carried out only by adjusting the elements of the system separately [19]. Transactional changes occur in the process of certain situations, as a result of which the organization experiences some features of change, but the fundamental nature of the organization remains the same [18].

For example, changes in culture, which fall into the category of changes related to people, mean that a change in culture in the enterprise is aimed at changing the behaviour of employees and will cause a reaction of human and socio-cultural potential in the enterprise. Some examples of cultural changes include reward and recognition programs, employee empowerment, and training. Human-centred process changes attempt to change the attitudes, behaviours, skills, or productivity of employees within an enterprise. Such a change can affect employees and their behaviour in many areas [14]. This can provoke a reaction in managerial potential, human potential, and personnel. Social changes include a large set of goals that organizations have created around people. These include workforce authorizations, cooperation agreements, and personal organizational needs [15]. These changes can cause changes within the enterprise and the reaction of social, socio-cultural, and human resources. If we consider the category of changes related to the organization, then, for example, changes in the structure of the organization may occur due to external influences. Structural changes may be related to structural characteristics, administrative procedures, or management system [14]. These changes require a response of structural, informational, communication potentials. Reengineering-oriented changes focus on ensuring major structural changes in the organization. Implementation of these changes usually focuses on day-to-day tasks or procedures. The goal is to significantly improve productivity, efficiency, quality, or customer satisfaction [16]. These changes require the realization of production, technological, technical potential because they will affect the quality of the activity. Disbandment of the business means that the company loses part of its assets. This can lead to the sale or disbandment of an entire business unit or units [17]. Consolidation, as a type of change in the organization, means the merger of individual enterprises, functional areas, or production lines into a single enterprise. Consolidation differs from a merger. A new enterprise is created as a result of consolidation. Such changes will force the company to activate the full potential of the enterprise.

We describe the relationship between changes and the potential of the enterprise using a system of sets. For a better understanding, we introduce a fundamental definition of the set. Under the set we understand a set of definite and disparate objects, which are considered as a whole [19, p. 380].

We describe the potential using sets of tuples of the full combination [19, p. 382]:

$$W = \{K_i\} \tag{1}$$

where W is the set of tuples of the full combination (in our case it is the potential of the enterprise); K_i is i the tuple of the full combination (in our case, this is each of the identified changes that affect the potential).

A complete combination of a set system elements is called a tuple, the elements of which are some subsets of the original sets N_1, N_2, \dots, N_s . The tuple will be considered complete if the length of the tuple is equal to the rank of the set system [19, p. 382]:

$$K = (M^1, M^2, \dots, M^s) \quad (2)$$

where K_i is a tuple of a complete combination of elements of sets N_1, N_2, \dots, N_s , at what $M_1 \subset N_1, M_2 \subset N_2, \dots, M_s \subset N_s$ where; s is the rank of the set system; M_i is a subset of the set N_i , which is part of the system and is an element of the tuple K , $i = 1, 2, \dots, s$.

$$N = \{N^1, N^2, \dots, N^s\} \quad (3)$$

where N is a system of sets; N_1, N_2, \dots, N_s - sets that make up the system; s - the rank of the sets system, i.e. the number of sets that make up the system.

$$N^1 = \{n_i^1\}, \text{ where } i \in I; N^2 = \{n_j^2\}, \text{ where } j \in J; \dots; N^s = \{n_k^s\}, \text{ where } k \in K; n_z^f \neq n_p^h \text{ for all known } f, h, z, p.$$

The set of tuples of a complete combination will be consistent if certain matching rules are met between the elements of the K_i

$$M_1^1 = M_s^s.$$

Under the system of sets, we understand each individual change that affects the corresponding potential and the development potential of the enterprise as a whole. The limitations for this model are time, money, lack or availability of the necessary information. The number of components and their detail may vary based on the company's mission and purpose. More detailing of individual factors can take place in the process of concretization or adjustment of the model. We introduce another mathematical construction that emphasizes the special significance of the central set in the sets system. This feature of the central set is determined by its relationship with the sets of tuples of the complete combination [21, 22].

The introduction of graphs helps to determine that in addition to direct relationships, there may be indirect, duplicate influence of factors on each other and the overall result. For example, the legislation will affect the formation of start-up capital through the regulation of lending, the organization of insurance and pension organizations, and others [23].

Consider a more detailed use of this approach on the example of enterprises in the service sector. Features of these enterprises are small size and usually adaptability. If we turn to the peculiarities of the activity, the service is a non-standard product. The service has no material form, it is intangible, it cannot be stored, and is received directly by the consumer. There are usually no warehouses at service enterprises.

Today, changes in the external environment can be considered a decrease in the purchasing power of the population, increasing requirements for service quality, and improving management, market environment.

We describe the development potential of the service enterprise using sets of tuples of the full combination, formula 1.:

$$W = \{K_1, K_2, K_3, K_4\} \quad (4)$$

where W – the set of tuples of the full combination (in our case it is the potential of enterprise development); K_1 - changes in purchasing power; K_2 - change in service quality; K_3 - change in the management system K_4 ; - change in the market environment.

K_1 – change in purchasing power. Purchasing power will affect the change in the range, and can cause staff reductions, changes in costs. Each of these changes in turn will cause a reaction of the corresponding potential: change of assortment - personnel potential, technical potential, technological potential; personnel change - human resources, information potential, organizational potential; change in costs - financial potential, information potential, resource potential. These changes cause a reaction of information potential (d_1), personnel (d_2), information (d_3), technical (d_4), and technological (d_5). At the same time, each of the potentials can be an impetus for new changes in the enterprise $d_1 \subset K_1, d_2 \subset K_1, d_3 \subset K_1, d_4 \subset K_1, d_5 \subset K_1$

Using formula (2) we obtain: $K_1 = (d_1, d_2, d_3, d_4, d_5)$.

K_2 – quality. Quality is a set of properties of products (services) that determine its suitability to meet certain needs following its purpose [5, p. 10]. Services (h_1), management (h_2), processes (h_3). should be qualitative $h_1 \in K_2, h_2 \in K_2, h_3 \in K_2$.

Changes in quality requirements will cause changes in the quality of services, quality of management, quality of processes, which in turn will affect the human, technical, technological, and informational changes in the quality of services; reaction of organizational and information potentials to change the quality of management; human and information potential must respond to changes in the quality of the process. Using the formula (2) we obtain:

$$K_2 = (h_1, h_2, h_3).$$

The generally accepted classification of the main groups of properties and, accordingly, service quality indicators (h^2):

- indicators of purpose (h^1) - characterize the useful effect of the use of the service for its intended purpose and determine the scope of use of the service;
- reliability indicators (h^2) - reliability;
- indicators of manufacturability (h^3) - characterize the effectiveness of technological solutions and skills of employees;
- indicators of standardization and unification (h^4) - is the presence in the service of standard, unified and original components, as well as the level of unification in comparison with other services;
- ergonomic indicators (h^5) - reflect the human interaction with the service and a set of hygienic, physiological, and psychological properties of man, which are manifested in the consumption (operation) of the service;
- aesthetic indicators (h^6) - characterize the information expressiveness, rationality of form, the perfection of execution, and stability of appearance;
- patent law indicators (h^7) - characterize patent purity, patent protection of services and are an important factor in assessing the competitiveness of the service;
- environmental indicators (h^8) - is the level of harmful effects on the environment that occur when consuming the service;
- safety indicators (h^9) - provide when providing and receiving services. Using the formula (3), we obtain:

$$h_1 = \{h^1, h^2, h^3, h^4, h^5, h^6, h^7, h^8, h^9\}$$

where h^1, h^2, \dots, h^9 – sets that make up the system; $h^1 = \{h_i^1\}$, where $i \in I$ – purpose indicators; $h^2 = \{h_j^2\}$, where $j \in J$ – reliability indicators; \dots $h^9 = \{h_k^9\}$, $k \in K$ where K – safety indicators.

K_3 – management system. The management system helps the company to work harmoniously even in difficult situations. It helps to find common ground in the implementation of ideas (d_3) by employees (d_2) and to find support from partners (d_1). A change in the management system will inevitably lead to a change in the organizational structure, changes in staff, and a change in relationships with partners. All changes affect the information potential, the change of partners is related to the resource potential, the change in staff in accordance with the personnel. At the same time, partners and employees themselves can be a source of new ideas or improvement processes. $d_1 \in K_3, d_2 \in K_3, d_3 \in K_3$

Using the formula (2) we obtain:

$$K_3 = (d_1, d_2, d_3)$$

K_4 - market environment. The market environment is a set of elements that are not part of the organization but affect the process of operation.

Among the many elements, we will focus only on those that determine the feasibility of the idea. The greatest influence on entrepreneurship is exerted by the actions of competitors (d_1), prices (d_2), demand (d_3), consumers (d_4), suppliers (d_5), and the availability of resources (d_6). Provided that $d_1 \in K_4, d_2 \in K_4, d_3 \in K_4, d_4 \in K_4, d_5 \in K_4, d_6 \in K_4$ changes in the actions of competitors mobilize all kinds of enterprise potential, change in price - financial and information potential, change in demand is associated with financial, resource potential, change in resources - with resource potential, and change in consumers and suppliers will have the greatest impact on information potential. We formalize the market environment using formula (2): $K_4 = (d_1, d_2, d_3, d_4, d_5, d_6)$

Graphic interpretation reflects the close relationship between the various components of the enterprise's potential and the impact of changes on each other. Each type of change will affect the other and its components. To clearly define the relationships and effectiveness of change implementation, it will be useful to assess:

- the degree of resistance to change - a decrease in the level of resistance to change, voltage drop, a positive attitude to change;
- reaction to changes - the opinion of the participants, a positive attitude, willingness to accept and use the acquired knowledge, increase understanding within the company;
- acquisition of knowledge and skills - obtaining specific knowledge, increasing professional motivation, overcoming persistent stereotypes of thinking;
- change of behaviour - systematic application of the acquired knowledge in practice;
- effect - change in performance results: the degree of customer satisfaction, improving the psychological climate, reducing staff turnover, sales, profit margins, etc.

Changes in the enterprise should be carried out systematically and managed, based on continuous use and increase of knowledge and potential of the enterprise personnel, information availability, circulation of knowledge in the organization, and raising/maintaining the level of the enterprise as a whole. Under the managed development of the enterprise, it is expedient and justified to understand the processes and results of systematic transformations and transformations in all its subsystems according to the directions established by a strategic choice for the purpose of maintenance of constant positive dynamics in the quality level of organizational formation. Managed development should be carried out by integrating the processes of self-organization and purposeful management. Its conceptual and applied basis consists of the modern management paradigm, and such concepts as synergetic, institutionalism, the concept of sustainable development, managerial postmodernism, and the concept of management processes transformations. The modern management paradigm orients the vector of managed development in the direction of meeting human needs with the use of market approaches, partnership with the private sector, advanced business management technologies, and a new organizational culture. Institutionalism directs the development and ways of systemic transformation based on own identity to create equilibrium systems. The concept of sustainable development determines the transition to an intensive path of development based on the rational use of endogenous strategic resources. Management postmodernism focuses on a critical attitude to classical schemes, and the recognition of "soft", subjective factors in management. The concept of reengineering focuses on systematic rethinking and radical redesign of management and business processes to reduce costs, and achieve significant positives in the quality of management.

These concepts and views on management are integrated with strategic thinking, based on which the system-logical bases of development of conceptual-methodological means of managed development are created. Applied functions of strategic thinking are realized in the processes of strategic activity, embodying the practical philosophy of management and strategic choice of the enterprise, the mainline of the development.

The paradigm of managed development should answer the key questions regarding result-target functions and methodological means of target tasks realization. The purpose of management is generally determined by its mission, which, based on the fundamental content of the modern paradigm of management, is to meet the complex needs of society as a whole. The basic hypothesis, from which follows the result-target function of managed development, is the concept of managerial responsibility to meet the needs of society. It is worth emphasizing that the priority for modern management is the formation of a domestic model that would correspond to the global ideas of harmonization of economic, social, and environmental development priorities [20].

The development can be most fully ensured if the company acquires the appropriate new quality and builds the potential of development. It may be interpreted as competence, i.e. the dynamic capabilities that provide the creation and reconfiguration of internal and external competencies to comply with the VUKA-environment. Under the general (or full) organizational competence of the enterprise should be understood the ability to meet the vital needs (mainly) due to the full realization of the development potential of the enterprise and the whole set of organizational functions. In this context, the useful capacity of the enterprise is the real satisfaction of vital needs, the full realization of functional load. This is because in the process of managing part of the capacity of the enterprise is lost. Its loss at different stages of life is different, but it is observed in any economic process, so with the available technology, it cannot be completely ruled out.

There is an urgent need today to develop a unified system of criteria for the success of the enterprise development potential. In particular, for several years, leading international organizations have been proposing to use a system of integrated socio-economic and environmental calculations. The main argument of the developed innovative method of calculating the real situation of a particular organizational entity or economic system is that the established indicators do

not reflect the actual situation. The traditional group of indicators does not take into account social, economic, and environmental degradation. In particular, the gross domestic product for a particular system or the amount of net profit for the enterprise does not reveal the true economic realities. Focusing management only on traditional economic and social indicators is dangerous for a modern organization. In particular, a high level of profitability is not an unambiguous indicator of the managed development of the enterprise.

To eliminate these shortcomings, it is possible to use the complex indicator, which is developed similarly to the index of true savings. The index of managed development can be defined as the rate of integrated growth of enterprise competencies after the proportional solution of social programs and compensation for environmental losses. Thus, the realization of the principle of eco harmony is achieved, which consists in the implementation of economic actions for the use of limited resources in the harmonious reconstruction of integrated systems in the period of adaptation to changing dynamic unstable environment, focused not only on consumers but on the harmonious combination of social natural, economic development priorities and is focused on maintaining stability and a holistic natural, social and economic environment and can create a synergistic effect in the interaction of enterprise and society. That is why it is necessary to constantly strive to increase the coefficient (k_e), which reflects the effectiveness of socially significant potential. It is calculated as the ratio of net power (P_K) at the output of the system to total power (P_O) at the input (4):

$$k_e = \frac{P_K}{P_O} \textcircled{R} 1$$

The efficiency ratio (k_e) can be represented as the product of two separately evaluated parameters (6):

$$k_e = k_T \cdot k_p$$

where k_T – integrated efficiency ratio of the enterprise as a business entity in this period;

$$k_p = \frac{q_K}{Q}$$

k_p – the ratio of goods production, where q_K – the total amount of goods of appropriate quality brought to consumers in a certain period; Q – the total amount of goods of appropriate quality produced in a given period.

Thus, the rationality of the implementation of organizational competence of the enterprise can be expressed through the coefficient (k_c) (7):

$$k_c = \frac{P_H}{P_e} < 1$$

where P_H – growth rates in the use of development potential per unit time; P_e – growth rates of resource potential per unit time.

The mechanism of competence development, as well as organizational, economic, or competitive advantages of the enterprise, should be based on rules or principles, according to which the achievement of the set goals is ensured, and possible problems are solved.

That is why competencies can mostly be seen as the ability to ensure development, to perform the full range of organizational functions at an appropriately high level, and the constraints on achieving greater productivity concerning the set goals. In particular, due to limited resources, a set of organizational knowledge, lack of sufficient experience in a particular industry, and so on. The real model of development should provide an increase in the competence of the enterprise compared to the current one through better use of all available or projected competencies and opportunities, i.e. (8):

$$\Delta Y = Y^* - Y$$

where ΔY – possible increase in organizational competence; Y^* – the potential value of organizational competence; Y – the actual or projected value of organizational competence at the basic level of competencies and opportunities use.

As the course of development of each enterprise is individual, the sets of enterprise competencies will differ. Deciding on the choice of one or another configuration of the development potential of the enterprise as a model of organizational

competence is a mathematical multi-criteria optimization problem in terms of equilibrium of criteria that usually compete. The balance of enterprise development will be determined through the continuity of achieving harmony with the external environment and expressed as follows (9):

$$g_n = \frac{P_{k_1}}{N_1} < \frac{P_{k_2}}{N_2}$$

where P_{k_1} , P_{k_2} – accordingly, the realization of enterprise socially useful capacities in the analyzed period and the period preceding the analyzed; N_1 , N_2 – the average industry volume of sales of socially useful capacities following the analyzed period and the period preceding the analysis.

To reflect all the diversity of enterprise activity aspects, the concept of proactive-initiative behaviour is proposed. The proactive-initiative model of management is based on the fact that the company not only acts as a passive observer of changes in the environment but also manages the external conditions of the operation. Each company can independently determine the configuration and combinatorics of all necessary resources for consumption, and enterprise development can be ensured by allocating key resources and developing the principles of their rational use. A dynamic component of the enterprise will be a combination of resources and capabilities that determine the necessary mode (trajectory) of development for certain scenario features of the external environment and internal organizational processes. Achieving the set goals following the concept will take place under the conditions of development potential and strategically oriented active impact on the external environment. The components of success are synergistic relationships and interdependencies between the limited available resources of the organization and the principles of their use, which correspond to a reasonable function of the usefulness of the enterprise behaviour. One of the key reasons for not ensuring effective management - is the impact of uncertainty on the external environment on the enterprise activity is eliminated or levelled, which allows managers to focus on management decisions with the maximum use of the end results.

The proactive-initiative model of the enterprise, in our opinion, is the most promising and effective. It forms the basis for full and unquestionable use of the existing potential of enterprise development, aggressive search for new opportunities, prevention of conflicts and problems, and provides an opportunity to use the whole set of extensive and intensive technologies. After all, it will provide the company with such characteristics as independence of reproduction and building development potential; obtaining multiplicative and synergistic effects; innovative receptivity; harmonized integrity of internal subsystems; strategic orientation of resource use; the ability to constructively recombine and redesign the enterprise as a whole.

DISCUSSION

The presented author's approach reflects the multifaceted process of the impact of changes on the development of the enterprise. In this case, the ascending principles, according to which the establishment and functioning of the enterprise, as well as the improvement of the principles of management, took place, are of particular importance. In accordance with this understanding of the essence of internal and external processes, the enterprise achieves organizational excellence and eliminates a whole series of problems that are primarily related to the life of the enterprise, namely: the adoption and implementation of management decisions, organizational structure, the establishment of target benchmarks, including strategic, and means of achieving them; manageability of economic actions when using limited resources is ensured; the optimality of the reconstruction of enterprise structures during the period of their adaptation to changes in the natural, social and economic environment; a harmonious combination of social, natural, economic development priorities; maintaining the reliability and integrity of the enterprise; achieving the effect of synergy in the interaction of the constituent elements of the enterprise and the relations of the enterprise with the external environment. These basic provisions will determine the specifics of changes in the development potential and the implementation of the entire set of functions that should be assigned to the enterprise as a business entity [24]. The proposed approach with the help of clearly defined mathematical constructions will allow company managers to determine the impact of factors as a whole and for each direction or factor separately, and the mathematical component allows determining the importance of factors and separating or generalizing the impact depending on the situation in the external environment.

CONCLUSIONS

Implementation of changes in enterprises is a complex and continuous process. Any change can become a catalyst for the introduction of other alterations in the middle of the enterprise. The effective existence of an organization is impossible without the formation, implementation, and expansion of the development potential. Development potential is a possibility to realize hidden opportunities under the influence of external and internal environmental factors.

The proactive-initiative model of the enterprise creation and operation is the most promising and effective which reflects the diversity of the enterprise's functioning. It forms the basis for full and indisputable use of the existing development potential of the enterprise, aggressive search for new opportunities, prevention of conflicts and problems, and provides the opportunity to use the entire set of extensive and intensive technologies. And it is the proactive-initiative model of enterprise development that allows you to control new opportunities and form development potential due to the timely use of the internal environment factors. After all, it provides the enterprise with such characteristics as independence of reproduction and increasing development potential; obtaining multiplicative and synergistic effects; innovative receptivity; harmonized integrity of internal subsystems; strategic orientation of the resources uses, ability to their constructive recombination, and redesign of the enterprise in general. The model of proactive-initiative creation and functioning of the enterprise makes it possible to form the basis for the full and indisputable use of the existing development potential of the enterprise, as well as to satisfy the needs of society as a whole.

The multivariate configuration of the company's development potential requires the use of a mathematical apparatus and a multi-criteria optimization problem in conditions of criteria balance that are, as a rule, competing. It is possible to describe the development potential of the enterprise using the formula of sets of tuples of a complete combination. The set of tuples of a complete combination is a complex function subject to specific changes. The impact of changes is determined using mathematical ratios, for qualitative indicators with mandatory consideration of weight. The proposed system of a set of tuples of a complete combination is quite mobile and easily adapted, it is possible to change the number of tuples that reflect changes and describe the factors influencing a specific change.

The controlled impact on changes is displayed using a system of sets, which determines each change and its impact on the corresponding potential and the development potential of the enterprise as a whole. The number of components and their detailing may change, based on the mission of the enterprise and the set goal, the conditions of activity, and the speed of adaptation of a separate unit or the enterprise as a whole. More complete detailing of some factors can occur in the process of specifying or adjusting the model. For detailing and a more controlled impact, we will introduce a system with sets of tuples of a complete combination, which allows us to determine in even more detail the impact of a change on the potential, or the inverse impact, and predict the result of the impact.

The management of the enterprise should establish the frequency of calculations of sets of tuples and their comparison with the previous ones. To ensure the formation, implementation, and development of the enterprise's potential as a means of controlling influence, we proposed to apply the paradigm of controlled existing competencies development, i.e., the enterprise has such dynamic capabilities that ensure the creation and reconfiguration of internal and external competencies under the requirements of the VUCA environment.

Controlled influence on development and changes in the external and internal environment can be carried out through self-organization and, accordingly, targeted management. Such influence is provided through a combination of synergy, institutionalism, philosophy of balanced development, management postmodernism, and the concept of managed transformations of administrative processes. The proposed means of managed development of the enterprise answer the key questions regarding its result-target function and methodological means of implementing target tasks.

Under the conditions of managed changes in the development potential of the enterprise, the processes and results of systematic alterations and transformations in all its subsystems are achieved under the established priorities and the forecasted dynamics of the development of the enterprise in general, and the implementation of managed changes in the development potential occurs through the formation of a congruent configuration of internal and external competencies, including the basis of the effectiveness of its implementation and expansion.

REFERENCES

1. Weber M. (1921) *Economy and Society: An Outline of Interpretive Sociology* / M. Weber // German: *Wirtschaft und Gesellschaft. Grundriß der verstehenden Soziologi*

2. Porter M. Competitive Strategy: Techniques for Analyzing Industries and Competitors. — New York: The Free Press, 1980 (2nd ed. — New York: Free Press, 1998. — 397 p. — ISBN 978-0-684-84148-9)
3. Druker P. Managing in a Time of Great Change. Published September 4, 1997 by Routledge. 336 Pages
4. G. Armstrong, J. Saunders, V. Wong, Ph. Kotler Principles of Marketing: European Edition, 4th ed, Financial Times/ Prentice Hall, New Jersey, USA
5. Besedin M.O., Nagaev V.M. (2005). Osnovy menedzhmentu: otsinochno-sytuatsiyniy pidkhid. (Modulnyi variant): pidruchnyk. [Fundamentals of management: an assessment-situational approach. (Modular option): textbook]. Kyiv: Center for Educational Literature, 495 p.
6. Stetsiv S. R. (2011). Sutnist ta etapy upravlinnia zminy na pidpriemstvi [The essence and stages of change management at the enterprise]. Visnyk Natsionalnoho universytetu «Lvivska politekhnika» [Bulletin of the National University "Lviv Polytechnic"], no 714, pp. 155-161.
7. Stadnyk V.V. (2007). Стадник В.В. Мenedzhment : pidruchnyk. [Management: textbook]. V.V. Stadnyk, M.A. John - K.: Vydvo "Akademydav", 472 p.
8. Mischenko A. P. (2007), *Stratehichne upravlinnia*, [Strategic Management], 2nd ed, Vydavnytstvo DUEP, Dnipropetrovsk, Ukraine.
9. Jeffrey Pfeffer (1975). *Organizational Design* (A H M Publications, 1975)
10. Cameron, E. Making Sense of Change Management [Text] / E. Cameron, M. Green. — New York: Kogan Page, 2004. — 288 p
11. König, E.; Vollmer, G. (1997): Systemische Organizations beratung / E. König, G.Vollmer // Weinheim. — 1997. - 5. Aufl — P. 114-118.
12. Patricia Koveljarboe, 4861 W. Lake Harriet Parkway, Minneapolis, MN 55410. LIBRARYTRENDS. - 1996. - Vol. 44, No. 3, Winter/ - P. 605.
13. Zamyshlyayev O. Matrix of changes: How to increase the efficiency of changes in the company / O. Zamyshlyayev. - M.: Alpina Publisher, 2014. - 126 p.
14. Smith, Martin E. Success Rates for Different Types of Organizational Change. Jan 2002.
15. Waldersee, Robert. Predicting Organizational Change Success: Matching Organization Type, Change Type and Capabilities. 2003
16. Chaudron, David, PhD. Begin at the beginning in organization change. 2008
17. Decker, Carolin and Thomas Mellewig. The Drivers and Implications of Business Divestiture - An Application and Extension of Prior Findings. 2008
18. Hanninen, Gail E. Creating Systems Change. 2008 9. Pelletiere, Vincent. Organization Self-Assessment to Determine the Readiness and Risk for a Planned Change. 2006
19. Strategic management of organizational and economic stability of the company: Logistics-oriented business design / A.D. Kanchaveli, A.A. Kolobov, I.N. Omelchenko and others; ed. A.A. Kolobova, I.N. Omelchenko. - M.: Publishing house of MSTU im. N.E. Bauman, 2001. - 600 p.
20. Sharov Y. Strategic planning in municipal management: conceptual aspects: Monograph. - K.: UDAU, 2001.
21. Mazaraki, A., Drozdova, Y., & Bay, S. (2020). THEORETICAL AND METHODOLOGICAL PRINCIPLES FOR ASSESSMENT THE READINESS OF SOCIO-ECONOMIC SYSTEMS FOR CHANGES. *Baltic Journal of Economic Studies*, 6(1), 80-86. <https://doi.org/10.30525/2256-0742/2020-6-1-80-86>
22. Mazaraki, A., Fedulova, I., Drozdova, Y. & Bay, S. (2021). Fuzzy-multiple approach to risk assessment under the conditions of management digitalization in enterprise activity *Financial and credit activity problems of theory and practice*, 5(40), 263-275. DOI: <https://doi.org/10.18371/fcaptop.v5i40.245099>
23. Melnychenko, S., Lositska, T., Bieliaieva, N. (2021). Digitalization of the hr-management system of the enterprise in the context of globalization changes *Financial and credit activity: problems of theory and practice*, 6(41), 534-543. DOI: [10.18371/fcaptop.v5i40.245099](https://doi.org/10.18371/fcaptop.v5i40.245099)
24. Mazaraki A.A. (2006). Mazaraky A.A. Torhovlia. Denhy. Mentalytet: monohrafyia [Trade Money Mentality: monograph]. K.: Book, 632 p.

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ВПЛИВ ЗМІН НА ПОТЕНЦІАЛ РОЗВИТКУ ПІДПРИЄМСТВА

У статті досліджено вплив змін на потенціал розвитку підприємства. Детально розглядаються можливі реакції на зміни. Дане визначення потенціалу спокою та потенціалу дії. Потенціал спокою не є статичним показником розвитку підприємства, але має більш повільні темпи, ніж потенціал дії. Нам відомо, що всі підприємства перебувають у постійному пошуку та вдосконаленні, навіть кризи можна сприймати як поштовх до дії. Автори визначили необхідність урахування змін зовнішнього середовища та зворотної реакції на зовнішнє середовище, силу впливу змін на потенціал розвитку підприємства. Взаємозв'язок змін і потенціалу підприємства ідентифікується через систему наборів, що допомагає встановити взаємозв'язок і узгодженість факторів, що впливають на зміни, з урахуванням перерхресних впливів. Серед основних факторів звернімо увагу на такі: організація, персонал, маркетинг, технологія, ступінь новизни обладнання та технологій, частота оновлення продукції, наявність патентів та ліцензій, ресурси, фінанси, організаційна культура, також основні характеристики зовнішнього середовища: складність, рухомість, невизначеність та взаємозв'язок факторів. Запропоновано використовувати математичні функції та кортежі повної комбінації для опису зв'язку між змінами та потенціалом розвитку підприємства.

Ключові слова: потенціал, зміни, розвиток, управління

JEL Класифікація: C63, D21, M10