#### TARAS NALYVAIKO

Kharkiv National University of Civil Engineering and Architecture, Sumska str., 40, 61002, Kharkiv, Ukraine; Doctoral Student, Department of Economics and Business ORCID iD: 0000-0003-2149-7370, e-mail: miroslava.valya@gmail.com

# FORMATION OF METHODS OF ADAPTIVE MANAGEMENT OF THE STAFF OF THE CONSTRUCTION ENTERPRISE

#### **ABSTRACT**

The modern world poses challenges to business that require a quick response and management decisions that would be based on a certain scientific and methodological basis. The most significant of them are those related to the management of people in the process of work, because they affect not only the economic, managerial, production, but also the social sphere. Challenges of the external environment, internal contradictions and conflicts, changing psychological and age types of employees require adaptive personnel management. Adaptive personnel management, which is based on changes in external and internal factors, is certainly based on a system of incentives. This system is based on the flexibility of the organizational system of personnel management and motivation of employees to adapt to change. To combine these elements and ensure the effective operation of the enterprise through adaptive management of its personnel, it is necessary to develop a method of adaptive personnel management of the enterprise. Given that construction is an important and specific type of activity, which is represented mainly by small businesses, this technique should be adapted just for them. This will make them more efficient, as small businesses have limited resources to develop such tools on their own.

The method of adaptive personnel management proposed by the author allows to create such conditions for the personnel of the enterprise, under which the employee will be able to adapt to any conditions and carry out their work effectively. In further research, the components of adaptive management techniques should be formalized and adapted to the realities of management of Ukrainian construction companies.

### **KEYWORDS**

Motivation, staff, staff incentive system, adaptive management, adaptive personnel management, construction

## Introduction

The modern world poses challenges to business that require a quick response and management decisions that would be based on a certain scientific and methodological basis. The most significant of them are those related to the management of people in the process of work, because they affect not only the economic, managerial, production, but also the social sphere. Challenges of the external environment, internal contradictions and conflicts, changing psychological and age types of employees require adaptive personnel management. Adaptive personnel management, which is based on changes in external and internal factors, is certainly based on a system of incentives. This system is based on the flexibility of the organizational system of personnel management and motivation of employees to adapt to change. To combine these elements and ensure the effective operation of the enterprise through adaptive management of its personnel, it is necessary to develop a method of adaptive personnel management of the enterprise. Given that construction is an important and specific type of activity, which is represented mainly by small businesses, this technique should be adapted just for them. This will make them more efficient, as small businesses have limited resources to develop such tools on their own.

s. 185-193

#### Analyse of recent research and publication

Among the researchers of adaptive management should be noted the work of Milash I.V., Kalinichenko L.L., Khalina V.V., Stets I.I., Oliferuk S.I., Mnushko Z.M., Bondareva I.V., which are devoted to the implementation of adaptive management at the enterprise level and other socio-economic systems [1-9]. In the researches of G. Yelnikova and the team of authors Tolochko V.M., Artyukh T.O., Zarichkova M.V. the issues of adaptive management were considered in relation to the personnel [10-11].

Also, the author in previous studies relied on the work [12], which used the tools of economic and mathematical modelling, which became the basis for formalizing the process of adaptive personnel management [13].

At the same time, formalized processes must be carried out in a certain sequence, it is necessary to provide for the reaction to the results of the impact and the criteria for evaluating such a reaction, as well as their impact on the performance of enterprises. Accordingly, there is a problem of developing a method of adaptive personnel management of the construction company, which would be based on the flexibility of organizational management structures and the properties of personnel as an object of management.

#### Presentation of main material

The issue of human motivation to achieve certain goals and results has always been important in the scientific community, because it is crucial in socio-economic processes for different actors at different levels. In part, the author considered the issue in terms of material motivation through wages in the construction sector in Ukraine [14].

It was determined that the category of motivation is debatable for a long time, due to its complexity. Existing approaches to understanding reveal its essence depending on the hierarchical level of the socio-economic system, from the position of a person, employee or business entity. From the point of view of the employer - motivation is understood as the process of motivating the employee to achieve the goals of the employer. This takes into account internal and external factors regarding the employer and employee, their needs, values, desires and aspirations, which will affect both employees and their motivation, as well as the organizational structure of the enterprise, its type, etc. Thus, all factors can be structured by type and level of hierarchy in relation to the methodology of adaptive personnel management: factors of general influence, factors influencing the organizational structure of management and factors determining the reaction of employees to the system of incentives and motivation. In scientific works there are different approaches to determining these factors, their grouping and consideration.

Thus, in [15] the main factors that determine the type, complexity and hierarchy of organizational structures of enterprises include: "the scale of production and sales; nomenclature of products; complexity and level of product unification; level of specialization, concentration, combination and cooperation of production; the degree of infrastructure development in the region; international integration of the enterprise, etc. "It should be noted that these factors represent a diverse set of internal and external influences - local, regional, national and international (global) levels.

In the abstract Simakova K.I. [16] determined that the formation of the organizational structure of management, which is understood as a "gradual search for the most effective combination of organizational variables", is influenced by the following factors:

- external environment (socio-economic; state and legal, international relations; environment of suppliers, consumers, competitors; partnerships);
- scientific and technical environment;
- strategic choice of management of the organization in relation to its goals;
- internal production factors (technology of production processes; type of production; organization of production process);
- internal management factors (management methods, technology of management processes); production staff.

From this structuring we see that the factors are represented by clearly defined internal and external, and regardless of the environment - (scientific and technical environment). In addition, internal factors are divided into production and management, which is quite logical, but the strategic choice of management can also be attributed to management factors.

The logic of grouping factors into internal and external, and, extended, into special, is given in [17]. Thus, the internal factors include complexity, formalization, centralization, norms of control (scope of control); external (general) factors are represented by the external environment, strategy of the organization, its size and technology; in addition, the author highlights the so-called special factors: the effect of power and control, computerization, scientific advances in systems development.

In [18] on the basis of the work of Novakovsky I.I. [19] identified a number of factors influencing the formation and change of the organizational structure of enterprise management. These include: the mission, strategic goals of the organization, the will of senior management, phases of the life cycle of the organization, the level of digitalization of the organization, the external environment and business processes of the organization. The external environment of the organization is represented by groups of influence: consumers, competitors, suppliers, etc. One of the groups of influence of the external environment includes owners (shareholders), which in our opinion, it is appropriate to consider as internal, because they will affect the mission, strategic goals, and, consequently, the OSM together with the company's management. Also, in the system of building partnerships and increasing the efficiency and adaptability of interaction with the external environment, influence groups can be considered as groups of stakeholders. Stakeholders are defined as stakeholders who have influence and interest in the organization. Based on the above, the author proposes to structure the factors influencing the OSM on internal and external, as well as in terms of stakeholders.

The issues of flexibility of organizational structures were studied by the author [20-21], where the essence and features of organizational structures of management and formalization of factors influencing flexibility were determined.

If we talk about employees, their behaviour will be influenced by a number of factors that must be taken into account when forming a system of incentives and motivation. They determine the strength of the reaction to certain managerial influences. Such factors include: gender, age, place of residence (demographic component); level of education, social status, profession (social component); own goals and aspirations, type of character, behaviour, interests (personal component).

It is important during management to take into account the theory of generations, which emphasizes the change of work behaviour depending on age. In his research, the author relies on the developments set out in [22-23].

Motivation and incentive system is the basis for the formation of methods for assessing and improving the adaptability of staff (Fig. 1). In addition to the impact on the staff itself, to ensure efficiency in adaptive management, it is necessary to adapt the organizational structures of personnel management (OSPM). This is necessary, because the interaction within any system is carried out at the structural levels, which involves the involvement of employees, and, consequently, also affects personnel management. OSPMs need to be flexible and respond adequately to internal and external challenges. Accordingly, there is a question of forming a methodology for assessing and increasing the level of flexibility of the organizational structure of personnel management of the enterprise.

Thus, to ensure the efficiency of the construction company there is a need to develop a methodology for adaptive personnel management of the entity, which will consist of two parts and exert influence through employee motivation (respectively disclosed through the methodology of assessing and improving staff adaptability) and the level of flexibility, disclosed through the method of assessing and determining the level of flexibility OSPM) (Fig. 1).

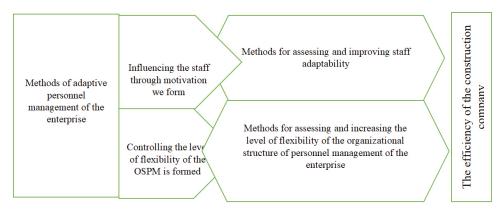


Fig.1 Component methods of adaptive personnel management of the enterprise (developed by author)

In a general sense, the technique is a set of methods and techniques for carrying out any work. When building a methodology of adaptive personnel management, we combine techniques aimed at increasing the adaptability of personnel and increasing the flexibility of OSPM.

In the previous works [13, 20, 21] the proposed methods were developed, but they were considered separately and were almost unrelated to the results of the enterprise (Fig. 2).

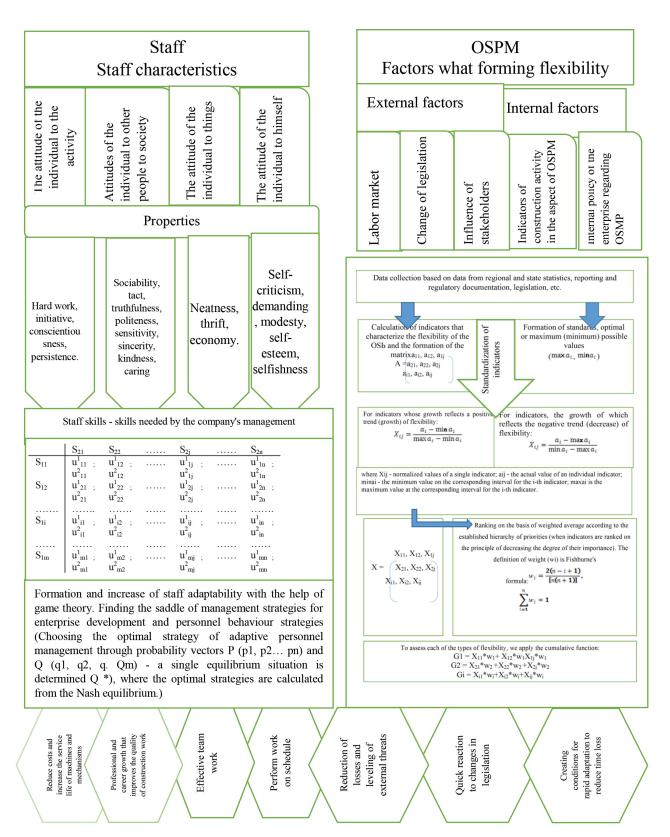


Fig. 2 Methods of adaptive personnel management of the enterprise (developed by author)

The proposed technique is implemented at different levels of adaptive control. At the first (I) and second level (II) adaptive management is aimed at implementing the overall strategy of the enterprise. All methods at these levels of adaptive management are aimed at adapting staff and increasing the flexibility of OSUP. The formation of the adaptability of the staff (III) of the enterprise and the individual (IV) focuses on the personal characteristics of the employee as a separate part of the team, here are relevant educational methods (promoting professional and career growth, etc.) and methods that promote teamwork.

In modern transformational conditions (crises, pandemics, geopolitical transformations, etc.) OSPM must be flexible to change quickly in response, to mitigate the consequences of such changes, to reduce losses and so on. The first to feel the imperfection of the organizational structure are the staff. Without flexible OSPM adaptability of the personnel is not possible (fig. 3).

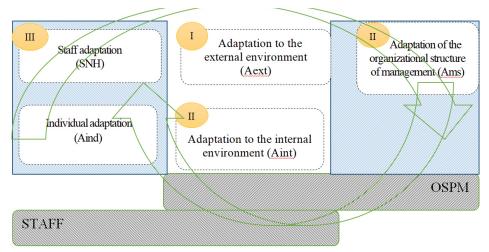


Fig. 3 Application of the methodology at different levels of adaptive personnel management (developed by author) In turn, flexible OSPM expands the capabilities of staff, allows you to maneuver in a given situation, which allows to increase the adaptation of the individual in particular and staff in general, causing the need to improve OSPM and adjust tactical and strategic plans of the enterprise. In ideal conditions, the proposed technique will launch a mechanism of staff adaptability, which will contribute to the continuous development of both employees and the conditions in which they work.

#### **Conclusions**

The method of adaptive personnel management proposed by the author allows to create such conditions for the personnel of the enterprise, under which the employee will be able to adapt to any conditions and carry out their work effectively. In further research, the components of adaptive management techniques should be formalized and adapted to the realities of management of Ukrainian construction companies.

#### References

- [1] Milash I.V. (2017) Zmist ponjattja «adaptyvne upravlinnja» v suchasnykh realijakh funkcionuvannja vitchyznjanykh pidpryjemstv [The meaning of the concept of "adaptive management" in the modern realities of the functioning of domestic enterprises] Available online URL: www.conf.ztu.edu.ua/wp-content/uploads/2017/01/126.pdf (accessed 10.11.2020) [2] Maslodudov Yu. A. (2009) Osobennostiadaptivnogoupravleniyanamashinostroitel 'nykhpredpriyatiyakh. [Features of adaptive control in machine-building enterprises]. Voprosy ekonomicheskikh nauk. № 6(39). pp. 76–78.
- [3] Stec I. (2013) Adaptyvne upravlinnja potencialom pidpryjemstva. [Adaptive management of enterprise potential]. Ukrajinsjka nauka: mynule, suchasne, majbutnje. Vyp. 18. pp. 154-162. [4] Oliferuk S.I. (2012) Adaptyvne upravlinnja rozvytkom siljsjkogho ghospodarstva: sutnistj ta oznaky. [Adaptive management of agricultural development: essence and features]. Efektyvna ekonomika. № 12. Available online URL: www.economy.nayka.com.ua/?op=1&z=1648 (accessed 10.11.2020)
- [5] Kalinichenko L.L. (2011) Adaptyvne upravlinnia pidpryiemstvom v konkurentnomu seredovyshchi [Adaptive enterprise management in a competitive environment], Bulletin of Transport Economics and Industry, №33. pp.177-180.
- [6] Khalina V. Yu., Bugay V.S. (2019) Mekhanizm adaptyvnoho rozvytku sotsialno-ekonomichnykh system na zasadakh sesteinovosti [The mechanism of adaptive development of socio-economic systems on the basis of sesteynosti]. Efficient economy. 5. Available online URL: www.ojs.dsau. dp.ua/index.php/efektyvna-ekonomika/article/view/1989 (accessed 10.11.2020)
- [7] Khalina V.Y. (2019) Kontseptualnyi bazys adaptyvnoho rozvytku ekosystem [Conceptual basis of adaptive development of ecosystems] Collection of scientific works DUIT, Vol. 46, pp.118-125.
- [8] Timinsky O.G. (2016) Tekhnolohii adaptyvnoho upravlinnia yak mekhanizm zabezpechennia efektyvnosti orhanizatsiino-upravlinskykh system. [Adaptive management technologies as a mechanism for ensuring the effectiveness of organizational and management systems]. Available online URL: <a href="https://www.repositary.knuba.edu.ua/bitstream/handle/987654321/4977/21">https://www.repositary.knuba.edu.ua/bitstream/handle/987654321/4977/21</a>. <a href="https://pdf?sequence=1&isAllowed=y">pdf?sequence=1&isAllowed=y</a> (accessed 10 November 2020)
- [9] Mnushko Z. M., Bondarjeva I. V. (2008) Suchasni pidkhody do adaptyvnogho upravlinnja farmacevtychnymy orghanizacijamy. Upravlinnja, ekonomika ta zabezpechennja jakosti v farmaciji. № 2. pp. 37-42
- [10] Yelnikova G. (2011) Tekhnolohiia adaptyvnoho upravlinnia personalom orhanizatsii. [Technology of adaptive personnel management of the organization]. Scientific Bulletin of the Institute of Vocational Education of the National Academy of Pedagogical Sciences of Ukraine. Ser.: Professional pedagogy, 1, pp. 8-14.
- [11] Tolochko V.M., Artyukh T.O., Zarichkova M.V. (2014) Vyznachennia sutnosti ta zmistovnosti poniat adaptatsii ta adaptyvnoho upravlinnia personalom aptechnykh zakladiv [Definition of the essence and content of the concepts of adaptation and adaptive personnel management of pharmacies]. Ukrainian Bulletin of Psychoneurology, 22, vip. 2 (79), appendix,pp. 263-267. [12]Chorna M., Nord G., Avanesova N., Stoian O. Innovative impressionability as a basis for stimulation of agent's behavior regarding energy saving. Academy of Strategic Management Journal. 2018. Vol. 17. Available online URL: <a href="https://www.abacademies.org/articles/innovative-impressionability-as-a-basis-for-stimulation-of-agents-behavior-regarding-energy-saving-7554.html">https://www.abacademies.org/articles/innovative-impressionability-as-a-basis-for-stimulation-of-agents-behavior-regarding-energy-saving-7554.html</a> [13] Nalyvaiko T.L. (2020) Formalizatsiia protsesu adaptyvnoho upravlinnia personalom. Infrastruktura rynku. 49. URL: <a href="https://www.market-infr.od.ua/uk/49-2020">www.market-infr.od.ua/uk/49-2020</a>
- [14] Smachylo V.V., Nalyvaiko T.L. Features of motivation in construction companies. Modern technologies in the development of economy and human well-being. Publishing House of University of Technology, Katowice, 2020. P.125-129.
- [15] Karmins `ka-Byelobrova M.V. (2012) Organizacijni struktury `upravlinnya pidpry `yemstvom. [Organizational structures of enterprise management]. Business Inform. 12. 192-195.

- [16] Simakov K.I. (2001) Zabezpechennia efektyvnosti orhanizatsiinoistruktury upravlinnia promyslovoho pidpryiemstva: avtoref.dys. ... kand. ekon. nauk: 08.06.01. Donetsk. 20 p. [17] Koshel`ny`k V. M. (2009) Osobly`vosti formuvannya i rozvy`tku organizacijny`x struktur upravlinnya pidpry`yemstvom u ry`nkovy`x umovax. [Features of formation and development of organizational structures of enterprise management in market conditions]. Formuvannya ry`nkovoyi ekonomiky`. Specz. Vy`pusk. 386-393.
- [18] Shoroxov V. V. (2015) Osobly`vosti evolyuciyi organizacijny`x struktur upravlinnya pidpry`yemstvom. [Features of the evolution of organizational structures of enterprise management] Efekty`vnist` derzhavnogo upravlinnya. 44(2). 48-57.

#10(62), 2020 part 4. Pp. 70-73

- [19] Novakivskyi I. I., Petrov Y. M. (2008) Lohistychni zasady peretvorennia orhanizatsiinykh struktur upravlinnia. Visnyk Natsionalnoho universytetu "Lvivska politekhnika". № 633. pp. 521-531. [20] Nalyvaiko T.L Structural-essential characteristics of organizational structures of employee management of economic entities in the construction branch. East European Scientific Journal.
- [21] Nalyvaiko T.L Assessment of flexibility of organizational structures of personnel management. Journal of Modern Economic Research. 2020. 1. Pp. 19-30.
- [22] Smachylo V., Shumilo O., Popova E. (2020) Enterprise personnel management through the lens of generational theory. Efektyvna ekonomika. №3 URL: www.economy.nayka.com.ua/pdf/3\_2020/71.pdf [23] Smachylo, V. (2019) "Architectonics of transportation of personal capacity of transport enterprises", Ekonomika ta derzhava, vol. 7, pp. 39-45.

# TWORZENIE METOD ADAPTACYJNEGO ZARZĄDZANIA PERSONELEM PRZEDSIĘBIORSTWA BUDOWLANEGO

#### STRESZCZENIE

Współczesny świat stawia przed biznesem wyzwania, które wymagają szybkiej reakcji i decyzji zarządczych, opartych na określonych podstawach naukowych i metodologicznych. Najistotniejsze z nich to te związane z zarządzaniem ludźmi w procesie pracy, ponieważ dotyczą nie tylko sfery ekonomicznej, zarządczej, produkcyjnej, ale także społecznej. Wyzwania otoczenia zewnętrznego, wewnętrzne sprzeczności i konflikty, zmieniające się typy psychologiczne i wiekowe pracowników wymagają adaptacyjnego zarządzania personelem. Adaptacyjne zarządzanie personelem, które opiera się na zmianach czynników zewnętrznych i wewnętrznych, z pewnością opiera się na systemie zachęt. System ten opiera się na elastyczności systemu organizacyjnego zarządzania personelem i motywowaniu pracowników do dostosowywania się do zmian. Aby połączyć te elementy i zapewnić efektywne działanie przedsiębiorstwa poprzez adaptacyjne zarządzanie personelem, konieczne jest wypracowanie metody adaptacyjnego zarządzania personelem przedsiębiorstwa. Biorac pod uwagę, że budownictwo jest ważnym i specyficznym rodzajem działalności, którą reprezentują głównie małe przedsiębiorstwa, tę technikę należy dostosować właśnie do nich. Dzięki temu będą bardziej wydajne, ponieważ małe firmy mają ograniczone zasoby do samodzielnego opracowywania takich narzędzi.

Zaproponowana przez autora metoda adaptacyjnego zarządzania personelem pozwala na stworzenie pracownikom przedsiębiorstwa takich warunków, w których pracownik będzie mógł dostosować się do każdych warunków i efektywnie wykonywać swoją pracę. W dalszych badaniach elementy adaptacyjnych technik zarządzania powinny zostać sformalizowane i dostosowane do realiów zarządzania ukraińskimi firmami budowlanymi.

#### **SŁOWA KLUCZOWE**

motywacja, personel, system motywacyjny dla pracowników, zarządzanie adaptacyjne, zarządzanie adaptacyjne personelem, budowa