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**BUILDING A MANAGEMENT SYSTEM TO ENHANCE  
ENTERPRISE ECONOMIC POTENTIAL IN MODERN SETTINGS**

*The research findings have revealed that in modern realia, enterprise economic development is associated with functional dependency, in particular related to its economic potential, optimization methods of potential utilization, and company management paradigm which challenges a critical need to build a management system to facilitate economic potential development, and also provides for: 1) the need to harmonize this system with the strategy of effective regional development; 2) enterprise economic potential reproduction subject to transformation of management decision-making criteria; 3) the implementation of progressive methods of enterprise production resource and asset management with a focus at maneuvering. In this context, the capacity to respond promptly to market changes is of critical importance to enterprises. To this end, modern enterprises are forced to increase their production output through the rational use of their labor, production resources and financial assets, as well as to take into account the emergence of new social needs, focusing on key factors of change, which will ensure the dynamism of their economic potential. The paper argues that management system of enterprise economic potential is a set of targeted tools and methods to affect enterprise stakeholders' interests characterized by constant dynamic transformational changes under the effects of internal and external environment, with a focus on rational use of enterprise potential and ensuring its balanced business performance. The suggested pathways and recommendations on enterprise economic potential management have significant implication and can be used in business for the most effective use of labor, production and material resources in static and dynamic aspects of the overall industry strategic development of the in general.*

**Keywords:** *economic potential; management system; rational resource consumption; efficiency; synergistic effect; development strategy.*

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**ФОРМУВАННЯ СИСТЕМИ УПРАВЛІННЯ ЕКОНОМІЧНИМ ПОТЕНЦІАЛОМ  
ПІДПРИЄМСТВ У СУЧАСНИХ УМОВАХ**

*У дослідженні визначено, що особливістю економічного розвитку підприємств у сучасних умовах є функціональна залежність, насамперед, від їх економічного потенціалу, оптимізаційних механізмів його використання та специфіки управління, що актуалізує питання розроблення системи управління економічним потенціалом, а також передбачає: 1) необхідність її врахування в стратегії ефективного розвитку регіонів; 2) відтворення економічного потенціалу підприємства за умови трансформації критеріїв прийняття управлінських рішень; 3) застосування прогресивних методів маневрування виробничими та фінансовими ресурсами підприємств. У цьому контексті, надзвичайно важливим для підприємств є здатність адекватно реагувати на ринкові зміни. З цією метою сучасні підприємства змушені нарощувати обсяги виробництва завдяки раціональному використанню своїх трудових, виробничих та фінансових ресурсів, а також враховувати появу нових суспільних потреб, з акцентом на найважливіші чинники змін, що дозволить забезпечити динамізм власного економічного потенціалу. У статті змістовно обґрунтовано, що система управління економічним потенціалом підприємства являє собою сукупність засобів і методів спрямованого впливу на інтереси підприємства, що*

характеризуються постійними динамічними трансформаційними змінами під впливом внутрішніх і зовнішніх умов, із фокусом на раціональне використання власного потенціалу і забезпечення необхідних пропорцій функціонування її господарського комплексу. Сформовані напрями та рекомендації щодо управління економічним потенціалом підприємства мають практичний характер і можуть бути використані у виробничій діяльності для найбільш ефективного використання трудових, виробничих та матеріальних ресурсів у статичному та динамічному аспектах стратегічного розвитку промисловості загалом.

**Ключові слова:** економічний потенціал; система управління; раціональне споживання ресурсів; ефективність; синергетичний ефект; стратегія розвитку.

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**ФОРМИРОВАНИЕ СИСТЕМЫ УПРАВЛЕНИЯ ЭКОНОМИЧЕСКОГО  
ПОТЕНЦИАЛА ПРЕДПРИЯТИЙ В СОВРЕМЕННЫХ УСЛОВИЯХ**

*В исследовании определено, что особенностью экономического развития предприятий в современных условиях является функциональная зависимость прежде всего от их экономического потенциала, оптимизационных механизмов его использования и специфики управления, что актуализирует вопросы разработки системы управления экономическим потенциалом, а также предусматривает: 1) необходимость её учёта в стратегии эффективного развития регионов; 2) воспроизведение экономического потенциала предприятия при трансформации критериев принятия управленческих решений; 3) применение прогрессивных методов маневрирования производственными и финансовыми ресурсами предприятий. В этом контексте чрезвычайно важным для предприятий является способность адекватно реагировать на рыночные изменения. С этой целью современные предприятия вынуждены наращивать объёмы производства благодаря рациональному использованию своих трудовых, производственных и финансовых ресурсов, а также учитывать появление новых общественных потребностей, с акцентом на важнейшие факторы изменений, что позволит обеспечить динамизм собственного экономического потенциала. В статье содержательно обосновано, что система управления экономическим потенциалом предприятия представляет собой совокупность средств и методов направленного воздействия на интересы предприятия, характеризующиеся постоянными динамическими трансформационными изменениями под влиянием внутренних и внешних условий, с фокусом на рациональное использование собственного потенциала и обеспечение необходимых пропорций функционирования её хозяйственного комплекса. Сформированные направления и рекомендации по управлению экономическим потенциалом предприятия имеют практический характер и могут быть использованы в производственной деятельности для наиболее эффективного использования трудовых, производственных и материальных ресурсов в статическом и динамическом аспектах стратегического развития промышленности в целом.*

**Ключевые слова:** экономический потенциал; система управления; рациональное потребление ресурсов; эффективность; синергетический эффект; стратегия развития.

**Problem statement.** In modern conditions of management of economic potential of the industrial enterprise acts as the general economic factor of rational consumption of resources and effective functioning of production system. It is known that even those companies that have similar potentials often differ in the results of their activities. Under these conditions, the difference in results can be explained only by the unequal degree of accuracy of the target orientation of the

system. In other words, other things being equal, the magnitude of the result will be greater the more successful will be the management system of economic potential of the enterprise.

**Analysis of recent research and the unsolved part of the problem** Managing the economic potential of enterprises can be considered as a continuation of scientific developments of scientists-economists O. Amoshi, Ya.G. Bersutsky, V. Grinyova, V. Zanga, M. Ivanova, O. Kizima, T. Klebanova, M. Lepi, P. Orlova, V. Ponomarenko, O. Pushkar, etc. However, issues such as taking into account the synergy of the combination of resources in assessing the level of economic potential of the enterprise, taking into account economic ties and relationships that reflect the conditions of enterprise development through the real and regulatory levels, in determining the strategic potential of enterprises. The special place of management in modern conditions is due to the fact that it guarantees the integration of economic processes in the enterprise. The formation of the management system of economic potential reflects the ability of the system to streamline the processes of formation of the potential of the enterprise in accordance with the inherent internal laws of economic activity and is necessary for:

- analysis of the current state of the industrial enterprise;
- modeling the development of economic potential of an industrial enterprise;
- determining the best ways to use the economic potential of the enterprise.

**The aim of the article** is to substantiate the stages of formation of the management system of economic potential of enterprises.

**Research results.** According to P. Drucker: today, in the "era without regularities", management is an part of human existence, it allows to effectively implement the strengths or weaknesses – to eliminate. The joint activity of people without management is not possible. Management is a decisive factor of civilization [4].

It is clear that for all the specifics of managing the potential of an industrial enterprise, it has the following features [3]:

- 1) the presence of economic potential of the enterprise, the causal link between its components;
- 2) the dynamic nature of the potential on the enterprise;
- 3) the ability of the system of economic potential of the industrial enterprise to change from small influences;
- 4) storage, transmission and conversion of information;
- 5) antientropy management.

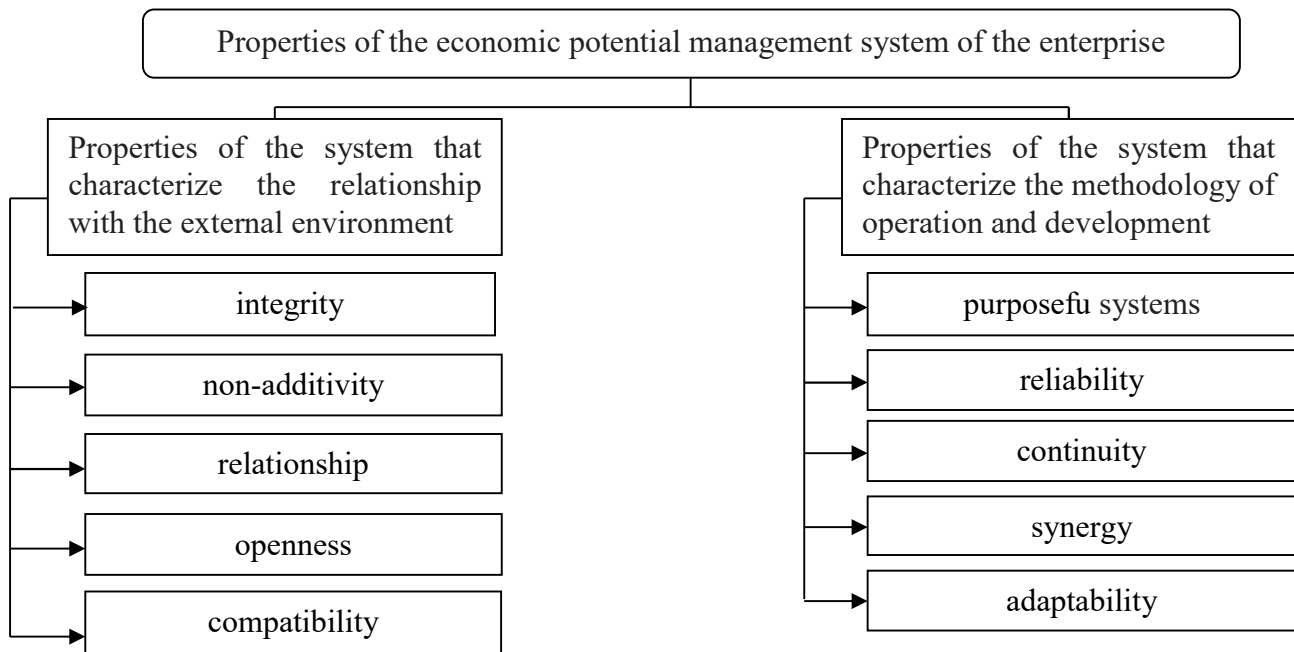
In this regard, the methodological basis for building a system for managing the economic potential of an industrial enterprise is the application of a systematic approach.

Based on the analysis of the structure of the systems given in the economic literature [1; 7], the classification of properties of system of management of economic potential of the industrial enterprise (fig. 1) with grouping on the following signs was developed:

- properties that characterize the economic potential of the industrial enterprise and its relationship with the external environment;
- properties that characterize the methodology of operation and development of enterprise potential.

We do not aim to fully disclose the content of the properties of the management system of the potential of an industrial enterprise. Let us dwell on the characteristics of only those features of the system that, in our opinion, are mandatory in the development of a system for managing the economic potential of an industrial enterprise. These are, first of all, integrity, openness, compatibility of the system, interdependence of the system and the external environment, adaptability of the system and synergy.

The potential of an industrial enterprise is an open system where the intensity of exchange of information and other resources with the external environment is observed. Only the effective use of the environment ensures the safety of the system. Economic potential responds to macroeconomic changes, develops under their influence, but at the same time retains the qualitative certainty and adaptability of functioning. Without interaction with the external environment, an open system cannot function. Theoretical and methodological foundations of the development of the management system of the economic potential of an industrial enterprise are the definition of a set of management laws, functions, methods and principles, which influenced on the processes of its formation and use.



Source: [1, 7, 8].

Fig. 1. Properties of the management system of economic potential of the enterprise

The economic potential of an industrial enterprise, as a whole, consists of interdependent parts with its contribution to the characteristics of the whole. Even I. Kant, describing the systemic order, drew attention to the fact that as part of a single any part of it owes its existence to the actions of others and exists for the sake of others, and that only in such conditions of existence is possible and physically justified [4]. Moreover, the system acquires new features that do not have its constituent elements. The main feature of the systems is the emergence of additional energy (force). In modern science, the control of the origin of this force is determined by the law of synergy inherent in all systems. The essence of the law of synergy is that the effect of joint action is not equal to the simple sum of individual efforts. Due to this, the potential of an industrial enterprise is not equal to the simple sum of the potentials of its subsystems. Formally, this can be represented as follows:

$$Y \neq \sum_{i=1}^n X_i, \quad (1)$$

where  $Y$  – is the potential of the enterprise;  
 $X_i$  – potential for the  $i$ -th resource source;  
 $n$  – is the number of resource sources.

The difference between the economic potential of an industrial enterprise and the sum of its subsystems represents a synergistic effect ( $Ec$ ) as an additional effect of the potential interaction of the components. Ideally,  $Ec > 0$ , which indicates a high degree of organization of the system. At  $Ec \approx 0$  – the organization of the system is low. Here it is appropriate to formulate another law of systems – the law of stability, which is based on the principle of homeostasis. This law states that each system seeks self-preservation through the use of its potential. According to our study, the law of sustainability acts as a desire of industrial enterprise resources for self-preservation through the use of its potential. The law of stability can be reflected by the following formula:

$$PR \triangleright PV_1 + PV_2, \quad (2)$$

where  $PR$  – the potential of enterprise resources;

$PV_1$  – the potential of external destabilizing effects (external fluctuations) on the resources of the enterprise;

$PV_2$  – the potential for internal destabilizing effects (internal fluctuations) on the resources of the enterprise.

From formula (2) it is seen that according to the law of stability "potential of creation" ( $S$ ) of industrial enterprise resources (first part of the formula) must be greater than "entropy potential" ( $R$ ) of industrial enterprise resources (second part of the formula). If the opposite phenomenon occurs, then the potential of the system degrades. Random destabilizing external fluctuations are not controllable parameters, so their level can be predicted with a certain degree of conventionality and measures for crisis management can be developed. Therefore, the more complex the system, the more chances it has to face a crisis situation in the process of development. The mechanism of reaction of the system to internal and external fluctuations can be different. In a state close to equilibrium, small fluctuations can be "suppressed", and the system quickly returns to its original state. But if the variance of external and internal fluctuations exceeds the critical limit, the system, faced with the prospect of irreversible disorganization, can use an alternative and move to another state – bifurcation. The mechanism of reaction of the system to internal and external fluctuations can be different. In a state close to equilibrium, small fluctuations can be "suppressed", and the system quickly returns to its original state. But if the variance of external and internal fluctuations exceeds the critical limit, the system, faced with the prospect of irreversible disorganization, can use an alternative and move to another state - bifurcation. Due to the law of stability, we can calculate the coefficient of assessment of the level of self-preservation [2, 8], which is defined as the difference between the potentials of creation and destruction relative to the potential of creation:

$$K_S = \frac{S - R}{S} 100, \quad (3)$$

where  $K_S$  – is the coefficient of self-preservation of the system;

$S$  – the potential for resource creation of an industrial enterprise;

$R$  – is the entropy potential of the resources of the industrial enterprise.

According to the results of our calculations, the range in which the value of the coefficient is characterized by the level of stability of the potential of the industrial enterprise:

0.2–1 – the situation is favorable, the system has great potential for sustainable growth;

-0.2–0.2 – the system is on the verge of maintaining stability;

-1–0.2 – violation of system stability.

Finally, another important law governing the system is the law of information saturation. The essence of this law is the dogma of the functioning of any system in market conditions: the more information about the external and internal environment, the more stable the position of the system.

Information, being a mandatory "raw material" for the development of any management decision, must have the properties of reliability, completeness, accuracy, relevance, value and usefulness. Any system, receiving information, processes it, produces a new one for efficient operation.

Modeling of the management system of economic potential of an industrial enterprise reflects the possibility of streamlining processes of formation. Also they use of resources in accordance with the inherent internal and external patterns of the industry. Describing the management system of the economic potential of an industrial enterprise, we emphasize that the relationship between the industrial enterprise and its economic potential is based on management methods.

The main purpose of economic potential management to coordinated and stimulating impact on economic potential by resource sources, is to ensure its rational use. The task of management to help practice develop principles or recommendations.

Thus, the directions of building a system for managing the economic potential of an industrial enterprise in modern conditions provides:

- multilevel concept of economic potential, which requires mandatory indication of the aspect (national, regional, sectoral, enterprise level) in which it is considered, while the economic potential of one level necessarily affects the economic potential of another and can both inhibit and stimulate growth;

- factors influencing the development of economic potential of an industrial enterprise are diverse and are not limited to high growth rates of volume and productivity of factors of production, but include the level of investment in the industrial economy, the level of structural adjustment ...;

- effective management of the economic potential of an industrial enterprise is directly related to all components of the national and regional economy and the environment in which it is carried out, so the lack of positive and long-term effects (results) in at least one interdependent area indicates the presence of negative trends further nullify the existing positive changes;

- the adequacy of the company's response to the transformation of economic relations. The system of managing the economic potential of an industrial enterprise should be a flexible system that will change, adapting to a market economy, ensuring the efficiency of the industrial enterprise.

**Conclusions and prospects for further research** Based on the study, it is necessary to identify areas for further development of enterprises that will ensure the effective use and areas of reproduction of their economic potential:

- further modernization and technical re-equipment of the main part of production facilities;

- increasing the technological level of production, expanding the export potential of enterprises through the production of high-tech products;

- increasing the level of labor potential through the elimination of unproductive use of labor resources, maintenance of surplus labor resources, hidden unemployment in various forms;

- increasing the level of production of competitive products by reducing the material consumption of products with the introduction of resource-saving, waste-free and low-waste technologies. The content of the management system of economic potential of the enterprise is defined as a set of tools and methods of direct influence on the interests of industrial enterprises, which are in constant dynamic transformation under the influence of external and internal conditions.

#### References

#### Література

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|---|--|
| 1. Al Khaiek Amir Akhmed Khasan (1999). <i>Sovremennye podkhody k otsenke ekonomicheskogo potenciala strany [Modern approaches to assessing the economic potential of the country]. Suchasna innovatsiino-promyslova polityka Ukrainy: Investytsiini priorytety ta infrastruktura [Modern</i> | 1. Аль Хайек Амир Ахмед Хасан. <i>Современные подходы к оценке экономического потенциала страны. Сучасна інноваційно-промислова політика України: Інвестиційні пріоритети та інфраструктура.</i> |
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- innovation and industrial policy of Ukraine: Investment priorities and infrastructure]. Chernivtsi: Ruta, 1999. Vol. 1. P. 252–256 [in Russian].
2. Bogdanov, A. A. (1989). Tektologiya. Vseobshchaia organizatsionnaia nauka [Tectology. General Organizational Science]. Moscow [in Russian].
3. Gvishiani, D. M. (1998). Organizatsiia i upravlenie [Organization and management]. 3rd. ed., rev. Moscow: Publishing house of MSTU im. N.E. Bauman. 332 p. [in Russian].
4. Ponomarenko, V. S., Trydid, O. M., Kyzym, M. O. (2003). Stratehiia rozvytku pidpriemstva v umovakh kryzy: monohrafiia [Strategy of enterprise development in the conditions of crisis: monograph]. Kharkiv: VD "INZhEK". 328 p. [in Ukrainian].
5. Pushkar, A. I. (1997). Modeli upravleniia rozvitiem proizvodstvenno-ekonomicheskikh sistem: monografiia [Models for managing the development of production and economic systems: monograph]. Kharkiv: KhGEU. 268 p. [in Russian].
6. Raizberg, B. A., Fatkhutdinov, R. A. (1999). Upravlenie ekonomikoi: uchebnik [Economic management: textbook]. Moscow: ZAO "Biznes-shkola "Intel Sintez". 784 p. [in Russian].
7. Shelegeda, B. G., Savchenko, M. V. (2002). Klassifikatsiia faktorov rozvitiia khoziaistvennogo kompleksa regiona [Classification of factors in the development of the economic complex of the region]. *Visnyk Tekhnolohichnoho universytetu Podillia = Bulletin of the Podillya University of Technology*. Khmelnytskyi. № 4. Part 2, Vol. 3 (46). P. 220–224 [in Russian].
8. Yermoshenko, M.M., Hanushchak-Iefimenko, L.M. (2010). Mekhanizm rozvytku innovatsiinoho potentsialu klasteroob'iednanykh pidpriemstv: nauk. Monohrafiia [Mechanism of development of innovative potential of cluster-related enterprises: science monograph]. Kyiv: National Academy of Management. 236 p. [in Ukrainian].
9. Gryshchenko, I. M. (2016). Pidpriemnytskyi biznes: pidruchnyk [Entrepreneurial business: a textbook]. Kyiv: Hramota. 520 p. [in Ukrainian].
10. Ganuschak-Efymenko, L., Gumenna, O. (2014). Logit-model of management innovation processes. *Наукові записки НаУКМА = Scientific notes of NaUKMA*. Vol. 159: Economic sciences. P. 19–21.
- Чернівці: Рута, 1999. Т. 1. С. 252–256.
2. Богданов А. А. Тектология. Всеобщая организационная наука. М.: Экономика, 1989.
3. Гвишиани Д. М. Организация и управление. Изд. 3-е., перераб. М.: Изд-во МГТУ им. Н.Э. Баумана, 1998. 332 с.
4. Пономаренко В. С., Тридід О. М., Кизим М. О. Стратегія розвитку підприємства в умовах кризи: монографія. Х.: ВД "ІНЖЕК", 2003. 328 с.
5. Пушкарь А. І. Модели управления развитием производственно-экономических систем: монография. Х.: ХГЭУ, 1997. 268 с.
6. Райзберг Б. А., Фатхутдинов Р. А. Управление экономикой: учебник. М.: ЗАО "Бизнес-школа "Интел Синтез", 1999. 784 с.
7. Шелегеда Б. Г., Савченко М. В. Классификация факторов развития хозяйственного комплекса региона. *Вісник Технологічного університету Поділля*. Хмельницький, 2002. № 4. Ч. 2, Т. 3 (46). С. 220–224.
8. Єрмошенко М. М., Ганущак-Єфіменко Л. М. Механізм розвитку інноваційного потенціалу кластерооб'єднаних підприємств: наук. монографія. К.: Національна академія управління, 2010. 236 с.
9. Грищенко І. М. Підприємницький бізнес: підручник. Київ: Грамота, 2016. 520 с.
10. Ganuschak-Efymenko L., Gumenna O. Logit-model of management innovation processes = Логіт-модель управління інноваційними процесам. *Наукові записки НаУКМА*. 2014. Т. 159: Економічні науки. С. 19–21.