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PREREQUISITES FOR IMPROVING THE MECHANISM OF OPERATIONAL PRODUCTION MANAGEMENT IN THE SYSTEM OF REGULATION OF ECONOMIC RELATIONS OF AN ENTERPRISE

Abstract

The article develops a hypothesis that in the management system of modern business entities, production process management appears as a complex vector that integrates a wide range of solutions: from the formation of a strategic vision of industrial development to precise operational monitoring of resource costs. Operational production management is proposed to be understood as a dynamic system of short-term planning, calculation, regulation and control of production cycles, the mission of which is to ensure uninterrupted and rhythmic production output while simultaneously optimizing resource costs. The fundamental tools of operational management include calendar and grid planning, dispatching, logistics support and adaptive leveling of production deviations. It is proven that in conditions of macroeconomic instability and military threats, operational production management requires constant transformation, deep integration with management accounting and the ability to instantly adapt in the event of destruction of logistics chains. The following prerequisites for improving the mechanism of operational production management in the system of regulation of economic relations of the enterprise are identified: violation of the fundamental principles of production organization, escalation of logistical and resource risks, anthropogenic barrier and personnel resistance, information asymmetry and shortage of verified data. It is argued that the described challenges require the management of industrial enterprises to transition to proactive strategies and implement flexible (Agile) management models, which will allow not only to minimize time losses and downtime, but also to ensure consistently high standards of product quality even in crisis conditions.

Keywords: production management, business process, anti-crisis management, project management, enterprise management, operational management, strategic management, risk.

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ПЕРЕДУМОВИ ВДОСКОНАЛЕННЯ МЕХАНІЗМУ ОПЕРАТИВНОГО УПРАВЛІННЯ ВИРОБНИЦТВОМ У СИСТЕМІ РЕГУЛЮВАННЯ ГОСПОДАРСЬКИХ ВІДНОСИН ПІДПРИЄМСТВА

Анотація

У статті розвинуто гіпотезу, що у системі менеджменту сучасних суб'єктів господарювання управління виробничими процесами постає як комплексний вектор, що інтегрує широкий спектр рішень: від формування стратегічної візії промислового розвитку до прецизійного операційного моніторингу витрат ресурсів. Оперативне управління виробництвом запропоновано розуміти як динамічну систему короткострокового планування, калькуляції, регулювання та контролю виробничих циклів, місія якої полягає у забезпеченні безперебійного та ритмічного випуску продукції при одночасній оптимізації ресурсних витрат.

До фундаментального інструментарію оперативного управління віднесено календарне та сіткове планування, диспетчеризацію, логістичне забезпечення та адаптивне нівелювання виробничих відхилень. Доведено, що в умовах макроекономічної нестабільності та воєнних загроз, оперативне управління виробництвом потребує постійної трансформації, глибинної інтеграції з управлінським обліком та здатності до миттєвої адаптації у разі деструкції логістичних ланцюгів. Виокремлено такі передумови вдосконалення механізму оперативного управління виробництвом у системі регулювання господарських відносин підприємства, як порушення фундаментальних принципів організації виробництва, ескаляція логістично-ресурсних ризиків, антропогенний бар'єр та кадровий резистент, інформаційна асиметрія та дефіцит верифікованих даних. Стверджується, що описані виклики вимагають від керівної ланки промислових підприємств переходу до проактивних стратегій та впровадження гнучких (Agile) моделей управління, що дозволить не лише мінімізувати часові втрати й простої потужностей, а й забезпечити стабільно високі стандарти якості продукції навіть у кризових умовах.

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Ключові слова: управління виробництвом, господарський процес, антикризовий менеджмент, проєктний менеджмент, управління підприємством, оперативний менеджмент, стратегічний менеджмент, ризик.

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Introduction

Production management and production activity management are important elements of the management system of modern organizations. For industrial enterprises, production management is the main link in the process of ensuring their competitiveness and the key to their economic survival. Domestic practice proves that the level of production efficiency of Ukrainian companies, especially under the influence of wartime risks, is quite low, and the need to relocate business from front-line regions increases the threat of its bankruptcy in the future. The lack of necessary resources - financial, personnel, information, digital, etc., makes domestic manufacturing business weak and inefficient in comparison with foreign companies. Therefore, it is in the plane of the effectiveness of management decisions that new opportunities for optimal distribution and use of available resources lie in order to achieve the goal of rational functioning of the operational production management mechanism.

Literature review

Let's take a brief look at the theoretical and methodological basis on which modern production management is built. Thus, Bezverkhy, & Khochay [1] study primary accounting as a source of information support for the management of crop production of agricultural enterprises, Boychenko, & Kiro [2] focus on the management of the quality of business processes of a production company in the context of sustainable development, Honcharuk & Vovk [3] analyze the environmental efficiency of crop production in Ukraine in the context of primary waste management on the basis of sustainable development, Denisyuk, & Tsal-Tsalko [4] propose a system for managing the activities of economic organizations for the production of dairy products from the perspective of subject and object aspects, Didur, & Dmytryuk [5] study systems for managing safety work in production, Yepifanova, & Kaspirovych [6] diagnose the possibilities of using the life cycle approach to analyze the industry-specific management production enterprise, Ivanets [7] focuses on the issue of planning the financial result of an agro-industrial production entity in managing its financial stability, Kara, & Pengrin [8] propose the introduction of innovative approaches to management using flexible production in winemaking, Kuzmenko, & Vetrov [9] trace the features of managing enterprises in the field of production and sale of alcoholic beverages in Ukraine under conditions of uncertainty, Melikhova, et al. [10] work on the aspect of improving the accounting and audit of costs by elements for forming a production budget under conditions of financial uncertainty in order to make effective management decisions, Melnyk, & Khrystofofor [11] generalize the problems of managing production inventories in railway transport based on budgeting, Nevlyudov et al. [12] propose method of decentralized management of technological processes in intelligent production.

Aims and Objectives

The purpose of the study is to study the possibilities and provide proposals for improving the mechanism of operational production management at the enterprises of Ukraine. The focus of the qualification work was on the following tasks: to investigate the features of production management and production enterprises; to identify the components of the mechanism of operational production management; to establish the problems of operational production management at the enterprises of Ukraine; to track and summarize changes in the paradigm of operational production management in the realities of wartime.

Methods

The work used the methods of system analysis, financial analysis and synthesis, comparative (comparative) analysis, historical and logical methods, methods of abstraction, idealization, generalization. Using these methods, the definition of operational production management was formalized, the interrelationships of the elements of the operational production management mechanism were identified, the components of the existing operational production management mechanism (methods, tools, principles) were specified, and the weaknesses of the functioning of such a mechanism were identified. The synthesis method was used to create a new, improved model of the mechanism based on a comparison of existing practices at domestic enterprises with leading world examples. Content analysis was used to study the evolution of theoretical approaches to the formation of operational production management paradigms, to identify modern trends in their development and to form a logical sequence of implementing changes.

Results

Production management problems are studied by modern scientists in various contexts, which allows us to outline the plane of production process management issues as one that covers issues of accounting and auditing production results, quality management, planning the supply of raw materials and materials to ensure the continuity of production processes, information support for making informed management decisions regarding production modernization, etc. (Fig. 1).



Figure 1. Problems of operational production management as objects of scientific research

Source: authors' development

Operational management is the basis of any production process, as it acts as a tool for implementing the strategy of functioning and development of industrial enterprises. In the theoretical and methodological plane, scientists understand operational production management as a system of detailed planning, calculation, regulation and monitoring of the production process in a short-term time interval, the purpose of which is to ensure continuous rhythmic and shift production in accordance with the calendar schedule with minimal resource costs.

If the task of strategic management in the company's management system is to specify where the business entity should be in the future, the essence of tactical management is the path by which it can get to this planned point, then the tasks of operational management include the answer to the question "what needs to be done to stay on the chosen course?". To perform this task at the applied level, operational production management must perform the following main functions:

- calendar planning, which involves the development of operational and shift schedules of workshops, divisions, departments, sections and individual workplaces of employees;
- dispatching, which means continuous and uninterrupted control over the production process;
- calculation of completed tasks and identification of deviations from planned indicators;
- timely provision of the enterprise with resources, such as raw materials, tools, finances, personnel, etc.;
- regulation or in other words – elimination of all detected deviations from schedules, their prevention;
- elimination of bottlenecks in the production process;
- effective redistribution of resources available in the company to restore the rhythm of the production process;
- operational accounting, monitoring and analysis, which are based on the collection of relevant information on the performance of tasks and the expenditure of corporate resources in real time.

Production operations management focuses on controlling and optimizing processes related to the production of goods to ensure efficiency, quality and timely delivery of raw materials and materials. It includes planning, scheduling, resource allocation, inventory control, and monitoring the efficiency of production processes to coordinate all aspects of production, from raw materials to finished goods. The goal of production management is to balance economic efficiency and production productivity, ensuring the smooth operation of the enterprise, and meeting customer needs.

This type of management activity also involves continuous improvement, identifying elements of the production chain where processes can be optimized or automated to reduce raw material waste and equipment downtime. By integrating data-driven decision-making into the management system of the business entity, production operations management helps enterprises remain competitive in dynamic markets and respond quickly to changes in demand, supply, etc., to supply chain disruptions, or to other production problems, including those associated with the destruction of logistics chains and the physical destruction of enterprise assets in war zones.

We were able to find that the problems of operational production management as objects of scientific research include cost management, quality management, time management, innovation management, efficiency management, resource management, risk management, inventory management. At the same time, focusing on the aspect of production management made it possible to consider the problem more broadly and move to the level of the problems of managing production enterprises as a whole. Since the mechanism of operational production management is part of the general management system of a business entity, the publications of Ukrainian scientists that outline the problems of managing companies as a whole in the realities of wartime in which they have had to function for the last four years deserve attention.

Based on the analysed publications, we conclude that in the management system of a business entity, production acts as a constant process of enterprise development, the organization of which ensures the production of products through the interaction of divisions, material resources and personnel (Kalicheva, et al, 2021). We understand operational production management as a set of processes of planning, organization, implementation and control of the use of corporate resources of the enterprise to obtain the final product in the short-term time horizon.

The mechanism of operational production management is a set of elements of the management process that involve the analysis of the external and internal environment of the enterprise's functioning, the use of management methods and adaptation of production processes to the strategic guidelines of the business functioning, the formation of goals and objectives of the sustainable development of the business entity,

and include a set of measures to diagnose the level of organization of production processes, making management decisions at their various stages and applying management tools, such as planning, evaluation, control and motivation, to achieve the ultimate goal of production.

The result of the functioning of the operational production management mechanism can be:

- modernization of products or product lines;
- the enterprise's entry into new markets and integration into new market niches;
- improving the working conditions of production personnel;
- optimizing and digitizing technological processes for product production;
- reducing the level of production costs;
- increasing the efficiency of the production process;
- accelerating adaptation to changes in the external and internal environment, as well as the interests and needs of product consumers;
- optimizing the personnel composition of the production personnel of the business entity (Kaliceva, et al, 2021).

The mechanism of operational management of production and production operations is an important element of the management system of any organization, which is focused on the effective transformation of its corporate resources into goods and services intended for sale to the population and business. Operational production management covers various business processes, ensuring the continuous execution of operations, maximizing the productivity of the enterprise and its personnel and minimizing resource costs. By combining and complementing key components of the management cycle, such as planning, scheduling, and quality control, operational production management plays a vital role in achieving the tactical and strategic goals of the enterprise.

The study of the basics of the functioning of the operational production management mechanism made it possible to generalize the goals of managing production operations of a classic manufacturing enterprise.

In general, the goals of operational production process management are focused on creating effective approaches to manufacturing products that ensure the formation of added value, and therefore, the profit of the enterprise. Enterprises must coordinate the goals of production activities with strategic business goals, adapting to the variability of customer interests and needs and the uncertainty of market conditions. Achieving these goals requires balancing the parameters of speed, quality, cost, and innovation in production processes in order to remain competitive and profitable business entities in the domestic market.

The goals of the operational production management mechanism include the priority of customer satisfaction with the quality and consumer properties of the final product. Timely delivery of quality products builds trust, strengthens partnerships and encourages customers to repeat orders. Operational management of production operations ensures clear planning, optimization of work processes and timely execution of orders in order to meet customer expectations and increase their loyalty in the long term.

Modern production management mechanisms often focus on reducing waste in order to maximize the image of a socially responsible and environmentally friendly business. By optimizing production processes, monitoring the rational use of resources and implementing the principles of lean production, production operations management minimizes material losses, avoids excess inventory and unnecessary labour costs, increasing the operational efficiency of the enterprise.

Anti-crisis operational management for production management is an effective tool for managerial influence on production processes, which aims to restore the rhythm of equipment and employees, minimize resource overspending, control the use of equipment, technology and technology, and identify reserves for improving operational production management. If the enterprise is operating at a loss, anti-crisis management should restore its activities first to the break-even level, and then to the basic level of profitability necessary for economic survival and business development. If the enterprise is profitable, the goal is to catch up with competitors.

The use of project management to manage production processes, for example, during the development of

a new product, the adjustment of the operation of a conveyor line, automation or digitalization of the production process, etc., can significantly increase the level of transparency of this process for management personnel, as well as allow timely identification of reserves for its reduction in cost and acceleration of obtaining the final result. The use of all the proposed tools for the digitalization of operational management of production processes can in practice facilitate the professional activities of management personnel and in the strategic perspective ensure an increase in the level of enterprise activity, however, it requires significant initial costs, which may be critical for implementation at Ukrainian enterprises in the realities of wartime.

Discussion

The dynamism of the economic system, the acceleration of the pace of scientific and technological progress, digitalization lead to a practically continuous process of changes in equipment, technologies and organization of production at the enterprise (Kalicheva, et al, 2021). The constant need to adapt management to the changing external and internal conditions of the existence and development of the enterprise gives rise to problematic aspects of operational management, since the renewal and restructuring of the production process is extremely difficult to implement the task.

The problems of production management lie in the impossibility of maintaining the rhythm, proportionality and continuity of production processes, given the hostile shelling and attacks on buildings and structures of Ukrainian enterprises and the need to protect employees at such times, which causes forced breaks and interruptions of technological processes and operations.

The limited availability of available resources creates difficulties in scaling production, updating and modernization of technologies, and introducing digital tools.

The expansion of automation significantly complicates the process of personnel management, which demonstrates resistance to change and unwillingness to undergo additional training and improve one's own qualifications in order to work effectively with modern innovative technologies. At the same time, a complete transition to automatic production management systems, in turn, creates risks of failures in production processes without timely response from management personnel.

In the conditions of severance of partnerships and disruption of logistics chains, including due to military operations in Ukraine, the problematic aspect is the creation of reserves and timely transportation of raw materials and materials necessary for production processes. At the same time, an excessive amount of reserves means that the enterprise overspends resources on their preservation in proper condition. In addition, a problematic management aspect remains the minimization of the volume of unfinished production, which is inherent in Ukrainian companies, and the reduction of the number of defective products, which increases when employees of enterprises work under constant stress and under enemy fire.

In addition, problems in the production management process are also recorded at the stage of obtaining reliable and relevant data necessary for making operational management decisions, as well as during the accounting of costs, their classification, distribution by responsibility centres and during the assessment of the cost price, which in the final calculation may differ significantly from the real volumes of resources spent on the manufacture of products.

Production process management is associated with numerous difficulties that affect efficiency, economic costs and overall business efficiency. From supply chain failures due to reasons independent of the enterprise to internal risks that management traditionally has influence on, such as equipment failure or personnel fraud, each obstacle that appears requires a proactive management approach to avoid loss of productivity and loss of income.

Solving problems with supply logistics is one of the current challenges of management processes. Raw material detention, shortages and price fluctuations can significantly change production process schedules. Long-term partnerships with suppliers, diversified sources of raw materials, and real-time monitoring of inventory volumes and their preservation status help ensure the continuous operation of the enterprise's production facilities.

A significant part of the resources of enterprises in wartime realities is directed to identifying threats to employee safety and taking measures to prevent and avoid them. At all times, employee safety is the main priority in managing production operations of socially oriented enterprises. Regular inspections of working conditions and production safety, training programs, and incident tracking reduce risks and ensure compliance with safety standards in accordance with the terms of concluded collective agreements.

Minimizing downtime of machines and equipment is an opportunity to receive additional income or avoid losses. Equipment failures lead to loss of productivity and a reduction in the volume of manufactured products. Scheduled maintenance, carried out in accordance with schedules agreed with engineers, and real-time monitoring of personnel and equipment productivity minimize downtime on lines and extend the service life of the enterprise's production assets.

Maintaining product quality is an important management tool in the fight for competitive advantage. Quality stability and increasing consumer benefits ensure customer satisfaction and a positive brand reputation. Effective management of production operations and processes can ensure strict control of product quality, from the raw materials used to the final quality inspection of the product.

A challenging task for management personnel, requiring appropriate competencies and information support, is to forecast and meet customer demand for products.

When implementing changes in the management structure of an enterprise, a negative reaction often occurs, associated with the rupture of existing organizational ties, behavioural stereotypes, changes in work criteria and the emergence of a new structure [14].

The implementation of the basic principles of production organization (differentiation, concentration and integration, specialization, proportionality, parallelism, directness, continuity, rhythm, automaticity, flexibility, etc.) leads to an increase in the efficiency of the enterprise under the constant influence of the environment, also increasing the internal flexibility of production, that is, the ability to quickly adapt to changes in the production program, conditions on the market of goods and services, and government regulations with the lowest costs. As a result, a dynamic organizational structure of the enterprise is formed [13].

The process of rationalization of management includes the development of a set of organizational, technical and socio-economic measures that ensure more efficient use of land, labour, equipment and other resources, the creation of favourable working and living conditions for employees, the introduction of new technologies, etc. [15].

Modern researchers and practitioners note that the problem of the functioning of the operational production management mechanism is the lack of practice of flexible management of technical and technological processes. The development of control systems is a complex multi-stage process, the implementation of which involves an adequate representation of the object of control automation. The description of flexible production by a system of mathematical models allows developing a strategy and methodology for managing a flexible production system as an object described by a reference model. The choice of a model is an informal creative procedure that depends on the target functions of the synthesis of the structure and elements of a flexible production system [16].

Therefore, the management of an enterprise involved in production management must possess such currently relevant competencies as creativity, critical thinking, problem-solving ability, communication skills, leadership, etc.

The personnel aspect is always problematic when it comes to the need to make quick and coordinated management decisions. In the context of production management, this issue is further complicated by the fact that the managerial staff must combine effective management skills with an understanding of the specifics of specific production techniques and procedures.

The personnel aspect is always problematic when it comes to the need to make quick and coordinated management decisions. In the context of production management, this issue is further complicated by the fact that the managerial staff must combine effective management skills with an understanding of the specifics of specific production techniques and procedures.

Conclusions

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1. Content analysis of professional scientific literature confirmed that production management is a multifaceted direction of the management system of modern enterprises and covers management decisions - from a strategic vision of production goals for business development to detailed operational accounting of production resources spent on production. Operational production management is a system of detailed planning, calculation, regulation and monitoring of production processes in the short term. Its goal in the management system is to ensure continuous, rhythmic production output with minimal resource costs. Operational production management is a tool for implementing the strategy of business operation and development. Important functions of operational production management are calendar planning, dispatching, resource provision and effective regulation of deviations. In conditions of dynamic markets and military risks, operational production management requires constant improvement, integration of management accounting and rapid response to disruptions in the supply chains of raw materials and materials.

2. The mechanism of operational production management is a set of elements of the management process that involve the analysis of the external and internal environment of the enterprise, the use of management methods and adaptation of production processes to the strategic guidelines of the business, the formation of goals and objectives for the sustainable development of the business entity, and include a set of measures to diagnose the level of organization of production processes, making management decisions at their various stages and applying management tools, such as planning, evaluation, control and motivation, to achieve the ultimate goal of production. Improving the mechanism of operational production management should be focused on increasing its flexibility and information support for rapid response to market and crisis challenges.

3. The list of main problems that require improvement of the mechanism of operational production management is proposed to include: violation of the basic principles of production, in particular, the inability to maintain rhythm, proportionality and continuity of production processes due to forced interruptions (hostile shelling, blackouts, etc.); the impact of logistical and resource risks, which manifest themselves in the breakdown of partnerships, disruption of logistics chains, which complicates the task of creating optimal stocks of raw materials and semi-finished products and minimizing the volume of work in progress; personnel resistance to technological changes - personnel resistance to change and unwillingness to work with digital solutions and technologies, complicates the modernization of production and increases the risk of failures in technological processes; difficulties in obtaining reliable data for making operational management decisions, as well as inaccuracies that occur during classification, cost allocation and assessment of production costs. The listed management challenges require the management of industrial enterprises to take a proactive approach and implement flexible management models to increase efficiency, minimize equipment downtime and maintain a high level of quality of the company's products.

References

1. Bezverkhyi, K. V., & Khochai, V. O. (2024). Pervynnyi oblik yak dzherelo informatsiinoho zabezpechennia upravlinnia vyrobnytstvom produktsii roslinnytstva silskohospodarskykh pidpriemstv [Primary accounting as a source of information support for crop production management of agricultural enterprises]. *Mizhnarodnyi naukovyi zhurnal "Internauka". Seriya : Ekonomichni nauky*, No. 11(2), 87–96. DOI:<https://doi.org/10.25313/2520-2294-2024-11-10505>. [in Ukrainian].
2. Boichenko, M. V., & Kiro, M. O. (2025). Upravlinnia yakistiu biznes-protsesiv vyrobnychoi firmy v konteksti staloho rozvytku [Quality

management of business processes of a manufacturing firm in the context of sustainable development]. *Ekonomichnyi prostir*, No. 204, 48–53. DOI: <https://doi.org/10.30838/EP.204.48-53>. [in Ukrainian].

3. Honcharuk, I. V., & Vovk, V. Yu. (2024). Analiz ekolohichnoi efektyvnosti vyrobnytstva produktsii roslinnytstva v Ukraini u konteksti upravlinnia pervynnymy vidkhodamy na zasadakh staloho rozvytku [Analysis of ecological efficiency of crop production in Ukraine in the context of primary waste management based on sustainable development]. *Ekonomika, finansy,*

menedzhment: aktualni pytannia nauky i praktyky, No. 3, 140–162. DOI: <https://doi.org/10.37128/2411-4413-2024-3-9>. [in Ukrainian].

4. Denysiuk, O. G., & Tsal-Tsalko, Yu. S. (2025). Systema upravlinnia diialnistiu hospodarskykh orhanizatsii z vyrobnytstva molochnykh produktiv: subiektnyi ta obiektnyi aspekt [Management system of the activity of economic organizations for the production of dairy products: subject and object aspect]. *Ekonomichnyi prostir*, No. 202, 43–51. DOI: <https://doi.org/10.30838/EP.202.43-51>. [in Ukrainian].

5. Didur, K. M., & Dmytriuk, S. P. (2025). Systema upravlinnia okhoronnymy robotamy u vyrobnytstvi [System of management of security works in production]. *Efektivna ekonomika*, No. 4. URL: http://nbuv.gov.ua/UJRN/efek_2025_4_73. DOI: <https://doi.org/10.30838/EP.202.43-51>. [in Ukrainian].

6. Yepifanova, I. Yu., & Kaspirovych, A. V. (2024). Vykorystannia pidkhotu zhyttievoho tsyklu dlia analizu haluzevoi spetsyfyky upravlinnia vyrobnychym pidpriemstvom [Using the life cycle approach to analyze the sectoral specifics of production enterprise management]. *Innovation and Sustainability*, Iss. 1, 133–141. DOI: <https://doi.org/10.31649/ins.2024.1.133.141>. [in Ukrainian].

7. Ivanets, Ye. O. (2024). Planuvannia finansovoho rezultatu subiekta ahropromyslovoho vyrobnytstva v upravlinni yoho finansovoiu stiikistiu [Planning of the financial result of the subject of agro-industrial production in the management of its financial stability]. *Ukrainskyi ekonomichnyi chasopys*, Iss. 5, 60–64. DOI: <https://doi.org/10.32782/2786-8273/2024-5-11>. [in Ukrainian].

8. Kara, N. I., & Penhhryn, S. M. (2025). Hnuchke vyrobnytstvo u vynorobstvi: vnnrovadzhenia innovatsiinykh pidkhodiv do upravlinnia [Flexible production in winemaking: implementation of innovative approaches to management]. *Efektivna ekonomika*, No. 4. URL: http://nbuv.gov.ua/UJRN/efek_2025_4_80. [in Ukrainian].

9. Kuzmenko, O. M., & Vietrov, D. O. (2024). Osoblyvosti upravlinnia pidpriemstvamy u sferi

DOI: [10.31379/sed.3.6.2025.47](https://doi.org/10.31379/sed.3.6.2025.47)

vyrobnytstva i prodazhu alkoholnykh napoiiv v Ukraini v umovakh nevypravdanosti [Peculiarities of managing enterprises in the field of production and sale of alcoholic beverages in Ukraine under conditions of uncertainty]. *Stratehiia ekonomichnoho rozvytku Ukrainy*, Iss. 54, 68–80. DOI: <https://doi.org/10.33111/sedu.2024.54.068.080>. [in Ukrainian].

10. Melikhova, T. O., Melikhov, Ye. V., & Kotenko, O. A. (2025). Udoshkonalennia obliku ta audytu vytrat za elementamy dlia formuvannia biudzhetu vyrobnytstva v umovakh finansovoi nevypravdanosti z metoiu pryiniattia efektyvnykh upravlinskykh rishen [Improving accounting and audit of costs by elements for the formation of the production budget under conditions of financial uncertainty in order to make effective management decisions]. *Investytsii: praktyka ta dosvid*, No. 1, 53–58. DOI: <https://doi.org/10.32702/2306-6814.2025.1.53>. [in Ukrainian].

11. Melnyk, T. S., & Khrystofor, O. V. (2024). Upravlinnia vyrobnychymy zapasamy na zaliznychnomu transporti na osnovi biudzhetuвання [Management of production inventories in railway transport based on budgeting]. *Mizhnarodnyi naukovyi zhurnal "Internauka". Serii : Ekonomichni nauky*, No. 1(2), 94–101. DOI: <https://doi.org/10.25313/2520-2294-2024-1-9613>. [in Ukrainian].

12. Nevliudov, I. Sh., Novoselov, S. P., & Sychova, O. V. (2025). Metod detsentralizovanoho upravlinnia tekhnolohichnymy protsesamy na intelektualnomu vyrobnytstvi [Method of decentralized management of technological processes in intelligent production]. *Suchasnyi stan naukovykh doslidzhen ta tekhnolohii v promyslovosti*, No. 1, 166–179. DOI: <https://doi.org/10.30837/2522-9818.2025.1.166>. [in Ukrainian].

13. Ivanova, O. A. (2020). Efektivna orhanizatsiia vyrobnytstva yak zasib upravlinnia konkurentospromozhnistiu innovatsiinoho pidpriemstva [Effective organization of production as a means of managing the competitiveness of an innovative enterprise]. *Vcheni zapysky Kharkivskoho humanitarnoho universytetu "Narodna ukrainska akademiia"*, Vol. 26, 163–169. [in Ukrainian].

14. Kalicheva, N. Ye., Maslova, V. O., & Yeroshkin, D. G. (2021). Upravliniski aspekty orhanizatsii vyrobnytstva v umovakh transformatsii biznes-seredovyshcha [Management aspects of production organization in the conditions of business environment transformation]. *Visnyk ekonomiky transportu i promyslovosti*, No. 75, 81–86. DOI: <https://doi.org/10.18664/btie.75.281251>. [in Ukrainian].
15. Yasynetska, I. A., Dobrovolska, E. V., & Pokotylska, N. V. (2023). Suchasnyi stan upravlinnia vyrobnytstvom produktsii ahrarnoho pidpriemstva [The current state of production

- management of an agricultural enterprise]. *Ahrosvit*, No. 5-6, 35–42. <https://doi.org/10.32702/2306-6792.2023.5-6.35>. [in Ukrainian].
16. Pukhovskiy, Ye. S. (2022). Proiektuvannia avtomatyzovanoi systemy upravlinnia hnuchkym vyrobnytstvom [Design of an automated management system for flexible production]. *Tekhnichna inzheneriia*, No. 1, 38–44. DOI: [https://doi.org/10.26642/ten-2022-1\(89\)-38-44](https://doi.org/10.26642/ten-2022-1(89)-38-44). [in Ukrainian].

ADDITIONAL INFORMATION

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