

INNOVATION SCIENCE AND TECHNOLOGY



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ISSUE 5

 Acceptance of papers **May, 2026**



**Acceptance of
papers**

Published monthly



Topics

economics,
technology, social
sciences

ISSN 3060-5229



Digital
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Identifier



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JOURNAL **"INNOVATION SCIENCE AND
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AGENCY FOR INFORMATION AND MASS
COMMUNICATIONS (AOKA) OF THE
REPUBLIC OF UZBEKISTAN, EFFECTIVE
FROM OCTOBER 9, 2024.

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The scientific electronic journal "Innovation Science and Technology" has been included in the list of scientific publications recommended for the publication of main scientific results of dissertations for the award of PhD and DSc degrees in economics and technical sciences, in accordance with the Resolution No. 370 of the Presidium of the Higher Attestation Commission of the Republic of Uzbekistan, dated May 8, 2025.

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ECONOMIC MECHANISMS FOR IMPROVING PRODUCTION EFFICIENCY IN INDUSTRIAL ENTERPRISES

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Annotatsiya. Mazkur maqolada sanoat korxonalarida ishlab chiqarish samaradorligini oshirishning asosiy iqtisodiy mexanizmlari tahlil qilingan. Zamonaviy sanoatda samaradorlik faqat yangi uskunalarni xarid qilish yoki ishlab chiqarish hajmini oshirish bilan emas, balki mehnat unumdorligi, ko'p omilli unumdorlik, energiya samaradorligi, boshqaruv sifati, raqamli transformatsiya, innovatsion yangilanish hamda inson kapitalini rivojlantirish bilan ham belgilanadi. OECD va UNIDO'ning so'nggi materiallarida unumdorlik o'sishi korxonalar va xodimlarning rag'batlari hamda imkoniyatlariga bog'liqligi, sanoat esa uzoq muddatli iqtisodiy o'sishning muhim drayveri ekanligi ta'kidlangan. Maqolada texnologik modernizatsiya, tashkiliy-boshqaruv amaliyotlari, inson kapitali, energiya va resurs samaradorligi, innovatsiyalar hamda investitsion rag'batlar o'zaro bog'liq iqtisodiy mexanizmlar sifatida asoslab berilgan.

Kalit so'zlar: ishlab chiqarish samaradorligi, sanoat korxonasi, mehnat unumdorligi, ko'p omilli unumdorlik, iqtisodiy mexanizm, energiya samaradorligi, innovatsiya, raqamli transformatsiya, investitsiya, raqobatbardoshlik.

Аннотация. В данной статье проанализированы основные экономические механизмы повышения эффективности производства на промышленных предприятиях. В современной промышленности эффективность определяется не только приобретением нового оборудования или увеличением объёмов производства, но и производительностью труда, многофакторной производительностью, энергоэффективностью, качеством управления, цифровой трансформацией, инновационным обновлением и развитием человеческого капитала. Последние материалы OECD и UNIDO показывают, что рост производительности зависит как от стимулов, так и от возможностей предприятий и работников, при этом промышленность остаётся важным драйвером долгосрочного экономического роста. В статье обоснованы технологическая модернизация, организационно-управленческие практики, человеческий капитал, энерго- и ресурсосбережение, инновации и инвестиционные стимулы как взаимосвязанные экономические механизмы.

Ключевые слова: эффективность производства, промышленное предприятие, производительность труда, многофакторная производительность, экономический механизм, энергоэффективность, инновации, цифровая трансформация, инвестиции, конкурентоспособность.

Abstract. This article analyzes the main economic mechanisms for improving production efficiency in industrial enterprises. In modern industry, efficiency is determined not only by the acquisition of new equipment or an increase in production volumes, but also by labor productivity, multifactor productivity, energy efficiency, management quality, digital transformation, innovation renewal, and human capital development. Recent materials published by the OECD and UNIDO indicate that productivity growth depends on both the incentives and capabilities of firms and employees, while industry remains an important driver of long-term economic growth. The article substantiates technological modernization, organizational and managerial practices, human capital, energy and resource efficiency, innovation, and investment incentives as interconnected economic mechanisms.

Keywords: production efficiency, industrial enterprise, labor productivity, multifactor productivity, economic mechanism, energy efficiency, innovation, digital transformation, investment, competitiveness.

INTRODUCTION

Production efficiency is one of the key economic indicators determining the competitiveness, financial stability, and long-term market performance of industrial enterprises. According to the OECD Compendium of Productivity Indicators 2024, labor productivity and multifactor productivity are regarded as the principal criteria for assessing economic growth and enterprise performance [1]. The UNIDO Industrial Development Report 2024 also emphasizes that manufacturing remains at the core of technological advancement and productivity growth [3].

In the contemporary economic environment, improving production efficiency cannot be explained by a single factor alone. The OECD's 2024 policy review states that productivity growth depends on both the incentives and capabilities of firms and workers [2]. This indicates that technological, organizational, financial, innovation-related, and

human-capital factors should be considered as components of an integrated system for enhancing efficiency in industrial enterprises.

The purpose of this article is to systematize the economic mechanisms for improving production efficiency in industrial enterprises, explain their underlying essence, and propose an integrated conceptual approach.

LITERATURE REVIEW

In recent years, digital transformation has become one of the most significant factors influencing production efficiency. In their 2024 study, Di Wang and co-authors demonstrate that digital transformation has a substantial positive impact on the efficiency of manufacturing enterprises, with the effect being particularly significant in certain categories of firms [4]. This finding suggests that production efficiency is associated not only with physical modernization, but also with the effective management of information flows and process optimization.

Studies devoted to energy efficiency also highlight another important dimension of this issue. A 2025 study indicates that digital development stages such as computerization, connectivity, visibility, transparency, predictive capability, and adaptability play a crucial role in improving energy efficiency in industrial production [5]. Another 2025 study, based on the example of the UK industrial sector, demonstrates that management-oriented best practices contribute significantly to reducing energy intensity and enhancing production efficiency [6].

Human capital is likewise considered a major source of production efficiency. UNIDO's official materials on skills development emphasize the importance of equipping young people, employees, and entrepreneurs with practical competencies aligned with industrial needs, as well as strengthening cooperation between educational institutions and employers to increase industrial productivity [7]. The OECD also notes that productivity growth is closely associated with workforce capabilities and professional skills [2].

RESEARCH METHODOLOGY

This study is based on a systematic approach to analyzing the economic mechanisms for improving production efficiency in industrial enterprises. Comparative analysis, logical analysis, synthesis, and systematization methods were applied during the research process. Scientific literature, OECD and UNIDO reports, and recent empirical studies on digital transformation, energy efficiency, innovation, and human capital were used as the main sources of analysis. Based on the research findings, the key economic mechanisms influencing production efficiency were identified and integrated into a unified conceptual model.

ANALYSIS AND RESULTS

1. Technological Modernization as an Economic Mechanism

The first key mechanism for improving production efficiency is technological modernization. When an industrial enterprise upgrades its equipment, introduces digital production systems, and improves information flows, it gains the ability to produce greater output using the same volume of resources. A 2024 empirical study confirms that digital transformation has a significant positive impact on production efficiency [4].

However, it would be inaccurate to limit technological modernization solely to the acquisition of new equipment. Research on energy efficiency demonstrates that the stages of digital development — from computerization to adaptability — significantly enhance energy savings [5]. Therefore, the economic essence of technological modernization lies in improving resource-use efficiency, implementing data-driven management systems, and increasing the intellectualization of production processes.

2. Organizational and Managerial Practices as an Economic Mechanism

The second important mechanism is the improvement of organizational and managerial practices. For technological solutions to generate effective results, production planning, maintenance systems, quality control, logistics, and internal coordination mechanisms must operate efficiently. A 2025 study indicates that management-based best practices reduce energy intensity and improve industrial efficiency [6].

From an economic perspective, this mechanism reduces waste, minimizes operational disruptions, increases the return on existing assets, and lowers coordination costs. The OECD also emphasizes the critical role of organizational capacity and management quality in ensuring productivity growth [2].

3. Human Capital and Skills as an Economic Mechanism

The third mechanism is the development of human capital and professional skills. In industrial enterprises, modern production systems require technical, operational, and managerial competencies to function effectively. According to UNIDO materials, practical skills aligned with employer needs are of decisive importance for improving industrial productivity [7]. The OECD likewise notes that productivity growth is closely associated with workforce capabilities and professional skills [2].

This mechanism becomes even more important in the context of digital and intelligent manufacturing. If new equipment or software solutions are introduced while employees lack the necessary competencies to use them effectively, the return on investment remains limited. Therefore, investment in human capital should be regarded as an independent economic mechanism for improving production efficiency.

4. Energy and Resource Efficiency as an Economic Mechanism

The fourth mechanism is the efficient utilization of energy and resources. In many industrial enterprises, excessive energy consumption, material losses, downtime, and technical failures reduce overall production efficiency. Recent studies demonstrate that energy efficiency can be enhanced through digital technologies and improved management practices [5], [6].

From an economic standpoint, this mechanism reduces resource consumption per unit of output, lowers production costs, and strengthens the enterprise’s resilience to external shocks. Consequently, resource efficiency should be considered not only an environmental issue, but also a direct source of economic efficiency.

5. Innovation and Strategic Renewal as an Economic Mechanism

The fifth mechanism is innovation and strategic renewal. Production efficiency increases not only through faster or lower-cost production processes, but also through the transition toward higher value-added products, services, and business models. A 2025 study demonstrates that digital transformation stimulates servitization processes in manufacturing firms through total factor productivity and human capital development [8].

Therefore, production efficiency should be evaluated not only in terms of production speed or operational costs at the workshop level, but also by the amount of value created per unit of resource utilized. From this perspective, innovation renewal and strategic modernization should also be considered important mechanisms for improving economic efficiency [3], [8].

6. Investment and Incentive Environment as an Economic Mechanism

The sixth mechanism is the investment and incentive environment. The OECD’s 2024 review emphasizes that firms require both opportunities and incentives to ensure productivity growth [2]. From the perspective of industrial enterprises, this means that financial resources are necessary for modernization, digitalization, employee training, and investment in energy-saving technologies, alongside an institutional environment that encourages such decisions.

If an enterprise lacks sufficient resources or if the economic environment encourages production volume rather than efficiency, even technically sound projects may not be fully implemented. Therefore, investment activity and the incentive system should be regarded as important economic mechanisms for improving production efficiency [2], [3] (Table 1).

Table 1
Main Economic Mechanisms for Improving Production Efficiency®

Economic Mechanism	Main Content	Expected Effect
Technological modernization	Equipment renewal, digital manufacturing, and system integration	Increase in output per unit of labor and capital
Management practices	Planning, maintenance, and process control	Reduction of waste and operational losses
Human capital	Development of technical and managerial skills	Increase in the return on technology
Energy and resource efficiency	Reduction of energy intensity and rational use of resources	Lower costs and increased operational stability
Innovation and renewal	Improvement of products, processes, and business models	Increase in added value and competitiveness
Investment and incentives	Financial resources and an efficiency-oriented institutional environment	Acceleration of modernization and renewal processes

Integrated Approach

The analysis demonstrates that production efficiency in industrial enterprises cannot be ensured through a single measure alone. The most effective approach is to integrate the above-mentioned economic mechanisms into a unified management system. Such a system may include the following stages: efficiency diagnostics, technological auditing, management restructuring, skills development, innovation integration, and continuous monitoring [1], [2], [4], [6], [7], [8] (Table 2).

Table 2
Integrated Model for Improving Production Efficiency in Industrial Enterprises

Stage	Main Task	Strategic Objective
Diagnostics	Measuring productivity, energy consumption, and operational losses	Identifying the actual initial condition
Technological assessment	Identifying modernization and digitalization opportunities	Directing investment toward high-return areas
Management restructuring	Improving work processes and control systems	Strengthening operational efficiency
Skills development	Enhancing technical and managerial competencies	Increasing the return on technology and systems
Innovation integration	Linking efficiency with product and process renewal	Increasing value creation

Monitoring and adjustment	Updating decisions based on performance indicators	Ensuring long-term efficiency and sustainability
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CONCLUSIONS AND RECOMMENDATIONS

The results of the study demonstrate that production efficiency in industrial enterprises is shaped by several interconnected economic mechanisms. Technological modernization, effective management practices, human capital development, energy and resource efficiency, innovation, and the investment environment generate significant results only when implemented in an integrated manner.

Therefore, industrial enterprises should consider the improvement of production efficiency not as a one-time technical measure, but as a continuous economic and managerial process. The most effective approach is the integrated application of technological, organizational, financial, and human-capital mechanisms. Under such conditions, production efficiency becomes a strong economic foundation for enhancing the competitiveness and ensuring the long-term sustainable development of the enterprise.

REFERENCES

1. OECD. OECD Compendium of Productivity Indicators – 2024.
2. OECD. Reviving Productivity Growth: A Review of Policies – 2024.
3. UNIDO. Industrial Development Report – 2024.
4. Wang, D., & Shao, X. Research on the Impact of Digital Transformation on the Production Efficiency of Manufacturing Enterprises: Institution-Based Analysis of the Threshold Effect – 2024.
5. Schmitt, T. Achieving Energy Efficiency in Industrial Manufacturing – 2025.
6. Ali, M. The Impact of Best Practice on Energy Efficiency in the UK's Industrial Sector – 2025.
7. UNIDO. Skills Development Official Materials.
8. Sui, X. The Impact of Digital Transformation on the Servitization of Manufacturing Firms – 2025.

Proofreader: Zokir ALIBEKOV
Layout and Designer: Oloviddin Sobir ugli

2026. № 5

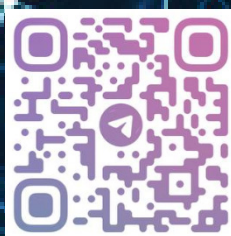
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