

КОЛЕКТИВНА МОНОГРАФІЯ

МІЖДИСЦИПЛІНАРНІ ВИМІРИ ІННОВАЦІЙ: ВІД ТЕОРІЇ ДО ПРАКТИКИ СОЦІАЛЬНО-ЕКОНОМІЧНОГО РОЗВИТКУ



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У монографії розглянуто теоретичні та практичні аспекти інноваційних процесів у контексті сучасного розвитку освіти та соціально-економічної сфери. Акцентовано увагу на широкому спектрі системних інновацій в освітній галузі – від управління безпекою середовища й упровадження новітніх педагогічних технологій до цифровізації мовної підготовки та інклюзивних рішень, а також на проблемах цифрової трансформації бізнесу, інтеграції штучного інтелекту та стратегічного управління людським капіталом у кризових умовах. Відображено погляди вітчизняних дослідників на вирішення актуальних завдань у сферах педагогіки, економіки, менеджменту та соціокультурної діяльності в контексті побудови інноваційного суспільства.

Адресується фахівцям-практикам, науковим і науково-педагогічним працівникам, докторантам, аспірантам та студентам; усім, хто цікавиться актуальними проблемами інноваційного розвитку суспільства.

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РОЗДІЛ 1

ТЕХНОЛОГІЧНІ ІННОВАЦІЇ, ШТУЧНИЙ ІНТЕЛЕКТ ТА ЦИФРОВІЗАЦІЯ ЕКОНОМІЧНИХ СИСТЕМ

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1.1. Artificial Intelligence in Enterprise Management

1.1. Штучний інтелект в управлінні підприємством

Olena BACHYNSKA¹

Олена БАЧИНСЬКА

Abstract. This study provides a comprehensive analysis of the role of artificial intelligence (AI) as a key tool for transforming modern enterprise management. The paper examines the dynamics of AI technology implementation across EU countries and highlights statistical indicators regarding the usage of intelligent systems, categorized by industry, business size, and functional objectives. It is demonstrated that AI integration enables enterprises to optimize business processes, automate routine operations, and improve both the accuracy of strategic forecasting and the efficiency of management decision-making. Particular attention is paid to the application of AI in marketing, HR management, finance, and logistics. It is substantiated that the effective integration of artificial intelligence technologies has become a determining factor for enterprise competitiveness in today's turbulent business environment. The research results emphasize the necessity of adapting organizational strategies to new technological realities to improve business process efficiency and minimize risks, provided that intelligent systems are used responsibly and accountably.

Keywords: artificial intelligence, enterprise management, business processes, digital transformation, automation, strategic management, digital economy, competitiveness.

Анотація. Дослідження присвячене комплексному аналізу ролі ШІ як ключового інструменту трансформації сучасного управління підприємством. У роботі розглянуто динаміку впровадження ШІ-технологій у країнах ЄС, висвітлено статистичні показники використання інтелектуальних систем залежно від галузі, розміру бізнесу та функціональних цілей. Доведено, що інтеграція ШІ дозволяє підприємствам оптимізувати бізнес-процеси, автоматизувати рутинні операції, підвищити точність стратегічного прогнозування та ефективність прийняття управлінських рішень. Особливу увагу приділено застосуванню ШІ у маркетинговій діяльності, сфері HR-менеджменту, фінансовому та логістичному управлінні. Обґрунтовано, що ефективна інтеграція технологій штучного інтелекту стає визначальним фактором конкурентоспроможності підприємств у сучасному турбулентному

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середовищі. Результати дослідження підкреслюють необхідність адаптації організаційних стратегій до нових технологічних реалій для підвищення ефективності бізнес-процесів та мінімізації ризиків, за умови відповідального та підзвітного використання інтелектуальних систем.

Ключові слова: *штучний інтелект, управління підприємством, бізнес-процеси, цифрова трансформація, автоматизація, стратегічне управління, цифрова економіка, конкурентоспроможність.*

Introduction. Discussions about artificial intelligence (AI) have been ongoing for years, and with the appearance of ChatGPT and its successors, interest in using AI is only gaining momentum. It can be confidently stated that a revolution of sorts has occurred in almost all spheres of public life where intellectual work is important and the automation of information search and processing via AI-based software is possible. The scope of AI usage is expanding, so an increasing number of enterprises are considering its implementation to improve their operations. This concerns not only the field of information technology directly but also other key business functions essential for the functioning of a business. AI is becoming an integral part of modern business, transforming traditional approaches to enterprise management. Due to its ability to analyze large volumes of structured or unstructured information, automate routine tasks, and generate alternative forecasts, AI opens up new opportunities for enterprises to optimize resources, make economically sound decisions, and increase their efficiency.

Research Results. The use of AI in enterprises is becoming increasingly noticeable (Fig. 1.1). A comparison of enterprises using at least one AI technology in EU countries shows that the share of such enterprises ranged from 5.21% to 42.03%. The highest share was recorded in Denmark (42.03%), followed by Finland (37.82%) and Sweden (35.04%), while the lowest shares were in Romania (5.21%), Poland (8.36%), and Bulgaria (8.55%). In 2025, in 26 EU countries, the share of enterprises using AI technologies increased compared to 2024. The largest growth was recorded in Denmark (14.45%), Finland (13.45%), and Lithuania (12.54%).

Enterprises using AI technologies, 2024 and 2025

(% of enterprises)

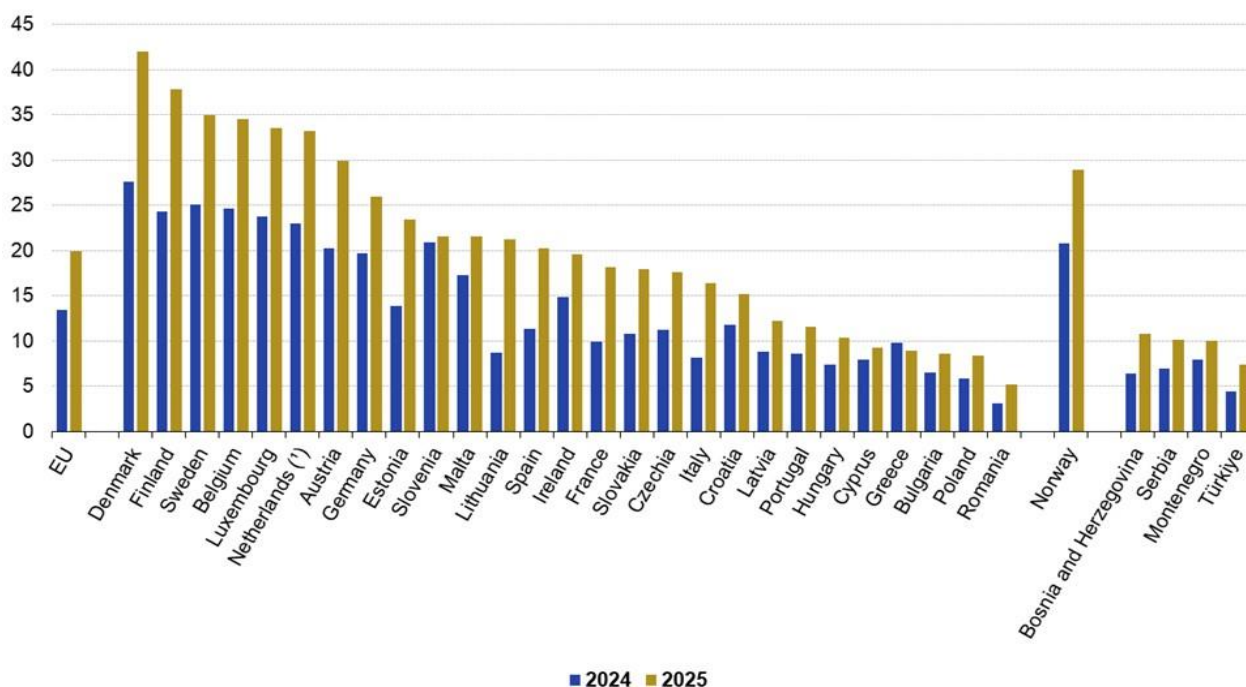


Fig. 1.1. Use of AI tools in EU enterprises (Eurostat)

Enterprises using AI technologies by economic activity, EU, 2025

(% of enterprises)

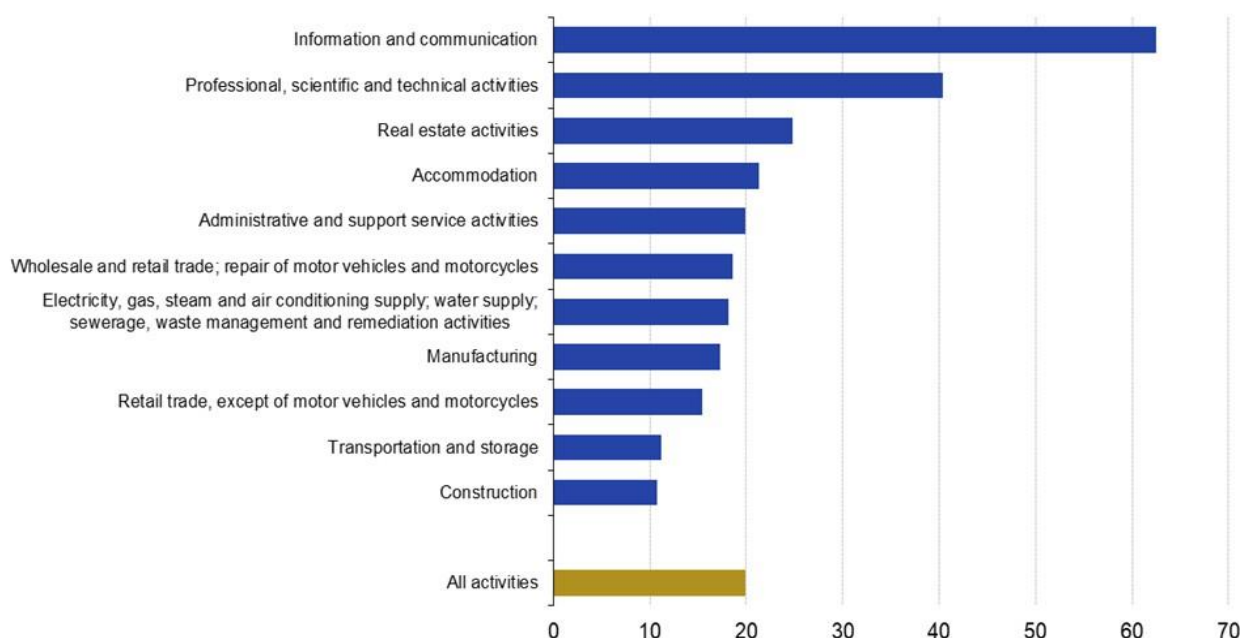


Fig. 1.2. Enterprises using AI technologies by type of economic activity, in EU countries (Eurostat)

As shown in Fig. 1.2, in some types of economic activity, AI is used significantly more often than in others. In 2025, the highest share of enterprises using AI was recorded in the information and communication sector (62.52%) and in the field of professional, scientific, and technical services (40.43%). In the remaining types of economic activity, the share of such enterprises was below 25%. It varied from 24.82% (real estate activities) to 10.79% (construction).

Enterprises using AI technologies by size class, EU, 2024 and 2025
(% of enterprises)

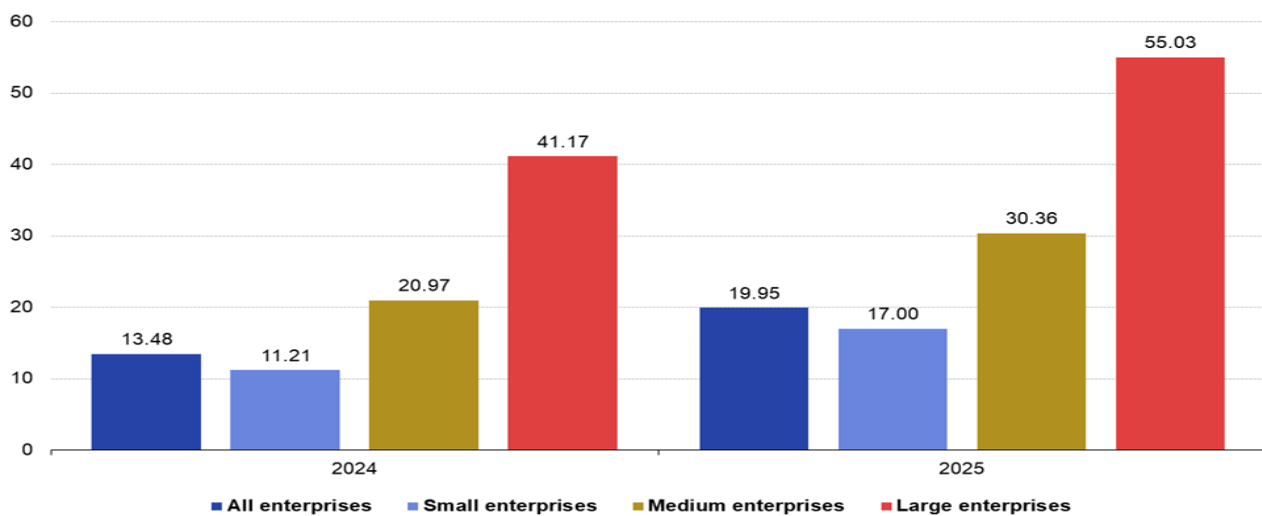


Fig. 1.3. Enterprises using AI technologies by size in EU countries (Eurostat)

Large enterprises used AI more frequently than small and medium-sized enterprises: in 2025, 17% of small enterprises, 30.36% of medium-sized enterprises, and 55.03% of large enterprises used AI (Fig. 1.3). This difference can be explained, for example, by the complexity of implementing AI technologies in an enterprise or by costs (i.e., investments in AI may be more accessible to large enterprises).

Enterprises in EU countries have used AI-based software or systems for various purposes (Fig. 1.4). Specifically, in 2025, 34.70% of enterprises utilized AI technologies for marketing or sales, while 31.05% used them for organizing business or management processes. AI-based software or systems for logistics were used the least, accounting for only 6.08% (Eurostat).

Enterprises using AI technologies by type of purpose and size class, EU, 2025
(% of enterprises using at least one AI technology)

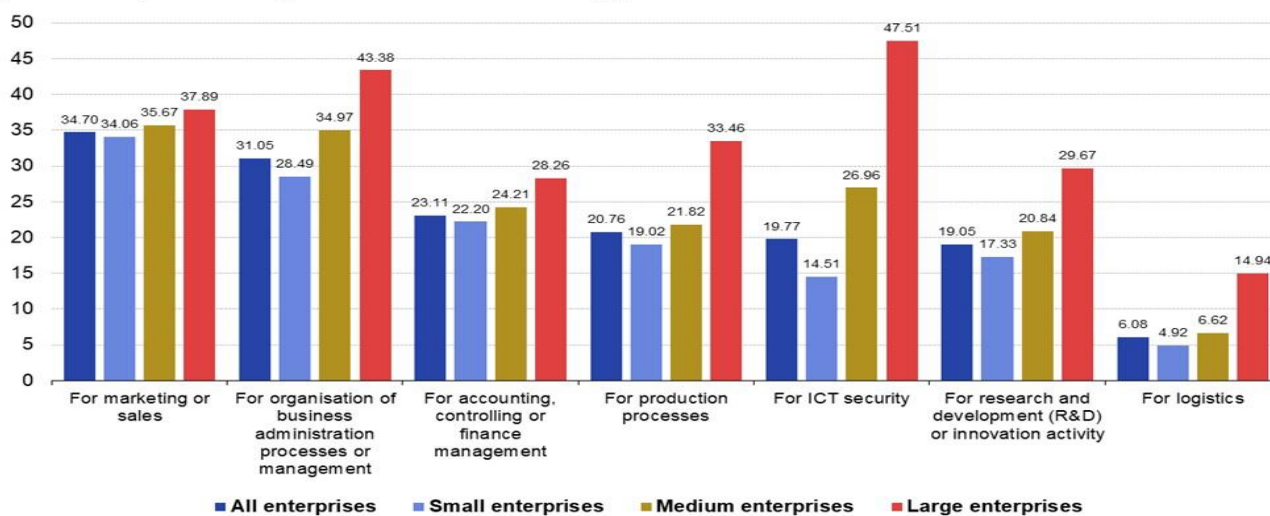


Fig. 1.4. Enterprises using AI technologies by size and purpose in EU countries

According to the survey results presented in the World Economic Forum's (WEF) «The Future of Jobs 2023» report, there is a steady trend toward the technological transformation of business models – more than 75% of respondents declared an intention to integrate modern technological solutions into their operations over a five-year horizon (World Economic Forum, 2023). This attests to the fundamental impact of digitalization as a catalyst for structural changes in modern commercial and trade ecosystems.

An analysis of innovation implementation priorities demonstrates a high level of adaptability among business entities regarding digital tools. In particular, 86% of surveyed organizations confirmed plans to implement digital platforms and application software. Concurrently, significant attention is being paid to the optimization of human capital management, which is reflected in the intentions of 81% of respondents to implement specialized technologies in education and personnel administration by 2027 (Fig. 1.5).

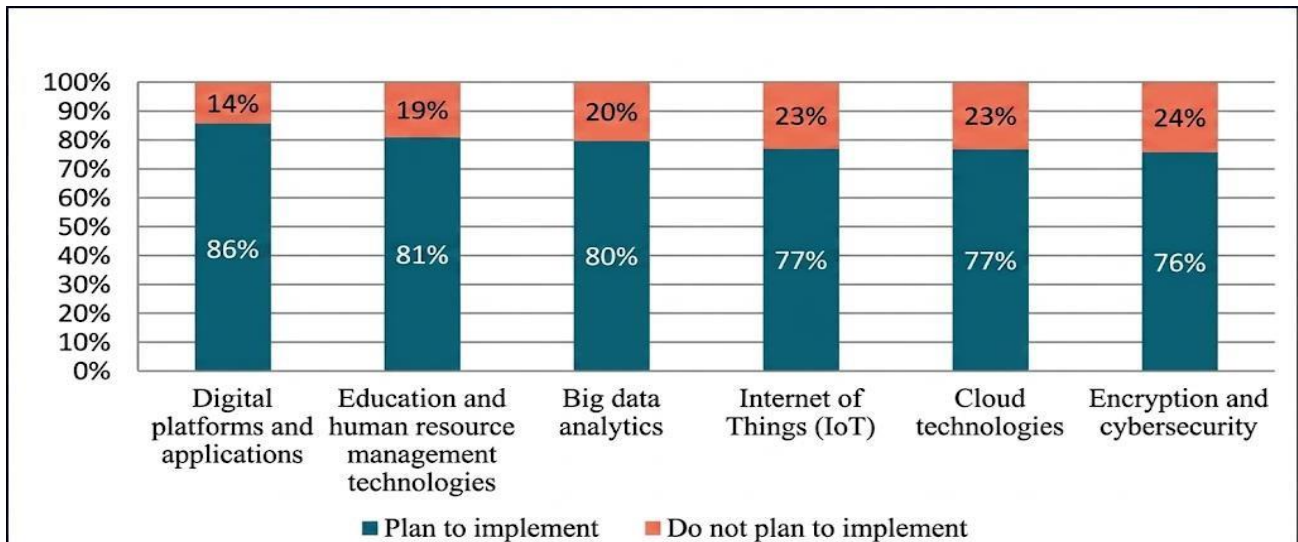


Fig. 1.5. Forecast of digital technology usage by companies by 2027

The integration of AI technologies into human resource management systems opens up new opportunities for improving the quality of management decisions, optimizing personnel processes, and stimulating the professional development of employees. The use of AI allows for in-depth data analytics, the forecasting of personnel behavioral models, and the personalization of management approaches, which significantly exceeds the capabilities of traditional management tools. This is precisely why the implementation of intelligent technologies in HR management has become a strategic priority for leading global IT companies.

Figure 1.6 illustrates how the degree of integration of innovative technologies into human resource management systems correlates with companies' positions in the 2024 ranking of the world's best employers, as compiled by Forbes (Forbes, 2024).

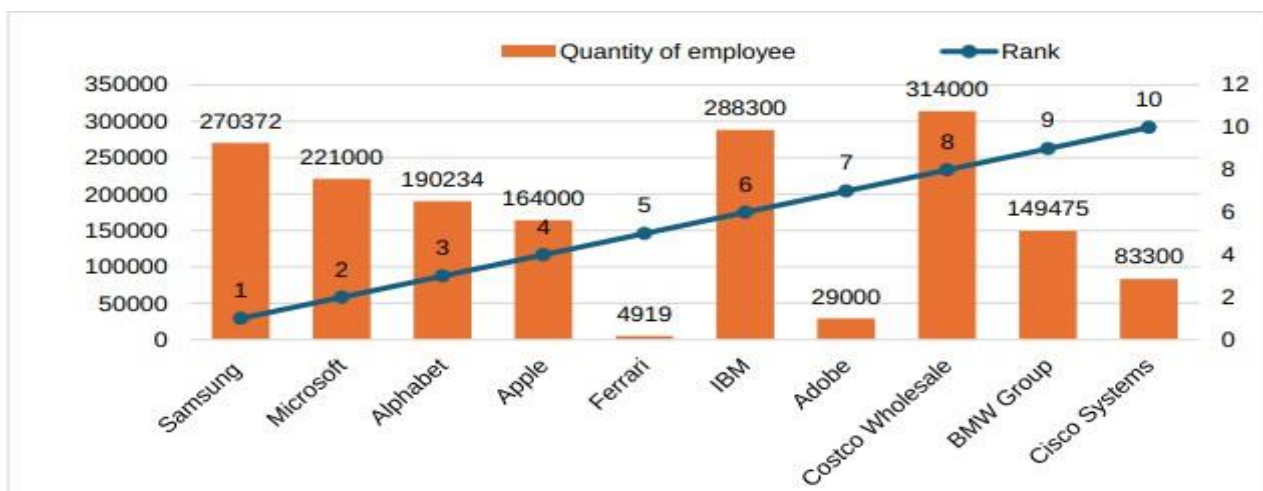


Fig. 1.6. Best employers according to Forbes as of 2024

Fig. 1.7 illustrates the structural priorities for the integration of AI technologies into functional areas of HR management. Empirical data indicate that the most intensive implementation of intelligent solutions is observed in the areas of personnel performance evaluation (43%), payroll administration (42%), and recruiting (41%), which confirms the organizations' focus on automating basic HR processes. A significant level of AI usage in new employee onboarding procedures (40%) and HR record-keeping (39%) indicates enterprises' aspiration to increase operational efficiency by optimizing routine functions.

At the same time, the average rates of application of intelligent technologies in the areas of labor mobility management and corporate culture formation (31% each) may indicate the relative complexity of formalizing and algorithmizing these processes. The lowest levels of implementation were recorded in the areas of professional retraining of personnel (29%) and retention (28%), which potentially reflects the insufficient realization of AI capabilities in strategically important aspects of human capital development. It is worth noting that 8% of the surveyed organizations do not plan to use AI technologies in HR practices, which may be due to industry specifics or resource constraints (Eisenberg, 2025).

In general, the provided data demonstrate a steady trend toward scaling the use of AI in HR management, with a dominance of its application in operational processes and a gradual expansion into more complex and strategic areas of HR activity.

The majority of HR leaders plan to increase usage of AI

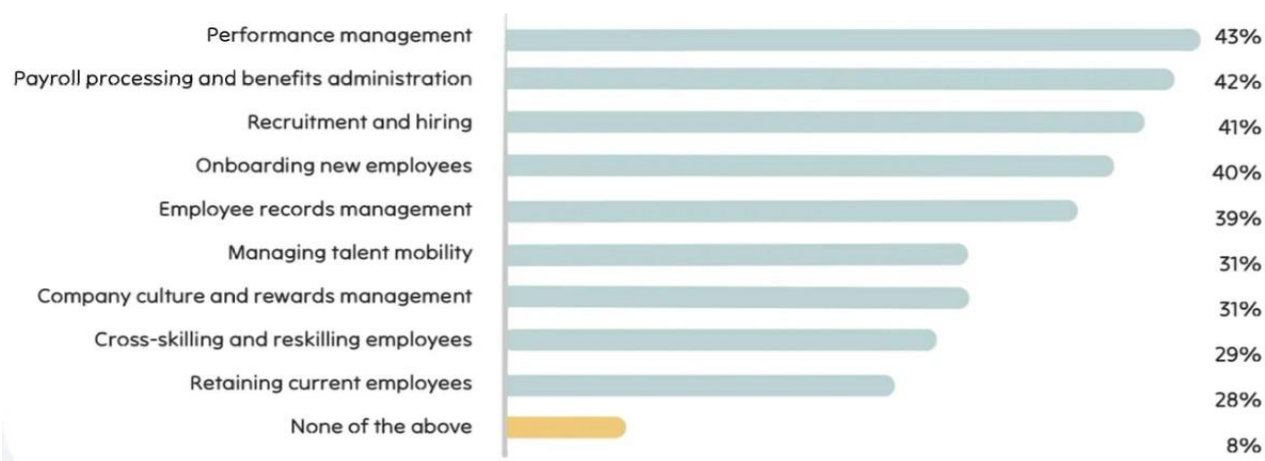


Fig. 1.7. Areas of AI application in HR processes (Atanesyan, 2023)

At the same time, the integration of AI technologies into the field of human resource management is accompanied by a number of significant risks and limitations. In particular, the automation of recruitment procedures based on algorithmic decision-making can reproduce or even amplify existing biases embedded in the source data or model parameters. This creates the potential for discriminatory effects based on such characteristics as age, gender, ethnic origin, educational background, or the previous professional experience of candidates. Furthermore, the use of intelligent systems in the processes of employee performance evaluation, the analysis of their behavioral characteristics, communications, or potential for customizing management approaches can have ambiguous socio-psychological consequences. Thus, the dominance of the algorithmic component in decision-making is capable of causing distrust among staff, especially in cases where evaluation results do not align with employees' subjective expectations, which can negatively affect the moral and psychological climate in the team and reduce the level of organizational loyalty (Dvornik, Shevel, 2025).

However, a certain proportion of enterprises have decided not to use AI technologies for a number of reasons (Fig. 1.8). The most common reason for not using them was a lack of relevant expertise (70.89%), followed by ambiguity regarding legal consequences (52.52%) and concerns about data protection and privacy breaches (48.8%). The least common reason for refusing to use AI among enterprises that had considered the possibility of its application was that these technologies were deemed of no value to the enterprise (20.68%).

Today, AI plays an important role in the transformation of business processes, helping companies reach new levels of efficiency. Artificial intelligence is increasingly being applied to optimize business processes in companies around the world. Table 1.1 provides examples of various companies and their experience in applying AI to optimize business processes.

Enterprises that have ever considered using any of the AI technologies by reason for not using, EU, 2025

(% of the enterprises that have ever considered using any of the AI technologies)

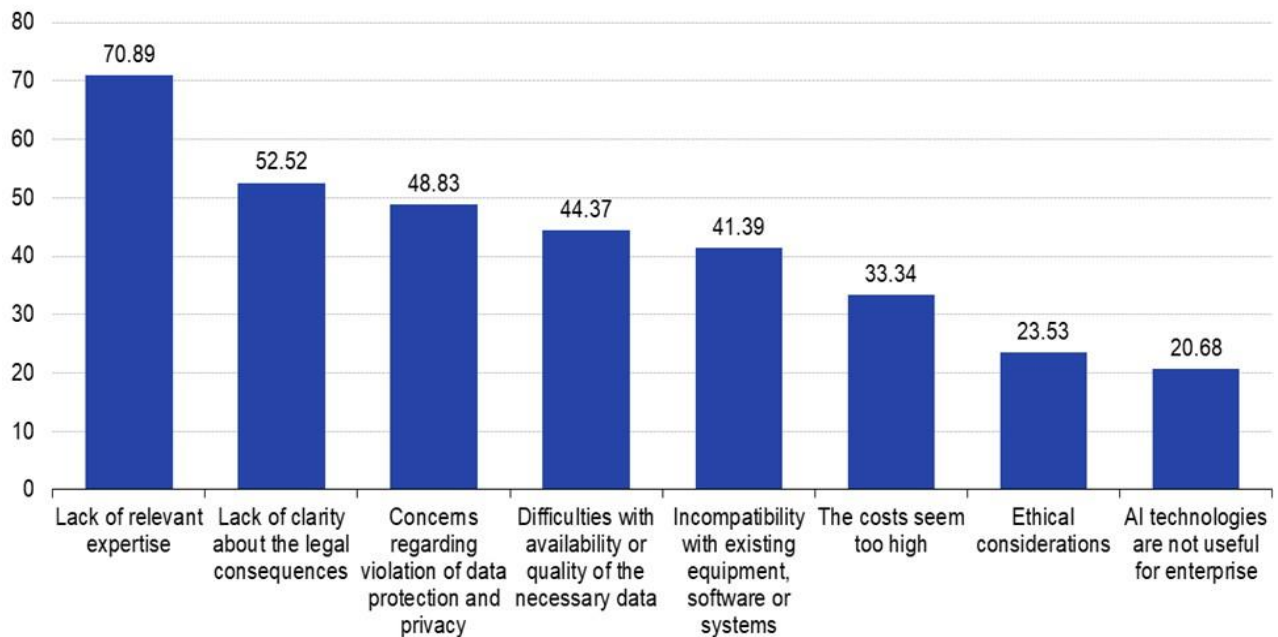


Fig. 1.8. Enterprises that have ever considered using any AI technologies, by reasons for not using them, in EU countries (Eurostat)

Table 1.1

The use of AI in optimizing business processes of modern global companies

Company	Experience in using AI to optimize business processes
Amazon	Amazon uses AI to optimize warehousing and delivery processes. Machine learning systems predict demand, automate inventory management, and improve delivery routes, reducing order fulfillment time and lowering logistics costs.
Google	Google implements AI algorithms to improve search query accuracy and personalize advertisements. AI analyzes user data to provide more relevant search results and targeted ads, increasing the effectiveness of advertising campaigns
IBM	IBM uses its Watson platform to provide solutions for natural language processing and big data analysis. Watson helps companies automate document processing, gain analytical insights, and support customer service through chatbots.
Netflix	Netflix uses AI-based recommendation algorithms to personalize content for its users. Machine learning systems analyze viewing history and ratings to suggest movies and series that best match each user's interests.
Tesla	Tesla integrates AI into its vehicles for autopilot features, including automated steering, adaptive cruise control, and collision avoidance systems. AI is also applied to optimize manufacturing processes at its factories, allowing for increased efficiency and precision.
Microsoft	Microsoft uses AI to enhance its office products, such as Microsoft 365. For instance, built-in AI features in Word and Excel assist with auto-correction, data analysis, and generating recommendations, which boosts user productivity.
Alibaba	Alibaba uses AI to optimize product search and recommendations, as well as in financial services through its Ant Financial platform. AI assists in fraud detection, risk management, and the automation of payment processing.

Thus, AI has the potential to significantly transform business processes, ensuring greater efficiency, speed, and accuracy across various aspects of an enterprise's operations.

The implementation of AI technologies acts as a catalyst for optimizing the key business processes of a modern enterprise. An analysis of AI's functional capabilities allows us to distinguish the following areas of its impact on the efficiency of economic activities:

- Algorithmization and automation of repetitive functional processes. The use of intelligent systems ensures a significant reduction in time and resource costs through the automation of standard operations. This involves delegating typical administrative and operational functions to algorithms, including processing information requests, managing accounting procedures, and controlling material flows, which minimizes the human factor and increases operational efficiency.

- Optimization of the strategic management decision-making architecture. Due to the ability to comprehensively process large data sets, well-founded predictive models are formed, which ensure the identification of development patterns, the assessment of potential risks, and the determination of strategic alternatives for enterprise development.

- Individualization of consumer interaction and the formation of value propositions. Intelligent algorithms allow for deep analysis of consumer behavior, which creates the prerequisites for forming individualized offers and improving the quality of the customer experience by adapting products and services to specific needs.

- Intellectualization and increasing the resilience of logistics networks. The use of AI promotes the synchronization of material and information flows, the optimization of transport routes, increased accuracy in demand forecasting, and the rationalization of inventory levels, which generally leads to cost reduction and increased resilience of the supply system.

- Proactive risk management and strengthening cybersecurity. Intelligent systems are capable of detecting deviations from the normal behavior of financial and

operational processes in real time, signaling potential threats, fraudulent actions, or cyber incidents, which increases the level of enterprise security.

- Systemic monitoring of the competitive environment and market conditions. AI provides systematic monitoring of competitive activity and the dynamics of market changes, allowing enterprises to promptly adjust their own strategies and maintain an appropriate level of competitiveness.

- Innovative product development. The use of machine and deep learning algorithms allows not only identifying promising directions for innovation but also shortening the cycle of creating and testing new solutions.

- Increasing the efficiency of labor potential utilization. Freeing employees from performing routine tasks allows them to focus on creative and strategic activities, which, in turn, increases work efficiency and the level of professional satisfaction.

The benefits of implementing AI technologies in enterprise operations are illustrated in Fig. 1.9.

One of the priority vectors for using AI tools in modern marketing is the personalization of communications with target audiences. Empirical data shows that implementing personalized approaches in email marketing ensures an average increase in the open rate by 29% and the click-through rate (CTR) by 41% compared to mass, non-personalized mailings. Additionally, it has been established that recommendation systems based on AI algorithms generate up to 35% of the total revenue of e-commerce platforms, while the use of personalized landing pages contributes to an increase in the conversion rate by an average of more than twofold (by 202%).

The functional effectiveness of such solutions is driven by the ability of machine learning algorithms to perform a comprehensive analysis of behavioral and transactional consumer data, including purchase history, activity on web resources, interaction with digital content on social networks, and other digital footprints. Based on this, detailed personalized user profiles are formed, which allows for the generation of relevant offers that are maximally aligned with the current needs and preferences of customers.

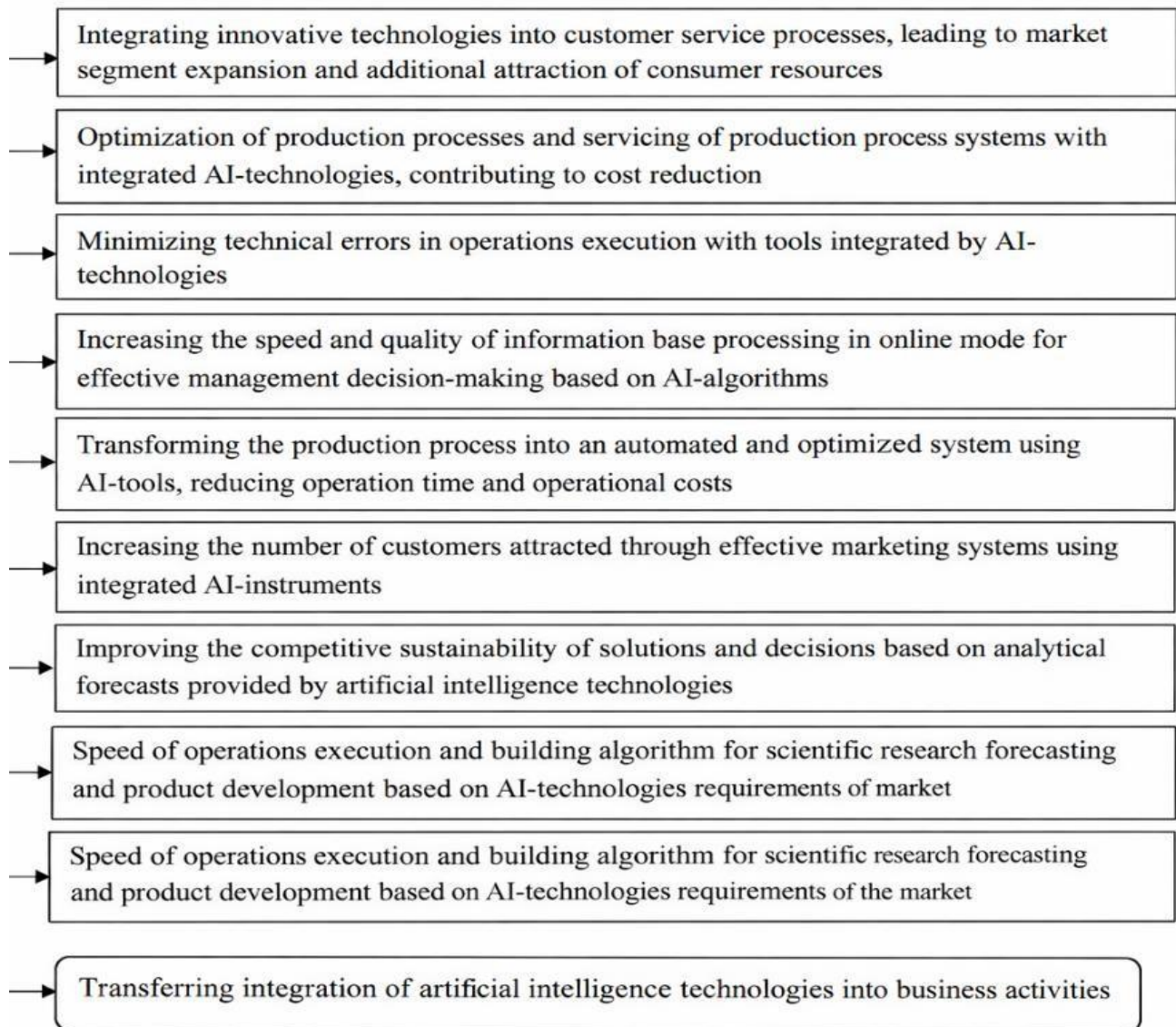


Fig. 1.9. Benefits of implementing AI technologies in enterprise operations

The research results, presented in Table 1.2, demonstrate the significant positive impact of AI tools on key marketing performance metrics. The most pronounced effects were recorded in the growth of the conversion rate (+104.3%) and CTR (+71.4%), which is explained by the high accuracy of target segment identification and the possibility of dynamic optimization of marketing messages in real-time. At the same time, a 35.7% reduction in customer acquisition costs contributes to increased efficiency in the use of marketing resources and growth in return on investment in marketing (Oliinyk, 2026).

Table 1.2

Comparative analysis of marketing campaign effectiveness with and without the use of AI tools

Metric	Without AI	With AI	Growth, %
Conversion Rate	2.3%	4.7%	+104.3
Customer Acquisition Cost (CAC), \$	48.50	31.20	-35.7
Return on Marketing Investment (ROMI), %	287%	412%	+43.6
Open Rate	18.7%	24.1%	+28.9
Click-Through Rate (CTR)	2.1%	3.6%	+71.4
Retention Rate	67%	81%	+20.9
Customer Lifetime Value (LTV), \$	847	1124	+32.7

The application of AI solutions in marketing is quite effective, particularly in content generation, ensuring that content is engaging for potential consumers, relevant, and more efficient in its use. Integrating AI technologies into an enterprise's marketing system helps expand the business audience, facilitating productivity optimization with minimal costs. With AI technologies, the process of analyzing consumer behavior and making decisions based on ready-made algorithms, while taking risk levels into account, becomes quite simple. This approach facilitates the adoption of the most optimal, scientifically grounded, and economically viable decisions for the company.

Unlike large corporations, small and medium-sized enterprises (SMEs) often function under conditions of strict financial, time, and personnel constraints. Traditional marketing methods require significant investments, which puts SMEs at a disadvantage compared to market players with large marketing budgets. The development of AI-based tools is becoming a critical factor that allows for the optimization of operational activities and ensures competitiveness. The transition from manual, labor-intensive tasks to automated, data-driven strategies is a key stage in the evolution of marketing.

To understand the nature of this impact, it is appropriate to classify existing tools into three strategic areas (Table 1.3):

- Content lifecycle management: Tools such as Jasper AI, Canva, Lumen5, and MarketMuse allow for a significant reduction in the "cost of creation" per unit of content while maintaining high quality.

- Customer lifecycle management: Platforms such as HubSpot, Zoho CRM, and Phrasee ensure the increased effectiveness of touchpoints, allowing for automated personalized communication.
- Data and analytics: Tools such as Brandwatch, Adzooma, and Hootsuite transform unstructured social and behavioral data into clear insights for decision-making (AI and Marketing for SMEs).

Table 1.3

Classification of AI-Driven Marketing Tools for Small and Medium-sized Enterprises (SMEs)

Tool Name	Core Functionality	Primary AI Capability	Strategic Benefit for SMEs
Jasper AI	Content Generation	Natural Language Processing (NLP)	Brand voice consistency; efficiency at scale
HubSpot	CRM & Automation	Predictive Analytics	Streamlined operations; personalized customer engagement
Phrasee	Email Marketing	Language Pattern Analysis	Optimized CTR; higher conversion rates
Canva	Graphic Design	Generative Design	Professional visual identity without specialized staff
Hootsuite	SMM Management	Predictive Scheduling	Multi-channel efficiency; optimized post timing
MarketMuse	Content Strategy	Semantic Analysis / SEO	Enhanced organic visibility; identification of content gaps
Adzooma	Online Advertising	Automated Optimization	Budget maximization; simplified campaign management
Brandwatch	Market Intelligence	Sentiment Analysis	Data-driven audience insights; reputation management
Zoho CRM	CRM & Lead Management	Predictive Modeling	Improved lead conversion; enhanced customer relationships

Tool Name	Core Functionality	Primary AI Capability	Strategic Benefit for SMEs
Lumen5	Video Marketing	Text-to-Video Generation	Low-barrier multimedia content production
ChatGPT/Gemini	General Ideation	Large Language Models (LLMs)	Rapid prototyping; low-cost strategic support

AI can bring significant benefits to enterprises; however, to implement AI and ensure its high efficiency, enterprise management needs to understand exactly how AI can be useful in performing specific functions and tasks. Thus, AI can be used in various aspects of enterprise activity: production management, investment management, marketing management, financial management, and human resource management (Oriekhov, 2024). The main directions of AI application in enterprise management are presented in Table 1.4.

Table 1.4

Main directions of AI application in enterprise management

Management Aspect	Directions of AI Technologies Usage
Production Management	1. Intelligent production planning: application of machine learning models to forecast the results of production processes under conditions of uncertainty and variability of the external environment. 2. Dynamic optimization of production capacities: adaptive regulation of equipment workload in accordance with demand and resource constraints. 3. Forecasting of production risks: identification of potential deviations in technological processes based on the analysis of historical and current data. 4. Intelligent quality control: use of computer vision and neural networks for automated detection of product defects. 5. Inventory management: demand forecasting and automatic adjustment of inventory levels.
Investment Management	1. Analysis of investment risks: use of artificial intelligence algorithms to assess the probability of losses and formation of project risk profiles. 2. Support of investment decisions: multifactor analysis of market data to form optimal investment strategies. 3. Automation of analytical reporting: generation of structured investment reports using natural language processing.

Management Aspect	Directions of AI Technologies Usage
	4. Monitoring of market dynamics: continuous tracking of changes in financial indicators in real time.
Marketing Management	1. Consumer behavior analysis: processing of large data sets to identify patterns of purchasing behavior. 2. Target audience segmentation: automated grouping of customers based on behavioral and demographic characteristics. 3. Generation of marketing content: creation of advertising texts using generative models. 4. Optimization of marketing campaigns: increasing the efficiency of advertising strategies based on predictive analytics. 5. Personalization of communications: adaptation of offers to individual customer needs.
Financial Management	1. Automation of financial accounting: processing of accounting operations with minimization of human intervention. 2. Detection of financial anomalies: identification of errors and fraudulent operations in real time. 3. Cash flow forecasting: modeling of future financial results of the enterprise. 4. Optimization of financial decisions: support of managerial decisions based on analytical models.
Human Resource Management	1. Automated recruiting: analysis of resumes and selection of candidates according to job requirements. 2. Intelligent interviews: use of virtual interviewers and analysis of candidates' speech. 3. Personnel evaluation: analysis of productivity, competencies and professional development of employees. 4. Real-time personnel management: monitoring of attendance and staff turnover. 5. Forecasting of personnel needs: determination of future staffing requirements.
Logistics Management	1. Optimization of delivery routes: multicriteria planning of transport flows. 2. Supply chain management: synchronization of supply, production and distribution. 3. Forecasting of logistics risks: identification of potential disruptions in supply. 4. Reduction of logistics costs: optimization of the use of transport resources. 5. Increasing delivery speed: automated route planning in real time.

According to analytical conclusions of Accenture, the implementation of solutions based on AI is a powerful driver of labor productivity optimization, which in the long-term perspective (until 2035) ensures its growth at the level of 40%. In

particular, for the U.S. economy, an increase in productivity indicators of approximately 35% is projected over the next decade. Along with microeconomic effects, the large-scale implementation of AI acts as a catalyst for macroeconomic growth, capable of doubling the corresponding rates in developed countries and ensuring a 38% increase in business profitability. In this context, the development of institutional mechanisms for AI integration becomes a strategic imperative for modern enterprises, which will allow not only to fully accumulate its economic potential, but also to ensure a sustainable trajectory of business model development (Deloitte).

The current stage of development of AI technologies is characterized by a high dynamics of evolutionary changes, which is accompanied by the simultaneous limitation of their applied universality. Despite significant progress, algorithmic solutions do not always demonstrate an appropriate level of adaptability to variable and unstable operating environments, which determines the need for systematic testing, validation, and the development of more flexible and scalable models. At the same time, the spread of AI technologies actualizes a number of socio-economic challenges, in particular the risks of workforce displacement as a result of the automation of production and management processes. In this context, the formation of effective mechanisms for the professional transformation of human capital acquires particular importance, including retraining and continuous learning programs.

In the strategic dimension, AI acts as a key driver of the transformation of modern management paradigms. Its application goes beyond operational automation and covers the processes of strategic planning, analytical forecasting, individualization of managerial decisions, and integration of innovative approaches into enterprise business models (Fig. 1.10). This creates preconditions for increasing the adaptability of organizations to conditions of global instability and growing competition (Tkachenko, Mezheryskyi, 2024).

Thus, AI is expanding its influence across various aspects of modern enterprise management. Only by actively embracing this wave of change can enterprises remain competitive. Confronted with both the opportunities and challenges posed by AI, companies need to assess their situation and formulate their own strategy for

integrating AI into business processes. To achieve this, enterprises must increase investments in AI, establish a well-governed data management system, develop intelligent business processes, and implement advanced decision-making mechanisms. At the same time, significant attention should be paid to talent development and the formation of teams that possess expertise in both management processes and AI technologies, enabling the creation of a new mode of human-machine collaboration and the attainment of additional competitive advantages.

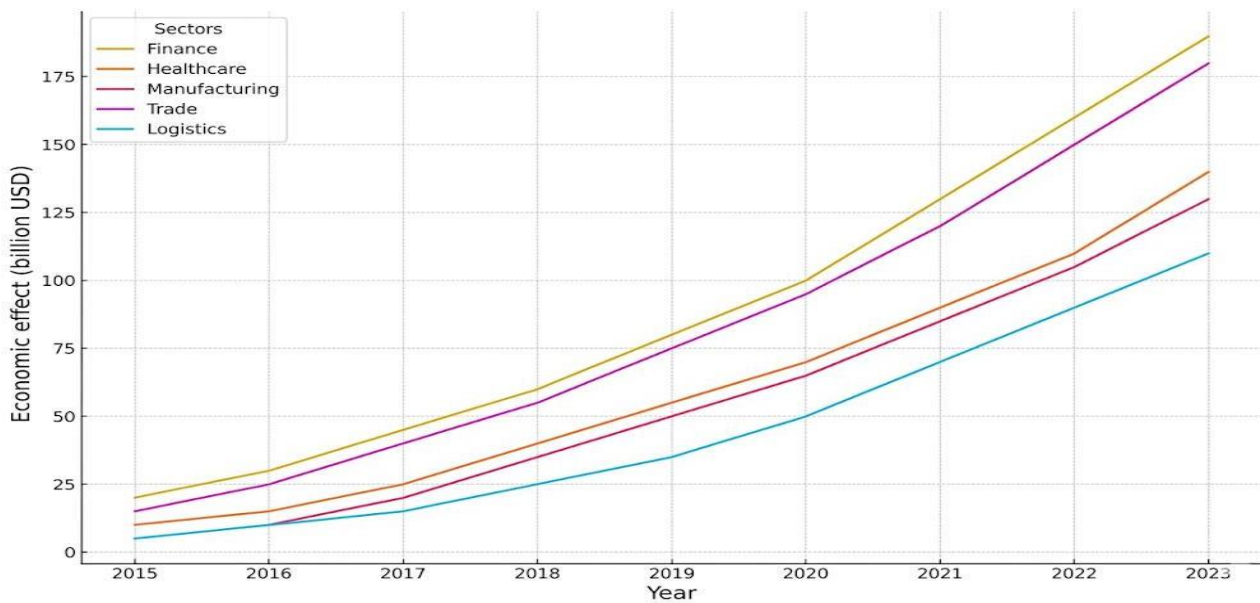


Fig. 1.10. Economic Effect of AI Technology Implementation

Conclusions. At the current stage of development, AI acts as a key driver in transforming management approaches, enabling a transition toward proactive, data-driven, and predictive models of management. Its integration into business processes enhances the validity of managerial decision-making and increases enterprises' adaptability to changes in the external environment. The analysis indicates a steady growth in the adoption of AI within the business sector, although disparities persist across industries and firm sizes. AI is most actively applied in marketing, human resource management, and general management, where it facilitates process automation and the personalization of customer interactions. Its impact on marketing effectiveness is particularly significant, as evidenced by increased conversion rates, reduced costs, and improved profitability. In the field of human resource management,

AI optimizes personnel processes, although its application in strategic areas remains limited. At the same time, the implementation of intelligent technologies is associated with risks, including algorithmic bias, privacy concerns, and a shortage of relevant competencies. The key advantages of AI include increased productivity, cost optimization, and enhanced enterprise competitiveness.

Forecasts regarding the future applications of AI in enterprises are promising; however, this growth must take into account data privacy, workforce development, ethical considerations related to AI implementation, and compliance with regulatory requirements. It is critically important for organizations to approach AI adoption with careful planning, continuous evaluation, and a commitment to responsible and accountable use of AI technologies, ensuring their harmonious integration into the enterprise structure.

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