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Innovative Approaches to Human Resource Management in the Context of Digital Economic Transformation

Abstract. Introduction. The current stage of economic development is characterized by profound transformation processes driven by digitalization, the rapid advancement of information technologies, the automation of business processes, and the growing role of human capital in ensuring the competitiveness of enterprises. Under these conditions, traditional approaches to workforce management are gradually losing their effectiveness, highlighting the need to develop and implement new innovative models of human resource management.

Purpose. The purpose of the article is to examine contemporary innovative approaches to work-force management in the context of the digital transformation of the economy and to identify strategic directions for improving human resource management systems.

Results. The article examines the impact of digital transformation on the labor market and work-force management systems. It is established that automation and the adoption of digital technologies reduce the need for routine operations while simultaneously increasing demand for cognitive, social, and creative competencies. The necessity of transitioning from traditional administrative HRM models to innovative approaches based on agile methodologies, HR analytics, artificial intelligence, People Analytics, and continuous employee learning systems is substantiated. It is determined that key areas of transformation include the development of data-driven HR systems, the enhancement of employees' digital competencies, the integration of human and artificial intelligence, and the establishment of flexible organizational work models. Particular attention is paid to fostering a culture of continuous learning, developing workforce adaptability, and managing Employee Experience as important factors in ensuring workforce effectiveness.

Conclusions. It is demonstrated that, in the context of the digital transformation of the economy, innovative approaches to workforce management are becoming a strategic factor in enhancing enterprise competitiveness. The effective adaptation of HRM systems requires comprehensive changes at the technological, organizational, and cultural levels, thereby facilitating human capital development, improving labor productivity, and strengthening enterprise resilience in a dynamic market environment.

Keywords: digital transformation; HR analytics; human resource management; reskilling and upskilling; employee experience.

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Інноваційні підходи до управління трудовими ресурсами в умовах цифрової трансформації економіки

Анотація. Сучасний етап розвитку економіки характеризується глибокими трансформаційними процесами, зумовленими цифровізацією, стрімким розвитком інформаційних технологій, автоматизацією бізнес-процесів та зростанням ролі людського капіталу у забезпеченні конкурентоспроможності підприємств. У цих умовах традиційні підходи до управління трудовими ресурсами поступово втрачають ефективність, що актуалізує необхідність пошуку нових інноваційних моделей управління персоналом.

Метою статті є дослідження сучасних інноваційних підходів до управління трудовими ресурсами в умовах цифрової трансформації економіки та визначення стратегічних напрямів удосконалення систем управління людськими ресурсами.

У статті досліджено вплив цифрової трансформації на ринок праці та систему управління трудовими ресурсами. Встановлено, що автоматизація та впровадження цифрових технологій зменшують потребу у виконанні рутинних операцій і водночас підвищують попит на когнітивні, соціальні та творчі компетенції. Обґрунтовано необхідність переходу від традиційних адміністративних моделей HRM до інноваційних підходів, заснованих на agile-методологіях, HR-аналітиці, штучному інтелекті, People Analytics та системах безперервного навчання персоналу. Визначено, що важливими напрямками трансформації є формування data-driven HR-систем, розвиток цифрових компетенцій працівників, інтеграція людського та штучного інтелекту, а також побудова гнучких організаційних моделей праці. Особливу увагу приділено розвитку культури безперервного навчання, адаптивності персоналу та управлінню Employee Experience як важливим чинником забезпечення ефективності трудових ресурсів.

Доведено, що в умовах цифрової трансформації економіки інноваційні підходи до управління трудовими ресурсами стають стратегічним чинником підвищення конкурентоспроможності підприємств. Ефективна адаптація систем HRM потребує комплексних змін на технологічному, організаційному та культурному рівнях, що забезпечить розвиток людського капіталу, підвищення продуктивності праці та стійкість підприємств в умовах динамічного ринкового середовища.

Ключові слова: цифрова трансформація; HR-аналітика; управління персоналом; reskilling та upskilling; employee experience.

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Statement of the problem. The current stage of economic development is characterized by profound transformational processes driven by digitalization, the rapid advancement of information technologies, the automation of business processes, and the growing role of human capital in shaping the competitive advantages of enterprises. Under such conditions, labor resources are becoming one of the key factors ensuring the efficient functioning and strategic development of business entities. Traditional approaches to labor resource management are gradually losing their effectiveness, as they no longer fully meet the modern requirements of the digital economy, which demands greater flexibility, adaptability, and speed in managerial decision-making.

The implementation of innovative approaches to labor resource management is becoming increasingly relevant, particularly those based on the use of digital platforms, HR analytics, artificial intelligence, automated personnel management systems, and modern tools for employee competency development. The application of these approaches contributes to increased labor productivity, optimization of HR processes, the formation of an effective motivation system, and improved adaptability of enterprises to changes in the external environment. At the same time, the insufficient level of digital readiness of enterprises, the shortage of qualified personnel, and the rapid transformation of the labor market necessitate further research into innovative mechanisms of labor resource management in the context of the digital transformation of the economy.

The Fourth Industrial Revolution, unfolding against the backdrop of the rapid spread of digital technologies, is fundamentally transforming the functioning of the labor market and the principles of labor resource management. The automation of routine operations, the implementation of artificial intelligence (AI), cloud computing, and platform-based business models are reshaping not only the nature of labor activity but also the organizational structures of enterprises, forms of

employment, and requirements for employee competencies.

Traditional approaches to human resource management (HRM), designed for a stable environment and long-term planning horizons, are becoming increasingly inadequate in addressing the challenges of the digital economy. Instead, greater emphasis is being placed on organizational flexibility, the ability of enterprises to rapidly acquire new competencies, and a strategic focus on the continuous development of human capital.

An analysis of recent studies and publications. The issue of the impact of digital transformation on the labor market and human resource management has become the subject of active scientific discussion in international academic literature.

A fundamental contribution to understanding the macroeconomic consequences of automation was made by Daron Acemoglu and Pascual Restrepo [1]. The researchers developed a theoretical model explaining the mechanisms of job displacement and job creation under the influence of technological progress. The authors demonstrate that, despite its disruptive impact on certain employment categories, automation generates demand for new forms of labor in the long run that remain inaccessible to machines. At the same time, they emphasize that the pace of technological change may exceed the speed of labor market adaptation, which highlights the need for an active role of governments and employers in workforce retraining.

In the work of David Autor, Frank Levy, and Richard Murnane [2], the impact of technological change on the transformation of job content and the structure of demand for labor resources is examined. The authors argue that the development of digital technologies and automation primarily replaces routine cognitive and manual tasks, while increasing demand for employees capable of performing non-routine analytical, communication, and managerial functions. The study proves that technological progress shifts the focus of labor

resource management from traditional personnel administration toward competency development, adaptability, and continuous professional learning.

The conceptual foundations of business digital transformation are thoroughly explored in the seminal work of Erik Brynjolfsson and Andrew McAfee [3]. In the monograph “The Second Machine Age”, the authors analyze how digital technologies are changing the nature of work: medium-complexity cognitive tasks are increasingly being performed by algorithms, while demand is growing at two opposite ends of the labor spectrum—highly educated specialists with creative and analytical thinking, and manual workers whose tasks remain difficult to automate. This labor market “polarization” has direct implications for HRM strategies, as enterprises are forced to rethink the structure and strategic management of their labor resources.

The issue of applying artificial intelligence directly in the field of human resource management is explored by Thomas Davenport in collaboration with Rajeev Ronanki [4]. The authors systematize the key directions of AI implementation in HR functions, ranging from automated resume screening and chatbots for onboarding new employees to predictive analytics for employee turnover and personalized learning programs. The researchers emphasize that AI does not replace HR managers but rather frees them from routine operations, allowing professionals to focus on strategic aspects of human capital development.

The report Deloitte “Global Human Capital Trends 2023: New Fundamentals for a Boundaryless World” [5] analyzes the key global trends in the transformation of human capital management under conditions of digitalization, labor market instability, and rapid technological development. Particular attention is paid to the need for developing new approaches to labor resource management based on flexibility, adaptability, and digital competencies. The authors emphasize that modern enterprises must rethink traditional HR models by integrating digital technologies, HR analytics, artificial intelligence, and continuous learning tools. The practical significance of the study lies in substantiating the importance of creating innovative labor resource management systems capable of enhancing labor productivity, employee engagement, and enterprise resilience in the context of the digital transformation of the economy.

The transformation of organizational management structures in the era of digitalization is comprehensively analyzed by Krisztián Dery and co-authors [6]. Their study, based on a survey of 281 enterprises, demonstrates a statistically significant relationship between the level of an organization’s digital maturity and its ability to attract, retain, and develop talent. Companies with a higher level of digitalization show greater labor productivity, better employee engagement indicators, and lower staff turnover, making the digitalization of HR processes a strategic priority.

The long-term dimension of the transformation of labor relations and career models is explored by Lynda Gratton and Andrew Scott [7]. In their book “The 100-Year Life”, the authors substantiate the concept of a “multi-stage” career path, which is expected to replace the traditional three-stage model (education – career – retirement). In the context of increasing life expectancy and the accelerating pace of technological progress, continuous learning and reskilling are becoming integral components of every employee’s career path. This creates fundamentally new challenges for HR systems, requiring support for lifelong learning rather than limiting employee development to the initial stages of professional activity.

The purpose of the article is to investigate modern innovative approaches to labor resource management in the context of digital transformation and to identify strategic directions for improving human resource management (HRM) systems.

Presentation of the main material. Digital transformation has a complex and contradictory impact on the structure of employment. On the one hand, the automation and algorithmization of labor processes reduce demand for routine cognitive and physical tasks. According to McKinsey Global Institute [8], approximately 30% of tasks across most sectors of the economy are already technically automatable, and by 2030 this share may increase to 60% in certain industries. However, task automation is not equivalent to the automation of occupations as a whole: most jobs consist of a diverse set of tasks, and only some of them can be replaced by machines.

On the other hand, digitalization creates new demand for competencies that remain inaccessible to machines, including creative and critical thinking, empathy, complex interpersonal communication, and the ability to manage under uncertainty. The study by David Autor and co-authors [2] convincingly demonstrates that digital transformation particularly increases demand for “social” skills such as leadership, negotiation, and teaching others, while demand for analytical skills grows primarily when combined with social competencies rather than as an independent factor. This means that even highly qualified technical specialists increasingly require well-developed soft skills.

One of the most significant structural shifts is the expansion of platform-based employment and the gig economy. Research by McKinsey Global Institute [8] indicates that up to 20–30% of the working population in developed countries is engaged in various forms of independent project-based work. This creates fundamentally new challenges for HRM systems, particularly the need to manage an “extended workforce” that includes not only full-time employees but also freelancers, partners, and bots.

A key issue for most enterprises is the development of strategies for enhancing digital competencies. Research by Deloitte [5] found that 77% of executives consider digital reskilling and upskilling of employees to be the

most critical HRM challenge for the coming decade. At the same time, traditional approaches to corporate learning—such as short-term training sessions and catalog-based learning programs—are proving insufficient to ensure the pace of competency development required in the digital era.

The response to the challenges of digital transformation has been the development and widespread adoption of fundamentally new approaches to human resource management, which differ significantly from traditional HR practices.

Agile methodologies, originally developed in the field of software engineering, are increasingly being applied to personnel management practices. Agile HRM involves moving away from rigid hierarchical structures toward self-organized cross-functional teams, flexible planning through short iterative cycles (sprints), continuous feedback instead of annual performance reviews, and the rapid adaptation of HR processes to changes in the business environment.

An important element of the agile approach is the transformation of performance evaluation systems. Traditional annual appraisals are increasingly being replaced by continuous performance management, which includes regular feedback, check-in meetings, and OKRs (Objectives and Key Results). Klaus Schwab [9] emphasizes that in the era of the Fourth Industrial Revolution, an organization's ability to quickly assess and develop employee potential is becoming no less important than technological infrastructure itself.

The application of artificial intelligence in HRM extends far beyond recruitment automation. Modern AI systems cover the entire talent management cycle: predictive analytics identifies the risk of turnover among key employees 6–12 months before it occurs; machine learning algorithms personalize learning pathways based on competency profiles and career goals; and NLP systems analyze employee engagement through corporate communications and surveys.

Leading digital companies are building “learning ecosystems” — integrated platforms that combine microlearning, social learning (peer learning), mentoring, and AI-driven personalization. Amazon, for example, announced an investment of \$700 million in reskilling 100,000 employees by 2025, while AT&T implemented the Future Ready program, covering 100,000 engineers and enabling the company to avoid mass layoffs during its digital transformation process [8].

Lynda Gratton and Andrew Scott [7] substantiate the concept of “intangible assets” in modern careers, which includes not only knowledge and skills but also the quality of social connections, reputation, and the ability to continuously rethink one's professional identity. Managing the development of employees' intangible assets is becoming a new function of progressive HR systems, extending beyond traditional learning and development management.

In response to these challenges, progressive companies are expanding the concept of personnel management toward Employee Experience (EX) management, focusing on the holistic experience of employees in their interactions with the organization. Erik Brynjolfsson and Andrew McAfee [3] emphasize that in an environment where top talent is increasingly targeted by competitors' recruitment algorithms, the quality of internal employee experience becomes a key factor in talent retention.

The key elements of a digital well-being strategy include the right to disconnect, flexible work arrangements (hybrid employment), digital workplace ergonomics, mental health support programs, and the development of a culture of psychological safety, where employees are not afraid to make mistakes in conditions of constant change.

National experience further illustrates how these global trends are being adapted by domestic enterprises. Grebeniuk [10] identifies four principal directions of digital technology implementation in Ukrainian personnel management practice — the use of artificial intelligence, cloud-based storage and services, chatbots, and virtual and augmented reality tools — and demonstrates that their application allows managers to make more substantiated and objective personnel decisions. A similar conclusion is reached by Chernikova, Voronina, and Chebotarov [11], who show that Ukrainian enterprises increasingly rely on an innovative approach based on HR-technologies: its implementation considerably reduces the time required for transmitting personnel information, increases the productivity of HR functions, and strengthens the overall effectiveness of personnel management activity.

A more technologically integrated perspective is offered by the concept of HR-engineering, which combines digital tools directly with the design of personnel management processes. Vedernikov, Chernushkina, and Kropyvnytskyi [12] examine digital HR-engineering instruments used by domestic enterprises, including AI-based systems for candidate screening, talent search, competency-fit assessment, and interview scheduling, and conclude that such instruments enable a more systematic, technologically integrated approach to workforce formation under conditions of digitalization.

At the same time, Ukrainian researchers emphasize that digital HR transformation generates not only opportunities but also significant challenges for entrepreneurial structures. Vorobets and Mokhnatskyi [13] show that, alongside the potential for improved HR efficiency, enterprises — particularly small and medium-sized businesses — face barriers such as insufficient digital competencies among staff, limited financial and technological resources, and the absence of a clearly defined implementation strategy, all of which slow the pace of digital transformation. A complementary conclusion follows from the study by Zlenko, Liashchenko, and Zlenko [14], who demonstrate that the digital

transformation of the personnel management system — implemented through artificial intelligence, cloud technologies, and analytical platforms that automate recruitment, adaptation, training, and performance evaluation — increases labor productivity and optimizes resource use, but at the same time requires enterprises to strengthen cybersecurity, cultivate a digital organizational culture, and adapt managerial decision-making practices to the new technological environment.

The systematization of the approaches discussed makes it possible to identify the key strategic directions for transforming labor resource management systems in the digital economy.

First, there is a transition from the administrative to the strategic function of HR. In the context of digital transformation, the HR department should be positioned not as a service function but as a strategic business partner responsible for developing the organizational capabilities necessary for implementing a digital strategy [6]. This requires, in particular, the involvement of HR directors in strategic planning and investments in the analytical capabilities of HR teams.

Second, the development of data-driven HR systems is essential. Managerial decisions in the field of personnel management should be based on data and predictive analytics rather than intuition and tradition. The implementation of HR metrics, People Analytics platforms, and the integration of HR data with enterprise business analytics are necessary conditions for effective human resource management in the digital era [4].

Third, there is a need to foster a culture of continuous learning and adaptability. Enterprises seeking to successfully navigate digital transformation must purposefully develop a learning organization in which acquiring new knowledge and skills becomes the norm

rather than the exception. This requires not only investments in training programs but also changes in cultural norms, incentive systems, and organizational structures [7].

Fourth, there is a need to rethink organizational forms of work. The expansion of remote, hybrid, and project-based employment requires new approaches to team organization, coordination, and the maintenance of corporate culture in distributed teams. Daron Acemoglu and Pascual Restrepo [1] warn that organizations unable to effectively integrate humans and machines into collaborative work processes will lose competitive advantage to those that succeed in doing so.

Fifth, the integration of human and artificial intelligence is becoming increasingly important. A promising model of labor resource management is based not on replacing humans with machines, but on enabling effective collaboration between them—an “augmented workforce,” where AI takes over routine and computational tasks, freeing human potential for creativity, strategic thinking, and empathy [9].

Conclusions. The digital transformation of the economy significantly reshapes the labor market by reducing the demand for routine tasks while simultaneously increasing the need for cognitive, social, and creative skills. This requires the modernization of approaches to labor resource management and employee development. Modern HR practices, including agile approaches, AI-driven analytics, and continuous learning systems, are shaping a new model of human resource management that moves away from traditional administrative methods. Effective adaptation of HRM requires comprehensive changes at the technological, organizational, and cultural levels.

References:

1. Acemoglu, D., & Restrepo, P. (2022). Tasks, automation, and the rise in US wage inequality. *Econometrica*, 90(5), 1973–2016. <https://doi.org/10.3982/ECTA19815>.
2. Autor, D. H., Levy, F., & Murnane, R. J. (2003). The skill content of recent technological change: An empirical exploration. *The Quarterly Journal of Economics*, 118(4), 1279–1333. <https://doi.org/10.1162/003355303322552801>.
3. Brynjolfsson, E., & McAfee, A. (2014). *The second machine age: Work, progress, and prosperity in a time of brilliant technologies*. W. W. Norton & Company. <https://books.google.com/books?id=BVKNEAAQBAJ>.
4. Davenport, T. H., & Ronanki, R. (2018). Artificial intelligence for the real world. *Harvard Business Review*, 96(1), 108–116. <https://hbr.org/2018/01/artificial-intelligence-for-the-real-world>.
5. Deloitte. (2023). Global human capital trends 2023: New fundamentals for a boundaryless world. Deloitte Insights. <https://www.deloitte.com/us/en/insights/focus/human-capital-trends/2023.html>.
6. Dery, K., Sebastian, I. M., & van der Meulen, N. (2017). The digital workplace is key to digital innovation. *MIS Quarterly Executive*, 16(2), 135–152. <https://aisel.aisnet.org/misqe/vol16/iss2/4>.
7. Gratton, L., & Scott, A. (2016). *The 100-year life: Living and working in an age of longevity*. Bloomsbury Publishing. <https://www.bloomsbury.com/us/100year-life-9781472930163/>.
8. McKinsey Global Institute. (2021). *The future of work after COVID-19*. McKinsey & Company. <https://www.mckinsey.com/featured-insights/future-of-work/the-future-of-work-after-covid-19>.
9. Schwab, K. (2016). *The fourth industrial revolution*. World Economic Forum. <https://www.weforum.org/publications/the-fourth-industrial-revolution/>.
10. Grebeniuk, H. M. (2024). Transformational changes in personnel management under digitalization [in Ukrainian]. *Herald of Economics of Transport and Industry*, 86, 135–145. <https://doi.org/10.18664/btie.86.310116>.
11. Chernikova, N. M., Voronina, V. L., & Chebotarov, K. H. (2023). Innovative approaches to HR-process management at domestic enterprises [in Ukrainian]. *Transformational Economy*, 3, 74–81. <https://doi.org/10.32782/2786-8141/2023-3-12>.

12. Vedernikov, M., Chernushkina, O., & Kropyvnytskyi, B. (2024). Application of digital HR-engineering tools under conditions of the economy's digitalization [in Ukrainian]. Herald of Khmelnytskyi National University. Economic Sciences, 336, 65–72. <https://doi.org/10.31891/2307-5740-2024-336-11>.
13. Vorobets, T., & Mokhnatskyi, M. (2025). Digital transformation of personnel management: prospects and challenges for entrepreneurial structures [in Ukrainian]. Economy and Society, 73. <https://doi.org/10.32782/2524-0072/2025-73-71>.
14. Zlenko, A., Liashchenko, Yu., & Zlenko, Ya. (2024). Features of digital transformation of the personnel management system [in Ukrainian]. Public Administration: Concepts, Paradigm, Development, Improvement, 9, 18–31. <https://doi.org/10.31470/2786-6246-2024-9-18-31>.



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