

TALENT MANAGEMENT ISSUES IN THE CONTEXT OF DIGITAL ECONOMY

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Key words: digital HRM technologies, human resources, digital economy, talent management

Introduction. The 21st century's technological growth has been characterized by rapid advancements, convergence of technologies, and their pervasive impact on various aspects of society. One of its impact can be considered the formation of the digital economy, which is a driving force in shaping the modern world, influencing how businesses operate, how people work, and how societies function. Its continued growth and development are likely to have profound effects on various aspects of people's lives and the global economy. However, the subject of this transformation is a human, but highly educated and qualified, who needs guidance, support and motivation to maximize his potential. They are more sensitive, and the traditional form of human resource management may force them to leave the company either because of indifference or because of a misunderstanding. To do this, companies need to implement new approaches in their human resources management systems, from which all parties will benefit.

Scientific novelty. Our scientific novelty will be the proposal of approaches to implementation in the HR management system and ways to do it. We also offer politicians, employers and employees to cooperate in finding the right solution to human resource management issues, since if employee is not satisfied, he tend to leave the country in search of a more comfortable life and opportunities for growth which will lead to the loss of highly educated and skilled employees, which is also a loss for the country.

Methodology. In the article have been used theoretical research methods, such as methods of analysis, induction and deduction, as well as methods of description and generalization. In particular, the basics of the digital economy and human resources were presented using the description method, the growth and share of the digital economy in the gross domestic product (GDP) were presented using the analysis method. Using the comparative method, a comparison of the level of digitalization of developed countries was presented. Also, the issues of human resource management in the context of digital economy were presented by deduction method and local aspects (local companies example) were presented by induction, conclusion and ways of solutions made via generalization.

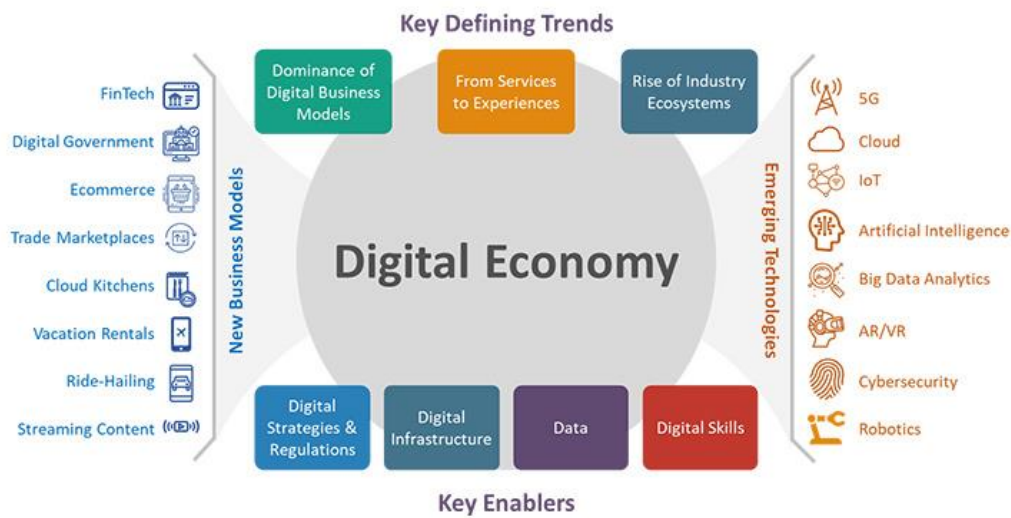
Literature review. Talent management is a critical aspect of organizational success, particularly in the context of the digital economy. The digital transformation of businesses has brought about significant changes in the way organizations manage their ta-

lent. McKinsey & Company identifies five core themes that drive the success of digital transformations: prioritizing hiring senior digital leaders, building a strong employee value proposition, developing a culture of innovation, creating a flexible and agile organization, and investing in employee development [McKinsey Digital, 2023]. Deloitte highlights the importance of mobility and flexibility for employees to remain relevant in the digital economy [Deloitte, 2016, 2]. Springer notes that HRM digital transformation has led to changes in employee-related functions such as recruiting, training, and evaluation [Jie & Zhisheng, 2023, 5]. Theintactone identifies challenges and opportunities for talent management, including setting standards for ethical behavior, increasing transparency, reducing complexities, developing a culture of reward and appreciation [Theintactone, 2019]. Therefore, talent management issues in the context of the digital economy are complex and multifaceted and require deep research and understanding for finding right solutions.

Analysis. The 21st century has witnessed an unprecedented surge in technological advancements, revolutionizing the way we live, work, and interact. Technology has become an integral part of our daily lives, influencing various aspects of society, economy, and culture. Its importance in shaping the trajectory of human progress cannot be overstated. One of the most evident and transformative impacts of technology in the 21st century is the revolution in communication. The rise of the internet, social media, and mobile devices has interconnected the world like never before. People can communicate instantaneously across borders, fostering global collaboration and breaking down traditional barriers. Social media platforms have empowered individuals to share ideas, mobilize for social causes, and create virtual communities, shaping the way societies perceive and engage with information. Technology has revolutionized education, making information more accessible and learning more interactive. Online platforms offer a plethora of educational resources, enabling self-directed learning and breaking down geographical constraints. Virtual classrooms and e-learning tools have become integral components of education, providing flexibility and personalized learning experiences. The democratization of information through technology has empowered individuals, fostering a culture of continuous learning and skill development.

In the realm of the global economy, technology has been a driving force behind unprecedented transformations. Digitalization, automation, and artificial intelligence have reshaped industries, creating new opportunities and challenges. E-commerce, online marketplaces, and digital payment systems have changed the way businesses operate and consumers shop. The Fourth Industrial Revolution, characterized by the integration of smart technologies into manufacturing and production processes, has ushered in a new era of efficiency and innovation. This whole process becomes the basis for the formation of the digital economy. But what is meant by the concept of “Digital Economy”? Accor-

ding to Oxford Learners Dictionary, it refers to an economy that functions mostly through the use of digital technology, especially the internet [Oxford Learner Dictionary]. In other words – it refers to the economic activities that are driven by digital technologies, data, and connectivity.



Picture 1. Digital Economy and Its Characteristics [Huawei, 2021]

It encompasses a wide range of digital technologies and applications that have transformed traditional industries, created new business models, and influenced the way people live and work. The digital economy is characterized by the rapid and pervasive use of digital technologies, including the internet, mobile devices, cloud computing, big data, artificial intelligence, and the Internet of Things (IoT) (see Picture 1.).

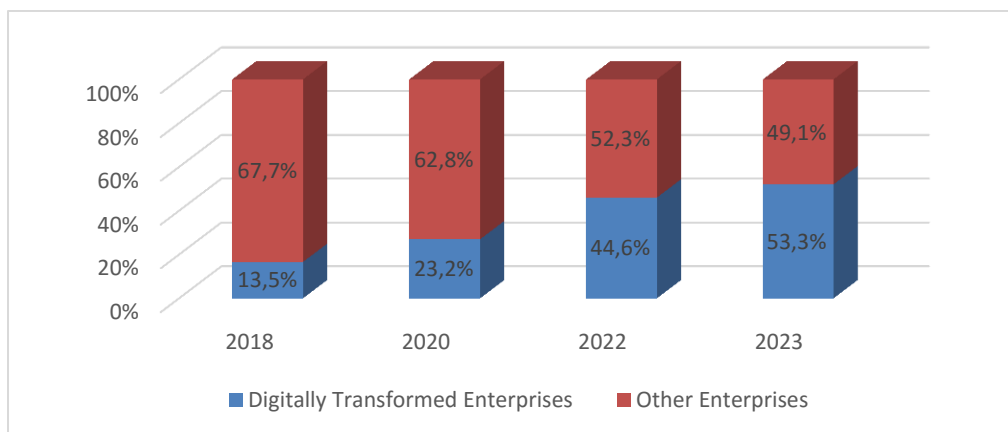


Figure 1. Nominal GDP driven by digitally transformed and other enterprises worldwide from 2018 to 2023 (in trillion U.S. dollars) [Statista, 2023]

While in 2018, digitally transformed enterprises accounted for 13.5 trillion U.S. dollars of the global nominal GDP, in 2023 they are forecast to account for 53.3 trillion U.S. dollars, more than half of the overall nominal GDP. This signals that digital supremacy in the global economy is near (see Figure 1.).

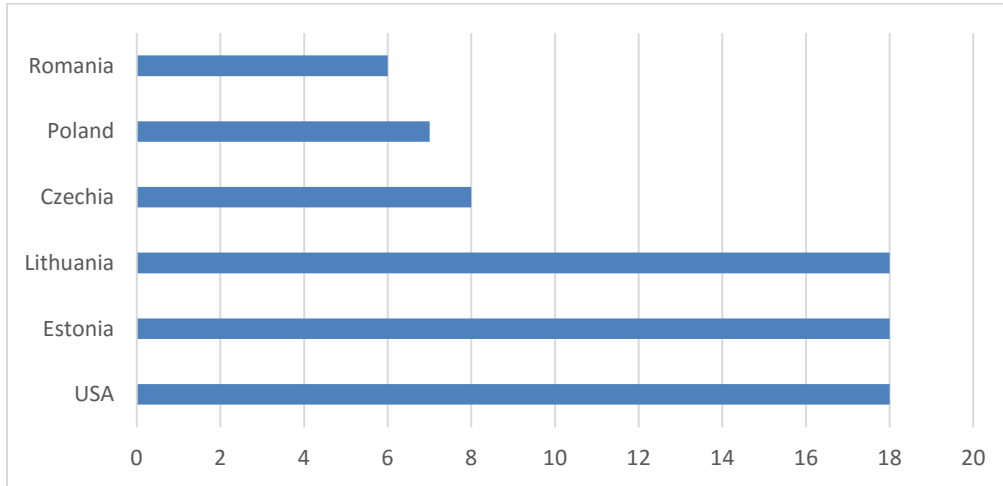


Figure 2. Digital economy value as a share of gross domestic product (GDP) in USA, Central and Eastern Europe (CEE) in 2021 (%) [Statista, 2023] [Alger, 2022]

The share of the digital economy relative to U.S. GDP has increased from 11% in 2005 to an estimated 19% in 2022. During this period, the compounded annual growth rate of the digital economy was approximately 300 basis points greater than that of U.S. GDP growth [Alger, 2022]. Estonia, Latvia, and Lithuania had the highest value of digital economy as a share of gross domestic product (GDP) among the presented Central and Eastern European (CEE) countries, at 18 percent each in 2021. To compare, in Czechia, the value of digital economy represented eight percent of GDP (Figure 2.) [Statista, 2022].

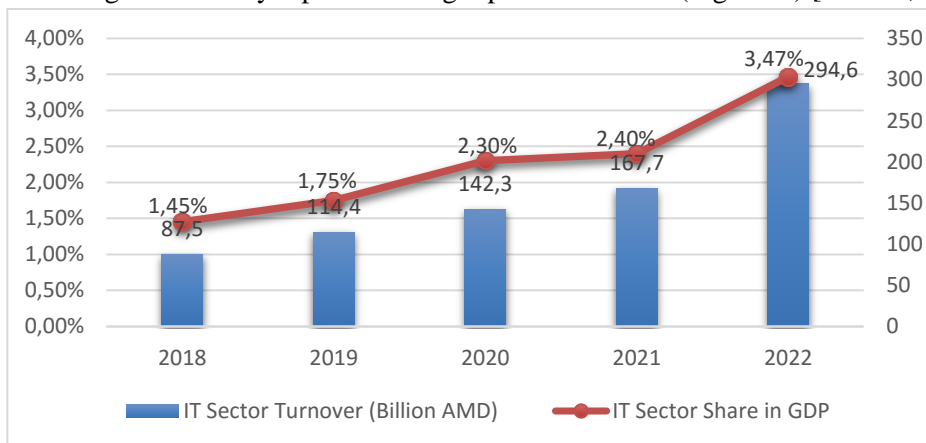


Figure 3. IT Sector in RA [Statistical Committee of RA, 2023]

The World Bank estimates that the digital economy contributes to more than 15% of global gross domestic product (GDP), and in the past decade, it has been growing at two and a half times faster than physical world GDP [WEF, 2022]. Armenia, as a developing country, cannot stay away from the process of digital economy formation and has been actively working on developing its Information and Communication Technology (ICT) sector. As we can see from Figure 3, its share in GDP is growing every year and in 2022 amounted to 3.47%. The government has implemented initiatives to promote the growth of the technology industry, including tax incentives and support for startups. Yerevan, the capital of Armenia, has been emerging as a hub for tech startups. The government has supported various initiatives to foster entrepreneurship and innovation. There are startup incubators, accelerators, and events that aim to support and highlight the talent in the technology sector [Ministry of HTI, RA, 2023]. In addition, Armenia has a strong emphasis on education in science and technology fields. The country produces a significant number of IT professionals, and many Armenians are employed in the global IT industry. The presence of skilled IT professionals is crucial for the development of the digital economy. The Armenian government has been working on implementing e-government initiatives to improve public services, increase efficiency, and reduce bureaucracy. This includes the digitization of various government services and the introduction of online platforms for citizens [The Electronic Government of the RA, 2023].

The development of digital infrastructure, including high-speed internet connectivity and digital payment systems, is crucial for the growth of the digital economy. Armenia has been investing in improving its digital infrastructure to support the increasing demands of the technology sector. The success of the digital economy is influenced by various factors, including political stability, economic conditions, and global market trends.

The subject of above-mentioned development is the human with his human capital. Human capital was touched upon by Adam Smith in his work back in the 18th century. He noted that for the formation of talents, their education, training or retraining require a lot of money, and this money must be considered as human capital. These talents are part of the potential of the organization as well as society [Smith, 1776]. Jacob Mincer's article is also important, in which the author explains the individual distribution of income among members of society solely as a result of their professional education [Mincer, 1958]. The owners of human capital are human resources that need to be managed, maintained and directed. Human Resource Management (HRM) in Armenia has been developing rapidly over the past few years. In this process take place organizations like the European Association for People Management (EAPM) which is a professional community that aims to develop the field of HRM in Armenia [EAPM, 2023]. They work towards introducing modern technologies and leading tools in HRM in Armenia, promoting the establishment of an effective HRM system. Armenian HR Association focuses on the development of HR managers and leaders in Armenia. It was founded in 2010 and has

about 80 members who are the leading specialists of the HR sphere and have come together to achieve common goals. The main mission of the Association is to develop a professional community in the field of HRM in Armenia, working towards the introduction of modern technologies and leading tools in HRM in Armenia, promoting the establishment of an effective HRM system through the combination of contemporary world experience and national peculiarities. The main directions of the activities of HR Association are: public awareness of HRM, professional development, improvement of HRM framework, HR Club meetings. Members of the Association are HR directors, HR managers, HR consultants, HR professionals, HR generalists, HR trainees and other HR-related specialists who represent companies from different spheres. In addition, the availability of HR software tools in Armenian has also been a significant achievement in the development of HRM in Armenia. HRDB is one such tool that is available in Armenian [HRDB, 2023]. This tool can help companies and their HR teams to manage their HR processes more efficiently. Therefore, it is expected that the field will continue to grow and develop in the coming years. The advent of the digital economy has brought about significant changes in the landscape of labor and employment. As technology continues to evolve, it reshapes the way people work, the skills they need, and the nature of employment relationships. This transformation has both positive and challenging implications for workers and employers alike.

❖ **Flexibility and Remote Work:** The digital economy has facilitated greater flexibility in work arrangements. Remote work, enabled by digital technologies, has become more prevalent, allowing employees to work from anywhere with an internet connection. This flexibility can enhance work-life balance and increase job satisfaction. However, it also raises challenges related to maintaining effective communication, collaboration, and addressing potential feelings of isolation among remote workers.

❖ **Skill Requirements and Lifelong Learning:** The digital economy places a premium on digital literacy and adaptability. Rapid technological advancements mean that skills become obsolete more quickly, necessitating a continuous focus on learning and upskilling. Employees are expected to embrace a mindset of lifelong learning to remain relevant in the evolving job market. Employers, in turn, may need to invest in training programs to ensure their workforce is equipped with the necessary skills.

❖ **Gig Economy and Platform Work:** Digital platforms have given rise to the gig economy, where individuals engage in short-term, freelance, or on-demand work facilitated by digital platforms. While this provides flexibility for workers, it also raises concerns about job security, access to benefits, and the delineation between independent contractors and traditional employees. Policymakers and businesses grapple with finding a balance that protects workers' rights without stifling the benefits of gig work.

❖ **Automation and Job Displacement:** Automation and artificial intelligence have the potential to streamline processes and boost efficiency but may also lead to job displace-

ment in certain sectors. As routine tasks become automated, there is an increased demand for workers with skills in areas such as data analysis, problem solving, and creativity. Addressing the potential negative impact on displaced workers requires thoughtful policies, retraining programs, and a societal commitment to supporting those affected.

❖ *Data Privacy and Security:* In the digital economy, data is a valuable asset, and concerns about privacy and security have become more pronounced. Employees entrust their personal information to employers, and maintaining the confidentiality and security of this data is paramount. Employers must navigate the ethical use of employee data, balancing the need for information with respect for individual privacy rights.

❖ *Workplace Culture and Well-being:* The digital economy has implications for workplace culture, communication, and employee well-being. The constant connectivity facilitated by digital tools can blur the lines between work and personal life, leading to potential burnout. Employers need to foster a supportive culture that promotes work-life balance, mental health, and employee well-being.

Above-mentioned process is being guided and implemented by human. Therefore, despite the technology growth including the use of artificial intelligence the human is the key player in whole process. However, not ordinary human – the highly educated person will be called talent. The robots and artificial intelligence can replace the job of not qualified human, but not talents, since machine cannot make judgement and think out of scope when talent can and will. In this context, there is a big problem to manage them – teach, guide, motivate, assess and promote. It is too sensitive, since talents are unique and it is too difficult to make a talent from the ordinary human, but too easy to lose them with the loss of whole efforts and resources invested. Therefore, the talent management is very sensitive issue and should be considered too serious then it is in nowadays companies.

Traditional human resources management (HRM) approaches have some disadvantages. Here are some common disadvantages associated with traditional HRM:

❖ *Paperwork and Administrative Burden:* Traditional HRM often involves a significant amount of paperwork, manual record-keeping and administrative tasks. This can be time-consuming and may lead to inefficiencies.

❖ *Lack of Flexibility:* Traditional HRM practices may be rigid and lack flexibility, making it challenging for organizations to adapt to changing business environments and employee needs.

❖ *Focus on Compliance over Strategy:* Traditional HRM can be more focused on compliance with rules and regulations rather than aligning HR practices with the overall strategic goals of the organization.

❖ *Limited Employee Engagement:* Traditional HRM may not emphasize employee engagement and satisfaction to the extent required in the modern workplace. This can result in lower morale and productivity.

❖ *Hierarchy and Bureaucracy*: Traditional HRM structures may reinforce hierarchical and bureaucratic organizational cultures, limiting communication and collaboration across different levels of the organization.

❖ *Ineffective Performance Management*: Traditional performance management systems may rely on reviews, which can be infrequent and fail to provide timely feedback. This approach may not support continuous improvement and employee development.

❖ *Insufficient Emphasis on Employee Development*: Traditional HRM may focus more on hiring and basic training rather than ongoing skill development and career advancement, potentially hindering employee growth.

❖ *Limited Use of Technology*: Traditional HRM systems may rely heavily on manual processes and outdated technologies, which can hinder efficiency and data accuracy.

❖ *Resistance to Change*: Traditional HRM practices may be resistant to change, making it difficult to adopt new, more innovative HR strategies and technologies.

❖ *Risk of Bias and Inequality*: Traditional HRM processes, such as recruitment and promotion, may be susceptible to biases, leading to issues of inequality and discrimination if not actively addressed.

To overcome these disadvantages, we recommend organizations transition to more modern and strategic HR approaches, such as adopting digital HR technologies, implementing agile performance management, and placing a stronger emphasis on employee engagement and development. Particularly we suggest to:

1. Develop a talent management system with the following features:

❖ *Enhance Employee Experience Platforms*: Develop even more comprehensive employee experience platforms that seamlessly integrate various HR functions, providing a unified and user-friendly interface for employees. This could include features for career development, well-being, and personalized learning paths.

❖ *Advance Predictive Analytics*: Further advance predictive analytics capabilities in HR to not only forecast workforce trends but also to provide actionable insights for strategic decision-making. This might involve predicting turnover risks, identifying skill gaps, and optimizing workforce planning.

❖ *Personalize Learning with AI*: Utilize artificial intelligence to create highly personalized learning experiences for employees. AI algorithms could analyze individual learning styles, preferences, and career goals to recommend tailored training and development opportunities.

❖ *Blockchain for HR Credentials*: Expand the use of blockchain technology to securely manage and verify professional credentials, certifications, and qualifications. This could streamline the hiring process and ensure the accuracy and integrity of employees' educational and professional backgrounds.

❖ *Augmented Reality (AR) for Training*: Integrate augmented reality into HR training programs to provide immersive and interactive learning experiences. AR could be used

for on-the-job training, simulations, and virtual collaboration, especially in industries with hands-on work.

❖ *Emotional Intelligence and Sentiment Analysis:* Implement tools that leverage AI to assess and improve emotional intelligence within the workplace. Sentiment analysis could be used to gauge employee morale, engagement, and overall well-being, allowing HR to proactively address potential issues.

❖ *Diversity, Equity, and Inclusion (DEI) Tech:* Develop technologies that support diversity, equity, and inclusion initiatives. This could involve AI tools to identify and address biases in hiring processes, analytics for tracking diversity metrics, and platforms to promote inclusivity in the workplace.

❖ *Continuous Performance Management:* Evolve performance management systems to focus on continuous feedback and development. This includes real-time feedback mechanisms, agile goal-setting tools, and analytics to measure ongoing employee performance and growth.

❖ *Gamification for Employee Engagement:* Integrate gamification elements into HR processes to enhance employee engagement. This could include gamified training modules, recognition programs, and competitions to foster a positive and collaborative workplace culture.

❖ *HR Virtual Assistants with Emotional Intelligence:* Develop virtual HR assistants with advanced natural language processing and emotional intelligence capabilities. These assistants could understand and respond to employee queries, provide emotional support, and offer personalized guidance on HR-related matters.

2. Delegation of high proportion of HR functions to Artificial Intelligence, which should be present in 3 levels:

❖ *Recruitment Procedure:*

➤ It should more easily and correctly find potential employees in employee's networks like <http://www.Linkedin.com>, analyze their behavior in social portals and get preliminary understanding is that person suitable for exact position or no. Also, it can more effectively make a shortlist of applied candidates CVs.

➤ Secondly, with the help of inquiry forms, which should be prepared using cross-question methods, it is easy to determine the real personality of candidates and check their professional level with the help of professional tests.

➤ Finally, it will suggest candidates who are most suitable for that position, without sympathy, subjectivity, or influence of any other factors.

❖ *Talents Trainings and Support:* Via periodic inquiries, it can easily determine which talents are lacking in training and which needs improvement. He will also identify any problems that are bothering talents and try to find solutions. It should also be an informative portal that allows employees to understand what is happening in the company, and if any problems arise, employees can anonymously ask the AI a question and get

an answer. This will prevent a lot of conflicts within companies and give management some insight into the thoughts of employees.

❖ *Talents Assessment Procedure:* The assessment procedure should also be performed via AI. The AI should assess whether talent meet the needs of the company, have a high performance and make his duties and task in appropriate time. It should be made via periodically analyze of feedbacks received, work done and identified misstatements analyze and it is very important that talents are informed about their current status, so that they can make improvements and receive a promotion or bonus during the annual (seasonal) assessment. Otherwise, if they don't get promoted, they won't blame anyone but themselves. For making it each employee at least should:

- have clear KPIs (Key Performance Indicators),
- receive monthly feedback from the manager,
- have career coach, who should be at least 2 level high (by position) and be from the other department, who will make career growth plan, guide and support him,
- have clear clarification each decision implemented in the company concerning to staff. For example, promotion of any staff member – it must be clear why decision made, alternatively person will try to find the reasons by himself and will have a feeling of injustice. Nothing can harm employee more than the feeling of injustice. The digital HR system should eliminate this feeling from the staff.

Also, the employee should be able to give an assessment to the manager. It is desirable that employee reviews are anonymous so that the employee can get a clear idea of what is happening,

3. Since keeping the talents inside the company and inside the country is also the aim of government, government can also take place in this process. We suggest giving tax privileges to companies, which make investments in creating HR system by, at least, letting them to record as an expense the investments made on HR systems and thus decrease the income tax. Overall, all shareholders will benefit from the process.

Conclusion. Talent management issues in the context of the digital economy are complex and multifaceted. Organizations must prioritize hiring senior digital leaders, build a strong employee value proposition, develop a culture of innovation, create a flexible and agile organization, invest in employee development, and adapt to the changing nature of work in the digital age. Also in navigating the challenges and opportunities presented by the digital economy, it is crucial for policymakers, employers, and workers to collaborate. Proactive measures, such as investing in education and training, implementing fair labor practices, and establishing clear regulations around digital work, can contribute to a more inclusive and sustainable future for the workforce in the digital age.

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The article examines the issues of human resource (talent) management in the context of the digital economy. It presents the role of human resources in the formation of the digital economy, the importance of human resource management, the disadvantages of traditional human resource management systems and the need to switch to digital human resources management systems. At the end of the article, it was indicated what the new digital human resources management systems should be, the introduction of artificial intelligence into human resource management at 3 levels was proposed – the recruitment procedure, talents training and support and talents assessment procedure, as well as a description of how this should be implemented. It was also suggested that the Government of the Republic of Armenia become a part of this procedure by providing tax incentives to companies that invest in the creation of a digital human resources management system.