THE MAIN SCIENTIFIC AND PRACTICAL DIRECTIONS AND PRIORITIES OF MANAGEMENT AND DEVELOPMENT OF THE DIGITAL ECONOMY AT THE ENTERPRISES OF MODERN SHIPBUILDING

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ABSTRACT

Theoretical reference: The article outlines some of the main theoretical and empirical aspects of studying the process of digitalization and human capital management of industrial economic entities, including considering the main structural elements of human capital formation/functioning, and the synergistic effect of various structural elements of human capital.

Method: The article discusses some main analytical methods for assessing the effectiveness of digitalization processes, including the market capitalization method, a method for assessing intellectual capital based on average annual return on assets (ROA), and a method for estimating the cost of human resources based on computational and analytical indicator of information productivity.

Results and Conclusion: The article discusses results around trends in digital transformation for shipbuilding companies and conclusions that the digital economy determines the new role of human resources and capital and that people remain a key success factor for digital enterprises.

Implications of research: The research helps outline the main directions and priorities of human resource management and digital economy development at modern shipbuilding enterprises.

Originality and value: The research provides a comparative analysis of theoretical and empirical aspects of digitalization and human capital management in the context of the shipbuilding industry, examining computational methods for evaluation. This contributes new perspectives and analysis specific to this industry context.

Keywords: shipbuilding enterprises, digital economy, HR management, human resources, training technologies.

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AS PRINCIPAIS DIREÇÕES CIENTÍFICAS E PRÁTICAS E PRIORIDADES DE GESTÃO E DESENVOLVIMENTO DA ECONOMIA DIGITAL NAS EMPRESAS DE CONSTRUÇÃO NAVAL MODERNA

RESUMO

Referência teórica: O artigo descreve alguns dos principais aspectos teóricos e empíricos do estudo do processo de digitalização e gestão do capital humano de entidades econômicas industriais, incluindo a consideração dos principais elementos estruturais da formação/funcionamento do capital humano e o efeito sinérgico de vários elementos estruturais do capital humano.

Método: O artigo discute alguns métodos analíticos principais para avaliar a eficácia dos processos de digitalização, incluindo o método de capitalização de mercado, um método para avaliar o capital intelectual com base no ROA (Rentabilidade Média Anual de Ativos) e um método para estimar o custo dos recursos humanos com base em indicador computacional e analítico da produtividade da informação.

Resultados e Conclusão: O artigo discute os resultados em torno das tendências de transformação digital para as empresas de construção naval e conclui que a economia digital determina o novo papel dos recursos humanos e do capital e que as pessoas continuam a ser um fator de sucesso fundamental para as empresas digitais.

Implicações da investigação: A investigação ajuda a delinear as principais orientações e prioridades da gestão dos recursos humanos e do desenvolvimento da economia digital em empresas modernas de construção naval.

Originalidade e valor: A pesquisa fornece uma análise comparativa de aspectos teóricos e empíricos da digitalização e gestão do capital humano no contexto da indústria de construção naval, examinando métodos computacionais para avaliação. Isso contribui com novas perspectivas e análises específicas para esse contexto industrial.

Palavras-chave: empresas de construção naval, economia digital, gestão de recursos humanos, recursos humanos, tecnologias de formação.

1 INTRODUCTION

The digital economy is a set of relations that develop in the processes of production, distribution, exchange, and consumption based on online technologies and aimed at meeting the needs for life's goods, which, in turn, involves the formation of new ways and methods of managing and requires practical tools of the state regulation [1, 5, 16].

Digitization and adopting digital tools accelerate economic growth, increase productivity, and improve the efficiency of business processes. Artificial intelligence further enhances this digital transformation [11, 12, 13, 14, 17]. Thus, digitalization is of great interest to both corporations and governments. Digital technologies are especially prevalent in human resource management. The focus of digitalization in personnel
management is due to the importance of human capital for the company's overall economic success.

The relevance of polymorphic scientific and practical issues of digitalization of the economy and human capital management as one of the essential objects of intangible assets of Russian and international shipbuilding enterprises is fully justified by the fact that in the current conditions of the development of the knowledge economy, there is no consensus on the problems of their conceptual, methodological and computational analytical evaluation [2, 3, 15].

The authors analyze the features and economic specifics of HR technologies at shipbuilding enterprises: payroll solutions, travel and expense management, employee engagement of shipbuilding enterprises, solutions for managing the productivity of shipbuilding enterprises, administration of benefits, and training technologies.

2 THEORETICAL FRAMEWORK

Modern economic science offers the following theoretical and empirical aspects of the study of the process of digitalization and human capital management of industrial economic entities [4, 6, 10]:

1.1 The most important structural elements of the formation and functioning of the human capital of enterprises are intellectual, organizational, consumer, information, organizational and managerial types of capital;

1.2 In the theory and practice of corporate governance, a significant synergistic effect is theoretically substantiated and empirically confirmed, which is formed due to the socio-economic determinism of various structural elements of the human capital of high-tech intellectual-intensive enterprises of the industrial sector of the Russian economy, in general, and the shipbuilding industry, in particular;

1.3 In the context of the digitalization of the Russian economy, the development of digital information and communication technologies, which is one of the most critical areas for the development of intangible assets of high-tech business entities operating in the domestic and international markets of modern shipbuilding, is undoubtedly in demand, relevance and timeliness.

HR technology is a general term for all technologies used by the personnel departments of shipbuilding enterprises to improve the organization's functions. In 2022
and beyond, we can see how HR technologies will be helpful in the following areas:

- **Payroll Solutions** are becoming more diverse as outsourcing cloud technology providers increasingly offer payroll services in their digital human resources management offerings for shipbuilding enterprises, especially small and medium-sized businesses. Other factors of digital transformation, such as attendance tracking software, are also becoming increasingly important.

- **Travel and Expense Management.** The personnel departments of shipbuilding enterprises use expense and travel services to record related expenses, track vacation time, pay suppliers and reimburse an employee through a link to the payroll service. Some companies also use expense reporting software to give managers an overview of an organization's expenses through automated analytics and reporting.

- **Involvement of employees of shipbuilding enterprises.** Employee Engagement HR technologies are increasingly used through platforms and applications that use different approaches to keep employees enthusiastic about their work. These include mobile applications with publishing and commenting capabilities similar to social networks, communication platforms that allow employers to disseminate information and employees to respond, and gamification methods.

- **Solutions for managing the productivity of shipbuilding enterprises.** Traditional annual reviews are becoming somewhat archaic, as new automated functions can now track performance. Productivity management modules in HCM systems are becoming increasingly popular and offer interactive functions that allow employees to receive feedback while continuously managing the productivity of modern shipbuilding companies.

- **Administration of benefits.** Thanks to digitization, the administration of benefits is becoming more complex, which means more than just health and disability insurance, vacations and sick leave for employees of shipbuilding companies. Corporate Wellness is diversifying its offerings by combining online technology with human elements, such as wellness trainers and physical activity programs. As a result, many HR technology providers sell specialized software systems that encourage employees to participate in healthcare programs.

- **Learning Technologies.** Corporate training and retraining programs for
employees of shipbuilding companies are switching to interactive online platforms created by HR technology providers. Learning Management Software (LMS) can customize training programs and track employee learning and performance. LMS can also allow students to use interactive features such as multi-threaded discussions, video conferences, and discussion forums.

3 METHODOLOGY

The main analytical methods for assessing the effectiveness of the digitalization processes of the Russian economy, in general, and the shipbuilding industry, in particular, are the following [7, 8, 9]:

3.1 THE MARKET CAPITALIZATION METHOD

The market capitalization method is the difference between the market value of the capital of business entities and the book value of their share capital. As the essential socio-economic advantages of the method, it is necessary to note the relative computational and analytical simplicity of calculation and ease of use for comparative characteristics of enterprises operating in the same industry markets and having an essentially identical structure of tangible and intangible assets; The disadvantages include the methodological complexity of comparing enterprises of various industrial-industrial sectors of the economy, however, directly competing in the industry markets of highly specialized knowledge-intensive goods and services.

3.2 A METHOD FOR ASSESSING INTELLECTUAL CAPITAL

A method for assessing intellectual capital based on enterprises' average annual return on assets (ROA), determined by the ratio of enterprises' yearly average return on assets (ROA) and the normalized industry average ROA. The economic advantages of the method should be recognized as the possibility of comparing the intellectual capital of modern shipbuilding enterprises with the industry intermediate level, as the main methodological shortcomings, the frequent lack of the possibility of mathematically correct calculation of the industry average ROA of shipbuilding companies should be mentioned.
3.3 A METHOD FOR ESTIMATING THE COST OF HUMAN RESOURCES

A method for estimating the cost of human resources based on a computational and analytical indicator of the information productivity of an economic entity, identified by the specific weight of net income from the management of a shipbuilding enterprise. The unconditional economic advantage of the method should be recognized by the fact that it indicates a part of the net income from the total revenue of the company generated through intellectual capital, as part of the non-material assets of the company, a specific employee making decisions, in other words, the art of management. The computational and analytical disadvantages of the method should be recognized as complications in calculating income received directly from managers' information and intellectual resources.

4 RESULTS AND DISCUSSION

The main values of the digital economy are information and knowledge, the source and carrier of which is a person. Therefore, the digital economy determines the new role of human resources and capital, not only constant changes and trends of various innovations. Despite all the achievements in the automation of business processes in shipbuilding, people with their intuition, skills and abilities remain a key factor in the success of a digital enterprise, so traditional personnel management systems are being transformed into talent management, training and employee development. In this regard, it is necessary to consider the main achieved results of digitalization, the features of the new conditions being formed and to determine a person's goals, tasks, functions and roles in the shipbuilding production management system. The authors suggest discussing the transformative potential of artificial intelligence (AI) in enhancing financial services within Jordanian commercial banks considered in the work [18] and the uncertainty and disparity in law enforcement opinion investigated in the work [19].

4.1 ORGANIZATIONAL DESIGN AND CHANGE MANAGEMENT

According to the HR management report, 53% of HR managers call organizational structure and change management a top priority for 2023. In addition, 45% say that their employees are tired of all the changes. Shipbuilding companies see the consequences of too much change and uncertainty. Adaptability is a prerequisite for HR directors who face digital transformation, economic uncertainty and political tensions. Employees are
becoming more resilient to change – in 2020, 74% were willing to change their work behavior to support organizational change, but this number dropped to 38% in 2022. Change fatigue is real, and HR managers need to help employees navigate the changes to mitigate their impact.

The main directions and priorities of human resource management and digital economy development at modern shipbuilding enterprises are graphically interpreted in Figure 1.

4.2 HR MANAGEMENT SOFTWARE FOR DIGITAL TRANSFORMATION

From hiring, employee adaptation and planning to compliance with requirements and benefits, the personnel management systems of shipbuilding enterprises can work like clockwork if the right technology is available. Automation simplifies HR workflows: eliminates possible bottlenecks in workflows, increases efficiency and, at the same time improves employee experience. Popular HR management programs include Monday.com, QuickBooks and Paycor.

4.3 DIGITIZED HR PROCESSES

Approximately 30% of shipbuilding companies intend to use artificial intelligence as part of their HR technologies, compared with 17% last year. As artificial intelligence becomes more advanced, the range of tasks that can be automated will increase. For
example, chat-bots with artificial intelligence can significantly improve employees' work by providing them with the necessary information and data.

4.4 HR self-service tools

HR managers are implementing employee self-service (ESS) and Manager Self-service (MSS) tools to improve service, reduce labor costs and shift responsibility for performing routine operations from HR to employees, their managers and job seekers. Self-service technologies that continue to evolve include digital assistants and chatbots controlled by artificial intelligence.

These trends drive the digital transformation of HR, but it is essential to remember that this transformation is more about personnel than technology. IT managers and personnel departments of shipbuilding enterprises need to involve stakeholders in finding solutions to ensure their widespread implementation by users. Finding solutions that drive innovation requires a collaborative process involving key stakeholders.

By collaborating with suppliers and listening to employees to find solutions for all parties involved, your shipbuilding personnel department will be ready to meet today's digital transformation trends and give your company an advantage in digital technologies.

5 CONCLUSIONS

A scientific and practical study of the processes of management and development of the digital economy at modern shipbuilding enterprises allowed us to formulate the following conclusions, recommendations, directions and priorities:

5.1 PROMISING AREAS OF ACTIVITY OF SHIPBUILDING COMPANIES IN THE FIELD OF DIGITAL ECONOMY

HR managers of shipbuilding enterprises were divided in their opinions on whether they have a well-defined strategy for working in the future: 42% say that this is the main priority of their activities, and 43% say that they do not. The central element of the future work strategy is human resource planning and forecasting of future talent needs. This is a top priority for HR managers. Instead of assuming that we can predict future needs for unique competencies of employees, gain access to a sufficient number of talents, fill future gaps by creating high-tech products of modern shipbuilding, and dictate when
and where employees work, let's allow employees to contribute their ideas on how to solve production and economic problems.

5.2 ATTRACTING AND RETAINING TALENTED EMPLOYEES FOR THE DIGITAL TRANSFORMATION OF HR

The acquisition of gifted employees has surpassed the popularity of talent management, especially in such competitive markets as modern shipbuilding technologies. Some popular talent management and acquisition technologies include a candidate tracking system (ATS) to post vacancies, view resumes, and create interview requests for potential candidates. Other features may include automatic resume ranking, pre-screening questions and response tracking, and multilingual capabilities.

In addition, a promising direction is candidate relationship management, which allows you to maintain a pool of passive candidates who can be considered quickly, as well as employee referral software, which enables HR to collect recommendations from current employees about potential and existing candidates.

5.3 PROMOTING REMOTE AND HYBRID WORKFORCE OF COMPANIES

Since remote and hybrid work does not show apparent signs of disappearing, the need to comply with the requirements becomes more complicated when employees of shipbuilding enterprises are distributed across different regions or even countries. Recognizing this, technological HR management tools help companies adapt to remote/hybrid environments by entering into contracts tailored to local conditions, communicating terms of employment and providing centralized, secure and accessible documentation storage.
REFERENCES


