Chapter 6

Human Capital Management in the Context of the Implementation of Digital Intelligent Decision Support Systems and Knowledge Management:
Theoretical and Methodological Aspects

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ABSTRACT

The basis for improving the quality of human capital in the framework of building a digital economy is the creation, mass implementation, and widespread use of digital intelligent systems in the business processes. This chapter develops the fundamental foundations of increasing the efficiency of using digital technologies and building the enterprise's information and computing infrastructure for embedding intelligent decision support and knowledge management systems in the organizational management system, which will contribute to the growth of labour productivity and increase the intellectuality of jobs. It is shown that the decisive role is played by artificial intelligence methods: intellectual analysis and modelling, decision support systems, learning avatars using neural networks, and geoinformation systems. A

special role in the chapter is given to knowledge management methods, it is shown that the effectiveness of their use depends on how different economic agents acquire, generate, disseminate, and use new knowledge necessary for successful management activities.

INTRODUCTION

At the present stage in the world there is an acute problem of achieving a high level of competitiveness of human capital. A promising task is the formation of universal mechanisms for the digital transformation of universities, scientific organizations, enterprises of the real sector of the economy to ensure the necessary and sufficient efficiency of integration and cooperation mechanisms within the framework of world-class scientific and educational centers, to form new training tools for the digital economy. All this will require the development of the human potential of key project implementers. In this chapter, the study is aimed at developing the theory of factors of production, namely the study of the effective adaptation of human capital to the conditions of the digital economy. With the ongoing process of forming a digital economy, a mismatch arises between the new requirements for the level and nature of human capital and the current state of the personnel management system. Overcoming this discrepancy requires a change in the working style of the relevant organizational and economic structures and a familiar understanding of the nature of business processes. It becomes necessary to introduce fundamentally new methods for the formation, evaluation and retraining of human capital involved in intellectual activity and making managerial decisions. In a digitalized society, such methods should be based on cyber-social technologies. Intellectualization and digitalization of human capital management are aimed at solving such problems as optimization of managerial and personnel decision-making processes; improving the quality of analytical data; the possibility of personnel planning and forecasting for the current and strategic periods; control coverage of all employees; transition to virtual workplaces; individualization through the creation for each employee of an environment for self-realization and development; HR analytics and performance management; access to the latest technological solutions.

Digital cross-industry interaction within the framework of human capital management involves the sharing of broadband channels, cloud resources, the Internet of things (IoT), big data (Big data), artificial and natural intelligence. All of these technologies should be transformed into the key capabilities of each of the participants and, thus, increase the level of digitalization and intellectualization of work processes, business organization and management in order to increase productivity and ensure innovation.

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