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CURRENT TRENDS IN TECHNOLOGICAL MODERNIZATION OF ENTERPRISES IN THE CONTEXT OF SCIENTIFIC AND TECHNICAL PROGRESS

The purpose of the study is to substantiate current trends in technological modernization of enterprises in the context of scientific and technological progress through the systematization of modernization tools, analysis of their functional purpose and evaluation of practical implementation results using the example of manufacturing enterprises. The methodological basis of the study is the system and process approaches, methods of generalization and scientific abstraction, structural and functional analysis, as well as case analysis of the practice of implementing technological solutions at Ukrainian enterprises. Comparative analysis and the method of interpreting empirical data were used to substantiate the results. The study systematizes technological tools for modernization of enterprises with their linkage to specific business processes and management functions. It was established that modernization is integrated in nature and is implemented through a combination of automation, data analytics, IoT and digital platforms in a single management architecture. The analysis showed that in Ukraine the situational model of using technologies dominates (37% of enterprises), while only 19% apply them systematically, which indicates the unevenness of transformation. A functional imbalance was identified: enterprises concentrate digitalization in marketing (26%) and analytics (23%), while the areas of personnel development (10%) and HR (6%) remain underestimated. Based on practical cases, it was proven that the implementation of APS systems allows to increase production and sales volumes by up to 40–59% while simultaneously reducing inventories by up to 45–60%. It was established that production automation provides a multiple increase in productivity (up to 13 times) and a reduction in production cycles from months to weeks. It was proven that the digitalization of logistics and document management allows to scale operations without a proportional increase in personnel and reduces operating costs by more than 50%. It was summarized that the key effect of modernization is the transition to data-driven management and increasing the adaptability of enterprises to an unstable environment. The practical significance lies in the possibility of using the proposed systematization of technological solutions as a tool for substantiating management decisions regarding the modernization of enterprises, choosing priority areas of investment in technologies and assessing the effectiveness of their implementation in the conditions of scientific and technological development.

Keywords: digitalized processes, technologies, innovations, technological tools, efficiency, Industry 4.0.