

Industrial Development in the Era of Digital Technologies: a Comparative Analysis of EU States

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Abstract

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Abstract:

An article is devoted to issues of industrial and digital development in European Union. The purpose of this article is to investigate and analyze the complex links between digital development and industrial growth within the European Union. By examining the digital transformation across EU member states, the article aims to evaluate the extent to which digital technologies contribute to, shape, or transform traditional industrial sectors. For this matter in current research, by adopting correlation analysis and k-mean clustering method, an empirical analysis of the nexus between digital development and industrial growth was performed, based on panel data for EU-27 countries from 2017 to 2022. The results of the study indicate that among the indicators of industrial development, two employment indicators show the highest correlation with digitalization indicators: employment in knowledge-intensive activities and employment in knowledge-intensive activities within business industries. The indicator of digital progress that exhibits the strongest correlation with indicators of industrial development is the Human Capital direction of the Digital Economy and Society Index. Results of cluster analysis showed, that EU-members states differ in their level of digital and industrial development, but all countries within EU moved ahead their progress towards digital transformation of industry. Investigation offers insights into how policymakers, businesses, and stakeholders can navigate and capitalize on the digital-industrial nexus for sustainable economic development.

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