

Driving Industrial Growth through Digitalization: Insights from CEE Countries*

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Abstract

Digital transformation has become a crucial engine for economic growth, especially amid the structural shifts of the Fourth Industrial Revolution. However, comparative insights into the progress of Central and Eastern European (CEE) Member States remain underexplored in the literature, particularly regarding Romania's positioning within broader EU digitalization trends. This study addresses this gap by evaluating Romania's digital development relative to other CEE countries, based on summarized indicators from the Digital Economy and Society Index (DESI). We focus specifically on the digital transformation of the business sector, assessing four key indicators: the share of SMEs with at least a basic level of digital intensity; use of electronic information sharing through ERP systems; adoption of big data analytics; and integration of artificial intelligence technologies. Using official European Commission reports from 2014 to 2023, our comparative case study offers both a temporal and regional perspective on digital performance. The methodology involves a quantitative assessment of DESI components relevant to enterprise digitalization, emphasizing cross-country comparison and trend analysis. Findings show that although Romania has registered consistent improvements since EU accession, it continues to lag behind the CEE and EU averages in the digital readiness of its business environment. The results underline the need for targeted policy measures and increased investment in R&D and emerging technologies to accelerate convergence. One limitation of the study is the partial availability of data on AI adoption, which is only provided for the 2021–2023 period.

Keywords: Digitalization, Romania, Policies, CEE countries

