

Title:

“Economic Disparities in Greek Regions in the Era of Technological Transition”

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Abstract

Technological innovation constitutes a central driver of economic growth, productivity, and structural transformation in contemporary economies. In the context of the global digital transition, regions are confronted with both new development opportunities and intensified risks of spatial inequality. In Greece, digital transformation has accelerated in recent years, supported by national recovery strategies and European Union initiatives. However, its uneven regional diffusion has contributed to widening economic disparities, reflected in productivity levels, employment structures, and income distribution.

Despite notable policy efforts, Greece continues to lag behind the EU average in key digital performance indicators. Only 52.4% of the population possesses at least basic digital skills (EU average: 55.6%), while ICT specialists represent just 2.4% of total employment, compared to 4.8% at the EU level. In 2023, only 43.3% of Greek SMEs achieved basic digital intensity (EU average: 57.7%), and the adoption of advanced technologies such as artificial intelligence and cloud computing remains limited (Digital Decade 2024 Report). These shortcomings are geographically uneven and disproportionately affect rural and less densely populated regions, where infrastructure deficits and lower levels of human capital constrain participation in the digital economy.

Urban centers, particularly, the metropolitan Attica and the region of Thessaloniki, attract the majority of digital investment, innovation activity, skilled labour, reinforcing agglomeration economies and higher productivity growth (Digital Transformation in Greece 2024-2025). Conversely, peripheral regions characterized by weaker digital infrastructure, limited SME digitalisation, and structural economic vulnerabilities struggle to integrate into emerging digital value chains. As a result, technological transition risks reinforcing a dual spatial structure: dynamic metropolitan cores and lagging rural peripheries.

The study adopts a mixed analytical approach combining EU Digital Decade indicators, national digital performance reports, and regional economic data (GDP per capita, employment composition, sectoral structure) to examine the spatial dimensions of digital inequality in Greece. Comparative regional analysis highlights how variations

in digital readiness interact with pre-existing economic structures to shape divergent development trajectories.

By situating the Greek case within the broader global challenge of digital transformation, this paper contributes to debates on territorial resilience and place-based policy in a transition era. It argues that technological innovation, while growth-enhancing, may exacerbate spatial inequalities unless accompanied by targeted regional strategies that strengthen digital infrastructure, expand digital skills, support SME digital upgrading, and foster inclusive innovation ecosystems.

Keywords: digital transition; regional inequality; Greece; digital skills; SME digitalisation; spatial disparities; place-based policy.