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Distance Education, Economic Growth, and Unemployment: Evidence from Turkey and Portugal

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Abstract

This study investigates the causal relationships among distance education, economic growth, and unemployment rates in Turkey and Portugal. Drawing on the human capital theory, the research explores whether distance education contributes to economic growth and labor market outcomes, or whether broader macroeconomic conditions shape the expansion of distance education systems. By examining these dynamics in two countries with distinct economic structures and educational systems, the study aims to provide a deeper understanding of the complex interactions between education, economic performance, and employment.

The analysis utilizes annual time series data spanning the period from 1990 to 2023. To capture potential shifts and structural changes over time, the study employs the Fourier Granger causality approach. This methodology is particularly effective for examining evolving economic relationships, as it accounts for an unknown number of structural changes occurring at unknown points in time and allows for smooth, gradual shifts rather than abrupt breaks. By using Fourier-based econometric tests, the study avoids imposing restrictive assumptions and provides a flexible framework to understand the dynamic interplay among distance education, economic growth, and unemployment rates.

The empirical findings reveal that economic growth plays a significant role in driving the expansion of distance education in both Turkey and Portugal. This suggests that improvements in macroeconomic performance increase the demand for flexible learning models, reflecting the responsiveness of educational systems to prevailing economic conditions. Interestingly, the analysis finds no evidence to support a causal effect of distance education on economic growth or on unemployment rates. These results imply that while distance education is an important tool for lifelong learning and skills development, it primarily responds to existing economic trends rather than acting as an independent driver of economic performance or employment.

From a policy perspective, the study highlights the importance of redesigning distance education systems to better align with labor market needs, improve educational quality, and develop sustainable human capital strategies. Policymakers should focus on enhancing the relevance and effectiveness of distance learning programs, ensuring that graduates acquire the skills demanded by evolving economic sectors. Such initiatives could strengthen the role of education in supporting long-term economic growth and employment, even if distance education does not independently drive macroeconomic outcomes.

Overall, the findings contribute to the literature on education, labor markets, and economic development by emphasizing the reciprocal relationship between economic conditions and the expansion of distance education. The study underscores that effective educational policy requires an awareness of broader economic dynamics and a proactive approach to adapting learning systems to future workforce needs.

Keywords: Economic Growth, Unemployment, Distance Education, Open Education

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