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The Impact of the Digital Economy on Total Factor Productivity: Evidence from Developing Asian Countries

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Abstract

Productivity stands as a fundamental driver of economic growth and development, commanding significant attention from both advanced and developing economies in recent decades. The growth of productivity is shaped by various factors contingent upon national conditions and economic environments. Notably, the digital economy—supported by the expansion of information and communication technology (ICT) and its infrastructure—offers substantial opportunities for enhancing productivity. This study examines the effect of digital economy indicators on total factor productivity (TFP) in a selection of developing Asian countries from 2003 to 2022 using a panel data model with fixed effects. Estimation results reveal that the E-Government Development Index and the E-Commerce Index exert a positive and statistically significant impact on TFP. Furthermore, a composite digital economy index also demonstrates a positive and significant influence on TFP. These findings suggest that policymakers in developing Asian economies can foster total factor productivity by strategically advancing digital economy indicators.

Keywords: Total Factor Productivity; Digital Economy; E-Government; E-Commerce; ICT Infrastructure.

JEL Classification: O33, O47, L86, C23.

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