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Does Industry 4.0 pay off? Evidence from Italy

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Abstract

Studies focused on Information Technologies (IT) developed during 1990s and 2000s highlight that IT are key resources the firm can rely on to obtain better performance. The fourth industrial revolution suggests that the adoption of new digital technologies (labeled as industry 4.0) bring superior competitive advantage for adopting firms as drivers of efficiency, differentiation as well as support to innovation. However, no studies capture the impacts of industry 4.0 technologies on firm's economic performance. The paper explores the relationship between investments in digital technologies and firm performances, by also examining eventually the cumulative effect of technologies on performance. Based on unique data gathered in 2017 on a sample of 1,229 Italian manufacturing firms, results show the positive impacts on adopters' performance. No cumulative effect is instead observed, where only one or two technologies have a positive impact on business results.

Keywords: digital technologies, performance, strategy, industry 4.0, industrial revolution, RBV

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