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Title: IMPACT OF TECHNOLOGY INVESTMENT ON FIRM'S PRODUCTION EFFICIENCY FACTOR IN MANUFACTURING**Author(s):** Novotna, M (Novotna, Martina); Volek, T (Volek, Tomas); Rost, M (Rost, Michael); Vrchota, J (Vrchota, Jaroslav)**Source:** JOURNAL OF BUSINESS ECONOMICS AND MANAGEMENT **Volume:** 22 **Issue:** 1 **Pages:** 135-155 **DOI:** 10.3846/jbem.2020.13635 **Published:** 2021**Times Cited in Web of Science Core Collection:** 0**Total Times Cited:** 0**Usage Count (Last 180 days):** 11**Usage Count (Since 2013):** 11**Cited Reference Count:** 78

Abstract: The goal of this paper is to investigate the impact of technology investments on production efficiency in manufacturing companies and how different these relationships are for low-technology and high-technology companies. The empirical part was based on the analysis of 2,848 large, small and medium-sized Czech companies by using Bayesian networks (BNs). The results show that technological investments have the greatest positive impact on the growth of labour productivity and on a decline in labour intensity in low technology enterprises. The technological investments have a positive impact on labour productivity growth in high-technology enterprises, but at the same time, the technological investments have an impact on the increase of labour intensity. On the contrary, the influence of investment growth was insignificant on the indicators of material and services intensity. Technologically intensive investments have a different impact on small, medium-sized and on large enterprises. The reaction of large companies depends on the category of technology intensity in contrast to small and medium-size enterprises.

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