International Conference 2025

6th - 7th November 2025

Strategic Aspects of Industry 4.0 Implementation: Insights from Business Practice

Z. Papulová

Faculty of Management, Odbojárov, Bratislava, Comenius University Bratislava, Slovakia

D. Smolka

Faculty of Management, Odbojárov, Bratislava, Comenius University Bratislava, Slovakia

Abstract:

Today's dynamic and rapidly changing environment exerts increasing pressure on business managers not only to adapt swiftly to these changes but also to proactively seek new opportunities and sources of competitiveness. One of the key trends that enterprises must currently accommodate is technological advancement, which is closely associated with the Fourth Industrial Revolution, commonly referred to as Industry 4.0. While many researchers investigating Industry 4.0 primarily emphasize technologies and enterprises' technological readiness, our article aimed at exploring the preparatory phase and assessing the conditions that enable successful implementation of Industry 4.0. For the purposes of our study, we concentrated mainly on strategic aspects. We defined specific areas and criteria to evaluate enterprise's readiness for Industry 4.0 adoption. Although Industry 4.0 has been widely discussed for some time, our findings indicate that its implementation within enterprises remains incomplete, and there is still room for improvement in the conditions supporting its deployment. Our analysis revealed several weaknesses within enterprises, such as insufficient top management support or the absence of a clear concept and plan for Industry 4.0 implementation. On the other hand, enterprises demonstrate a relatively strong awareness of the importance of Industry 4.0, particularly regarding the necessity to respond to customer requirements and to incorporate these needs into the design of product and service innovations.

Keywords:

Industry 4.0, strategy, competitiveness, strategic readiness.