

The Impact of Business Intelligence and Digital Supply Chain Capabilities on the Development of Small and Medium-Sized Businesses

Mahya Mozaffari Shamsi¹, Hamid Babaei Meybodi²,
Saeed Dehghan Khavari³ and Seyed Hossein Mirjalili⁴

ABSTRACT

This study examines the impact of Business Intelligence (BI) and digital supply chain capabilities on operational performance and sustainable competitive advantage in small and medium-sized enterprises (SMEs), with a particular focus on the mediating role of supply chain ambidexterity. A quantitative research design was employed, and data were collected from managers and employees in SMEs operating in the ceramic and tile industry. Structural equation modeling (SEM) was used to analyze the proposed relationships. The findings indicate that Business Intelligence has a significant positive effect on both supply chain ambidexterity and operational performance. Similarly, digital supply chain capabilities significantly enhance supply chain ambidexterity and sustainable competitive advantage. The results further confirm that supply chain ambidexterity plays a key mediating role in translating digital capabilities into improved performance outcomes, partially mediating the relationship between Business Intelligence and operational performance, as well as between digital supply chain capabilities and sustainable competitive advantage. The study contributes to the literature by integrating Business Intelligence and digital supply chain capabilities within a unified framework and highlighting the critical role of supply chain ambidexterity as a dynamic capability. The findings offer important managerial implications, suggesting that SMEs should combine

¹ Department of Management, Meybod University, Meybod, Iran.
E-mail: mahya.mahi.mzf@gmail.com

² Department of Management, Meybod University, Meybod, Iran.
E-mail: babaei@meybod.ac.ir

³ Department of Economics, Meybod University, Meybod, Iran.
E-mail: saeed.khavari@meybod.ac.ir

⁴ Faculty of Economics, Institute for Humanities and Cultural Studies, Tehran, Iran.
E-mail: smirjalili@ihcs.ac.ir

digital investment with ambidextrous capability development to achieve superior operational and competitive outcomes.

Keywords: Business Intelligence, Digital Supply Chain, Supply Chain Ambidexterity, Operational Performance, Competitive Advantage, SMEs

JEL Classification: D22, D24