The role of big data and predictive analytics capabilities in supply chain management: The perspective of Malaysia manufacturing firm

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ABSTRACT
Big Data and Predictive Analytics (BDPA) is considered a significant resource that enables the firm to gain competitiveness in the supply chain. Besides that, another challenge that is still facing by many manufacturing firms is the disproportionate growth between data captured and the firm's capabilities to manage, process, analyze and transfer the big data to actionable knowledge and value. Therefore, this paper investigates and examines the relationship of BDPA capabilities on the firm's financial and market performance. This paper has utilized the Resource-Based View (RBV) theory and quantitative research design to achieve the research objectives. A total of 400 survey questionnaires were distributed to respondents in Malaysian manufacturing companies listed in the FMM Directory and received 138 usable responses representing a 34.50% response rate. The data were empirically tested through structural equation modelling using Smart-PLS. Research findings showed that tangible resources, organizational learning, and data-driven culture positively influence a firm's financial performance, while technical skills and management skills were insignificant. Moreover, management skills, organizational learning, and data-driven culture positively influenced a firm's market performance, whereas tangible resources and technical skills were insignificant.