GAINING COMPETITIVE ADVANTAGE FROM ANALYTICS THROUGH THE MEDIATION OF DECISION-MAKING EFFECTIVENESS: AN EMPIRICAL STUDY OF UK MANUFACTURING COMPANIES

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Abstract

While it is widely believed that analytics capabilities enable a company to identify valuable insights from big data thereby to improve the effectiveness of decision-making and to gain competitive advantage, little empirical research has been undertaken to investigate the mechanisms through which analytics capabilities improve decision-making effectiveness and organisational competitiveness. This paper aims to reduce this research gap in the literature. Drawing on the resource-based view (RBV), it develops a research model to specify the interrelationships among information processing capabilities, resource heterogeneity, decision-making effectiveness, and competitive advantage. It then empirically tests the proposed model using structural equation modelling based on 232 responses collected from UK manufacturing companies. This paper has made several contributions to the research and practice of business analytics and decision-making. First, it advances the literatures by conceptually developing and empirically testing a path model linking information processing capabilities to decision-making effectiveness and competitive advantage. Second, it advances our knowledge by clarifying and testing the mediating role of decision-making effectiveness in affecting the relationship between information processing capabilities and competitive advantage. Third, it extends the RBV and decision-making literatures by explicating and testing the mediating role of resource heterogeneity in affecting the relationship between information processing capabilities and competitive advantage, and between information processing capabilities and decision-making effectiveness. Finally, this paper contributes to managers’ and business analytics practitioners’ knowledge by demonstrating the importance of improving decision-making effectiveness in gaining competitive advantage.

Keywords: Information processing capability, Decision making effectiveness, Resource heterogeneity, Competitive advantage, Mediating role, Questionnaire survey

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