The Impact of Supply Chain Innovation on Competitive Advantage with Mediating Effects of Robustness and Resilience Capabilities

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I have the pearl of my eyes to admire blessing of the Compassionate and omnipotent because, the words are bound, knowledge is limited and time is short to express His dignity. I avail this opportunity to bow my head before ALLAH almighty in humility, Who has given me the wisdom and perseverance for completing this piece of report. I invoke peace for Holy Prophet Muhammad (P.B.U.H), Who is forever torch.

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DEDICATION

Heartedly and humbly dedicated to my lovely and beloved mother who is my true and real source of aspiration throughout my life and whom I always found beside me and her shadow over my head to protect me from every evil and abhorrent eye

Abstract

The role of innovation has, over the last decade, evolved into a significant determinant in the operations of businesses. The purpose of this study was to propose and validate a theoretical model to investigate whether supply chain innovation positively influences risk management capabilities (i.e. robustness and resilience) in supply chain operations and further to investigate that these capabilities may improve competitive advantage. Thus, a theoretical model was developed from extant studies and evaluated through development of questionnaire survey conducted among construction industry of Islamabad/Rawalpindi. The data were analysed using confirmatory factor analysis and structural equation modelling to validate the suggested model. Analysing 210 respondents from managerial staff, a positive impact of supply chain innovation has been witnessed on risk management capabilities which in turn put a significant influence on enhancing competitive advantage. Therefore, this study reveals an apparent evidence of importance of supply chain innovation and risk management capabilities in supporting competitive advantage. Moreover, this study provides an empirical understanding of strategic retention of supply chain innovation and risk management capabilities in supply chain management and also confirms and expands existing theories about innovation and competitive advantage. This research empirically validate relationships between supply chain innovation, risk management capabilities and competitive advantage with moderator variable of buyer-supplier relationship. Further, the findings also provide firm grounds for managerial decisions on investment in technology and process innovations and indicates that these indicators are necessary to achieve competitive advantage.

Key Words: Supply chain innovation, Risk management capabilities, Robustness, Resilience, Supply chain risk management, Buyer-supplier relationship, Competitive advantage.

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List of Abbreviations

SC……...……Supply chain

SCs……..…Supply chains

RMC……Risk management capability

BSR…….Buyer-supplier relationship

RMC……...….Risk management capabilities

SCI……..……Supply chain innovation

RandD……Research and Development

RM……...…Risk management

SCRM……..……Supply chain risk management

SCM……Supply chain management

CA……Competitive advantage

OEM……Original Equipment Manufacturer

JIT……Just-in-time

RTC…….…Robustness capability

RSC…….…Resilience capability

VMI……Vendor Managed Inventory

TMS……...……Transportation Management Systems

GPS……Global Positioning Systems

PPC……Production Planning and Control

APS……Advanced Planning Systems

IoT……..……Internet of things

ERP…….……Electronic Planning Resource

RFID……Radio Frequency Identification

CR……Composite Reliability

AVE…….…Average Variance Extracted

CI…….…Confidence Interval

RC…….…Risk Capability

IS…….…Information System

PLS-SEM…….…Partial Least Square – Structural Equation Modelling

HTMT……. Heterotrait – Monotrait