Operationalising Ambidexterity through Better Management Practices: The Case of High-Variety, Low-Volume Manufacturing

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A thesis submitted in fulfilment of the requirements for the degree of Doctor of Philosophy

Faculty of Engineering and IT

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Australia

2020

Certificate of Original Authorship

I declare that this thesis, is submitted in fulfilment of the requirements for the award of Doctor of Philosophy, in the Faculty of Engineering and IT at the University of Technology Sydney. This thesis is wholly my own work unless otherwise reference or acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis. This document has not been submitted for qualifications at any other academic institution. This research is supported by the Australian Government Research Training Program.

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Date: 23rd January 2020

Acknowledgements

First and foremost, I would like to thank my principle supervisor Assoc. Prof. Dilek Cetindamar Kozanoglu who's boundless guidance and endless support was not only instrumental to the completion of this thesis, but also to my development as a researcher. This thesis would not have been possible without her encouragement, suggestions and support.

I would also like to express my deepest gratitude to Assoc. Prof. Renu Agarwal who's been my co-supervisor, mentor and friend. Her belief in me and the opportunities that stemmed from that belief helped make me who I am today.

I am also indebted to the constant support from my colleagues and friends at the School of Information, Systems and Modelling at the University of Technology Sydney. In particular, I would like to thank Mr. Ravindra Bagia and Dr. Nathalie Sick for their continual encouragement and guidance throughout this journey.

To my family and friends that have had to endure the four tumultuous years, just as much as I have. Without your inspiration, kindness and constant support, this project would not have been possible. In particular, I would like to thank my parents, Mr. Mile Katic and Mrs. Stoja Katic, as well as my sister Tanja, for fuelling my motivation to succeed and for standing by me at every step of the way.

Lastly, I would like to extend many thanks to Dr. Hasan Akpolat for opening the opportunity for me to undertake this research project in the first place. His continuous support throughout this journey cannot be understated.

Mile Katic

January 2020

Abstract

Despite increased research interest concerning organisational ambidexterity - the ability to increase operational efficiency and simultaneously leverage assets for change and innovation – the question of how this is actually operationalised in organisations remains elusive. This thesis aims to address this gap based on the context of small to medium sized manufacturers that produce a high variety of customised products at low volumes (HVLV). For these HVLV manufacturers, ambidexterity appears in all parts of their daily operations. However, the reality seems far more challenging as the flexibility so ingrained in their organisational design can actually be to their detriment.

Taking on the routines-based view of organisation, this thesis aims to uncover the mechanisms that enable ambidextrous capabilities to impact organisational performance in HVLV manufacturers. In particular, this thesis is concerned with the role better management practices (BMP), in the form of production planning and control (PPC) and human resource management (HRM), play in facilitating the deployment of ambidextrous capabilities towards organisational performance outcomes.

A literature review and theory building exercise led to the development of a conceptual model grounded on the hypothesised links between ambidextrous capabilities, BMP and HVLV manufacturer performance. An Australia-wide survey of HVLV manufacturers was subsequently undertaken and the results analysed through the use of partial least squares structural equation modelling.

The outcomes of this research reveal that both PPC and HRM mediate the relationship between ambidextrous capabilities and HVLV manufacturer performance by way of operational flexibility and process innovation. Though providing evidence that BMP form the conduit from which ambidextrous capabilities incur performance outcomes, their impacts prove varied. PPC, whilst effective in facilitating operational flexibility, does not have an impact on process innovation and HRM, whilst useful in inducing process innovation, does not appear to have an impact on operational flexibility.

This thesis adds to the growing body of literature on ambidexterity where BMP are uncovered as a missing link between ambidextrous capabilities and organisational performance outcomes. In addressing the HVLV manufacturing dilemma, this research

reveals that merely holding ambidextrous capabilities is not enough. In order to capitalise on these capabilities, HVLV manufacturers need to make effective use of management practices that actually help to get work done in the first place. This thesis ends with a discussion on theoretical and empirical implications as well as suggestions for further research.

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