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THE EFFECT OF TECHNOLOGY DISRUPTION ON ORGANISATIONAL HEALTH: MEDIATING EFFECT OF COMPETENCE ADEQUACY AND MODERATING EFFECT OF INNOVATION CAPACITY AND COMPETENCE BUILDING

By

HARI AP NAIR

Thesis Submitted to
Othman Yeop Abdullah Graduate School of Business,
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in Fulfilment of the Requirement for the Degree of Doctor of Philosophy
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ABSTRACT

As a world’s fastest growing telecommunication market, India is undergoing evolutionary changes in telecommunication technologies. Rapidly changing communication technology has been posing innumerable challenges to the telecommunication companies in India for adequate skill availability and at the same time significantly changing competence requirements. The recognition of competence adequacy as a key factor to sustain organizational health in an increasingly competitive telecommunication sector has opened up several possibilities of competence based research. The study examined the inverse effect of technology disruption on competence adequacy and subsequently on the organizational health. Further, the organization’s intervention to competence building and innovation capacity was also put through the moderating tests as balancing factors. Knowledge Evolution Theory underpins this study framework to highlight the competence issues caused by technology disruption. This quantitative study was conducted in India among four leading Telecommunication firms. An online questionnaire was administered to managers from the firms who were selected using stratified random sampling. The eight hypotheses of this study were tested with Structural Equation Modelling using AMOS software. The results of the study found significant positive effects of competence adequacy, innovation capacity and competence building on organisational health. Secondly, technology disruption was found to have significant negative relationship with both competence adequacy and organisational health. In addition, the interaction of competence building and innovation capacity on the path of technology disruption and competence adequacy significantly moderated the relationship and finally, competence adequacy was found to have a significant mediating effect on the relationship between technology disruption and organisational health. The study provides new directions to the practising human resource professionals to improve the competence adequacy in high technology industries especially among telecommunication companies. The results of the study also highlights the widening technology skill gap present in telecommunication industry in India. The findings of this study also have pointed out the importance of innovation capacity as balancing factor in technology firms in the wake of evolutionary changes in telecommunication technology.

Keywords: organizational health, competence, innovation capacity, telecommunications.
ABSTRAK


Keywords: kekukuhan organisasi, kompetensi, keupayaan inovasi, telekomunikasi.
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With my mother’s blessings.

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LIST OF ABBREVIATIONS

2G/3G/4G  2\textsuperscript{nd}, 3\textsuperscript{rd} & 4\textsuperscript{th} Generation Telecommunication
AMOS  Analysis of Moment Structures
AVE  Average Variance Extracted
BSC  Balanced Score Card
CA  Competence Adequacy
CB  Competence Building
CLC  Corporate Leadership Council
CR  Composite Reliability
GSM  Global Standard for Mobile communication
IC  Innovation Capacity
ICT  Information and Communication Technology
IOI  Inventory of Organisational Innovation
KET  Knowledge Evolution Theory
KSAO  Knowledge, Skill, Attributes & Other characteristics
LTE  Long Term Evolution
OH  Organisational Health
R&D  Research & Development
RBT  Resource Based Theory
RBV  Resource Based View
RIM  Research In Motion
ROI  Return on Investment
TD  Technology Disruption
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<td>UMTS</td>
<td>Universal Mobile Telecommunication Standards</td>
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<tr>
<td>VRIN</td>
<td>Valuable, Rare, In-imitable &amp; Non-substitutable</td>
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CHAPTER ONE
INTRODUCTION

1.1 Introduction

This chapter sets the foundation for this research study. The research is framed in the context of the technology companies, where environmental disruption is inevitable and frequent, particularly to the telecommunication sector. Through the section 1.2 and the subsections, this chapter provides the background and rationale of the study from the global perspective and further focused to Indian telecommunication context. The section is followed by statement of the research problem, research questions and research objectives. Corresponding variables applied in the theoretical framework are briefly touched upon in this chapter. Theoretical, methodological and practical significance of the study is elaborated in section 1.6. Further, the scope and limitations of the research is covered in subsequent section followed by an overview of how the overall thesis is structured. Finally the summary section gives a quick overview of what had been covered in this chapter.

1.2 Background

The increasing rapidity of change in business environments and disruptive technologies are common to the Telecommunication industry today. These disruptive changes continuously affect the performance of these firms and sometimes influence their very existence itself (Esposito & Mastroianni, 2002). Technology disruption has caused an abysmal reduction of product prices and at the same time, the demand from consumers for superior product performance has increased (Munir, 2003; Real, Barbosa, & Vargas, 2006). Rapid progress in communication technologies has put
The contents of the thesis is for internal user only
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Appendix A: Survey request to participants