Chapter 4

The Journey Towards Harnessing Frontier Technologies:
Becoming a Digital Firm With Digital Capability and Dexterity

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ABSTRACT

As the digital era unveils, it has become a must for many business firms to redesign their existing business processes to utilize the frontier technologies to become competitive. However, "digital transformation" has received less attention in prior literature, and no clear pathway to a successful digital transformation has been provided. This chapter builds on 12 in-depth interviews with top-level decision-makers of Sri Lankan business firms to develop a digital transformation model. The findings reveal that the solid foundation of a digital business firm relies on a "digital-first" mindset and three success pillars reflecting unique organizational characteristics (e.g., digital business transformation strategy, workforce, and firm resources) that collectively enable digital capability and dexterity. This chapter further argues that digital capability and dexterity are the critical hallmarks of a truly digital firm in a digital economy where technologies continue to improve exponentially.

INTRODUCTION

Over the last three decades, technology has embarked on the voyage of digital transformation in business firms worldwide (Verhoef et al., 2021; Vial, 2021). The concepts of the Internet of things, blockchain and cryptocurrency, big data analytics, artificial intelligence and machine learning, quantum computing, and robotic process automation are empowering business firms operating in all sectors, including manufacturing, tourism and hospitality, banking and finance, retail, healthcare, and other service sectors (Vidmar et al., 2021). Consequently, today, managers in most business firms are constantly pressured to make strategic choices about exploiting the emerging frontier technologies to achieve a sustainable competitive advantage in the long run. As prior literature reveals, in most instances, business firms aiming to transform themselves into digital often focus on how to effectively utilize frontier technologies to achieve specific business objectives (e.g., how can we provide our service via a mobile application? how do we increase our likes on Facebook? etc.) (Verhoef et al., 2021; Tavoletti et al., 2022). However, most scholars have recently emphasized that a business firm cannot achieve a sustainable competitive advantage by simply adopting the technology itself (Kraus et al., 2021; Vidmar et al., 2021). Instead, a business firm should know how to utilize technology to transform the way it does business effectively (Tavoletti et al., 2022), disrupting established value chains and business models.

Research Gap

Although the notion of *"digital transformation"* has recently emerged as a buzzword, many business firms in the South Asian region are struggling with progress and still have a long way to go (Rhee et al., 2022), and Sri Lanka is not an exception. Similar to most business firms in the South Asian region, although the business firms in Sri Lanka are talking about the sophisticated technologies they are planning to offer, in most instances, these firms lack the skills and the mindsets needed to deal with this transformation effectively (Rassool & Dissanayake, 2019). Given the pace of change and the pressure to adapt, although some business firms in Sri Lanka have put in massive investments and efforts, most of these firms have fallen short of achieving successful digital transformation due to organizational barriers and shortcomings related to resistance to change (Fairooz & Wickramasinghe, 2019; Jayalath & Premarathne, 2021). On the other hand, despite the hype of the *"digital transformation"* notion, it has not been comprehensively studied in the business management literature (Nadkarni & Prügl, 2021; Verhoef et al., 2021). More specifically, little attention is paid to understanding a business firm's approach to becoming digital by initiating digital transformation efforts (Hanelt et al., 2021).

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