


Chapter 11

Digital Transformation and Innovation Management: A Systematic Literature Review

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ABSTRACT

Digital innovation is the creation and commercialization of novel products and services while digital transformation indicates the combined effects of several digital innovations by novel actors (and actor constellations), structures, practices, values, and beliefs that change, threaten, replace, or complement existing rules of the game within organizations and fields. Since innovation processes themselves are subject to digitization, scholars have argued that accepted theories of innovation are no longer applicable, and hence, there is a significant need for novel theorizing and empirical research on digital innovation management.

INTRODUCTION

Digital technologies are impacting all aspects of economic and social activities by disrupting or complementing existing activities or creation of new activities, services, and businesses. Digitalization allows automation and tracking and storing of information and data which can be analysed for improving processes,

DOI: 10.4018/978-1-6684-5575-3.ch011

work organization (Zuboff, 1988) and predict future events (Agrawal, Gans, and Goldfarb 2018). Some of the high impact digital technologies are internet of things, blockchains, additive manufacturing, big data, and artificial intelligence; cloud computing, and augmented and virtual reality (Rindfleisch et al., 2017). Digital innovation is the creation and commercialization of novel products and services while digital transformation indicates the combined effects of several digital innovations by novel actors (and actor constellations), structures, practices, values, and beliefs that change, threaten, replace or complement existing rules of the game within organizations and fields (Hinings et al., 2019).

In order to leverage the complex and dialectical relationships between innovation, digital technologies, the relationship between evolution and trajectories of connected digital technologies and firm innovation needs to be understood. Innovation is a result as well as a source of digital transformations at all levels.

Digital technologies are continuously improving through higher processing capacity and lower cost enabling new opportunities for networks to generate, develop, and fund innovative digital products and services (Yoo, 2010). The unique characteristics of digital innovation processes make it mandatory for firms to evaluate the role and configuration of their product and service portfolio, their interaction with the digital environment, and how organizational processes can be configured to support digital technology driven innovation.

Since Innovation processes themselves are subject to digitization, scholars have argued for newer theories as existing assumptions and perspectives may no longer be relevant (Nambisan, Lyytinen, Majchrzak, & Song, 2017; Svahn, Mathiassen, & Lindgren, 2017). Hence there is a significant need for novel theorizing and empirical research on digital technology driven innovation. Management and organizational scholars have been focussed on interconnections between digital transformation and innovation management in recent past. However due to a fragmented research on the interplay between digital transformation and innovation management, practitioners and researchers lack a framework to undertake decisions and evaluate current situations.

Through a systematic literature review, this study aims to develop a holistic framework systematically of key dimensions (*what*); and a framework which can be used to explore the role and approach played by digital technologies in innovations at level of firm, industry and society, based on the empirical evidence from the selected papers. The paper contributes to our understanding of the theory of digital technologies and innovations in various contexts of industries across different sectors of the economy and different levels of decision making i.e. firm, industry and societal levels.

The research objectives of this study are:

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