

EDITED BY

S. Asieh H. Tabaghdehi
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BUSINESS STRATEGIES AND ETHICAL CHALLENGES IN THE DIGITAL ECOSYSTEM



Business Strategies and Ethical Challenges in the Digital Ecosystem

Amidst the turbulence of our digital age, ‘Technological Adoption and Digital Business Strategy in the Time of Crisis’ emerges as a vital compass for businesses seeking sustainable growth. This insightful book doesn’t just theorize; it provides actionable strategies grounded in real-world scenarios. I highly recommend this book as a must-read for executives, entrepreneurs, and innovators looking to master the art of digital transformation in an ever-evolving landscape.

—*Professor Charles Dennis, Middlesex University, UK*

In a world of constant change and uncertainty, ‘Technological Adoption and Digital Business Strategy in the Time of Crisis’ stands as a beacon of practical wisdom. This book provides actionable insights and real-world examples, making it an indispensable guide for navigating the digital landscape during challenging times. Highly recommended for business leaders and professionals seeking to thrive in today’s dynamic environment.

—*Professor Yogesh K. Dwivedi, Personal Chair,
Swansea University, Wales, UK*

Business Strategies and Ethical Challenges in the Digital Ecosystem

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Chapter 1

Introduction: Business Strategies and Ethical Challenges in the Digital Ecosystem

S. Asieh H. Tabaghdehi and Pantea Foroudi

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Business Strategies and Ethical Challenges in the Digital Ecosystem developed progressively and became vital in academic research and management practice in a new normal. The playing field for managers and entrepreneurs has changed and become progressively complex due to the technological advancements and social issues they have to deal with in the current international market. Artificial intelligence has been used to create pathways into the private spaces of consumers allowing the application of Big Data Analytics as a tool to monitor and interact with consumers, businesses, competitors and every other stakeholder to improve business performance. Being computer-savvy has become a must at all levels of the workforce. But technological advancements are not the only ones challenging traditional management and organisational theories. Concepts like open innovation, the share economy and sustainability are also pushing practitioners to think innovatively.

The development of platforms and infrastructures such as social media, crowdfunding/crowdsourcing, Internet of Things (IoT) and virtual workspaces has improved, worldwide, innovation, entrepreneurship and sustainability in substantial ways with broad managerial, organisational and policy implications. The emergence of new digital technologies, awareness of corporate social responsibility and the greater need for innovation and problem-solving skills are becoming a de-facto part of the everyday management agenda. Increasing globalisation has made the world smaller and more competitive. Sociocultural and sociopolitical issues affect businesses at an unprecedented speed, yet academic research is not evolving fast enough to develop concepts and techniques needed by practitioners, especially where it is needed in domains such as management.

Before COVID-19 swept over the globe, the term “technological adoption” was highly used in businesses which implied that a business was forward-thinking enough to embrace technology and evolve their operations, products and services to better appeal to modern needs. There was no particular urgency or real meaning attached to the term even a few months ago. But now, needless to say,

the situation has changed. Technological adoption has suddenly become crucial for businesses across all industries. Those undergoing a tech-centric reimagining hope to achieve a new business model, tap new revenue streams or find new digital means to improve their products, extend their business reach and outfox their competitors. Digitally mature organisations enjoy increased efficiency, better consumer satisfaction, improved employee engagement and better product and service quality. Thus, there is the need to understand how “technological adoption” impacts on business strategy, organisational performance and consumers behaviour.

Digitally mature organisations enjoy increased efficiency, better consumer satisfaction, improved employee engagement, better product and service quality and revenue growth. This is where digital ethics and online reputation management comes into play. In a post-COVID world, remaining on that ever-important cutting-edge means being remote-friendly, keyed into a tech-reliant world and being capable of facilitating satisfying interactions between digitally connected employers and consumers. Online reputation management is the practice of ensuring that your online presence accurately conveys your business’s image and any important digital evolutions it might have undergone.

Hence, in the contemporary landscape of business, the intersection of technological adoption and digital strategy has become a critical focal point, particularly in current rapidly growing digital society. As industries grapple with unprecedented challenges, the integration of smart technology and responsible digital innovation has emerged as a transformative force, reshaping the way organisations operate, strategise and connect ethically and responsibly with their stakeholders.

This book, *Business Strategies and Ethical Challenges in the Digital Business Ecosystem*, delves into a comprehensive exploration of this dynamic landscape, navigating through four distinct but interconnected parts that collectively illuminate the multifaceted dimensions of this digital paradigm shift. Part I focuses on ‘The landscape of Technological Innovation’, Part II emphasises ‘Market Trends and Consumer Adoption’, Part III focuses on ‘Business Strategies for Technological Adoption’ and Part IV emphasises ‘Ethical and Strategic Challenges in the Digital Age’.

Our leading chapter was contributed by S. Asieh Hosseini Tabaghdehi, Ana Canhoto and Ashley Braganza, as provided (Chapter 2) and focused on the duality of smart technology in the current digital era. The chapter was driven from their policy recommendation that was presented to the UK policymakers; they specified that to pave the way for socially responsible smart technologies, companies must explore and address risks stemming from the connectivity and cognitive capabilities of smart systems throughout their lifecycle stages, encompassing data input, processing and output. Chapter 3 is contributed by Alireza Aghakabiriha, Mohammad Reza Meigounpoory and Pantea Foroudi. They focus on the innovation ambidexterity bibliometric analysis and explore further whether the technovation ambidexterity is a new agenda in future study. Atta ur Rehman, Danae Manika, Pantea Foroudi and Maria Palazzo in chapter 4 develop an understanding of how the perceived product innovation impacts on brand loyalty

among UK Apple product users, with a focus on extending the technology acceptance model.

In part II, chapter 5 is provided by S. Asieh Hosseini Tabaghdehi, Nikolas Kois, Leila Hosseini Tabaghdehi and Hossein Kalatian. This chapter highlights the importance of the relationship between organisations and customers in the current digital age and how SMEs use social media as an opportunity to develop their enterprises. In their study, they conducted qualitative methods to explore the insights from a wider stakeholder perspective. Chapter 6 is provided by Fahimeh Dousthosseini, Manijeh Haghghinasab and Pantea. They delineate why and under what conditions consumers intend to buy green and what the consequences are. Relying on theories of reasoned action and theory of planned behaviour, the authors offer that the green purchase intention is impressed by environmental and personality components. Provide statements about the determinants and key implications of such market identification. Chapter 7 was developed by Mostafa Oboudi, Ayatolah Momayez, Nader Seyyed Amiri and Morteza Akbari. They review the IoT as a concept with bibliometric analysis using data selected from the Scopus database. The cited references included two clusters. Also, co-occurrence keyword analysis found four groups. The first cluster shows IoT adoption in agriculture, manufacturing, logistics and supply chain management. The second cluster includes behavioural models of IoT technology acceptance. The third cluster refers to the adoption of IoT and automation technology in intelligent buildings, smart homes, smart cities and healthcare. Finally, the fourth cluster contains information management.

In chapter 8, Mehdi Rahmani, Pantea Foroudi , S Asieh H Tabaghdehi and Ramin Behbehani investigated the specific features of advanced technology that shape customer purchase intention in greater depth. By investigating when and under what conditions customers choose advanced technology-based purchases, this chapter sheds light on the evolving landscape of consumer decision-making, and it seeks to quantify the transformative power of advanced technology in driving customer purchase intentions. Shazia Luidens, Guido Berens and Ronny Reshef in chapter 9 highlight the importance of the relationship between sustainable human resource practices and employee intentions to engage in sustainable behaviour within an eco-friendly hotel. Specifically, they examine the influence of internal sustainability orientation, supervisory support, training and rewards, as well as the mediating role of employees' knowledge of the resort's sustainability practices.

In Part III, Edem Boni and S Asieh Hosseini Tabaghdehi contributed to chapter 10 and explored further the impact of digitalisation on retail business models and understanding consumer purchasing habits during emergencies. They discussed in detail the influence of scarcity and competitive arousal on consumer choices, the effects of stock-outs on brand and store preferences, price sensitivity, waiting times and the shift towards online shopping. They addressed concerns about social exclusion in digital channels and the potential for bridging the gap between offline and online shopping experiences.

In Chapter 11, Zeinab Zamani, Ameneh Khadivar, Hamid Padash, Javad Shekarkhah and Morteza Akbari recognise and rank the factors that impact the

adoption of mobile commerce (MC) by users. Their results showed that compatibility, perceived usefulness (PU), perceived risk (PR), mobility and perceived cost (PC) have a significant effect on the adoption of MC by users. The results of multilayer perceptron (MLP) showed that mobility, among other model variables, had the greatest impact on the adoption of MC, and perceived cost had the lowest effect on the adoption of MC. The comparison of the MLP model with linear regression illustrates that the predictive power of MLP outperforms the linear regression model in predicting MC adoption.

Next, Maryam Khodayari, Morteza Akbari and Pantea Foroudi in chapter 12 highlight the importance of the factors involved in and obstacles to sharing economy adoption have been studied with several methods, and several models have occurred to clarify the underlying procedure of SE adoption, which provide contradictory and scattered findings. This chapter seeks to offer a scientific outline of the academic structure of the SE adoption domain.

Chapter 13 is provided by Asieh Tabaghdehi, Ozlem Ayaz, Ainurul Rosli, Prena Tambay and Waheel Mughal. This chapter highlights the importance of digital adoption in SMEs and investigated further the ethical implications of digital footprints in SMEs performance and value creation. Chapter 14, provided by Lefteris Kretsos, S. Asieh H. Tabaghdehi and Ashley Braganza, discussed the Political Challenge of AI in Modern Society by focusing on various challenges from National AI Strategy to the Algorithmic Elections. Chapter 15, provided by Ming-yao Jen, Dorothy Yen and Kevin Lu, highlighted social trust and self-efficacy drive collaborative consumption. Chapter 16, provided by Hossein Kalatian and S. Asieh H. Tabaghdehi discussed the role of digital Customer Knowledge Management and Ethical Innovation Strategy in social value creation. Finally Chapter 17, provided by S. Asieh H. Tabaghdehi explored further the ethical governance of digital footprint data and how it is a critical domain, influencing privacy, trust, transparency, accountability and overall digital well-being. This chapter provides an overview of key considerations and challenges in this realm, emphasising the need for a robust ethical framework to guide the responsible use of digital footprint data. It explores the interconnected dimensions of trust, transparency, accountability and digital well-being in the context of digital footprint data. In essence, “Business Strategies and Ethical Challenges in the Digital Business Ecosystem” offers a comprehensive journey through the intricate web of technological evolution, digital innovation strategy, and ethical considerations as the key implication in this domain. By examining these interconnected parts, readers will gain valuable insights into the strategies and considerations essential for navigating the challenges and opportunities presented by the digital age.

Part I

The Landscape of Smart Technology and Digital Innovation

This part aims to set the stage by focusing on technological innovations and their immediate impact on consumer perceptions and behaviour.

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Chapter 2

The Duality of Smart Technology

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Abstract

The advent of the smart technology era has brought forth unprecedented opportunities and challenging risks, extending beyond individual, organisational and societal boundaries. These vulnerabilities are deeply interconnected with contextual factors such as technology accessibility, user competence and the wide-ranging consequences of technology utilisation that necessitates context-aware solutions. In this policy recommendation that was presented to the UK policymakers, we specified that to pave the way for socially responsible smart technologies, companies must explore and address risks stemming from the connectivity and cognitive capabilities of smart systems throughout their lifecycle stages, encompassing data input, processing and output. We emphasised that effective risk management demands a multifaceted orchestration of proactive (push) and reactive (pull) measures to mitigate harm. Furthermore, we indicate that smart technology's transformative potential has the capacity to revolutionise competition across industries, redefining innovation. However, this transformation introduces substantial risks that extend beyond corporate boundaries, affecting individual well-being and safety. Consequently, responsible innovation and mitigation strategies are imperative. Finally, we highlighted that global consumer decisions about smart technology adoption tend to be influenced less by geopolitical factors and more by complex motivations that weigh technological promises against perceived risks. The pursuit of socially responsible smart technology represents a multilayered effort tackling challenges that transcend conventional boundaries while empowering technology developers to embrace innovation.

Keywords: Smart technology; connected technology; datafication; digital vulnerability; digital exclusion; push and pull mechanism

Introduction: Unravelling the Impact of Smart and Connected Technology – Evaluating the Shift in Society

In today's rapidly evolving world, the pervasive influence of "Smart and connected technology" has emerged as a defining symbol of modern society. Smart and connected technology refers to a category of technological solutions and devices that are designed to be intelligent, interconnected and capable of collecting and sharing data for various purposes. These technologies often leverage the Internet of Things (IoT) and other advanced digital systems to provide innovative features and capabilities. These digital innovations and digital connectivity have revolutionised nearly every aspect of our lives, from our homes and workplaces to the ways we communicate, learn and interact with the world. The unique characteristics of current digital transformation are the unprecedented synergy between devices and the seamless exchange of data across a vast network of interconnected systems.

This chapter provides a reflective analysis of our recommendations to policymakers in the United Kingdom in 2022, focusing on the exposition of five critical issues:

- (1) What have been or will be the most important impacts of increasingly prevalent smart and connected technology in our lives, including in the home, in the workplace and in our towns and cities, and are they necessarily better than current systems?
- (2) Are there any groups in society who may particularly benefit from or be vulnerable to the increasing prevalence of smart technology, such as young or elderly people, people with disabilities and people likely to be digitally excluded?
- (3) How can we incentivise or encourage design that is safe, secure, environmentally and user-friendly and human rights compliant?
- (4) What are the key short- and long-term risks and threats, and how can we ensure the devices, systems and networks of individuals, businesses and organisations are digitally literate and cyber secure?
- (5) How will current geopolitical concerns influence domestic consumers, e.g. regarding standards of imported goods or in how we can deal with cyber threats?

Here, we highlighted the impact of smart and connected technology on modern society discussing how technology has changed our daily routines and reshaped our expectations.

The arrival of smart technology ranging from smartphones to autonomous vehicles has expanded their conventional functions. The connected technology altered the way that we interact with devices, equipped with the ability to collect