

MANAGEMENT AND INFORMATION TECHNOLOGY IN THE DIGITAL ERA

Challenges and Perspectives

Edited by Nawal Chemma,
Mohammed El Amine Abdelli, Anjali Awasthi
and Emmanuel Mogaji

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IN THE DIGITAL ERA:
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PERSPECTIVES**

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FOREWORD

Information technology management facilitates the interaction of intervening actors, improves human resource management procedures and applies new pedagogical models for continuous and distance learning. The growth prospects of artificial intelligence and how it is revolutionising different sectors further present critical challenges for managers on how to harness the opportunities of this technology for their business prospects. Managers need to understand how technology is changing their business operations and the emergence of digital consumers who demand more innovative, technologically driven experiences. In addition, technological considerations are addressed, with topics such as selecting digital tools for developing and exploiting the new trends and applying artificial intelligence technology in the business and management industry. The edited book of these dimensions helps various actors to propose creative and innovative solutions for digital technologies that allow enterprises and organisations to draw positive paths for the future community, allowing for a better discussion and understanding of the issues and challenges created by contemporary society.

This book has presented different chapters, highlighting management and practical implications across other technology, sector and countries. In addition, the chapters provide a wide of reflections on the challenges and perspectives of management and information technology in the digital era.

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PREFACE

Our book highlights the importance of management and information technology in the digital era. The book offers a theoretical and empirical framework in the field of digitalisation. The readers will find the chapters in this book both enriching and thought-provoking. The insights provided in the collection of research materials will enhance the understanding in this area, inspire further interest in management and information technology in the digital era and provide a basis for sound management decisions and stimulate new ideas for future research. This book offers a modern insight for researchers, students, professionals and decision-makers on the application of digitalisation in the Management area.

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MANAGEMENT AND INFORMATION TECHNOLOGY IN THE DIGITAL ERA: INTRODUCTION TO EDITED COLLECTION ON CHALLENGES AND PERSPECTIVES

Nawal Chemma, Mohammed El Amine Abdelli,
Anjali Awasthi and Emmanuel Mogaji

ABSTRACT

Management of information technology (IT) will continue to be an essential endeavour for organisations as we experience the increasing advancement of technology across different spectres of life. Managers will need to understand how technology is changing their business operations and the emergence of digital consumers who demand more innovative and technologically driven experiences. This book was conceptualised to provide theoretical insight for managers and researchers to understand where we are and where technology is taking us. This book has presented different chapters, highlighting management and practical implications across other technology, sector and countries. These selected chapters provide a wide variety of stimulating insights into the varying challenges and perspectives of management and IT in the digital era. Significantly, we recognise the growing prospects of Artificial intelligence (AI) and how it is revolutionising different sectors, further presenting critical challenges for managers on how to harness the opportunities of this technology for their business prospects.

Keywords: Management; information technology; digital era; artificial intelligence; edited book; business

INTRODUCTION

Since the 1980s, academics have paid close attention to the strategic use of IT. Researchers have proposed several prescriptive models that firms might use to determine the strategic

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potential of IT in the workplace (Philip, Gopalakrishnan, & Mawalkar, 1995). Technology has become an integral part of our everyday lives. It has been integrated into different sectors, including education, finance, education and health (Dwivedi et al., 2022; Sharma, Soetan, Farinloye, & Noite, 2022; Soetan & Kieu, 2020). Technological innovates that has been supported by global economic growth, combined with explosive digital technology proliferation, the emergence of fast internet access, faster computer processing power and big data for analytics and insight (Abdulquadri, Mogaji, Kieu, & Nguyen, 2021; Adeyanju, Ajilore, Ogunlalu, & Onatunji, 2022). The digital era has been marked by the emergence of various digital technologies playing a crucial role in shaping and regulating multiple operations. ITs are among these initiatives. They have escalated the use of computers for data collection, storage and processing to serve various functions (Dwivedi et al., 2022; Mogaji & Nguyen, 2021; Soetan & Kieu, 2020).

IT is the essential vehicle for information management, and enterprises have successfully employed computers as an information resource management tool since the 1960s. Information is now widely recognised as a critical organisational resource I, and it, like all other resources, must be efficiently managed to meet corporate goals and objectives. However, there have been growing challenges around understanding and adopting technology for business operations. Mogaji and Nguyen (2021) explored the attitude of managers to Artificial Intelligence (AI) and highlighted the limited understanding of digital technologies' practical and technical implications.

Information management systems, in general, can be considered information systems because they control data flow, databases and technological data processes. Although IT management is concerned with exploring, analysing and managing IT as a technological resource, IT management also aids in the design, development and deployment of IT products and services (Gupta, 2010). Therefore, the understanding of IT management is a need for the theoretical exploration of some of the inherent challenges and perspectives regarding its adoption. Perhaps from a country perspective – challenges of developed versus developing countries, the sector – service sectors with automating business operations or creative industry. A holistic understanding is much needed.

These are some of the insights this book aims to address and contribute to the growing body of work exploring management and IT in the digital era (Borges, Laurindo, Spínola, Gonçalves, & Mattos, 2021; Hsieh & Wu, 2019; Wiesböck & Hess, 2020). The challenges with IT are well recognised (Abdulquadri et al., 2021; Dwiledi et al., 2021; Mogaji, Balakrishnan, Nwoba, & Nguyen, 2021). However, this book explores these challenges and highlights their future use. We hope that this book meaningfully advances our comprehension and management of digital technology and stimulates further research. The subsequent section of this chapter highlights the coverage and content of the book and a concluding remark.

COVERAGE AND CONTENT OF THE BOOK

Following double-blind refereeing, 12 articles were selected that reflect some of the main challenges and perspectives of management and IT in the digital era, representing a relevant research area, both for scholars and practitioners. The chapters are grouped into three different themes. Theme one has three chapters with a focus on AI. Theme two has

five chapters with a focus on IT. Theme three has four chapters with a focus on technology-driven business operations. In addition to these chapters, there is an introductory chapter (Chemma, Abdelli, Awasthi, & Mogaji, 2020) and a concluding chapter (Chemma et al., 2020) written by the editors. This first chapter provided a background to the study and introduced the coverage and contents of the book, highlighting the different themes and chapters. The book highlights a selection of 12 chapters.

In chapter two, the contributors (Roy & Jain, 2022) highlight that adopting AI-driven technologies and amplifying gamification in marketing services are new phenomena in chapter two. Moreover, games and AI dynamics are relatively new in emerging countries and need greater attention. However, the authors give an insight on the dyad model that would explain users' and companies' perspectives. The third chapter (Kolog et al., 2022) explores the possible challenges that hinder the implementation of AI in Africa. The authors also propose solutions for AI implementation in education, especially in this era of the COVID-19 pandemic. The solutions stem from rethinking the role of AI in the education sector. The fourth chapter (Döngül & Cavaliere, 2022), which provides a flexible production planning model with multiple constraints and maximum cost savings, has been developed. After optimisation, the standard genetic algorithm was used to solve the aim of the model function. Results indicate that the calculation results of the objective process with six order sizes and 40 order sizes tend to be good.

Theme two of the book starts with chapter five, which sought to measure the mediating relationship of online buying intentions between narcissism, materialism and brand experience for Phuket, Thailand, customers (Somtawinpongsai, Hamid, Raza, Sawangchai, & Cavaliere, 2022). Chapter six critically evaluates the opportunities and challenges in adopting IT for enhancing transportation in developing countries. The study makes theoretical contributions to the growing body of technological innovation, smart mobility and intelligent transport systems (Nguyen & Mogaji, 2022a, 2022c). It has implications for stakeholders, especially the tech developers, transporters and transport tech start-ups. For chapter seven, the impact of COVID-19 on the physical provision of banking services in high street banks was explored (Nguyen & Mogaji, 2022b). The study reports the thematic analysis of tweets from 12 banks in the United Kingdom to understand the challenges and issues banks face due to the pandemic. The analysis presents three key themes: service update, preparation and delivery. For chapter eight (Afef Khalil et al., 2022), this research paper aims to analyse the impact of digital technologies and government support on the resilience of Small and Medium-sized Enterprises (SMEs) during the COVID-19 pandemic. A questionnaire survey was employed based on a sample of 96 SMEs and was divided into three parts and comprised 28 questions. For chapter nine (Bechir & Lachi, 2022), this study aims to study the reality and prospects of the digital economy in Algeria through annual reports and statistics that present the usefulness of digitalisation in Algerian economic sectors.

Theme three of the book starts with Chapter 10. The study highlights SME 5.0. Also, the approaches, forecasting theories, ideas and methodologies are intended to help SMEs become more efficient and effective (Mohammadian, 2022a). Chapter 11 focuses on system processing through incoming data and big data and analysis after data processing and clustering and then intelligent decision-making. This can be driven and done entirely through an Internet of Things (IoT), AI, BI and the future of fourth technologies

(Mohammadian, 2022b). For Chapter 12, this study is the first to examine the impact of collectivist culture on the communication and willingness of artisans to share their knowledge and, therefore, the capacity of the cluster to disseminate the innovation. It aims to measure and understand the impacts of the individualistic or collectivistic culture on how artisans communicate and share their ideas. The research contains a Thailand companies' survey case study for the final chapter.

CONCLUSION

Management of IT will continue to be an essential endeavour for organisations as we experience the increasing advancement of technology across different spectres of life (Mogaji, 2021). Managers will need to understand how technology is changing their business operations and the emergence of digital consumers who demand more innovative and technologically driven experiences (Gökerik, Gürbüz, Erkan, & Sap, 2018). This book was conceptualised to provide theoretical insight for managers and researchers to co-create technology values and better understand their prospects (Borges et al., 2021; Hinson & Mogaji, 2020).

This book has presented different chapters, highlighting management and practical implications across other technology, sector and countries. These selected chapters provide a wide variety of stimulating insights into the varying challenges and perspectives of management and IT in the digital era. Significantly, we recognise the growing prospects of AI and how it is revolutionising different sectors, further presenting critical challenges for managers on how to harness the prospects of this technology for their business prospects (Soetan, Mogaji, & Nguyen, 2021).

This book represents a significant contribution to the growing body of work on IT, AI and technology management. We thank all the authors who submitted articles for consideration in this edited book. Over 34 papers were initially received. These few authors pulled through with tenacity, perseverance and passion for creating knowledge. We are grateful to the reviewers who contributed their valuable time and talent to develop this edited book and ensured the quality of the chapters with their constructive comments and suggestions. We believe this book contains significant work that is profoundly meaningful for stakeholders interested in information management.

This book on *Management and Information Technology in the Digital Era: Challenges and Perspectives* focuses on different factors influencing digital adoption. We hope we have made a mark regarding the information out there. The authors have covered different geographies worldwide and employed different methodological approaches to reach their study conclusions. The authors' affiliations are also international in scope. The collection reflects the diversity and breadth of current research within this stimulating and evolving research area. We hope you will enjoy the book as much as we have done editing it and liaising with different authors who have contributed to the work.

REFERENCES

- Abdulquadri, A., Mogaji, E., Kieu, T., & Nguyen, P. (2021). Digital transformation in financial services provision: A Nigerian perspective to adopting chatbot. *Journal of Enterprising Communities: People and Places in the Global Economy*, 15(2), 258–281.
- Adeyanju, S., Ajilore, O., Ogunlalu, O., & Onatunji, A. (2022). Innovating in the face of the COVID-19 pandemic: Case studies from Nigerian universities. In J. S. McKeown, K. Bista, & R. Y. Chan (Eds.), *Global higher education during COVID-19: Policy, society, and technology* (pp. 104–120). Boston, MA: STAR Scholar.

- Afef Khalil, A., Bousselmi, H., Abdelli, M., Baccouche, I., Rio, L., & Nasr, H. (2022). The impact of digital technologies on SMEs' resilience during the COVID-19 pandemic. In N. Chemma, M. Abdelli, A. Awasthi, & E. Mogaji (Eds.), *Management and information technology in the digital era: Challenges and perspectives*. Bingley: Emerald Publishing Limited.
- Bechir, S., & Lachi, O. (2022). Analysis of the effects of digital technology on the Algerian economy. In N. Chemma, M. Abdelli, A. Awasthi, & E. Mogaji (Eds.), *Management and information technology in the digital era: Challenges and perspectives*. Bingley: Emerald Publishing Limited.
- Borges, A. F., Laurindo, F. J., Spinola, M. M., Gonçalves, R. F., & Mattos, C. A. (2021). The strategic use of artificial intelligence in the digital era: Systematic literature review and future research directions. *International Journal of Information Management*, 57, 102225.
- Chemma, N., Abdelli, M., Awasthi, A., & Mogaji, E. (2022). Management and information technology in the digital era: Introduction to edited collection on challenges and perspectives. In N. Chemma, M. Abdelli, A. Awasthi, & E. Mogaji (Eds.), *Management and information technology in the digital era: Challenges and perspectives*. Bingley: Emerald Publishing Limited.
- Döngül, E. S., & Cavaliere, L. (2022). Strategic management of platform business ecosystem using artificial intelligence supported human-computer interaction technology. In N. Chemma, M. Abdelli, A. Awasthi, & E. Mogaji (Eds.), *Management and information technology in the digital era: Challenges and perspectives*. Bingley: Emerald Publishing Limited.
- Dwivedi, Y. K., Hughes, L., Ismagilova, E., Aarts, G., Coombs, C., Crick, T., & Williams, M. D. (2021). Artificial Intelligence (AI): Multidisciplinary perspectives on emerging challenges, opportunities, and agenda for research, practice and policy. *International Journal of Information Management*, 57, 101994.
- Gökerik, M., Gürbüz, A., Erkan, I., & Sap, S. (2018). Surprise me with your ads! The impacts of guerrilla marketing in social media on brand image. *Asia Pacific Journal of Marketing & Logistics*, 30(5), 1222–1238.
- Gupta, P. (2010). *IT infrastructure and its management*. New Delhi: Tata McGraw Hill Education.
- Hinson, R., & Mogaji, E. (2020). Co-creation of value by universities and prospective students: Towards an informed decision-making process. In E. Mogaji, F. Maringe, & R. E. Hinson (Eds.), *Higher education marketing in Africa* (pp. 17–46). Cham: Palgrave Macmillan.
- Hsieh, Y. J., & Wu, Y. J. (2019). Entrepreneurship through the platform strategy in the digital era: Insights and research opportunities. *Computers in Human Behavior*, 95, 315–323.
- Kolog, E., Devine, S., Egala, S., Amponsah, R., Budu, J., & Farinloye, T. (2022). Rethinking the implementation of artificial intelligence for a sustainable education in Africa: Challenges and solutions. In N. Chemma, M. Abdelli, A. Awasthi, & E. Mogaji (Eds.), *Management and information technology in the digital era: Challenges and perspectives*. Bingley: Emerald Publishing Limited.
- Mogaji, E. (2021). *Brand management*. Cham: Palgrave Macmillan.
- Mogaji, E., Balakrishnan, J., Nwoba, A., & Nguyen, P. N. (2021). Emerging-market consumers' interactions with banking chatbots. *Telematics and Informatics*, 65, 101711.
- Mogaji, E., & Nguyen, N. P. (2021). Managers' understanding of artificial intelligence in relation to marketing financial services: Insights from a cross-country study. *International Journal of Bank Marketing*. ahead-of-print No. ahead-of-print. doi:10.1108/IJBM-09-2021-0440
- Mohammadian, H. (2022a). Mapping the future SMEs' HR competencies via IoE technologies and 7PS model through the 5th Wave theory. In N. Chemma, M. Abdelli, A. Awasthi, & E. Mogaji (Eds.), *Management and information technology in the digital era: Challenges and perspectives*. Bingley: Emerald Publishing Limited.
- Mohammadian, H. (2022ba). Mapping the future global SMEs growth via hybrid SMEs/SME 5.0/tomorrow's SMEs concept through the 5th Wave, i-sustainability plus and DCT theories. In N. Chemma, M. Abdelli, A. Awasthi, & E. Mogaji (Eds.), *Management and information technology in the digital era: Challenges and perspectives*. Bingley: Emerald Publishing Limited.
- Nguyen, P., & Mogaji, E. (2022a). Information technology for enhancing transportation in developing countries. In N. Chemma, M. Abdelli, A. Awasthi, & E. Mogaji (Eds.), *Management and information technology in the digital era: Challenges and perspectives*. Bingley: Emerald Publishing Limited.
- Nguyen, P., & Mogaji, E. (2022b). Redefining banking service delivery: Information technology adoption by UK banks amid the COVID-19 pandemic. In N. Chemma, M. Abdelli, A. Awasthi, & E. Mogaji (Eds.), *Management and information technology in the digital era: Challenges and perspectives*. Bingley: Emerald Publishing Limited.
- Nguyen, P. N., & Mogaji, E. (2022c). Marketing communications strategies for public transport organisations. In O. Adeola, P. Katuse, & K. Kakra (Eds.), *Public sector marketing communications: Foundational and contemporary issues* (pp. 23–56). Cham: Springer.

- Philip, G., Gopalakrishnan, M., & Mawalkar, S. R. (1995). Technology management and information technology strategy: Preliminary results of an empirical study of Canadian organisations. *International Journal of Information Management*, 15(4), 303–315.
- Roy, G., & Jain, V. (2022). Role of artificial intelligence in gamification for the emerging markets. In N. Chemma, M. Abdelli, A. Awasthi, & E. Mogaji (Eds.), *Management and information technology in the digital era: Challenges and perspectives*. Bingley: Emerald Publishing Limited.
- Sharma, H., Soetan, T., Farinloye, T., & Noite, M. (2022). AI adoption in universities in emerging economies: Prospects, challenges and recommendations. In *Re-imagining educational futures in developing countries*. Cham: Palgrave.
- Soetan, T. O., & Kieu, T. A. (2020). The implications of artificial intelligence on the digital marketing of financial services to vulnerable customers. *Australasian Marketing Journal*, 29(3), 235–242.
- Soetan, T., Mogaji, E., & Nguyen, P. N. (2021). Financial services experience and consumption in Nigeria. *Journal of Services Marketing*, 35(7), 947–961.
- Somtawinongsai, C., Hamid, A., Raza, M., Sawangchai, A., & Cavaliere, L. (2022). Impact of brand experience, narcissism, and materialism on luxury purchase behaviour mediated by online buying intentions. In N. Chemma, M. Abdelli, A. Awasthi, & E. Mogaji (Eds.), *Management and information technology in the digital era: Challenges and perspectives*. Bingley: Emerald Publishing Limited.
- Wiesböck, F., & Hess, T. (2020). Digital innovations. *Electronic Markets*, 30(1), 75–86.

THEME 1

ARTIFICIAL INTELLIGENCE

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