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Abdalmuttaleb M. A. Musleh Al-Sartawi ·  
Abdulnaser Ibrahim Nour  
Editors

# Artificial Intelligence and Economic Sustainability in the Era of Industrial Revolution 5.0

 Springer

*Editors*

Abdalmuttaieb M. A. Musleh Al-Sartawi  
College of Business and Finance  
Ahlia University  
Manama, Bahrain

Abdulnaser Ibrahim Nour  
Department of Accounting, Faculty  
of Business and Communication  
An-Najah National University  
Nablus, Palestine, State of

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# Preface

Countries seek to achieve sustainable development, particularly economic sustainability through practices that enable long-term economic growth and extend the positive effects of this growth to the environmental, social, and cultural aspects of society. Economic sustainability emphasizes achieving economic growth in terms of volume and quality while also maintaining the health and stability of societal growth and the human ecosystem. Economic sustainability aims to preserve capital and labor, to improve the standard of living, the effective use of assets, along with maximization of profits. The principles of economic sustainability can hence be considered in line with the elements of Industry 5.0. Both seek to and include the welfare and well-being of workers, individuals, and the society. This publication accordingly focuses on topics related to the role of technology and AI in advancing the welfare and well-being of the society.

The publication *Artificial Intelligence and Economic Sustainability in the Era of Industrial Revolution 5.0* has provided a platform for interdisciplinary research from multiple perspectives, disciplines, and researchers. The publication covers topics in the fields of technology, economics, accounting, finance, and knowledge management especially from the perspective of the more human-centric society—Society 5.0.

This publication consists of 99 chapters. The call for papers sought submissions in full research papers and hence attracted many submissions which were reviewed in a double-blind process by academics in the relevant fields.

This book provides insight on important areas related to artificial intelligence, sustainable development, and Society 5.0. The papers present a wide range of topics including block cipher, entrepreneurship and AI, AI and stock trading decisions, digital transformation, knowledge management, chatbot engineering, cybersecurity, and smart metering system.

As editors, we would like to take this opportunity to thank our reviewers for refereeing the chapters as well and their contributions toward the improvement of quality and content of the chapters. Particular thanks go to our authors and reviewers for the quality of the papers. We are grateful for receiving papers and submissions from two conferences, (1) The Fifth Scientific Conference of the College of Economics

and Social Sciences 2023 (CESS) and (2) The International Conference on Global Economic Revolutions 2022. Finally, we would like to thank the executive editor of CESS 2023, **Dr. Islam Abdeljawad**, for his hard work and support in organizing the conference, leading the editorial team, and reviewing the final accepted papers for publication.

Manama, Bahrain  
Nablus, Palestine, State of  
October 2023

Abdalmuttaleb M. A. Musleh Al-Sartawi  
Abdulnaser Ibrahim Nour

# Introduction

The Fifth Industrial Revolution or ‘Industry 5.0’ has been dubbed as the digital revolution with a *soul*. In this sense, Industry 5.0 addresses the technocentric limitations of Industry 4.0. Sustainable technologies, human-centric artificial intelligence, and manufacturing simulation are essential for implementing the key elements of Industry 5.0 which include **human-centricity, sustainability, and resilience**. Countries seek to achieve sustainable development, particularly economic sustainability through practices that enable long-term economic growth and extend the positive effects of this growth to the environmental, social, and cultural aspects of society. Economic sustainability emphasizes achieving economic growth in terms of volume and quality while also maintaining the health and stability of societal growth and the human ecosystem. Economic sustainability aims to preserve capital and labor, to improve the standard of living, the effective use of assets, along with maximization of profits [1]. The principles of economic sustainability can hence be considered in line with the elements of Industry 5.0. Both seek to and include the welfare and well-being of workers, individuals, and the society.

Industry 5.0 is an effort to address the human impacts of the Fourth Industrial Revolution. In light of the rapid developments of the Industrial Revolution 5.0, the importance of this conference to achieve a sustainable economy is embodied in several aspects. As the limited natural resources threaten the sustainability of the economy, the development of new operations and investment in various resources is a necessity for the long-term sustainability of any business activity [2].

On the other hand, preserving human life is important, as climate change causes damages that impede the human ability to continue living, so reducing energy consumption and adjusting the food production approach provides an opportunity for the growth and stability of future generations. Also on this list are discovery and innovation [3]. When the environment gets worse, it becomes harder to come up with new ideas and find new parts that can be used to make products and services that help the economy.

In Society 5.0, organizations need to seize both national and international market opportunities through reliable employees who can effectively and efficiently utilize

digital technology [4]. It is the role of organizations, through strategies, policies, and training, to increase employee engagement and voice.

Abdalmuttaleb M. A. Musleh Al-Sartawi  
2023

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## About the Editors

**Abdalmuttaleb M. A. Musleh Al-Sartawi** (Ph.D.) is Chairperson of the Accounting, Finance and Banking Department at Ahlia University, the Kingdom of Bahrain. He is ranked by the **Stanford University** as **one of the World's Top 2% Scientists** in 2022 and 2023. Moreover, he is Editor-in-Chief of the *International Journal of Electronic Banking* (IJEBank), Inderscience, and Associate Editor of the *Journal of Sustainable Finance and Investment*, Taylor & Francis.

Al-Sartawi received his **Ph.D.** in Accounting from the University of Banking and Financial Science (UBFS). He has presented and published many papers in regional and international conferences and journals. In addition, Al-Sartawi is **Chair and Editor of two international conferences**: the European, Asian, Middle Eastern, North African Conference on Management and Information Systems (EAMMIS) and the International Conference on Global Economic Revolutions (ICGER). He is Member of various **editorial boards and technical committees** in international refereed journals and conferences.

Al-Sartawi is **Member of several international organizations and associations** such as the European Accountants Association (EAA), Bahrain Economists Society, the Middle East Economic Association (MEEA), the International Islamic Marketing Association (IIMA), the Arab Academy for Banking and Financial Sciences, and the Palestinian Accounting Association.

Besides his experience in **teaching**, he is vastly experienced in local and **international quality standards and accreditation** requirements. He is responsible for developing and implementing the Bahrain Quality Assurance (**BQA**) and the National Qualifications Framework (**NQF**) systems at his department. In terms of international accreditation, he has experience in preparing reports as per **AACSB** standards, related to Assurance of Learning and intellectual contribution standards.

Al-Sartawi has worked closely with a number of international professional bodies in mapping his department's programs with professional certifications, resulting in several exemptions and accreditations such as **ACCA, CFA, and CIMA**. URL: <https://www.scopus.com/authid/detail.uri?authorId=57191107039>

**Prof. Dr. Abdunaser Ibrahim Nour** obtained his B.A. in Accounting and Auditing in 1988 from Nagpur University, M.Com. in Accounting and Business Administration in 1990 from Pune University, India, and Ph.D. degree in accounting in 1996 from Rajasthan University, India, and worked following his post-graduation at Al-Isra University in Amman, Jordan, in the post of Assistant as well as Associate Professor. He remained in this job for a period of fourteen years from 1996 to 2005 after which he applied for and got the position of Dean of College of Business at Middle East University in Amman, Jordan, from August 2008 until September 2014. He worked as Dean Faculty of Graduate Studies in Zarqa University, Jordan, for 2 years. He was then appointed as Dean of Business at Al-Ahliyya Amman University for almost 2 years and Deputy Dean and Chairman of the department for several times at different universities. He was appointed as Visiting Professor in Accounting at Al-Najah University, Nablus, on 1-9-2018. He has published more than 90 articles in both Arabic and English languages in local and international journals. He contributes well in local, regional, and international conferences, seminars, and workshops. He has published more than 8 books in accounting, finance, management, and sustainable development fields. URL: [https://www.researchgate.net/profile/Abdunaser\\_Nour](https://www.researchgate.net/profile/Abdunaser_Nour)