Guest editorial

Editorial for the special issue on "circular economy and sustainable business performance management in the era of digitalization"

Moving from linear to circular economy became a significant concept in today's business environment, and organisations need to adopt more sustainable business models. In addition, another wave, digitalisation, through new industrial revolution is also affecting organisations, and synchronous transition that covers circular and digital principles is essential. Therefore, for successful performance management practices that evaluate both circular and sustainable business performance in the digital era are needed, and more detailed analysis should be addressed.

Although there are some previous studies that mention these concepts such as Kazancoglu *et al.* (2018) and Ozkan-Ozen *et al.* (2020), in order to extend the field of research, this special issue focuses on enlightening the area of circular economy and sustainable business performance management in the era of digitalisation by answering key research questions. In this special issue, some of strong publications are selected for addressing the topic.

To start with, the possible research direction that is mentioned in the call for papers "Exploring future research directions in the nexus of circular economy and sustainability performance in the context of digitalisation" is directly pointed out by analysing barriers related to circular economy and digitalisation come forefront in this special issue, and different decision-making techniques had been used for this purpose. Authors approached to the research theme from different point of views.

For instance, for sustainable and smart practices, Kumar, Raut, Narwane, Narkhede and Muduli proposed barriers for implementation of smart technology in an Indian warehouse to achieve sustainability. This research aims to fulfil the gap in knowledge by identifying the relationship among different barriers that can enable technology adoption in warehouses. This study is unique in terms of modelling smart and sustainable warehouses with an integrated approach.

From a more practical point of view, Saroha, Garg and Luthra has identified and analysed 32 basic practices and their inter-relationship among them for achieving sustainability in circular supply chain management. The study is expected to help to improve the implementation of circular supply chain management for practitioners and decision-makers.

On the other hand, Agrawal, Whankede, Kumar, Upadhyay and Garza-Reyes aimed to conduct a comprehensive review and network-based analysis by exploring future research directions in the nexus of circular economy and sustainable business performance in the context of digitalisation and followed a systematic literature review approach.

A study is conducted by Chhabra, Singh and Kumar, which aims to have continuous monitoring and tracking of logistics operations to enhance the green performance, and in line with the proposed research direction "Proposing underlying digital technologies for sustainability performance of organisations in CE" of the special issue. In their study, a case study approach is used and performance indicators such as carbon emissions and the value of travel time saving are selected for the study to ensure green logistics.

In addition, Ferreira, Fernandez, Mota Veiga and Hughes aimed to map scientific publications, intellectual structure and research trends in the sustainable business models. They made recourse to the bibliometric, co-citation and cluster analysis techniques.

Furthermore, Umar, Khan, Yusliza, Ali and Yu conducted research related to Industry 4.0 and green supply chain practices, in which, the aim is to examine the impact of Industry 4.0 on economic and environmental performance through the mediation of green supply chain

International Journal of Productivity and Performance Management
Vol. 71 No. 3, 2022
pp. 693-695

1741-0401
DOI 10.1108/IJPPM-03-2022-696

management practices in the emerging economy context. In their study, the field of sustainable business performance management is contributed by focussing on economic and environmental performance with a view of digitalisation.

In another study, Bag, Sahu, Kilbourn, Pisa, Dhamija and Sahu explored the barriers of digital manufacturing initiatives in a circular economy by integrating two techniques. Their main originality is presenting the barriers preventing companies from adopting and benefiting from digital manufacturing initiatives and develops a methodological model. Furthermore, Ada *et al.* worked on analysing barriers of circularity for agricultural cooperatives in the digitalisation era. They aimed to propose a novel framework for barriers to circularity within cooperative supply chains, and used one of multicriteria decision-making method, fuzzy best-worst.

Moreover, Huynh investigated digital-based circular business models, and especially focused on fashion industry, and employed exploratory multiple-case study method. The aim of the study is to narrow the gap between the fashion circular economy theory and practice to harmonise fashion firms' orchestration and accelerate their transition towards the circular economy.

On the other hand, Obrecht, Singh and Zorman contributed to the special issue by forecasting the potential to reuse electrical vehicles (EV) batteries beyond EV end-of-life for electricity storage and conceptualising a new circular economy feature.

Another study, Badhotiya, Avikal, Soni and Sengar defined two objectives including identifying barriers to adopt circular economy practices in manufacturing industry and prioritising these by using a decision-making approach. They grouped these barriers under social, economic and environmental dimensions, and their results showed that low demand and acceptance of remanufactured products, lack of government support and legislation, and high upfront investment costs and long-term economic return are the key barriers for manufacturing industry.

In this special issue, Ada, Sagnak, Uzel and Balcioglu worked on analysing barriers of circularity for agricultural cooperatives in the digitalization era. They aimed to propose a novel framework for barriers to circularity within cooperative supply chains, and used one of multicriteria decision-making method, fuzzy best-worst.

In addition, Kuzma, Sehnem, Campos and de Sousa Jabbour contributed to the special issue by conducting a systematic literature review related to circular economy indicators and metrics. This study is valuable for the issue by advancing the analysis of the specificities of indicators for the circular economy and providing subsidies for improving future metrics, and pointing out the research directions in the call for paper.

Finally, Mahroof, Omar and Kucukaltan focused on sustainable food supply chains and offered a consolidative approach in exploring the potential contribution of digital technologies in sustainable supply chain management for the sustainable performance of food supply chains, through circular economy. They used semi-structured interviews and apply thematic analysis to offer rich insights into sustainable supply chain management challenges and their relationship with the business performance.

However, some of the research directions such as assessment of digital technologies on the sustainability performance or developing performance assessment model may need more research and can be focused on in future studies.

Yigit Kazancoglu
Logistics Management Department, Yasar University, Izmir, Turkey

Sachin Kumar Mangla
Jindal Global Business School, O. P. Jindal Global University, Sonipat, India and Plymouth Business School, University of Plymouth, Plymouth, UK

Malin Song
Collaborative Innovation, Center for Ecological Economics and Management, Anhui University of Finance and Economics, Bengbu, China

Guo Li
School of Management and Economics, Beijing Institute of Technology, Beijing, China, and

Flavio Hourneaux Junior
Business Administration Department, School of Economics, Business Administration and Accounting, University of São Paulo, São Paulo, Brazil

References

Kazancoglu, Y., Kazancoglu, I. and Sagnak, M. (2018), "A new holistic conceptual framework for green supply chain management performance assessment based on circular economy", *Journal of Cleaner Production*, Vol. 195, pp. 1282-1299, doi: 10.1016/j.jclepro.2018.06.015.

Ozkan-Ozen, Y.D., Kazancoglu, Y. and Mangla, S.K. (2020), "Synchronized barriers for circular supply chains in industry 3.5/industry 4.0 transition for sustainable resource management", *Resources, Conservation and Recycling*, Vol. 161, 104986, doi: 10.1016/j.resconrec.2020.104986.