TRANSFORMATIVE BUSINESS MODELS FOR DECARBONIZATION

THE CASE OF WEB SUMMIT AWARD-WINNING START-UPS

AUTORES

Evaldo Costa
Iscte – Instituto Universitário de Lisboa, DINÂMIA'CET, Lisboa, Portugal

Jose.Costa@iscte-iul.pt.

Nuno Bento
Iscte – Instituto Universitário de Lisboa, DINÂMIA'CET, Lisboa, Portugal

nuno.bento@iscte-iul.pt

Margarida Fontes
LNEG - Laboratório Nacional de Energia e Geologia

margarida.fontes@lneg.pt

The social demand for decarbonization has placed increasing pressure on businesses to contribute actively to mitigate the risks of a climate disruption resulting from carbon emissions. The development of new business models capable of transforming conventional systems of production and consumption and replacing them with more sustainable alternatives is one critical step towards this goal. This study combines several streams of literature including sustainability transitions and business model theories to investigate the key-elements of the business models that have the potential to transform the provision of goods and services in a way that enables the transition to a low-carbon society. We investigate the start-ups and relate to the extent to which they avoid, shift or improve the production or consumption of goods and services in a way that significantly reduces carbon emissions. For that, we analyze the start-ups that received innovation awards on the Web of Summit between 2014-2020. We found start-ups that are transforming their business models. The results reveal a growing tendency of the transformative projects to adopt integrated business models (e.g., business-to-business-to-commerce (B2B2C), instead of the traditional business-to-business (B2B) and business-to-consumer (B2C) models. They also highlight the role of technologies such as artificial intelligence (AI) and machine learning (ML) in a growing tendency of these start-ups in transformative business models. Together or separately, these drivers contribute to accelerate the commercialization of innovative solutions as well as to shorten the distance between production and consumption. This research emphasizes the importance of transformative business models as a mean to mitigate carbon emissions and achieve the transition to a low-carbon society. It contributes to fill a gap in the business model's literature concerning the elements that drive such transformation. These factors also improve the understanding of the way that firms contribute to implement sustainability transitions. The research is also relevant for policies that aim to promote the decarbonization of the economy, by highlighting the leverages that can be used to promote the transformation of business.

LINHA INTEGRADORA DO DINÂMIA'CET-ISCTE

Innovation and Transition to Sustainable Societies

PALAVRAS-CHAVE

Decarbonization
Business models
Sustainability transitions
Transformation
Technology

REFERÊNCIAS

Aspara, J., Lamberg, J. A., Laukia, A., & Tikkanen, H. (2013). Corporate business model transformation and inter-organizational cognition: The case of Nokia. Long range planning, 46(6), 459-474.

Costa, E., Horta, A., Correia, A., Seixas, J., Costa, G., & Sperling, D. (2021). Diffusion of electric vehicles in Brazil from the stakeholders' perspective. International Journal of Sustainable Transportation, 15(11), 865-878.

Sousa, C., & Costa, E. (2022). Types of Policies for the Joint Diffusion of Electric Vehicles with Renewable Energies and Their Use Worldwide. Energies, 15(20), 7585.