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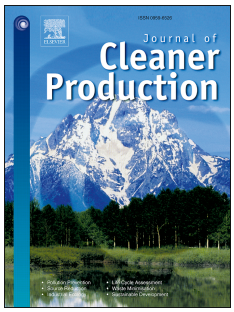

Scalability and robustness of business models for sustainability: A simulation experiment

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Scalability and Robustness of Business Models for Sustainability: A Simulation Experiment

Abstract

Entrepreneurial ventures increasingly aim at developing viable business models for solving societal or ecological challenges. Such business models for sustainability (BMfS) build on reinforcing mechanisms of value creation and capture that allow achieving financial and sustainability objectives simultaneously. To date, we do not know much about the successful design of such business models. This research aims to reduce this gap by experimentally exploring their scalability and robustness in different environmental conditions. Rooted in the literature on business models and innovation adoption, we develop a simulation model that integrates various dimensions of BMfS. We apply the simulation to Coursera, an entrepreneurial venture with the social mission of making high-quality education globally accessible. The simulation allows us to test hypotheses about the venture's financial and sustainability performance over time. We find that the business model is highly scalable but shows limited robustness to strong competitive pressure. We derive implications for the effective design of business models and discuss how the findings contribute to sustainability literature.

Keywords

Business Model for Sustainability (BMfS); Entrepreneurial business models; Business model analysis; Simulation modeling; System dynamics; innovation diffusion; MOOC