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Business models for sustainability in start-ups

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Extended abstract

As part of the 2030 Agenda and the 17 Sustainable Development Goals (SDGs) established in 2015 by the United Nations to end poverty, protect the planet and improve people's lives around the world (United Nations, 2015), business is often expected to play a fundamental role in achieving all the identified goals (El-Haddadeh et al., 2021). The SDGs provide the legitimate policy framework around which companies can plan, measure, and communicate their contribution to sustainable development (Horne et al., 2020). In this context, it is believed that new ventures can play a crucial role in achieving the SDGs by commercialising sustainable innovations through sustainable value creation, delivery and capture mechanisms (Bergmann and Utikal, 2021), which capture economic value while maintaining or regenerating natural, social and economic capital beyond their firm boundaries (Lüdeke-Freund et al., 2018; Schaltegger et al., 2016). Accordingly, new business models (BM) have the potential to contribute to the achievement of all SDGs (Fioramonti et al., 2019), by mitigating environmental impact related to natural resource use (SDGs 6, 14 and 15) and greenhouse gas emissions (SDGs 7 and 13), promoting more sustainable consumption and production practices (SDG 12), reducing educational, gender and income inequalities (SDGs 4, 5 and 10), and contributing to the transformation and sustainable economic development of cities (SDGs 8, 9 and 11).

In recent years, there has been an increase in academic studies addressing the link between sustainable business models (SBM) and the SDGs. However, little research applies empirical data-driven approaches to assess the contribution of entrepreneurs' BM to the SDGs. For instance, Bocken and Short (2021) provide a comprehensive review of the dominant types of unsustainable BMs in several sectors that are slowing down progress towards the SDGs, and suggest possible responses based on SBM solutions. Van Zanten and van Tulder (2021) applied network analysis to explore how 67 economic activities interact with 59 SDG targets.

Applying an empirical approach, Morioka et al. (2017) characterise SBM integrating the SDGs into the value creation and delivery system. The authors conduct a multiple case study analysis of 11 firms from diverse sectors. Nevertheless, the study does not address start-ups and the results are case-specific, so their generalisability is limited. By combining secondary data and interviews, Henry et al. (2020) present a typology

for circular start-ups BMs to explore innovative organisations working on circular economy. Nonetheless, the authors do not address the SDG in their research. Finally, Horne et al. (2020) map the SDGs-related activity of 588 start-ups in Germany through content analysis of award descriptions and ventures websites. However, they do not detail the types of SBM under which start-ups operate.

To address the abovementioned gaps, the ongoing research project ETORNE funded by the Provincial Council of Gipuzkoa (EZAGUTZA-18) aims to characterise and map SBM patterns of start-ups in the region of Gipuzkoa, following a mixed approach that combines multidimensional scaling (Amshoff et al., 2015; Pieroni et al., 2021) and qualitative comparative analysis (QCA) (Bouwman et al., 2019; Ragin, 2008).

Based on previous research on circular and sustainable BMs (Bocken et al., 2015; Mendoza et al., 2022; Pieroni et al., 2021) and the definition of the 17 SDGs (United Nations, 2015), a framework comprising SBM downstream architecture (e.g. offering, SDG embedded in the value proposition, client focus and revenue mechanisms) and upstream architecture (value creation processes and partnerships embedding the SDGs) will be defined. Then, secondary data from 175 start-ups of Gipuzkoa by industry (health, energy, food, smart industry, and creative industries) will be collected based on the elements of the framework and analysed applying multidimensional scaling. Multidimensional scaling is a statistical analysis that provides a visual representation of the pattern of proximities (i.e. similarities or distances) between a set of objects (i.e. SBM design options). Design options with a high similarity value can therefore be visualised on a two-dimensional map, creating different SBM patterns.

On the other hand, quantitative data on the integration of SDG and shared value creation will be collected through a Likert-based questionnaire to be sent to the start-ups in the sample and analysed performing a QCA. QCA methodology allows the determination of which conditions or configurations of conditions are necessary or sufficient to bring about a given outcome, providing causal recipes explaining a phenomenon (Rihoux and Ragin, 2008). In the context of this research, QCA results are expected to provide configurations of SBM that are necessary or sufficient to explain high or low levels of economic, social and environmental performance of the start-up under study (Bouwman et al., 2019; Ragin, 2008), thereby suggesting paths start-ups can follow to improve their shared value creation for all stakeholders (Bocken et al., 2015).

The results will contribute to practice and theory on business model for sustainability in several ways. It presents a set of SBM patterns that integrate the SDGs based on a replicable approach that can be extended to the analysis of other firm and industry types. It also extends previous methodological approaches on the topic, suggesting the use of QCA to assess the contribution of SBM configurations in creating shared value. Identified SBM patterns and causal recipes could support entrepreneurs in their decision-making and ideation processes. Finally, the results could also make policy makers aware of where start-up efforts are concentrated and where the gaps are with respect to their contribution to the SDGs, which can support them in the development of innovation programmes.

Keywords

Sustainable business model; Sustainable Development Goals (SDG); Business model patterns; Mixed method; Entrepreneurship

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