Towards Sustainable Business Models for the Healthcare Industry

An empirical analysis of 32 healthcare startups

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Extended abstract

Problem statement

Climate change has emerged as the paramount public health concern of the 21st century (Costello et al., 2009). Annually, approximately 150,000 deaths worldwide are linked to climate change-induced health threats, including extreme weather occurrences, deteriorating air quality, vector-borne diseases, and food and water scarcity. Projections suggest a potential increase of 250,000 annual deaths by 2030 to 2050 (World Health Organization, 2009). As the healthcare sector is a forefront actor in addressing the repercussions of climate change-mediated health hazards on patients, their leadership is also crucial in raising awareness and prioritizing strategies for mitigation (Costello et al., 2009, 2013). Ironically, the healthcare sector is a significant contributor to environmental pollution and the responsibility to tackle it has only recently started to gain traction (Eckelman et al., 2018; Eckelman & Sherman, 2016; Malik et al., 2018).

Considering this paradox, a sustainability transition is becoming increasingly relevant for the healthcare industry. On the organisational level, this transition should stem from long-term sustainability goals established by the owners or top management (Chofreh & Goni, 2017). These goals should encompass more than just environmental considerations; they should embrace all three pillars of sustainability within a triple bottom line (i.e., TBL) framework (Giddings et al., 2002). Despite the importance of strategic analysis, healthcare firms often adopt sustainability practices primarily for economic gain, regulatory compliance, or other external reasons, often without recognizing the environmental and social benefits these decisions can yield.

Purpose

The aim of this research is to explore (sustainable) business models in the healthcare sector and to contribute to a model based on operational cases. Despite the widespread interest in the subject, there remains a scarcity of articles that apply formal business models in operational contexts (Ritala et al., 2018). Moreover, studies examining the implementation of business models often concentrate on the economic aspect, neglecting the social and environmental dimensions within a TBL perspective (Giddings et al., 2002). To tackle these issues, the study adopts the Triple Layered Business Model Canvas (i.e., TLBMC) proposed by Joyce and Paquin (2016). This model comprises three distinct business model canvases, each dedicated to one of the pillars of sustainability. The operational cases concern 32 healthcare startups selected for the EU-funded CrossCare 2.0. project[1] which stimulates and facilitates innovations in the broad healthcare and welfare sector. The empirical analysis will unravel if startups opt for a conventional or sustainable (i.e., including the social and environmental pillars) business model. As the research project spans a one-year time horizon, a potential transition could also be observed. The study will shed light on their motivations, strategies, and actions.

Methods

The framework to analyze the business models is the TLBMC by Joyce and Paquin (2016). This tool consists of three separate business model canvases or layers, one for each pillar of sustainability. The different layers consist of nine interconnected components. The economic layer is adopted from the business model canvas as proposed by Osterwalder and Pigneur (2010). The environmental layer presents nine components related to a lifecycle perspective while the social layer's components are based on a stakeholder perspective. For an in-depth discussion of the TLBMC we refer to Joyce and Paquin (2016).

The data is gathered among 32 healthcare startups in The Netherlands and Flanders, Belgium. The 32 startups go through two rounds of data collection. In the first round, data

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[1] https://interregvlaned.eu/en/crosscare-2-0/over-ons

is collected through the semi-structured interview technique (Kallio et al., 2016). For each startup, at least one person with a crucial role (i.e., founder or top manager) participates in a three-hour TLBMC workshop. More concretely, through question and answer the researchers guide the participant to complete the TLBMC for their startup. The aim of these semi-structured interviews is to obtain a founder's or top management view on all the TLBMC layers with their respective components. At the end of the workshop, the participant is also asked to rate the difficulty of defining each TLBMC component on a 5-point Likert scale. The interviews are audited and then digitally transcribed for subsequent evaluation of the results. The approach followed to interpret the results of the interviews is a phenomenological hermeneutical circle (Fleming & Robb, 2019; Settembre Blundo et al., 2019). For each startup, the interpretation process results in a descriptive report and a graphical TLBMC summary. The second round of data collection takes place nine months after the first round. During a second workshop, the descriptive report, and the graphical TLBMC summary of the first workshop are presented. Next, the authors guide the participant once more through the TLBMC for their startup. The aim of the second workshop is to verify the initial data collection and to capture a potential evolution since the first workshop.

Contributions

The study will investigate conventional and (a potential transition towards) sustainable business models among healthcare startups. The empirical analysis will highlight the actual motivations, strategies, and actions. The two rounds of data collection might lead to the drafting of a sustainable business model innovation process. Therefore, we address the call to raise awareness and develop climate change mitigation strategies by the healthcare industry (Costello et al., 2009, 2013).

Secondly, empirical studies on the application of the TLBMC are still scarce. Moreover, most of these studies are limited to a single case (e.g., Ribeiro et al., 2018). By considering 32 cases, we might further contribute to the validation of the TLBMC. At the same time, as we focus on a particular sector (i.e., healthcare) and type of company (i.e., startup), we might be able to formulate more specific implementation guidelines.

Finally, the paper will not only contribute to the body of literature on sustainable business models but will also provide valuable insights into managerial implications. More specifically, the introduction of a sustainable development path should carefully assess the evolution of the value proposition of the company. The TLBMC serves as an intuitive and easily implementable tool that enables companies to gain a deeper understanding of their value creation process and to assess all three pillars of sustainability equally. However, for optimal effectiveness, it's imperative to view the sustainable business model as dynamic rather than static, continuously updating it in alignment with the enterprise's sustainability transition.

Conference track contributions

This research-in-progress has several key contributions to the conference track. First, the study addresses the sustainable transformation and transition challenge for the rigid healthcare sector. Secondly, as we collect data among 32 healthcare startups, this research-in-progress addresses the conference track objective of discussing empirical studies. At present we conducted six workshops. By the time of the conference, we will have data on 16 startups that can be shared with the audience. Thirdly, the second round of data collection must still start and therefore the research protocol can be further finetuned. We would be grateful to hear the opinions of fellow researchers. Finally, the audience might also have insights on how to deploy the qualitative data for grounded theory (Nie, 2017).

Keywords

Sustainable business models, healthcare, startup, triple layered business model canvas

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