

Technology as a Catalyst for Sustainable Social Business: Advancing the Research

Agenda. Editorial introduction to the Special Issue

Abstract: This guest editorial presents an introduction to the topic and overview of the papers in this Special Issue of *Technological Forecasting & Social Change* on *Technology as a Catalyst for Sustainable Social Business*. In this introduction, we review the logic that underpinned our earlier call for papers and then go on to review the contents of the selected papers that comprise the current special issue. At the end, we synthesise the knowledge and contributions of the papers published as part of this Special Issue to suggest areas for further research and inform the development of a future research agenda in the area of technology and Social Business.

1. Introduction

The global economy has recently experienced several important challenges. These challenges have been triggered by different factors related, among others, to global crises (such as international wars, the COVID-19 pandemic and the 2008 financial crisis), changing attitudes (e.g., towards environmental issues and climate change) and increasing awareness of social concerns (such as poverty, diversity and equality issues).

Social businesses (SBs) can play a significant role in the efforts towards social, environmental and economic sustainability development as they combine ideas, capacities and resources to achieve social transformation and offer solutions to social problems (Akter et al., 2020; Alvord et al., 2004; Akbulaev et al., 2019; Batat, 2020; Ramani et al., 2017; Spieth et al., 2019). SBs can provide numerous benefits, such as supporting sustainable innovation, offering solutions to current environmental challenges, improving social capital,

as well as creating conditions for the development of new, more effective business models (Akbulaev et al., 2019; Spieth et al., 2019). Therefore, the concept of SBs has received increasing attention from researchers, practitioners and policymakers (Foss & Saebi 2018; Neumeyer & Santos 2018).

Nevertheless, scholars argue that “*despite its immense potentials as a sustainable and innovative means to solve specific social problems, the basic concept of the social business model...remains unclear to many*” (Ashraf et al., 2019, p. 1145). In his seminal work, Yunus (2010) defines SBs as undertakings specifically developed to deliver social benefits, and not concerned with profit generation for any of the stakeholders (Yunus, 2010). A similar definition is provided by the European Commission (2011), which defines a SB as an organization whose primary objective is to achieve social impact rather than generating profit for owners and shareholders. From the above definitions, it can be seen that SBs are considered distinctly different from the more ‘traditional’ for-profit organisations. Although SBs are also self-sustaining organisations that aim to cover the cost of their operations and repay their owners' investments, the main difference is that their priority is to serve society (Peerally et al., 2019; Yunus et al., 2010).

In academic literature, the term SB has been used to refer to different types of organizations, including non-profit organizations, for-profit social enterprises where profit maximization is not the primary goal, and hybrid organizations that operate at the intersection of markets and society (e.g., Czinkota et al., 2020; Weerawardena et al., 2020; Ballesteros-Sola, 2014). These organizations may include more ‘modern’ hybrid business models but also more traditional businesses characterized by a non-loss, non-dividend form, operating within different sectors, including the food, health, education and financial services sectors (Czinkota et al., 2020; Ashraf et al., 2019; Agafonow & Donaldson, 2015).

Based on the above, it can be deduced that regardless of the exact definition of SB adopted, long-term sustainability of SBs depends on their ability not only to be self-sustaining but also to create social (including environmental) benefits (Rey-Martí et al., 2016; Sabatier et al., 2017). Nevertheless, issues such as the increasingly competitive environment, consumers' unwillingness to pay for socially-oriented products, the limitations of existing business models to support social missions and the challenges associated with measuring social impact have been extensively reported as concerns that SBs need to address (e.g., Gregory-Smith et al., 2017; Ballesteros-Sola, 2014; Haigh et al., 2015; Weerawardena et al., 2010).

Additionally, challenges relating to mission drift, i.e., the shift from the organisation's initial societal focus, and other issues relating to balancing social and economic objectives, may affect the sustainability of SBs (Klein et al., 2021; Muñoz & Kimmitt, 2019; Santos et al., 2015).

As SBs today strive to improve their sustainability, identifying ways that could enable SBs to meet both their social mission and their market requirements is imperative (Santos et al., 2015; Sepulveda et al., 2018). Technology can play an important role in these efforts (Gouvea et al., 2018; Luthra et al., 2018; Acquiera et al., 2017), as it can support SB operations, facilitate the creation of sustainable value, and create favourable conditions that enable SBs to balance social and financial objectives (Apostolidis et al., 2021; Dora et al., 2020; Presenza et al., 2019; Täuscher & Abdelkafi, 2018).

2. Implications of technology for sustainable business

To date, a growing body of literature has focused on the development and use of technology to support more sustainable business models as the dissemination and adoption of technology can facilitate and support organizations addressing societal and sustainability challenges (e.g., Apostolidis et al., 2021; Gouvea et al., 2018). For instance, Luthra et al. (2018) argue that

effective information systems can significantly enhance business efficiency as they can improve customer service, reduce costs and help organizations to achieve the three pillars of sustainability (ecological, economic, and societal). Furthermore, technologies such as big data, artificial intelligence, social media, web analytics, text mining and other ICT tools and techniques can significantly improve the social, environmental and economic sustainability of businesses (Sivarajah et al., 2020). Studies have highlighted the important role of suitable infrastructure, support, training, technological capabilities and collaboration that can enable businesses implement technological breakthroughs, but also the challenges associated with the limited resources that many businesses face (Apostolidis et al., 2021; Peeraly et al., 2019; Presenza et al., 2019; Mukkamala et al., 2018).

Despite the increasing attention to how technology can support more sustainable businesses, there is currently only fragmented research on how contemporary SBs can fully capitalize on the opportunities created by the recent technological developments to sustainably balance their social-economic priorities and fully exploit the strengths of their business models, while mitigating their vulnerabilities. In this context, this Special Issue aims to offer novel insights into how SBs can profoundly enrich their capabilities to create and deliver sustainable value and simultaneously meet their social and economic needs, and how technology can act as a catalyst to ensure SB sustainability.

3. Technology as a catalyst for sustainable social business

All the papers hosted in this Special Issue advance the research agenda on technology as a catalyst for sustainable social businesses. They do so in different ways, however, as the technologies discussed as part of the Special Issue and the way they “catalyze” the sustainability of SBs differ.

The Special Issue opens with the work of Soni et al. (this issue), who provide an overview of the current research on technological interventions in SBs. Through a bibliometric analysis of existing SB literature, the authors identify several technological developments, such as Social Media analytics, Big Data, Internet of Things and Blockchain, that can help SBs improve their social, financial and operational sustainability. Based on the results of their analysis, the authors present a framework for the use of technology in SBs, taking into consideration social innovation, digital technologies and decision making for sustainability. The study identifies future research directions, highlighting the point, for instance, that most of SB research has been conducted by scholars in developed markets, with limited contributions emanating from developing countries and Bottom of the Pyramid markets, an area that requires further research.

Contributing to the gap in the existing literature identified by Soni et al. (this issue), Chaudhuri et al. (this issue) explore how technology can help SBs operating at the Bottom of the Pyramid to scale up their social impact. By exploring the case of two technology-enabled healthcare social enterprises in India, the authors argue that although Bottom of the Pyramid markets can provide an ideal context for the development of technology-focused SBs, scaling up their impact may be a key challenge due to the many resource constraints these organizations face. Their study demonstrates that when social firms need to make adjustments to their operations, the decision is influenced by whether the organization prioritizes alleviating constraints faced by the firm or by the customers. According to the authors, this decision influences how firms mobilize and use their resources, it affects the breadth and the depth of their social impact and it establishes elements of institutional legitimacy (normative, regulative and cognitive). The work concludes with the development of a conceptual model for scaling-up SBs in the Bottom of the Pyramid markets.

Due to the increasing popularity of blockchain-based technologies, the use of blockchains to support sustainable SBs is explored by two of the studies in this Special Issue. First, Devine et al. (this issue) explore how blockchain-based smart contracts can become useful tools for sustainable social businesses, by improving trust and transparency in the processes and supporting the monitoring and balance of social and financial objectives. By drawing upon Yunus' seven principles of social business, the authors explain how these principles can be codified as smart contract functions, and they develop a social business blockchain model demonstrating how blockchains can be utilised to promote and support the coexistence of social and economic logics. In their discussion, the authors point out that the implementation of blockchain and smart contract technology can improve transparency and lead to the development of new types of trust relationships between SB stakeholders and organizations.

Focusing on a similar research area, Nguyen et al. (2021) investigate the application and use of blockchain technology as an alternative infrastructure in the context of socially-oriented crowdfunding platforms. The authors explore how blockchain technology can offer a potential response to the continuous criticism of crowdfunding platforms regarding their potential to attract investment and ensure transparency, reliability, and trustworthiness. Building on three case studies of blockchain-supported social crowdfunding platforms (EtherInvest, CreditFund and CrypSupport), the authors identify the enablers and barriers in the application of blockchain technology to create social value. In line with the findings of Devine et al. (this issue), the study suggests that the application of blockchain technology can lead to improvements in trust and transparency but also reduce costs and extend the crowdfunding community, which can further improve the sustainability of the platforms. On the other hand, the authors also identify a number of challenges, such as legal requirements and increased development costs, which may impede the adoption and use of blockchain technology in SBs.

Using a similar context, Nisar, Prabhakar and Bourlakis (this issue) look at technology-enabled crowdfunding campaigns as a platform to support SBs in their efforts to create and communicate social value. In their work, the authors discuss the underlying social challenges and explore the factors that can influence the success of online crowdfunding campaigns. By using the popular ALS Ice Bucket Challenge campaign as a case study of a technology-enabled campaign to support a social cause, the authors explore the factors that support donations. Furthermore, they look into the factors that affect campaign content sharing and participation, to understand how technology and social media can help information reach a wider audience in a shorter period of time. A theoretical model of the motivating factors behind campaign donations (including personalization, comprehension, message involvement and surprise) and sharing/participation (including moral obligation, income and attitudes towards donations and helping others) is developed and tested through an online survey involving US participants. The findings highlight moral obligation as an important ‘trigger’ of donations, while personalization and message involvement are identified as the most influential factors behind sharing a viral crowdfunding campaign. The paper closes with a discussion on how SBs can take into account these motives to support the design and implementation of more effective technology-supported crowdfunding campaigns.

In their research, Manika et al. (this issue) stress the importance of positive spillover effects for technology-based SBs as they strive to remain financially sustainable, while contributing to diverse socio-economic and ecological issues. Using the contemporary example of a SB initiative supporting the reduction of CO₂ emissions in China, the authors examine how customer pride, triggered by the adoption of environmentally-friendly technology, may support further conservation behaviours (such as reducing, recycling and reusing). A conceptual model based on the Technology Acceptance Model (TAM) is developed and tested through an online survey to explore the spillover effect of adopting pro-environmental

technologies in further conservation behaviours. The findings indicate that feelings of pride can spill over and positively affect subsequent “green” behaviours, suggesting that technology SBs can leverage pride appeals, as the spillover effects can support wider improvements in the environmental, social and financial sustainability.

Further contributing to the theme of the Special Issue, Vo-Thanh et al (this issue) investigate how mobile applications can support the development of more sustainable SBs. Using the case of the popular food waste reduction mobile application Too Good To Go, the study adopts the affordance theory and service-dominant (S-D) logic and uses semi-structured interviews to explore and compare the perceptions of a) app developers, b) business app users and c) consumer app users. The authors then discuss how these perceptions may affect the social and sustainable value that SBs try to offer. The study indicates that there is significant congruence between app developers’ intentions and how businesses and consumers use the various functions offered by the app to interact with each other and reduce food waste.

Furthermore, the findings indicate that for the successful development and adoption of similar mobile applications, SBs need to consider not only the functional, but also the social and emotional value created by these apps as they all play an important role in supporting the wider adoption and use of such technologies and enable SBs to achieve their social mission.

In their study, Vrontis et al. (this issue) extend the SB literature by taking an alternative look at the relationships between innovation and the social role of the company, in an attempt to define a new SB model: the hybrid for-profit enterprise. The study examines the key differences between ‘traditional’ for-profit organizations and this new hybrid model, which combines company profits and social impact, and assesses how technological innovation can affect the social conduct of profit-making enterprises. By using a sample of 4,000 Italian SMEs with a corporate social commitment, the study explores the existence of a relationship between innovative behaviour, and the social and business goals of companies. The results

indicate a relationship between technological and social commitment in a company, but also an overlap of social innovations and business innovations, as in several cases the financial results drive the social ones. The authors conclude in favour of this new hybrid business model, which considers “social” and “business” as different but coexisting dimensions of innovation.

The concepts of hybridity and innovation are also the focal point in the work of He et al. (this issue), who explore the role of digital hybridity in supporting SBs in their social and financial pursuits. As SBs face several constraints in their efforts to become more sustainable, the authors explore how “digital hybridity” (i.e., the technology-enabled combination of social and commercial missions) can help SBs enhance their sustainability by deploying digital innovation to combine social welfare and commercial logics. An industry-leading Chinese social enterprise that provides financial services to low-income customers is used by the authors to develop a process model, which elaborates how digital innovation can help SBs resolve conflicts, prioritize resources, create synergies and harmonize competing goals. Adopting a technology lens, the study provides an alternative solution to the sustainability challenges of SBs, explaining how digital innovation can support hybridity and internally blend the (often competing) social and commercial logics that SBs incorporate.

In their paper, ‘When technology leads social business: food-truck innovation’, Lichy, Dutot and Kachour (2021) further develop the discussion on the technology-supported hybridity of SB models by looking at the case of French food trucks, and how they combined their social and financial goals during the pandemic. The study explores how food trucks adapted their business model during the first period of the COVID-19 pandemic, taking advantage of technological innovations, as well as factors such as lower overheads and the ability to be mobile, to capitalize on the increasing demand for ready-made food, but the authors also address some of the challenges faced by society providing a sustainable alternative to eating

out. Using a combination of quantitative and qualitative data from consumers and business owners and managers, the authors link the concepts of social innovation, social business and sustainability in the food sector, validating the principles of SBs in a new context, highlighting the important role of technology in the development of new hybrid business models.

The role of digital technologies in supporting SB sustainability is also the focus of the paper by Allal-Cherif et al. (this issue). More specifically, in their study the authors pose the question of how digital technologies such as social networks, chatbots, and artificial intelligence can support identifying, selecting, and retaining talented employees in SBs. The application of these technologies is particularly useful for SBs looking to recruit not only skilled people, but above all employees who have behaviours and values that match their social mission. A grounded theory methodology is used to analyse, compare, and combine several technologies dedicated to recruitment, including social networks, MOOCs, serious games, chatbots and A.I. The authors examine the performance and limits of these digital tools and identify ways that they can make the recruitment process for SBs faster, more systematic, more specific, and more objective. The authors also discuss how these technologies can help SBs reach previously inaccessible talent in the market and achieve better results in terms of attractiveness, integration, and retention, enabling them to carry out their social missions and remain financially sustainable with optimized human resources and reduced costs.

Acknowledging that social enterprises often require help to develop their capabilities and diffuse their innovative ideas, Ho and Yoon (this issue) explore the role of intermediaries in supporting the development and growth of SB ecosystems, and how technology can facilitate and contribute to this process. The study suggests that due to the characteristics of SBs and their need to balance both social and financial objectives, intermediary organizations can play

complex and “ambiguous” roles in the SB ecosystem, involving a wide variety of stakeholders. Recent (advanced) technological developments, such as blockchain and big data analytics, can support and facilitate the role of these intermediaries, e.g., by enhancing data gathering and analysis, the evaluation of social impact and financial progress, and communication with different stakeholders.

Finally, in the last paper of the Special Issue, Amouri et al (this issue) explore the factors that can enable or impede the development of new social enterprises by young entrepreneurs.

Through a questionnaire administered to young social entrepreneurs in Tunisia, the research indicates that a lack of investment capital, scarce access to finance, a lack of entrepreneurial skills, and aversion to risk can constrain young entrepreneurs’ tendencies to create new SB ventures. On the other hand, technological propensity has a positive effect on their decision to launch new social business projects. According to the authors, although technology can play a vital role in supporting young entrepreneurs overcoming the several SB challenges and enhance the sustainability of the SB sector, financial constraints and entrepreneurial limits could still challenge this process, ultimately requiring support from public institutions to overcome these constraints.

4. Developing a future research agenda

The studies compiled in this Special Issue were selected as they cover a range of topics, perspectives, business models and approaches that demonstrate and explain how technology can contribute to the sustainability of SBs. By utilizing different methodologies, theoretical frameworks, case studies and business contexts, the authors have clearly showcased how technology can play a significant role in the SB sector in different ways, contributing to the development of new social business models and the improvement of existing ones, enhancing their efficiency and contribution.

The authors in this Special Issue explore how technology can support the development of digital tools and platforms that can be used by SBs to enhance their operations and sustainability (e.g., Soni et al., this issue). Established technologies, already adopted and used by for-profit organizations, such as social networks and popular digital platforms, can become useful tools to promote, encourage and support the mission of SBs. For instance, social media, massive open online course (MOOC) platforms, chatbots and big data analytics can play an important role in the communication and diffusion of the social mission (Nisar, Prabhakar & Bourlakis, this issue) but also improve SB effectiveness and operations, e.g. by significantly improving the identification, selection, and retention of appropriate employees. For SBs operating with limited resources, these tools can provide a cost-efficient and effective alternative to their ‘traditional’ methods, and support their financial and social goals. As such, it is important for researchers to explore the drivers and barriers that may affect the adoption of these established tools, from a for-profit to a social business context. Furthermore, the wider context of this technology adoption requires further investigation. As most of the work in SB and technology adoption has been done by scholars in developed countries (Soni et al., this issue), further consideration is needed for SBs operating in developing countries, particularly on how technologies used extensively in some markets can support the sustainability of SBs in markets with more limited (or different) infrastructure and resources.

In addition to the above discussions, the authors in this Special Issue also suggest that technology adoption in SBs does not always need to follow for-profit organizations, i.e. using technologies already developed and utilized by for-profit businesses. In addition to the more established technologies and tools, the introduction of more “modern” technologies such as cryptocurrencies and blockchains can also be considered to create a more sustainable path for SBs. For instance, the use of cryptocurrencies can help SBs overcome challenges imposed by

rigid financial regulations and encourage international users and investors to support their social projects (Nguyen et al., this issue). In addition to cryptocurrencies, other blockchain technologies such as blockchain-based smart contracts can help SBs by improving the efficiency of their operations, reducing costs, facilitating harmony in social and economic objectives and improving transparency and trust between the various stakeholders in the SB ecosystem (Devine et al., this issue). In this context, the readiness of SBs (and other key stakeholders within their ecosystem) to adopt these new technologies, and how these technologies align with the existing goals and the more traditional methods used by different SBs, needs to be explored. Furthermore, the studies suggest that when discussing the development and implementation of new technologies, the risks need to be carefully considered, including development costs, governance and regulatory issues, as they may reduce the reliability of these new technologies and their effectiveness in the longer term.

In addition to (existing and new) technologies offering potential tools for SBs, the authors in this Special Issue have discussed how technology-enabled social ventures can improve their sustainability, when technology is a core element of the value that these social enterprises try to offer. For instance, the authors have explored how SBs that engage in technology-enabled social innovation can improve their resource allocation, market penetration and scalability, and alleviate potential constraints to improve their sustainability (Chaudhuri et al., this issue). As scalability is a key issue for SB sustainability, this perspective highlights the challenges that technology-focused SBs may face due to their nature and characteristics and stresses the need for further research in this area. Furthermore, the authors stress that, to improve their sustainability and achieve their financial and social objectives, technology-focused SBs need to focus not only on the functional value of their technology offering but also leverage the emotional and social value they can create (e.g., Manika et al., this issue; Vo-Thanh et al., this issue). Emotional value, stakeholder emotional reactions, and spillover effects can

become an important ally for SBs who are striving to be self-sustaining through financial activity, while contributing to diverse socio-economic and ecological issues, and as such need to be investigated further in relation to technological developments and sustainable innovation.

Finally, some of the studies in the Special Issue have taken a more in-depth look at how technology can transform, contribute to, and even re-define existing business models and contribute to their sustainability. Several authors explain how technology and disruptive innovation can lead to the development of new (and more sustainable) hybrid social business models (Vrontis et al., this issue; Lichy et al., this issue), while He et al. (this issue) introduce the term “digital hybridity” to explain how SBs can retain their hybrid nature, and prevent mission drift, by drawing on digital innovation. On the other hand, Ho and Yoon (this issue) explain how technology can support sustainable SB ecosystems by encouraging and facilitating interactions with intermediaries, while Amouri et al. (this issue) explain why technological propensity can be an important factor for the creation of new SBs. In this respect, concepts such as digitization, fluid and sustainable innovation and business model hybridity and how they can influence the way we understand (and define) social enterprises are very relevant for researchers exploring the development of sustainable SBs. Additionally, these studies emphasise the point that in order to get a better understanding of the impact of technology on the sustainability of SBs, the interactions between different stakeholders (e.g., intermediaries, investors, other organizations) within the SB ecosystem need to be considered, as the meso- and macro-level impact of technology can have a strong effect on SB sustainability and their potential to achieve their objectives.

In summary, as technology continues to evolve and mature, the impact that it will have on SBs and their sustainability is expected to grow accordingly, creating several opportunities (and challenges) for existing and new SBs. In this Special Issue we introduce this discussion

and we hope that the ideas and knowledge in the published papers will create a springboard for further research in this increasingly popular area.

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