Social Entrepreneurship and Sustainable Development Goals: A Conceptual Framework

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Abstract: Studies linking social entrepreneurship and sustainable development goals (SDGs) are gaining interest due to the possible impact acceleration to achieve both social and economic goals. Social entrepreneurship supports technology upgrading and innovation with the digital approach. This study proposes an updated conceptual framework that connects social entrepreneurship with SDGs, mainly targeting 8.2 in SDG 8 (achieving higher economic productivity levels through diversification, technological upgrading, and innovation, focusing on high value-added and labour-intensive sectors). However, less research addresses the focus on digital technology and SDGs. With this study, the authors contribute to filling this research gap by answering this research question: how can social innovation within social entrepreneurship using digital technology improve Sustainable Development Goals achievement? A systematic literature review of 3,214 social entrepreneurship-related journals based on the Scopus database with no publication date restriction resulted in 111 included studies. The results were then mapped into two bibliographic visualizations using VOSViewer, i.e., "social entrepreneurship" and "technology innovation in social entrepreneurship." In social entrepreneurship visualization, the technology-related keyword filter only resulted in 1 keyword, i.e., "technology transfer," which shows fewer research activities. In technology-related visualization, there are four keywords ("technology transfer," "social technology," "technology and innovation," and "technology"). Five organizational level constructs in digital social entrepreneurship were identified: sustainable entrepreneurship development, social business model design, government regulation, marketing strategy, and creative solution generation capacity. These organization behaviour dimensions have been categorized to illustrate their influence on digital social entrepreneurship and SDG. Hence, this study is envisioned to provide original work in the theoretical development of bridging digital social entrepreneurship and SDGs that benefit both academicians and practitioners.

Keywords: social entrepreneurship, digital social innovation, service-dominant logic, sustainable development goals, conceptual framework

1. Introduction

Technology, science, and capacity building have become significant pillars in the implementation of the recent Sustainable Development Goals (SDGs) by the United Nations Development Programme (UNDP) (UN-DESA, 2021). Technology represented mainly by digital technology usually aims to advance society. Technology is also addressed in early research, which showed in the context of innovation - an intertwined phenomenon between technology, social, and economic context (Austin et al., 2006; Ganne et al., 1989).

Social and technology context in innovation can also be seen in the entrepreneurship process, which is shown in the works of Dacin et al. (2010), Zahra et al. (2009), Peredo & McLean (2006), Mair & Martí (2006). Perceived change is one notable factor that shapes the social innovation process to benefit the social system (Bărbulescu et al., 2021; Cadenas et al., 2020; Goyal & Sergi, 2020; Popkova & Sergi, 2020). In response to change, research also highlighted that technology-based innovation for social purposes needs to employ a social business model and its impact on social gain for the society and the firm (Amry et al., 2021; Chilukuri, 2021; Gerli et al., 2021; Gouvea et al., 2021). In recent years, one of the social business models includes innovation using Information and Communication Technology (ICT) means or digital platforms (Bărbulescu et al., 2021; Gerli et al., 2021; Ghatak et al., 2020). In this context, exogenous events like Covid-19 accelerate the new digital approach for the social business model.

Further, the social business model innovation can be geared toward the Sustainable Development Goals (SDGs/SDG). Various researchers stated the importance of the social business model to achieve the Sustainable Development Goals agenda (Bretos et al., 2020; Conway et al., 2019; Eichler & Schwarz, 2019; Lavišius et al., 2020; Ramani, 2020; Tiba et al., 2020). Others stated that networking skills are essential for a social enterprise to situate around the agenda of the SDGs (Craveiro et al., 2020; García-Jurado et al., 2021).
However, few research efforts convey the focus on digital technology and SDGs. Some research efforts in social innovation discuss cultural motive (Lyne, 2020), economic motive, self-efficacy (Quiroz-Niño & Murga-Menoyo, 2017), proactiveness (Mintrom & Thomas, 2018; Portuguez Castro & Gómez Zermelo, 2021), agreeableness (Lehoux et al., 2018), and marketing (Shu et al., 2020; Tiba et al., 2020). With this study, the authors contribute to filling this research gap by conducting a systematic literature review and answering this research question: how can social innovation within social entrepreneurship using digital technology improve Sustainable Development Goals achievement? Answering related research questions is imperative to developing social innovation and social business models using digital means to support sustainable development. It will also benefit academic knowledge in social entrepreneurship to support social innovation advancement using digital-based platforms.

2. Literature review

2.1 Social entrepreneurship and social innovation

The common elements of social entrepreneurship include social value creation, engagement in a process, and social entrepreneurship creation process (Dhewanto et al., 2020; Mair & Martí, 2006; Morris et al., 2021; Peredo & McLean, 2006). Nowadays, the business model must be followed by market values and principles, business strategies, operation methods, and collaboration capabilities with public institutions while focusing on their main visions (Kabir, 2019, p. 16). Entrepreneurs use the "creative destruction" process to fuel new economic growth to create an up-to-date fit in the ever-growing environment. Schumpeter called this "gambling," the individual vision and investors' money on new products (Ettlie, 2006, p. 8). The so-called gambling or creative destruction behaviour relates to giving resources with a new capacity to create wealth; Drucker (1986, p. 30) called this "to innovate." Innovation is one of the challenges in entrepreneurship to become sustainable (Dhewanto et al., 2020). Geoff Mulgan (former Chief Executive Officer of Nesta, an innovation foundation based in the UK) defined innovation in the social context as innovative activities and services created by organizations with a social or environmental related mission (Campopiano & Bassani, 2021).

2.2 Digital social innovation and value creation

Service-Dominant (SD) logic is the new way of introducing and clarifying alternative views of exchange and value creation in the market. Some important principles of SD logic are viewed as follows: service is the foundation of exchange, and the customer actor is the value co-creator (Lusch & Vargo, 2014, pp. 15, 68).

Social entrepreneurship activities provide value creation (Lan et al., 2017). In the value creation process, information and communication technology act as the value shifter leading to new market opportunities (Bărăulescu et al., 2021; Bonomi et al., 2017; Henry et al., 2017; Scillitoe et al., 2018). Digital technology plays an essential facilitator of new value creation in forming products or services in the organization. There is a need to have appropriate strategies in place, particularly previous digital experience (in individual) or perceived feasibility (in the organization), to diffuse innovation using digital technology (Bărăulescu et al., 2021; Ghatak et al., 2020; Scillitoe et al., 2018). Researchers (Carroll & Casselman, 2019; Faludi, 2020) linked digital social innovation with innovation activities and process measurement such as member interaction to unlock social value creation potential.

2.3 Digital social innovation and SDGs

Recent research reports suggest that social innovation influences social performance (do Adro et al., 2021; Salim Saji & Ellingstad, 2016; Sarkki et al., 2019). In this context, The United Nations' SDGs provide orientation reference for social performance for social enterprises (Günzel-Jensen et al., 2020; Marave-Vivas et al., 2021). Shu et al. (2020) studied the perspective framework toward SDGs awareness, which includes creativity as an essential factor. Gidron et al. (2021) analysed the impact of technology start-ups on solving social and environmental issues and used SDGs as a tool for characterizing the concept, which combines technology start-up (as innovation) and social enterprise (as social innovation).
3. Methodology

3.1 Literature resources

The literature review started with the keyword selection and followed protocol guidelines in PRISMA 2020 to provide a systematic way to the intellectual structure in social entrepreneurship and social innovation research (Page et al., 2021). The term systematic in this study refers to the steps in research protocol; it fosters evidence-based practices and is fundamental to scientific activities, including social science (Pahlevan-sharif et al., 2019). The selected database is Scopus ProQuest, considering its broad coverage of 76.8 million core records covering 26.8% titles in social science (12,464 titles in social sciences covering psychology, economics, arts, and humanities as of January 2020) (Elsevier, 2020). The Scopus results are then compared to another scientific database i.e., ProQuest Central (9,096 titles in social sciences, sociology, psychology, humanities, business, and economics as of May 2022) (ProQuest LLC, 2022).

3.2 Search string and study selection

The identification stage began with identifying keywords with the criteria based on organizational behaviour and technological factors which influence the social innovation process within social entrepreneurship. Authors also exercised keywords related to social innovation and SDGs.

Table 1: Keyword query string

<table>
<thead>
<tr>
<th>Keyword</th>
<th>Scopus Advanced Search query string</th>
<th>ProQuest Basic Search command</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main topic: Social entrepreneurship, social innovation</td>
<td>TITLE-ABS-KEY (&quot;social entrepreneurship&quot; AND &quot;social innovation&quot;)</td>
<td>(ab(&quot;social entrepreneurship&quot; AND &quot;social innovation&quot;) OR ti(&quot;social entrepreneurship&quot; AND &quot;social innovation&quot;) OR if(&quot;social entrepreneurship&quot; AND &quot;social innovation&quot;))</td>
</tr>
<tr>
<td>Digital constructs</td>
<td>TITLE-ABS-KEY (&quot;social entrepreneurship&quot; AND digital)</td>
<td>(ab(&quot;social entrepreneurship&quot; AND digital) OR ti(&quot;social entrepreneurship&quot; AND digital) OR if(&quot;social entrepreneurship&quot; AND digital)) AND at.exact(&quot;Article&quot;)</td>
</tr>
<tr>
<td></td>
<td>TITLE-ABS-KEY (&quot;social entrepreneurship&quot; AND technolog* AND innovation)</td>
<td>(ab(&quot;social entrepreneurship&quot; AND technolog* AND innovation) OR ti(&quot;social entrepreneurship&quot; AND technolog* AND innovation) OR if(&quot;social entrepreneurship&quot; AND technolog* AND innovation))</td>
</tr>
<tr>
<td>Social innovation and Sustainable Development Goals (SDGs) constructs</td>
<td>TITLE-ABS-KEY(&quot;social innovation&quot; &quot;SDG*&quot;)</td>
<td>(ab(&quot;social innovation&quot; AND SDG*) OR ti(&quot;social innovation&quot; AND SDG*) OR if(&quot;social innovation&quot; AND SDG*))</td>
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The initial search of the “social entrepreneurship” exact keyword with no restrictions on language, published date, or type of article resulted in 3,214 results. It is identified that 1,201 results need to be filtered out due to non-English, non-journal, and non-article exclusion criteria. This activity reflected the identification phase (the first one) in the PRISMA 2020 flow diagram.

Several assessment processes are used for eligibility in the screening phase (the second one). The process of “reports sought for retrieval” and “reports assessed for eligibility” employ a comparison between Scopus and ProQuest search results. In general, ProQuest Search Results yielded fewer data compared to Scopus. For example, Scopus search results for "social innovation" and SDG* generated 40 articles, whereas ProQuest yielded 11 articles. Since the particular attention of this study is to get the latest progression of social innovation, the query strings in Table 1 assisted the focus. They resulted in 111 included studies (the inclusion phase, third process).

3.3 Data collection

Search results from the "social entrepreneurship" exact keyword (3,214 articles) were filtered to include only journal articles written in English and four subject areas (Business, Management, and Accounting; Economics,
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Econometrics, and Finance; Social Sciences; Decision Sciences), yielded in 1,900 articles. It is then downloaded as comma-delimited (.csv) file and fetched to VoSViewer (Visualization of Similarities Viewer) software for keyword occurrence mapping.

Other search results from "social entrepreneurship" and "technology-based innovation" keywords were treated similarly and yielded 77 articles. After downloading the .csv bibliographic file, VoSViewer is also used for keyword occurrence mapping.

Figure 1 contains two graphic illustrations for treatment on 111 included studies. The articles were tabularized to get important constructs on current social innovation frameworks.

4. Findings and discussion

Findings from VOSViewer give initial objective data on the intellectual structure in the relative timeframe. The analysis of interest is co-occurrence analysis (focusing on author keywords), which means the relatedness of items based on the number of documents they exist together (van Eck & Waltman, 2021, p. 37).

Research articles related to "social entrepreneurship" are visualized in Figure 1 (on the left side). It was extracted using keyword co-occurrence analysis with a minimum of 5 author keywords in abstract, title, and keywords, resulting in 4,146 keywords, 4,590 total link strength, and 228 articles.

Research articles related to "social entrepreneurship" and "technology-based innovation" are visualized in Figure 1 (on the right side). It was extracted using keyword co-occurrence analysis with a minimum of 2 author keywords in abstract, title, and keywords, resulting in 320 keywords, 134 total link strength, and 28 resulting articles.

Recent research (around the year 2018 to 2020) in social entrepreneurship focuses on social entrepreneurial intention, passion, sustainable development, self-efficacy, design thinking, entrepreneurial ecosystem, and hybrid organizing. Likewise, research keywords in technology innovation and social entrepreneurship surround technology transfer, innovation ecosystem, technological innovation, and entrepreneurial ecosystem.

Figure 1: Co-occurrence keywords from 2 bibliographic data
4.1 Research focus: digital social innovation to address SDGs

The study intended to identify existing digital social innovation frameworks in social entrepreneurship to support the achievement of SDGs. This study’s specific SDG focus is target 8.2 in SDG 8 (achieving higher economic productivity levels through diversification, technological upgrading, and innovation, focusing on high value-added and labour-intensive sectors). The findings from the tabularization process resulted in 17 factors influencing technology-based social innovation within social entrepreneurship:

- Individual behaviour = 9 factors: social mission, networking ability, deliberate action to use knowledge, economic motives, perceived change, customer opportunity recognition, creativity, prior entrepreneurship experience, and empathy.
- Group behaviour = 3 factors: social network development, group entrepreneurship development, spontaneous order.
- Organization behaviour = 5 factors: sustainable entrepreneurship development, impact, social business model design, government regulation, marketing strategy.

4.2 Theoretical lens for framework development

The digital social innovation process has the potential for improvement in social value and social structure (Faludi, 2020). From the Diffusion of Innovation theory and actor side, innovation begins with a linking process initiated by actors. There are several types of mediating actors in the diffusion of innovation described by (Caiazza & Volpe, 2017): opinion leader, facilitator, champion, linking agent, and change agent. This study focuses on the change agent role, an actor who fosters self-reliance in adopters.

A more recent finding (Downes & Nunes, 2014) suggested a more radical change in the diffusion process. Looking from the actor side, they argued that the bell-shaped curved in diffusion innovation theory has shifted to the shark-fin-shaped curve. The Big Bang Disruption Theory is particularly applicable to the actors who have the below characteristics: undisciplined strategy (not tied to one market discipline); unconstrained growth: (achieve nearly vertical market adoption with customers’ help e.g., through social networks); unencumbered development (engineer products or services by testing in the real market).

From the Service-Dominant logic lens, all four axioms beautifully fit with social innovation with the digital approach: "service is the foundation of exchange," "the customer is always the value co-creator," and "all economic and social actors act as integrators for resources," and "beneficiaries determine value" (Lusch & Vargo, 2014, p. 15).

Figure 2: A proposed conceptual framework

Considering the focus of this study on the organization analysis and actors of innovation, factors included in the conceptual model development come from organizational behaviour synthesis.

Impact is defined as the transformation which leverages partnership and collaboration (Goyal & Sergi, 2020). Impact of social entrepreneurship generates social and economic values which support sustainability (Cardella et al., 2020; Gerli et al., 2021; Turker, 2021). Sustainable entrepreneurship development relies on a relationship with suppliers, employees, and customers based on mutual benefit and sustainability outcomes.
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(Cardella et al., 2020; Gerli et al., 2021; Scillitoe et al., 2018). Costs are within consideration after social and environmental outcomes are achieved (Alberti & Garrido, 2017). Therefore, we have the following hypothesis:

\[ H_01: \text{sustainable entrepreneurship development capability is positively related to digital social entrepreneurship to address SDGs.} \]

Digital social entrepreneurship, which uses digital technology for social impact, is the future of social entrepreneurship (Faludi, 2020; Ghatak et al., 2020; Goyal & Sergi, 2020). The business model addresses explicit social or environmental issues; organizational slack and business case are relatively minor priorities (Alberti & Garrido, 2017). Thus, we have the following hypothesis:

\[ H_02: \text{social business model design is positively related to digital social entrepreneurship to address SDGs.} \]

Nowadays, new roles of government include ways to address failure in the innovation system and bottlenecks in the flow of knowledge and technology (Gouvea et al., 2021). In a broad sense, government regulations positively affect sustainable enterprise development in a country (Apostolopoulos et al., 2020; Bajwa et al., 2021; Díaz-Perdomo et al., 2021; Jiatong et al., 2021; Tabares, 2021; Thiam et al., 2021). Therefore, we have proposed the following hypothesis:

\[ H_03: \text{government regulation is positively related to digital social entrepreneurship to address SDGs.} \]

Social entrepreneurship uses marketing strategy for relationship development rather than competitive advantage (Ko et al., 2019; Mirvis & Googins, 2018; Powell & Osborne, 2015). Although several studies found that most social enterprises had no explicit marketing capacity, it is currently executable with the free approach in the era of digital. Social enterprises can use relatively accessible digital tools for marketing strategies like blogs and video-based platforms (like Youtube, Instagram, Tiktok). Therefore, the following hypothesis applies:

\[ H_04: \text{marketing strategy is positively related to digital social entrepreneurship to address SDGs.} \]

Creativity at the individual level can produce new communities (Gouvea et al., 2021). Scholars also argued that creativity is the factor that drives social innovation performance (Ko et al., 2019). Creativity also relates to digital social entrepreneurship since value creation can use digital platforms (Chandna, 2021). Thus, we have the following hypothesis:

\[ H_05: \text{creative solution generation capacity is positively related to digital social entrepreneurship to address SDGs.} \]

Challenges in social entrepreneurship include creating impact with a sustainable approach and a proper social business model (Chandna, 2022). Having a social mission is imperative in social entrepreneurship. A feasible business model and sustainable entrepreneurship could be generated through the social experience and perceived feasibility of digital solutions (Gerli et al., 2021; Ghatak et al., 2020; Ibáñez et al., 2021).

\[ H_06: \text{the relationship between social mission and digital social entrepreneurship to address SDGs is mediated by sustainable entrepreneurship development.} \]

\[ H_07: \text{the relationship between social mission and digital social entrepreneurship to address SDGs is mediated by social business model design.} \]

Social entrepreneurship operates in a specific institutional context at a minimum within country boundaries. Knowledge of the regulation and the market shaped by the regulation is essential to ensure sustainable entrepreneurship. Government regulation and marketing influence knowledge use in digital social entrepreneurship (Gerli et al., 2021; Ghatak et al., 2020). Thus, we have the following hypothesis:

\[ H_08: \text{the relationship between knowledge use and digital social entrepreneurship to address SDGs is mediated by government regulation.} \]

\[ H_09: \text{the relationship between knowledge use and digital social entrepreneurship to address SDGs is mediated by marketing strategy.} \]

This study tries to improve the understanding of social entrepreneurship as a field of study and practice. It examined the social entrepreneurship context and the process of social innovation to create value. It might have several limitations, such as focusing on the processual view of social innovation actors. Future research can also consider viewing the social innovation from the adoption process on the consumer or user side.
Another limitation entails the unit analysis of social enterprise as an organization. Future research can combine the unit of analysis by integrating individual and organizational factors to improve perceptions of technology use in social innovation.

5. Conclusion

The global development network has highlighted the importance of having technology-based solutions to improve unsustainable development tracks. Related digital technology enables improvement in almost every economic sector, including social innovation. However, we still see many blockers in technology adoption for social good. Social entrepreneurship embodies the potential to become a catalyst in technology transformation and social improvement. The value creation process can be enhanced using technology in social innovation.

This study explores the research questions concerning digital social innovation and its influence on achieving sustainable development goals. Using bibliometric data from Scopus and 111 literature reviews, this research mapped social entrepreneurship’s intellectual structure and technology-based social innovation within social entrepreneurship. Six variables were extracted from state-of-the-art research tabularization. Subsequently, a conceptual framework model and its hypotheses from an organization-level view are proposed. Having this conceptual framework enables the researchers in social entrepreneurship to pave a more focused relationship with sustainable development goals.

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