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IDENTIFICATION OF SOCIAL ELEMENTS IN BUSINESS MODELS BASED ON THE EXAMPLE OF SELECTED INNOVATIVE ENTERPRISES IN POLAND[1]

Summary

Purpose | The purpose of this article is to present a preliminary analysis of the business models (BM) of innovative enterprises in terms of their sustainability and to identify the extent to which social aspects are incorporated.

Research method | The Triple Layered Business Model Canvas was applied to characterise the BMs, while the Methodological Sheets for Social Life Cycle Assessment (LCA) supported the identification of social aspects. The analysis covered selected innovative enterprises that participated as panellists in three science and technology parks, where research was conducted using the Open Space method.

Results | The findings align with existing research on sustainable enterprises and business model development. Owners, managers and employees highlighted the key role of social aspects in fostering innovation. All companies adapted their BMs toward sustainability by integrating social dimensions, though to varying degrees. A stakeholder-based perspective shows that consumer- and community-related activities are the

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least developed, while the "workers" category is the most difficult to evaluate. Integrating social aspects into sustainable BMs may yield benefits such as attracting skilled and loyal employees, enhancing organisational resilience, strengthening dynamic capabilities and improving societal readiness for new technologies and social innovations.

Originality/value/implications/recommendations | The novelty lies in applying the Triple Layered Business Model Canvas to describe the business models of innovative enterprises. Additional value is provided by the use of the Social LCA methodology to identify and characterise the social components embedded in these BMs.

Keywords: business model, sustainable business model, Triple Layered Business Model Canvas, Social Life Cycle Assessment, innovative enterprises

JEL classification: D22, D91, L10, Q01

1. Introduction

Today, the corporate environment is referred to as VUCA (volatility, uncertainty, complexity, ambiguity). The turbulent nature of the environment results from technological advances, globalisation, environmental and political risks as well as increased environmental, health and social awareness, which are reflected in the changing expectations of various stakeholder groups. Changing external conditions force enterprises to be one of the links in today's economies, i.e., developing sustainable economies characterised by circular economy, inclusion economy, sharing economy and green economy.

Furthermore, adapting to them, or becoming the so-called creative element in these changes, requires a holistic approach to defining goals, strategies and business models (BMs). Moreover, it should be noted that technological progress is now occurring at a much faster pace and we are dealing with a knowledge-based economy in which knowledge (including so-called tacit knowledge) is a key factor in competitiveness, and companies find it much more difficult to recruit, retain or replace highly skilled employees. Entrepreneurs have begun to notice that not only economic conditions, but also social values, e.g., a work/life balance or a good atmosphere at work, play an important motivation function. For this reason, the social aspects seem crucial for innovative companies and creative team management.

Taking social elements into account in the company's activities and strategy leads to the concept of a sustainable business model (SBM), which is increasingly becoming a subject of interest to researchers [Wells, Seitz, 2005]. This concept takes economic, environmental and social aspects into account in the business model [Stubbs, Cocklin, 2008]. While large enterprises show a tendency to change their business model towards greater sustainability, this trend is not yet visible among small innovative enterprises. However, the question arises as to whether innovative enterprises are beginning to build their business in the spirit of sustainable business models.

The purpose of the article is to present a preliminary analysis of the business models of innovative enterprises (e.g., start-ups) in terms of their sustainability, along with the identification of the inclusion of social aspects in them. To characterise business models, we used the Triple Layered Business Model Canvas (TLBMC) proposed by A. Joyce and R. L. Paquin [Joyce, Paquin, 2016]. To identify social aspects, we used the Methodological Sheets for Social LCA [Traverso et al., 2021], defining the categories to be evaluated.

The empirical material for the analysis of BMs was obtained as part of the research conducted using the Open Space method in three technology parks in Poland in November and December 2019. In addition, publicly available press materials and information on the websites of the surveyed enterprises were sources of data, too. A traditional literature review was used to support the conceptual and methodological framework of the study. For data protection reasons, the names of the enterprises analysed have been coded. Moreover, secondary sources are not explicitly cited but may be checked in the authors' archives.

2. Literature review

The reviewed literature therefore addresses the conceptual foundations of sustainable development, the structure and purpose of sustainable and triple-layered business models, and the role of innovative enterprises in adopting new value-creation logics. These issues are central to the objective of this article, which is to identify social elements embedded in the business models of selected innovative companies.

More than 20 years ago, J. Elkington [Elkington, 1997] argued that a BM should provide social, environmental and economic values to support sustainable development. W. Stubbs and C. Cocklin [2008] were the first scholars to introduce the concept of SBM, in which sustainability goals influence the enterprise's actions and decisions and reflect a more holistic approach to sustainability [Stubbs, Cocklin, 2008]. Moreover, R. Freeman [2010] pointed out that social, environmental and economic values should be provided to all stakeholders. Therefore, sustainability should be at the centre of BMs value proposition; sustainable value is created and delivered to customers and all other stakeholders and transformed into economic value for the enterprise and its stakeholders while preserving or regenerating the natural, social and economic capital outside the organisation [Geissdoerfer, Vladimirova, Evans, 2018; Schaltegger, Freund, Hansen, 2012; Upward, Jones, 2016].

Most definitions of SBM adopt a holistic view of value and stakeholders [Boons, Lüdeke-Freund, 2013; Curtis, Mont, 2020; Geissdoerfer et al., 2018], leading to a reformulation in which the environment and society are treated as stakeholders and as sources and recipients of value [Schaltegger, Hansen, Lüdeke-Freund, 2016; Schoneveld, 2020]. An SBM provides benefits to a broad set of stakeholders, including consumers and local communities [Freeman, 2010], and supports the development of circular [Manninen et al., 2018] and sharing economies [Curtis, Mont, 2020]. Sustainability ultimately requires balancing economic, environmental and social pillars, which are inherently interdependent [Lüdeke-Freund, Dembek, 2017]. The literature also highlights the role of clean technologies, social innovations and new organisational forms in achieving sustainable development goals [Bocken et al., 2014; Boons, Lüdeke-Freund, 2013]. Innovation in SBM is thus understood as creating positive impacts and reducing negative ones through changes in how value is created, delivered and captured, or through modifications of the value proposition [Shakeel et al., 2020; Velter et al., 2020].

The literature provides several examples of tools that support the development of SBM as the traditional methods and tools used so far do not work out. Mention should be made of the Strongly Sustainable Business Model Canvas developed by A. Upward [Upward, Jones, 2016], the Business Innovation Kit developed by H. Breuer [Lüdeke-Freund et al., 2018] and the Triple Layered

Business Model Canvas developed by A. Joyce and R. L. Paquin [Joyce, Paquin, 2016], which is based on the Business Model Canvas (BMC) [Osterwalder, Pigneur, 2010]. This tool aims to help organisations that want to innovate their BMs and create, deliver and capture ecological, social and financial value in an integrated manner. There are three layers in the tool, the first one – the economic layer – follows the BMC, the second one – the environmental layer – contains nine elements but builds on the life-cycle perspective of environmental impact whereas the third one – the social layer – also contains nine elements but builds on a stakeholder management approach to explore an organisation's social impact [Joyce, Paquin, 2016].

A search of the Scopus database by title, keywords and abstract using the words: "triple" AND "layer" AND "business" AND "model" yielded 24 articles. Among these articles, only 8 of them used the TLBMC [Joyce, Paquin, 2016] to describe sustainable business models. Research indicates that the TLBMC can serve as a tool for describing and designing sustainable business models across diverse sectors, ranging from biotechnology, tourism, and social media to agriculture and energy services. This approach supports the analysis of economic, social, and environmental value creation, with particular attention to sustainability-oriented start-ups.

Environmental Life Cycle Assessment constitutes a formal and well-established methodology for evaluating the environmental impacts of a product or service across multiple indicators (e.g., CO_2 emissions, ecosystem quality, human health, resource depletion, water use) throughout its entire life cycle. In contrast, Social Life Cycle Assessment (S-LCA) is an emerging approach aimed at assessing the social and socio-economic impacts of products, designed to complement environmental LCA and life-cycle costing in the development of comprehensive sustainable life-cycle assessments [Sureau et al., 2018].

The S-LCA Guidelines, developed by the United Nations Environment Programme and the Society of Environmental Toxicology and Chemistry (UNEP/SETAC) within the Life Cycle Initiative, provide a structured framework for evaluating social impacts across product life cycles [Benoît, Mazijn, 2009]. Since their initial publication, continuous efforts have been made to refine and expand the methodological foundations of S-LCA [Sureau et al., 2018]. In

2021, updated Methodological Sheets for S-LCA subcategories were released [Traverso et al., 2021], offering clear and operational guidance through examples of inventory indicators, units of analysis, and potential data sources [Benoît-Norris et al., 2011]. This method is well structured and widely used.

3. Research methodology

The data for analysis was obtained during panels organised in November and December 2019 in three technology parks: Wrocław Technology Park, the University of Zielona Góra Science and Technology Park and the Euro-Centrum Science and Technology Park in Katowice. Each panel took the form of a moderated discussion using the open space method. Of the 32 innovative companies participating in the panels, only five had a positive impact on the society and four had a positive impact on the environment (excluding enterprise C). These companies were subjected to a thorough analysis, which was supplemented in 2022 with information obtained from a review of grey literature.

Secondary sources, including publicly available press materials, company websites and grey literature, were used to complement the information obtained during the panel discussions. Their role was to verify selected statements made by the entrepreneurs, identify additional social activities not explicitly mentioned during the panels, and update the case descriptions with developments observed after 2019. The analysis of these materials followed a thematic approach consistent with the categories of the TLBMC and S-LCA frameworks. However, the scope and reliability of secondary sources varied, which should be taken into account when interpreting the results and constitutes an additional methodological limitation of the study.

During the panels, an open discussion was conducted, encouraging entrepreneurs to speak freely. The questions addressed various aspects of business operations, including key elements of business models that contribute to enterprise development, components of the business model that are critical for fostering innovation, the influence of cooperation networks on business models (both within and beyond the value chain), the benefits expected from participation in cooperation networks, as well as the benefits already achieved

through collaboration within such networks or clusters, and the advantages resulting from innovations implemented in recent years. The entrepreneurs were not asked directly about the social aspects of their business models, as most would have declared that they undertake actions benefiting various stakeholders. The authors aimed to capture actual practices rather than declared intentions.

Business models were analysed using the TLBMC developed by A. Joyce and R. L. Paquin [Joyce, Paquin, 2016]. The business model description for each case study is structured across three layers:

1. the business layer, which focuses on the customer, value proposition, and key partners in line with the BMC framework;
2. the environmental layer, which considers the environmental activities undertaken and the associated environmental value, understood as the expected positive impacts on both the environment and the firm;
3. the social layer, which identifies six stakeholder groups and corresponding subcategories in accordance with the S-LCA methodology.

The S-LCA methodology was introduced in the work of C. Benoît and B. Mazijn [Benoît, Mazijn, 2009], where stakeholders were classified into six categories: workers, the local community, value chain actors (excluding consumers), consumers, society, and children. The identification of social aspects in the analysed case studies was based on the detailed subcategories defined in the Methodological Sheets for Social LCA [Traverso et al., 2021]. Some subcategories were excluded from the analysis because they are no longer relevant for enterprises operating in highly developed economies or pertain to the economy as a whole rather than to individual companies.

4. Research results

This chapter examines the business models of selected enterprises that demonstrate different approaches to integrating social and environmental value, and each case is presented according to a consistent analytical scheme that enables structured comparison across the business, environmental and social layers.

4.1. Enterprise A

Industry: **medical and energy industry**

Subject and scope of business: Production of medical supplies and renewable-energy solutions. The company pioneers energy-storage technologies in Poland and operates internationally in medical-supply production.

Business model description:

1. The business layer: The enterprise generates revenue through the production of medical supplies, adding value by using zero-emission technologies. Renewable energy sources such as wind and PV reduce production costs and support the development of energy-efficient solutions. Key resources include specialised knowledge and in-house renewable energy infrastructure.
2. The environmental layer: Its goal is to reduce emissions by producing renewable energy and developing efficient energy-storage infrastructure. Modern storage technologies enhance energy security and quality of life. The enterprise operates a research and development (R&D) centre focused on energy efficiency and decarbonisation and is the first in Poland to manufacture medical supplies using zero-emission technology.
3. The social layer: The enterprise promotes ecological awareness through conferences and educational activities for pupils and students hosted at its R&D centre. It is an active member of an energy cluster. As a partnership, it is not required to publish full CSR disclosures, but its innovative technologies contribute to technological and economic development.

4.2. Enterprise B

Industry: **design and construction of process lines**

Subject and scope of business activity: Multi-disciplinary design of process lines for the chemical and food industries, including hazardous materials facilities.

The company also builds and services process lines and operates in Poland and abroad.

Business model description:

1. The business layer: The enterprise offers comprehensive EPC services across the entire project life cycle, valued by clients for timeliness, reliability and expert cost advice. Its key resources are specialised knowledge and skills, which help reduce customers' operating costs. It collaborates within its supply chain but avoids partnerships with large related firms to maintain legal, organisational and economic independence.
2. The environmental layer: Designed process lines optimise media consumption, and the enterprise conducts R&D on environmentally friendly technologies.
3. The social layer: Designers work collaboratively across installations, forming a close-knit team that also pursues shared sports activities. Online opinions describe the enterprise as demanding, especially on foreign contracts, but note fair pay, good organisation and strong interpersonal relations. Consumers highlight professional service and honest advice. Some comments indicate managerial pressure related to reporting duties.

4.3. Enterprise C

Industry: **mainly the medical industry**

Subject and scope of business activities: The enterprise provides telemedicine services, mainly telecardiology and telecare supported by advanced IT. It also conducts educational, publishing, R&D and IT activities, and offers additional rental and retail services.

Business model description:

1. The business layer: The enterprise shifted its BM from B2C to B2B, closing its call centre, now operated by a key partner with capital ties. Core

resources include an in-house telemedicine and tele-emergency centre, as well as tacit knowledge gained through patient interactions. Key partners are medical enterprises and local government units. The enterprise emphasises that its greatest value lies in "saving one life a day over the phone". It also secures public and EU funding, mainly for preventive health initiatives.

2. The environmental layer: Although the enterprise does not directly target environmental goals, its online services reduce the need for patient travel, indirectly lowering fossil-fuel use and emissions.
3. The social layer: The enterprise stresses stakeholder cooperation and transparent governance for investors and owners. It works with local governments nationwide to provide free diagnostic and preventive services, supported by EU-funded medical campaigns. CSR is explicitly communicated on its website, and the enterprise declares compliance with "Good Practices of Companies Listed on NewConnect", despite occasional delays noted in recent reports. Publicly available information suggests mixed employee opinions, making working conditions difficult to assess. Its strong market position complicates evaluation of fair competition, though no undesirable practices have been reported. The enterprise appears to prioritise consumer privacy and ensures feedback mechanisms for users.

4.4. Enterprise D

Industry: space industry

Subject and scope of business activities: Founded in 2013, the enterprise designs space architecture and brings together a multidisciplinary team developing concepts and technologies for space exploration.

Business model description:

1. The business layer: The enterprise co-founded and operates a Research Station that enables testing of space-related designs and studying human responses to isolation, including simulated lunar missions. It collaborates

internationally on facilities replicating Moon and Mars conditions and has developed a concept for a 1,000-person Martian colony based on inflatable, modular structures. Running analogue research stations has opened new opportunities, such as cooperation on hydrogen electrolysis for bus fuel and plans for a plant-growing facility supporting space agriculture.

2. The environmental layer: The enterprise contributes to reducing greenhouse gas emissions through hydrogen production and its use in transport. However, space-related activities indirectly burden the environment due to high resource consumption, emissions and atmospheric pollution.
3. The social layer: In this enterprise, the economic value proposition has been replaced by social value, and the business model is built entirely around social stakeholders. Its mission is to advance space technologies for a better future. The enterprise focuses on inspiring and supporting young professionals and researchers by creating networking opportunities and offering access to a scientific platform. All projects are non-commercial and serve scientific development, contributing both to technological progress and, indirectly, to economic growth. As the founder emphasises: "I'm not sacrificing anything! I'm investing in the future." Research on hydrogen electrolysis and plant cultivation in space conditions represents a tangible contribution to the Sustainable Development Goals, particularly in the areas of clean energy and future food security. The enterprise collaborates with numerous international institutions and actively involves students in complex projects related to future manned missions to the Moon and Mars. Many students have participated in projects carried out for NASA, gaining valuable experience and contributing to the development of space technologies.

4.5. Enterprise E

Industry: **construction industry**

Subject and scope of business activities: Polish-owned construction company with 30 years of experience, providing end-to-end investment services from design to project delivery.

Business model description:

1. The business layer: A few years ago, the enterprise shifted its BM and introduced a "design and build" service offering tailor-made houses aligned with clients' budgets. Customer focus and an individual approach remain central values. Human resources are key, with strong emphasis on developing employees' skills and competencies, considered more valuable than financial capital. The enterprise also relies on partner networks that provide access to resources and mutual support, including sharing projects when one partner has fewer orders.
2. The environmental layer: According to the owner, the BM increasingly prioritises values beyond profit, focusing on benefits for the land and environment. The "design and build" service supports material savings by overseeing and optimising the entire investment process. The resulting buildings are modern, ergonomic and cost-efficient, with solutions tailored and holistically optimised for each client.
3. The social layer: The owner's shift toward SBM translates into continuous pro-social activities and the pursuit of social value. Employees benefit from workshops, training and team-building initiatives, as well as an annual health-oriented Active challenge. The enterprise hires locally and cooperates with local suppliers, building its workforce entirely from the local community. It supports community development by training employees in technical skills and enabling knowledge transfer through participation in collaborative networks.

5. Discussion of results

The activities for social stakeholders have been assigned the categories proposed in the Methodological sheet [Traverso et al., 2021] and shown in Table 1. Those that did not occur for any enterprise were removed from the list of subcategories.

TABLE 1

Stakeholder groups and subcategories identified for enterprises.

Stakeholder categories and subcategories	Enterprises				
	A	B	C	D	E
Worker					
Fair salary		+?			
Working hours		+	+?		–?
Forced labour		–?		–?	
Equal opportunities/discrimination	+?	+?	+?		+?
Health and safety		+	+		+
Social benefits/social security		+	?		+
Employment relationship		+			+
Local community					
Access to material resources			+		
Access to immaterial resources	+		+	+	
Safe and healthy living conditions			+		
Respect for indigenous rights					
Community engagement	+		+	+	
Local employment	+				+
Secure living conditions			+		
Value chain actors (not including consumers)					
Fair competition	+?	+	+	+?	
Promoting social responsibility			+		
Supplier relationships			+?		
Respect for intellectual property rights	?	+?	+	+?	
Consumer					
Health and safety			+	+	
Feedback mechanism		+	+?		
Consumer privacy			+		
Transparency		+	+		
End-of-life responsibility					
Society					
Public commitments to sustainability issues	+		+	+	+
Contribution to economic development	+	+		+	+
Technology development	+	+	+	+	
Children					
Education provided in the local community	+		+	+	

Note: "+" – identified; "-" – not present; "+?" – can be inferred to occur but requires verification; "-?" – can be inferred not to occur but requires verification; "?" – by inference presumably occurs but needs verification.

Source: own elaboration.

The research was conducted before the pandemic, the political and economic turbulence surrounding the Turów Power Plant, and the outbreak of the war in Ukraine. These events posed significant threats to many enterprises, forcing changes in business models or leading to bankruptcy. Among the 32 active members of the technology parks, only five could be tentatively classified as companies incorporating social or environmental layers into their business models. These entities had already integrated social (C, D, E) or environmental (A, B, D, E) aspects into their BMs in 2019, which made them conceptually and organisationally prepared for emerging challenges.

Grey literature research conducted in 2022 shows that these enterprises continue to operate, remain profitable and maintain their business models. While the construction and medical sectors may have "benefited" from the pandemic, later developments – such as rising interest rates and a likely slowdown in construction investment – are less likely to affect enterprises like E, which embed social aspects in their BMs. In a period of disrupted supply chains, the products and services offered by B also create growth opportunities. Likewise, the search for new raw-material sources and the rising demand for highly skilled personnel in Poland's still-developing space technology sector strengthen the conditions for the social activities undertaken by D.

Surveys of technology parks indicate that most enterprises pursue goals consistent with classical or alternative theories, suggesting that firms prioritise economic objectives before social ones. This is in line with A. B. Carroll's [Carroll, 2016] view that an enterprise must first achieve minimum economic goals and only then will it pursue social goals. However, enterprise D – whose activities are primarily socially driven – challenges this assumption. The five analysed enterprises illustrate an emerging shift in Polish business models: although the social layer in their BMs remains underdeveloped, it is nonetheless present.

The results of this study are consistent with the broader understanding of social value creation presented in the literature. Social value encompasses equality, justice, well-being, health, safety, individual rights, education and community development [Evans et al., 2017; Laukkanen, Tura, 2020]. The strongest elements identified in the analysed business models – public commitments to sustainability issues, contribution to economic development and technology

development – correspond to these dimensions. Activities observed in the "Local community" category, such as access to immaterial resources and community engagement, similarly reflect the emphasis on strengthening social relationships. Elements related to "Value chain actors", including fair competition and respect for intellectual property rights, align with the literature on ethical behaviour toward partners and suppliers. Although less consistently represented, the "Worker" category also includes core components of social value creation, such as health and safety and equal opportunities. Overall, the findings show that the social elements identified in the analysed business models correspond closely to the key dimensions of social value creation described in previous studies.

The findings of this study are consistent with the growing body of literature indicating that enterprises increasingly integrate social and environmental elements into their business models. Previous research confirms that sustainable business models are most frequently observed among innovative or knowledge-intensive firms, which tend to embed social and environmental goals more readily due to their organisational culture, stakeholder orientation and reliance on human capital [Bocken et al., 2014; Geissdoerfer et al., 2018]. This tendency is reflected in the present study.

International research also indicates that sustainable or socially oriented business models are not limited to innovative firms. Studies from various sectors – including energy, mobility, clothing, and digital services – show that companies increasingly incorporate social and environmental value into their business models, although the extent of this integration differs across industries and national contexts [Karami, Madlener, 2021; Laukkanen, Tura, 2022; Norris, 2023]. However, similar to the findings presented here, these studies highlight that the social layer is often less developed than the economic or environmental layers, and its implementation tends to be more fragmented.

In the Polish context, research on sustainable business models remains relatively scarce, and most studies focus on environmental rather than social aspects. The present study therefore contributes to filling this gap by demonstrating that even among innovative enterprises, the social layer of the business model is still emerging and unevenly developed.

6. Conclusions

The analysis of the social layer shows that the strongest elements appear in the "Society" category, where public commitments to sustainability issues, contribution to economic development and technology development were identified in four enterprises. In the "Local community" category, access to immaterial resources and community engagement were the most common, each present in three cases. Elements related to "Value chain actors", such as fair competition and respect for intellectual property rights, were also identified in four enterprises, although some assessments rely on inferred rather than fully confirmed information. The "Worker" category was less consistently represented, with aspects such as health and safety and equal opportunities appearing across several enterprises but often requiring verification.

The presented case studies are in accordance with the research on a sustainable enterprise and the more holistic approach building the business model. The owners, managers and employees of investigated companies have pointed out the crucial role of social aspects for their innovative businesses. The surveyed entities contribute to some extent to the Sustainable Development Goals. However, the key question is whether such activities are merely a means to an economic output or whether they are driven by the value system within a given enterprise. These two concepts are widely reported in the literature [Shakeel et al., 2020].

The four enterprises modified their BMs for sustainability by incorporating various social aspects into their operations (Enterprise D's BM was geared toward social goals from the beginning and the economic goal came later). At this stage of the research, it is not possible to assess which enterprise is more involved in social issues. However, looking through the lens of stakeholders, it is noticeable that the least developed social area is consumer and community activities, and the category that is the most difficult to verify is the category of "workers".

Taking into consideration the social level in the sustainable business models can provide some benefits for companies such as the following:

- attracting loyal employees who possess unique skills and sophisticated knowledge and, in some cases, having exclusive rights to them;
- improving of the enterprise resistance to crisis;
- shaping dynamic competencies;
- improving social adaptation for new technologies and social innovations.

This study has several limitations that should be acknowledged. First, the analysis is based on a small number of case studies, which restricts the possibility of drawing broader generalisations. The sample was not selected randomly but consisted of enterprises that participated in panel discussions organised in three technology parks, which introduces a degree of purposive sampling. Moreover, the study relies partly on secondary materials, including publicly available information and grey literature, which may vary in completeness and reliability. These factors mean that the findings should be interpreted as exploratory insights rather than representative conclusions about innovative enterprises more broadly.

Further research will expand the sample to include a larger number of innovative enterprises from different regions and sectors, enabling comparative analyses and more robust generalisations. Another promising direction is to examine how social elements evolve over time within business models, particularly in response to external shocks such as pandemics, geopolitical crises or technological disruptions. Mixed-method approaches could provide deeper insights into the mechanisms through which social value becomes embedded in innovative enterprises.

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