A Mixed-Methods Strategy for Small Samples in Ill-Structured Literature

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Abstract: This paper contributes to general research by providing a tested protocol to extract structured information with analytical and statistical significance from an exploratory context, despite small samples. Exploring new trends in business and management can be challenging. Sometimes the singularity of the phenomenon observed, or its novelty, offers small samples. The research protocol was developed to study social business models, providing understanding of differences between profiles of a taxonomy. Results were consistent when applied to other samples. The research protocol relies on a mixed method based on pattern identification through qualitative and quantitative analysis. Detailed methodological decisions and procedures offer a guide for dealing with ill-structured literature lacking consensus and empirical studies, addressing emergent phenomena. The theoretical background is developed in two parts: first, by contextualizing the literature where the mixed-method protocol was developed, and second, by referencing various business and management studies that informed the protocol. The research evaluated significant differences in social business models dimensions and profiles, aiming to classify them and understand how these differences influence social value creation. In the absence of theoretical definitions, social investment and award criteria were researched. The research context, including its strengths and constraints, is explained to assist researchers facing similar challenges. Online data and interviews underwent content and pattern-matching analysis to fill a model selected from the literature. This exploratory research helped overcome theoretical limitations and incorporated diverse perspectives needed to understand social entrepreneurship. The mixed-method strategy identified profiles and classified business models, proposing a taxonomy. The resulting taxonomy is supported by the literature and consistent with the contexts where it has emerged. All procedures are described with examples from the research project to enhance understanding and usage. This comprehensive approach allows researchers to navigate the complexities of social entrepreneurial literature, contributing to a more nuanced understanding of the field.

Keywords: Mixed-method Research, Small Sample, Social Entrepreneurship, Research Strategy, Mixed-method Protocol

1. Introduction

Exploring new trends in business and management can be challenging. Sometimes the singularity of the phenomenon observed, or its novelty, offers small samples. Small sample sizes are common in exploratory research, where the goal is to identify potential relationships and patterns rather than confirm hypotheses with large datasets. It can happen due to the nature of the study or the specific population being studied. For instance, if the phenomena are recent, there will be no historical data for comparison, and the population will be small (Hair et al., 2017). Moreover, surveys aimed at large samples are time-consuming and can be expensive. Due to these constraints and limited access to organizations, students often rely on small samples (Ball, 2019; Remenyi et al., 1998).

A small dataset contains a limited number of cases, typically with high-dimensional features. It means that each case highlights a few patterns, and the recurring patterns have many characteristics or descriptors mixed inside them. Therefore, the number of latent patterns is much larger than the number of cases in the samples, leading to weak statistical models. Additionally, outliers, or unusual data points, can severely affect the model's performance by distorting the learned distribution. To solve this problem, it is paramount to establish an effective feature selection to reduce the redundancy in the high-dimensional feature space, ensuring that only the most relevant features are considered (Zhou et al., 2022).

There is no silver bullet in the literature to guide how to develop more robust classifiers that can handle the variability and noise in small datasets, ensuring reliable predictions even with limited data (Ball, 2019; Zhou et al., 2022). And it is not claimed that the protocol presented in this study is applicable in any context. However, by explaining and detailing the steps necessary to approach the literature in a pre-paradigmatic state and presenting the results obtained with the protocol, we hope to offer a replicable structure that helps to deal with this challenge.

In line with the issues addressed in exploratory studies (Hair et al., 2017), building taxonomies offers a viable approach for managing the multitude of predictors and dimensions involved (Carneiro et al., 1991; Ciccarino

et al., 2022a; Peixoto et al., 2022). This method can reduce the extensive array of potential combinations to a more manageable set (Humbrick, 1980) effectively representing the simultaneous and conjoint interactions that occur (Venkatraman & Prescott, 1990).

This paper is drawn from social entrepreneurial literature. Social entrepreneurship (SE) is of paramount importance due to its unique focus on addressing social, environmental, and economic challenges through innovative and sustainable business models (Ciccarino, 2023; Sampaio & Sebastião, 2024). These ventures integrate the pursuit of social impact supported by financial viability. This dual objective is crucial for tackling complex global issues such as poverty, inequality, and environmental degradation, which often cannot be effectively addressed by either the public sector or traditional business practices alone (Kamaludin et al., 2024; Stephan et al., 2015).

By leveraging entrepreneurial principles and market-based strategies, social entrepreneurs create scalable solutions that empower communities, promote social inclusion, and drive systemic change. Furthermore, SE fosters a culture of innovation and resilience, encouraging the development of new approaches to persistent problems (Kamaludin et al., 2024; Seelos & Mair, 2005; Tate & Bals, 2018). The study of SE enriches our understanding of how business can be a force for good, offering insights into the mechanisms through which entrepreneurial activities can generate social value. It challenges traditional paradigms. This, in turn, informs policymaking, supports the development of supportive ecosystems, and inspires future generations of entrepreneurs (Hossain et al., 2017; Kamaludin et al., 2024).

Additionally, when social sciences fail to challenge their paradigms, there is a serious risk of losing critical insight, leading to a crisis in the validity of their constructs (Churchill Jr, 1979; Miller, 2011). SE offers a unique opportunity for the recombination of meanings and multidisciplinary synthesis, primarily by expanding the boundaries between the public and private sectors and creating synergies that surpass the capabilities of non-profit organizations (Es-seqally & El Adnani, 2024; Tate & Bals, 2018; van der Have & Rubalcaba, 2016). The choice of SE literature to develop a mixed-method research protocol is particularly justified given the complex and emergent nature of this field, which often involves small sample sizes and ill-structured phenomena (Es-seqally & El Adnani, 2024; Kamaludin et al., 2024).

2. Theoretical Background

Social entrepreneurship (SE) represents a distinct domain within entrepreneurship literature (Dacin et al., 2010), aimed at understanding new business models that efficiently address fundamental human needs unmet by conventional structures (Seelos & Mair, 2005; Stephan et al., 2015). The primary distinction between conventional and SE lies in the prioritization of social objectives in decision-making and strategic formulation (Austin et al., 2006; Dees, 1998).

From an evolutionary perspective, current SE literature has developed from two main strands(Defourny & Nyssens, 2010). Both strands emerged in the 1980s and matured between 2001 and 2010 (Hossain et al., 2017). The first strand involves non-profit organizations adapting more efficient methods to better fulfill their missions, driven by the adoption of sophisticated management practices by governments, which subsequently demanded similar efficiency from supported organizations (Dees, 1998). This shift was also motivated by the need for financial alternatives in response to reduced social investments due to political decisions or crises (Harvie & Ogman, 2019; Ramos & Martín, 2001). Consequently, social organizations have been pressured to develop financial autonomy from traditional revenue sources like donations and public funds, necessitating sustainable integration of social and economic outcomes (Kamaludin et al., 2024; Zahra et al., 2009).

This challenging socioeconomic context also incentivized entrepreneurs focused on social impact to explore economically viable opportunities arising from social problems (Austin et al., 2006; Peredo & McLean, 2006; Sampaio & Sebastião, 2024). However, many such entrepreneurs discovered their identity after receiving some prize. They did the job without a concept to guide them (Ciccarino, 2020; Seelos & Mair, 2005).

Despite being a popular and rapidly growing research field (Es-seqally & El Adnani, 2024), the literature on SE still lacks a universally agreed-upon definition (Kamaludin et al., 2024; Lee et al., 2014). This ambiguity can be attributed to its two-strand evolution (Defourny & Nyssens, 2010) or to this literature's unique feature of connecting different approaches and disciplines, promoting academic diversity (van der Have & Rubalcaba, 2016).

What we can conclude is that SE literature is still in a pre-paradigmatic state, offering little guidance to organize and accumulate knowledge in its fragmented concepts (Hossain et al., 2017; Kamaludin et al., 2024;

Lee et al., 2014). The major theoretical limitation of this state is the widely dispersed knowledge that requires synthesis and consolidation to balance multidimensionality and achieve progress (Macke et al., 2018). The problem is that merely having and prioritizing social goals is insufficient to define what constitutes a social entrepreneurship initiative (SEI), even though these are common and generally accepted characteristics (Austin et al., 2006; Peredo & McLean, 2006). Scholars frequently highlight the challenge of identifying which organizations fit within the SE domain due to criteria that are either too broad or too narrow (Dacin et al., 2010; Sampaio & Sebastião, 2024). The available classifications are, in general, conceptual and lack empirical tests (Bignotti & Myres, 2022; Erpf et al., 2019).

This methodological issue hampers literature development, as broad constructs create measurement issues and narrow constructs test fewer hypotheses. The interplay between theory and constructs must be balanced to avoid excessive variation in results and ensure knowledge accumulation (Hamann et al., 2013; Richard et al., 2009). This aspect can also derail supportive structures and the provision of managerial tools adequate to the SE context (European-Commission, 2016; Lee et al., 2014; Seelos & Mair, 2005). Consequently, many social enterprises struggle with financial sustainability, with a high rate of failures reported, especially within the first few years of operation (Kamaludin et al., 2024).

Another key aspect is the focus on 'corporate social responsibility' and 'business models' (Sampaio & Sebastião, 2024), indicating that research remains centered at the organizational level (Erpf et al., 2019; Lee et al., 2014). Consequently, significant links between analysis levels such as ecosystems, countries, or public policy are often overlooked (Johnson and Schaltegger, 2020). Although these themes appear in the literature, they are not thoroughly developed (Kamaludin et al., 2024; Sampaio & Sebastião, 2024). Theoretical studies, reviews, and case studies dominate literature, reinforcing the focus on the organizational level (Lee et al., 2014; Sottini et al., 2024).

Strategic management theory has faced similar challenges in evaluating the performance construct (Hamann et al., 2013; Richard et al., 2009; Venkatraman & Ramanujam, 1986). Literature suggest that building taxonomies offers a way to manage numerous concepts by reducing possible combinations to a manageable set through identifying latent profiles that represent complex phenomena. These profiles, contingent on context and circumstances, capture simultaneous interactions (Carneiro et al., 1991; Humbrick, 1980; Venkatraman & Prescott, 1990). This approach recognizes that organizational results are multidimensional constructs needing literature-specific measures (Hamann et al., 2013; Venkatraman & Ramanujam, 1986). A problem widely reported in SE is the lack of measures, tool and techniques developed within this literature to fit SEI's context (Kamaludin et al., 2024; Lee et al., 2014).

Building a taxonomy requires identifying patterns to differentiate groups, explaining result differences while maintaining multidimensionality. Factors should create internally homogeneous and externally heterogeneous groups, making the classification process relevant and stable, thus necessitating study replications (Carneiro et al., 1991). Constructing taxonomies organizes dispersed knowledge and provides a framework for theoretical consolidation (Venkatraman & Prescott, 1990). The proposed mixed-method protocol, applied in strategic management (Carneiro et al., 1991; Peixoto et al., 2022), uses pattern-matching in qualitative and quantitative studies to address small samples in ill-structured literature.

3. Research Protocol

3.1 Mixed-Methods Protocol

Mackenzie and House (1978) warn of the need to employ a research strategy appropriate to the literature studied, corroborating the call from SE scholars and practitioners (Ciccarino et al., 2022b; Kamaludin et al., 2024; Lee et al., 2014). This basic mixed-methods approach was selected to provide a way to deal with SE literature, recognizing its pre-paradigmatic state (Hossain et al., 2017; Kamaludin et al., 2024; Lee et al., 2014). It integrates both qualitative and quantitative techniques, allowing a more comprehensive exploration and understanding of multifaceted domain (Krivokapic-skoko & O'Neill, 2011), as pointed out in the previous sections (Macke et al., 2018; Zhou et al., 2022). The basic mixed-method approach proved to be critical when dealing with small sample sizes, as it enables the triangulation of data to enhance validity and reliability, producing balanced syntheses between literature and practice. The qualitative components can provide in-depth insights into contextual factors and underlying mechanisms, while the quantitative aspects can offer measurable and generalizable findings. This protocol meets the need to explore multi-method strategies that are not essentially guided by quantitative analyses (Krivokapic-skoko & O'Neill, 2011).

To screen fragmented literature, the study followed the model of systematic review literature, as proposed by Remenyi et al. (1998). This model seeks to delineate the underlying narrative to allow the identification of important dimensions that should guide the subsequent data collection and analysis. It consists of five steps: 1) Primary narrative; 2) higher-order narrative; 3) theoretical background; 4) hypotheses; 5) scientific confirmation. Each level accomplished leads to a deeper understanding of the topic. Therefore, the study started with qualitative exploratory research. Table 1 summarizes the research protocol that will be described in the following sections.

Table 1: Taxonomy Framework

Type of study	Method	Stage of narrative	Research question / goal	Data	Result
Qualitative exploratory study	Systematic literature reviews	1) Primary narrative	What is social entrepreneurship?	Literature reviews and bibliometric studies were consulted to identify the seminal papers, keywords and important themes.	The acknowledgement of different definitions, pattern identification and the selection of constructs to work on.
	Systematic literature reviews	2) Higher order narrative	Search for auxiliary concepts in more mature literature.	Literature	- Theoretical frameworks that helped to organize the information. - Methodology application examples
Qualitative descriptive study	- Content analysis - Case study - Pattern matching	3) Theoretical background	- Identify distinctive events such as prizes and investments. - what elements of a social entrepreneurial business model is considered in an investment selection?	- Secondary data from web sites, public reports, case studies, social media. - Interviews / snowball	- Definition of unit of analysis - Study delimitation - Case(s) selection - Semi-structured interview protocol - Online Questionnaires - Population and sample definition
Quantitative descriptive study	- Descriptive statistics - Exploratory factor analysis using principal component analysis and varimax rotation. - Cronbach's Alpha - Cluster Analysis (hierarchical algorithm and K-means algorithm)	4) Hypotheses	- How SEIs and investors can analyze social business models in order to achieve better results?	Online survey	- Relevant features and dimensions - Underlining data infrastructure - Hypotheses' formulation - Case(s) description(s) - Sample description
Quantitative explanatory study	- One-way ANOVA - Pearson Correlation 2-tailed test - MANOVA - Bonferroni's post hoc test	5) Scientific confirmation	- Discern and categorize Social Economy Initiatives (SEIs) based on significant differences in their business model factors and value creation capacity. - What are the profiles that classify cases? - What is the relationship between profiles and the creation of results? - How do the dimensions that characterize the different profiles influence the creation of results?		- Structure for classification and information organization
	Quantitative study replication		Test results' validation and reliability.		

Source: Authors

3.2 Qualitative Study

The systematic review literature departed from a primary narrative (1) that is still fuzzy and widely dispersed (Remenyi et al., 1998). The question that guided the research was: What is social entrepreneurship? It implies the acknowledgement of different definitions, pattern identification and the selection of constructs to work on. Literature reviews and bibliometric studies were consulted to identify the seminal papers, keywords and significant themes. The result was still vague, with much variance. But it highlighted that the most critical characteristic of the topic was the prioritization of social value creation and the need for auxiliary concepts to enable delimitation.

The search for auxiliary concepts proceeded as follows: Firstly, value creation was identified in the more mature literature on strategy. The insights from this literature provided theoretical frameworks that helped organize the information from SE, such as the business model Canvas (Osterwalder & Pigneur, 2011) and the generic strategies (Teece, 2010; Zott & Amit, 2007). It also provided the methodology for the quantitative stage of the mixed-method. Therefore, the lesson learned was that the answer to how to approach ill-structuredliterature can be found in a similar literature and the search should be guided by the primary narrative found in reviews and bibliometric studies. This reflection helped to achieve a higher-order narrative (2) consolidating the literature review (Remenyi et al., 1998).

Lee et al. (2014) discussed that a way to approach SE literature is following prizes and investments received by social entrepreneurial initiatives (SEI). And Martin (2016) used online secondary data to describe value creation in the sharing economy. Combining both guidances, a second question emerged to set up a research infrastructure to form the theoretical background (3) - what elements of a SE business model are considered in an investment selection? The public information of global social investors that provide support to SEI was analyzed by thematic content analysis (Bardin, 1977). The Results highlighted their investment thesis and selection criteria (Ciccarino & Rodrigues, 2020), marking the transition to a descriptive study (Remenyi et al., 1998).

At this point, the SEI's definition was chosen. SE is a business model or project developed by for-profit or non-profit organizations. Organizations that develop SEIs should be private and have management autonomy. SEIs are stable and sustainable operations with the explicit objective of creating social value through collective interest in utilizing production factors such as wage labor, capital, and resources (European-Commission, 2016). Clearly defining the unit of analysis concept is fundamental for a consolidation strategy in the research field because it informs future researchers, preventing misunderstandings. Explicitly reporting this definition aids in interpreting results and facilitating comparisons between studies. However, this step is usually overlooked (European-Commission, 2016; Lee et al., 2014; Richard et al., 2009; Venkatraman & Ramanujam, 1986).

Still exploring the theoretical background (3) the *'Portugal Social Innovation'* (PIS) public policy was identified, providing a delimitation for the study and deepening the understanding of this aspect of SE (Johnson and Schaltegger, 2020). PIS was selected due to its uniqueness and relevance, capable of confronting the theory and developing it through a case-oriented study (Eisenhardt, 1989; Ghauri, 2004). PIS allowed the observation of SE from the perspective of public policy and its agents (i.e., investors and entrepreneurs)(Ciccarino & Nogueira, 2020), enlarging the discussion in SE literature to a multilevel perspective (Kamaludin et al., 2024; Lee et al., 2014; Sottini et al., 2024).

Ensuring that the data comes from consistent experimental environments is essential to avoid conflicts and maintain data reliability, which is often overlooked in small dataset research. PIS also optimized the selection criteria to balance between too many and too few features, as redundant information can lead to high costs in analysis, while too few features may not provide meaningful insights (Zhou et al., 2022).

Once settled the theoretical background (3) and the research delimitation (i.e. SEI invested by PIS) an interview protocol was developed. Interviews aimed to validating and better understand concepts and constructs identified in the previous steps to underline hypotheses (4) (Remenyi et al., 1998). Data was collected by in-depth, semi-structured interviews with Portuguese investors and social entrepreneurs using snowballing. Results were analysed by pattern matching. A pattern is something recurring that appears systematically both in the literature and in the data collected (Eisenhardt, 1989; Ghauri, 2004).

The quantitative descriptive and explanatory study relied on the results of these interviews in line with the first step in building a context-based taxonomy (Humbrick, 1980). Additionally, by the end of the quantitative study, interviews also helped to perform comparative case studies applying the taxonomy (Ciccarino, 2023) and answering a need that still exists in SE literature (Sottini et al., 2024).

3.3 Quantitative Study

The quantitative study aims to answer how SEIs and investors can analyze social business models to achieve better results. Results should enable improvements in funding access and a better understanding between these two agents. It also aimed to provide a structure for classification and information organization (Humbrick, 1980; Venkatraman & Ramanujam, 1986), balancing the constructs to avoid measurement problems and narrow hypotheses (Hamann et al., 2013; Richard et al., 2009). A taxonomy is the tool chosen because 1) it allows contextual analysis by questions and indicators that compose it; 2) it supports classification and comparison, highlighting generic features; 3) a taxonomy is a statistical-based classification, then it allows generalizations favoring replication (Carneiro et al., 1991; Venkatraman & Prescott, 1990). A taxonomy is a context-based classification structure based on patterns (Humbrick, 1980), consistent with the qualitative study. Additional hypothesis tests should be done to make the taxonomy generalizable (Carneiro et al., 1991; Peixoto et al., 2022)

An online survey was based on previously tested and published scales related to the SE research field and framed in the Osterwalder and Pigneur (2011) business model analyses. The SE literature did not offer well-tested correlated scales on clearly established dimensions, so a wide range of variables was selected. Social

value measures were also identified in the literature review to establish a process-result dynamic important for a correct evaluation, considering their temporality (Richard et al., 2009).

The questionnaire relied on the qualitative study results following the last steps proposed by Remenyi et al. (1998). The survey targeted social entrepreneurs or SEI's managers and the database followed the selection criteria of SEIs that received prizes or investment in the past five years (Lee et al., 2014). It helped to evaluate the population and ensure that only SEIs appropriate to the study would be selected. Online data and snowballing were used to send the survey. The taxonomy and its contextual analysis were possible due to the study delimitation in Portugal. This added cohesion to commonly dispersed variables because Portugal has a pioneering public policy toward innovation and social value creation (Humbrick, 1980; Zhou et al., 2022). It highlights the importance of the mix-method's qualitative stage.

The study aims to discern and categorize Social Economy Initiatives (SEIs) based on significant differences in their business model factors and value creation capacity. The first step was verifying latent dimensions and summarizing variables, highlighting the most important ones. An exploratory factor analysis (EFA) was performed using principal component analysis as the extraction method. The dimensions should be mutually excluding (Rotation Method Varimax with Kaiser Normalization - superior to 0.6, and Bartlett's Test $\alpha < 0.05$; factor load > 0.6). The dimension's reliability will be tested using Cronbach's Alpha ($\alpha >$ 0.6) (Hair Jr et al., 2010). The issues concerning common method bias (CMB) were addressed using the Harman's single factor test through exploratory factor analysis (EFA) (Podsakoff et al, 2003).

Variables that do not form factors improve the description of the taxonomy's profiles in the Portuguese instance. In this sense, they were subjected to One-way ANOVA to observe individual differences between variable means and descriptive statistics. However, the conclusions from this analysis are only context descriptions (Carneiro et al, 2011).

Then statistical methodology for taxonomy development was performed to a test hypothesis framed according to the method constraints (Carneiro, 2011). The anticipation is that by amalgamating business model elements with contextual factors, SEIs can be classified and grouped based on their resemblances, thus reflecting multivariate profiles (Humbrick, 1980). However, the emergence of such profiles cannot be predetermined, leading to the formulation of the first hypothesis (H_1): there exist at least two distinct profiles of SEIs shaped by business model factors (H_{1a}) and funding accessibility (H_{1b}).

Classifications within a taxonomy are deduced from pattern observation (Venkatraman & Prescott, 1990) and are contingent upon contextual nuances (Humbrick, 1980), their generalizability resting on statistically sound testing methods (Carneiro, 2011). Consequently, the second hypothesis (H_2) posits that the means of at least two profiles exhibit significant disparities.

The hierarchical algorithm determined the number of clusters through the Euclidean quadratic distance to guarantee the maximum separation between each group. Then, cases were classified using the K-means algorithm (Carneiro et al, 2011). As the classification in clusters emerges from the data, MANOVA validated the classification (Carneiro et al, 2011). This technique is appropriate when there is more than one evaluation measure for the same objective and improves the control of type I experimental error. As the measures were created orthogonally, the classification in each cluster provides the basic premise of the independence of observations required (Hair Jr. et al, 2010).

The internal homogeneity of the clusters was tested together by Box's M test ($\alpha > 0.05$) and Levene's test ($\alpha > 0.05$) to gauge each measure individually. The suitability of the clusters was assessed using Pillai's Trace and Wilks Lambda tests ($\alpha < 0.05$) and determined whether the clusters are different (Hair Jr. et al, 2010; Carneiro et al, 2011). These differences were described using the cluster's centroid analysis and Bonferroni's post hoc test ($\alpha < 0.05$). This test points out significant differences among groups and ranks their effects (Carneiro et al, 2011).

Once the taxonomy with its different profiles (i.e. 3 profiles were identified) was developed, the study followed to understand how different SEI create value. To achieve this goal, value measures identified in the literature at the second step of this study were tested in relation to the taxonomy. Three more hypotheses were tested.

The third hypothesis (H_3) verifies if the variables selected to describe subjective and objective social value (i.e., results from business models) are significant to explain the samples' variation, grouping according to the literature. Therefore, it states that (H_3) exist distinct underlying factors that explain the covariance among

variables related to objective social value (H_{3a}) and subjective social value (H_{3b}). This hypothesis is tested by verifying if the variables are grouped according to the literature and according to the previous study using an EFA.

The fourth and fifth hypotheses aims to analyze the relationship between the social value measures and taxonomy, underscoring the characteristics of social dynamics. The fourth hypothesis aims to validate the differences between taxonomy' profiles in creating social value. In this sense, the means of at least two profiles must exhibit significant disparities (H_4) considering objective social value (H_{4a}) and subjective social value (H_{4b}). MANOVA assess the influence of dimensions and variable in SEI classification in each profile.

Thus, the fifth hypothesis (H_5) states that there is a positive correlation between social value creation and the taxonomy's dimensions. To validate, it is necessary to have at least one positive correlation between objective social value and the business model dimensions (H_{5a}) and at least one positive correlation between subjective social value and the business model dimensions (H_{5b}). This hypothesis is tested by descriptive analysis using the parameter and correlation analysis (Pearson Correlation 2-tailed test and descriptive analysis $\alpha < 0.05$). The parameter of the correlation coefficient is below 0.5 in low correlation, between 0.5 and 0.7 in moderate correlation, and above 0.7 high (Remenyi et al., 1998).

This protocol's resulting database corresponds to 40.45% of the population of Portuguese SEIs. The sample also represents 43.63% of the response rate, which is higher than the 30.36% reported in benchmarking studies (Kuratko et al., 2017). At the end of sample treatment, there were 88 valid cases. Due to the complexity of the study, this sample is considered small (i.e., 50 to 100 cases) (Hair Jr et al, 2010). It was possible to know the population because of the qualitative study. Results were consistent when the entire quantitative study was replicated in a smaller sample of 21 Brazilian cases and in a larger one with 285 cases from the United Kingdom. These findings validate the taxonomy and the measures to evaluate results, suggesting reliability.

4. Conclusion

This paper makes a contribution to research by providing a tested protocol for extracting structured information with analytical and statistical significance from exploratory contexts, even with small samples. It effectively handled the emergent phenomena studied. The methodological decisions and procedures are meticulously documented, serving as a guide for navigating ill-structured literature lacking consensus and empirical studies.

Developed to study social and innovative business models, this research protocol facilitates understanding differences between groups and proposes a taxonomy that proves consistent when the protocol was applied to other samples. Combining literature from strategic management helped overcome the challenges of dealing with SE's ill-structured literature. The taxonomy enables contextual analysis by considering specific indicators relevant to the SEI while supporting classification and comparison, highlighting generic features that can be generalized across different settings.

The relevant and stable classification process suggests this taxonomy is a tool for organizing dispersed knowledge, providing a structure for theoretical consolidation. The profiles and dimensions highlighted by the taxonomy balance the interplay between theory and constructs, avoiding excessive variation in results to enable knowledge accumulation, as recommended in the literature (Hamann et al., 2013; Richard et al., 2009). (Hamann et al., 2013; Richard et al., 2009). These multidimensional findings can build supportive structures and provide managerial tools suitable for the SE context, improving financial sustainability and ensuring the continuity of a positive social impact (European-Commission, 2016; Kamaludin et al., 2024; Lee et al., 2014; Seelos & Mair, 2005; Sottini et al., 2024).

By considering different stakeholders and contexts, the qualitative methods employed expand the SE literature discussion to a multilevel perspective that is still often overlooked (Kamaludin et al., 2024; Lee et al., 2014; Sottini et al., 2024). The mixed-method approach, integrating qualitative and quantitative techniques, allows a comprehensive exploration and understanding of this multifaceted domain (Krivokapic-skoko & O'Neill, 2011), suitable to SE needs (Macke et al., 2018; Zhou et al., 2022). The protocol produced research tools useful to explore other research aspects in SE, delivering balanced syntheses between literature and practice. Additionally, the quantitative aspect of the mixed-method did not guide the study, what is an underdeveloped feature(Krivokapic-skoko & O'Neill, 2011).

While the study's focused scope allowed for a deeper discussion and more comprehensive descriptions, it also represents a research limitation. We encourage the replication of this protocol in other contexts to enhance its validity, enabling comparison and refinements. Further discussion is necessary regarding the sustainability and real-world application of the proposed protocol in solving practical problems. The tools presented can help identify underlying patterns, structuring the knowledge needed for a deeper understanding of social strategies.

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