
IMPACT MEASUREMENT IN AN EMERGING SOCIAL SECTOR: FOUR NOVEL APPROACHES

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Acknowledgement: The authors would like to thank Professor Christopher Tucci and two anonymous reviewers for the constructive comments and support. This study was partially funded by Production Development Corporation (CORFO - Chile). Grant number (15PES-44402).

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Abstract

This paper explores the formalization of social impact measurement (SIM) in contexts where there are little or no expectations for it. Drawing on a combination of institutional and organizational-level theories, we assess the complex relationship between nine potential antecedents of SIM and its formalization, across 152 social entrepreneurs in Chile's social sector. Using configurational comparative methods (fsQCA), we discover and map four novel approaches to social impact measurement, revealing a much more diverse and counterintuitive reality. We also find that factors assumed to be central to formalization in mature sectors, in emerging settings play a peripheral role at best. By offering a multi-level explanation of what matters and when for SIM in an emerging social sector, this paper offers empirical evidence on how to better capture and report SIM and expands the theoretical understanding of SIM as a governance and accountability mechanism in social entrepreneurship.

Keywords: impact measurement; social entrepreneurship; social value; emerging social sector; accountability; governance; Chile

INTRODUCTION

In both research and practice, there is a growing discussion around the relevance of evaluating the multiple impacts of social ventures (Rawhouser, Cummings & Newbert, 2019; Wry & Haugh, 2018). The demand for social impact measurement (SIM) originates from multiple sources. On the one hand, stakeholders, who want additional accountability, proof of legitimacy and better sense of what returns over their investments (Ebrahim & Rangan, 2010; 2014). On the other hand, social organizations gradually see it as instrumental to learn and improve operational and competitive aspects of the business and secure future success (Keevers et al., 2012). Overall, SIM plays a role in appraising, communicating and legitimizing often-hidden internal and external value social ventures are creating (Ebrahim & Rangan, 2014) and the outcomes from their prosocial efforts (Austin, 2006; Rawhouser et al., 2019; Stephan et al., 2016). SIM is especially important in social sectors where accountability is paramount and institutional funders and governments actively encourage its use to allocate resources in the most efficient and effective way (Nicholls, 2010).

While relevant, SIM is still a poorly understood phenomenon within existing scholarship (Saebi, Foss & Linder, 2018) and remains theoretically and empirically underdeveloped (Rawhouser et al., 2019). Most of what we know about it stems from contexts where normative frameworks, mandatory schemes, and/or market demands exist to motivate and regulate SIM efforts. This is usually the case of mature social sectors, where legislation such as the Affordable Care Act (USA) or the Social Value Act (UK) are constantly putting social enterprises' governance and accountability under a microscope. In these contexts, research has been primarily focused on understanding how, and with what consequences, social ventures deal with

pressures from stakeholders to measure social impact using formal measurement instruments (see e.g. Hall, Millo & Barman, 2015; Molecke & Pinkse, 2017).

This might not necessarily be the case within certain social sectors where SIM is at the earlier stages of usage, which makes our already poor understanding of the phenomenon even more problematic. This is important since sectors exhibiting fewer guidelines and templates for SIM formalization tend to be "characterized by ambiguity and uncertainty that permeates everything from the viability and performance of critical technologies to customers' needs, the competitive landscape, products' meaning, and conceptions of value" (Zuzul & Tripsas, 2020:396). In these contexts, we would expect to find a lack of formal rules, institutional structures, isomorphic pressures, formal governance and accountability mechanisms for capturing and communicating social impacts. As such, it is specifically thought-provoking to understand why some social ventures would engage with SIM anyway. Existing theories have not offered explanations as to why and how social enterprises voluntarily choose to engage in and formalize SIM in contexts where the expectations for SIM are fuzzy and its benefits for social enterprises are not immediately evident. Therefore, in such contexts we seek to understand *what catalyzes social ventures to formalize social impact measurement activities? and what approaches emerge as a result?* Context with fewer guidelines and templates allow us to better understand the paths to SIM, unlike more established sectors where the antecedents are likely to be blurred or skewed by formal rules.

In the absence of a theoretical apparatus, we draw from institutional and organization-level theories (Barman & Maclndoe 2012) to conjuncturally assess the enterprise's ability to formalize SIM and the perceived value of doing so alongside isomorphic processes and institutional pressures. Our study focuses on the emerging social sector in Chile, where we surveyed 152

social entrepreneurs. Using configurational comparative methods, we analyzed combinations of nine internal and external factors that might enable SIM formalization. Our configurational analyses reveal a number of counterintuitive aspects of SIM and allow us to identify four novel approaches, which we label: *forward-looking & outcome-driven; inward-looking & process-driven; outward-looking & market-driven; outward-looking & public-driven.* We discover that not only can SIM take many forms, but it also emerges in the absence of factors assumed central within more established social sectors (i.e. certifications, maturity and investors pressure).

Our findings offer several contributions. By exploring new contexts and theories, we expand our understanding of SIM. Most scholarly efforts have been focused on conceptualizing and measuring social impact by looking at the venture's mission (Stevens, Moray & Bruneel, 2015) or immediate outputs (Rawhouser et al., 2019). Our unexpected findings offer an explanation for its spontaneous emergence. These discoveries show us a much more varied and counterintuitive reality compared to what we find through the lens of single theories. When assessed as multi-level configurations in alternative contexts, these factors are simply not as relevant for SIM formalization as previously thought. Empirically, we offer evidence and ways of capturing SIM and its antecedents in an emerging social venturing context. The examination of SIM has relied so far on measurement practices and data intended for large corporations, e.g. KLD index, GRI reporting. These are meant to guide institutional investments, report on CSR initiatives and demonstrate social performance across and within industries (Frias-Aceituno Rodriguez-Ariza & Garcia-Sánchez, 2014; Rawhouser et al., 2019). While robust and generalizable, these are unsuitable to capture and explain the phenomena. We offer insight into how to measure, collect, analyze and report evidence on SIM, which is pertinent to SIM scholarship.

THEORETICAL GROUNDING

Social impact measurement

Social impact measurement (SIM) is the processes of capturing and communicating valued information about the effects of social interventions, i.e. whether and how a change in condition has occurred (Kroeger & Weber, 2014; Micheli & Mari, 2014). Initially SIM emerged from public policy debates regarding interventions and accountability for the health of populations and the environment (Stephan et al., 2016). This later expanded to a variety of initiatives to ensure that the expenditure of public funds and industrial development were benefiting citizens and nations (Ebrahim, 2003).

Social impact measurement is tightly allied to notions of trust and legitimacy. In the social sector, SIM plays a critical role in the trust formation process, when organizations seek funding (DiMaggio & Anheier, 1990). In these instances, social venture programing is deemed legitimate when it is accompanied with evidence that activities are leading to noticeable improvements in the target populations (Nicholls, 2009). This is why entities, that are dependent funding, dedicated so much time and resources to SIM. For example, the Robin Hood Foundation and the Robert Enterprise Development Fund (REDF), have developed extensive SIM detailing cost-benefit ratio methodologies for social programs to report and communicate their efforts (Emerson, 2003).

On one hand, think tanks have latched on to the idea of advancing SIM techniques and practices (e.g. Epstein & Yuthas, 2014 and the New Philanthropy Capital's Inspiring Impact). From these efforts, a host of tools and frameworks are now available to companies, governments, and social enterprises seeking to monitor and communicate their social impact. Maas and Liket (2011) identify more than 30 different SIM approaches that include temporal dimensions

(retrospective, current, or prospective), perspectives (micro, meso or macro), and ambitions (to screen, monitor, and/or report). Today, there are databases that host large collections of tools and indicators: Social Value International, IRIS+ and Global Value Exchange, among others.

On the other hand, academic uptake of SIM has moved at a slower pace. Even though Dees (2007) and subsequently Ebrahim and Rangan (2010) highlight the importance of impact measurement in the social enterprise ecosystem, SIM scholarship continues to lack of empirical and theoretical studies that develop the field. For their part scholars have opted to use practitioner-based works to offer normative suggestions (Ebrahim & Rangan, 2014). Even though many studies highlight the range of benefits associated with SIM (e.g. Colby, Stone & Carttar, 2004; Poole et al., 2001), we know very little about how SIM is governed in the absence of formalized arrangements and isomorphic pressures. In other words, there is a dearth information about contextual SIM drivers and approaches in contexts that do not ask for SIM, many of which are in emerging social sectors.

Formalization of social impact measurement: configural antecedents

Understanding how SIM formalization occurs in emerging social sectors requires the identification of a range of relevant conditions or 'theoretical units' for it. To do so, we draw on Barman and MacIndoe's (2012) multi-level approach and pay attention to a range of institutional and organization-level perspectives. We argue that in the absence of one coherent theoretical apparatus, the formalization of SIM can be best explained by the addition of organizational capacity alongside variables drawn from new institutionalism. Ultimately, neither the isomorphic pressures delineated by new institutional theory, nor organizational structural and strategic characteristics can fully explain the "uneven spread of outcome measurement across the field". A

configurational multi-level approach is required. In what follows we explain the institutional antecedents and organizational capacity perspectives found in extant literature. These perspectives inform the constructs in our empirical study.

Institutional antecedents. Prior studies have identified a number of institutional antecedents, which exert pressure on organizations for the development and use of SIM. Hall et al. (2015) show how SIM matters when it comes to prioritizing stakeholders. It also enables social ventures to successfully negotiate with funders by describing the social identity of the enterprise to constituents (Grimes, 2010). Developing SIM mechanisms is central to stakeholders because investors struggle to understand their investments (Déjean, Gond, & Leca, 2004). It sets the stage for funder trust (Thomson, 2010) and helps to meet external accountability expectations (Molecke & Pinkse, 2017). Indeed, without SIM governance the current levels of funding for social programs would not have risen to the existing levels. The latter involves both government and philanthropic programs. SIM can be also explained by the need for legitimizing social actions (Nicholls, 2010) facing a range of stakeholders including consumers, who can discriminate between the social value delivered by a range of competitors.

Four of the more frequently cited institutional antecedents, or 'pressures', for SIM formalization include, government, investors, market and civic society. Arvidson and Lyon (2014) highlight the role of governmental antecedents through external resource provider demands. Such firms undergo social impact evaluations as a way to bridge the tension between what organizations are currently doing and what they are asked to measure. Muñoz and Kimmitt (2019) are similar in this regard with a diagnostic framework that governments can use to design impact measurement for the allocation of social bonds investments.

Investor antecedents and SIM formalization are often viewed a mechanism to engage with stakeholders through transparent reporting to reduce capital constraints (Cheng, Ioannou, & Serafeim, 2014). Investors use a range of social and environmental impact measurement for a multitude of reasons, primarily of which is performance-based outcomes, client demand and for strategic reasons (Ioannou & Serafeim, 2015; Amel-Zadeh & Serafeim, 2018). There are however situations in which private capital for social investing, for example in social impact bonds, may not actually lead to any outcome differences when compared to traditional methods (Edmiston & Nicholls, 2017).

Market based forces are another aspect of SIM formalization. Grewal, Riedl and Serafeim (2019) empirically investigate the value of market based nonfinancial impact measurement regulation, demonstrating that the equity market rewards firms with strong environmental, social, and governance disclosures. Dubey et al. (2017), highlight that market demand for SIM is gaining favor through a mixture of coercive and normative pressures that nudge managers to give more caution to external market-based measures.

Notions of a civil society also act as a pressure for the formalization of SIM. Hall, Millo and Barman (2015) extend stakeholder perspectives of social return on investment by explaining how managers' prioritization of stakeholders can be observed through accounting reporting mechanisms, which act as a mirror and voice for societal values and preferences. Calls for rapid responses to issues of global poverty are another example of societal pressure to develop impact measurement. In this domain, Ebrahim and Rangan (2014) suggest that responses to societal problems and pressures requires a willingness to have variance in the approaches and time frames used when measuring organizational impacts on the lives of people and society.

Organizational antecedents. Similarly, research has identified a number of organizational antecedents with respect to SIM. Organizational antecedents refer to those organizational characteristics that explain the differential adoption of SIM practices within a certain institutional environment, including competences, structures and actions (Barman and MacIndoe, 2012). SIM is increasingly being considered as an integral component of the governance of social organizations (Mair, Mayer & Lutz, 2015). Its formalization can be explained by the number of benefits it presumably delivers. SIM can be driven by perceived operational and future benefits (Beer & Micheli, 2018). It enables learning and strategizing, as it improves the effectiveness of strategic decision making (LeRoux & Wright, 2010) and the internal understanding of social value (Kroeger & Weber, 2014). It reinforces organizational identity (Grimes, 2010), social actions and accountability principles (Benjamin, 2013; Ebrahim, Battilana, & Mair, 2014). Also, it can strengthen the legitimacy of the social mission, reinforcing employee behaviors (Beer & Micheli, 2017). SIM helps front-line employees by motivating conversations about financial and non-financial progress as well as strategic progression (Benjamin & Campbell, 2015), becoming a critical mechanism to encourage connections between social and financial performance at the organizational level (Battilana et al., 2015; Beer & Micheli, 2017).

Four of the more frequently cited organizational capacity aspects of SIM formalization include, strategic value, operational value, future value, and business maturity. Nicholls (2009) introduces the idea of 'blend value accounting' as a reporting and disclosure strategy for social entrepreneurs, to communicate their social and environmental impacts. Ormiston and Seymour (2011) provide a guiding view on the role of strategic value of SIM formalization, focusing on the paradox between mission and formal measurement mechanisms. Their [Ormiston and

Seymour] framework imbues the strategic importance of measurement through managerial efforts to align strategy, mission and objectives, with SIM, to create significant value.

Operational value and the formalization of SIM is best described by Rawhouser et al (2019). In their paper, the authors summarize and frame the extant field of SIM, from an operational perspective considering principles, processes, and outcomes of impact measurement. They conclude that operational aspects of SIM are valuable but there is currently a disparate application of this meaning in scholarship and in practice. This is echoed by Beer and Micheli (2017) who point to the importance of social value measurement from an operational value perspective, calling for better theorizations and integration into practice.

The future value of SIM formalization is evidenced in the extant literature thought the development of frameworks for social value creation (Kroeger & Weber, 2014). For example, Grieco, Michelini and Iasevoli (2015) use time frame considerations in their hierarchical cluster analysis and classification model (prospective, ongoing, retrospective) when assessing the role of social impact. Mass and Liket (2011) develop a classification framework and method for SIM, finding differences in time frame, orientation, length of time and perspectives. Mass and Liket (2011) call for concentrated efforts on SIM and its longer-term impacts.

Business maturity also act as an organizational capacity consideration for the formalization of SIM. A recent study by Moroz and Gamble (2020) highlights the use of SIM as it relates to different stages in the organizational journey, identifying five social and environmental audit pathways over time and at different stages of social venture maturity. Parker et al (2019) examine SIM in a B Corp, setting pointing to the negative short-term financial impacts of SIM certification. More specifically, Parker et al. (2019) find that financial penalties accrue to less

mature firms, namely, the small/younger organizations in their sample, and call for more scholarship on the long-term impacts of SIM.

Somewhere between the institutional and organizational factors are efforts to award, and be awarded, a range of certifications which stem from, and engage with, SIM. Wilburn and Wilburn (2013) describe the certification journey of organizations as a way to balance economic, social responsibility and sustainability. Two such examples are B Corp certification or the Global Impact Investing Rating System (GIIRS). More recently, there has been a surge of literature focused on certifications requiring SIM. For example, Moroz et al (2018) set the foundation for the role of impact measurement, certification and prosocial opportunities. Some authors argue that there are short term financial penalties associated with impact measurement certification (Parker et al, 2019) as well as within group variations under the same SIM certification (Gamble, Parker & Moroz, 2020).

Organizing the empirical puzzle. These factors account for varying institutional and organizational antecedents for why firms would adopt and implement SIM (Arvidson, Lyon, McKay, & Moro, 2013; Barman & MacIndoe, 2013; Benjamin & Campbell, 2015) and can potentially explain how SIM assists organizations in the achievement of their goals (Gibbon & Dey, 2011; Ryan & Lyne, 2008). Given the range of possible drivers, we return to Barman and Maclndoe's (2012) multi-level approach to make sense of the above literature and organize the empirical puzzle as our own multi-level analytical framework comprising institutional and organizational antecedents, which we show in Figure 1[1].

---Insert Figure 1 about here---

[1] In Appendix E we provide a detailed list of previous research informing our selection of antecedents.

With this framework we link the relevant literature to the multiple antecedents as part of a coherent whole. As they make theoretical sense together, we expect to find novel conjunctural relationships as they trigger SIM formalization. However, it is unlikely that they will all play an equal role in SIM formalization or showing similar empirical weightings as the latter occurs. It is possible that organizational factors will be more relevant than institutional factors overall, given the lack of formal rules in our context of interest. Government pressure is unlikely to play a central role by itself, but it can eventually appears supporting the effect of markets since, as seen in similar contexts (e.g. Latam) and situations (case of), support programs and early regulatory framework tend to follow waves of market change. This the case of Argentina and Colombia's "community benefit company" legal structure and the well-known case of Benefit Corporations in USA, Canada and Europe, where regulation followed from the irruption of B Crops and B Lab. From the literature, we expect to see business maturity, certifications and investors playing a decisive role, since as social enterprises grow supported by early investment certifications give the former a way of proving their worth and gaining legitimacy. It would not be surprising to discover different situations where one overplays the other, yet the richness exists hidden in the possible unusual combinations of institutional and organizational factors enabling SIM formalization. These are the working hunches guiding the following empirical examination.

RESEARCH CONTEXT, METHODS AND DATA

Research context

In exploring our questions, we turned our attention to a research setting that exhibited relatively fewer guidelines and templates guiding SIM formalization. We focus on the emergent social sector in Chile. Despite having a very active social sector (Muñoz, Kimmitt & Dimov, 2020),

Chile (at the time of this writing) has not yet agreed on relevant legislative and regulative arrangements to support its social enterprises and social entrepreneurs. The first, and only so far, government support program for social ventures including impact measurement was only launched in August 2018 (Corfo, 2018), which only supports six incubators and 40 social entrepreneurs. Chile has yet to define an appropriate legal framework and regulation for social enterprises and the prevailing normative and cognitive rules remain ambiguous (Muñoz et al., 2020). Drawing on Zuzul and Tripsas (2020), we argue that in these early years, the paths to creation, delivery and most importantly measurement of social impact are likely to be elusive and rapidly changing. As such, because there are fewer guidelines and templates guiding SIM formalization in the Chilean social sector, we can better understand the paths to SIM. In a more established sector, the antecedents are likely to be blurred or skewed by formal rules.

Configurational approach

The complex empirical puzzle calls for a particular methodological approach, capable of addressing causal complexity. In understanding the conjunctural relationship between internal and external factors and the formalization of SIM, we use configurational comparative methods, in its fuzzy-set variant - fsQCA (Ragin, 2008). FsQCA is a set-theoretic method to observe and analyze complex causal relationships involving outcomes resulting from many possible potential drivers. It enables making causal inferences based on the notions of causal sufficiency and causal necessity and is particularly well-suited for addressing research questions dealing with complex causal relationships (Misangyi et al., 2017).

Sample and data collection

Casing procedure in fsQCA studies draws on two principles: the definition of an area of homogeneity where cases share similar background characteristics and with that set of cases maximum heterogeneity needs be achieved in terms of the outcome of interest. While comparability is essential, the sample requires cases with both positive and negative outcomes (Ragin, 2000), i.e. social enterprises that have and have not yet formalized impact measurement.

For this study, we use a proprietary dataset of over 580 social entrepreneurs from Chile, which was collected in 2016 as part of large-scale study of the Chilean social sector. The study aimed at developing an in-depth understanding of the key processes and mechanisms through which social enterprises emerge, operate and create value, as well as the contexts in which these enterprises thrive. Since no official registry for social enterprises exists in the country, the research team created a directory of more than 2,500 potential social entrepreneurs at the national level. We gathered the information through incubators, government-led entrepreneurship programs, support programs run by municipalities, universities and other relevant organizations such as B Corps Chile, the Chilean Association of Entrepreneurs (ASECH), and Chile's Economic Development Agency. We provided the following definition to the potential participants: "Social entrepreneurship involves any type business activity with a social purpose which utilises market mechanisms to resolve social and environmental problems." This definition sets the boundaries for the first delineation of the area of homogeneity. 340 individuals identified themselves with that definition.

To further narrow down the space of homogeneity whilst retaining high variance within the group, we refined the sample in line with three criteria. First, we drop from the sample cooperatives and communal organizations since they fall outside the theoretical scope of the

present study. The explanatory conditions delineated in Figure 1 cannot account for (SIM) accountability formalization in situations of collective organizational governance. Second, to observe SIM in action we selected only those ventures that has been trading for at least one and less than 10 years. It is unlikely that nascent ventures (<1 year of trading) will have formalized social impact measurement or other forms of social impact accounting. Statements on that matter are likely to be purely speculative and we decided to minimize that risk at the expense of a smaller sample. Finally, to capture active SIM governance we focused on those respondents with active involvement in the management of the enterprise. We included founders and managers and discarded non-executive board members and investors that have no operational involvement in the enterprise. While SIM formalization decisions can stem from any of the above, founders and managers are better positioned to provide a full account of the process of formalization, intentions and outcomes thereof. A final subsample of 152 social enterprises was considered for this study. These enterprises operate across a range of industries including: social finance (equity crowdfunding and microlending) communication and design, culture, sports, packaging, software development, health, business consulting, hospitality, apparel, recycling, amongst others; whilst tackling a diverse range of social and environmental problems for example: poverty, drug addiction, deforestation, lack of education, financial exclusion, and mental health.

To make sense of our findings, we conducted several follow-up interviews in early 2017 with a subsample of 12 exemplar social enterprises, which at that time were formalizing their impact measurement practices. Details for each of the 12 participants, including main focus, declared impact and SIM tool utilized at the time of the interview, can be found in Table 1. The qualitative data obtained from the interviews were not used as a direct input for the configurational analysis, rather as a way of understanding the reality behind each type, which is

central to the development of our explanations and approaches. Thus, this is a post-hoc analysis of the transcripts guided explicitly by our results, where we centered our examination on how the distinct configurations lead to formalization of SIM.

---Insert Table 1 about here---

Measurement[2]

Outcome condition: SIM formalization

While established measures for social impact remain scarce (Saebi et al., 2018), there are many alternative methods to understand social and environmental impact (Ebrahim & Rangan, 2014), from less-formalized ad-hoc tools to more-formalized international standards. The outcome measure thus captures the degree of specialization and standardization of the SIM practices reflecting the level of maturity of the social enterprise and commitment to better understanding and communicating its overall performance facing stakeholders. We coded SIM formalization by looking at the degree of specialization and standardization of the SIM practices reflecting the level of maturity of the social enterprise and commitment to better understanding and communicating its overall performance facing stakeholders. Scoring details are provided in the calibration section.

Causal conditions

In the same way the outcome condition varies across a formalization continuum, there are different motives behind the founders and stakeholders' preferences for particular levels of

[2] The full list of questions utilized to assess our constructs are available in Appendix A.

formalization. We therefore assess what triggers varying levels of formalization in terms of the type of impact measurement tool used by the social venture in the context of interest.

Business maturity is captured by looking at the overall number of years the social enterprise has been in operation, formally or informally, exchanging goods or services and delivering social value to beneficiaries. Drawing on Hwang and Powell (2009), we argue that the more mature the social enterprise become, the more likely is to develop more sophisticated accountability and performance measurement mechanisms. *Strategic value of SIM* focuses on the degree of utility of the business's social orientation, as materialized in its social mission. It uses a 5-point Likert scale to assess how important is the social orientation across seven dimensions: competitive advantage, profitability, consumer decisions, employees, sales, suppliers and partnerships. *Future value of SIM* uses a 5-point Likert scale to capture the extent to which social entrepreneurs perceived SIM as inherent to future success of social enterprise. There are two key distinctions between *Strategic and Future Value of SIM*. First, whereas the former focuses on what SIM allows the organization to achieve in terms of immediate performance-related effects, as a direct result of engaging in SIM practices; the latter focuses on the ultimate outcome of such actions in the long run, where SIM is thought to play (or not) a critical role. Second, while the areas of performance effects are concretely delineated in the case of *Strategic Value,* the appreciation of success, in Future Value, is relative to the mission of the organization. It is worth noting that some researchers (e.g., Cheng et al. 2014; Grieco et al. 2015; Moroz et al. 2018; Parker et al. 2019) treat future value as embedded into strategic value, when immediate/concrete and long-term/loose objectives and their intended effects are compressed into the same temporal and categorical space. We make such distinction in our examination of SIM.

Operational value of SIM captures the perceived value of SIM in the present. Using single selection (Yes/No), it assesses the social entrepreneurs' perception regarding the direct contribution of SIM to the operation of the social enterprise and/or immediate outcomes, across nine items: internal validation, communication with stakeholders, access to investment, selling products, credibility, good management practice, part of the social enterprise's key responsibilities, continuous improvement and other daily practices.

Civic society pressure captures the degree to which non-governmental stakeholders have influenced the achievement of the venture's objectives. We use a 5-point Likert scale that assesses the perceived importance of clients, donors, partners, suppliers and beneficiaries for social and commercial objectives. Likewise, *government pressure* uses a 5-point Likert scale to capture the degree to which local (e.g. municipality) and central governments (e.g. development agency), as appropriate, have influenced the achievement of the venture's objectives, as perceived by the social entrepreneur. Our measure for *market pressure* seeks to capture the social enterprise's competitive environment by examining the nature of the social enterprise's main competitor, as per their legal form. We use dichotomous coding with (1) for for-profit competitors and (0) for competitors from the third sector organizations. This, under the assumption that traditional for-profit enterprises create a more competitive environment than non-for-profit organizations, requiring social enterprises to formalize managerial practices, particularly those related to social value creation, delivery and accountability (Dees, 2007; Ebrahim & Battilana, 2014). Our measure of *Investors pressure* focuses on the amount of investment rounds received by the social enterprise during the first three years of operation. Drawing on Carman (2007), Christensen and Ebrahim (2006), and Benjamin (2013), who show that measuring outcomes is oftentimes done in response to funders, we assessed investment

rounds across three sources of external investment: venture capital, impact investment and seed funding. We selected these sources as they can exert pressure early in the process and shape the venture's accounting mechanisms. Finally, our measure for *Certification* captures the presence/absence of standardized third-party certifications either these being process- or outcome-based. Since this is a dichotomous variable, we coded this measure with 1 for certification and 0 for no certification.

Calibration of outcome and causal conditions

In configurational research calibration is essential as it enables systematic comparison, ensuring that the different measures conform to dependably known standards. Using theoretical knowledge and/or distribution of raw scores, the research team specifies the score that would qualify a case for full membership in the sets of social enterprises with formalized impact measurement practices, as well as in the set of each of the causal conditions. Also, the score that would completely exclude the cases from each of the sets. It does so by using an estimation technique, automated in fsQCA 3.0 (Ragin & Davey, 2016) that transforms raw scores into set measures (Ragin, 2007), rescaling the original measure into scores ranging from 0.0 to 1.0. In the following we present our measures for both outcome and causal conditions, providing also calibration rationale and thresholds for each of them[3]. In the following, we present the rationale and thresholds for calibration for our set of outcome and causal conditions.

For the outcome condition, ***SIM formalization***, we applied direct calibration by coding with 0 the absence of SIM practices, with 0.5 those firms implementing some type of impact measurement tool that is neither specialized (i.e. measuring change in condition) nor

[3] The calibration table is available for the review process in Appendix B.

standardized (i.e. externally validated), for example Facebook comments, satisfaction surveys and website hits. While these are not impact-specific, they allow the organization to make early sense of the impact they are having within their communities of beneficiaries. We coded with 0.75 those organizations that are using tools that are either particular to the social enterprise sector e.g. units of service delivered, beneficiaries' testimonials, donors' perception of value or are externally validated but are not specific to social enterprises, such as ISO9001 and tax returns. Finally, we coded with 1 those organizations using SIM practices that are both specific to social enterprises and externally validated such as B Impact Assessment, Randomized Control Trials, Outcomes Star and SROI.

To assess the stability of our emerging results, we recalibrated our outcome measure using two alternative approaches. First, we created a crisp set coding with 1 all enterprises that have initiated a SIM formalization process, regardless of the level of specialization or standardization of the measurement type; and with 0 those enterprises that have not yet engaged in SIM formalization. Second, we recalibrated the formalization efforts moving cases away from the cross-over point (0.5), to enable the possibility of sharper contrasts between SIM formalization and non-formalization. This procedure moves farther out of the set (0.25) those enterprises implementing some type of impact measurement that is neither specialized nor standardized and moves farther into the set those enterprises using either specialized nor standardized SIM tools.

Our calibration of ***business maturity*** is based on the observed distribution of scores and the principle of irrelevant variation. The average years of trading for our sample is 3 and the standard deviation is 2.4. As such, our calibration thresholds are 1 (full out), 3 (cross-over point) and >5 (full in). As per the principle of irrelevant variation (Ragin, 2007), any enterprise with 5 years of trading or more is considered as part of the set of mature social enterprises. Also using

the observed distribution of aggregate scores as anchors, we calibrated *Strategic value of SIM* using 22, 28 and 33 as thresholds for full exclusion, cross-over point and full inclusion in the set of enterprises with strong social orientation. For the ***Future value of SIM***, we observe a skewed distribution of raw scores where respondents seem to over-estimate the role of SIM as inherent to the future success of the social enterprise. To counterbalance this effect and using observed distribution of raw scores, we calibrated this measure using 3, 4 and 5 as calibration thresholds (i.e. 3=0.05, 4=0.5 and 5=0.95). In this case, setting the point of maximum ambiguity above the middle of the scale reduces the possibility of leniency effects. For ***Operational value of SIM***, the average number of areas of impact is 3 and the standard deviation is 2.8. As such, our calibration thresholds are 1 (full exclusion), 2.5 (cross-over point) and >6 (full inclusion). Drawing also on the principle of irrelevant variation, any enterprise considering six areas of impact or more is deemed as part of the set of cases with strong operational value of SIM.

For ***Civic society pressure*** we used the distribution of aggregate scores as anchors (average 33.6; SD 10.3), and calibrated this measure using 24, 34 and 45 as thresholds for full exclusion, cross-over point and full inclusion in the set of enterprises perceiving strong pressure from civic society actors. As with the latter, for ***government pressure*** we used the observed distribution of aggregate scores as anchors (average 12.8; SD 5.8), and calibrated this measure using 8, 13, 18 as thresholds for full exclusion, cross-over point and full inclusion in the set of enterprises perceiving a strong influence from government actors. Our calibration of ***investors pressure*** is based on the observed distribution of raw scores. The average investment rounds received by enterprises for our sample is 0.7 and the standard deviation is 1.1. As such, our calibration thresholds are 2, 1 and 0 for full inclusion, cross-over point and full exclusion in the set of social enterprises perceiving a strong influence from investors. Since ***market pressure*** and ***certification***

use dichotomous scores, the calibration procedure simply retains the Full in (1) and Full out (0) distinction. In the former, 1 represents *market pressure* and 0 *no market pressure*, and in the latter 1 means certification and 0 no certification. Table 2 presents descriptive and correlations for our set of calibrated causal and outcome conditions.

---Insert Table 2 about here---

Recalibration of causal conditions. In an effort to compare and assess the stability of the results under alternative model specifications, we recalibrated the causal conditions forcing the fuzzy scores downwards to create separate sets with "super strong" membership. By squaring the membership scores (Ragin, 2000), this procedure allows to observe and contrast causal relationships under lower degree of membership in the set of each relevant condition, where only the cases with high membership scores will be retained as part of the set of SIM formalization. This can have a major impact on patterns of necessity and sufficiency revealed in the main analysis, cleaning the causal recipes if the stability of the results is confirmed.

Data analysis

Facing an empirical puzzle with nine explanatory conditions and 512 (2^9) logically possible combinations of conditions for SIM, we conducted multiple necessity and sufficiency analyses.

Analysis of necessary conditions. The analysis of necessary conditions in fsQCA looks at which individual factors may be necessary or mostly necessary for the outcome to occur. By focusing on the degree to which instances of an outcome agree in displaying the causal condition thought to be necessary (consistency) and the empirical relevance of each causal condition (coverage), it examines whether one of the configurational enablers is individually enough to produce the formalization of social impact measurement. A condition can be deemed necessary

when it surpasses the 0.95 consistency threshold while exhibiting a relatively high coverage (~>0.8). In this analysis we test the subset relationships between the nine conditions and the formalization and non-formalization of SIM. Results of the necessity analysis for SIM formalization are reported in Table 3. The assessment of non-formalization of SIM is also used and discussed below as part of the robustness tests.

---Insert Table 3 about here---

Alongside revealing degrees of necessity, this analysis allowed us to retain the six causal conditions with higher consistency levels in each of the two areas (marked in grey shading in Table 3) to be used in the subsequent sufficiency analyses. All necessary conditions selected are also empirically relevant, which means that the constraining effect of each necessary condition may be great. As explained by Marx and Dusa (2011), the use of six conditions in intermediate-Ns studies allows for balancing parsimony and explanatory richness. The use of a smaller number of conditions (≤5) can indeed lead to a more parsimonious set of solutions, which is essential to theorization, however it increases the likelihood of limited diversity. Similarly, seven or more conditions can produce a fine-grained representation of reality, however, it can severely impact the empirical relevance of the individual solution terms as the number of cases for each might be too low. We run different configurational analyses using four, five, seven and eight conditions and the results show that six conditions for 152 cases still offer the best explanation.

Sufficiency analysis. The sufficiency analysis assesses and logically reduces all possible combinations of conditions to the set of causal recipes that better explain the outcome of interest. First, fsQCA constructs a truth table listing all 64 (2^6) logically possible combinations of causal conditions along with the cases conforming to each combination. As expected, we did not find evidence for all 64 possible combinations. The truth table presents 48 combinations of

conditions, with 78 cases exceeding the minimum acceptable frequency and consistency thresholds and 74 cases below the bar (See Appendix C). Based on frequency and consistency thresholds[4], fsQCA applies a Boolean algorithm based on a counterfactual analysis of causal conditions to logically reduce the truth table rows to a solution table comprising simplified combinations of conditions (Ragin et al., 2006), which can be understood as different solution paths for SIM formalization.

To untangle the empirical puzzle, we conducted multiple sufficiency analyses. First, we explored causal recipes leading to the three alternative outcome specifications. This, with the aim of finding the best model fit (using consistency and coverage criteria) and, once defined, testing whether the main results remain stable. The two additional sufficiency analyses then become robustness tests. We also looked at causal recipes leading to non-formalization of SIM. At times, the explanation of the absence of something is more interesting and robust than the explanation of its presence. This is normally discarded upfront by traditional linear methods and the assessment of net effects. A negate analysis of the kind in fsQCA also allows for eliminating alternative causal relationships by showing that these are causally weaker and the data at hand better explain presence than absence. In a third set of analyses, we tested alternative frequency and consistency thresholds to first observe which set of findings offer a better balance between parsimony and empirical richness. Once established, the alternative assessments operate as robustness tests, retaining the most empirically-relevant solution terms as the thresholds go up and atomizing the solution terms, without showing radical discrepancies, as thresholds go down. In the following section we report the most stable set of results.

[4] The frequency threshold specifies the minimum amount of cases to be considered in the analysis. The consistency threshold defines the minimum acceptable level to which a combination of causal conditions is reliably associated with the each of the outcomes. Consistency thresholds of at least 0.8 and up to 0.95 are recommended.

FINDINGS

Discovery #1: No necessary conditions

Before delving into the configurational assessment of SIM antecedents, we looked at which individual factors may be necessary or mostly necessary for SIM formalization. This is important for two reasons. First, it allows us to discard upfront trivial elements, despite evidence of importance attributed by studies in mature social sectors. Second, it increases our confidence on the selected set of elements, in the sense that promoting or removing them would have a significant effect on whether and how SIM is formalized.

Our initial observation of necessary conditions (Table 3) shows that no condition is necessary or almost necessary for the formalization of SIM, neither in its present nor its absent form. While this is not surprising, since necessary conditions are rare in social phenomena, the analysis provides an interesting perspective pertaining three espoused dimensions deemed central to formalization (certifications, business maturity and investment influence). Each of these dimensions exhibit significantly low consistency scores against their attributed importance in the literature. This is further confirmed by the relatively high consistency observed when these three are assessed in their absent form.

Discovery #2: Four sufficient solutions for SIM formalization

In this stage, we evaluated the different combinations of conditions that are linked to SIM formalization in terms of causal sufficiency as well as the strength of the causal relationships between the combinations of conditions and the outcome. For our main analysis, we used a frequency threshold of 1 and a consistency threshold of 0.8. Based on the truth table analysis and using these thresholds, fsQCA applies counterfactual analysis and logical minimization to reduce

the 48 truth table rows to a set of simplified combinations of conditions, which constitute the main results shown in Solution Table 4[5].

---Insert Table 4 about here---

Our main configurational analysis revealed four SIM approaches, which can be understood as unique recipes for SIM formalization in emerging social sectors. The overall solution is highly consistent (0.81) and empirically relevant with a 0.81 coverage (superior to the 0.65 standard), with individual solution terms exhibiting equally consistent results ranging from 0.8 to 0.94.

Type 1 Forward-looking & outcome-driven SIM presents a 2-condition configuration, with the presence of prospective value and operational utility of SIM acting in conjunction and exhibiting a strong causal relationship with the outcome. This is the solutions showing the highest raw and unique coverage scores, meaning that a large proportion of the cases are covered by the above-mentioned combination. It portrays SIM formalization as oriented toward building the future success of the business forged by the contribution it makes to the operation of the social enterprise and its immediate social outcomes. In forward-looking & outcome-driven social enterprises, SIM operates as a mechanism for understanding and communicating how improvements in current social and environmental impacts can contribute to the future success of the social venture.

Clothing-venture is a social enterprise that collects and redistributes clothing using portable shops. It gives poor people access to good quality clothing and provides training around

[5] The Solution Table distinguishes core and peripheral conditions. This is based on how causal components are causally connected to a specific outcome. Core conditions are decisive causal ingredients that distinguish configurations, and peripheral conditions act as complementary ingredients that only make sense as contributing factors. In fsQCA, large black circles represent core conditions with small black circles being a reflection of peripheral conditions. Circles with an X are used to indicate the absence of condition. No circle indicates that the condition is irrelevant for explaining the outcome of interest.

recycling and reusing discarded material, whilst diverting waste from landfills. Impact measurement is focused on managerial aspects [operational value] of the social enterprise, using qualitative and quantitative information pertaining tons of clothing diverted from landfills and how families have been supported and benefited from their training initiatives. The benefits to the community are quantified and disaggregated based on service lines and target groups. They also use GIS to geo-reference their beneficiaries. All of the above is managed using software-based social accounting and impact measurement. Despite the growing interest of local governments and potential corporate partners, they have remained reluctant to engage in formal partnerships [irrelevance of civic and government pressure]. Desired impacts are difficult to achieve, since the founders observe there is still too much bureaucracy in local governments and a fundamental value misalignment with potential corporate partners. Here, SIM focuses on forging future business success [future value], despite the potential constrains posed by external stakeholders. Given its focus on internal aspects [operational value] – processes and practices – of the enterprise, little attention is given to stakeholder engagement and participation [irrelevance of market pressure] and the appreciation of the potential effects in communities' conditions are likely to be moderate yet knowing that social impact is likely to be tangled with future financial results [future value].

Energy-venture is a solar energy venture undergoing through a profound transformation, from selling and installing solar panels to helping residents of social housing to save money. While social impact has been part of *Energy-venture* since the beginning, such transformation led the team to focus on sustainable architecture and eco-friendly housing for all, reorienting state funds and subsidies toward creating green community benefits. Government funding is either received by low-income families directly or awarded to large construction companies

through private-public partnerships, so *Energy-venture* is not pressured by contractual obligations to the government [irrelevance of civic and government pressure]. Impact measurement in eco-friendly housing is linked primarily to savings in energy consumption [operational value]. It is thus simple to communicate to all stakeholders enabling the venture to secure long-term contracts [future value] within the construction industry. At the same time, it facilitates continuous improvement [operational value] since the higher the energy savings the more value the business produces. This has led *Energy-venture* to think about new services associated with social finance and impact-oriented loans to low-income consumers. The central aim is to monetize energy savings for the business today and tomorrow. As illustrated by *Clothing-venture* and *Energy-venture, forward-looking & outcome-driven* social ventures are likely to maintain a narrow reporting scope, focused almost exclusively on those key factors that enable future-oriented learning, such as internal processes, enterprise social outcomes and business performance. Such an approach leads to the use of informal communication and reporting tools targeting internal audiences and management as primary interest groups.

Type 2: Inward-looking & process-driven SIM presents a set of conditions marked by presence of *operational value of SIM* and absence of *civic society pressure* as core conditions. These are complemented by absence of *strategic value* and absence of *government pressure*, which play only a peripheral role. This SIM type shows social enterprises formalizing SIM in early stages as highly functional and part of an accelerated learning process, since they are not yet open to external influence from societal or government actors. Indeed, these are required in their absent form for SIM to get formalized. Here, *strategic value* is also absent reinforcing the central role of *operational value*, which reveals a strong focus on the improvement of current practices and immediate goals over future-oriented social missions.

Social impact measurement in *inward-looking & process-driven enterprises* works as a mechanism for understanding, learning and improving business processes and practices leading to social and environmental impacts. *Software-venture* is a technology social venture that offers Enterprise Resource Planning (ERP) software to small businesses. Competition is not relevant to them since they do not seek to compete in the traditional ERP market space [irrelevance of market pressure], operating as a social enterprise with prices ~30% below market average and with a strong focus on sustainability resource management. While collaborations with civic society groups and other social enterprises are valued by the founders of *Software-venture*, they tend to slow-down the use of agile software development methods. In their view, partnering work and empathizing with the struggles of other social actors take too much time and they are already working with an extended network of collaborators in software development [~civic society pressure]. Since the idea of a socially-oriented venture selling a sustainability software to SMEs was a difficult sell to government agencies [~government pressure], *Software-venture* decided to join up a roundtable discussion to understand policy directions, but remained focused on the creation of new sustainability-related pieces of software and the development of new services aimed at expanding their customer base.

Software-venture is also focused on expanding its collective impact, including a novel crowd radio and television service addressing inclusion issues across engineering students, seen as future customers. Impact measurement is primarily associated with software engineering [operational value], in terms of how much their technology products help socially-oriented SMEs achieve their social goals; and likewise, how many unsolved needs of social enterprises can be solved through their technology products. *Software-venture*'s impact materializes through their customers' social impact, which also helps explain the absence of a *strategic value of SIM*. In

addition, the latter condition is seen as embedded in the collaborative nature of the venture, which seems to render the *social mission* as redundant in relation to immediate performance-related effects [~strategic value] and reduce their attention to changes in beneficiaries' circumstances. Combined, the above illustrates the sole emphasis on the *operational value of SIM*, and why the other drivers are either absent or irrelevant for the formalization of SIM.

In this sense, *inward-looking & process-driven* enterprises are likely to promote a distant engagement with external stakeholders as well as exhibiting an infrequent participation thereof, which seem to be more prominent when it comes to civic society and government actors. In the case of *Software-venture*, they distance themselves from government contracts and other social enterprises [~government and civic society pressure] that slow down product development and focus instead on speeding up close collaborations and learning, which is what ultimately triggers the formalization of SIM. As such, scope of reporting is likely to be even narrower than the previous type with low levels of accountability, using informal communication channels to report on improvements around business processes and practices to internal audiences only. *Inclusion-venture* is a consulting firm focused on fostering inclusion in the workplace particularly for vulnerable groups, such as people with disabilities or immigrants. As *Software-venture*, their impact is channeled through their clients, yet *Inclusion-venture*'s inward-orientation and attention to learning [operational value] are amplified by their view of social innovation and the relationships they have established with funders.

Type 3: Outward-looking & market-driven SIM is similar to the previous one at the core, with the presence of operational value of SIM and absence of civic society pressure as central conditions. However, these are complemented by presence of market pressure and absence of government pressure as drivers of formalization. This type focuses on the immediate goals and

the improvement of practices, it does so by leveraging social impact measurement in response to market demands. However, in order to respond adequately, these social enterprises require a low degree of influence from external actors (e.g. clients, donors, partners, suppliers, beneficiaries) and complete independence from government as they pursue social and commercial objectives. When it comes to social development, the government's delineation of priority areas tends to narrow down the scope and intensity of funding available to social enterprises. In addition, there is no legal recognition for social enterprises, restricting bidding for government contracts, which augments as a significant number prefers to avoid bureaucracy. Those that fall outside priority areas and share those concerns, tend to see markets much more favourably for the development of their social businesses, despite the competition. In this case, SIM functions as a mechanism for understanding, monitoring and communicating social and environmental impacts, with particular attention to the demands of market actors such as customer and competitors.

Like *Software-venture*, *Recruitment-venture* also offers software solutions to third sector organizations but focuses on volunteer recruitment and management. Like *Software-venture*, they do not engage in partnerships with other social enterprises or governments [~civic society and ~government pressure], as it slows down technology development. However, unlike the previous type, *Recruitment-venture* works with large NGOs [market pressure] which normally attract a larger pool of volunteers lacking sufficient financial resources to invest in new managerial solutions. SIM is then focused on the work they do with and for large NGOs, in terms of efficiency and coordination of volunteering work [market pressure]. Here, the size of the market segment seems to play a role in how and why SIM is formalized and utilized.

Attention to changes in markets requires a closer engagement with and more frequent participation of different stakeholders, where customers and investors [market pressure] are

likely to engage and influence the operation, outcomes and intended impacts of the social enterprise. In this sense, it is expected a higher level of accountability, pertaining primarily to how social and financial outcomes improve together [operational value]. This requires a broader reporting scope than the previous types and a more formal and frequent communication to market actors about the social enterprise's practices, outputs and impacts. *Consumption-Venture* is a radical social enterprise, actively promoting a new way of doing business and donating 100% of its profit to other NGOs. In order to enter quickly into the market and attract and interact with as many customers as possible, they decided to focus only on crowded (ideally low-income) market spaces (water dispensers, long-life and powder milk, toilet paper), which also exhibit low entry barrier and equally low profit margins. Competition in these markets tends to be strong demanding particular attention to market needs and changes [market pressure], which led *Consumption-Venture* to constantly learn from markets and adapt its product portfolio in consequence [operational value]. Since donation is the key for *Consumption-Venture*, impact is measured through the amount of quarterly and aggregate contributions they make to other NGOs, which is directly related to the enterprise's operational efficiency and profit [operational value].

Type 4: Outward-looking & public-driven SIM portraits social enterprises highly oriented toward solving social problems, most likely in response to government demands or in collaboration with public sector actors. As with the other solution terms, the presence of operational value of SIM is also a core condition, but for serving the delivery of social goals rather than competitive improvements facing market pressures. This SIM type shows social enterprises highly committed to delivering on their social mission and formalizing SIM in line with requirements from public sector, either due to contractual obligations or as recipients of public funds. Uniquely for outward-looking & public-driven enterprises, SIM is enabled by the

social enterprise's social mission. It works as a mechanism for understanding, monitoring and communicating the social mission and derived impacts, primarily in response to regulatory requirements.

Projects-Venture, for example, is an umbrella social enterprise that develops social projects supported by different government agencies [government pressure]. Social projects are incubated and spin-off when they reach their potential in terms of social outcomes and financial viability. Its portfolio approach and funding sources reduce the importance of potential market competition [~market pressure]. Here, SIM formalization emerges from experimenting and learning about the alternative ways in which social outcomes can be optimized [operational value]. Most of *Projects-Venture*'s portfolio is connected to government support programs [government pressure]. This relationship goes beyond subsidies, grants and seed funding. *Projects-Venture* collaborates with local governments in both policy design and service delivery [government pressure], and SIM allows them to gain legitimacy and form partnerships facing local organizations and municipalities reluctant to engage with for-profit social enterprises [strategic value]. The measurement system *Projects-Venture* utilizes is heavily reliant on highly legitimized SIM tools, in this case randomized control trials, which are aligned with the way in which the government conducts the cost-benefit analysis of prospective social programs [operational value]. SIM is closely link to both the delivery of cost-effective social interventions and performance of the social enterprise [strategic value]. An intensive measurement system, such as randomized control trials (RCTs), involves high attention to changes in circumstances experienced by the enterprise's beneficiaries.

Outward-looking & public-driven enterprises show closer engagement and more frequent interactions with stakeholders, particularly with government actors. Here, both regulator and

governmental agencies are likely to engage and influence the social enterprise's practices, outcomes and intended impacts. This requires extensive reporting and a more formal and frequent communication with the regulator about whether and how the intended impacts are being achieved, since it is likely that outcomes will trigger payments. In this sense, a high level of accountability is required and expected, yet only a moderate attention to the financial outcomes of the social enterprise's commercial operation. *Education-Venture* illustrates the latter. This social enterprise focuses on environmental education, targeting primarily council schools in rural areas and aligned with the national plan for communal development [government pressure]. Although the venture is still in its developing phase, *Education-venture* collects evidence from parents regarding whether children and their families are more or less aware of the environmental problems around them. These perceptions inform the design of new environmental education programs [operational value]. The standardized tests used are linked to the local councils' community development plans and sustainability strategies. Since these rural communities are highly dependent on sustainable tourism, local governments are open to directly fund external providers of environmental education.

Discovery #3: Counterintuitive patterns across types

Table 4 also reveals interesting patterns across types, pertaining to the prominence and counterintuitive roles of some individual conditions. First, the *operational value* of SIM is prominent across solution terms and central to SIM formalization, being the only condition present across all solutions. Second, the *strategic value of SIM* traditionally derived from the venture's social mission appears as peripheral to SIM formalization at best. This is counterintuitive as the social mission is normally assumed as instrumental to forging prosocial

decision-making in social enterprises. This might relate to the emergent nature of our context, where the immediate, concrete performance-related effects of incipient SIM practices might not be yet in the scope of possibilities for new social enterprises. Or perhaps the relationship between SIM formalization and e.g. customer acquisition is not immediately evident for the founders of social ventures. This requires further examination since the absence of strategic considerations may be detrimental for SIM formalization and the performance of the social enterprise more broadly.

The absence of *civic society pressure* as a core condition is also counterintuitive (Types 2 and 3), because this means that SIM formalization tends to prosper in the absence of external actors exerting influence on the social enterprise whilst in pursuit of social and economic objectives. Finally, given the lack of regulation and the absence of an appropriate legal form for social enterprises to operate and compete in their own categories, one would expect to find a wide-spread perception of weak or non-existent pressure from the *market and government actors*. However, we did find evidence of influence in Types 3 and 4 respectively. Interestingly in Types 3 and 4, the role played by *regulation* and *competition* in SIM formalization seems to be mutually exclusive. This occurs when market competition is present and government influence is absent, and vice-versa. We suspect that this is due to the reality that social enterprises tend to prioritize one over the other as main source of income. For example, receiving grants or subsidies for social action appears to be in conflict with trading with final consumers. At least in the context of SIM formalization it seems that these two cannot co-exist as drivers. Yet, hybridity in social enterprises involves the combination of social and commercial missions, strategies and practices, which are assumed to exist in balance. Our findings illustrating mutual

exclusivity in two of the four types, calling into question the notion of hybridity in social impact measurement.

Sensitivity and robustness tests

To confirm the stability and robustness of the results we conducted several exploratory analyses that also conform three sensitivity tests. We did so by readjusting the calibration and frequency thresholds and rotating conditions and outcomes. This allows us to test whether our results and inferences, particularly those relating to causal necessity and sufficiency, are robust to the use of alternative specifications. In a first type of assessment, we conducted two configurational analyses using alternative outcome specifications. As mentioned above, we recalibrated the outcome measure to create first a crisp set and move the middle points toward the extremes. As seen in Table 5, the results remain stable. Table 5 with a dichotomous outcome mirrors Table 4, but losses overall empirical coverage. While it offers a more balanced empirical distribution, individual coverage scores drop in empirical significance leaving relevant cases outside of the solutions. The second analysis combines solutions 2 and 3 from the main analysis forming a super set (~strategic*operational*~civic*~gov*market). In doing so, it losses empirical significance (solution coverage of 0.153) covering a small proportion of the sample. We run a third configuration analysis with "super strong" membership. As explained above, this is done by squaring the membership scores and pushing the scores downwards. As seen in Table 6, patterns of necessity and sufficiency remain stable showing simply a more atomized view of the solution space.

We also run negate sufficiency and necessity tests, to eliminate alternative explanations regarding possible causal relationships between conditions and absence of the outcome; i.e. Non

formalization of SIM (Tables 7 and 3). The results also confirm the stability of the main results, showing that the absence of operational value leads to non-formalization of SIM (core and dominant condition in Table 7 and consistent in Table 3). The sufficiency analysis reveals however an interesting new pattern. It brings to the fore the effect of absence of market competition as core condition in non-formalization. This suggests that social enterprises competing against other third sector organizations might have less incentives or feel less compelled to formalize SIM than those competing against for-profit firms. This pattern is not salient in the main analysis. Although further tests are needed given the relatively low consistency score in the necessity analysis (0.638 see Table 3), this finding calls into question the assumed effect of isomorphic mimicry in the social sector, particularly in cases where formal rules or guidelines are not yet established. Similarly, in the case of absence of certification, which shows in Table 3 above relatively high consistency (0.85) and coverage (0.60) scores in relation to non-formalization. We presume that this relates to a social sector in early stages of development, at least in terms of templates, guidelines and legal apparatus available to social enterprises. We can infer that in such cases voluntary certifications follow from emerging measurement practices, despite the legitimacy it is assumed to confer to social enterprises.

---Insert Tables 5, 6 and 7 about here---

DISCUSSION

To date, the existing literature does not lend theoretical perspectives on how and why social entrepreneurs, in social sectors lacking formal social accounting guidelines and templates, voluntarily choose to engage in and develop SIM. This entails a spontaneous emergence in contexts where it is not required, no guidance is offered and there are no immediate benefits.

This constitutes a fundamental problem in our knowledge of social impact measurement (SIM) and social entrepreneurship more broadly. Arguably, everything we know about SIM formalization as antecedents and outcomes has been explained by looking at institutionalized governance and accountability mechanisms.

SIM formalization constitutes an important form of governance, since outcome measurement in social enterprises can significantly strengthen downward accountability (Benjamin, 2013), i.e. understood as the processes by which founders are held accountable to the people at lower levels or the ability of beneficiaries to hold the social enterprise to account. This in turn is central to demonstrating that social ventures are enabling social, environmental and economic outputs, outcomes and change. Yet, we simply do not know how the measurement of social value and governance mechanisms work for social ventures in emerging social sectors. To address this issue, we mapped the responses of 152 social entrepreneurs in Chile and explored alternative combinations of institutional and organizational factors that might enable SIM formalization. Our research reveals four approaches through which social enterprises design and implement SIM: *forward-looking & outcome-driven; inward-looking & process-driven; outward-looking & market-driven; outward-looking & public-driven.* These findings show, that in contexts with no structured governance or enforcement of SIM, it can emerge in a variety of ways. Not only can SIM take many forms in contexts with no structured governance or enforcement mechanisms, but it materializes in the absence of factors assumed central in more established social sectors, as is the case of certifications, maturity and pressure from investors.

Drawing on our discoveries, interview data and inferential work, in Table 8 we offer an empirical typology of SIM formalization. For each type, we provide a structured definition comprising basic conceptualization of the approach, likely focus of SIM attention, orientation

and scope, along with an empirical illustration using interview data. As with previous fsQCA research (e.g. Muñoz et al., 2020; Kimmitt et al., 2020), each line constitutes a theoretical statement in itself. Combined, they provide a systematic characterization of SIM formalization, whilst offering a basis for organizing the study and guiding the practice of social impact measurement.

---Insert Table 8 about here---

Contributions

This paper contributes to literature by expanding our understanding of SIM (Wry & Haugh, 2018). We offer surprising yet consistent relationships that emerge by exploring a new context through a multi-level, configurational theoretical lens. The counterintuitive nature of our empirical discoveries seems central to the growing, yet still scarce, debate around governance and accountability in social venturing (Grimes, 2010; Molecke & Pinkse, 2017; Rawhouser et al. 2019; Saebi et al. 2018). We do so in a number of ways.

First, most of our collective efforts have been focused on conceptualizing and measuring social impact as output (Rawhouser et al., 2019), yet little is known about what factors might trigger SIM and how such factors combine to enable alternative conceptualizations and measurements. Our analyses reveal an array of alternative solutions for SIM, showing a much more varied reality than originally thought. Our four SIM approaches shed light on the combinations of antecedents underlying such diversity, suggesting that the how to "do" outcome measurement is contingent upon combinations of venture- and contextual-level factors, not just guidance provided by institutionalized governance and enforcement. These are unexpected, yet consistent discoveries for which a priori predictions would have been unreasonable (Robinson,

2019). Molecke and Pinkse (2017) offer an interesting explanation for how social entrepreneurs handle the pressure to measure social impact using a bricolage lens. While bricolage is promising for our understanding of spontaneous emergence, their examination focuses on formal methodologies and the strategic handling of accountability. Our findings expand Molecke and Pinkse's (2017) contribution by showing "forms of bricolage" in the absence of formal methodologies and strategies. This also becomes a relevant expansion of Di Domenico, Haugh and Tracey's (2010) work on social bricolage. Most notably, our findings expand Benjamin's (2013) analysis of accountability paths. The author argues that the studied normative measurement guides were neither uniform in the conceptualization of beneficiaries, nor in how they directed social enterprises to use impact measurement. We show the "complex how" behind such non-uniformity and use. What this also tells us is that in emerging social spaces efforts to monitor social and commercial activities, managers' performance, and downwards accountability, as Ebrahim, Battilana and Mair (2014) argue, may not be sufficient to resolve the many of accountability challenges faced by social enterprises.

Second, we bring to light the actual importance of a number of factors generally deemed central to SIM formalization, namely: certifications, business maturity and investment influence. This is counterintuitive in light of our current understanding of the effects of those variables on SIM formalization. We show inconsistent relationships across the three factors, challenging current knowledge and intuition. These are unexpected findings. In the case of certification, one might expect for it to increase the degree of SIM formalization as the social venture engages with voluntary schemes requiring paying close attention to indicators and reporting on targets met (Wry & Haugh, 2018). Moreover, certifications are deemed central to category distinctiveness which affect members' actions in important ways (Gehman & Grimes, 2017). Finally,

investment is allocated against promises of future value, in this case both social and commercial. Thus, one would expect that the more investment social enterprises receive across different investment rounds, the stronger the demands from investors, through contractual obligations, for social enterprises to measure and report on social impact as reliably as possible, hence forcing them to formalize measurement practices (Nicholls, 2009). Drawing on US data from the *National Venture Capital Association*, Miller and Wesley (2010) found that indeed social investment focus influences the way social entrepreneurs frame social value. None of the latter is supported by our evidence, challenging grounded assumptions in this domain. This is further confirmed by the relatively high consistent relationships observed when these three are assessed in their negative form.

In empirical terms, we offer evidence and ways of capturing SIM and its antecedents in a social venturing context. Most of the research on SIM has relied on measurement practices and data intended for large corporations, as shown by Rawhouser et al. (2019). KLD index, GRI reporting and similar are certainly relevant, yet inadequate to explain entrepreneurial phenomena. Hall et al. (2015) paved the way by showing how emergent processes leading to SROI can be captured. However, the use of key actors in the US, UK and Continental Europe might be problematic for inferential work. As previously argued, we suspect in that case the explanation of SIM formalization as outcome and its antecedents are actually informed by the institutionalized governance and accountability mechanisms already in place. Our research offer insight into how to measure, collect, analyze and report evidence on SIM which is pertinent to entrepreneurship scholarship.

Future research. We believe our SIM findings open up interesting avenues for future research, most notably in the areas of formalized prosocial performance, legitimacy,

accountability and our understanding of social impact more broadly. In terms of performance, future research can move the investigative focus beyond outputs and outcomes and look at inputs and activities instead, and the learning mechanisms involved in SIM. These are fundamentally different approaches to appreciating the value of SIM and can help us better understand why social ventures approach SIM in the way that they do. In terms of accountability, one could expect that, as with most management practices, formalization of SIM will increase as the enterprise gains maturity. Social and financial reporting and audits become mandatory as the firm grows (Nicholls, 2009). Without a better understanding of SIM, addressing the challenges of materiality, uncertainty and empowerment of social enterprises will be difficult (Nicholls, 2018). SIM brings materiality, accountability and therefore legitimacy to the foreground and into focus. This is especially so in the context of emerging economies, where accountability is less formalized. Studies that replicate our findings will help to refine of our SIM protocol and will simultaneously broaden the extant literature of social auditing and the production of legitimacy (Power, 2003). This has theoretical applications to our understandings of the antecedents and mechanisms for measuring, monitoring, and reporting social impact. Finally, much more needs to be done to advance our understanding of actual social impact. Our analyses show novel approaches to SIM, but whether and how these different approaches lead to more impact is yet to be uncovered. This is important because social impact is what SIM is supposed to facilitate. What is problematic at this stage to advance research in these areas is the lack of novel data and approaches to data collection. For example, the temporal and causal links between inputs, activities, outputs, outcomes and impact, which SIM aims to capture and report on, are elusive from a research point of view. We can either seat and wait until these connections finally

materialize or find creative ways to explore and explain possible futures and hidden causes. AMD welcomes commentaries. We look forward to our colleagues' reactions.

Practical implications. Our findings also offer a set of practical guardrails for entrepreneurs interested in social impact. Certifications, business maturity, and investment influence are not as critical as previously thought. While they might contribute to further clarity regarding what actually enables impact measurement, they are not a silver bullet for learning or performance in social ventures. Additionally, practitioners can see from this study that a 'one size fits all' approach to SIM is myopic at best. Social and environmental audits, with their associated certification, are highly complicated with varying trajectories and outcomes (Gamble et al., 2020; Moroz & Gamble, 2020; Parker et al., 2018). While certifications may be indicators of professionalism (Hwang & Powell, 2009) there is evidence in our findings that a disconnect exists between social accounting, SIM and its formalization. Even though SIM is becoming a mainstream staple in business disclosures, entrepreneurs should question garden variety certification trends and engage with accountability protocols that best push and represent their core values.

Concluding remarks

Social impact measurement has evolved into an important area of theoretical and practical importance for purposes of accountability and governance. Yet, why and how social enterprises formalize SIM in social sectors lacking formal guidelines and templates guiding SIM remains unknown. Our empirical findings uncover counterintuitive findings and novel approaches to SIM, which we hope will help to advance a growing and important field of research.

TABLES AND FIGURES

TABLE 1
Interview participants

Social enterprise	Activity => key impact	SIM measurement
Clothing-venture (2014)	Clothing recycling for low income families through portable shops ⇒ Reduce waste to land fields	Tons of clothing diverted from land fields Inflows and outflows of recycled material Number of beneficiaries who had received recycled clothing Number of beneficiaries, workers who have gone through recycling training Interviews with users
Education-Venture (2015)	Environmental education for schools in rural areas ⇒ Increase Environmental awareness of children and families	Satisfaction with and general feedback on environmental courses provided (children and parents). Indirect impact captured through municipalities' environmental surveys Interviews with users
Recruitment-venture (2015)	Social enterprise support (access to volunteers and software) ⇒ Increase efficiency and awareness of the impact of social enterprises in Chile	Feedback over Facebook
Consumption-Venture (2009)	Bottled water and donation of profits to NGOs in need of support ⇒ Provide NGOs supporting disadvantaged people with access to funding ⇒ Increase awareness of the impact of social enterprises in Chile	Funds donated to NGOs B Corp certification in progress
Sustainability-venture (2013)	Recycling and sustainability actions through incentives ⇒ Change people's attitudes towards recycling and sustainability	Users' CO2 emissions Number of new sustainability actions users engage with. Interviews with users
Software-venture (2007)	Enterprise resource planning software for small businesses (focus on sustainability) and technology development (e.g. e-commerce platforms) for social enterprises. ⇒ Improve work of social enterprises ⇒ Provide organizations with technology for sustainability	Number of clients adopting sustainability software Interviews with users Visitors to tech fair stand
Projects-Venture (2011)	Social enterprise incubation platform ⇒ Nurture change-makers ⇒ Entrepreneurship support in disadvantaged communities	B Corp certified Future impact of change-makers Community impact (e.g. job creation, access to funds, partnerships) RCT under development
Inclusion-venture (2014)	Consulting services focused on inclusion in the workplace ⇒ Change the way organizations do	Number of consulting services provided Interviews with users (businesses and

	business	workers) Proprietary SIM methodology under development (to include e.g. financial impact of inclusion)
Energy-venture (2014)	Sustainable architecture and solar panels ⇒ Improve energy efficiency in social housing	Energy savings, using government's standardized measurement system Proprietary SIM methodology under development (to include e.g. non-financial impacts)
Science-venture (2014)	Science and technology for disadvantaged communities ⇒ Improve access to science and technology ⇒ Increase awareness of sustainable living in disadvantaged communities	Number of teachers and children using technology Behavioral change in new technology users (e.g. learning environmental actions through gaming)
Parks-venture (2010)	Collaborative restoration of parks and public spaces in disadvantaged areas ⇒ Improve quality of life, social cohesion, sense of belonging in disadvantaged areas	RCT Use of restored public spaces and parks Users' perception before / after intervention (e.g. security, local participation)

TABLE 2
Descriptive and correlations

		Mean	SD	1	2	3	4	5	6	7	8	9
1	Business maturity	0.4342	0.3944									
2	Strategic value	0.5464	0.3716	0.011								
3	Future value	0.6889	0.3676	-0.034	.378**							
4	Operational value	0.4668	0.4205	.180*	.173*	.268**						
5	Civic society	0.5080	0.3751	0.012	.244**	.324**	0.152					
6	Government	0.5193	0.4024	0.014	0.093	0.072	0.009	.555**				
7	Investors	0.3156	0.3734	-0.098	0.056	-0.067	-0.106	0.026	.166*			
8	Market	0.38	0.487	0.041	-0.044	-0.094	0.104	-.160*	-.197*	0.039		
9	Certification	0.19	0.394	.207*	-0.025	-0.026	0.129	0.017	-0.069	-0.079	0.032	
10	SIM formalization	0.4262	0.3638	0.156	.176*	.312**	.772**	0.041	-0.079	-0.06	0.067	.191*

* 0.05, ** 0.01

TABLE 3

Analysis of necessary conditions for SIM formalization and non-formalization

	SIM formalization				SIM non-formalization			
	Presence of condition		Absence of condition		Presence of condition		Absence of condition	
Condition tested	Consistency	Coverage	Consistency	Coverage	Consistency	Coverage	Consistency	Coverage
Future value of SIM	**0.853414**	0.527954	0.269186	0.368921	0.657926	0.547892	0.433151	0.799103
Operational value of SIM	**0.835201**	0.762557	0.341066	0.272668	0.324141	0.398380	0.806804	0.868250
Strategic value of SIM	**0.690097**	0.538286	0.480120	0.451204	0.566184	0.594486	0.560267	0.708761
Business maturity	0.552371	0.542194	0.586451	0.441823	0.449605	0.594070	0.653522	0.662764
Certification	0.254785	0.569207	0.745215	0.392528	0.143249	0.430793	0.856751	0.607472
Civic society pressure	**0.612459**	0.513836	0.554702	0.480602	0.554660	0.554660	0.569520	0.664228
Government pressure	**0.565429**	0.464096	0.579783	0.514097	0.592912	0.655092	0.514963	0.614663
Market pressure	**0.409242**	0.457138	0.590758	0.407170	0.361028	0.542862	0.638972	0.592830
Investment pressure	0.349849	0.472445	0.764277	0.476006	0.374994	0.681674	0.709788	0.595075

TABLE 4
Solution Table: Alternative SIM approaches

	Types			
Configurations	**1**	**2**	**3**	**4**
Strategic value of SIM	-	⊗	-	●
Future value of SIM	●	-	-	-
Operational value of SIM	●	●	●	●
Civic society pressure	-	⊗	⊗	-
Government pressure	-	⊗	⊗	●
Market pressure	-	-	●	⊗
Consistency	0.8	0.94	0.92	0.84
Raw coverage	0.72	0.259	0.22	0.27
Unique coverage	0.24	0.018	0.011	0.012
Derived SIM approaches	***Forward-looking, outcome-driven***	***Inward-looking & process-driven***	***Outward-looking & market-driven***	***Outward-looking & public-driven***
Overall consistency	0.81			
Overall coverage	0.81			

TABLE 5
SIM formalization with dichotomous outcome

	Types			
Configurations	**1**	**2**	**3**	**4**
Strategic value of SIM	-	⊗	-	●
Future value of SIM	●	-	-	-
Operational value of SIM	●	●	●	●
Civic society pressure	-	⊗	⊗	-
Government pressure	-	⊗	⊗	●
Market pressure	-	-	●	⊗
Consistency	0.97	0.95	0.98	0.98
Raw coverage	0.59	0.18	0.16	0.22
Unique coverage	0.23	0.013	0.014	0.012
Derived SIM approaches	***Forward-looking, outcome-driven***	***Inward-looking & process-driven***	***Outward-looking & market-driven***	***Outward-looking & public-driven***
Overall consistency	0.97			
Overall coverage	0.67			

Frequency cutoff: 1; Consistency cutoff: 0.851

TABLE 6
SIM formalization with super strong membership in causal conditions

	Types					
Configurations	**1 (2*)**	**2 (1*)**	**3 (1*)**	**4 (1*)**	**5 (4*)**	**6 (3*)**
Strategic value of SIM	⊗	-	-	●	⊗	-
Future value of SIM	-	●	●	●	-	-
Operational value of SIM	●	●	●	●	●	●
Civic society pressure	⊗	⊗	-	●	●	⊗
Government pressure	⊗	-	⊗	-	●	⊗
Market pressure	-	⊗	⊗	-	⊗	●
Consistency	0.94	0.90	0.93	0.88	0.86	0.91
Raw coverage	0.31	0.20	0.20	0.28	0.10	0.22
Unique coverage	0.022	0.035	0.026	0.096	0.025	0.0015
Overall consistency	0.85					
Overall coverage	0.69					

* Equivalent solution from main solution table 4. Frequency cutoff: 1; Consistency cutoff: 0.836

TABLE 7
SIM non-formalization

	Types				
Configurations	**1**	**2**	**3**	**4**	**5**
Strategic value of SIM	●	⊗	⊗	●	⊗
Future value of SIM	●	-	⊗	●	-
Operational value of SIM	●	⊗	⊗	⊗	⊗
Civic society pressure	⊗	⊗	-	-	●
Government pressure	●	⊗	●	⊗	●
Market pressure	●	⊗	⊗	⊗	⊗
Consistency	0.84	0.92	0.98	0.85	0.87
Raw coverage	0.049	0.158	0.12	0.118	0.138
Unique coverage	0.049	0.009	0.0025	0.0056	0.0066
Overall consistency	0.85				
Overall coverage	0.465				

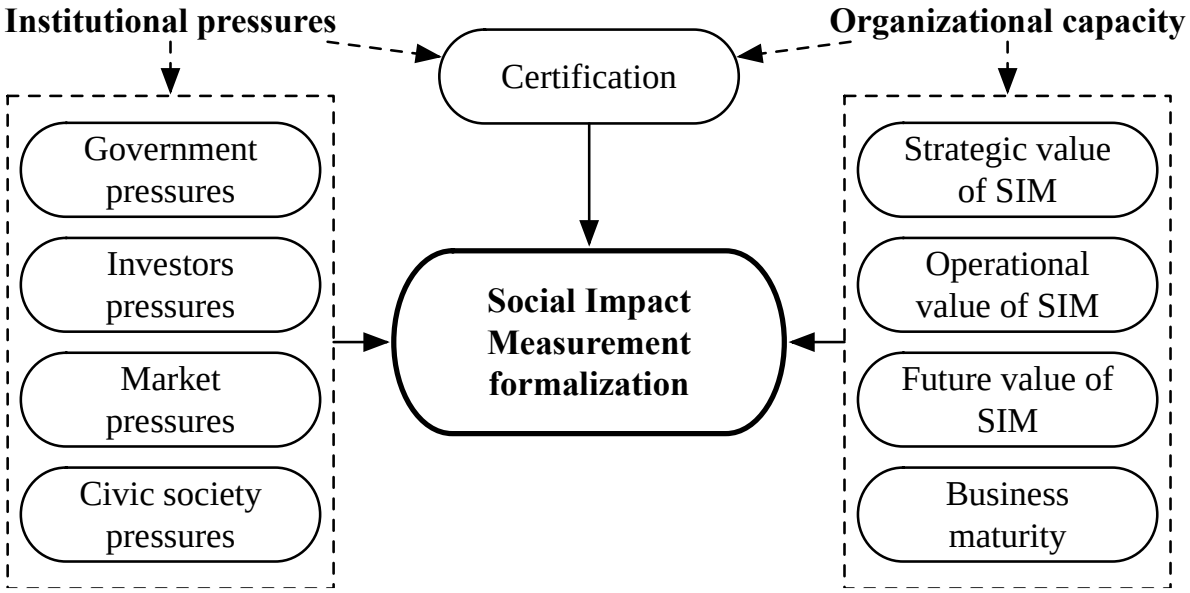
Frequency cutoff: 3; Consistency cutoff: 0.847

TABLE 8
SIM approaches: conceptualization and evidence

Type	SIM basic conceptualization	Likely focus of attention, orientation and reporting scope	Empirical illustration
Forward-looking & outcome-driven	Mechanism for understanding and communicating how improvements in current impacts contribute to the future success of the venture	Focus on business performance, oriented toward enabling future success of the venture. SIM is likely to be narrow, informal and focused primarily on internal audiences	We are reluctant to establish relationship with private investors and similar stakeholders. Some large companies have contacted us for their CSR strategies, but nothing serious yet… We started working recently with La Vicuna Council, fast and close because they are small, but no formal contract yet *(Clothing)*
Inward-looking & process-driven	Mechanism for understanding, learning and improving processes and practices leading to impacts	Focus on internal processes, oriented toward learning about organizational processes and practices. SIM is likely to be narrow, informal and focused only on internal audiences	We also offer ad-hoc service management software, and also creating e-commerce platforms for SMEs. We are also exploring other types of projects involving HSEC standards -Health Safety Environment and Community, which are specific platforms for measuring or development of metrics related to environmental impact and community inclusion, particularly for SMEs that are integrating sustainability in their business models *(Software).* For those of us who want to make social innovation, there are no funds that understand our dynamics, because private funds seek to maximize profitability and social funds seek to maximize social returns. We do both at the same time *(Inclusion).*
Outward-looking & market-driven	Mechanism for understanding, monitoring and communicating impacts facing market demands	Focus on market demands, oriented toward aligning impacts with market expectations. SIM is likely to be broad scope, more formal and focused on external audiences, primarily market actors	The first obvious impact is the donation made to the NGOs, which is central for them. Children Foundation [anonymized] has just launched a spectacular new event and our donation has been part of that. Sometimes, our contribution is what enables them to stay afloat. There is also the impact of the model itself that has been replicated by other companies. When we started we were the only ones doing this, now we are leaders in the field of social entrepreneurship, motivating many to do the same with their own ventures. So there is impact at the ecosystem level. Now, we measure donations and nothing else *(Consumption)*
Outward- looking & public-driven	Mechanism, enabled by social mission, for understanding, monitoring and communicating impacts facing regulatory requirements	Focus on regulatory requirements, oriented toward aligning mission and impacts with regulatory requirements. SIM is likely to be extensive, more formal and focused on external audiences, primarily regulator	We work very close to the public sector because they are the ones who work in the communities where we operate in. The National Service for Women, Technical Assistance, Tourism, all these government agencies. Then everything we do is connected to what they do, we all see the same needs and try to solve the same problems together *(Projects).* We have been able to measure it through surveys where, for example, parents are asked how the importance of our program... and everyone agree, they like the idea. We are measuring how people feel about the idea, those in favor and against it. And the truth is that we have 90% in favor. This high rate is important to us, because it [the council] demands social development. We are part of the Community Development Plan, which is all about building a sustainable community around critical areas: tourism, energy, water, etc. *(Education)*

FIGURE 1

SIM framework: Configural antecedents



APPENDIX A
Measurement details

Construct	Questions and scoring
Future value of SIM	Please indicate the extent to which you agree with the following statement (1-5 scale) • Measuring our social and/or environmental (as appropriate) impact is central to the future success of our social enterprise
Operational value of SIM	Why do your social enterprise utilize tools to assess its social and/or environmental (as appropriate). Select all of those that apply to you: • Internal validation • Improve communication with stakeholders • Access to investment • Selling products • Credibility • Good management practice • Part of the social enterprise's key responsibilities • Continuous improvement • Other daily practices
Strategic value of SIM	In relation to your social enterprise, please indicate the extent to which you agree with the following statements (1-5 scale) • In general, the social component of our enterprise gives us a competitive advantage • Our social enterprise would be more profitable if we remove the social component (inverted measure) • The social component of our enterprise influence the buying decisions of our customers • The social component of our enterprise helps us recruit and retain employees • The social component of our enterprise helps us sell products and/or services • The social component of our enterprise helps us establish valuable relationships with suppliers • The social component of our enterprise helps us form strategic alliances with other organizations
Business maturity	Approximately, for how long your social enterprise has been selling products / services in the market? • ___ years
Certification	Does your social enterprise have some form of certification? (relevant to this study) • Yes • No
Civic society pressure	In scale from 1 to 5, how important are the following stakeholders for the achievement of your social and commercial objectives? • Clients • Donors • Partners • Suppliers • Beneficiaries

Government pressure	In scale from 1 to 5, how important are the following stakeholders for the achievement of your social and commercial objectives? • Local government Local (for example municipality) • Central government • Government agencies (for example, Economic Development Agency)
Market pressure	Of the following list, what type of organization is your main competitor? • A traditional for-profit company • An NGO, non for profit • Another social enterprise • I have no competitors • I do not know
Investment pressure	Please indicate how many times has your social enterprise receive funding from the following sources in the last 3 years since founding: Year 1 Year 2 Year 3 Venture capital Impact investment Seed funding

APPENDIX B
Calibration Table

Case ID	Maturity	Strategic value	Future value	Operational value	Civic society	Government	Investor	Market	Certification	SIM formalization	SIM dichotomous	SIM extremes
1	0.82	0.501	0	0.89	0.01	0	0.05	1	1	1	1	1
4	0.05	0.18	0.95	0.99	0.99	0.99	0.05	1	0	0.501	1	0.25
5	0.82	0.18	0.05	0.01	0.501	0.14	0.501	1	0	0	0	0
6	0.95	0.27	0.95	0.61	0.87	0.08	0.05	0	0	0.501	1	0.25
8	0.95	0.02	0.95	0.78	0.95	0	0.05	1	1	0.501	1	0.25
10	0.05	0.501	0.501	0.78	0.23	0.65	0.05	1	0	0.501	1	0.25
24	0.05	0.86	0.95	0.99	0.84	0.77	0.95	1	0	0.75	1	0.75
28	0.05	0.97	0.95	0.89	0.87	0.14	0.05	0	0	0.501	1	0.25
29	0.501	0.86	0.95	0.78	0.9	0.05	0.05	1	0	0.75	1	0.75
31	1	0.99	0.95	0.99	0.99	0.99	1	0	1	0.75	1	0.75
32	0.05	0.12	0.501	0.01	0.14	0.35	0.95	1	0	0	0	0
36	0.95	0.95	0.95	0.98	0.06	0	0.05	0	0	0.501	1	0.25
37	0.501	0.08	0.05	0.01	0.06	0.14	0.05	0	1	0	0	0
39	0.501	0.27	0.501	0.95	0.04	0.92	0.05	1	0	0.501	1	0.25
41	1	0.99	0.95	0.78	0.99	0.99	0.05	0	1	0.501	1	0.25
42	0.501	0.97	0.95	0.01	0.57	0.77	1	0	0	0	0	0
43	0.95	0.38	0.95	0.78	0.87	0.97	0.05	0	0	0.501	1	0.25
50	0.18	0.99	0.95	0.27	0.63	0	0.05	0	0	0.75	1	0.75
51	1	0.99	0.95	0.99	0.99	0.95	0.05	0	0	0.501	1	0.25
52	0.05	0.86	0.95	0.01	0.501	0.95	0.95	0	0	0	0	0
56	0.05	0.05	0.501	0.95	0.75	0.92	0.05	0	1	0.501	1	0.25
57	0.95	0.65	0.501	0.01	0.75	0.35	0.05	1	0	0	0	0
58	0.05	0.77	0.95	0.78	0.97	0.92	1	0	0	0.75	1	0.75
59	1	0.01	0.501	0.01	0.01	0.77	0.05	0	0	0	0	0
61	0.05	0.95	0.95	0.78	0.29	0.35	0.05	0	0	0.501	1	0.25
66	0.01	0.77	0.95	0.61	0.11	0.03	0.05	1	1	1	1	1
69	0.95	0.01	0.05	0.95	0.01	0	0.05	1	1	1	1	1
70	0.18	0.08	0.95	0.01	0.23	0.05	0.501	0	0	0	0	0
71	0.05	0.77	0.95	0.01	0.14	0.01	0.95	0	0	0	0	0
75	0.501	0.86	0.95	0.98	0.92	0.14	0.05	0	0	0.501	1	0.25
80	0.05	0.02	0.501	0.89	0.87	0.99	0.05	0	0	0.75	1	0.75
83	0.501	0.501	0.95	0.05	0.35	0.86	0.05	0	1	0.501	1	0.25
88	0.501	0.97	0.501	0.01	0.23	0.01	0.05	1	1	0	0	0
89	0.18	0.92	0.501	0.78	0.92	0.65	0.95	1	0	0.501	1	0.25

90	0.05	0.95	0.95	0.95	0.02	0.08	0.05	0	0	0.501	1	0.25
92	0.99	0.95	0.95	0.61	0.94	0.86	0.05	0	0	0.501	1	0.25
94	0.501	0.08	0.501	0.01	0.01	0.08	1	0	0	0	0	0
97	0.82	0.27	0.95	0.89	0.75	0.35	0.05	1	0	0.75	1	0.75
98	0.501	0.01	0.95	0.78	0.87	0.99	0.501	0	1	0.501	1	0.25
99	0.99	0.86	0.05	0.01	0	0	1	1	0	0	0	0
101	0.05	0.99	0.95	1	0.9	0.99	1	0	0	0.75	1	0.75
103	0.05	0.18	0.501	0.01	0.95	0.86	0.95	0	0	0	0	0
104	0.501	0.95	0.95	0.01	0.97	0.97	0.05	0	0	0	0	0.25
106	0.501	0.99	0.95	0.98	0.97	0.77	0.05	1	1	0.501	1	0.25
107	0.82	0.86	0.95	0.61	0.23	0.65	0.05	1	0	0.501	1	0.25
109	0.99	0.12	0.05	0.61	0.11	0.14	0.05	1	0	0.501	1	1
111	0.05	0.65	0.501	0.78	0.84	0.99	0.95	0	0	1	1	0
112	0.501	0.08	0.05	0.01	0.29	0.14	0.05	0	1	0	0	0
114	0.18	0.18	0.05	0.01	0	0	0.95	0	0	0	0	0
117	0.05	0.99	0.95	0.01	0.99	0.99	0.95	0	0	0	0	0
125	0.05	0.86	0.95	0.01	0.75	0.65	0.501	0	0	0	0	0
127	0.18	0.02	0.05	0.01	0.01	0.99	0.501	0	0	0	0	1
134	1	0.95	0.95	0.99	0.63	0.92	0.05	0	0	1	1	0.75
138	0.501	0.12	0.95	0.05	0.63	0.92	0.95	0	1	0.75	1	0.25
143	0.05	0.97	0.95	0.05	0.84	0.95	0.05	0	0	0.501	1	0.75
146	0.18	0.05	0.95	0.95	0.75	0.95	0.05	0	0	0.75	1	1
150	0.05	0.38	0.95	0.78	0.01	0.01	0.501	1	0	1	1	1
151	0.95	0.02	0.95	0.99	0.23	0.35	0.05	1	1	1	1	0.75
154	0.95	0.92	0.95	0.78	0.8	0.501	0.95	0	1	0.75	1	0.75
157	0.18	0.08	0	0.27	0.29	0.65	0.501	0	0	0.75	1	0
158	0.05	0.38	0.95	0.01	0.87	0.65	0.05	0	0	0	0	0
159	0.18	0.86	0.95	0.01	0.23	0.99	0.05	1	0	0	0	0
160	0.05	0.27	0.95	0.01	0.84	0.08	0.501	1	1	0	0	0.25
161	0.99	0	0.95	0.27	0	0.05	0.05	0	0	0.501	1	1
165	0.05	0.501	0.95	0.98	0	0	1	1	0	1	1	0
166	0.05	0.77	0.95	0.01	0.23	0.77	0.05	0	0	0	0	0
170	0.501	0	0.95	0.89	0.98	0.99	0.05	0	0	0	0	0
172	0.99	0.92	0.95	0.01	0.57	0.99	0.05	1	0	0	0	0.25
174	0.18	0.92	0.95	0.78	0.69	0.99	0.05	0	0	0.501	1	0
175	0.05	0.95	0.95	0.01	0.57	0	0.05	0	0	0	0	0.75
176	0.501	0.65	0.05	0.78	0.57	0.65	0.05	0	0	0.75	1	0.75
179	0.82	0.501	0.95	0.95	0.87	0.35	0.05	1	0	0.75	1	0
180	0.18	0.65	0.05	0.01	0.04	0.99	0.05	0	0	0	0	0
184	0.05	0.27	0.501	0.01	0.95	0.95	0.05	0	0	0	0	0

185	0.18	0.03	0.501	0.01	0.08	0.05	0.05	0	0	0	0	0.25
186	0.82	0.97	0.501	0.89	0.29	0.501	0.05	1	1	0.501	1	0
189	0.82	0.01	0	0.01	0.05	0.99	0.05	1	0	0	0	0.75
196	0.501	0.97	0.95	0.78	0.8	0.86	0.95	0	1	0.75	1	0.75
199	0.99	0.65	0.95	0.27	0.57	0.65	0.05	0	1	0.75	1	0
200	0.18	0.05	0.05	0.01	0.63	0.35	0.05	1	0	0	0	0.75
201	1	0.18	0.501	0.27	0.05	0.01	0.501	1	0	0.75	1	0.75
205	0.95	0.38	0.95	0.95	0.23	0.01	0.05	0	0	0.75	1	0
206	0.05	0	0	0.01	0.23	0.99	1	0	0	0	0	0
207	0.05	0.86	0.95	0.01	0.84	0.95	1	0	0	0	0	0.75
209	0.05	0.99	0.95	0.98	0.92	0.99	0.05	0	0	0.75	1	0.75
210	0.01	0.77	0.95	0.99	0.501	0.05	0.05	0	0	0.75	1	0.75
212	0.18	0.99	0.95	0.89	0.96	0.99	0.05	0	0	0.75	1	0
213	0.05	0.38	0.95	0.01	0.87	0.35	0.05	1	0	0	0	0.75
214	0.82	0.27	0.95	0.61	0.63	0.35	0.05	1	0	0.75	1	0.75
215	0.05	0.27	0.501	0.99	0.04	0	0.501	1	0	0.75	1	0.75
220	0.501	0.501	0.95	0.98	0.87	0.35	0.501	1	0	0.75	1	0.25
221	0.05	0.18	0.95	0.61	0.35	0.08	0.05	1	0	0.501	1	0.75
226	0.05	0.86	0.95	0.05	0	0	0.05	1	0	0.75	1	1
228	1	0.92	0.95	0.98	0.69	0.65	1	1	0	1	1	0
232	1	0.501	0.501	0.95	0.96	0.95	0.501	1	0	0	0	0.25
233	0.95	0.86	0.95	0.05	0	0	0.95	0	0	0.501	1	0.75
236	0.01	0.92	0.95	0.78	0.43	0.35	0.501	1	0	0.75	1	0
239	0.99	0.95	0.05	0.01	0.14	0.501	0.501	1	0	0	0	0.75
240	0.05	0.05	0.501	0.95	0.18	0.01	0.05	0	0	0.75	1	0
242	0.05	0.05	0.95	0.01	0.99	0.99	0.95	1	0	0	0	0
243	0.501	0	0	0.01	0.97	0.95	0.05	0	0	0	0	0
244	0.501	0.03	0.95	0.01	0	0	0.05	0	0	0	0	1
245	0.99	0.27	0.05	0.89	0.03	0.05	0.05	0	1	1	1	0
246	0.95	0.77	0.501	0.01	0.9	0.86	0.501	0	0	0	0	0
249	0.18	0.12	0.95	0.01	0.95	0.65	0.05	0	0	0	0	0.25
250	0.05	0.86	0.95	0.27	0.14	0.14	0.05	0	0	0.501	1	0
251	0.05	0.27	0.95	0.01	0.69	0.97	0.05	1	0	0	0	0.25
255	1	0.86	0.95	0.89	0.96	0.86	0.05	0	0	0.501	1	0.25
256	0.95	0.05	0.95	0.61	0	0	0.05	1	0	0.501	1	1
257	0.05	0.86	0.95	0.78	0.98	0.23	0.05	0	0	1	1	0
260	0.05	0.03	0.05	0.01	0.96	0.99	1	0	0	0	0	0.75
263	0.05	0.77	0.95	0.61	0.63	0.99	0.05	0	0	0.75	1	0
264	0.82	0.12	0.05	0.01	0.18	0.05	0.05	0	0	0	0	0.75
265	0.05	0	0.95	1	0.18	0.08	0.05	0	1	0.75	1	0

269	0.82	0.92	0.95	0.01	0.84	0.14	0.05	0	1	0	0	0.75
270	0.18	0.77	0.95	0.27	0.75	0.35	0.05	1	0	0.75	1	0
272	0.05	0.501	0.501	0.01	0.06	0.05	0.05	1	0	0	0	0
273	0.95	0.86	0.95	0.01	0.69	0.77	0.501	0	0	0	0	0
275	0.501	0.501	0.05	0.01	0.08	0.65	1	1	1	0	0	1
276	0.05	0.95	0.95	0.78	0.63	0.01	0.05	0	1	1	1	0.25
277	0.82	0.77	0.501	0.98	0.96	0.501	0.05	0	0	0.501	1	0
278	0.05	0.02	0.501	0.01	0.43	0.95	0.501	1	0	0	0	0.75
283	0.95	0.77	0.95	0.61	0.35	0.86	0.05	0	1	0.75	1	1
284	1	0.99	0.95	0.61	0.98	0.95	1	0	0	1	1	0
287	0.05	0.86	0.95	0.01	0.23	0.01	0.05	0	0	0	0	1
288	0.18	0.92	0.95	0.95	0.03	0.08	0.05	1	0	1	1	0.25
289	0.05	0.86	0	0.78	0	0.77	0.501	0	0	0.501	1	0.25
292	0.05	0	0.95	0.05	0	0	0.501	0	0	0.501	1	1
293	1	0.99	0.95	1	0.92	0.92	0.501	1	1	1	1	0
297	0.05	0.77	0.501	0.01	0.35	0.99	0.501	1	0	0	0	0
302	0.82	0.77	0	0.01	0.03	0.35	0.05	0	0	0	0	0.75
303	0.01	0	0	0.27	0.69	0.95	0.05	0	0	0.75	1	0.25
304	0.18	0.99	0.95	0.78	0.99	0.97	1	0	0	0.501	1	0.75
305	1	0.501	0.05	0.95	0.94	0.95	1	1	0	0.75	1	0
306	0.05	0.77	0.501	0.01	0.06	0.08	0.05	0	0	0	0	0
309	0.501	0.03	0.05	0.01	0.99	0.99	0.05	0	1	0	0	0.75
310	0.99	0.77	0.95	0.78	0.94	0.95	0.05	0	0	0.75	1	0
312	0.05	0.95	0.95	0.01	0.95	0.99	0.05	1	0	0	0	0.75
313	0.95	0.27	0.95	0.78	0.01	0.99	0.95	0	0	0.75	1	0
314	0.05	0.97	0	0.01	0.69	0.08	0.05	0	0	0	0	0.25
318	0.01	0.95	0.95	0.01	0.99	0.99	0.05	0	0	0.501	1	0
319	0.501	0.38	0	0.01	0.29	0.14	0.501	1	0	0	0	0.75
322	0.99	0.38	0.95	0.05	0.87	0.99	0.05	0	0	0.75	1	0
324	0.05	0.01	0	0.01	0.03	0.05	0.501	0	0	0	0	0.25
326	0.05	0.18	0.501	0.89	0.43	0.86	0.501	1	0	0.501	1	0.75
327	0.18	0.77	0.95	0.27	0	0	0.95	1	0	0.75	1	0.75
329	0.501	0.27	0.95	0.99	0.01	0.35	0.05	0	0	0.75	1	0.75
330	1	0.38	0.95	0.89	0.01	0.35	0.05	0	0	0.75	1	0.75
331	1	0.77	0.95	0.98	0.69	0.65	0.05	0	0	0.75	1	0.25
338	0.05	0.92	0.95	0.99	0.35	0.35	0.501	1	0	0.501	1	0.25
339	0.501	0.65	0.05	0.89	0	0	0.501	1	0	0.501	1	0.75
340	0.05	0.97	0.501	0.89	0.35	0.01	0.05	1	1	0.75	1	0

APPENDIX C
Truth table

Strategic value	Future value	Operational value	Civic society	Government	Market	Cases	Outcome	Consist.
1	1	1	1	0	1	3	1	0.962642
1	1	1	0	0	1	6	1	0.957929
1	1	1	0	1	0	1	1	0.953411
0	1	1	0	1	1	2	1	0.949773
0	1	1	0	1	0	1	1	0.942639
0	1	1	0	0	1	5	1	0.939918
0	1	1	0	0	0	5	1	0.938105
1	1	1	0	1	1	3	1	0.936981
0	0	1	0	0	1	2	1	0.933624
1	0	1	1	1	0	1	1	0.918593
1	0	1	0	0	1	2	1	0.918088
0	1	1	1	0	1	3	1	0.911806
0	0	1	0	0	0	1	1	0.911036
0	1	1	1	0	0	1	1	0.903991
1	1	1	1	1	1	6	1	0.879729
1	1	1	1	0	0	5	1	0.878099
1	1	1	1	1	0	20	1	0.847226
1	0	1	0	1	0	1	1	0.836901
1	1	1	0	0	0	3	1	0.827369
0	1	1	1	1	1	1	1	0.803148
0	1	1	1	1	0	6	1	0.801317
1	0	1	1	1	1	1	0	0.797293
1	1	0	0	0	1	4	0	0.69342
0	1	0	0	0	1	2	0	0.674358
1	1	0	1	0	1	2	0	0.624632
0	1	0	0	1	0	1	0	0.616323
1	1	0	0	1	0	2	0	0.568919
0	1	0	1	1	0	6	0	0.546143
0	1	0	1	0	1	2	0	0.532389
1	1	0	1	0	0	3	0	0.489519
1	0	0	0	1	0	1	0	0.486725
1	1	0	1	1	0	11	0	0.471718
1	0	0	1	0	0	1	0	0.455919
1	1	0	0	0	0	5	0	0.444012
1	1	0	0	1	1	2	0	0.439686
0	1	0	0	1	1	1	0	0.436094

0	0	0	0	0	1	1	0	0.420142
0	0	0	0	1	0	3	0	0.418884
1	0	0	0	0	0	1	0	0.413336
1	1	0	1	1	1	2	0	0.391667
0	1	0	0	0	0	6	0	0.370839
0	0	0	1	0	1	2	0	0.363062
0	0	0	1	1	0	4	0	0.350143
1	0	0	0	0	1	1	0	0.348933
1	0	0	0	1	1	2	0	0.338261
0	1	0	1	1	1	2	0	0.327434
0	0	0	0	0	0	5	0	0.254384
0	0	0	0	1	1	1	0	0.24864

APPENDIX D
Theoretical grounding for configural antecedents

Table E1. Antecedents of SIM: Illustrative literature

Paper	Focus	Maturity	Strategic value	Future value	Operational value	Government pressure	Investors pressure	Market pressure	Civic society pressure	Certification
Amel-Zadeh & Serafeim, 2018	Provides insights into why and how investors use reported environmental, social and governance (ESG) information.						X			
Arvidson & Lyon, 2014	Examines the experience and behavior of non-profit organizations in relation to a demand for social impact evaluations. It focuses on SIM learning and promotional purposes and strategic decoupling.	X	X		X	X				
Beer & Micheli, 2017	Explores how performance measurement influences stakeholders in not-for-profit organizations.								X	
Beer & Micheli, 2018	Delineates distinctiveness of social value measurement, pointing toward how and to what extent individuals and groups perceive and realize subjective changes from interactions with organizations.				X				X	
Benjamin, 2013	Explores the role of beneficiaries in the nonprofit accountability environment.								X	
Benjamin & Campbell, 2015	Explores what drives performance in nonprofits. Shows how frontline staff work in a partnership with clients set an agenda for change and achieve desired results.				X				X	
Cheng et al. 2014	Investigates whether superior performance on corporate social responsibility strategies leads to better access to finance.		X	X			X			
Costa & Pesci, 2016	Proposes a multiple-constituency approach to social impact measurement.								X	
Déjean et al. 2004	Studies how institutional entrepreneur in emerging industries use the development of measurement tools as a strategy to develop its own legitimacy and power. If focuses on how the development of measurements of social responsibility is central to understanding the development of socially-responsible investment.						X			

Dubey et al. 2017	Investigates how institutional pressures motivate organizations to shape performance measurement systems for sustainability benchmarking.				X		X		
Ebrahim et al. 2014	Examines the challenges of governance facing organizations that pursue a social mission through the use of market mechanisms.		X						
Ebrahim & Rangan, 2014	It proposes a performance assessment framework for organizations with social missions that are under growing pressure to demonstrate their impacts on pressing societal problems.							X	
Edmiston & Nicholls, 2017	Examines the effect of private social investment on outcome-based commissioning and whether alternative forms of performance measurement and management lead to innovation in service delivery; improved social outcomes; future cost savings; and additionality.			X	X	X			
Gamble et al. 2020	Examines and models the underlying continuum of business model integration (revenue model with social and environmental missions) in hybrid organizations. It shows a non-congruence with Certified B Corporation's audit results.		X						X
Gibbon & Dey, 2011	Discusses how social accounting and audit change as social organizations scale-up, which leads them to quantify and express social value creation, make comparative assessments of social value and use financial proxies.	X							
Grewal et al. 2019	Examines the reaction to nonfinancial performance and disclosure.		X				X		
Grieco et al. 2015	Explains how the assessment of social impact plays a strategic role in helping social organizations understand to what extent their social mission has been accomplished.		X	X					
Grimes, 2010	Looks at funding relationships within the social sector and explains how organizations within the social sector employ performance measurement not just as a means of accountability, but also as a tool for making sense of social entrepreneurship as an organizational identity.					X			
Hall et al. 2015	Examines changes underpinning managers' prioritization of stakeholders and focus on how managers' attention to salient stakeholders influences the development of Social Return on Investment (SROI)							X	
Ioannou &	Explores the impact of sustainability ratings on sell-side analysts'					X			

Serafeim, 2015	assessments of firms' future financial performance.								
Kroeger & Weber 2014	Explores appropriate methodologies to quantify and compare social value creation.			X					
Lall, S. 2019	Examines how social enterprises interact with social finance organizations in the context of impact measurement. Shows how social enterprises embrace impact measurement as a tool for organizational learning, and social finance organizations develop more empowering approaches for impact measurement.	X				X			
LeRoux & Wright, 2010	Explores increased pressures faced by nonprofits for accountability and performance, both from their funding entities as well as the public. Focuses on the extent to which reliance on various performance measures improves strategic decision making within nonprofit organizations.		X		X				
Maas & Liket 2011	Analyzes and categorizes contemporary social impact measurement methods, which have been developed in response to the changing needs for management information resulting from increased interest of corporations in socially responsible activities.			X	X	X		X	
Molecke & Pinkse, 2017	Investigates how social entrepreneurs handle the increasing pressure to measure social impact with formal methodologies.				X	X	X	X	
Moroz & Gamble, 2020	Examines the varying journeys and certification motivations of B Corps, in relation to their business models.	X		X			X		X
Moroz et al. 2018	Examines the lifecycle of Certified B Corporations and its relation to the entrepreneurial journey.		X	X					X
Muñoz et al. 2018	Looks at how B Corp certified organizations influences the formalization of organizational purpose in new sustainable ventures.			X					X
Muñoz Kimmitt, 2019	Explains how policy agents and investors can better assess and prioritize social issues and target groups and subsequently guiding policy decisions regarding investment allocation on social economy enterprises; and how such processes impact formalization and accountability decisions in new social ventures.				X	X			
Ormiston & Seymour 2011	Explores the significance of aligning mission, objectives and strategy with impact measurement in social entrepreneurship.		X						
Parker et al. 2019	Investigates impact of B Lab certification on the short-term growth rates of certifying firms.		X	X					X

Rawhouser et al. 2019	Develops a typology of four approaches to conceptualizing social impact, in relation to outcomes and activities.	X	X			
Thomson, 2010	Explains why funders' outcome reporting mandates affect the extent of outcome measurement among nonprofits.			X		
Wilburn & Wilburn, 2013	Discusses the role of B Lab and B Corps in providing the models necessary for a shift to a focus on the double bottom line: profit and social benefit. It focuses on the role of their performance assessment program, ratings agency and analytics platform.	X	X			X

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