



# Conceptualizing and operationalizing the social entrepreneurship construct<sup>☆</sup>

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## ABSTRACT

Addressing the need for conceptualization and operationalization of the social entrepreneurship construct, we propose a behavioral measure of social entrepreneurship orientation (SEO). We build on past qualitative work within the social entrepreneurship literature that contextualizes the behavioral entrepreneurship concept, and draw upon the emergent effectuation theory that captures entrepreneurial behavior in resource-constrained contexts. After surveying 507 U.S.-based social purpose organizations, we offer five dimensions of SEO: *innovativeness*, *proactiveness*, *risk management*, *effectual orientation*, and *social mission orientation*. We also find support for SEO's nomological validity, observing a positive influence on social innovation. We discuss limitations and implications of our measure to future research in social-entrepreneurship-led social value creation.

## 1. Introduction

The increasing recognition of social purpose organizations' (SPOs') contribution to economic and societal wellbeing is fueling academic, practitioner, and policy planner interest in social entrepreneurship (SE) and resulting impact on social value creation (Bacq & Janssen, 2011; Lurtz & Kreutzer, 2017). The literature on SE-led social value creation is growing. However, the broad inclusiveness of SE which currently accommodates all activities with some element of social value creation creates challenges for demarcating the construct's conceptual boundaries (Leadbeater & Goss, 1998; Shaw & Carter, 2007), and contributes to a definitional ambiguity of the SE construct (Bacq & Janssen, 2011; Short, Moss, & Lumpkin, 2009), thereby hindering advancement of the field. Broadly, the SE field is seemingly in a pre-paradigmatic stage (Nicholls, 2010), comprising less sophisticated methodologies, predominantly using success stories of social entrepreneurs (Lepoutre, Justo, Terjesen, & Bosma, 2013), and lacking novel datasets and explanatory/quantitative enquiries (Short et al., 2009).

In a positive development, researchers advocate using established theoretical lenses from fields such as management and entrepreneurship to advance SE (Dacin, Dacin, & Tracey, 2011; Short et al., 2009). However, such efforts must be contextualized, capturing the complexity and uniqueness of SE (Shaw & Carter, 2007; Steyaert & Dey, 2010), since SE differs substantially from commercial entrepreneurship (Lurtz

& Kreutzer, 2017).

Past attempts to conceptualize and operationalize SE focus on what social entrepreneurs do; however, research capturing the core characteristics of SE remains scant. SE researchers have used the firm behavior framework of entrepreneurship (Mair & Martí, 2006; Weerawardena & Sullivan Mort, 2006) adapted from commercial entrepreneurship theory (Covin & Slevin, 1991). Particularly, Weerawardena and Sullivan Mort (2006) contextualize this framework through qualitative work, proposing a constrained optimization framework of SE whereby social entrepreneurs, in addition to displaying conventional behavioral characteristics, display characteristics that capture the SE context. Similarly, the effectuation framework (Saravathy, 2001) seems suitable to capture entrepreneurial behavior in resource-constrained environments as normally evident in SPOs (VanSandt, Sud, & Marmé, 2009).

Building upon these developments, we propose *social entrepreneurship orientation* (SEO) construct as an organizational behavioral orientation displayed by SPOs in their strategic decisions. We conceptualize SEO as comprising behavioral characteristics of *innovativeness*, *proactiveness*, *risk management*, *social mission orientation*, *sustainability orientation*, and *effectual orientation*. We test our measure using a two-stage design in a survey of 507 U.S.-based SPOs, and validate the measure with social innovation which signifies social value creation (Weerawardena & Sullivan Mort, 2006, 2012).

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Adding empirical support for the proposed measure, the study advances the SE field in several ways. First, it proposes a set of core dimensions that capture the uniqueness of the SE construct. Second, it finds a middle ground between the currently advocated view of using theories from other fields, and the need to address the uniqueness of SE for advancing the field. Accordingly, the approach here builds on past research that captures the unique SPO context, while being consistent with the multi-dimensional view of SE. The study therefore attempts to advance the SE field beyond its purported pre-paradigmatic state. Third, we develop measures for key constructs, simultaneously addressing the need for building new datasets and adopting explanatory/quantitative approaches. Finally, our work will guide researchers to move beyond the definitional ambiguity of the SE concept and test comprehensive models of SE-driven social innovation-based value creation.

The paper begins with a review of past attempts to conceptualize SE, then outlines the proposed conceptualization of SEO followed by a step-by-step approach to operationalize the construct. Following these sections, we validate the SEO measure with social innovation. The final section discusses the implications of the research findings to theory, practice and future research.

## 2. Literature review

### 2.1. Attempts to conceptualize and operationalize SE construct

Over the years, attempts to define the SE construct have grown, mostly discussing what social entrepreneurs do, such as undertaking social innovation (Bacq & Janssen, 2011) and exploiting opportunities to create social wealth (Mair & Martí, 2006), with limited research identifying what constitutes the SE construct. However, some notable attempts exist. For example, Lurtz and Kreutzer (2017) offer a conceptualization of non-profit entrepreneurial orientation at the organizational level. Using a case study design, they highlight two new dimensions apart from innovativeness, proactiveness, and risk-taking behaviors of conventional entrepreneurship. First, social risk-taking denotes decision making within high uncertainty whereby social entrepreneurs seek to take low risks given their accountability to donors. Financial risk-taking is almost non-existent, suggesting a risk-averse organizational culture for handling monetary resources, consistent with previous research (Weerawardena & Sullivan Mort, 2006). Second, collaboration with corporations is seen as crucial to attracting resources for facilitating social mission fulfillment.

Some researchers examine the entrepreneurial characteristics of corporations that undertake social value creation. This stream of literature, broadly cited as *corporate social entrepreneurship* (Austin & Reficco, 2005; Austin, Stevenson, & Wei-Skillern, 2006), is purportedly an extension of corporate social responsibility (CSR) initiatives (Austin & Reficco, 2005) and/or corporate philanthropy activities (Porter & Kramer, 2002). The underlying premise is that generating social outcomes besides economic outcomes enhances stakeholder appeal, thereby establishing a firm's long-run sustainability (Austin & Reficco, 2005). The literature examines social value creation formats such as charitable donations (Altınay, Sigala, & Waligo, 2016), sustainability-oriented innovations (Spitzeck, Boechat, & França Leão, 2013), and commercial and social enterprise alliances (Ghauri, Tasavori, & Zaefarian, 2014). Kuratko, McMullen, Hornsby, and Jackson (2017) pilot test a corporate social entrepreneurship scale by augmenting and adapting their commercial entrepreneurship scale (Kuratko, Hornsby, & Covin, 2014). They propose stakeholder salience, social proactiveness, corporate governance, and transparency as additional dimensions of corporate social entrepreneurship. A limitation of this conceptualization is the inadequacy of some dimensions to capture the SE context. While corporate social value creation initiatives are popular in the literature, these initiatives do not provide a meaningful dimension to conceptualize the SE construct. These initiatives are subsumed within

the ultimate commercial mission, thus falling outside the social mission focus that represents the SE field's conceptual boundary (Dacin et al., 2011).

Some researchers suggest *community engagement* as a feature of SE since community engagement facilitates resource acquisition (Kodzi, 2015) and social innovation (Ishigaki & Sashida, 2013). However, community engagement is not unique to SPOs as for-profit firms also undertake community engagement initiatives through CSR programs (Morsing & Schultz, 2006). Although community engagement (orientation) facilitates social value creation, this facet is perhaps reflected by the social mission dimension which essentially entails engaging with targeted communities.

Similarly, the multi-dimensional SE frameworks by Weerawardena and colleagues (Sullivan Mort, Weerawardena, & Carnegie, 2003; Weerawardena & Sullivan Mort, 2006) contribute towards conceptualizing and contextualizing SE. They argue that commercial behavioral entrepreneurship theory provides valuable input, though remains inadequate to capture the unique characteristics of SE (Weerawardena & Sullivan Mort, 2006). They conceptualize SE as multi-dimensional, whereby social entrepreneurs, similar to for-profit counterparts, display behavioral characteristics of *innovativeness*, *proactiveness*, and *risk management*. However, social mission, the need for long-term viability and environmental dynamics constrain/shape these behaviors. Initially they proposed the 'expression of virtuous behavior' as a dimension of SE (Sullivan Mort et al., 2003), but their subsequent field work (Weerawardena & Sullivan Mort, 2006) offers a more pragmatic market-driven SPO behavior of creating social value through income-generating strategies, instead of relying exclusively on philanthropic funding. Here, they replace the characteristic of 'virtuous behavior' with a more pragmatic and inclusive construct of 'social mission'. They also replace 'risk-taking behavior' with 'risk management' to reflect the SPO's emphasis on assessing financial viability of all projects irrespective of the potential social impact. Despite its significance, this framework is yet to be empirically examined.

### 2.2. Effectuation approach to entrepreneurship

Effectuation (Sarvasvathy, 2001) represents entrepreneurial behavior in resource-constrained environments where entrepreneurs (effectuators) maximize the use of resources at-hand such as abilities, expertise and networks. Goals are not predetermined, instead, evolve over time based on available means and entrepreneurial imagination. Effectuation departs from a conventional 'planned' approach of targeting predetermined goals with most-efficient strategies (Sarvasvathy, 2001).

Effectuation adequately captures entrepreneurial decision-orientation across resource-constrained contexts such as start-ups (Chandler, DeTienne, McKelvie, & Mumford, 2011), born-globals (Andersson, 2011), innovation at small firms (Berends, Jelinek, Reymen, & Stultiens, 2014), and marketing under uncertainty (Read, Dew, Sarvasvathy, Song, & Wiltbank, 2009). The assumed resource-constrained context of effectuation is similar to that afflicting SPOs. While commercial firms access multiple (and perhaps steady) sources of funding, SPOs normally do not have such opportunities. For SPOs, funding sources such as donations and grants are becoming uncertain and demanding (Weerawardena & Sullivan Mort, 2006). Additionally, the non-distributive restriction on surpluses generated by nonprofit SPOs limits them from tapping into the same capital markets as commercial entrepreneurs (Austin et al., 2006). Similar to effectuators, social entrepreneurs actively engage in resource enhancement strategies such as internal collaboration, team building and, developing inter-organizational partnerships to overcome resource constraints (Weerawardena & Sullivan Mort, 2006).

## 3. Building the social entrepreneurial orientation (SEO) construct

SPOs are distinguishable from commercial organizations mainly due

to their social mission which guides all activities (McDonald, 2007). SPOs typically operate with increasing uncertainty and competition for funding, forcing them to adopt an entrepreneurial posture in their strategic initiatives for achieving competitiveness and viability (Dees, 1998; Weerawardena & Sullivan Mort, 2012). Such posturing is evident across the social sector where SPOs are moving away from conventional philanthropic funding to earned-income-generating activities.

Consistent with the behavioral entrepreneurship theory (Covin & Slevin, 1991), our proposed SEO construct represents an organizational level strategic entrepreneurial posture. SEO represents a *behavioral* orientation since behaviors rather than attributes give meaning to the entrepreneurial process (Covin & Slevin, 1991). This perspective allows reliable measurement of SEO, thereby permitting its management (Covin & Slevin, 1991), while overcoming the limitations of individual traits-based views of entrepreneurship.

Building on the behavioral SE framework (Weerawardena & Sullivan Mort, 2006), we propose that SPOs in their strategic decision-making display *innovativeness*, *proactiveness*, *risk management*, *social mission orientation*, and *sustainability orientation*. Collectively, these characteristics represent a six-dimensional construct. While the entrepreneurship literature extensively discusses the first three dimensions, we add *social mission orientation* differentiating SE from commercial entrepreneurship (Austin et al., 2006; Shaw & Carter, 2007). The proposed *sustainability orientation* dimension captures an SPO's orientation to build an economically viable organization that will help sustain the social mission over time (Weerawardena, McDonald, & Sullivan Mort, 2010). While we derive these five dimensions from prior qualitative research (Weerawardena & Sullivan Mort, 2006, 2012), we augment our conceptualization with *effectual orientation* (Sarasvathy, 2001) as the sixth dimension. An effectual orientation not only reflects the resource-constrained context of SEOs, but also the social entrepreneurial tendency to create social value for targeted communities by overcoming resource limitations (Weerawardena et al., 2010).

### 3.1. Proposed SEO dimensions

Our working definition of SEO is 'a strategic behavioral orientation expressed through the characteristics of *innovativeness*, *proactiveness*, *risk management*, *effectual orientation*, *social mission orientation*, and *sustainability orientation*, aimed at resolving social market failures and creating greater social value to maximize social impact'.

*Innovativeness* reflects a tendency towards continually developing and promoting novel ideas/solutions to social needs, and new ways of marketing, raising funds, and influencing government, while departing from conventional approaches (Weerawardena et al., 2010; Weerawardena & Sullivan Mort, 2006). *Proactiveness* reflects the tendency to actively scan the external environment, predict unexpected shocks, and prepare for future uncertainty. *Risk management* denotes a propensity for identifying risks, taking manageable risks, making cautious resource commitments, and stringent project planning before allocating funds to a project.

*Effectual orientation* reflects a behavioral tendency to astutely manage limited resources at hand for attaining an optimum solution. This definition encompasses behaviors such as managing potential losses, exploiting contingencies, developing strategies based on available resources, partnering with stakeholders and obtaining pre-commitments (Sarasvathy, 2001).

Addressing social needs is the *raison d'être* of social enterprises (Dees, 1998). *Social mission orientation* denotes a behavioral tendency of devotion to addressing social needs. Lastly, *sustainability orientation* entails a behavioral tendency for long-term survival and financial viability. For sustaining their social mission, SPOs need to remain viable. Financial sustainability thus represents a prerequisite for undertaking social projects (Weerawardena et al., 2010).

As the previously cited qualitative studies highlight, the outlined dimensions of SEO express an underlying behavioral orientation of

social entrepreneurs, thus likely sharing common variance. Accordingly, the proposed SEO construct is an underlying abstraction reflected by the six observable behaviors (George & Marino, 2011); hence, we conceive SEO as a second-order reflective construct comprising six first-order dimensions (Law, Wong, & Mobley, 1998). This conceptualization departs from an aggregate model where an overall construct represents a function of its dimensions, and also a profile model where only a set of profiled dimensions is described (Law et al., 1998).

### 3.2. Conceptual boundaries of SEO

We now delineate what SEO does not represent. First, SEO does not represent individual traits/personality, such as passion for work, aggressiveness, daring or tenacity (Baum & Locke, 2004). Instead, SEO represents a behavioral tendency. Second, SEO neither reflects entrepreneurial intentions (Krueger, 1993), nor cognitions/beliefs (Haynie, Shepherd, Mosakowski, & Earley, 2010). Also, SEO is not a motivational variable that explains 'why' entrepreneurs act the way they do (Stevenson & Jarillo, 1990). That is, SEO is not a state-of-mind. In contrast, SEO denotes the 'how' of entrepreneurial behavior (Stevenson & Jarillo, 1990). SEO is not conceived as an outcome of entrepreneurial action. SEO represents a strategic posture displayed at the organizational level, and is therefore a likely antecedent of SE outcomes, such as social innovation and social value creation. Lastly, SEO requires the primacy of a social mission, which provides the conceptual boundary for our conceptualization.

### 3.3. Nomological validity

Assessing the impact of SE remains a challenge (Mair & Martí, 2006). In this context, the primary strategy for social value creation is *social innovation* (Weerawardena & Sullivan Mort, 2012), which we specify as a nomological outcome of SEO. Social innovation refers to the generation and implementation of new product/service ideas for addressing social problems. We also specify environmental variables as contextual covariates within SEO's nomological framework. *Environmental turbulence* reflects the degree to which social entrepreneurs perceive their external environment as complex, dynamic and unpredictable. Additionally, *institutional support structures* reflect perceptions of favorability of rules/regulations towards SPOs, national/local government support, support from financial institutions, access to finance, and ease of access to information/resources in the broader social economy (Nicholls, 2010).

## 4. Method

### 4.1. Key informant data

We collected data using an online self-administered survey of 507 key informants of U.S.-based non-profit organizations. The non-profit sector represents the "main world of the social entrepreneur" (Thompson, 2002, p.413), providing a valid context for our study. While scholars outline benefits of using multiple respondents (Kumar, Stern, & Anderson, 1993), within our task of capturing the behavioral characteristics of social entrepreneurs at the strategy formation level, we surveyed the senior management coalition such as CEOs, CFOs and CMOs. Senior management staff have specialized knowledge about a firm's operations, and are directly involved in strategy formation (O'Shannassy & Leenders, 2016). The data provided by such informants can be as valid as that obtained from multiple informants (Zahra & Covin, 1993).

The respondents are primarily female (Females = 61%) at senior-level positions. Around 41% of the informants are Directors and Department Heads, and 34% as CEO, CFO, CMO (non IT executives). Eight percent are Vice President (other than Operations), seven percent

are VP/Director of Operations, five percent are Technology/Operational Executive level staff, and five percent are Owners/Partners/Principals. Their level of self-assessed involvement in organizational decision-making (Kumar et al., 1993) is high (mean = 4.3 out of 5.0), suggests suitability as key informants. Lastly, 39% of the informants belong to the '55 to 64 years old' age-group, and 27% of the respondents are in the '45 to 54 years old' group, with adequate representation from other age groups as well.

Forty-four percent of the SPOs surveyed operate in Health and Human Services, 14% within Arts, Culture and Humanities, nine percent within Civil Rights and Community Development, five percent within Environment and Animals, four percent within international work, and 24% belong to the 'Other' category (Guidestar Directory of Charities and Non-profit Organizations, 2016). Such sector diversity enables greater generalizability of the findings (Short et al., 2009). An organization in our sample, on average, has 675 employees (95% confidence interval, CI: 508–852 employees), and has been operating for approximately 47 years (95% CI: 45–51 years), suggesting a sample comprising typically large and established SPOs.

## 4.2. SEO scale development

In developing the proposed SEO scale, we followed conventional guidelines (Clark & Watson, 1995; Hinkin, 1995; Netemeyer, Bearden, & Sharma, 2003), detailed below.

### 4.2.1. Item generation

Given the nascent state of SE theory, we used a mix of deductive and inductive approaches for item generation (Hinkin, 1995). We explicated (a priori) the six dimensions of SEO adapted from the literatures on SE (Weerawardena et al., 2010; Weerawardena & Sullivan Mort, 2006) and effectuation (Read et al., 2009; Sarasvathy, 2001). This approach provided a theoretical template—the six dimensions—for item generation in an SE context. Then using an inductive approach, we devised items of each dimension based on previous qualitative work with social entrepreneurs (Weerawardena & Sullivan Mort, 2006). We generated an initial pool of 31 items based on wording/expressions of senior decision-makers observed across these qualitative studies. We used a 5-point Likert Scale anchored at 'Strongly Agree' (5) to 'Strongly Disagree' (1) to measure the responses.

### 4.2.2. Item refinement

Considering the conceptual definitions, content validity was (re) evaluated, resulting in item revision/deletion. We removed repetitious items, balancing domain-sampling considerations with parsimony (short scales also tend to minimize response biases; Hinkin, 1995). We retained at least four indicators per dimension to avoid empirical modeling problems (Kline, 2016). We kept the measure manager-friendly (not overly long) since senior managers are generally time poor. We deleted three items and reworded some others, leaving 28 items.

### 4.2.3. Expert review

Three expert judges who are senior academics in the Management/Entrepreneurship areas at Australian and U.S.-based universities provided feedback on face validity of the 28 items. After consulting with the judges, we deleted two items, resulting in a final set of 26 items. Four items each operationalize innovativeness, proactiveness, risk management, and social mission orientation, whereas five items each measure effectual orientation and sustainability orientation. (The finalized items are reported in Table 2).

### 4.2.4. Pilot testing

We pilot tested the 26 items with 26 key informants who were similar to those in the main sampling frame. They provided written feedback on questionnaire content as well as item relevance/

redundancy (Netemeyer et al., 2003). Based on feedback, we reworded four items.

### 4.2.5. Pre-testing

We pre-tested the items with 124 key informants at U.S.-based SPOs to examine psychometric properties before the main study. We examined construct unidimensionality using a principal component analysis of items comprising each dimension. A single factor emerged in each case except for effectual orientation for which two items (i.e., 'We believe in undertaking pilot projects before fully implementing new programs', and 'On high social impact project, we take steps so potential losses are affordable') loaded on a separate factor. Removing either item one at a time offered a unidimensional measure of effectual orientation. We retained these items based on endorsement by the experts.

We observed convergent validity as corrected item-to-total correlations were in an acceptable range for innovativeness (0.45–0.55), proactiveness (0.58–0.71), risk management (0.54–0.72), effectual orientation (0.34–0.45), social mission orientation (0.55–0.73), and sustainability orientation (0.51–0.67). These correlations exceed the recommended 0.35 cut-off (Netemeyer et al., 2003), except for one item of effectual orientation, which was marginally below the cutoff at 0.34. We retained the item based on face/content validity (Netemeyer et al., 2003). For all unidimensional constructs, the corresponding item factor loadings exceeded 0.40 (Netemeyer et al., 2003).

The average inter-item correlations of the dimensions are between 0.26–0.58, considered acceptable (Clark & Watson, 1995). The Cronbach's Alpha ( $\alpha$ ) estimate for the six dimensions ranged from 0.64–0.85, indicating acceptable scale reliability. Effectual orientation's reliability ( $\alpha = 0.64$ ) though below 0.70, exceeds 0.60 which is acceptable in early phases of research (Sin et al., 2005).

Next, we affirm construct validity through well-fitting single-factor congeneric models (Jöreskog, 1971) of each dimension. For instance, social mission orientation ( $\chi^2(2) = 8.77, p < 0.05; CFI = 0.99$ ) and effectual orientation ( $\chi^2(5) = 4.10, p = 0.53$ ) reveal acceptable fit. All standardized item loadings exceed 0.50. Further, constraining the covariance between any pair of dimensions to 1.0 significantly worsens Chi-square relative to a freely-estimated model, suggesting discriminant validity (Anderson & Gerbing, 1988). For instance, innovativeness and proactiveness are statistically distinct ( $\Delta\chi^2(1) = 90.56, p < 0.01$ ), as are social mission orientation and sustainability orientation ( $\Delta\chi^2(1) = 165.67, p < 0.01$ ). Next, we present the results of the main study.

## 5. Results

### 5.1. Non-response and common method bias

We did not see indications of non-response bias through comparing the focal variables across early and late respondents. We took several steps to minimize the potential impact of common method bias (CMB). During questionnaire design, we split the questionnaire into sub-sections with brief introductions (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003), and used different scale types for measurement (e.g., SEO was measured with a Likert scale, whereas Social Innovation was measured with a Semantic Differential scale). We worded the items positively since negatively-worded items may confuse respondents (Netemeyer et al., 2003), potentially introducing systematic error. We also avoided hidden cues that potentially prime respondents towards a particular response, thereby contributing to CMB (Podsakoff et al., 2003).

Next, we empirically examined the potential incidence of CMB. First, using Harman's single factor test, we observed that the first factor (from an unrotated principal components analysis) explained only 25% of the total 63% variance, indicating little threat of CMB. Second, we conducted a marker variable analysis (Lindell & Whitney, 2001). We observed that the smallest positive correlation of the marker variable (i.e., respondents' use of public transport) with an observed variable

**Table 1**  
Descriptive statistics, bivariate correlations and validity estimates.

	Mean	S.D.	INV	PRC	RSK	EFF	SOC	SUS	PIN	SIN	ENV	ISS
Innovativeness (INV)	3.9	0.86	<b>0.66</b>									
Proactiveness (PRC)	3.8	0.92	0.40**	<b>0.80</b>								
Risk management (RSK)	3.9	0.80	0.32**	0.49**	<b>0.72</b>							
Effectual orientation (EFF)	3.6	0.70	0.55**	0.49**	0.52**	<b>0.59</b>						
Social mission orientation (SOC)	4.2	0.73	0.51**	0.38**	0.47**	0.55**	<b>0.71</b>					
Sustainability orientation (SUS)	4.2	0.71	0.40**	0.50**	0.63**	0.51**	0.51**	<b>0.72</b>				
Product innovation (PIN)	2.6	1.11	0.37**	0.36**	0.16**	0.30**	0.21**	0.21**	<b>0.89</b>			
Service innovation (SIN)	2.9	1.02	0.45**	0.35**	0.21**	0.36**	0.39**	0.25**	0.56**	<b>0.84</b>		
Environmental turbulence (ENV)	4.0	0.82	0.33**	0.12**	0.18**	0.25**	0.19**	0.13**	0.10*	0.13**	<b>0.68</b>	
Institutional support structures (ISS)	2.8	0.80	0.19**	0.27**	0.17**	0.28**	0.18**	0.18**	0.27**	0.22**	−0.01 <sup>n.s.</sup>	<b>0.73</b>

Note: \* $p < 0.05$ ; \*\* $p < 0.01$ ; <sup>n.s.</sup>non-significant. S.D. is standard deviation. The square root of AVE is typed in bold italics.

was 0.09 ( $p < 0.05$ ); this estimate serves as a proxy of method variance. We partialled out this effect from the raw correlation matrix, comparing this adjusted matrix with our unadjusted correlation matrix. Most of the originally significant inter-item correlations remained statistically significant post adjustment, indicating that these results cannot be fully accounted for by CMB (Lindell & Whitney, 2001). Thus, CMB does not pose a serious threat.

## 5.2. Descriptive statistics

As Table 1 reports, the sampled SPOs are high in terms of innovativeness (mean = 3.9/5.0), proactiveness (mean = 3.8/5.0), risk management (mean = 3.9/5.0), effectual orientation (mean = 3.6/5.0), social mission orientation (mean = 4.2/5.0), and sustainability orientation (mean = 4.2/5.0). These high scores suggest high levels of entrepreneurial behaviors at SPOs (Weerawardena & Sullivan Mort, 2012). The correlations are mostly positive and significant, and no correlations seem threateningly high (refer to Table 1). The six SEO dimensions are moderately correlated, consistent with our higher-order conceptualization.

## 5.3. Measurement model analysis

A first-order confirmatory factor analytic measurement model yielded an adequate fit to data (Chi-square,  $\chi^2$  (695) = 1757.75 ( $p < 0.01$ ); CFI = 0.88; RMSEA = 0.055; SRMR = 0.060). Examining this model, we found two loadings below the 0.50 threshold. These loadings correspond to environmental complexity (i.e., ‘The social problems that we deal with are very complex’ (standardized loading = 0.40,  $p < 0.01$ ), and ‘The volunteers who support us have changing expectations’ (standardized loading = 0.49,  $p < 0.01$ ). We deleted these weak items, and re-estimated the model, observing an acceptable fit ( $\chi^2$  (620) = 1537.39 ( $p < 0.01$ ); CFI = 0.89; RMSEA = 0.054; SRMR = 0.055). The standardized first-order loadings (Table 2) were significant ( $p < 0.01$ ) and ranged from 0.50–0.90, indicating convergent validity.

The constructs demonstrated acceptable reliability as Cronbach's Alpha (internal consistency) and Composite Reliability estimates exceeded 0.70 (refer to Table 2). We also observed discriminant validity. As Table 1 reports, the square root of average variance extracted (AVE) for every construct exceeded its correlation with other constructs (Fornell & Larcker, 1981). Next, constraining the covariance between any pair of constructs to 1.0 significantly inflates the Chi-square relative to an unconstrained model. For example, social mission orientation was statistically distinct from effectual orientation ( $\Delta\chi^2$  (1) = 139.23,  $p < 0.01$ ) and sustainability orientation ( $\Delta\chi^2$  (1) = 165.67.00,  $p < 0.01$ ); product and service innovation were also statistically distinct ( $\Delta\chi^2$  (1) = 15.67,  $p < 0.01$ ).

## 5.4. SEO measurement model

We estimated the hypothesized six-dimensional (second-order) model SEO, and observed a significant Chi-square ( $\chi^2$  (293) = 1061.95 ( $p < 0.01$ ). Given the Chi-square's sample-size sensitivity, we examined alternative indices of fit. These indices (CFI = 0.87; RMSEA = 0.072) suggested less than adequate fit, though not necessarily a poor fit. The standardized second-order loadings were significant ( $p < 0.01$ ); innovativeness ( $\beta = 0.72$ ,  $p < 0.01$ ), proactiveness ( $\beta = 0.68$ ,  $p < 0.01$ ), risk management ( $\beta = 0.78$ ,  $p < 0.01$ ), effectual orientation (standardized loading,  $\beta = 0.86$ ,  $p < 0.01$ ), social mission orientation ( $\beta = 0.78$ ,  $p < 0.01$ ), and sustainability orientation (standardized loading,  $\beta = 0.87$ ,  $p < 0.01$ ).

To derive a better fitting model, we empirically compared the hypothesized six-dimensional SEO model with rival five-dimensional models (i.e., Model M1 to Model M6) that excluded one dimension at a time. Table 3 reports the measurement model comparisons. We used the indices of AIC, CAIC, BIC and ECVI for non-nested model comparisons. A model with the smallest value of these indices is considered better, and most likely to replicate (Kline, 2016). We observed that Model M1 (that excluded the sustainability orientation dimension) performed better than other models. Therefore, we accepted this five-dimensional model as our final measure of SEO, comprising the dimensions of innovativeness ( $\beta = 0.75$ ,  $p < 0.01$ ), proactiveness ( $\beta = 0.67$ ,  $p < 0.01$ ), risk management ( $\beta = 0.70$ ,  $p < 0.01$ ), effectual orientation ( $\beta = 0.92$ ,  $p < 0.01$ ), and social mission orientation ( $\beta = 0.78$ ,  $p < 0.01$ ).

## 5.5. Nomological validity

Using the final SEO construct, we estimated a structural model with social innovation specified as an outcome. We operationalized social innovation comprising ‘service’ and ‘product’ innovation as separate (first-order) dimensions. Further, we operationalized each type of innovation in terms of the number and degree of innovation (Weerawardena, 2003). The number dimension reflects the number of innovations introduced in the last five years, as captured by the item: ‘Service innovations introduced by our organization during the last five years have been...’ anchored at Very limited (1) to Extensive (5). The degree of innovation reflects the degree of innovativeness associated with the innovation, as captured by the item: ‘Service innovations have been mainly...’ anchored at incremental; marginal improvements to existing products/services (1) to radical; radical changes to existing products/services (5). Table 2 reports the scale items. Additionally, we specified organizational age (in years) and size (number of employees) as additional covariates. We measured environmental complexity and institutional support structures using four items each measured on a 5-point Likert scale derived from the literature.

The structural model achieved adequate fit:  $\chi^2$  (544) = 1304.84 ( $p < 0.01$ ); CFI = 0.89; RMSEA = 0.053). Social innovation was measured significantly by its two aspects, product innovation

**Table 2**  
Reliability and validity estimates.

Constructs and items	Standardized loading	Cronbach's Alpha	CR <sup>a</sup>
<i>Innovativeness:</i>		0.75	0.75
We look for new ways of delivering social outcomes.	0.72**		
We look for innovative ways of marketing our services.	0.65**		
We look for new ways of working with outside agencies like government agencies, businesses or other non-profits.	0.63**		
We seek novel ways of fundraising.	0.62**		
<i>Proactiveness:</i>		0.87	0.88
We engage in forecasting to avoid surprises.	0.84**		
We consider it important to be ready for future unexpected events.	0.80**		
We engage in financial modeling to prepare for the future.	0.80**		
We actively monitor external forces affecting us.	0.76**		
<i>Risk management:</i>		0.81	0.81
We always engage in managing risks associated with our projects.	0.80**		
We will not undertake a project without considering associated costs and benefits.	0.75**		
We will commit resources to a project only when assured of funding to cover the cost.	0.66**		
We have a cautious approach to making resource commitments.	0.66**		
<i>Effectual orientation:</i>		0.72	0.73
On high social impact projects, we take steps so potential losses are affordable.	0.71**		
In designing new services, we see the value in partnering with clients/beneficiaries.	0.67**		
We believe in shaping our destiny using whatever means at our disposal.	0.53**		
We believe it is important to get funding pre-commitments from our donors when undertaking new projects.	0.53**		
We believe in undertaking pilot projects before fully implementing new programs.	0.50**		
<i>Social mission orientation:</i>		0.80	0.80
Our philosophy guides everything we do in the organization.	0.77**		
We often ask ourselves - 'How is this activity achieving the purpose of the organization?'	0.73**		
We are deeply committed to creating social value.	0.71**		
Whatever surplus funds we generate are re-invested towards fulfillment of the mission.	0.63**		
<i>Sustainability orientation:</i>		0.81	0.81
We always seek to balance mission and financial viability in the organization.	0.81**		
Our organization closely manages costs.	0.70**		
We seek sustainable sources of income to remain viable.	0.69**		
Long term survival is always a top priority.	0.66**		
<i>Service innovation:</i>		0.82	0.83
Service innovations introduced during the last five years.	0.87**		
Service innovations have been mainly (incremental vs. radical).	0.81**		
<i>Product innovation:</i>		0.88	0.88
Product innovations introduced during the last five years.	0.90**		
Product innovations have been mainly (incremental vs. radical).	0.88**		
<i>Environmental complexity:</i>		0.75	0.77
The economic conditions impacting non-profits are becoming increasingly uncertain.	0.78**		
Charitable funding is becoming highly unpredictable.	0.75**		
There is increasing competition for government funding.	0.64**		
Government regulations for non-profits are always unpredictable.	0.50**		
<i>Institutional support structures:</i>		0.81	0.82
Local and national governments have special support programs for social purpose organizations.	0.76**		
There are sufficient institutional support structures to assist social purpose organizations.	0.74**		
There is adequate information available on social needs that need to be addressed.	0.74**		
We have access to sufficient resource support from financial institutions.	0.67**		

\*\*  $p < 0.01$ .

<sup>a</sup> CR is composite reliability.

**Table 3**  
SEO model comparisons.

Model name	Model compared	$\chi^2$ (df)	CFI	RMSEA	AIC	CAIC	BIC	ECVI	Change ( $\Delta$ ) in $\chi^2$ and df relative to the hypothesized model
Hypothesized model	SEO 6-dimensional model	1061.95 (293)	0.87	0.072	1177.95	1481.21	1423.21	2.33	–
Model M1	SEO model excluding Sustainability Orientation	624.29 (184)	0.90	0.069	718.29	964.03	917.03	1.42	$\Delta \chi^2 = 437.66$ $\Delta df = 109$
Model M2	SEO model excluding Effectual Orientation	761.14 (184)	0.88	0.079	855.14	1100.88	1053.88	1.69	$\Delta \chi^2 = 300.81$ $\Delta df = 109$
Model M3	SEO model excluding Social Mission Orientation	740.60 (204)	0.88	0.072	838.60	1094.80	1045.80	1.66	$\Delta \chi^2 = 321.35$ $\Delta df = 89$
Model M4	SEO model excluding Innovativeness	699.36 (204)	0.90	0.069	797.36	1053.56	1004.56	1.58	$\Delta \chi^2 = 362.59$ $\Delta df = 89$
Model M5	SEO model excluding proactiveness	839.82 (204)	0.86	0.078	937.82	1194.02	1145.02	1.85	$\Delta \chi^2 = 222.13$ $\Delta df = 89$
Model M6	SEO model excluding risk management	710.52 (204)	0.89	0.070	808.52	1064.72	1015.72	1.60	$\Delta \chi^2 = 351.43$ $\Delta df = 89$

Note:  $\chi^2$  refers to the Chi-square estimate;  $df$  refers to degrees of freedom.

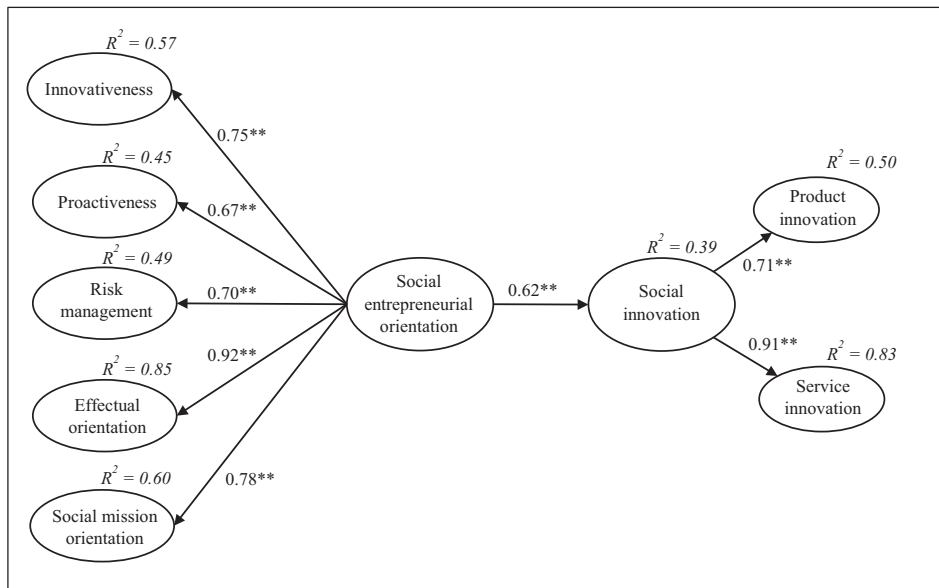


Fig. 1. Social entrepreneurial orientation and social innovation: Focal parameter estimates.  
Note: \*\* $p < 0.01$ .  $R^2$  denotes the variance-explained.

( $\beta = 0.71$ ,  $p < 0.01$ ), and service innovation ( $\beta = 0.91$ ,  $p < 0.01$ ). Also as expected, we observed nomological validity as SEO significantly predicted social innovation ( $\beta = 0.62$ ,  $p < 0.01$ ), explaining 39% of its variation (refer to Fig. 1).

## 6. Discussion

In addressing the need for conceptualizing and operationalizing the SE construct, we build on the behavioral model of SE (Weerawardena & Sullivan Mort, 2006) that explicates the characteristics of SPOs, their operating environment, and delivery of social value, thereby enabling more quantitative explanations of SE-led social value creation. Through the present study, we capture the unique context within which SPOs operate (Steyaert & Dey, 2010), simultaneously addressing the need for building new datasets and adopting explanatory/quantitative approaches for measuring SE.

We conceptualized SEO as comprising six dimensions: *innovativeness*, *proactiveness*, *risk management*, *effectual orientation*, *social mission orientation*, and *sustainability orientation*. However, our analysis supports a five-dimensional measure of SEO excluding sustainability orientation. Effectual orientation emerges as the strongest dimension. Thus, the tendency of SPOs to work with limited means to achieve optimum outcomes represents the strongest indicator of SE activity, supporting the view that the increasingly turbulent operating environment forces SPOs to adopt an entrepreneurial posture (Weerawardena & Sullivan Mort, 2006). Consistent with earlier work (Weerawardena & Sullivan Mort, 2006), social mission orientation emerges as the second-strongest dimension. This finding reinforces the view that attaining social goals is central to social entrepreneurship (Dees, 1998). Interestingly, the emergence of effectual orientation as the strongest dimension of SEO overtaking social mission complements the view that having an economically viable organization is a prerequisite to delivering greater social value to targeted communities. Innovativeness is the third-strongest dimension, suggesting that devising novel and value-adding approaches to addressing social needs is a pivotal aspect of socially entrepreneurial behavior. Risk management and proactiveness also emerge as comparable dimensions. This result suggests that proactive strategic planning is almost as important as managing project risks, also supporting the view of social entrepreneurs as ‘risk managers’ versus purely risk takers (Weerawardena & Sullivan Mort, 2006).

We did not find empirical support for sustainability orientation as one of the dimensions. This finding was surprising considering that the current operating environment requires social entrepreneurs to orient

towards building economically viable organizations for ongoing fulfillment of the social mission (Weerawardena et al., 2010; Weerawardena & Sullivan Mort, 2012). Perhaps other dimensions may better capture sustainability orientation. For example, *proactiveness* entails readiness for unexpected events and attempts at avoiding unexpected shocks. *Risk management* entails adopting a cautious approach to financial decision making. Similarly, *effectual orientation* entails using limited resources to achieve an optimum outcome; these facets may reflect long-term sustainability-oriented decision making.

Our sample of U.S.-based SPOs represents diverse organizations such as Health and Human Services, Arts, Culture and Humanities, Civil Rights and Community Development, and Environment and Animals. This diversity supports the generalizability of our findings (Short et al., 2009). Further, we observed that SEO significantly explains social innovation activity, explaining almost forty percent of its variance. Although testing with a performance outcome such as profitability seems useful, such measures may be inappropriate for measuring SPO performance given the complexity in capturing social value (Mulgan, 2010).

For practitioners, the findings facilitate delivery of social value to targeted communities. First, SEO is a behavioral construct that suggests that the entrepreneurship of any organization manifests through behavioral characteristics in their strategic decisions. Our approach departs from the belief that ‘social entrepreneurs are born, not made’ (British Council, 2015), a concept that does not accommodate the potential value of training entrepreneurs. As our approach suggests, any SPO can adopt an entrepreneurial posture in their strategic decision-making by displaying the examined characteristics, and SPOs can be trained to be socially entrepreneurial.

As our findings reveal, social entrepreneurs tend to pursue new ways of creating value for targeted communities, and in this effort, they must actively scan the external environment, predict unexpected shocks, and prepare for future uncertainty, use existing resources economically (use an effectual logic), plus be primarily driven by their social mission of creating social value for targeted communities.

Similarly, our measure of social innovation that captures the type (product and service) and the degree of innovation (encompassing incremental to radical innovations) provides valuable insights on innovation characteristics that contribute to social value creation. The Grameen Bank’s micro-financing scheme (service innovation) in Bangladesh is a radical innovation which is adopted globally for poverty alleviation. While radical social innovations are popular, SPOs cannot underestimate continuous incremental innovation, as

accumulated incremental innovation substantially contributes to SPO social value creation initiatives. As the literature suggests, SPOs, irrespective of their size, undertake incremental to radical social innovations (Weerawardena & Sullivan Mort, 2012). Our measure therefore informs practitioners about the scope of social innovation, enabling them to enhance social value creation.

## 7. Limitations and directions for future research

Our study has some limitations. First, we rely on self-reports of key decision makers as they are well-versed with organizational workings. Although using multiple respondents from an organization is potentially valuable, scholars highlight the complications in recruiting such respondents (Kumar et al., 1993). Second, our study is conducted in the US which is one of the highly-developed countries and future research is needed in economically less-developed countries, and countries known for the ‘base of the pyramid (BOP)’. Despite these limitations, our measure facilitates future research. First, broadly, our measure will encourage researchers to move towards more explanatory research using larger national/cross-national datasets. Second, our measure facilitates future research examining the constructs that mediate the relationship between SEO and social innovation, such as resources and capabilities that will facilitate social innovation. Finally, replications of our model across domains in which SPOs are currently active such as the public sector, social enterprises, social businesses, and public-private partnerships that address social problems will serve to advance the field.

## 8. Conclusion

We contribute to the social entrepreneurship field by providing a well-founded measure of the SE construct. We address this need that is fueled by the vital contribution social entrepreneurs make to society. Understanding what constitutes social entrepreneurship therefore will not only contribute to advancing social entrepreneurship research but also facilitate practitioners in the field. Most importantly, this research signals to future researchers to move beyond currently dominant small sample-based exploratory studies to more explanatory approaches using larger datasets. Overall, social entrepreneurship remains fertile for academic inquiry.

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