

Article

Sustainability, Transformational Leadership, and Social Entrepreneurship

Etayankara Muralidharan ^{1,*} and Saurav Pathak ²

¹ School of Business, MacEwan University, Edmonton, AB T5J 4S2, Canada

² College of Business Administration, Kansas State University, Manhattan, KS 66506, USA; sauravp@ksu.edu

* Correspondence: muralidharane@macewan.ca

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Abstract: This article examines the extent to which culturally endorsed transformational leadership theories (CLTs) and the sustainability of society, both considered societal level institutional indicators, impact the emergence of social entrepreneurship. Using 107,738 individual-level responses from 27 countries for the year 2009 obtained from the Global Entrepreneurship Monitor (GEM) survey, and supplementing with country-level data obtained from Global Leadership and Organizational Behavior Effectiveness (GLOBE) and Sustainability Society Foundation (SSF), our findings from multilevel analysis show that transformational CLTs and sustainability conditions of society positively influence the likelihood of individuals becoming social entrepreneurs. Further, the effectiveness of transformational CLTs matters more for social entrepreneurship when the sustainability of society is low, which suggests the interaction between cultural leadership styles and societal sustainability. This article contributes to comparative entrepreneurship research by introducing strong cultural antecedents of social entrepreneurship in transformational CLTs and societal sustainability. We discuss various implications and limitations of our study, and we suggest directions for future research.

Keywords: comparative entrepreneurship; multi-level modeling; social entrepreneurship; sustainability; transformational leadership CLTs

1. Introduction

Social entrepreneurship, which has been viewed as catalytic leadership, brings about social change geared to address societal concerns [1–3]. This form of entrepreneurship is gaining importance as a line of scholarly inquiry [4,5]. Specifically, research on social entrepreneurship has been gaining attention due its potential to address societal problems, such as global warming, social inequality, environmental degradation, population explosion, poverty, illiteracy, and other sustainability challenges [6–9]. While extant research has explored what contextual factors influence commercial entrepreneurship [10], their influence on social entrepreneurship warrants further research [6,11]. Further, while the challenge in contextualizing entrepreneurship is to make entrepreneurship theory more context specific [12] to understand the key determinants of entrepreneurial activity [13], the influence of external context particularly on social entrepreneurship is an under-researched area [6,14].

Our study explores the role of cultural expectations about ideal leadership and sustainability of society, both societal institutional indicators, in influencing social entrepreneurship. Societies differ in the way they view ideal leadership, i.e., “in the attributes, motives and behaviors that they believe characterize outstanding leadership” [15] (p. 506). These societal or cultural leadership ideals are also called culturally endorsed implicit leadership theories, and are hereafter called CLTs [16]. Sustainability is concerned about the well-being of the individuals in society, the environmental eco-system in which they live, and the economy in which they participate (Sustainable Society Foundation, hereafter called SSF). The institutional definitions, as given by the World Commission on

Environment and Development (WCED), the International Institute of Environment and Development (IIED), and the World Business Council for Sustainable Development (WBCSD) stress the role of leadership in developing and implementing agendas for sustainability, that in turn maximizes the goals of sustainable development of society. So, given that any progress toward sustainable development requires active leadership [17], also objectives of social entrepreneurship, our specific question is ‘what is the specific role of leadership in the context of sustainability to predict social entrepreneurial behaviors?’.

We build on insights from institutional theory [18,19] to develop transformational CLTs (as informal institutions) and sustainability (as formal institutional conditions) as antecedents of individuals’ engagement in social entrepreneurship [20]. Institutional conditions of high human, environmental, and economic wellbeing (all indicators of sustainability, as defined by SSF) may be reflective of supportive governmental policies, regulations and rules [12]. For example, environmental taxation can be a key factor that influences environmental sustainability [21]. These conditions, we propose using the institutional support perspective [20], are conditions that are favorable for social entrepreneurs [22]. Further, we use the understanding of culture-entrepreneurship fit [23], to show that transformational CLTs, which are considered as informal institutions, facilitate social entrepreneurial behavior. In other words, social entrepreneurship will flourish in institutional contexts where leadership ideals align with entrepreneurial behaviors [15]. Using the institutional configuration perspective [20], we also propose that in conditions of low human, environmental, and economic wellbeing, reflective of deficiencies in formal institutions such as governmental policies, regulations and rules [12], there is a dependence on informal institutions (transformational CLTs) for social entrepreneurial activities [24].

Since the above institutional contexts cut across multiple levels, entailed theory needs to follow a multilevel perspective [12]. We develop a multilevel theoretical and empirical model that proposes both main and interactive effects of transformational CLTs and sustainability of societies on individual level social entrepreneurship. We add to literature examining the interface of leadership and sustainability [25]. Our findings add to the increasing scholarship that apply inputs from institutional theory to explore and understand phenomenon at the crossroads of business and society [26,27]. Our study also responds to recent calls for a greater consideration of the influence of context on entrepreneurship [12,22]. We contribute to literature in the following ways. First, we go beyond leadership effectiveness and styles of individuals, CEOs, and corporate firms [28], to examine if certain cultural leadership styles—perceived to be culturally shared and accepted stereotypes of effective leaders make individuals in those societies more prone to engage in social entrepreneurship. In particular, we investigate if cultural transformational leadership styles influence the individual-level likelihood of engaging in social entrepreneurship. The characteristics of transformational leadership are considered theoretically consistent in being able to induce socially responsible behaviors in general and social entrepreneurial behaviors in particular.

Second, research linking sustainability and socially responsible behaviors is of recent origin, including its link with social entrepreneurship. Sustainability oriented societies may play a salient role in shaping the social entrepreneurial behaviors of individuals in that society (SSF). Further, studies on sustainability as a broader concept examining financial, social, and environmental dimensions in an integrated manner are limited [29]. Third, research has yet to establish the dominant mechanisms through which sustainability of societies could seek to achieve its potential societal well-being. Does it operate in isolation or is it contingent upon other factors? In other words, to what extent does sustainability need to be reinforced by other prevailing institutions? Acts of leadership that are held closely and in great regard may propel a society’s drive to achieve human, environmental, and economic well-being. In this regard, we seek to investigate if transformational CLTs, which stresses on acts of leadership that are geared toward creating social good, provides for that reinforcement.

This article is structured as follows. In the next section, we discuss the backgrounds of social entrepreneurship, culturally-endorsed transformational leadership theories, and sustainability before deriving the hypotheses on main effects and interaction effects of transformational leadership and

sustainability on social entrepreneurship. We then introduce the sample and estimation methods, present results, and close with discussion, limitations, and conclusions.

2. Social Entrepreneurship

Social entrepreneurial behavior involves recognition, evaluation, and exploitation of opportunities to address the basic needs of societies [30]. Social entrepreneurship directly contributes to globally recognized sustainable development goals, and therefore offers inputs for socially accepted sustainable business practices [31]. Individuals who become social entrepreneurs partner self-motivation with the pursuit of goals to benefit society rather than solely benefiting themselves [32]. While definitions of social entrepreneurship emphasize the creation of social wealth over economic wealth as a differentiator between social entrepreneurs and commercial entrepreneurs, we examine from the perspective of 'total wealth maximization' by social entrepreneurs [33]. In practice, social entrepreneurship integrates economic and social value creation [5]. Examples of such initiatives are efforts of: Ashoka (<http://www.ashoka.org>), which was founded in 1980 to provide start-up funding for entrepreneurs with a social vision; activities of Grameen Bank (<http://www.grameen-info.org>), which was founded in 1976 to empower women and eradicate poverty in Bangladesh; and, the use of arts to develop community programs in Pittsburgh by Manchester Craftsmen's Guild (<http://www.manchesterguild.org>). Total wealth standard, as proposed by Zahra et al. [33], accounts for both social and economic dimensions of social entrepreneurship and also for social value that is created by commercial entrepreneurship.

Social entrepreneurs are identified by the GEM Social Entrepreneurship survey as individuals who respond "yes" to the following question: "Are you, alone or with others, currently trying to start or currently owning and managing any kind of activity, organization, or initiative that has a particularly social, environmental, or community objective?" Social value creation, for such entrepreneurs, involves solving and fulfilling the basic needs of society, such as food, shelter, education, and basic health and hygiene services. A social mission is central to social entrepreneurs. It affects the way these individuals perceive and assess opportunities in society. They develop their enterprises based on a community-oriented vision shared with the members of their community and stakeholders of the enterprise. The underlying motivation for social entrepreneurial activity is to create social value rather than personal and shareholder wealth [34]. Such activities can occur within or across business, non-profit, or government sectors [30].

Social entrepreneurship, like any form of entrepreneurship, is fundamentally an individual-level behavior [35]. Further, we can infer that entrepreneurial behaviors are performed by individuals who are embedded in a wider sociocultural context [36,37]. Therefore, it is appropriate that social entrepreneurial behavior be examined in the context in which individuals exist in societies, as contextual factors may facilitate or constrain the emergence of social entrepreneurship [38]. By using inputs from institutional theory to understand social entrepreneurship, we can generate new insights for both social entrepreneurship and institutional theory [22,39]. In developing our institutional framework, we consider both formal and informal institutional antecedents to predict social entrepreneurship [20]. In line with the objectives of this study, we specifically examine social entrepreneurship in leadership and sustainability contexts as institutional indicators.

3. Transformational CLTs

We first discuss the general idea of implicit leadership theories (hereafter called ILTs), of which transformational CLTs are a type. ILTs are considered as informal institutions that legitimize behaviors, attributes, and motivations of leaders, and these theories influence individuals' preferences in terms of who they will accept and categorize as leaders [40,41]. Followers' perceptions of a leader are embedded in the society's cultural values. These values are outcomes of repeated behaviors that shape the cultural expectations of ideal leadership, and leaders tend to behave in line with these expectations [42]. In other words, individuals are more likely to emerge as successful leaders if they demonstrate traits that are consistent with the ILTs held by followers [43].

ILTs are culturally shared and vary across countries. Therefore, different types of leaders emerge depending on how strongly certain ILTs are culturally endorsed. CLTs are strongly influenced by societal-level cultural orientations [15,42]. Transformational CLTs, build on ILTs [41] and are therefore informal institutions because they refer to the individual's stereotypical ideas about the attributes and behaviors of effective leaders [44,45].

4. Sustainability

Sustainable development is defined by the United Nations World Commission on Environment and Development as a "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" [46]. This definition of the Brundtland Commission revolves around the 'needs' of the world's poor and the 'limitations' on the environment's ability to meet the needs of the present and the future, underlying the strong linkage among initiatives, such as poverty alleviation, environmental improvement, and social equitability through sustainable economic growth [47]. As per the SSF, sustainability conditions at the societal level include the three dimensions of human, environmental, and economic well-being, which facilitate or constrain the goals of sustainable development of society.

Sustainability is affected by governmental agencies and policies [48]. These are institutions or the underlying rules and structure that shape social, economic, and political transactions within society [49]. Key formal institutions are policy instruments that have a direct bearing on human behavior [50]. Strong formal institutions facilitate sustainability in society. Strong social policies in the form progressive tax structures, income-transfer programs, and wage setting institutions shape income distribution [51]. Strong economic and monetary policies provide environment for growth. Environmental policy integration with sustainability across policy sectors, such as finance, trade, energy, transport, etc., is essential for sustainable development in society [52]. Further, systemic policy instruments, such as market mechanisms (e.g., taxes on carbon) and educational policy reforms can facilitate sustainability [50]. Therefore, major impacts on sustainability conditions in a society are largely governed by formal institutions of the country [53].

5. Theoretical Framework and Hypotheses Development

Drawing on inputs from institutional theory, we can develop new insights for social entrepreneurship by exploring the factors that facilitate or constrain entry into social entrepreneurship [4,20,22]. Societal level institutions, which act as implicit guidelines for an individual's actions [54], refer to aspects of societal structure that facilitate or constrain behavior [18,19,55]. Formal institutions relate to explicit incentives and constraints arising from government regulations [19,56], the existence or the lack of it leads to institutional conditions that facilitate or constrain entrepreneurial activity [38]. Informal institutions, which are implicit, are socially constructed and culturally transmitted [20,57].

Entrepreneurial behaviors are performed by individuals who are embedded in a larger sociocultural context [36], which comprise formal and informal institutions [18]. Different disciplines conduct comparative entrepreneurship research based on specific institutions (formal or informal) chosen to influence entrepreneurship [58]. While comparative entrepreneurship research based on institutional economics explores formal institutions [6], research based on cross-cultural psychology explores informal institutions [20,59]. Studies examining joint effects of formal and informal institutions in comparative entrepreneurship research are limited [11,20]. Specifically, extant research has mainly examined the role of formal institutions in social entrepreneurship research [5,20,33,60].

In our proposed model (Figure 1), transformational CLTs is an important informal institution affecting the supply of potential social entrepreneurs. Using the understanding of culture entrepreneurship fit [23], we propose that individuals are likely to choose to become social entrepreneurs where CLTs fit with and are supportive of the motives and characteristics linked with social entrepreneurship. Informal institutions "shape and justify individual and group beliefs, actions, and goals" [61] (p. 139). Engaging in social entrepreneurship is one example. Societal sustainability reflects formal institutional

conditions of human, economic, and environmental wellbeing because they may be consequences of governmental policies, regulations, and rules [12]. Government activism is an important formal regulatory institution affecting social entrepreneurship [39]. High sustainability conditions, we propose using the institutional support perspective [20], are favorable for social entrepreneurs [22]. Finally, using the institutional configuration perspective, we propose joint effects of transformational CLTs (informal institution) and sustainability (formal institutional condition) to show in societies with low sustainability, transformational CLTs can enhance social entrepreneurial activity.

5.1. Transformational CLTs and Social Entrepreneurship

Social entrepreneurship has been viewed in terms of catalytic leadership to effect social change [62]. Using the key findings of Global Leadership and Organizational Behavior Effectiveness (GLOBE) studies, we classify culturally endorsed transformational leadership along the traits of being charismatic (or value based), being team oriented, and being humane [63–65], and propose that these traits that are culturally endorsed can be key to providing that catalytic leadership required in social entrepreneurs. The key behaviors of charismatic leaders are to provide a sense of mission, articulate an inspirational vision based on values, make followers feel good in their presence, and develop a strong regard in followers based on the leader's values and beliefs [66,67]. Such leadership based on self-concepts of followers may be relevant to social entrepreneurship [68,69]. These leaders motivate followers by presenting their vision in terms of the values that they represent. The follower's self-concept, becomes linked to these values and results in value internalization on the part of the follower [70–72]. Shamir et al. [68] suggested that self-concepts are composed, in part, of identities and transformational leaders help link one's identity with greater social causes. Transformational leadership values the interests of society over self-interest. [73].

Another key quality of transformational leadership required to effect social change is the ability to have people in society to work cooperatively to manage their own governance [74]. It is through effective team building processes that individuals in a society acquire the necessary knowledge (be it technical or cultural) that would help them to make more meaningful contributions to societal change [75]. Team participation also facilitates collective decision making that helps move away from a moral development process that is individualistic to an all-inclusive notion of morality [76]. Leadership that is team oriented therefore helps build a collaborative mind set and also develops values of team cohesiveness and more importantly develops common purpose or goals that are very important in social entrepreneurship [65]. Finally, transformational leaders intellectually motivate followers and pay attention to individuals [77,78]. This reflects the humane-oriented style that stresses compassion and concern for the well-being of others [65], which we infer as an important requirement of social entrepreneurs.

Using the understanding of cultural fit for the emergence of social entrepreneurial leaders [23], we propose that individuals are more likely to choose to become social entrepreneurs in societies where CLTs fit with the characteristics of social entrepreneurs and are supportive of the objectives of social entrepreneurship. These CLTs, we argue, capture the important aspects of entrepreneurial agency. In sum, transformational leaders may be effective at forming a collective identity based on appealing to values that go beyond the self-interests of individuals and appeal to the good of society. Accordingly, followers connect their identity with the greater good of society. Therefore, cultures that endorse transformational leadership provide the required context within which social entrepreneurs are likely to thrive. Hence:

Hypothesis 1 (H1). *Transformational CLTs is positively associated with individual-level social entrepreneurship.*

5.2. Sustainability and Social Entrepreneurship

As mentioned, earlier, sustainable development is defined as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” [46].

The key elements of sustainability are human wellbeing, environmental wellbeing, and economic wellbeing (SSF). They form the basis of the goals of social entrepreneurs i.e., achieving human and environmental well-being through economic well-being in society. Social entrepreneurs, through their social enterprises, combine economic and social goals, with the latter being part of their business models to address sustainable development problems in societies [79]. Therefore, it will be easy for social entrepreneurs to overcome challenges and obstacles that are associated with starting a socially-responsible enterprise, when there is institutional support from key stakeholders in society for their enterprises [80].

Sustainability is influenced by many societal stakeholders, the main being governmental agencies [48]. These form formal institutions, which are rules and structures that shape transactions within society [49]. Formal institutions, which typically are policy and regulatory instruments such as economic policies, environmental policies, and social policies, directly influence human behavior that lead to human wellbeing, environmental wellbeing, and economic wellbeing. Presence of policy initiatives that support the above pillars can lead to sustainability in societies, and is reflective of institutional support for those who drive social change agenda, i.e., social entrepreneurs.

The understanding of the institutional support perspective proposed by Stephan et al. [20] includes an institutional context in which formal institutions facilitates access to resources by social entrepreneurs, given that objectives of such entrepreneurs may be aligned with the overall goals of human, economic, and environmental wellbeing. From an economic and human wellbeing point of view strong government policies entail progressive tax structures and regulations meant to redistribute wealth and ensure adequate spending for the welfare of its citizens [81,82]. Similarly, educational programs and reforms, health care and reforms, and effective governance are hallmarks of systemic policies that drive sustainability [50]. While political institutions of societies provide security and material wellbeing for its inhabitants and economic institutions (banking, trading, and stock exchanges) facilitate economic growth, sustainable societies also have strong environmental policies that fit into the existing institutional arrangements [83].

So, in line with institutional support perspective, high sustainability conditions are appropriate contexts within which social entrepreneurs are likely to thrive. Such conditions help to support the legitimacy of social entrepreneurial ventures and also help entrepreneurs to get resources and other support required for setting up and running such enterprises. Hence:

Hypothesis 2 (H2). *Societal sustainability is positively associated with individual-level social entrepreneurship.*

5.3. Transformational CLTs, Sustainability, and Social Entrepreneurship

The influence of transformational CLTs builds on the understanding of leadership as “the nature of the influencing process—and its resultant outcomes—that occurs between a leader and followers and how this influencing process is explained by the leader’s dispositional characteristics and behaviors, follower perceptions and attributions of the leader, and the context in which the influencing process occurs” [84] (p. 5). The above suggests that leadership effectiveness may be contingent upon the context within which leadership behaviors are performed [85], and therefore suggests that boundary conditions exist in understanding the effects of transformational CLTs on social entrepreneurship.

Bringing about change in society is a key goal of social entrepreneurship. In societies where sustainability does not exist, leaders need to think of their roles through their various enterprises, to implement initiatives that pay heed for the world and its diverse environment [86]. Such leaders are transformational leaders that instill sustainability practices into the fabric of society and engage in social transformation through their social entrepreneurial agency. They “raise followers’ aspirations and activate higher order motives (of sustainability), such that followers identify with the leader and his or her mission/vision” [87] (p. 428). They, through their social entrepreneurial ventures, influence the orientation that brings about social change in followers [88]. We therefore suggest that the positive effects of the transformational CLTs on social entrepreneurship is stronger in societies where sustainability is low or non-existent.

Our observation draws insight from the institutional configuration perspective which recognizes that human action is shaped jointly by formal and informal institutions [20]. Sustainability context of a society is largely reflective of the strength of its formal institutions that drive economic, human, and environmental well-being. Transformational CLTs are informal institutions that represent culturally endorsed leadership traits in society. The social entrepreneurial process can be argued to be an outcome of the fit between the individual and opportunities in society [89]. These opportunities are considered as external enablers [90]. External enablers for social entrepreneurship are different from those of commercial entrepreneurship [91]. Enablers for social entrepreneurship are embedded in society, a context that differs from that of commercial entrepreneurs [92]. Examples of external enablers include changes in technology, consumer preferences, macroeconomic conditions, or other environmental characteristics assumed to exist independent of individual perception [93]. Economic, human, and environmental well-being, all of which are indicators of sustainability (SSF) can be considered as external enablers for transformational leaders, with a prosocial focus, to set up social enterprises. Low or lack of sustainability, a consequence of weak formal institutions, are conditions that such leaders can help change through their social enterprises. Therefore there is a dependence on informal institutions (culturally endorsed transformational CLTs) to address voids created by weak formal institutions (low sustainability) [24]. Hence:

Hypothesis 3 (H3). *The influence of transformational CLTs on individual-level social entrepreneurship is negatively moderated by societal sustainability, such that in societies with lower sustainability the influence of transformational CLTs on individual-level social entrepreneurship is higher.*

As discussed, entrepreneurial behaviors are performed by individuals who are embedded in a larger sociocultural context [36] and these levels interact with each other [94]. We attempt to examine the effect of societal level predictors of transformational CLTs and sustainability. To estimate the effect of these national-level predictors, analytical techniques are required to accurately account for individual- and group-level effects of such entrepreneurial behaviors [95]. We leverage the strength of a multilevel design to test a theoretical framework that estimates the effects of societal level predictors on entrepreneurial behavior [59]. Figure 1 summarizes the multilevel theoretical framework that we use to propose effects of transformational CLTs, sustainability, and their interplay on individual-level social entrepreneurship.

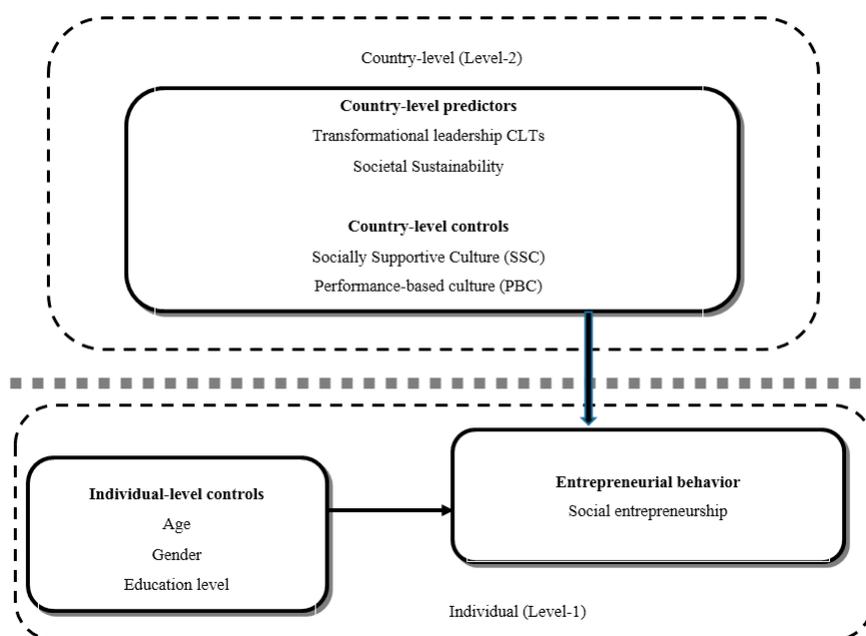


Figure 1. Theoretical framework.

6. Methodology

6.1. Data

Our hypotheses relate to the cross-level effects (i.e., the influence of country-level factors) on individual-level social entrepreneurship. We test: (1) the direct effects of culturally-endorsed transformational leadership theories (transformational CLTs) and societal sustainability (2), and the moderating effects of sustainability on the influence of transformational CLT on individual-level social entrepreneurship. The theoretical framework for the study accommodates two levels—individual-level (level-1) and country-level (level-2)—making it a multilevel framework, as depicted in Figure 1.

We analyzed survey data on 107,738 individual-level responses from 27 countries (countries being Argentina, Brazil, China, Colombia, Denmark, Ecuador, Finland, France, Germany, Greece, Guatemala, Hungary, Iran, Israel, Italy, Malaysia, Morocco, Netherlands, Russia, Slovenia, South Africa, South Korea, Spain, Switzerland, United Kingdom, United States, and Venezuela) for 2009, obtained from the publicly-available GEM survey [96], conducted by the Global Entrepreneurship Research Association (GERA). Since 1998, GERA has been collecting internationally harmonized individual-level data on entrepreneurial behaviors on an annual basis. GERA surveys representative samples of the adult working population (between 18 and 64 years of age) in each country surveyed. GEM offers one of the most comprehensive and harmonized data sets on international comparative data on individual-level entrepreneurial behaviors. GEM's operationalization of its survey can be found in Levie and Autio [97], Minniti, Bygrave, and Autio [98], and Reynolds et al. [96].

The 2009 adult population survey of GEM provided the first comprehensive data that used social entrepreneurship as a unique theme. The operationalization of individual-level social entrepreneurship was based on earlier pilot studies by GEM in such a manner that the survey questions were theoretically grounded in the social entrepreneurship literature [99]. Our data thus was for the year 2009.

We complemented the GEM database, which is comprised of individual-level responses, with data on country-level indicators of CLTs collected from the GLOBE survey [44] and sustainability from the SSF. We started the data-creation process with more than 80 countries that were included in the GEM dataset. However, country-level data from the aforementioned sources were not available for all of those countries. Therefore, we ended up with a dataset that had meaningful and usable information on 27 countries that were common to all data sources.

6.2. Dependent Variable

As per the GEM Social Entrepreneurship survey methodology [20], social entrepreneurs were identified as individuals (identified as = 1) who responded yes to “Are you, alone or with others, currently trying to start or currently owning and managing any kind of activity, organization or initiative that has a particularly social, environmental, or community objective?” as well as answered affirmatively that their primary reason for starting and owner-managing pertained to “any kind of activity, organization, or initiative that has a particularly social, environmental, or community objective” [33]. They were identified as one of the following three categories, (1) nascent entrepreneurs (defined as individuals who were active in the process of establishing a new firm during the preceding 12 months and who have expectations of full or part ownership, but have not yet launched) or (2) owner-manager of new firms (young firms who have survived for 3.5 years and have paid wages to any employees for more than three months) or (3) both (this is true if an individual is an owner-manager of a new firm as defined above and is also trying to start a separate firm). Individuals were identified as 0 otherwise, thereby making our dependent variable dichotomous in nature (i.e., it assumed a value of 1 if the individual responses were affirmative and a value of 0 otherwise). The operationalization of the dependent variable using the GEM data is shown in Appendix A [20]. The percentage rates of social entrepreneurship in each of the 27 countries in the sample set is shown in Table 1.

Table 1. Sample descriptives.

| Country | N | Social Entrepreneurship (%) ^a | Transformational Leadership CLTs | Sustainability |
|----------------|---------|---|-------------------------------------|----------------|
| Argentina | 1674 | 12.19 | 5.56 | 4.61 |
| Brazil | 2000 | 0.85 | 5.67 | 4.91 |
| China | 3405 | 5.93 | 5.44 | 4.86 |
| Colombia | 2030 | 10.59 | 5.72 | 5.14 |
| Denmark | 1999 | 17.96 | 5.31 | 6.46 |
| Ecuador | 2196 | 1.05 | 5.93 | 4.88 |
| Finland | 1988 | 7.60 | 5.36 | 6.39 |
| France | 1623 | 4.99 | 4.62 | 5.64 |
| Germany | 5844 | 2.69 | 5.26 | 5.81 |
| Greece | 1970 | 6.04 | 5.76 | 5.05 |
| Guatemala | 2132 | 2.81 | 5.65 | 5.63 |
| Hungary | 1964 | 5.96 | 5.52 | 5.88 |
| Iran | 3035 | 6.62 | 5.82 | 4.37 |
| Israel | 1832 | 5.40 | 5.61 | 4.57 |
| Italy | 2891 | 2.94 | 5.41 | 5.47 |
| Malaysia | 1809 | 0.33 | 5.64 | 4.76 |
| Morocco | 1495 | 1.54 | 4.69 | 4.87 |
| Netherlands | 2126 | 3.06 | 5.52 | 6.00 |
| Russia | 1631 | 2.82 | 5.12 | 4.70 |
| Slovenia | 3014 | 4.61 | 5.35 | 6.63 |
| South Africa | 2793 | 4.08 | 5.71 | 4.05 |
| South Korea | 1940 | 4.18 | 5.31 | 5.46 |
| Spain | 28,609 | 1.36 | 5.50 | 5.88 |
| Switzerland | 1516 | 6.86 | 5.43 | 6.74 |
| United Kingdom | 21,419 | 5.50 | 5.54 | 6.20 |
| United States | 3249 | 6.96 | 5.71 | 4.84 |
| Venezuela | 1554 | 6.37 | 5.40 | 4.97 |
| | 107,738 | | | |

Note: ^a Our dependent variable used for the main analyses includes income oriented social entrepreneurship also—i.e., the latter were retained in the operationalization of our dependent variable.

6.3. Predictor Variables

Country-level (level-2) leadership traits: We used two country-level variables in our analysis: transformational CLTs and societal sustainability. Since the data on these indicators came from different sources, the variables had different scales of measurement. Therefore, each of the variables was z-standardized, such that: (1) all variables had a common metric with a mean of 0 and a standard deviation of 1, and (2) the interpretation of estimates could be based on one-standard deviation.

Measures of culturally-endorsed leadership traits were obtained from the GLOBE survey. GLOBE's Leaders Attributes and Behavior Questionnaire is the basis on which the CLTs were generated. GLOBE surveyed 17,000 CEOs/managers across 62 societies. Starting with an alpha version of this questionnaire, GLOBE enlisted 56 leader attributes and behavior items, including a variety of the traits, skills, behaviors, and abilities that are associated with leadership emergence and effectiveness. A subsequent beta version enlisted another 56 attributes, thereby totaling 112 leader behaviors.

Leader attributes were rated from 1 to 7 (a low of 1 indicating "this behavior or characteristic greatly inhibits a person from being an outstanding leader" to a high of 7 indicating "this behavior or characteristic contributes greatly to a person being an outstanding leader"). Using statistical procedures and conceptual arguments, GLOBE grouped the 112 disparate leader behaviors into 21 primary dimensions of leadership. GLOBE performed a second-order factor analysis wherein these 21 dimensions were loaded onto six global dimensions of leadership: (1) value-based/charismatic; (2) team-oriented; (3) participative; (4) humane-oriented; (5) autonomous; and, (6) self-protective.

We further conducted a principal component factor (PCF) analysis on the six leadership dimensions. The results are shown in Table 2. Charismatic, team-oriented, and humane-oriented leadership loaded on as one first factor, whereas participative, autonomous, and self-protective loaded on a second factor. Stephan and Pathak [15] called the first factor as outward focused leadership

style and the second factor as inward focused leadership style. We call factor one as transformational leadership CLTs, which was operationalized by taking the arithmetic mean of the three contributing leadership dimensions. This factor was used as our predictor variable since it broadly reflects the characteristics (charismatic, team oriented, and humane oriented) of transformational leadership. This factor (transformational CLTs dimension i.e., factor 1) showed high internal consistency (reliability expressed as Cronbach's Alpha = 0.74, ICC (2) interrater reliability = 0.95), as well as meaningful within-country agreement. The between-country variation ICC (1) scores for the six subscales ranged from 0.14 to 0.19, suggesting that significant variance existed in sub-scales between countries [100]. For the 27 countries that are included in our study, we observed a mean score on transformational leadership CLTs of 5.49, a minimum of 4.62 (for France), and a maximum of 5.93 (for Ecuador). Further details on the underlying data source, the operationalization method, and the interpretation of the leadership dimensions can be found in House et al. [44] and Dorfman et al. [65].

Table 2. Higher-order principal component factor analysis of all six GLOBE global leadership dimensions (CLTs).

| | Factor 1 <i>Outward Focused Leadership</i> ^a | Factor 2 <i>Inward Focused Leadership</i> | Communality (h^2) |
|----------------------------|--|--|-----------------------|
| Charismatic leadership | 0.85 | −0.08 | 0.82 |
| Team-oriented leadership | 0.92 | 0.07 | 0.72 |
| Participative leadership | 0.14 | −0.89 | 0.84 |
| Humane-oriented leadership | 0.67 | 0.41 | 0.60 |
| Autonomous leadership | −0.40 | 0.50 | 0.35 |
| Self-protective leadership | 0.28 | 0.88 | 0.87 |
| Variance explained (%) | 36.11 | 33.99 | |
| Cronbach's Alpha | 0.74 | 0.70 | |

Note: ^a factor 1 (transformational leadership CLTs) was created as arithmetic mean of *charismatic*, *team-oriented* and *humane-oriented leadership* and used as a predictor in our model. Communality (h^2) is defined as $(1 - uniqueness)$, where a higher communality indicates greater establishment of the validity of factors.

A country's score on *sustainability* was created using the social sustainability index (SSI) from the Sustainable Society Foundation (SSF), a non-profit organization established in 2006 to stimulate and help countries in their efforts toward sustainability. The SSI was published in 2006 and is updated every two years. The SSI comprises 21 indicators, which are classified into seven categories, and crosses three well-being dimensions: (1) human; (2) environmental; and, (3) economic. The human well-being indicators comprise items covering basic needs (sufficient food, drink, and safe sanitation), health (education, healthy life, and gender equality), and personal and social development (income distribution, population growth, and good governance). The environmental well-being dimension comprises indicators covering natural resources (biodiversity, renewable water resources, and consumption), climate and energy (energy use and savings, greenhouse gases, and renewable energy). The economic well-being dimension comprises indicators covering transition (organic farming and genuine savings) and economy (gross domestic product, employment, and public debt). We operationalized sustainability (our second predictor variable) by taking the arithmetic mean of the scores of the three constituent well-being dimension scores. Using the above information, a composite index (SSI) score is plotted on spider webs to show the value of the score (on a scale of 1 to 10) and the distance to sustainability. A score of 10 represents high sustainability values and a score of 1 represents low sustainability values. For the 27 countries that were included in our study, we observed a mean score on sustainability values of 5.64, a minimum of 4.05 (for South Africa), and a maximum of 6.74 (for Switzerland).

6.4. Interaction Terms

We created one interaction term to test our hypothesis on the moderating effect of societal sustainability. To accomplish this task, we multiplied the z-scores of the sustainability individually with the z-scores of transformational CLTs, which in turn yielded the interaction term included in our study.

6.5. Individual and Country-Level Controls

We controlled for a number of individual-level demographic characteristics, all of which were obtained from the GEM dataset. An individual's age and gender [96,101] influence their propensity to engage in entrepreneurship. Similarly, education level [101] has been linked to entry into entrepreneurship as well. We, therefore, controlled for level of education (five levels: 0 = none; 1 = some primary; 2 = primary; 3 = secondary; and 4 = graduate). Stephan and Uhlaner [11] use the understanding of national culture as informal institutions and use GLOBE's data to develop two higher order dimensions of culture, socially supportive culture (hereafter called SSC) and performance-based culture (hereafter called PBC) to predict national entrepreneurial rates. Given that national culture has an impact on entrepreneurship, we have used SSC and PBC as controls in our model. SSC is a composite of humane-orientation and reverse coded assertiveness cultural dimensions offered by GLOBE and PBC is a composite of future orientation, uncertainty avoidance, performance orientation, reverse coded in-group collectivism, and reverse coded power distance cultural dimensions offered by GLOBE. We have used composite measures (two composite measures of controls) as opposed to using seven single items (out of nine cultural dimensions offered by GLOBE) in view of adequacy requirements of predictor variables in multilevel studies with low to moderate number ($N = 27$) of countries [102].

6.6. Estimation Methods

Our data is grouped by country, resulting in a hierarchical and clustered dataset. This type of grouping allowed us to account for the variance in the dependent variable that could arise due to country-level specific factors. This grouping resulted in 107,738 observations distributed across 27 countries.

There is a possibility of false positives in OLS analysis applied on a clustered dataset like ours. This is due mainly to an underestimation of standard errors because of their non-normal distribution [103]. We, therefore, analyzed the data using hierarchical linear modeling methods—in particular, random-effect logistic regression to estimate the influence of country-level factors (level-2) on the likelihood of individual-level social entrepreneurship.

In multilevel (or mixed linear) methods, fixed effects refer to group-specific (where group is any higher level, level-2) factors that are assumed to influence the dependent variable and the use of random effects ensures that the groups are drawn randomly from a larger population [95]. This allows for the generalizability of the effects of group-specific factors across all groups. Random effects in our multilevel framework refer to the fact that we allow only the intercept term to vary randomly across countries to account for the variance in the dependent variables. In sum, random effects, throughout our study, refer to random intercepts (also known as *intercept as outcomes*) only and not to random slopes (also known as *slopes as outcomes*).

We employed a four-step testing strategy in this study. In the first step, we estimated between-country variance in the dependent variable by including no predictors or controls in our random-effect logistic regression model. We observed significant country-level variance, and this suggests that country-level factors were responsible for explaining the variance in the dependent variable. Our above finding necessitated multilevel analyses [95,104], given that, in data that contains significant group-level variance, employing single-level analysis techniques would yield inaccurate estimates (as discussed above). The first regression model was called the null model.

In the second step, we added individual-level and country-level controls to the model in order to estimate the proportion of variance as explained by these controls alone, prior to the addition of the two country-level predictors. This step enabled us to isolate the proportions of the remaining variance, further explained by the addition of the three predictors alone, after accounting for all of the control variables. As our third step, and to examine the effects of country-level predictors as well as to estimate the proportion of the remaining variance (after the individual and country-level controls had been accounted for) explained by the country-level predictors, we added the two country-level predictors.

The decrease in the variance components that is associated with the dependent variables provided a measure of the extent to which our country-level predictors accounted for that remaining variance.

Finally, as our last step, we introduced our interaction term into the regression model. Interaction term between transformational CLTs and sustainability was introduced separately into the regression model. Societal sustainability was theorized as the moderator in the above interaction term.

The regression model took the following generalized form [105]:

$$\text{Social entrepreneurship} = \beta_{0j} + (\text{individual and country level controls}) + r_{ij} \tag{1}$$

$$\beta_{0j} = \gamma_{00} + U_{0j} \tag{2}$$

$$\beta_{0j} = \gamma_{00} + \gamma_{01}(\text{country level predictors}) + U_{0j} \tag{3}$$

$$\beta_{0j} = \gamma_{00} + \gamma_{01}(\text{country level predictors}) + \gamma_{02}(\text{interaction terms}) + U_{0j} \tag{4}$$

Above, γ_{00} = mean of the intercepts across countries (denoted by many as constant), γ_{01} = slopes of country-level (level-2) predictors. The term U_{0j} represents the random part of the equation and is a measure of the country-level residuals, and r_{ij} represents individual-level residuals. The level-2 Equations (2) yield the intra-class correlations, while (3) and (4) predict the effects (or gammas expressed as odds ratios) of level-2 predictors on level-1 intercept. The models yielded the estimates for main effects of the country-level predictors (γ_{01}); moderating effects (γ_{02}) as the fixed part estimates; random intercept γ_{00} and the between-country variance component associated with the error term U_{0j} as the random part estimates. Analyses were performed using STATA 13.

7. Results

Table 1 provides the sample descriptives of the 27 countries in our sample. Table 3 provides the descriptive statistics for controls, predictors, and the dependent variable. Tables 4 and 5 show the correlation matrices for individual and country-level variables, and Table 6 reports the effects of the predictor variables on the likelihood of social entrepreneurship.

Table 3. Descriptive statistics of all variables.

| Variables | N | Mean | SD |
|-----------------------------------|---------|-------------------|-------|
| Individual-level variables | | | |
| Social entrepreneurship | 107,738 | 0.04 ^a | 0.20 |
| Age | 107,738 | 42.19 | 12.85 |
| Gender | 107,738 | 0.53 | 0.50 |
| Education level | 107,738 | 2.01 | 1.02 |
| Country-level variables | | | |
| Socially supportive culture (SSC) | 27 | 3.73 | 0.28 |
| Performance-based culture (PBC) | 27 | 3.58 | 0.40 |
| Transformational CLTs | 27 | 5.49 | 0.21 |
| Sustainability | 27 | 5.64 | 0.64 |

^a Multiplying this number would yield percent of social entrepreneurship as mean across countries, here shown as raw mean. N = 107,738; Weighted in order to give equal weights to all countries.

Table 4. Correlation matrix for individual-level variables.

| | 1 | 2 | 3 | 4 |
|----------------------------|---------|---------|---------|------|
| 1. Social entrepreneurship | 1.00 | | | |
| 2. Age | −0.01 * | 1.00 | | |
| 3. Gender | −0.02 * | 0.01 * | 1.00 | |
| 4. Education level | 0.09 * | −0.10 * | −0.02 * | 1.00 |

* $p < 0.05$ (two-tailed); N = 107,738 Weighted in order to give equal weights to all countries.

Table 5. Correlation matrix for country-level variables.

| | 1 | 2 | 3 | 4 | VIF ^a |
|---|------|-------|--------|-------|------------------|
| 1. Social entrepreneurship ^b | 1.00 | | | | 1.02 |
| 2. Socially supportive culture (SSC) | 0.14 | 1.00 | | | 1.40 |
| 3 Performance-based culture (PBC) | 0.26 | 0.11 | 1.00 | | 1.31 |
| 4. Transformational CLTs | 0.03 | 0.17 | 0.01 | 1.00 | 1.08 |
| 5. Sustainability | 0.20 | −0.29 | 0.40 * | −0.27 | 1.56 |

* $p < 0.05$ (two-tailed); $N = 27$; ^a VIF = Variance Inflation Factor; scores less than 10 suggests no multicollinearity [106].

^b Social entrepreneurship in this correlation matrix is the percentage rate of social entrepreneurship by country.

Table 6. Effect of transformational CLTs and sustainability on individual level social entrepreneurship (odds ratio).

| | Model 1 | Model 2 | Model 3 | Model 4 |
|---|---------|-----------------|-----------------|-----------------|
| Fixed part estimates | | | | |
| Individual-level | | | | |
| Age | | 1.01 (0.27) | 1.01 (0.27) | 1.01 (0.27) |
| Gender | | 0.77 *** (0.02) | 0.77 *** (0.02) | 0.77 *** (0.02) |
| Education level | | 1.01 *** (0.00) | 1.01 *** (0.00) | 1.01 *** (0.00) |
| Country-level | | | | |
| Socially supportive culture (SSC) | | 0.80 *** (0.03) | 0.80 *** (0.03) | 1.36 *** (0.03) |
| Performance-based culture (PBC) | | 0.75 *** (0.01) | 0.75 *** (0.01) | 1.09 *** (0.02) |
| Transformational CLTs (H1) | | | 1.19 *** (0.04) | 0.77 *** (0.02) |
| Sustainability (H2) | | | 1.36 * (0.04) | 1.18 *** (0.02) |
| Sustainability × Transformational CLTs (H3) | | | | 0.88 *** (0.02) |
| Random part estimates | | | | |
| Variance of intercept | 0.72 | 0.58 | 0.53 | 0.52 |
| % of variance explained (Rho) | 18.00 | 15.00 | 14.34 | 14.30 |
| Model fit statistics | | | | |
| Number of observations | 107,738 | 107,738 | 107,738 | 107,738 |
| Number of countries | 27 | 27 | 27 | 27 |
| Degrees of freedom (Number of variables in the model) | 0 | 5 | 7 | 8 |
| Chi-square | - | 705 | 705 | 706 |
| Probability > Chi-square | - | *** | *** | *** |
| Likelihood ratio test of Rho | *** | *** | *** | *** |

Note: OR values greater than 1 signal positive association and OR values less than 1 signal negative association. $p < 0.001$ ***; $p < 0.01$ **; $p < 0.05$ *; $p < 0.1$ +; 2-tailed significances for hypotheses; Standard errors in parentheses.

7.1. Intra-Class Correlation (ICC)

A significant between-group variance in the dependent variable necessitates multilevel analysis [103,104]. To check this variance, we estimated a multilevel logistic regression (Model 1 or null model of Table 6) that yielded intra-class correlation coefficient (ICC or rho) of 18 percent for the likelihood of social entrepreneurship across the 27 countries that are included in our study. The ICC (or rho) value indicates the proportion of variance in the dependent variable that resides between groups owing to country-level characteristics. Since the observed ICC values indicated significantly high variance [104], they necessitated multilevel analyses, and therefore warranting a look into country-level factors that could explain this variance. In our study, the two predictors (i.e., transformational CLTs and sustainability values) made up for those factors.

7.2. Main Effects on Social Entrepreneurship (Transformational CLTs and Sustainability)

The random-effect logistic regression models are reported in Models 2, 3, and 4 of Table 6. These models report estimates for the fixed part (estimates of coefficients) and random part (variance estimates), and provides model fit statistics. The estimates are reported as odds ratios in Models 2, 3, and 4 (exponential of the beta coefficients obtained from logistic regressions). Ratios greater than 1 represents a positive association (percent increase) and those less than 1 represents negative association (percent decrease).

Model 2 includes the individual-level controls and three country-level controls. Model 3 of Table 6 shows the influence of transformational CLTs and sustainability on individuals' probability of engaging in social entrepreneurship. The odds ratio indicates that an increase of 1 standard deviation (SD) of transformational CLTs increased the likelihood of individual-level engagement in social entrepreneurship by 19 percent (odds ratio = 1.19; $p < 0.001$) and an increase of 1 SD in sustainability increased the likelihood of individual-level engagement in social entrepreneurship by 36 percent (odds ratio = 1.36; $p < 0.05$). The above findings support our main effects of H1 and H2.

The variance components of random intercepts decreased from 0.58 in Model 2 of Table 6 to 0.53 in Model 3 of Table 6, suggesting that 8 percent $\left(\frac{0.58 - 0.53}{0.58} \times 100\right)$ of the remaining variance in engaging in social entrepreneurship could be explained by the two country-level predictors—transformational CLTs and sustainability—after the individual-level and country-level controls had been accounted for. This observation shows that transformational CLTs and sustainability are salient predictors of the individual's likelihood of engaging in social entrepreneurship.

7.3. Interaction Effects of Sustainability Values and Transformational Leadership Styles on Social Entrepreneurship

Model 4 shows the interaction results. The odds ratio indicates that an increase of 1 standard deviation (SD) of interaction term decreased the likelihood of individual-level engagement in social entrepreneurship by 12 percent (odds ratio = 0.88; $p < 0.001$). Figure 2 shows the moderating effect of sustainability on the influence of transformational CLTs on social entrepreneurship. We observe that in countries with low values of sustainability it requires high transformational CLTs to raise the likelihood of individuals becoming social entrepreneurs. This finding, therefore supports our interaction Hypothesis H3.

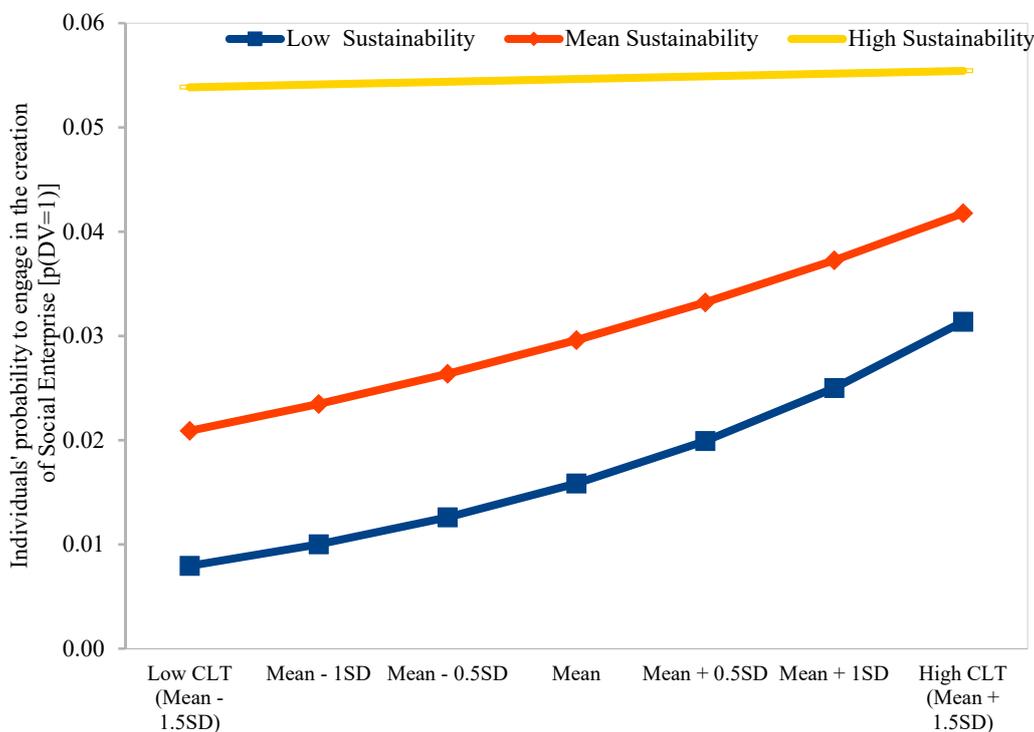


Figure 2. Interaction ^a between transformational leadership CLTs and sustainability ^b (Social Entrepreneurship). ^a Beta coefficient estimates are used for graphical representation of the interaction. ^b Low and high sustainability represent (Mean - 1.5 S.D.) and (Mean + 1.5 S.D.).

7.4. Robustness Checks

We conducted a series of supplementary analyses and performed additional robustness checks, as follows. First, Lepoutre et al. [99] and Stephan and Uhlaner [11] established that revenue-generation through market-based transactions manifests the entrepreneurial element in social entrepreneurs. This is similar to that observed in commercial entrepreneurs. Thus, we utilized a second measure of social entrepreneurship (revenue-generating social entrepreneurship) from the GEM survey as an alternate dependent variable and replicated the regressions reported in Model 3 of Table 6. Revenue-generating social entrepreneurs are a subset of the main sample who responded “yes” (coded 1, else 0) to the following question: “Will any of the revenue for this activity, organization, or initiative come from income, for example through sales of products or charging for services?” Results for the two main effects—those of transformational CLTs and sustainability—were not significantly affected.

Second, we replicated Model 3 of Table 6 by substituting the two CLT factors with the six constituent leadership dimensions used to create them. The effects of four out of these six dimensions were observed to be statistically significant. The loss in significance of the two were attributed to the fact that the six dimensions load on to two factors, thus suggesting collinearity between them.

Finally, we conducted tests to ensure that the significance levels of the main effects of the two country-level predictors were not solely driven by the large number of observations (107,738 responses). We checked this using the *sample* command in Stata, which permits the random sampling and retention of a given percentage of the total number of observations, while still clustering them by country. The study reran Model 3 in Table 6 with retained samples ranging from as low as 1% to 100% of the full sample and observed no loss of generalizability.

8. Discussion

It has been established that any progress towards the goals of sustainable development is spearheaded by social change that requires active leadership [17]). Leadership plays an important role in linking socially responsible activities with outcomes [107]. The importance of leader passion has been established in organizing a social enterprise and outcomes; such passionate leadership have similarities to transformational leadership [108]. The role of transformational leadership can therefore be inferred to have an important influence on entrepreneurial agency that effect societal change.

Extant scholarship on the antecedents of social responsibility has been in the area of corporate social responsibility. These studies focus on individual traits, behaviors, and shared leadership [109]. While an individual’s personal character, traits, and attributes drive entrepreneurial behavior, they are also shaped in part by the context in which those behaviors are performed [22]. While social entrepreneurs play a key role in societal transformation [110], there is increasing agreement among scholars that context plays an important role in shaping the social-value-creation aspect of social entrepreneurship [111–113]. Therefore, the influence of context on social entrepreneurship requires detailed examination [79].

Our study examines antecedents at the societal level, which drive socially responsible behaviors among individuals. We discuss the interplay of culturally endorsed leadership theories with societal-level sustainability to advance the understanding of the emergence of social entrepreneurs across different cultures. Leadership traits and sustainability are societal-level indicators of informal and formal institutions, respectively. Our results suggest that culturally-endorsed leadership traits in society strongly influence the emergence of social entrepreneurial activities. Similarly, sustainable societies also offer supportive conditions for social entrepreneurs to flourish. However, for the emergence of social entrepreneurial activities in societies that do not have conditions of sustainability, it may be necessary to have strong transformational leadership CLTs. Through the above findings, we establish the value of transformational CLTs as informal institutions and explore their standalone explanatory role in individual agency of social entrepreneurship. It has also a significant role for social entrepreneurial behavior in societies low on sustainability. The contextual perspective that is adopted

in our study therefore highlights the role of societal context in the motivation of individuals to lead social enterprises in contrast to individual differences believed to drive such motivations [114].

We integrate findings from leadership, sustainability, and entrepreneurship research by using insights from institutional theory. From a theoretical perspective, our findings add to the literature examining the influence of joint institutional configurations of formal and informal institutions on entrepreneurial behavior [20]. While the use of configurations has been seen in the areas of strategic management and psychology [115,116], its' use in comparative entrepreneurship research is limited [20,117]. Our study findings offer a wider perspective in showing the mutually reinforcing effects of informal and formal institutional indicators of transformational CLTs and sustainability respectively [20] in predicting phenomena (social entrepreneurship) at the interface of business and society [27].

We also contribute to the development of multidisciplinary research to advance the application and understanding of leadership theory [118], as well as its role in achieving the goals of sustainable development [80]. In doing so, our study partially responds to the call by Waldman et al. [88] to research the role of leadership in social responsibility by adopting a multilevel perspective. A multilevel perspective with antecedents at the societal level may provide a better understanding on the role of leadership in socially responsible activities [88]. From an empirical perspective, our study addresses the call for rigorous empirical studies to understand the important antecedents of social entrepreneurship [119], through multilevel research [107]. We analyze multisource data that include population-representative surveys on social entrepreneurship (obtained from the GEM survey), country-level data on transformational CLTs, and societal-level sustainability from GLOBE and SSF, respectively. Multilevel modeling permits the testing of individual-level relationships at the same time as cross-level country. Further, multilevel designs avoid both ecological and individualistic fallacies by allowing for the simultaneous consideration of both country-level and individual-level factors on entrepreneurial behaviors [59].

Limitations and Future Research

While the use of clustered data set (as in this study) allows for the accounting for the variance in the outcome variable, it has a few limitations. Our study obtains individual as well as country-level data from different sources, such that the number of countries for which data was commonly available across each of these sources was limited to 27. Also, the availability of GEM data on individual-level social entrepreneurship was limited to the year 2009 at the time this study was conducted. Longitudinal data over a substantial period of time would facilitate the examination if social entrepreneurial behaviors evolve over time. Further, since GEM is cross-national survey, by design they use single item variables to minimize culturally induced response biases. Specifically, since social entrepreneurship may vary by countries, GEM uses single item to minimize cultural biases in responses. Single item usage may be a limitation in view of validity and reliability concerns. Future research may therefore consider other operationalizations that encompasses detailed activities of social entrepreneurs. Finally, data on social entrepreneurship is publicly available for the single year of 2009. This is yet another limitation of our study in that we were unable to perform test-re-test tests. However, GEM's other indicators of entrepreneurship that are available for multiple years show test-re-test reliability of over 0.7 on average. Future waves on longitudinal data on social entrepreneurship would allow for performing such tests.

Future research can also explore other relevant institutional-level variables that could impact the likelihood of individuals engaging in social entrepreneurship in order to consolidate the role that context plays in shaping social entrepreneurial behaviors. For example, the effects of other CLT dimensions on social entrepreneurship (i.e., the participative, autonomous, and self-protective dimensions), which load onto what Stephan and Pathak [15] call inward focused leadership, can be examined. Further, the effects and interplay with sustainability of other societal cultural values and norms studied by comparative entrepreneurship researchers can be examined [120]. Finally, some

researchers have criticized the measurement of values in the GLOBE project [121]. Hence, replication of our findings using a different measure of our values at the societal level would be desirable.

9. Conclusions

This study contributes to the research integrating leadership, sustainability, and entrepreneurship lines of enquiry. While social entrepreneurs may help to achieve sustainable development goals, little research has been conducted to draw on extant leadership theory and sustainability at the societal level to better understand social entrepreneurship. Our study integrates culturally-endorsed leadership theories (CLTs), and societal-level sustainability (informal and formal institutional indicators respectively) to predict the likelihood of social entrepreneurship. Using a multi-level study, we find strong and consistent effects of transformational CLTs and sustainability on social entrepreneurship. However, societies with low sustainability require a culture of strong transformational leadership for individuals to engage in social entrepreneurship. In summary, while transformational CLTs and sustainability both motivate and facilitate the creation of social enterprise, the effectiveness of CLTs is felt more in societies where sustainability is low.

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Conflicts of Interest: The authors declare no conflict of interest.

Appendix A

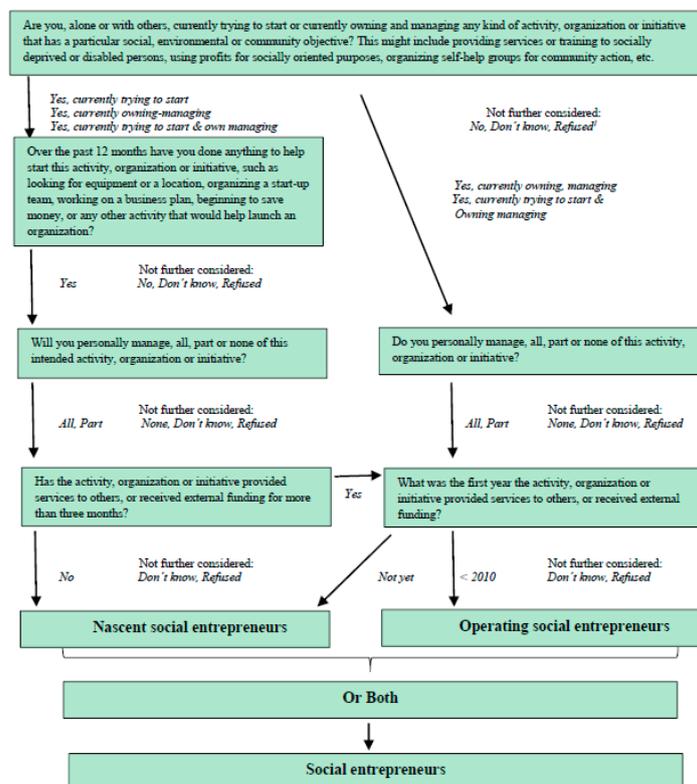


Figure A1. Questions for Social Entrepreneurship from GEM (2009). Source [20].

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