RESEARCH ARTICLE

The role of cognitive legitimacy in social entrepreneurship: a multilevel analysis

Xing Li · Wanxiang Cai · Niels Bosma

Abstract While the role of cognitive legitimacy in new organizational forms' development has been extensively studied, the cognitive legitimacy of social entrepreneurship (SE) has so far received limited attention. Drawing from legitimacy theory and organizational ecology literature, we theorize and explore how SE obtains cognitive legitimacy via its prevalence and the legitimacy spillovers of the two categories it encapsulates: new business and nonprofit organizations. Using data from the Global Entrepreneurship Monitor, we find evidence for the existence of legitimacy spillovers from both new business and nonprofit organizations to SE activity. Second, the perceived density of social enterprises is significantly related to individuals' engagement in SE. Third, we find the effect of legitimacy spillover effects is more significant when individuals perceive a lower density of social enterprises. Our study contributes to the research on SE, organizational ecology, and hybrid organizations by exploring the multiple sources for increasing SE's legitimacy, particularly highlighting the existence of cross-categories legitimacy spillover effect within hybrid organizations.

Plain English Summary This study delves into how cognitive legitimacy shapes social entrepreneurship (SE). Findings show macro-level legitimacy spillover and perceived SE density predict individual SE entry. This study is vital for effective long-term SE policy planning. This study explores the sources of cognitive legitimacy for social entrepreneurship (SE). Based on legitimacy and organizational ecology literature, we argue that SE may gain cognitive legitimacy through two avenues. First, macro-level legitimacy of both business and nonprofit organizations (elements that SE combines) can prompt individuals to actively assess and pursue SE. Here, legitimacy spillovers occur by emphasizing similarities with these two constituents, thus enhancing the comprehensibility of SE. Second, individuals' perceived SE density enables them to passively recognize SE as a comprehensible option. Our empirical analysis shows both sources of cognitive legitimacy to positively relate to individuals' SE entry, with the legitimacy spillover effect weakening as individuals perceive a higher SE density. Policymakers developing long-term SE policy plans may use this information, e.g. for determining if, when and how

X. Li · N. Bosma
Utrecht University School of Economics, Adam Smith Hall, Kriekenpitplein 21-22, 3584EC Utrecht, Netherlands
e-mail: x.li@uu.nl

N. Bosma
e-mail: n.s.bosma@uu.nl

W. Cai (✉)
University of Bristol Business School, 30-32 Tyndall's Park Road, Bristol BS8 1PY, UK
e-mail: wanxiang.cai@bristol.ac.uk

 Springer

updating legal structures could be an effective approach given the local context.

1 Introduction

Over the past decades, social entrepreneurship (SE) has attracted significant attention from scholars and practitioners due to its great potential to solve societal problems using market-based solutions (Mair & Marti, 2006; Saebi et al., 2019). It seeks to create social values while generating profits (Austin et al., 2006; Battilana & Lee, 2014; Mair & Marti, 2006). This focus on potentially competing dual objectives reflects the hybrid nature of SE (Battilana & Lee, 2014; Saebi et al., 2019), making it neither fully understood nor taken for granted up until now (Dart, 2004; Nicholls, 2010; Weidner et al., 2019). The legitimacy perspective provides a fundamental framework for understanding the emergence and development of SE, which primarily focuses on institutional pressure and conformity to stakeholder expectations rather than market efficiency and effectiveness (Bruton et al., 2010; Dart, 2004; Huybrechts & Nicholls, 2013). Three dimensions of legitimacy are well documented: pragmatic, moral, and cognitive (Suchman, 1995). To date, scholars have primarily emphasized the role of pragmatic and moral legitimacy in understanding SE (Bruder, 2021; Dart, 2004) and individuals' engagement in SE (Au et al., 2023; Miller et al., 2012; Zheng et al., 2022), the cognitive legitimacy of SE remains relatively unexplored.

The limited attention that SE scholars have paid so far to cognitive legitimacy is striking. We aim to explore SE's cognitive legitimacy for two reasons. First, SE researchers assume that it is theoretically impossible to explore the cognitive legitimacy of SE at its initial stage (Dart, 2004). However, organizational ecologists argue that new organizational forms can obtain cognitive legitimacy from similar categories as they begin to grow (Kuilman & Li, 2009; Lewis et al., 2021; Xu et al., 2014). Exploring the sources of SE's cognitive legitimacy thus challenges previous studies and enriches current SE literature. Second, cognitive legitimacy—the absence of

questions or challenges regarding a new entity (Suchman, 1995; Tost, 2011)—is recognized as "the most subtle and the most powerful source of legitimacy" (Suchman, 1995). When new entities gain cognitive legitimacy, individuals will support them regardless of their moral and pragmatic legitimacy (Tost, 2011). New ventures and organizations thus often seek to obtain cognitive legitimacy to make them understandable to consumers (Shepherd & Zacharakis, 2003) and investors (Maier et al., 2023), increasing their survival rate (Rao, 1994) and enhancing stakeholders' loyalty to the organization (Tyler, 2006; Tyler & Blader, 2005). Social enterprises[1] (SEs) often grapple with a series of challenges, including acquiring financial resources, assessing organizational performance, and navigating a non-munificent institutional environment, which primarily stems from its inherent struggle for legitimacy (Bhatt et al., 2019; Gupta et al., 2020). Building a deeper understanding of how SE obtains its cognitive legitimacy is critical for SE to overcome these challenges. Furthermore, scholars have identified that cognitive legitimacy matters in developing new organizational forms, categories, or practices (Kuilman & Li, 2009; Lewis et al., 2021; Xu et al., 2014; Zhao et al., 2018). Focusing on SE's cognitive legitimacy thereby can enhance our understanding of individuals' SE engagement and enrich our knowledge about its emergence.

This paper aims to address a lack of understanding of SE's cognitive legitimacy. We ask: *What are the major sources of SE's cognitive legitimacy, and how do they affect individuals' decision to engage in SE activity?* Building on legitimacy theory and organizational ecology perspectives (Bitektine & Haack, 2015; Kuilman & Li, 2009), we argue that SE can obtain cognitive legitimacy from "legitimacy spillovers" and the perceived density of SEs. On the one hand, organizational ecology theorists suggest that a great recognition of one organizational category increases the legitimacy of similar organizational forms (i.e., legitimacy spillover) (Kuilman & Li, 2009; Li et al., 2007; Suddaby et al., 2017). Especially at the beginning stage of a new organizational form, when its population starts to grow, initial cognitive legitimation for the new organizational form comes from an

---

[1] The corresponding new organizations of social entrepreneurship are recognized as social enterprises (Miller et al., 2012).

existing organizational form with well-established legitimacy (Xu et al., 2014). As an exemplar type of hybrid organization (Doherty et al., 2014), SEs share similarities with two well-established organizational categories, "business" and "nonprofit organization." Thus, evaluators may use the legitimacy of both business and nonprofit categories to interpret SE based on their shared characteristics. On the other hand, as the new organization form develops, it can obtain cognitive legitimacy from its density (Bogaert et al., 2016; Dobrev & Gotsopoulos, 2010; Hannan & Carroll, 1992). Given SE has undergone decades of legitimation in many countries, we expect it can also obtain cognitive legitimacy from its own prevalence as perceived by the inhabitants (Husted et al., 2016; Lewis et al., 2021). However, these two sources of legitimacy are not fully complementary to each other. As both sources of cognitive legitimacy provide an understanding of SE, extra sources of legitimacy are not needed once the practice of SE is widely understood (Taeuscher et al., 2021). The spillover effects are more important in obtaining legitimacy when the organizational form is new (Xu et al., 2014; Zhao et al., 2018). Therefore, we further predict legitimacy spillover effects to be weaker if individuals perceive a higher density of SE activity in their environment.

Empirically, we use the data from the special survey on SE from the Global Entrepreneurship Monitor (GEM) conducted in 2015. We apply multilevel models to test how a nation's density of new businesses and nonprofit organizations can influence individuals' likelihood of starting a social venture. The empirical results confirm our hypotheses: national new business and nonprofit organization density, as well as individuals' perceived SEs density, are positively associated with individual engagement in SE; furthermore, the influence of new business and nonprofit organization density on individuals' engagement in SE (i.e., legitimacy spillover) is weaker if the perceived SEs density is high. Further analyses suggest that the results are robust.

This paper contributes to SE, organization ecology, and hybrid organization research. First, it improves the understanding of the cognitive legitimacy of SE, obtained through legitimacy spillover from business and nonprofit categories, as well as derived from SE's prevalence. It shifts previous attention from SE's pragmatic and moral legitimacy to its cognitive legitimacy, uncovering the significant role of cognitive legitimacy in predicting individual SE engagement.

It also provides empirical evidence of how individuals evaluate an entity's cognitive legitimacy through either evaluative or passive modes and how passive mode dominates the evaluation process (Bitektine & Haack, 2015; Tost, 2011). Furthermore, it contributes to organizational ecology literature by leveraging a multilevel legitimacy perspective (Bitektine & Haack, 2015), thereby explaining how interpopulation (e.g., legitimacy spillover) and intrapopulation processes (i.e., perceived SE density) affect individuals' action through a cross-level mechanism. Finally, departing from prior predominant arguments that hybridity often confuses audiences (Pache & Santos, 2013; Zuckerman, 1999), our findings suggest that hybrid organizations can receive legitimacy benefits from categories that they straddle based on the above legitimacy and organizational ecology perspectives.

The remainder of this paper is organized as follows. We first introduce relevant concepts and propose hypotheses. Next, we address our data and the methods used in our analysis. We then report the results of our regression analysis and discuss the results of several robustness checks. Finally, we summarize our main findings and discuss implications, limitations, and suggestions for future research.

2 Theoretical background

2.1 The legitimacy of social entrepreneurship

While most societies' attention to SE has increased, actors in this field still perceive a lack of recognition (Bhatt et al., 2019; Bruder, 2021), especially regarding its pursuit of social and financial objectives simultaneously (Doherty et al., 2014; Pache & Santos, 2013). Previous research has utilized the legitimacy perspective to comprehend the emergence and evolution of SE (Dart, 2004; Ewald Kibler et al., 2018; Miller et al., 2012). The legitimacy view fits this purpose particularly because it emphasizes institutional pressure and conformity to stakeholder expectations instead of market efficiency and effectiveness (Bruton et al., 2010; Dart, 2004). Suchman (1995: 574) defines legitimacy as "a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definition." He classifies legitimacy into three dimensions:

pragmatic legitimacy based on audiences' self-interest calculation, *moral legitimacy* rooted in the audience's socially constructed value system, and *cognitive legitimacy* as a reflection of an organization's comprehensibility or taken-for-granted assumptions.

Academic studies have so far mainly attributed the emergence of SE to its pragmatic and moral legitimacy (Au et al., 2023; Bruder, 2021; Dart, 2004). For instance, researchers argue that SE has gained some pragmatic and moral legitimacy because of the practical value of its outcomes and the dominance of pro-business ideology in the broader social environment, thus contributing to its emergence (Dart, 2004). Furthermore, Miller et al. (2012) propose that both pragmatic and moral legitimacy affect compassion-triggered SE engagement. More recent research continues to adopt a prosocial or moral standpoint when addressing the emergence of SE (Bruder, 2021; Zheng et al., 2022). By contrast, SE's cognitive legitimacy has received little attention. This study aims to contribute to previous studies by exploring the cognitive legitimacy of SE for two main reasons.

First, exploring SE's cognitive legitimacy challenges previous arguments in SE literature that it is inappropriate and unnecessary to consider the cognitive legitimacy of SE during its early development (Dart, 2004; Miller et al., 2012). Dart (2004: 421) argues that the social-enterprise form (at that time) was unprecedented and put forward that "at this stage, it is likely theoretically excessive and unwarranted" to explore SE's cognitive legitimacy. Nicholls (2010) also discusses SE as a pre-paradigmatic field with limited knowledge about its legitimate methods, usefulness, and problems. More recent studies also argue that SE is neither fully understood nor taken for granted as an emerging organizational entity for stakeholders (Chliova et al., 2020; Saebi et al., 2019; Weidner et al., 2019). However, cognitive legitimacy can be considered to be a continuous rather than a binary variable (Fisher et al., 2016; Gardberg & Fombrun, 2006; Tost, 2011); that is, it reflects the degree to which an entity is understandable. Therefore, even if SE is a relatively new phenomenon, it has been around long enough to gain some extent of cognitive legitimacy. Organizational ecologists also posit that organizations can obtain cognitive legitimacy even at their emerging stage (Kuilman & Li, 2009; Lewis

et al., 2021; Xu et al., 2014; Zhao et al., 2018). They argue that new entities can gain cognitive legitimacy through both interpopulation and intrapopulation processes. As a new organizational form begins to grow, it obtains initial legitimation from existing organizational forms with well-established legitimacy, especially when there are shared similarities or identity overlaps with these established forms (Audia et al., 2006; Ruef, 2000). The new organizational form further garners increased acceptance and accumulates more cognitive legitimacy from its density as it becomes more popular and grows in size (Bogaert et al., 2016). Thus, even though the SE field has not reached maturity, it has gained a certain degree of cognitive legitimacy (taken for grandness) from multiple audiences due to its increasing popularity over the past decades (Miller et al., 2012; Short et al., 2009). Consequently, we propose that it is appropriate, and perhaps even necessary, to explore the cognitive legitimacy of SE.

Second, cognitive legitimacy, the widespread acceptance of the organization as *necessary* or *inevitable*, is considered to be the most powerful source of legitimacy (Suchman, 1995; Tost, 2011). Tost (2011) argues that if an entity or organizational form reaches a certain level of cognitive legitimacy, individuals will support it regardless of its moral and pragmatic legitimacy. Thus, ventures that adopt new entities often need to obtain cognitive legitimacy to attract consumers or investors (Maier et al., 2023; Shepherd & Zacharakis, 2003). Cognitive legitimacy also helps such ventures to overcome liabilities of newness, increase their chance of survival, and acquire resources (Suddaby et al., 2017; Überbacher, 2014). Organizational ecology literature further finds that the cognitive legitimacy of a category contributes to the survival and growth of the organizations that belong to the category (Hannan & Carroll, 1992; Kuilman & Li, 2009; Xu et al., 2014). Thus, a deeper understanding of the cognitive legitimacy of SE may not only support SEs' survival but also provide insights into developing the whole category of SE. Overall, we aim to contribute to a deeper understanding of where the cognitive legitimacy of SE comes from in order to better explain and perhaps influence individuals' choices to participate in SE activity (Miller et al., 2012; Townsend & Hart, 2008).

2.2 Hybrid organizations and social entrepreneurship

Hybrid organizations, known to combine aspects of multiple organizational forms, are typically considered to be lacking legitimacy due to their deviations from existing well-established categories that convey a coherent social recognition for a group of organizations (Deephouse, 1996; Wry et al., 2011). The mixed identities, organization forms, and institutional logics in hybrid organizations often confuse what "type" they belong to, which further causes difficulties for them in obtaining and maintaining legitimacy (Greenwood et al., 2011; Kostova & Zaheer, 1999). Social enterprise is often recognized as an exemplary type of hybrid organization that combines elements from both commercial business and nonprofit organizations (Battilana & Lee, 2014; Chliova et al., 2020; Doherty et al., 2014; Pache & Santos, 2013). Hybridity often makes social enterprises deviate from a widely acknowledged type (i.e., commercial business or nonprofit organization), leading to a lack of legitimacy. However, hybridity also exemplifies the shared similarities and identity overlaps between social enterprises and commercial businesses or nonprofit organizations. Specifically, SE is similar to commercial entrepreneurship regarding resources, context, and *opportunity* (Austin et al., 2006). Both commercial and social entrepreneurs wish to obtain future returns, are embedded in similar external contexts (including tax, regulatory, sociopolitical environment, and macroeconomy), and require financial and human resources. Besides, SE emerges from nonprofit sectors and shares nonprofit organizations' social and civic orientation (Battilana & Lee, 2014; Dart, 2004; Haugh, 2007).

Considering the shared similarities, research suggests that audiences may at some point tolerate the disruption caused by category spanning (Durand & Paolella, 2013) as categorical boundaries become blurred (Battilana & Lee, 2014) and new categories emerge due to the category-spanning (Durand & Khaire, 2017). This line of reasoning therefore proposes a somewhat different perspective on the link between hybridity and legitimacy in the context of SE that is only limitedly validated via (quantitative) empirical analysis.

3 Hypotheses development

3.1 Legitimacy spillovers and SE engagement

Organizational ecology literature posits that the cognitive legitimacy of new organizational forms can be obtained through the interpopulation process by receiving "legitimacy spillovers" from an existing organizational form with well-established legitimacy (Kuilman & Li, 2009; Xu et al., 2014). In other words, *legitimacy spillovers* occur when greater social recognition for one established category results in a higher social recognition for related organizations as well (Kostova & Zaheer, 1999; Kuilman & Li, 2009; Li et al., 2007). Such spillovers are usually based on the similarities between the new and well-established organizational forms (Haack et al., 2014; Suddaby et al., 2017). For instance, Kostova and Zaheer (1999) propose that the legitimacy of subunits of a multinational organization (MNE) may be evaluated by the MNE as a whole since they belong to the same cognitive category. Research has also shown that legitimacy spillover can occur in the context of foreign banks (Kuilman & Li, 2009) and financial cooperatives (Dobrev et al., 2006).

Based on the legitimacy spillover perspective, legitimacy can transfer from the well-established organizational form to the new form as long as there is some identity overlap between them (McKendrick et al., 2003; Xu et al., 2014). Thus, legitimacy spillover may also occur for hybrid organizations as they can build parallels or analogies using existing categories they straddle, thereby increasing audiences' understanding of what they are (Alexy & George, 2013; Martens et al., 2007). Empirical research has confirmed the existence of legitimacy spillovers within certain hybrid organizations or practices (Peng, 2003; Xu et al., 2014). For instance, science-technology-hybrid start-ups are positively evaluated by venture capital (Wry et al., 2014). China's collectively owned enterprises can gain legitimacy from state-owned enterprises as they share some key identity codes (Peng, 2003; Xu et al., 2014). Drawing on the above perspective, we expect SE may gain legitimacy from spillover effects from both commercial business and nonprofit organizational categories as it combines elements from both categories.

However, prior research mainly explored legitimacy spillover effects at the macro level (i.e., how the density of an organization is positively associated with that of another) (Kuilman & Li, 2009). Researchers have attributed the macro-to-macro relationship to several across-level causal mechanisms (Coleman, 1994; Hedstrom & Swedberg, 1998). As Bitektine and Haack (2015) argue, legitimacy is a cross-level process that includes macro-level 'collective' legitimacy judgment (i.e., validity), which influences micro-level perceptions and judgment of social acceptability (i.e., property). The macro-level validity can thus affect how individuals evaluate observed organizational behaviors and properties, which further affects individuals' behavior (Bitektine & Haack, 2015). Related to this cross-level mechanism, Scott (1995) and Suchman (1995) argue the comprehensibility of a category originates from the availability of cultural models that provide plausible explanations. When an organizational form is new to the evaluator, s/he needs conceptual exemplars to interpret it (Zhao et al., 2018). Commercial businesses and nonprofit organizations, as two well-established categories, thus provide parallels and/or syllogisms to individuals to help them understand SE through shared identities: the legitimacy of the business category assists individuals in understanding SEs' business-related activities, while the legitimacy of the nonprofit category improves individuals' understanding of SEs' social mission. Overall, the commercial business and nonprofit categories can thus make SE predictable, inviting, and meaningful (Bitektine & Haack, 2015; Suchman, 1995). When individuals perceive SE to be understandable (i.e., cognitively legitimate) through the spillover effect of legitimacy from both business and nonprofit organizations, they are more likely to engage in SE creation.

In line with previous studies (Lewis et al., 2021; Suddaby et al., 2017), we proxy the legitimacy of commercial business and nonprofit categories by their population density. A higher prevalence of organizations indicates a higher level of social recognition and acceptance level of these organizations; therefore, more cognitive legitimacy is accumulated for them (Bogaert et al., 2016; Chung & Cheng, 2019). We thus argue that the more legitimacy both commercial businesses and nonprofit organizations have, the more easily an individual can be expected to

understand SE, and the more likely s/he would start a social venture. A concern about potential competition between businesses/charities and social enterprises arises as organizational ecologists argue that the increasing population density drives competition and thus leads to a decrease in the founding rate of new organizations (Lander & Heugens, 2017; Miller & Eden, 2006; Suddaby et al., 2017). However, we argue that conflict and competition are less likely to happen between SE and organizational forms of business and nonprofit. SE exists due to the market and government's failure to meet social needs or solve social problems (Austin et al., 2006; Stephan et al., 2015). It identifies opportunities from societal problems that are not usually considered by commercial businesses, leaving space for SE development (Austin et al., 2006; Saebi et al., 2019). SE and nonprofit organizations are more likely to mutually be supportive of each other as both aim to address social problems and create social values (Battilana & Lee, 2014; Saebi et al., 2019). Therefore, we propose the following hypotheses that capture legitimacy spillovers concerning individuals' engagement in SE:

Hypothesis 1a (H1a). New business density at the national level is positively associated with the likelihood of individuals engaging in SE.

Hypothesis 1b (H1b). Nonprofit organization density at the national level is positively associated with the likelihood of individuals engaging in SE.

3.2 Perceived SE density and SE engagement

As a new organizational form grows in size, it can also gain cognitive legitimacy through the *intrapopulation* process (Audia et al., 2006; Ruef, 2000; Xu et al., 2014). Here, the cognitive legitimacy of a given organizational form is based on the widespread knowledge about this form and therefore depends on the prevalence of the organizational form (Hannan & Freeman, 1984). When new organizational forms or practices become more prevalent within an area, there are more shared scripts and understandings about them; they further become more comprehensible and unquestioned to individuals (i.e., cognitive legitimacy). Therefore, the popularity of a new organizational practice increases its comprehensibility and is most commonly linked to its cognitive legitimacy (Bird & Wennberg, 2014; Husted et al., 2016; Schultz et al., 2014; Sine et al., 2005).

In line with the organizational ecology perspective, we expect that SEs' density can also serve as a source of cognitive legitimacy for SE. After decades of development, SE has increasingly gained popularity in the world (Miller et al. 2012; Saebi et al., 2019; Short et al., 2009). As discussed above, a higher prevalence of an organizational form increases its comprehensibility (i.e., cognitive legitimacy) (Husted et al., 2016; Schultz et al., 2014). Accordingly, SE is more likely to be recognized when there is a higher density of SEs in their countries. Also, here, a concern may arise that population density may reflect competition, which further leads to the decrease or exit of new organizational forms (Lewis et al., 2021; Schultz et al., 2014; Xu et al., 2014). However, as organizational ecologists argued, density only causes fierce competition when an organizational form becomes fully taken-for-granted (Dobrev & Gotsopoulos, 2010; Lander & Heugens, 2017; Suddaby et al., 2017). Since SE is still a relatively recent phenomenon and becoming taken-for-granted is still the central concern of SE's development (Bhatt et al., 2019; Ewald Kibler et al., 2018), SE's density can better represent its cognitive legitimacy rather than competition. Thus, as the number of SEs grows, the density of SE contributes to its increased acceptance and taken-for-grantedness.

Institutionalists and organizational ecologists further find that the cognitive legitimacy of a new organizational practice, sourcing from its density, can enhance its adoption and implementation. As the density of a new organizational form increases, it becomes more widely accepted, and further, it has a much higher chance of being adopted by an individual. For instance, in the context of corporate social responsibility (CSR), Husted et al. (2016) show that the rising CSR density enhances its legitimacy, thus increasing a focal firm's CSR engagement. We extend this logic to uncover the role of cognitive legitimacy at the micro level. We argue that the cognitive legitimacy of SE as perceived by an individual will enhance the likelihood of this individual engaging in SE. We focus on the perceived cognitive legitimacy of SE because the degree to which the legitimacy of a new organizational form determines an individual's decision to engage in SE is dependent on individual perception (Miller et al., 2012; Nicholls, 2010; Scott & Lane, 2000). Bitektine and Haack (2015) also highlight the relevance of perceived cognitive legitimacy

(via a mechanism of validity and collective judgment) in their multilevel model of legitimacy towards a certain observable action. Therefore, we propose that an individual's perceptions of the social-enterprise form's cognitive legitimacy can shape his/her choice to engage in SE. As we stated above, perceived cognitive legitimacy can be derived from residing in a region with a higher (perceived) density of social enterprise. We thus focus on individuals' perceived SE density as an indicator of their perceived SE's cognitive legitimacy and hypothesize:

Hypothesis 2 (H2). An individual's perceived density of social enterprise is positively associated with the likelihood of individuals engaging in SE.

3.3 The interaction between perceived SE density and spillover effects

As aforementioned, individuals can increase their recognition and acceptance of SE through perceived SE density and legitimacy spillover effects, further leading to their entry into social entrepreneurial activity. However, these sources of cognitive legitimacy may not be strictly additive (Zimmerman & Zeitz, 2002). Institutional and organizational ecology theorists argue that individuals evaluate the legitimacy of a category differently as the category develops (Kuilman & Li, 2009; Taeuscher et al., 2021). The legitimacy spillover effect tends to play a more important role when the organizational form is relatively new. For instance, Zhao et al. (2018) find that an emerging category largely depends on conformity with other categories to obtain legitimacy during its early development. However, an organization's legitimacy is characterized by a "range of acceptability" (Deephouse, 1999: 152). Once an organization reaches the audiences' range of acceptability, it is perceived as legitimate and will gain only marginal benefits from additional legitimacy (Taeuscher et al., 2021). For example, Xu et al. (2014) show that an increasing density of new organizational forms can reduce the need for legitimacy transfer from other categories.

We attribute this change in the legitimacy evaluation of new organizational forms to different evaluative modes used by evaluators (Bitektine & Haack, 2015; Tost, 2011). Audiences evaluate the legitimacy of an organization using two different modes: either an evaluative or a passive mode (Bitektine & Haack, 2015; Jacqueminet & Durand, 2020; Tost, 2011). The

Fig. 1 Theoretical model
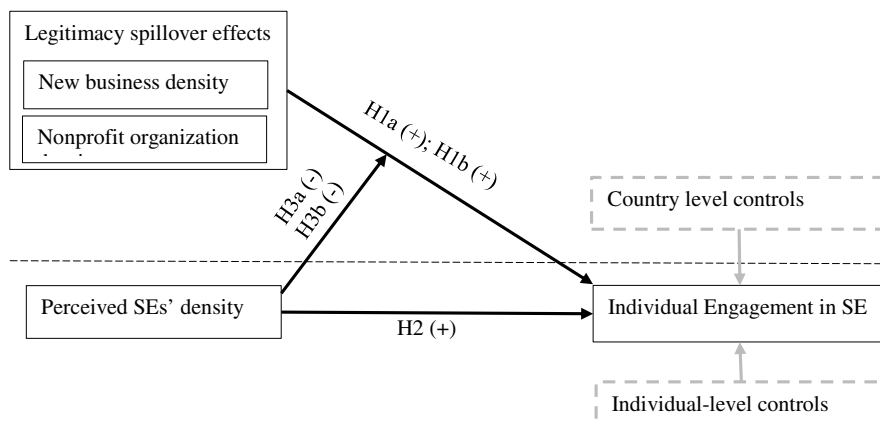
evaluative mode is based on individual perception of the practice's appropriateness, which requires more mental effort during the evaluation process. By contrast, in the passive mode, individuals either adopt collective beliefs and approval (i.e., validity) of the practice or quickly passively embrace practices that align with their expectations, which is effortless (Tost, 2011). The passive mode takes precedence unless there is a need or desire for the evaluative mode to intervene because individuals tend to conserve cognitive energy when evaluating (Tost, 2011). In addition, as a category has gained high legitimacy, evaluators face strong social pressure from its collective legitimacy, and those who make different evaluations are under pressure to suppress their deviant opinions (Centola et al., 2005; Zhu & Westphal, 2011). Thus, in this situation, individuals' passive mode dominates the judgment process of an organization's legitimacy, and the evaluative mode is suppressed (Bitektine & Haack, 2015). In contrast, when the population of a new category starts to grow, and there is a lack of perceived validity, the evaluative mode dominates the legitimacy judgment process (Tost, 2011).

As discussed above, the legitimacy spillover from both commercial business and nonprofit organizations to SE reflects an evaluative mode because it requires individuals to make efforts to understand the appropriateness of SE based on the two distinct categories it blends. By contrast, perceived SE density represents the perceived collective legitimacy of SE, thereby reflecting individuals' evaluation in a passive mode (Bitektine & Haack, 2015). Therefore, in contexts with a perceived higher density of social ventures, individuals are more likely to accept

SE passively to conserve energy (Lewis et al., 2021; Tost, 2011). As individuals become more exposed to SEs, the predictability and understandability of SEs increase, eliminating the need for individuals to interpret SE through other similar categories. That is, they rely less on the legitimacy spillover effects from business and nonprofit organizational forms. We, therefore, propose:

Hypothesis 3 (H3a). The positive legitimacy spillover effect of the business category on individual engagement in SE is weaker if the individual perceives a higher SE density.

Hypothesis 3 (H3b). The positive legitimacy spillover effect of the nonprofit category on individual engagement in SE is weaker if the individual perceives a higher SE density.

Figure 1 presents the conceptual framework combining Hypotheses 1–3 and showcases the multilevel nature of the mechanisms we propose for analyzing the cognitive legitimacy of SE.

4 Methods

4.1 Sample and data sources

To examine our model, we utilized a multilevel design incorporating individual-level (level 1) data nested within country-level data (level 2). To test our hypotheses, we combined multiple datasets. Firstly, our individual-level data were derived from the Adult Population Survey (APS), a sizeable population-representative survey conducted by the Global Entrepreneurship Monitor (GEM) in 2015 (Lepoutre et al.,

2013; Stephan et al., 2015). The APS survey by GEM selects a random sample of at least 2000 individuals each year in every participating country, ensuring broad representation. These participants were interviewed either through phone or face-to-face interviews. For detailed information on data collection protocols, we refer to the GEM manual (Bosma et al., 2012).

Previous studies have recognized the GEM survey as a reliable data source, and numerous empirical cross-national entrepreneurship studies published in reputable academic journals have utilized GEM data for their analyses (Boudreaux et al., 2019; Kibler et al., 2018). In 2015, the survey collected responses from over 181,000 individuals across 60 countries. In addition, the 2015 GEM survey emphasized social entrepreneurship, incorporating specific questions that aimed to identify and capture individuals' social entrepreneurial activity.

The data for our country-level variables were gathered from various sources, including the World Values Survey and the World Bank. To prevent any potential endogeneity issues between our predictors and the outcome, we lagged all country-level variables by at least one year. Once we merged the individual data with the aforementioned country-level data sources, our final sample encompassed at least 48,906 individuals from 22 countries, ensuring that all personal data and SE engagement information were accessible. The number of observations by country is presented in Table 1 in the Electronic Supplementary Material.

4.2 Variables and measures

4.2.1 Dependent variable at the individual level: SE

This study's dependent variable focused on individuals' engagement in social entrepreneurial activity. To identify social entrepreneurs, we employed a two-question criterion derived from previous studies (Saurav Pathak & Muralidharan, 2016, Pathak & Muralidharan, 2018; Sahasranamam & Nandakumar, 2020). Our measurement of SE engagement aligns with prior research on SE (Mair & Marti, 2006; Stephan et al., 2015). Participants were classified as social entrepreneurs if they responded affirmatively to both questions: "Are you, alone or with others, currently attempting to start or lead any activity with a social,

environmental, or community objective?" and "In the past twelve months, have you taken any action to help initiate this activity, organization, or initiative?". The dependent variable is treated as a binary variable, which is coded as 1 if individuals confirmed their current involvement in "trying to start," "currently leading," or both and had made efforts to commence the activity within the past twelve months. A code of 0 was assigned otherwise.

4.2.2 Independent variables at the country level

New business density We measured the national-level new business activity using the total start-up activity in a country from the World Bank's Entrepreneurship Survey. It is proxied by new firm density, which is the World Bank's best-known indicator of total start-up activity. It represents the number of newly registered businesses (i.e., private, formal sector companies with limited liability) per 1000 working-age people (aged from 15 to 64), thus providing cross-national analysis data. Prior research has reported that this index has high validity and reliability (Carbonara et al., 2016; Herrera-Echeverri et al., 2014; Stenholm et al., 2013).

The density of nonprofit activity According to prior studies, it is difficult to obtain homogeneous cross-national data on the nonprofit sector, such as the number of nonprofit organizations in a wide range of countries, donations, or employment within the third sector (Apinunmahakul & Devlin, 2008; Nissan et al., 2012; Saxton & Benson, 2005). Therefore, in this study, we measured the level of national nonprofit activity using a proxy variable—an average membership volume of nonprofit organizations of different types in a country. We obtained data from the World Values Survey Wave 6 (the 2010–2014 Wave). In this survey, individuals indicate whether they are active members of the following ten voluntary associations: (1) church or religious organization; (2) sport or recreational organization; (3) art, music, or educational organization; (4) labor union; (5) political party; (6) environmental organization; (7) professional association; (8) humanitarian or charitable organization; (9) consumer organization; and (10) self-help group, mutual aid group. The World Value Survey dataset further provides the country-level rate of all

respondents that belong to each of the above associations. We computed the average rate across all ten associations. The score used in our analyses reflects the average percentage of individuals in each country's sample actively involved in different nonprofit organizations.

4.2.3 Independent and moderating variable at the individual level: perception of SE density

As discussed in the hypotheses, individuals' decision-making on engaging in SE relies on the legitimacy spillovers from the population-level business and nonprofit activity and individuals' perception of SE legitimacy. To capture individuals' perception of SE legitimacy, we used individual-level data relating to their perception of SE density in their country. We measure an individual's perception of SE density as a dummy variable, which equals 1 if he/she responded in the affirmative that "in my country, you will often see businesses that primarily aim to solve social problems." We obtained this data from the GEM APS database as well.

4.2.4 Control variables

We incorporated individual- and country-level control variables in line with prior multilevel empirical studies (Ewald Kibler et al., 2018; Stephan et al., 2015). At the individual level, we accounted for gender using a binary variable (female = 0, male = 1) (Estrin et al., 2013; Pathak & Muralidharan, 2018). Additionally, we included age as a categorical variable (Saurav Pathak & Muralidharan, 2023; Wei et al., 2023). Previous research has indicated a positive association between individuals' education level and SE engagement (Estrin et al., 2013). Thus, we employed a seven-level education variable based on the GEM survey. Furthermore, we recognized the potential influence of work status and household income on SE activity (Saurav Pathak & Muralidharan, 2016; Sahasranamam & Nandakumar, 2020). We included work status as a binary variable, with a value of 1 indicating full-time or part-time employment. Similarly, household income was represented by a dummy variable, with a value of 1 signifying belonging to the middle- or higher-income group within their respective countries. Additionally, we accounted for individual socio-cognitive traits known to impact (social)

entrepreneurial activity, such as perceived entrepreneurial self-efficacy, alertness to entrepreneurial opportunities, fear of failure, and individuals having a peer startup entrepreneur in the network (Boudreaux et al., 2019; Saurav Pathak & Muralidharan, 2016; Sahasranamam & Nandakumar, 2020). The specific questions used to measure these socio-cognitive traits are presented in Table 1.

At the country level, we included the logarithmic scale of GDP per capita for 2014 as a control variable to capture the potential country-level effects in our main regression model (Hoogendoorn, 2016). To conduct a series of robustness checks, we further considered three country-level variables (including GDP growth, unemployment, and postmaterialism) based on prior studies on SE (Hechavarría et al., 2023; Sahasranamam & Nandakumar, 2020). We obtained GDP per capita, GDP growth, and unemployment data from the World Bank. The indicator of postmaterialism is available from the World Value Survey, which was measured using a 4-item postmaterialism index (Inglehart, 1997). We used the data from the Wave 6 survey (period from 2010 to 2014). Postmaterialism reflects a country prioritizing prosocial attitudes, volunteering, and political activism (Stephan et al., 2015). We lagged for all country-level variables for at least one year. Table 1 shows all variables' definitions and sources.

4.3 Method

We employed a multilevel modeling approach in our analysis due to the hierarchical nature of our dataset, which encompasses both national and individual levels. Individuals within the same country often share similar experiences, leading to comparable beliefs regarding SE. In multilevel modeling, observations within a nation are not considered independent of each other. In our study, it means that country-level factors influence the variation in assessing individuals' willingness to engage in SE. Thus, for our main analyses, we utilized multilevel logit regression. This model offers several advantages compared to standard logit regression. Firstly, it helps overcome the ecological fallacy, which assumes that relationships observed at the aggregate level hold true at the individual level. We can avoid this fallacy by considering the multilevel structure (Jargowsky, 2005: 715).

Table 1 Variable descriptions

Variables	Descriptions	Data sources
Dependent variables		
Individual's engagement in SE	Two questions are used together to measure this variable in the GEM survey: one is "Are you, alone or with others, currently attempting to start or lead any activity with a social, environmental, or community objective?"; Another one is "In the past twelve months, have you taken any action to help initiate this activity, organization, or initiative?". If an individual's answer for the first question is "trying to start," "currently leading," or "trying to start and leading" and the answer for the second question is "yes," then it is coded 1.	GEM APS (2015)
Independent variables		
New business density	New business density (new registrations per 1,000 people ages 15-64).	World Bank, World Development Indicators (2014)
The density of nonprofit activity	Using a proxy variable: an average membership volume of the following ten nonprofit organizations in a country: church or religious organization; sport or recreational organization; art, music or educational organization; labor union; political party; environmental organization; professional association; humanitarian or charitable organization; consumer organization; and self-help group, mutual aid group.	World Value Survey (2010-2014)
Moderating variables		
Individual's perception of SE	Coded 1 if individuals answer yes to the question "In <country>, you will often see businesses that primarily aim to solve social problems," 0 otherwise.	GEM APS (2015)
Individual-level controls		
Gender	A dummy variable: 1= male; 0 = female.	GEM APS (2015)
Age	A categorized variable; It includes five categories: 18–24, 25–34, 35–44, 45–54, and 55–64, which are coded as 1–5, respectively	GEM APS (2015)
Education	A categorized variable. it is coded according to the UN classification: pre-primary= 0, primary/first stage basic education =1, lower secondary/second stage basic education =2, upper secondary= 3, post-secondary, non-tertiary education = 4, first stage of tertiary education= 5, and second stage of tertiary education =6.	GEM APS (2015)
Work status	It captures whether individuals are not working, are retired, or are students (= 0), or working full- or part-time (=1)	GEM APS (2015)
Household income	It is a dummy variable, which equals 1 when a respondent indicated that he/she belonged to the middle- or higher-income group of the country, and 0 otherwise.	GEM APS (2015)
Individuals having a peer startup entrepreneur in the network	A dummy variable: coded 1 if a respondent knows an entrepreneur, 0 otherwise. The question for measuring this variable in the GEM survey is "Do you know someone personally who started a business in the past 2 years?".	GEM APS (2015)

Table 1 (continued)

Variables	Descriptions	Data sources
Individual's self-efficacy	A dummy variable: coded 1 if a respondent believes that he/she has the knowledge for starting a new business and 0 otherwise. The question for measuring this variable in the GEM survey is "Do you have the knowledge, skill, and experience required to start a new business?".	GEM APS (2015)
Fear of fail	A dummy variable: coded 1 if a respondent is afraid of failure and 0 otherwise. The question for measuring this variable in the GEM survey is "fear of failure would prevent them from starting a business?".	GEM APS (2015)
Alertness to opportunity	A dummy variable: coded 1 if a respondent indicates there will be a good opportunity for starting a new business in the next six months. The question for measuring this variable in the GEM survey is "In the next six months, will there be good opportunities for starting a business in the area where you live?".	GEM APS (2015)
Country-level controls		
Log of GDP per capita	The logarithm of real GDP per capita, PPP.	World Bank, World Development Indicators (2014)
Country-level variables used in robustness checks		
GDP growth	Real GDP growth rate.	World Bank, World Development Indicators (2014)
Unemployment	Unemployment, total (% of the total labor force).	World Bank, World Development Indicators (2014)
Postmaterialism	Inglehart's 4-item postmaterialism index, emphasizes immaterial life goals such as pro-environmental attitudes and volunteering. It is measured as the percentage of individuals in each country who are identified as "postmaterialist."	World Value Survey (2010-2014)

Secondly, the multilevel logit model accounts for the nonindependence of error terms, resulting in more reliable estimates compared to single-level regression (Estrin et al., 2013).

Consistent with the study conducted by Estrin et al. (2013), we assessed the statistical suitability of employing multilevel modeling in our analysis. Initially, we ran an empty multilevel regression model, which does not include any explanatory variables, to examine the significance of country effects (random intercepts). The findings revealed statistically significant country-level variances ($p < 0.001$) in explaining individuals' engagement in social entrepreneurial activity. The residual interclass correlation (ICC1) indicated that 15.28% of the variation in SE engagement could be attributed to the country level, indicating a substantial proportion (Hox et al., 2017). To further evaluate the appropriateness of the multilevel modeling approach, we compared the ICC1 before and after incorporating macro-level control variables such as GDP per capita, business entry rate, and nonprofit activity. The results showed that the ICC1 decreased to 8.44% after accounting for these macro-level controls, suggesting that multilevel modeling remains suitable for our research purposes.

We utilized the variance inflation factor (VIF) method to assess the multicollinearity issue, as presented in Table A2 in the Electronic Supplementary Material. Our analysis indicated that multicollinearity was not a concern among our variables, as all

VIF scores remained below the critical threshold of 5 (Hair, 2009).

5 Results

Within our study, Table 2 presents the descriptive statistics and correlation matrix for all variables utilized. We further examine our hypotheses by employing a series of logistic multilevel regression models, as our research aim was to explore whether population-level legitimacy can spill over to influence an individual's SE decision-making, a binary variable following the Bernoulli distribution. Table 3 displays eight logit regression models used to test our hypotheses.

Model 1 incorporates all individual- and country-level control variables. Model 2 adds the entry rate of new firms, the first focal predictor, to test hypothesis 1a, and Model 3 adds nonprofit activity, our second focal predictor, to examine hypothesis 1b. To test hypothesis 2, Model 4 adds individuals' perception of SE density as an independent variable. Model 5 includes all focal predictors. To test hypotheses 3a and 3b, Models 6–7 contain the interaction terms in a stepwise manner. We also incorporated both interaction terms in one model, as shown in Model 8. Finally, Models 9–16 provide a series of additional analyses to examine the robustness of our main results.

5.1 Main results

Before addressing the results linked to our hypotheses, we briefly discuss those control variables that predominantly confirm earlier findings. From Model 1, we observe that the probability of being engaged in SE differs among distinct age groups. Specifically, compared to the 18–24 age category, age this probability is lower for individuals aged 25–34 ($\beta = -0.197$, $p < 0.01$) and 35–44 ($\beta = -0.185$, $p < 0.05$), while it is larger for those in the 55–64 age range ($\beta = 0.175$, $p < 0.05$). Model 1 also finds that people are more likely to pursue SE within groups characterized by higher levels of educational attainment. Individuals who are either fully or part-time employed are also more inclined to be involved in SE ($\beta = 0.499$, $p < 0.01$). Household income also shows a positive relationship with involvement in SE ($\beta = 0.16$, $p < 0.01$). Consistent with prior

findings of e.g. Boudreaux et al. (2019) and Sahasranamam and Nandakumar (2020), Model 1 indicates a strong association between individual socio-cognitive entrepreneurial traits and self-reported SE activity. Specifically, we find individuals' having a peer startup entrepreneur in their network ($\beta = 0.68$, $p < 0.01$), entrepreneurial self-efficacy ($\beta = 0.543$, $p < 0.01$), and alertness to entrepreneurial opportunity ($\beta = 0.349$, $p < 0.01$) to be positively associated with the probability to be engaged in SE, while fear of failure presents a negative relation ($\beta = -0.162$, $p < 0.01$).

Turning to our hypotheses, we proposed a positive relationship between the entry rate of new businesses at the national level and individuals' SE entry in Hypothesis 1a. In Model 2, we find the entry rate of new businesses was positively associated with an individual's SE entry, and the relationship was statistically significant at the 5 percent level. The coefficient of *New business density* is 0.085, indicating that if the number of new businesses per 1000 residents increases by 1, the log odds ratio of SE entry increases by 0.085. From Model 3, we also support Hypothesis 1b, as a country's nonprofit activity significantly positively affects an individual's SE entry ($\beta = 0.074$, $p < 0.05$). Model 4 supports Hypothesis 2 that an individual's perceived density of social enterprise is significantly and positively associated with the likelihood of individuals engaging in SE ($\beta = 0.214$, $p < 0.01$). We still found positive and robust relationships when all focal predictors were included in the same model (Model 5). The average marginal effects of new business density and nonprofit activity are 0.004 and 0.003, suggesting that the average probability of an individual engaging in SE increases by 0.004 and 0.003, respectively, if new business density and nonprofit activity by one unit.

The interaction models further indicate that an individual's perception of SE density negatively moderates the effects of legitimacy spillovers on an individual's SE engagement. Specifically, from Model 6, we find a significant negative interaction between the entry rate of new businesses at the national level and individuals' perception of SE density ($\beta = -0.028$, $p < 0.05$), which supports our Hypothesis 3a. Finally, in Model 7, we note that an individual's perception of SE density also has a significant negative moderating effect on the influence of a nation's nonprofit activity on individuals' SE engagement ($\beta = -0.045$,

Table 2 Descriptive statistics and correlations

Variables	Mean	Std. Dev.	1	2	3	4	5	6	7	8	9
1. Individual's SE entry	0.050	0.218	1								
2. New business density	3.632	3.481	0.041***	1							
3. The density of nonprofit activity	6.909	3.394	0.052***	0.025***	1						
4. Have a peer startup entrepreneur in network	0.317	0.465	0.022***	−0.067***	0.086***	1					
5. Gender	0.522	0.500	0.025***	−0.00100	−0.013***	−0.002	1				
6. Age	2.983	1.287	−0.005**	0.028***	−0.048***	−0.006**	−0.012***	1			
7. Education	3.088	1.396	0.055***	0.126***	0.042***	−0.081***	0.023***	−0.086***	1		
8. Work status	0.680	0.466	0.072***	0.036***	0.029***	−0.015***	0.176***	0.015***	0.172***	1	
9. Household income	0.631	0.482	0.051***	0.004	0.049***	−0.031***	0.082***	−0.011***	0.256***	0.214***	1
10. Individual network	0.392	0.488	0.107***	−0.051***	−0.001	0.051***	0.067***	−0.082***	0.066***	0.145***	0.104***
11. Individual self-efficacy	0.517	0.500	0.106***	−0.032***	0.046***	0.068***	0.123***	0.002	0.069***	0.164***	0.096***
12. Fear of fail	0.406	0.491	−0.044***	−0.039***	−0.032***	0.000	−0.071***	0.010***	0.016***	−0.007***	−0.025***
13. Alertness to opportunity	0.404	0.491	0.093***	0.034***	0.093***	0.127***	0.042***	−0.071***	0.066***	0.104***	0.086***
14. Log of GDP per capita	9.962	0.615	−0.060***	0.442***	−0.080***	−0.132***	0.007***	0.156***	0.258***	0.035***	0.019***
Variables used in robustness checks											
15. GDP growth	2.701	1.978	0.054***	−0.020***	0.001	0.081***	−0.002	−0.088***	−0.046***	0.031***	−0.007***
16. Unemployment	11.59	8.744	−0.067***	−0.103***	−0.358***	−0.063***	0.007***	0.068***	−0.070***	−0.108***	−0.095***
17. Postmaterialism	10.29	5.976	0.043***	0.011***	0.414***	−0.030***	−0.004	0.018***	0.033***	0.049***	0.015***

Variables	Mean	Std. Dev.	10	11	12	13	14	15	16	17
10. Individual network	0.392	0.488	1							
11. Individual self-efficacy	0.517	0.500	0.253***	1						
12. Fear of fail	0.406	0.491	−0.030***	−0.144***	1					
13. Alertness to opportunity	0.404	0.491	0.228***	0.212***	−0.080***	1				
14. Log of GDP per capita	9.962	0.615	−0.149***	−0.155***	0.072***	−0.098***	1			
Variables used in robustness checks										
15. GDP growth	2.701	1.978	0.116***	0.036***	−0.036***	0.081***	−0.470***	1		
16. Unemployment	11.59	8.744	−0.074***	−0.032***	0.041***	−0.142***	0.194***	−0.389***	1	
17. Postmaterialism	10.29	5.976	−0.034***	0.025***	−0.023***	0.105***	0.383***	−0.153***	−0.200***	1

*** $p<.001$, ** $p<.01$, * $p<.05$, n=48,881, Group of countries=22

Table 3 Multilevel logit regression results

Models	Dependent variable: the Individual's likelihood of engaging in SE							
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Controls								
Gender: male	.027	.027	.027	.03	.03	.03	.028	.028
	(.045)	(.045)	(.045)	(.045)	(.045)	(.045)	(.045)	(.045)
Age range								
25–34	−.197***	−.198***	−.198***	−.192***	−.193***	−.194***	−.194***	−.196***
	(.073)	(.073)	(.073)	(.073)	(.073)	(.073)	(.073)	(.073)
35–44	−.185**	−.185**	−.186**	−.182**	−.183**	−.186**	−.184**	−.187**
	(.074)	(.074)	(.074)	(.074)	(.074)	(.074)	(.074)	(.074)
45–54	.109	.109	.109	.106	.106	.102	.105	.101
	(.074)	(.074)	(.074)	(.074)	(.074)	(.074)	(.074)	(.074)
55–64	.175**	.175**	.175**	.169**	.169**	.163**	.167**	.161**
	(.08)	(.08)	(.08)	(.08)	(.08)	(.08)	(.08)	(.08)
Education								
Primary education	.000	.003	−.002	.006	.006	−.001	.003	−.005
	(.177)	(.177)	(.177)	(.177)	(.177)	(.177)	(.177)	(.177)
Lower secondary education	.049	.049	.044	.068	.063	.06	.054	.049
	(.171)	(.17)	(.171)	(.171)	(.171)	(.171)	(.171)	(.171)
Upper secondary education	.255	.257	.254	.273*	.273*	.267*	.265*	.257
	(.159)	(.159)	(.159)	(.159)	(.159)	(.159)	(.159)	(.159)
Post-secondary, non-tertiary education	.367**	.369**	.365**	.394**	.395**	.389**	.386**	.379**
	(.165)	(.165)	(.165)	(.165)	(.165)	(.165)	(.165)	(.165)
First stage of tertiary education	.61***	.611***	.61***	.645***	.646***	.641***	.638***	.63***
	(.162)	(.162)	(.162)	(.162)	(.162)	(.162)	(.162)	(.162)
Second stage of tertiary education	1.034***	1.033***	1.04***	1.074***	1.08***	1.074***	1.079***	1.072***
	(.203)	(.203)	(.204)	(.204)	(.204)	(.204)	(.204)	(.204)
Work status	.499***	.5***	.499***	.497***	.498***	.495***	.498***	.495***
	(.061)	(.061)	(.061)	(.061)	(.061)	(.061)	(.061)	(.061)
Household income	.16***	.159***	.159***	.169***	.168***	.163***	.168***	.163***
	(.053)	(.053)	(.053)	(.053)	(.053)	(.053)	(.053)	(.053)
Have a peer startup entrepreneur in network	.68***	.681***	.681***	.677***	.678***	.678***	.678***	.678***
	(.046)	(.046)	(.046)	(.046)	(.046)	(.046)	(.046)	(.046)
Individual's self-efficacy	.543***	.544***	.543***	.532***	.533***	.53***	.534***	.53***
	(.052)	(.052)	(.052)	(.052)	(.052)	(.052)	(.052)	(.052)
Individual's fear of failure	−.162***	−.162***	−.161***	−.167***	−.165***	−.169***	−.164***	−.169***
	(.047)	(.047)	(.047)	(.047)	(.047)	(.047)	(.047)	(.047)
Individual's alertness to opportunity	.349***	.349***	.349***	.323***	.322***	.318***	.323***	.319***
	(.046)	(.046)	(.046)	(.047)	(.047)	(.047)	(.047)	(.047)
National GDP per capita (log)	.02	−.265	.056	.043	−.194	−.184	−.203	−.194
	(.227)	(.231)	(.212)	(.227)	(.219)	(.219)	(.219)	(.218)
Predictors at the country level								
New business density		.085**			.08**	.089***	.081**	.091***
		(.035)			(.033)	(.033)	(.033)	(.033)
Nonprofit activity density			.074*		.061*	.061*	.074**	.077**
			(.04)		(.036)	(.036)	(.036)	(.036)

Table 3 (continued)

Models	Dependent variable: the Individual's likelihood of engaging in SE							
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Predictor at the individual level								
Perceived SE density				.214***	.214***	.2***	.268***	.262***
				(.047)	(.047)	(.048)	(.052)	(.053)
Cross-level interaction effects								
New business density X Perceived SE density						−.036***		−.039***
						(.012)		(.012)
Nonprofit activity density X Perceived SE density							−.031**	−.037***
							(.014)	(.014)
Constant	−4.832**	−1.94	−5.237**	−5.137**	−2.767	−2.854	−2.689	−2.768
	(2.259)	(2.315)	(2.113)	(2.259)	(2.195)	(2.191)	(2.192)	(2.189)
Variance of random intercept between countries	.451***	.349***	.387***	.45***	.303***	.302***	.302***	.302***
	(.141)	(.111)	(.122)	(.141)	(.097)	(.097)	(.097)	(.096)
Number of countries	22	22	22	22	22	22	22	22
Observations	48881	48881	48881	48881	48881	48881	48881	48881
AIC	16876.4	16873.07	16875.16	16857.81	16853.54	16845.96	16850.4	16841.16
BIC	17052.34	17057.81	17059.9	17042.55	17055.88	17057.09	17061.53	17061.09

Standard errors are in parentheses

*** $p<.01$, ** $p<.05$, * $p<.1$

$p < 0.01$), providing support for our Hypothesis 3b as well. When we included both interaction terms into one model (Model 8), the results still supported Hypothesis 3a and 3b.

We plot the notable moderating effects that depict the average predicted probability of individuals' involvement in SE across different levels of perceived density of SEs while considering varying densities of both new business and nonprofit organizations. In Fig. 2, the vertical axis represents the probability of engaging in social entrepreneurship, while the horizontal axis represents the density of newly established businesses within a country. The results in Fig. 2 indicate that as the density of new businesses increases, both people who perceived SEs' density and those who did not are more likely to engage in social entrepreneurship than their counterparts in societies with a lower density of new business. In addition, the legitimacy spillover effect from the new business on SEs becomes smaller when individuals perceive a density of SEs in their countries. We plot the graphs for the significant interaction effect between nonprofit organizations and perceived SE density in social entrepreneurship (Fig. 3). It shows that people with a perception of SE density are less likely to depend

on the legitimacy spillover effect from the nonprofit organizations for deciding to start a social venture. Overall, all figures suggest that the legitimacy spillover effects become smaller in predicting individuals' SE entry when they perceive a density of SEs in their countries.

5.2 Robustness tests

We then conducted a series of robustness checks, as shown in Table 4. First, all the positive effects of our focal predictors and the interaction effects were replicated by removing alertness to entrepreneurial opportunity as an individual-level control variable. The results support the robustness of our findings. Then, we added GDP growth and unemployment as country-level control variables separately. The results provide evidence of the robustness of our findings. Finally, we used postmaterialism from the World Value Survey as an alternative measure for one of our predictors, the national-level nonprofit activity. We repeated all the analyses. The results are consistent with our original findings, as presented before, except for a less robust moderating effect of perceived SE density on the relationship between postmaterialism

Fig. 2 Interaction between country-level new business density and individual-level perceived SEs density in social entrepreneurship
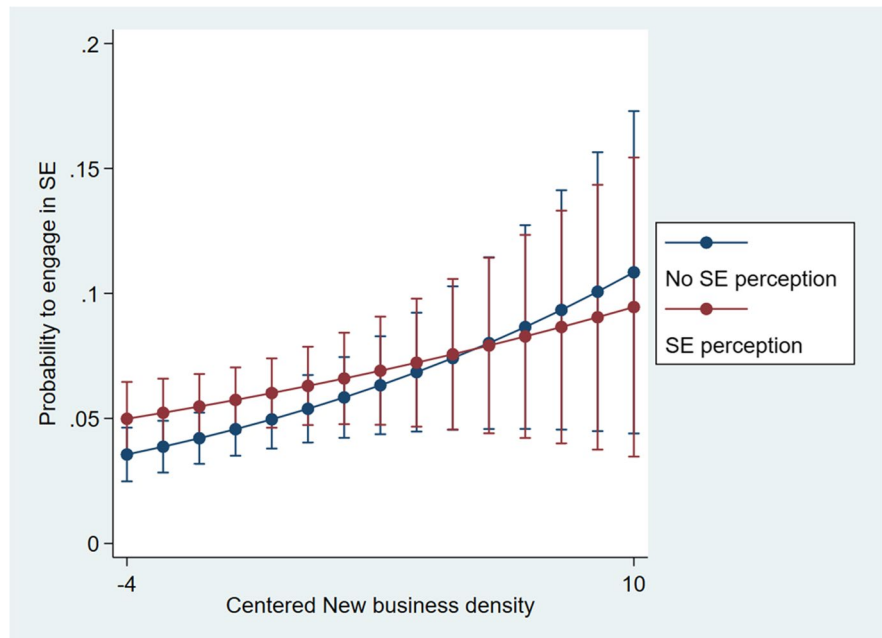
and individuals' SE entry (Model 16). Apart from the above robustness tests, we further run our analysis by adopting an alternative measurement for our dependent variable (i.e., individuals' engagement in SE) and using the lagged density of business by two years, respectively. The results still support our hypotheses (see Table A3 and Table A4 in the Electronic Supplementary Material).

6 Discussion and conclusions

This study explores the pathways of how SE as an organizational form may obtain cognitive legitimacy. Drawing on legitimacy theory and organizational ecology perspectives, we find that SE can gain cognitive legitimacy by means of legitimacy spillover effects from both commercial business and nonprofit categories (Kostova & Zaheer, 1999; Kuilman & Li, 2009) and by the perceived prevalence of social enterprises (Hannan & Freeman, 1984). We also argue that these two sources of cognitive legitimacy are not strictly additive. We find legitimacy spillover plays a less vital role when individuals perceive a higher prevalence of SE activity. The empirical results suggest both the density of business and nonprofit activity in a country are positively associated with individuals' social entrepreneurial entry; moreover, this

positive association is diminished when individuals perceive SEs to be prevalent in their country.

6.1 Theoretical implications

This paper makes contributions to research on SE, organizational ecology, and hybrid organizations. First, we contribute to SE literature by identifying its sources of cognitive legitimacy. Prior SE research initially considered studying SE's cognitive legitimacy to be theoretically unwarranted (Dart, 2004) and has, accordingly, paid limited attention to SE's cognitive legitimacy (Kibler et al., 2018; Miller et al., 2012). This paper adds to the understanding of SE's cognitive legitimacy by identifying two sources at different levels of analysis: legitimacy spillovers from business and nonprofit organizations (macro level) and SE prevalence perceived by individuals (micro level). We propose that the macro-level legitimacy spillover effects of both business and nonprofit categories should be considered in conjunction with the perceived presence of SE at the micro level in order to assess SE's cognitive legitimacy, but in different ways: the perceived density of SE enables individuals to passively consider SE as comprehensible, while the macro-level legitimacy (i.e., density) of business and nonprofit organizations assist individuals to actively evaluate the comprehensibility of SE (i.e., legitimacy

Fig. 3 Interaction between country-level nonprofit organizations and individual-level perceived SEs density in social entrepreneurship
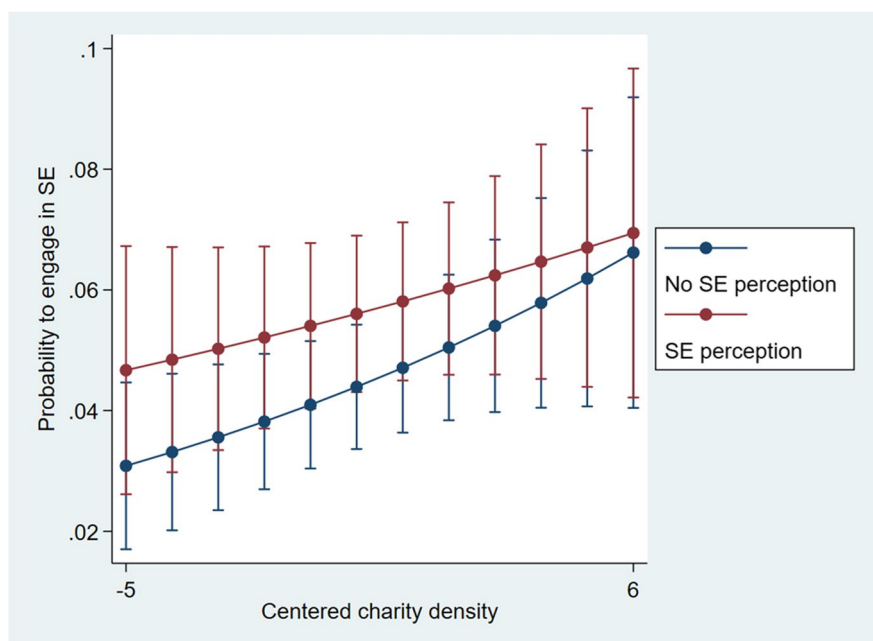
spillover). Our results further suggest that the legitimacy spillover effects become weaker if individuals perceive a higher SE density, thus providing empirical support to previous theories about how individuals evaluate legitimacy in either evaluative or passive modes and how the passive mode dominates the evaluation process (Bitektine & Haack, 2015; Tost, 2011).

Second, we contribute to the organizational ecology literature by leveraging a multilevel theory of legitimacy proposed by Bitektine and Haack (2015). Organizational ecologists have long discussed the prevalence of an organizational form by investigating interpopulation (i.e., legitimacy spillover) and intrapopulation processes (i.e., the accumulated legitimacy through their own density) (Kuilman & Li, 2009; Lewis et al., 2021; Xu et al., 2014; Zhao et al., 2018). They mainly focus on understanding both processes at the macro level (Dobrev et al., 2006; Hannan & Carroll, 1992; Kuilman & Li, 2009; Li et al., 2007; Zavyalova et al., 2012). Our multilevel model explains how interpopulation and intrapopulation processes occur through a cross-level mechanism: the macro-level legitimacy of business and nonprofit organizations, as well as the perceived SE density, affect individuals' comprehension of SE, thereby influencing their engagement in SE. In addition, earlier organizational

ecologists mainly focus on the legitimacy spillovers within categories (e.g., from a category to its subcategory) (Dobrev et al., 2006; Kuilman & Li, 2009; Li et al., 2007; Zavyalova et al., 2012). We extend previous research by focusing on how legitimacy spillovers occur across categories. That is, we find that social enterprises, which straddle contradicting categories of business and nonprofits, can receive legitimacy spillovers from both categories.

Finally, this paper contributes to the current body of literature on hybrid organizations. It responds to recent calls for more symmetrical theorization of hybridity to better understand its positive and negative effects (Wry et al., 2014). Scholars usually find that mixed identities, organization forms, and institutional logics in hybrid organizations could confuse what 'type' they belong to, which leads to tensions and may inhibit them in obtaining and maintaining legitimacy (Greenwood et al., 2011; Kostova & Zaheer, 1999). Instead, our results suggest that SEs may also benefit from their hybrid nature, acquiring legitimacy over time through the spillover effects from both the established business and nonprofit categories that it straddles. It also holds the potential to contribute to a better understanding of the emergence and legitimacy of other types of hybrid ventures, such as sustainable and environmental entrepreneurship.

Table 4 Robustness check

Robustness check	Dependent variable: the individual's likelihood of engaging in SE							
	Removing alertness to opportunity		Adding GDP growth as a control		Adding unemployment as a control		An alternative measure for nonprofit activity: Postmaterialism	
Models	Model 9	Model 10	Model 11	Model 12	Model 13	Model 14	Model 15	Model 16
Controls								
Gender	.014	.012	.03	.028	.03	.028	.03	.029
	(.043)	(.043)	(.045)	(.045)	(.045)	(.045)	(.045)	(.045)
Age								
Ranges only (25–34)	−.186***	−.189***	−.193***	−.196***	−.192***	−.196***	−.192***	−.195***
	(.07)	(.07)	(.073)	(.073)	(.073)	(.073)	(.073)	(.073)
Ranges only (35–44)	−.181**	−.187***	−.183**	−.187**	−.182**	−.187**	−.182**	−.186**
	(.072)	(.072)	(.074)	(.074)	(.074)	(.074)	(.074)	(.074)
Ranges only (45–54)	.073	.068	.106	.101	.107	.102	.106	.102
	(.072)	(.072)	(.074)	(.074)	(.074)	(.074)	(.074)	(.074)
Ranges only (55–64)	.104	.096	.169**	.161**	.17**	.162**	.169**	.164**
	(.077)	(.077)	(.08)	(.08)	(.08)	(.08)	(.08)	(.08)
Education								
1.Educ. - primary/first stage	−.017	−.028	.005	−.006	.006	−.005	.008	−.006
	(.174)	(.174)	(.177)	(.177)	(.177)	(.177)	(.177)	(.177)
2.Educ. - lower secondary/second stage	.024	.01	.062	.049	.064	.051	.065	.049
	(.168)	(.168)	(.171)	(.171)	(.171)	(.171)	(.171)	(.171)
3.Educ. - upper secondary	.23	.215	.271*	.256	.273*	.258	.274*	.255
	(.156)	(.156)	(.159)	(.159)	(.159)	(.159)	(.159)	(.159)
4.Educ. - post-secondary, non-tertiary	.368**	.352**	.394**	.377**	.395**	.379**	.399**	.378**
	(.162)	(.162)	(.165)	(.165)	(.165)	(.165)	(.165)	(.165)
5.Educ. - first stage of tertiary	.659***	.644***	.645***	.629***	.646***	.631***	.648***	.626***
	(.159)	(.159)	(.162)	(.162)	(.162)	(.162)	(.162)	(.162)
6.Educ. - second stage of tertiary	1.043***	1.033***	1.08***	1.072***	1.083***	1.074***	1.077***	1.057***
	(.198)	(.198)	(.204)	(.204)	(.204)	(.204)	(.204)	(.204)
Work status	.503***	.501***	.497***	.495***	.497***	.495***	.497***	.495***
	(.058)	(.058)	(.061)	(.061)	(.061)	(.061)	(.061)	(.061)
Household income	.202***	.198***	.169***	.164***	.167***	.163***	.169***	.161***
	(.051)	(.051)	(.053)	(.053)	(.053)	(.053)	(.053)	(.053)
Have a peer startup entrepreneur in network	.714***	.713***	.678***	.677***	.678***	.677***	.678***	.676***
	(.044)	(.044)	(.046)	(.046)	(.046)	(.046)	(.046)	(.046)
Individual's self-efficacy	.578***	.575***	.534***	.531***	.534***	.531***	.533***	.529***
	(.049)	(.049)	(.052)	(.052)	(.052)	(.052)	(.052)	(.052)
Fear of fail	−.184***	−.187***	−.165***	−.169***	−.166***	−.169***	−.164***	−.169***
	(.045)	(.045)	(.047)	(.047)	(.047)	(.047)	(.047)	(.047)
Log of GDP per capita	−.235	−.235	−.132	−.137	−.208	−.206	−.373*	−.365*
	(.216)	(.216)	(.237)	(.237)	(.207)	(.209)	(.221)	(.221)
Individual-level variable for Robustness check								
Alertness to opportunity			.322***	.319***	.321***	.318***	.32***	.317***
			(.047)	(.047)	(.047)	(.047)	(.047)	(.047)

Table 4 (continued)

Robustness check	Dependent variable: the individual's likelihood of engaging in SE							
	Removing alertness to opportunity		Adding GDP growth as a control		Adding unemployment as a control		An alternative measure for nonprofit activity: Postmaterialism	
Country-level variable for Robustness check								
GDP growth			.044	.04				
			(.067)	(.067)				
Unemployment					−.03	−.028		
					(.019)	(.019)		
Postmaterialism							.036**	.041**
							(.018)	(.018)
Predictors at the country level								
New business density	.082**	.093***	.078**	.09***	.085***	.096***	.098***	.109***
	(.032)	(.032)	(.032)	(.032)	(.031)	(.031)	(.032)	(.032)
Nonprofit activity density	.063*	.079**	.06*	.076**	.052	.069*		
	(.035)	(.036)	(.035)	(.036)	(.034)	(.035)		
Predictor at the individual level								
Perceived of SE density	.252***	.3***	.214***	.262***	.214***	.261***	.216***	.216***
	(.045)	(.05)	(.047)	(.053)	(.047)	(.053)	(.047)	(.048)
Cross-level interaction effects								
New business density X Perceived SE density		−.036***		−.039***		−.038***		−.036***
		(.011)		(.012)		(.012)		(.012)
Nonprofit activity density X Perceived SE density		−.036***		−.036***		−.036***		
		(.013)		(.014)		(.014)		
Postmaterialism X Perceived SE density								−.014**
								(.007)
Constant (individual level)	−2.249	−2.243	−3.513	−3.448	−2.369	−2.408	−.881	−.941
	(2.161)	(2.161)	(2.457)	(2.455)	(2.089)	(2.105)	(2.22)	(2.224)
Variance of random intercept between countries	.296***	.295***	.297***	.296***	.269***	.273***	.29***	.291***
	(.094)	(.094)	(.095)	(.095)	(.087)	(.088)	(.093)	(.093)
Number of countries	22	22	22	22	22	22	22	22
Observations	54062	54062	48881	48881	48881	48881	48881	48881
AIC	18512.43	18499.76	16855.12	16842.81	16853.2	16841.24	16852.68	16842.95
BIC	18708.18	18713.31	17066.25	17071.53	17064.33	17069.97	17055.02	17062.88

Standard errors are in parentheses.

*** $p<.01$, ** $p<.05$, * $p<.1$

6.2 Implications for practice

The findings of this study may hold significant implications for policymakers seeking to promote social entrepreneurial activity. Our results indicate that the presence of new businesses and nonprofit initiatives within a country can positively influence individuals' engagement in SE. Therefore, facilitating the establishment of new startups and supporting nonprofit activities in a country or region may also be conducive to the growth of social entrepreneurial activity. Policymakers are encouraged to enhance government support and foster a conducive business ecosystem for startups and nonprofit organizations while developing policies to foster SE. This approach not only benefits the expansion of startups and nonprofits but also serves as a catalyst for attracting more individuals to participate in SE. Encouragement can be manifested

through various means, such as providing incentives to signal benefits (e.g., financial support or direct subsidies) and establishing supportive regulative institutional frameworks (Stenholm et al., 2013).

Policymakers should be aware that the positive legitimacy spillover effects on individuals' SE engagement tend to diminish when individuals perceive a greater density of SE in their countries. In other words, the initial legitimation for SE activity comes from its mixed business and nonprofit categories with well-established legitimacy when the number of social enterprises is small. However, as the SE population grows and accumulates constitutive legitimacy that is most commonly related to the proliferation of an organizational population, individuals who perceive a higher social recognition for SE in their country are less likely to rely on legitimacy spillover effects in their decision to engage in SE. Therefore, policymakers are advised to formulate a plan for SE's long-term development, taking into account legitimation over time due to legitimacy spillovers. For example, depending on the existing legal structures that may be enabling or hindering SE, granting sociopolitical legitimacy to SE through the enactment of legislation and laws can be an effective approach, as previous research has highlighted the importance of government endorsements as a source of legitimacy for new organizations (Tost, 2011).

6.3 Limitations and future research

While our study contributes to understanding legitimacy spillovers for social entrepreneurial activity, we acknowledge several limitations. This study employed a population-representative sample from 22 diverse countries to test our multilevel hypotheses. It is important to note that the cross-sectional nature of our dataset limits our ability to establish strong causal relationships based on our analyses. Future research could employ alternative methodologies, such as experimental or longitudinal research designs, to provide further insights into the causal relationships under investigation.

Another limitation of our study is that our measure of SE relies on a single indicator that reflects the overall SE activity. However, Zahra et al. (2009) categorized social entrepreneurs into three distinct types: social bricoleur, social constructionist, and social engineer. These different types of social entrepreneurs exhibit variations in their ability to identify opportunities and assemble the necessary resources to pursue those opportunities. Hence, it becomes crucial to investigate how legitimacy spillovers may influence each type of social entrepreneur differently. Unfortunately, the available GEM dataset does not provide the means to differentiate between these types of social entrepreneurs. Future research should address this limitation by considering the diverse categories of social entrepreneurs to explore the potential varying effects of legitimacy spillovers across these different types.

Third, organizational scholars have recognized multiple legitimacy types (i.e., cognitive, normative, and regulatory legitimacy) that are important for organizations (Bitektine, 2011; Scott, 1995). However, in this study, we specifically explored the spillover effects of constitutive legitimacy on SE activity. Future research may investigate how other types of legitimacy spill over to SE activity. For instance, researchers could examine whether granting sociopolitical legitimacy to business or nonprofit sectors leads to higher social recognition for SE activity in the future.

Finally, while this paper has revealed the positive legitimacy transfers across categories (from business and nonprofit sectors to SE), the legitimacy of SE could also be negatively affected by its cognitively related categories. Prior studies have suggested that firms can suffer from negative spillovers when members of their industries engage in wrongdoing (Barnett & King, 2008; Zavyalova et al., 2012), and negative spillovers may have a stronger influence on legitimacy than positive spillovers (Haack et al., 2014; Kostova & Zaheer, 1999). Furthermore, this paper focuses on a so-called 'top-down' vertical spillover across categories. It is also possible to explore how the overall legitimacy of the "business" and "nonprofit" categories could be affected by SE activity, leading to 'bottom-up' legitimacy spillovers. Therefore, it may be fruitful to explore such bottom-up legitimacy spillovers, which can take place simultaneously as "top-down spillovers" in future studies.

Declarations

Wanxiang Cai (also on behalf of Xing Li and Niels Bosma) declares that there are no conflicts of interest among authors.
This article does not contain any studies that involve animals and human participants performed by any of the authors.

References

Alexy, O., & George, G. (2013). Category divergence, straddling, and currency: Open innovation and the legitimation of illegitimate categories. *Journal of Management Studies, 50*(2), 173–203. https://doi.org/10.1111/joms.12000

Apinunmahakul, A., & Devlin, R. A. (2008). Social networks and private philanthropy. *Journal of Public Economics, 92*(1–2), 309–328. https://doi.org/10.1016/j.jpubeco.2007.07.005

Au, K., Jeong, S. S., Hsu, A. J., & Xiao, Y. (2023). When does prosocial motivation deliver? A dual-motivations approach to social enterprise outcomes. *Journal of Business Ethics*, 1–20. https://doi.org/10.1007/s10551-023-05452-7

Audia, P. G., Freeman, J. H., & Reynolds, P. D. (2006). Organizational foundings in community context: Instruments manufacturers and their interrelationship with other organizations. *Administrative Science Quarterly, 51*(3), 381–419. https://doi.org/10.2189/asqu.51.3.381

Austin, J., Stevenson, H., & Wei-Skillern, J. (2006). Social and commercial entrepreneurship: Same, different, or both? *Entrepreneurship: Theory and Practice, 30*(1), 1–22. https://doi.org/10.1111/j.1540-6520.2006.00107.x

Barnett, M. L., & King, A. A. (2008). Good fences make good neighbors: A longitudinal analysis of an industry self-regulatory institution. *Academy of Management Journal, 51*(6), 1150–1170. https://doi.org/10.5465/amj.2008.35732609

Battilana, J., & Lee, M. (2014). Advancing research on hybrid organizing–Insights from the study of social enterprises. *Academy of Management Annals, 8*(1), 397–441. https://doi.org/10.5465/19416520.2014.893615

Bhatt, B., Qureshi, I., & Riaz, S. (2019). Social entrepreneurship in non-munificent institutional environments and implications for institutional work: Insights from China. *Journal of Business Ethics, 154*(3), 605–630. https://doi.org/10.1007/s10551-017-3451-4

Bird, M., & Wennberg, K. (2014). Regional influences on the prevalence of family versus non-family start-ups. *Journal of Business Venturing, 29*(3), 421–436. https://doi.org/10.1016/j.jbusvent.2013.06.004

Bitektine, A., & Haack, P. (2015). The "macro" and the "micro" of legitimacy: Toward a multilevel theory of the legitimacy process. *Academy of Management Review, 40*(1), 49–75. https://doi.org/10.5465/amr.2013.0318

Bitektine, A. (2011). Toward a theory of social judgments of organizations: The case of legitimacy, reputation, and status. *Academy of Management Review, 36*(1), 151–179. https://doi.org/10.5465/amr.2009.0382

Bogaert, S., Boone, C., Negro, G., & van Witteloostuijn, A. (2016). Organizational form emergence: A meta-analysis of the ecological theory of legitimation. *Journal of Management, 42*(5), 1344–1373. https://doi.org/10.1177/0149206314527129

Bosma, N., Coduras, A., Litovsky, Y., & Seaman, J. (2012). GEM Manual: A report on the design, data and quality control of the Global Entrepreneurship Monitor. *Global Entrepreneurship Monitor, 9*, 1–95.

Boudreaux, C. J., Nikolaev, B. N., & Klein, P. (2019). Socio-cognitive traits and entrepreneurship: The moderating role of economic institutions. *Journal of Business Venturing, 34*(1), 178–196. https://doi.org/10.1016/j.jbusvent.2018.08.003

Bruder, I. (2021). A social mission is not enough: Reflecting the normative foundations of social entrepreneurship. *Journal of Business Ethics, 174*(3), 487–505. https://doi.org/10.1007/s10551-020-04602-5

Bruton, G. D., Ahlstrom, D., & Li, H. L. (2010). Institutional theory and entrepreneurship: Where are we now and where do we need to move in the future? *Entrepreneurship: Theory and Practice, 34*(3), 421–440. https://doi.org/10.1111/j.1540-6520.2010.00390.x

Carbonara, E., Santarelli, E., & Tran, H. T. (2016). De jure determinants of new firm formation: how the pillars of constitutions influence entrepreneurship. *Small Business Economics, 47*(1), 139–162. https://doi.org/10.1007/s11187-016-9715-z

Centola, D., Willer, R., & Macy, M. (2005). The emperor's dilemma: A computational model of self-enforcing norms. *American Journal of Sociology, 110*(4), 1009–1040. https://doi.org/10.1086/427321

Chliova, M., Mair, J., & Vernis, A. (2020). Persistent category ambiguity: The case of social entrepreneurship. *Organization Studies, 41*(7), 1019–1042. https://doi.org/10.1177/0170840620905168

Chung, H.-M., & Cheng, L.-H. (2019). Coopetition and firm survival in a cluster: Insights from the population ecology on the Yacht industry in an emerging economy, 1957–2010. *Management and Organization Review, 15*(4), 837–856. https://doi.org/10.1177/01708406209051

Coleman, J. S. (1994). *Foundations of social theory*. Harvard University Press.

Dart, R. (2004). The legitimacy of social enterprise. *Nonprofit management and leadership, 14*(4), 411–424. https://doi.org/10.1002/nml.43

Deephouse, D. L. (1996). Does isomorphism legitimate? *Academy of Management Journal, 39*(4), 1024–1039. https://doi.org/10.5465/256722

Deephouse, D. L. (1999). To be different, or to be the same? It's a question (and theory) of strategic balance. *Strategic Management Journal, 20*(2), 147–166. https://doi.org/10.1002/(SICI)1097-0266(199902)20:2<147::AID-SMJ11>3.0.CO;2-Q

Dobrev, S. D., & Gotsopoulos, A. (2010). Legitimacy vacuum, structural imprinting, and the first mover disadvantage. *Academy of Management Journal, 53*(5), 1153–1174. https://doi.org/10.5465/amj.2010.54533229

Dobrev, S. D., Ozdemir, S. Z., & Teo, A. C. (2006). The ecological interdependence of emergent and established organizational populations: Legitimacy transfer, violation by comparison, and unstable identities. *Organization Science, 17*(5), 577–597. https://doi.org/10.1287/orsc.1060.0209

Doherty, B., Haugh, H., & Lyon, F. (2014). Social enterprises as hybrid organizations: A review and research agenda. *International journal of management reviews, 16*(4), 417–436. https://doi.org/10.1111/ijmr.12028

Durand, R., & Khaire, M. (2017). Where do market categories come from and how? Distinguishing category creation from category emergence. *Journal of Management, 43*(1), 87–110. https://doi.org/10.1177/0149206316669812

Durand, R., & Paolella, L. (2013). Category stretching: Reorienting research on categories in strategy, entrepreneurship, and organization theory. *Journal of Management Studies, 50*(6), 1100–1123. https://doi.org/10.1111/j.1467-6486.2011.01039.x

Estrin, S., Mickiewicz, T., & Stephan, U. (2013). Entrepreneurship, social capital, and institutions: Social and commercial entrepreneurship across nations. *Entrepreneurship Theory and Practice, 37*(3), 479–504. https://doi.org/10.1111/etap.12019

Fisher, G., Kotha, S., & Lahiri, A. (2016). Changing with the times: An integrated view of identity, legitimacy, and new venture life cycles. *Academy of Management Review, 41*(3), 383–409. https://doi.org/10.5465/amr.2013.0496

Gardberg, N. A., & Fombrun, C. J. (2006). Corporate citizenship: Creating intangible assets across institutional environments. *Academy of Management Review, 31*(2), 329–346. https://doi.org/10.5465/amr.2006.20208684

Greenwood, R., Raynard, M., Kodeih, F., Micelotta, E. R., & Lounsbury, M. (2011). Institutional complexity and organizational responses. *Academy of Management Annals, 5*(1), 317–371. https://doi.org/10.5465/19416520.2011.590299

Gupta, P., Chauhan, S., Paul, J., & Jaiswal, M. P. (2020). Social entrepreneurship research: A review and future research agenda. *Journal of Business Research, 113*, 209–229. https://doi.org/10.1016/j.jbusres.2020.03.032

Haack, P., Pfarrer, M. D., & Scherer, A. G. (2014). Legitimacy-as-feeling: How affect leads to vertical legitimacy spillovers in transnational governance. *Journal of Management Studies, 51*(4), 634–666. https://doi.org/10.1111/joms.12071

Hair, J. F. (2009). Multivariate data analysis.

Hannan, M. T., & Carroll, G. R. (1992). *Dynamics of organizational populations: Density, legitimation, and competition*. Oxford University Press.

Hannan, M. T., & Freeman, J. (1984). Structural inertia and organizational change. *American Sociological Review, 49*, 149–164. https://doi.org/10.2307/2095567

Haugh, H. (2007). Community–led social venture creation. *Entrepreneurship Theory and Practice, 31*(2), 161–182. https://doi.org/10.1111/j.1540-6520.2007.00168.x

Hechavarría, D. M., Brieger, S. A., Levasseur, L., & Terjesen, S. A. (2023). Cross-cultural implications of linguistic future time reference and institutional uncertainty on social entrepreneurship. *Strategic Entrepreneurship Journal, 17*(1), 61–94. https://doi.org/10.1002/sej.1450

Hedstrom, P., & Swedberg, R. (1998). *Social mechanisms*. Cambridge Cambridge University Press.

Herrera-Echeverri, H., Haar, J., & Estévez-Bretón, J. B. (2014). Foreign direct investment, institutional quality, economic freedom and entrepreneurship in emerging markets. *Journal of Business Research, 67*(9), 1921–1932. https://doi.org/10.1016/j.jbusres.2013.11.020

Hoogendoorn, B. (2016). The prevalence and determinants of social entrepreneurship at the macro level. *Journal of Small Business Management, 54*, 278–296. https://doi.org/10.1111/jsbm.12301

Hox, J., Moerbeek, M., & Van de Schoot, R. (2017). *Multilevel analysis: Techniques and applications*. Routledge.

Husted, B. W., Jamali, D., & Saffar, W. (2016). Near and dear? The role of location in CSR engagement. *Strategic Management Journal, 37*(10), 2050–2070. https://doi.org/10.1002/smj.2437

Huybrechts, B., & Nicholls, A. (2013). The role of legitimacy in social enterprise-corporate collaboration. *Social Enterprise Journal, 9*(2), 130–146. https://doi.org/10.1108/SEJ-01-2013-0002

Inglehart, R. (1997). *Modernization and postmodernization in 43 societies*. Princeton University Press.

Jacqueminet, A., & Durand, R. (2020). Ups and downs: The role of legitimacy judgment cues in practice implementation. *Academy of Management Journal, 63*(5), 1485–1507. https://doi.org/10.5465/amj.2017.0563

Jargowsky, P. A. (2005). The ecological fallacy. *Encyclopedia of Social Measurement, 1*, 715–722.

Kibler, E., Salmivaara, V., Stenholm, P., & Terjesen, S. (2018). The evaluative legitimacy of social entrepreneurship in capitalist welfare systems. *Journal of World Business, 53*(6), 944–957. https://doi.org/10.1016/j.jwb.2018.08.002

Kostova, T., & Zaheer, S. (1999). Organizational legitimacy under conditions of complexity: The case of the

multinational enterprise. *Academy of Management Review, 24*(1), 64–81. https://doi.org/10.5465/amr.1999.1580441

Kuilman, J. G., & Li, J. (2009). Grades of membership and legitimacy spillovers: Foreign banks in Shanghai, 1847–1935. *Academy of Management Journal, 52*(2), 229–245. https://doi.org/10.5465/amj.2009.37308018

Lander, M. W., & Heugens, P. P. (2017). Better together: Using meta-analysis to explore complementarities between ecological and institutional theories of organization. *Organization Studies, 38*(11), 1573–1601. https://doi.org/10.1177/0170840616677629

Lepoutre, J., Justo, R., Terjesen, S., & Bosma, N. (2013). Designing a global standardized methodology for measuring social entrepreneurship activity: The Global Entrepreneurship Monitor social entrepreneurship study. *Small Business Economics, 40*(3), 693–714. https://doi.org/10.1007/s11187-011-9398-4

Lewis, A. C., Cordero, A. M., & Xiong, R. (2021). Too red for crowdfunding: The legitimation and adoption of crowdfunding across political cultures. *Entrepreneurship Theory and Practice, 45*(3), 471–504. https://doi.org/10.1177/1042258720915574

Li, J., Yang, J. Y., & Yue, D. R. (2007). Identity, community, and audience: How wholly owned foreign subsidiaries gain legitimacy in China. *Academy of Management Journal, 50*(1), 175–190. https://doi.org/10.5465/amj.2007.24162209

Maier, L., Baccarella, C. V., Block, J. H., Wagner, T. F., & Voigt, K.-I. (2023). The legitimization effect of crowdfunding success: A consumer perspective. *Entrepreneurship Theory and Practice, 47*(4), 1389–1420. https://doi.org/10.1177/10422587211057025

Mair, J., & Marti, I. (2006). Social entrepreneurship research: A source of explanation, prediction, and delight. *Journal of World Business, 41*(1), 36–44. https://doi.org/10.1016/j.jwb.2005.09.002

Martens, M. L., Jennings, J. E., & Jennings, P. D. (2007). Do the stories they tell get them the money they need? The role of entrepreneurial narratives in resource acquisition. *Academy of Management Journal, 50*(5), 1107–1132. https://doi.org/10.5465/amj.2007.27169488

McKendrick, D. G., Jaffee, J., Carroll, G. R., & Khessina, O. M. (2003). In the bud? Disk array producers as a (possibly) emergent organizational form. *Administrative Science Quarterly, 48*(1), 60–93. https://doi.org/10.2307/3556619

Miller, S. R., & Eden, L. (2006). Local density and foreign subsidiary performance. *Academy of Management Journal, 49*(2), 341–355.

Miller, T. L., Grimes, M. G., McMullen, J. S., & Vogus, T. J. (2012). Venturing for others with heart and head: How compassion encourages social entrepreneurship. *Academy of Management Review, 37*(4), 616–640. https://doi.org/10.5465/amr.2010.0456

Nicholls, A. (2010). The legitimacy of social entrepreneurship: Reflexive isomorphism in a pre-paradigmatic field. *Entrepreneurship: Theory and Practice, 34*(4), 611–633. https://doi.org/10.1111/j.1540-6520.2010.00397.x

Nissan, E., Castaño, M.-S., & Carrasco, I. (2012). Drivers of non-profit activity: a cross-country analysis. *Small Business Economics, 38*(3), 303–320. https://doi.org/10.1007/s11187-010-9276-5

Pache, A. C., & Santos, F. (2013). Inside the hybrid organization: Selective coupling as a response to competing institutional logics. *Academy of Management Journal, 56*(4), 972–1001. https://doi.org/10.5465/amj.2011.0405

Pathak, S., & Muralidharan, E. (2018). Economic inequality and social entrepreneurship. *Business & Society, 57*(6), 1150–1190. https://doi.org/10.1177/0007650317696069

Pathak, S., & Muralidharan, E. (2016). Informal institutions and their comparative influences on social and commercial entrepreneurship: The role of in-group collectivism and interpersonal trust. *Journal of Small Business Management, 54*, 168–188. https://doi.org/10.1111/jsbm.12289

Pathak, S., & Muralidharan, E. (2023). Contextualizing emotional intelligence for commercial and social entrepreneurship. *Small Business Economics*, 1–20. https://doi.org/10.1007/s11187-023-00775-1

Peng, M. W. (2003). Institutional transitions and strategic choices. *Academy of Management Review, 28*(2), 275–296. https://doi.org/10.5465/amr.2003.9416341

Rao, H. (1994). The social construction of reputation: Certification contests, legitimation, and the survival of organizations in the American automobile industry: 1895–1912. *Strategic Management Journal, 15*(S1), 29–44. https://doi.org/10.1002/smj.4250150904

Ruef, M. (2000). The emergence of organizational forms: A community ecology approach. *American Journal of Sociology, 106*(3), 658–714. https://doi.org/10.1086/318963

Saebi, T., Foss, N. J., & Linder, S. (2019). Social entrepreneurship research: Past achievements and future promises. *Journal of Management, 45*(1), 70–95. https://doi.org/10.1177/0149206318793196

Sahasranamam, S., & Nandakumar, M. K. (2020). Individual capital and social entrepreneurship: Role of formal institutions. *Journal of Business Research, 107*, 104–117. https://doi.org/10.1016/j.jbusres.2018.09.005

Saxton, G. D., & Benson, M. A. (2005). Social capital and the growth of the nonprofit sector. *Social Science Quarterly, 86*(1), 16–35. https://doi.org/10.1111/j.0038-4941.2005.00288.x

Schultz, P. L., Marin, A., & Boal, K. B. (2014). The impact of media on the legitimacy of new market categories: The case of broadband internet. *Journal of Business Venturing, 29*(1), 34–54. https://doi.org/10.1016/j.jbusvent.2012.11.001

Scott, S. G., & Lane, V. R. (2000). A stakeholder approach to organizational identity. *Academy of Management Review, 25*(1), 43–62. https://doi.org/10.5465/amr.2000.2791602

Scott, W. R. (1995). *Institutions and organizations* (Vol. 2). Sage Thousand Oaks.

Shepherd, D. A., & Zacharakis, A. (2003). A new venture's cognitive legitimacy: An assessment by customers. *Journal of Small Business Management, 41*(2), 148–167. https://doi.org/10.1111/1540-627X.00073

Short, J. C., Moss, T. W., & Lumpkin, G. T. (2009). Research in social entrepreneurship: Past contributions and future

opportunities. *Strategic Entrepreneurship Journal, 3*(2), 161–194. https://doi.org/10.1002/sej.69

Sine, W. D., Haveman, H. A., & Tolbert, P. S. (2005). Risky business? Entrepreneurship in the new independent-power sector. *Administrative Science Quarterly, 50*(2), 200–232. https://doi.org/10.2189/asqu.2005.50.2.200

Stenholm, P., Acs, Z. J., & Wuebker, R. (2013). Exploring country-level institutional arrangements on the rate and type of entrepreneurial activity. *Journal of Business Venturing, 28*(1), 176–193. https://doi.org/10.1016/j.jbusvent.2011.11.002

Stephan, U., Uhlaner, L. M., & Stride, C. (2015). Institutions and social entrepreneurship: The role of institutional voids, institutional support, and institutional configurations. *Journal of International Business Studies, 46*(3), 308–331. https://doi.org/10.1057/jibs.2014.38

Suchman, M. C. (1995). Managing legitimacy: Strategic and institutional approaches. *Academy of Management Review, 20*(3), 571–610. https://doi.org/10.5465/amr.1995.9508080331

Suddaby, R., Bitektine, A., & Haack, P. (2017). Legitimacy. *Academy of Management Annals, 11*(1), 451–478. https://doi.org/10.5465/annals.2015.0101

Taeuscher, K., Bouncken, R., & Pesch, R. (2021). Gaining legitimacy by being different: optimal distinctiveness in crowdfunding platforms. *Academy of Management Journal, 64*(1), 149–179. https://doi.org/10.5465/amj.2018.0620

Tost, L. P. (2011). An integrative model of legitimacy judgments. *Academy of Management Review, 36*(4), 686–710. https://doi.org/10.5465/amr.2010.0227

Townsend, D. M., & Hart, T. A. (2008). Perceived institutional ambiguity and the choice of organizational form in social entrepreneurial ventures. *Entrepreneurship Theory and Practice, 32*(4), 685–700. https://doi.org/10.1111/j.1540-6520.2008.00248.x

Tyler, T. R. (2006). Psychological perspectives on legitimacy and legitimation. *Annual Review Psychology, 57*, 375–400. https://doi.org/10.1146/annurev.psych.57.102904.190038

Tyler, T. R., & Blader, S. L. (2005). Can businesses effectively regulate employee conduct? The antecedents of rule following in work settings. *Academy of Management Journal, 48*(6), 1143–1158. https://doi.org/10.5465/amj.2005.19573114

Überbacher, F. (2014). Legitimation of new ventures: A review and research programme. *Journal of Management Studies, 51*(4), 667–698. https://doi.org/10.1111/joms.12077

Wei, S., Boudreaux, C. J., Su, Z., & Wu, Z. (2023). Natural disasters, personal attributes, and social entrepreneurship: an attention-based view. *Small Business Economics*, 1–19. https://doi.org/10.1007/s11187-023-00822-x

Weidner, K., Weber, C., & Göbel, M. (2019). You scratch my back and I scratch yours: Investigating inter-partner legitimacy in relationships between social enterprises and their key partners. *Business and Society, 58*(3), 493–532. https://doi.org/10.1177/0007650316675617

Wry, T., Lounsbury, M., & Glynn, M. A. (2011). Legitimating nascent collective identities: Coordinating cultural entrepreneurship. *Organization Science, 22*(2), 449–463. https://doi.org/10.1287/orsc.1100.0613

Wry, T., Lounsbury, M., & Jennings, P. D. (2014). Hybrid vigor: Securing venture capital by spanning categories in nanotechnology. *Academy of Management Journal, 57*(5), 1309–1333. https://doi.org/10.5465/amj.2011.0588

Xu, D., Lu, J. W., & Gu, Q. (2014). Organizational forms and multi-population dynamics: Economic transition in China. *Administrative Science Quarterly, 59*(3), 517–547. https://doi.org/10.1177/0001839214541866

Zahra, S. A., Gedajlovic, E., Neubaum, D. O., & Shulman, J. M. (2009). A typology of social entrepreneurs: Motives, search processes and ethical challenges. *Journal of Business Venturing, 24*(5), 519–532. https://doi.org/10.1016/j.jbusvent.2008.04.007

Zavyalova, A., Pfarrer, M. D., Reger, R. K., & Shapiro, D. L. (2012). Managing the message: The effects of firm actions and industry spillovers on media coverage following wrongdoing. *Academy of Management Journal, 55*(5), 1079–1101. https://doi.org/10.5465/amj.2010.0608

Zhao, E. Y., Ishihara, M., Jennings, P. D., & Lounsbury, M. (2018). Optimal distinctiveness in the console video game industry: An exemplar-based model of proto-category evolution. *Organization Science, 29*(4), 588–611. https://doi.org/10.1287/orsc.2017.1194

Zheng, W., Chen, Y., Dai, Y., Wu, Y. J., & Hu, M. (2022). Why do good deeds go unnoticed? A perspective on the legitimacy Judgment of social entrepreneurship in China. *Entrepreneurship & Regional Development, 34*(9–10), 788–806. https://doi.org/10.1080/08985626.2022.2071995

Zhu, D. H., & Westphal, J. D. (2011). Misperceiving the beliefs of others: How pluralistic ignorance contributes to the persistence of positive security analyst reactions to the adoption of stock repurchase plans. *Organization Science, 22*(4), 869–886. https://doi.org/10.1287/orsc.1100.0575

Zimmerman, M. A., & Zeitz, G. J. (2002). Beyond survival: Achieving new venture growth by building legitimacy. *Academy of Management Review, 27*(3), 414–431. https://doi.org/10.5465/amr.2002.7389921

Zuckerman, E. W. (1999). The categorical imperative: Securities analysts and the illegitimacy discount. *American Journal of Sociology, 104*(5), 1398–1438. https://doi.org/10.1086/210178