

RESEARCH ARTICLE

The imprinting effect of previous NPO work experience on social entrepreneurship

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Social entrepreneurship (SE) has gained considerable momentum worldwide as it aspires reconcile and integrate the twin goals of sustainable development and wealth creation, contributing to improved environmental quality and social well-being. We examine the antecedents and contextual forces of SE. Built on imprinting theory, we analyze the impact of previous work experience in nonprofit organizations (NPOs) and the institutional factors on SE decisions. Based on a comparison of 50 countries in the Global Entrepreneurship Monitor database, we find that the processes and driving forces associated with SE are embedded in a matrix of imprinting factors. Specifically, individuals with previous NPO work experience have a higher propensity to engage in SE, while business entrepreneurial experience weakens this relationship. Institutional and environmental factors such as unemployment rate and the existence of a long-term orientated national culture also strengthen this relationship.

Keywords: NPO work experience, Social entrepreneurship, Imprinting theory, Institutional environment

1. Introduction

Social entrepreneurship (SE) has been recognized as an effective means of addressing social needs and business challenges (Saebi et al., 2019; George et al., 2021; Zahra, 2021) and has shown a direct relationship with sustainable development (Bansal et al., 2019; Méndez-Picazo et al., 2021; Santa-Maria et al., 2021). During the COVID-19 pandemic, social enterprises have made important contributions in preparing anti-epidemic supplies, epidemic prevention and control, psychological counseling, and ultimately fostering sustainability of firms and society. With the background of epidemic situation in the last 3 years, the question of how to achieve a sustainable development transition has become a critical issue for all companies (Ranjbari et al., 2021). With increasing emphasis on corporate social responsibility (CSR) and environmental and social governance (ESG) logic, sustainable transformation of organizations has become a critical issue for every business, and this has been recognized by both shareholders and other stakeholders (Lokuwaduge and Heenetigala, 2017; Aslaksen et al., 2021). As a change agent who employs entrepreneurial means to provide systematic solutions to social and environmental problems while ensuring its own survival and sustainability (Mair and Marti, 2006; Partzsch and Ziegler, 2011), a social entrepreneur must make development sustainable to meet the mission of solving social

problems in the long run (Seelos and Mair, 2004; Boons and Lüdeke-Freund, 2013).

Although entrepreneurial practices appeal to a shift from simply focusing on wealth creation to considering the solution of social problems, the rate of SE remains relatively low and underdeveloped. With social and environmental problems becoming increasingly serious around the world, as well as the concern and preference for sustainable business development, how to promote the rapid development of SE has become an important issue. Of these, sustainable development is defined as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (World Commission on Environment and Development, Special Working Session, 1987). In sustainable development, the environment, society, and economy are considered to be the triple bottom line of sustainable development (Hák et al., 2016), and it has been shown to play an important role in addressing triple bottom line issues such as waste management for polluted environments (Vanapalli et al., 2021) and water management (Adelodun et al., 2020). Social enterprises have a clear advantage in addressing the environment, society, and the economy together, as they compensate for the shortcomings of a purely business model, namely its lack of sustainability (Schaltegger et al., 2012). For example, social enterprises take into account how environmental and social issues are integrated with economic issues (Rahdari et al., 2016) and enable businesses to continuously create socially shared value through economic development, good governance, stakeholder responsiveness, and environmental improvements (Visser, 2011),

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ultimately achieving both sustainable development and reaping economic benefits. However, relatively little research has been conducted to explore the antecedents and incentive mechanisms for people to become active in social entrepreneurial activities.

The literature on influencing factors of individuals' choices of SE is organized at both individual and environmental levels, in which the individual level is mainly carried out according to motivation and ability. Motivation studies grounded in social cognition theory and trait theory have emphasized the influence of noneconomic motivation on individuals' social entrepreneurial decisions, such as an entrepreneur's sense of serving society and the psychological rewards of pleasure, happiness, and responsibility achieved in the process of solving social problems and achieving social goals (Baumeister et al., 2011). Common personality traits that social entrepreneurs share including agreeableness and open-mindedness (Nga and Shamuganathan, 2010), pro-social motivation (Renko, 2013), compassion (Grimes et al., 2013), sustainable development orientation (Kuckertz and Wagner, 2010), empathy, sense of moral obligation, self-efficacy and perception of social support (Hockerts, 2017), and gendered attitudes that favor social contribution (Lortie et al., 2017). Competency-based studies have analyzed the impacts of individuals' own resource endowments and resource mobilization capabilities on SE decisions, mainly from a resource-based perspective, focusing on generic human capital (Estrin et al., 2016), social capital, and financial capital (Sahasranamam and Nandakumar, 2020) as having a positive impact on SE.

In contrast, macro-level "environment" research predominantly focuses on the impacts of national environments and policies, as well as the effect of cultural and institutional factors on SE. For example, some scholars argue that institutions have a strong supportive role in providing more stable expectations and reducing information costs and subsidies for SE (Stephan et al., 2015). On the other hand, scholars with an institutional deficit perspective argue that the government's ability to act in the absence of institutions is limited and that strong willingness to solve social problems better motivates individual to be socially entrepreneurial (Stephan et al., 2015; Hörisch et al., 2017).

Despite these contributions, 3 limitations should be mentioned, to which our research responds: First, the theoretical perspective to explain individual choice of SE is relatively narrow, so that some scholars call for a greater integration of multidisciplinary perspectives to construct theories applicable to SE (Short et al., 2009; Gámez-Gutiérrez and Abril, 2019). Here, we suggest that imprinting theory provides an appropriate explanation for how a founder's previous personal experience can influence the subsequent choice of SE. According to this theory, individuals will develop characteristics that are compatible with their external environment during sensitive periods, and even if the environment changes after, characteristics first developed during the particular periods will continue to affect the individual's behavior and will not easily disappear (Marquis and Tilcsik, 2013). Sensitive periods are defined as important

events in the development of an individual's values or nodes, where significant organizational change is experienced (Tilcsik, 2014). During sensitive periods, individuals tend to absorb organizational characteristics that are consistent with salient features of the external environment in order to increase their adaptability to it (Stinchcombe, 1965). Despite continuous changes in subsequent environments, the cultural values formed during the sensitive period of the organization will not simply disappear but will form a symbolic spiritual legacy that has a significant impact on organizations or individuals in the future (Kriauciunas and Kale, 2006). Imprinting theory suggests that past career imprints shape individuals' cognition and abilities, which in turn influence their subsequent entrepreneurial behavior, thus providing an instructive perspective for combining unique individual experiences with social entrepreneurial choices. Furthermore, sustainability as a value proposition can have a driving influence on subsequent behavior, for example, entrepreneurial motivation based on the role of the imprint. More importantly, some of the identified drivers can be associated with imprinters (individual entrepreneurs), highlighting the importance of entrepreneurial characteristics for the further development of sustainable business models (Glinik et al., 2021). Just as many drivers can be assigned to strategic considerations (imprinting processes) to imprint sustainability in the entrepreneurial process and business model. These considerations can be used to develop specific strategies to increase the competitive advantage of sustainability-focused SE projects.

The second limitation is that some studies tend to overlook the impact of individual participants' distinct human capital accumulation on their willingness to engage in SE (Estrin et al., 2016; Sahasranamam and Nandakumar, 2020). Recent studies have shown that ones' prior working experience in social organizations will increase their willingness to become social entrepreneurs. People with this practical experience become more familiar with the problems that social enterprises need to solve and thus have stronger inclination to solve the problems. However, there is still a gap between one's willingness and behavior, which is also limited by the availability of data.

Third, while social entrepreneurial choices are the result of individual motivation and ability, any economic and social activity will be influenced by the external economic and institutional environment (Baker et al., 2005), and strengthening the study of entrepreneurial contextualization is a necessary way to gain a deeper understanding of diversity of entrepreneurship. The absence of necessary analysis of macroeconomic and cultural institutions not only makes it difficult to understand the antecedents and outcomes of SE but also significantly reduces the explanatory power of theory. Accordingly, many scholars have called for future research to include consideration of macrocontexts, such as socioeconomic and environmental factors, national policies, and culture (Nga and Shamuganathan, 2010). Some scholars have attempted to incorporate macroinstitutional factors into the analytical

framework of SE (Stephan et al., 2015), but explorations of the linkages between micro and macro factors are still rare.

This article analyses the impact of nonprofit organization (NPO) work experience on choice of SE from the perspective of imprinting theory. We take into account the dual factors of “institutional environment” and “individual difference” when we analyze the dynamic impact of NPO work imprints on SE with the analytical framework of imprinting. Although initial studies have found individuals with prior NPO experience are prone to imprinting as they experience transitions to new organizations or social systems (Ashforth and Saks, 1996; Higgins, 2005), the process from imprinting to elicitation remains underdiscussed. We thus offer 4 scholarly contributions: First, we deepen the dynamic study of imprinting theory by constructing a framework for analyzing the process of imprinting from formation to activation and also address the relative lack of analysis of the strength and persistence of imprinting in the existing literature (Marquis and Tilcsik, 2013). Second, the analysis of social entrepreneurial activities based on imprinting theory integrates individual and institutional contextual factors to reveal that the unique human capital such as NPO work experience (NEP) is critical to individuals’ social entrepreneurial choices. Third, our study of mechanisms for the influence of macroinstitutional contexts on individual participants’ particular human capital accumulation and their social entrepreneurial decisions extends the institutional analysis of SE research, deepens the understanding of the external environment’s role in social entrepreneurial decisions, and responds to scholars’ appeal for combining views based on endogenous dynamics and external forces. Fourth, in the context of a sustainable environment and the dual mission requirements of social enterprises, our article expands on how social enterprises can make changes from an individual perspective based on a sustainable development transformation, extending the application of sustainability in the field of SE.

This article is structured as follows: Section 2 focuses on the logical relationship between NEP and SE from a theoretical perspective and the moderating role of individual entrepreneurial experience (EEP), national long-term orientation culture, and unemployment (UNE) rate; Section 3 describes the research design; Section 4 tests the hypotheses; and Section 5 presents the results and discussion.

2. Theory and hypotheses

Individuals are prone to be imprinted (Ashforth and Saks, 1996) as they undergo role transitions to new organizations or social systems. Their values, beliefs, and cognitive patterns will be updated or even replaced when they are socialized and accepted by the new organization, to adapt and conform with the new environment in which they find themselves, creating an imprinting effect that reflects the characteristics of the corresponding environment. The values, competencies, and experiences they developed will continue to influence individuals’ future

behaviors and decisions in subsequent career stages (Higgins, 2005). The process of organizational imprint formation is in fact the process of institutionalization. Merton (1940) argues that “within a given occupation, and perhaps within a given organization, a process of sacralization is constantly taking place . . . through the formation of sentiment, emotional attachment to symbols and status in the hierarchical organization, and emotional involvement in competence and authority, attitudes involving moral legitimacy increasingly take on a privileged position, an attitude in a privileged position that increasingly establishes itself as a value and is henceforth no longer seen as merely a technical means of facilitating management.” Selznick (1957) examines the process of institutionalization of a specific organization to a unique set of values and argues that “the most important aspect of the institutionalization process is perhaps the inculcation of values in the organization beyond the technical requirements of the task at hand.”

It follows that imprinting theory provides an adequate explanation of the intrinsic motivation of individuals to form antecedent values and practices that influence subsequent behavior by way of imprinting. Much of the previous research on social entrepreneurial intentions or behavior have explained the phenomenon from a human capital perspective (Estrin et al., 2016), personality traits view (Nga and Shamuganathan, 2010), institutional theory (Hörisch et al., 2017), and behavioral entrepreneurship theory (Dwivedi and Weerawardena, 2018). In recent years, Niu et al. (2020) found that social class stigma created through imprinting can have a subsequent impact on the environmentally sustainable behavior of entrepreneurs. Similarly, He et al. (2021) found that the imprint of academic experience and educational background of executives further motivated companies to engage in more sustainable transition, such as green innovation.

However, these studies have ignored the factors that shape imprinting, and even when they do refer to past experiences, they simply attribute them to the experience. Instead, we have broken down the experience based on previous work and analyzed the potentially different effects of multiple experiences on the imprint. Thus, the analysis of imprinting theory on social entrepreneurial behavior is a further exploration of how past experiences shape the imprinting that influences subsequent behavior, as well as an analysis that combines macro and micro factors. To gain a deeper understanding of the mechanisms underlying the impact of imprinting theory, this article therefore attempts to look at how individual participants who have worked in NPOs are influenced by imprint formation, conflict, reinforcement, and activation.

2.1. NEP and SE: Imprint formation

For organizations, there are 3 main factors that create a lasting imprint: the policies and regulations that sustain the organization at its inception, the nature of available resources, and the values of founders. Regarding the policies and regulations that sustain the organization,

obtaining legitimacy at its inception is key to its survival. On the one hand, imitating and following the strategic behavior of incumbents is a crucial way to build legitimacy in a given field (Deephouse, 1996). On the other hand, compliance with regulatory regimes, such as policies and regulations, is the essential prerequisite for organizations to gain access to markets and external resources (Oliver, 1997). The socialization of start-up organizations into the institutional field constructed by policy and regulation, in response to the pressures of pursuing legitimacy, will continue to develop organizational structures and decision-making logics that are consistent with the expectations of particular policy and regulation and create a lasting organizational imprint in the long-term (Kriauciunas and Kale, 2006). The nature of available resources at the early stage of an organization not only determines the basis of its survival but also becomes the source of sustaining its competitive advantage. Resource providers often shape initial organizational values, beliefs, and strategic positioning through implicit interaction with organizations that they support (Carroll and Hannan, 2000). The imprinting effect of a founder's values on the organization is not only reflected in his or her choice of resources available at the start of the business, based on their own values, but also in the influence of personal values on the organization's strategic decisions and cultural values, thus creating an organizational imprint (Carroll and Hannan, 2000; Marquis and Qiao, 2020). For example, He et al. (2021) mention that the academic background of executives, as well as their technical and overseas backgrounds, form a deep imprint of sustainability values, which in turn influence subsequent corporate green innovation behavior.

NPOs began developing on a larger scale after World War II, when the 2 main sectors of society, the public sector and the private sector, were no longer able to meet the needs and balance regarding socioeconomic activities and public demand due to enormous postwar destruction and the growing disparities and contradictions between countries. There was a general realization among societal actors that social problems could not be solved by the government only, nor could it rely on the market as the primary alternative to the state, giving rise to the third sector, namely, NPOs. The development of NPOs is closely related to institutional factors and national policies, such as the Model Nonprofit Corporation Act issued in 1954 in the United States, the Act on Promotion of Specified Non-Profit Activities passed in 1998 in Japan, the enactment of the Law of the People's Republic of China on Public Welfare Donations in 1998, and the Regulation on Foundation Administration in 2004 in China. Under the influence of formal government regulations and cultural perceptions, NPOs have more substantial social mission characteristics than general organizations (Levitt, 1973). Secondly, NPOs are typically funded by a selection of 3 types of sources: (1) direct or indirect government support, including tax breaks, financial subsidies, and other supportive policies; (2) charitable donations from corporations and

individuals; and (3) an organization's own operating income. The first 2 types of sources fund the majority of NPOs. The expectation that NPOs will take on a social mission is also shaped by the implicit contracts between government, donors, and NPOs, concerning NPOs as substitutes for solving social problems. NPOs require more robust monitoring by the government and donors due to agency risk, and an NPO's implicit interaction with the government and donors reinforces its belief to fulfill its social mission (Carroll and Hannan, 2000). However, NPOs are mission-driven rather than profit-driven (Helmig et al., 2014) and exist primarily to achieve their causes in a sustainable manner; but they also need to fund their social causes, so their sustainability is not only in terms of their contribution to social development but also in terms of financial sustainability (Ilyas et al., 2020). Finally, NPO founders tend to have a higher sense of social mission and moral obligation than others. The existing literature suggests that NPO founders are often values-driven and passionate about the organizational mission they are trying to create and develop (Carman and Nesbit, 2013).

The characteristics mentioned above of an NPO's social mission are also imprinted in the perceptions of the organization's employees since individuals choose whether to join an NPO based on their own needs and values, which indicates that they are in accordance with the NPO's sense of social mission once they decided to join. Similarly, personal values play an important role in employees' perceptions of different aspects of sustainability, with the environment and society being the 2 most important dimensions (Cirnu and Kuralt, 2013). NPOs tend to inculcate common and correct values, ethics, beliefs, and ways of acting within the organization and provide new entrants with a socialization process of cultivating organizational values. Individuals are likely to adopt values aligned with those of their NPOs in order to adapt to their new roles (Higgins, 2005). Studies have shown that NPO employees have a relatively higher job acceptance rate than corporate and government employees (Light, 2002). Compared with public officials, voluntary NPO employees are more consistent with organizational values (Peng et al., 2015). The voluntary nature of NPOs may allow individuals to resonate with the subsequent stimuli of their daily work and environment more strongly, in addition to strongly identifying with the social mission of NPOs emotionally and cognitively. On the other hand, NPOs provide a wide range of voluntary services and activities in the fields of environment, humanitarian aid, social issues, philanthropy, and so on, and volunteering is a long-term, planned and pro-social behavior. Existing research suggests that a high level of participation in volunteer activities may lead to a strong identification with the volunteer role (Grube and Piliavin, 2000). Individuals who experience repeated training and socialization in volunteering with NPOs typically strengthen their sense of social mission and eventually form a solid imprint.

The choice of SE is an essential reflection of personal values and sense of mission. Published work has

demonstrated that personal pro-social motivation (Renko, 2013), sense of moral obligation (Hockerts, 2017), and sense of social mission and empathy are closely related to SE, which is strongly consistent with the image of social entrepreneurs in the popular consciousness as having a strong sense of social mission. The imprint of social mission developed by NPO employees and their own cognitive imprint of social identity motivate them to pay more attention to social missions, according to the observations of some scholars, such as Rotolo and Wilson (2006). They found that NPO employees have more prosocial values and are more willing to engage in volunteer activities than private-sector employees. Taylor (2010) found that NPO employees valued their contribution to society more than private-sector employees, have higher motivation to engage in public services, and display more prosocial behaviors. SE focuses on creating social value, which aligns with the values of NPOs' social mission, and therefore, employees who have worked in NPOs are more likely to engage in social entrepreneurial activities.

In addition, the emergence of SE originates from the "triple failure" of government, the market, and philanthropy. For instance, in Slovenia (Rojc Štremfelj et al., 2020) and Romania (Ceptureanu et al., 2017), more than 90% and 50% of NPOs have no staff, respectively, and are constrained by such financial reasons that seriously hinder the sustainable development of these NPOs (Cirnu and Kuralt, 2013). NPOs are typically limited by inadequate government funding, often leaving individuals with solid organizational imprints, driven by their social mission, to find a functioning business model that is more conducive to enhance their own regeneration ability. These individuals look for potential opportunities not met by commercial enterprises, traditional government, and philanthropic practices. These unmet needs play essential roles in motivating individuals who prioritize social missions to engage in SE. Similarly, from the perspective of dedicated human resources and capacity building, prior practical experience in NPO work has been found to enable individual participants to become familiar with the problems to be solved by social enterprises, build up the knowledge and skills necessary for SE, reduce various costs involved in SE, and therefore lead to a higher propensity to choose SE.

Finally, NPOs and NEP are also relevant to sustainable development. For example, on the macrolevel, Urquía-Grande et al. (2021) found that NPOs promote and achieve sustainable development through management and social work philosophy. In addition, NPOs use an organizational sustainability approach to focus on strategic and operational level management to ultimately achieve sustainable transition (Weerawardena et al., 2010). Taken together, we propose the following hypothesis.

Hypothesis 1: An individual's prior NEP is positively associated with subsequent SE.

2.2. The logic of commercialization and social entrepreneurial decision-making: Imprint conflict and imprint weakening

While imprinting continues to influence the behavior of the focal entity (Marquis and Tilcsik, 2013), the impact of an imprint can remain robust or weaken as external conditions change (Wang et al., 2019; Marquis and Qiao, 2020), since socialized values can evolve or change over time with critical new events (Akerlof, 1983). Furthermore, human behavior is mainly determined by existing knowledge, ingrained cognition, and cognitive psychological patterns, all of which may evolve over time (Knudsen and Srikanth, 2013). Similarly, sustainable development and sustainable transformation are dynamic and therefore a continuous process rather than a goal (Newman, 2005), which requires individual entrepreneurs (imprinters) to constantly evaluate their relationship with nature and society. Therefore, as a socialized value, the social mission imprint cannot avoid the influences of internal and external factors, such as cultural, social, and personal experiences (Rokeach, 1973).

Cognitive conflict is one of the most critical factors in weakening the impact of imprinting. Firstly, cognition plays an important role in the context of sustainable development, described as a "vision of the future" through the statement of a value or ethical principle (Viederman, 1995). Thus, cognitions shape worldviews and values through mapping and influence subsequent sustainable development behavior (Byrch et al., 2007). The literature has shown that imprints are vulnerable during changes in the external business environment (Kriauciunas and Kale, 2006), restructures of the internal executive team (Beckman et al., 2007), and deterioration of organizational performance (Boeker, 1989). Differences between the initial resource environment in which an individual was placed early on and the current organizational environment can weaken an individual's prior imprint, thereby reducing the individual's subsequent performance (Tilcsik, 2014). The focal imprint may be strengthened if the prior ideological experience has similar characteristics to the focal imprint and is consistent in content (Wang et al., 2019). Conversely, previously formed imprints may be weakened when new, credible information emerges that contradicts the perceptions shaped by the source of the imprint (Marquis and Qiao, 2020).

The missions of commercial organizations and NPOs differ significantly: The mission of the former is to satisfy the economic interests of shareholders and the mission of the latter is to serve the public. The former is primarily profit-driven, while the latter is social mission-driven, so the impact of previous commercial EEP on subsequent entrepreneurial behavior should not be overlooked. In particular, the financialization of business has been accelerated since 1970 by Milton Friedman and other scholars who have proposed the theory of shareholder supremacy and the idea that "Social Responsibility of Business Is To Increase Its Profits" (Friedman, 2007), which has led to a more profit-oriented imprint of

commercial enterprises. The utility theory of economics states that individual participants make rational judgments when making entrepreneurial and employment decisions based on their resource endowments in order to maximize personal gains (Douglas and Shepherd, 2002), and those entrepreneurial rental returns are essential for driving their choices of commercial entrepreneurial activities. Entrepreneurs develop an identity that contains business-driven values in the business environment and personally construct information systems focusing on issues that are deemed to be important by a dominant logic and develop decision rules in line with the dominant logic (Easterby-Smith and Lyles, 2011). Entrepreneurs are free to choose from any productive, nonproductive, and destructive entrepreneurial activity, not on the basis of personal moral constraints but for business profits (Baumol, 1990). The process of starting and developing a commercial enterprise might bring with it unsustainable problems, such as environmental pollution and negative social effects (Boele et al., 2001). Social entrepreneurs, on the other hand, can address the problems in business enterprises by taking on social responsibility and addressing social issues as long-term changes, that is, by achieving a multidimensional and fundamental shift in organizational systems toward more sustainable production and consumption patterns (Staniškienė et al., 2022). The fundamental goal of non-profit SE organizations is to support or engage in public activities and to achieve the Pareto optimization of social welfare. Commercial profits or returns on entrepreneurial rents are not essential to their entrepreneurial motivations.

Moreover, contradictory frameworks are essential to understanding the success of sustainable development programs (Hahn et al., 2014). Specifically, research on the sustainability framework suggests that actors do not ignore or eliminate tensions by choosing one end of the spectrum over the other but rather can view tensions as paradoxes or “contradictory but interrelated factors that exist and persist simultaneously” (Smith and Lewis, 2011). Thus, based on the idea of sustainability, we do not completely reject the element of commercial entrepreneurship but rather choose to explain its impact on social entrepreneurial behavior as a set of persistent but antagonistic paradoxes. We analyze the unsustainability of sustainability (Sharma and Jaiswal, 2018) to ultimately achieve positive sustainable development in a coordinated manner.

Therefore, for those who have purely business-driven EEP, the previous formation of a business-driven logic conflicts with the NPO’s social mission values, which can potentially weaken the social mission imprint formed by NPO and, as a result, social entrepreneurial behavior. We therefore present Hypothesis 2.

Hypothesis 2: Personal experience of commercial entrepreneurship weakens the positive relationship between NEP and SE.

2.3. Cultural and SE decisions: Imprint reinforcement

The influence of culture plays a crucial role in the maintenance and reinforcement of imprinting. Human beings are social animals suspended in the nets of meanings woven by themselves, while culture is the net made up of various socially established structures of meaning (Geertz, 1973). Through studies of how organizations evolve over time, researchers have found that institutions and experiences can exert influence on organizations and become part of their culture and norms. With new imprints subsequently layered on top of them, a complex set of characteristics and practices are created (Cooper et al., 1996). According to the research of imprinting and environmental fit, imprinting evolves throughout the life of an individual even as external conditions change, and an external environment consistent with imprinting will maintain the imprint (Marquis and Tilcsik, 2013).

What is more, the relationship between culture and sustainability behaviors is deeply rooted, particularly in the cultural aspect of ethics. The more a cultural context contains norms and values that are aligned with the principles of sustainability, the more that cultural context will generate and/or contain systems that are relevant to sustainability, thus increasing the likelihood of adopting sustainable development (Caprar and Neville, 2012).

At a corporate level, sustainability is a topic of increasing concern in contemporary society and businesses must inevitably incorporate this issue into their agenda. Organizational culture is a prerequisite for sustainable business development, and therefore, corporate sustainability activities and strategies must be embedded in the organizational culture to be successful (Baumgartner, 2009). In essence, corporate sustainability means creating long-term value by adopting a business approach that takes into account economic, social, and environmental impacts at the same time. Sustainable development in all contexts is inextricably linked to the ability to think and act in the long run and to manage the intertemporal tensions inherent in balancing short-term financial considerations with long-term social and environmental considerations (Slawinski and Bansal, 2015). In short, sustainable development requires trade-offs across time (Bansal and Desjardine, 2014). Managers with a long-term oriented (LTO) culture have developed the ability to consider the long-term and short-term consequences of their actions “side-by-side” (Slawinski and Bansal, 2015), allowing for greater engagement in intertemporal trade-offs and consideration of the “long-term perspective.” This may optimize the creation of higher long-term corporate value and better corporate sustainability performance.

At the individual level, sustainability has become a global concern due to the increasing environmental problems caused by energy consumption and environmental pollution. Individual psychological factors, such as attitudes and values, can influence behavior to different degrees in different cultural contexts (Pícha and Navrátil,

2019; Cleveland et al., 2020). Hofstede's cultural model is one of the most influential models for evaluating cultural differences in the social sciences, which is also an important reference for cross-cultural research.

In general, a national culture, as the value and behavioral patterns shared by all members of a country, is jointly created by groups and inherited from generation to generation with high stability. As a significant dimension of national culture, long-term/short-term orientation refers to whether individuals conduct their behavior with the future in mind and the extent to which they accept traditional values (Hofstede, 2001). Long-term orientation represents the time orientation of a society, indicating the extent to which people consider the future for decision-making, as well as the cultural value that perceives time systematically. Such values attach more significance to the long term, encouraging and pursuing future benefits (Hofstede, 1993). As a repository of cultural action, culture carries value theory, norms, and cognitive direction, thus influencing how individual actions are taken (Sztompka, 1999). According to some scholars, those individuals with a long-term orientation are more future-oriented and more likely to consider future consequences and thus have higher likelihood to engage in pro-social behaviors, such as recycling (Ebreo and Vining, 2001), conserving natural resources (Kortenkamp and Moore, 2006), and participating in environmental activities (Joireman et al., 2001). To cite an instance, research has found that consumers with a long-term orientation have a stronger willingness to buy green (Carmi and Arnon, 2014). Furthermore, the benefits of using green energy-efficient products far outweigh the cost of purchasing them in the long run (Ghazali et al., 2017). Long-term orientation positively contributes to the prosocial behavior of individuals, while pro-environmental behavior of residents can significantly mitigate the threat of environmental pollution to human existence and promote sustainable social development (Qiao et al., 2020). In addition, long-term orientation is the core of organizational sustainability. For those countries with a long-term orientation culture, they focus more attention on environmental management and take a long-term perspective on investments in environmental management practices, which lead investors to become more environmentally conscious in their investment decisions. This cultural environment inspires managers to become more involved in CSR practices that will only pay off in the future, and therefore, companies will demonstrate higher levels of social responsibility.

On this basis, this article argues that people living in countries with long-term cultural orientation cultivate an LTO cultural logic and show more concerns about future rewarding social and environmental goals, which is consistent with the mission of engaging in SE and sustainable development. For those individual participants living in an LTO culture, they are exposed to new information that is consistent with the social mission imprint, which boosts their confidence in the NPO. In this case, they will recognize the organization's social mission and will be more

likely to maintain and reinforce the imprint of their previous NPO work; hence, our Hypothesis 3:

Hypothesis 3: A long-term national orientation culture reinforces the positive relationship between NEP and SE.

2.4. Reinforcement of SE decisions by economic context: Imprint stimulation

Apart from various cultural environmental factors, the socioeconomic environment where an individual lives is also influential in imprinting. The premise that the environment forms an imprint on the individual is that it reinforces an individual's attention to the exclusion of other stimuli from the external environment (Marquis and Qiao, 2020). In a dynamically changing social environment, it is possible that new demands arise to activate the original imprinting (Marquis and Qiao, 2020), which in turn influences individual decisions. When the new demands of subsequent social environment show high compatibility with the original imprint of skills and habits developed in early life of an individual, it is easy to activate the original imprint of the individual for better adaption to the subsequent social environment (Tilcsik, 2014).

Economic development is also often considered an important component of sustainable development (Anand and Sen, 2000), and by incorporating macro-level economic factors plays an important role in sustainable development transition, as one can choose different approaches to fit sustainable development depending on the specific economic situation. Based on the politically targeted nature of sustainable development and the significant role played by economic growth in this process (Méndez-Picazo et al., 2021), SE has emerged as a new factor in changing the goals of economic growth to promote sustainable development (Johnson and Schaltegger, 2020; Schaltegger et al., 2020).

UNE rates indicate the level of economic development in a country, and countries with high UNE rates are more likely to encounter problems, such as social crime, insecurity, hunger, and low living standards, thus widening the gap between the rich and the poor in a country and even undermining social stability. Additionally, UNE is an important factor affecting sustainable development, especially for young and middle-aged people (Picatoste and Rodriguez-Crespo, 2020). In contrast, job creation through start-ups and small business operations can reduce UNE (Warren, 2016). In this economic environment, individual participants with the imprint of a social mission will likely reinforce their previous imprint and practice SE themselves for tackling social problems, thus mitigating the failures of market and government and reducing the impact of UNE rates to some extent. Therefore, such individuals with previous NEP will have a higher probability of making attempts to solve social problems that cannot be addressed in an NPO organization through SE. On this basis, we argue that countries with high UNE rates have stronger needs to solve social problems, which activates

the imprint of an individual's previous NPO social mission, thus improving the rate of social entrepreneurial action. Therefore, Hypothesis 4 in this article is proposed as follows.

Hypothesis 4: National UNE rates reinforce the positive relationship between NEP and SE.

3. Methods

3.1. Samples and data sources

The data used in this study are mainly derived from the Global Entrepreneurship Monitor (GEM) database, an international entrepreneurship research program jointly launched by London Business School and Babson College in 1997. The GEM survey samples involve a total of 100 countries and regions around the world, with the report samples representing approximately three-fourth of the world population and nearly 90% of the global Gross Domestic Product (GDP; Amoros and Bosma, 2014), which makes it the most authoritative data that can be used to observe the degree of entrepreneurial activity in different countries and particularly the quality of entrepreneurial activities. As for the research results obtained using the database, they are published in top academic journals in the fields of economics, management, and sociology. Based on the SE literature and the GEM pilot study in the United Kingdom, the GEM Social Entrepreneurship Survey questions were conducted in the GEM Global Survey in 2009 before a further expansion in 2015. In this article, the Adult Population Survey (APS) collected by GEM 2015 was taken as the primary source of SE data. This data set contains the information on interviews with 167,793 adults in 58 economies, with the data of each country based on original data collected from the APS of at least 2,000 randomly selected adults (ages 18–64) in each economy.

In order to enrich the internal differences between the samples, the moderating variables used in this article take the country as the data unit, and the data at the national level are sourced from the World Bank database, the Index of Economic Freedom database, and the Hofstede Insights database. In this article, the 4 databases are arranged and matched to establish the basic research database. In addition, the following standards are applied to refine the data. First of all, the GEM data variables are checked separately, the variable codes are reasonably corrected, invalid codes are eliminated, and the variables are rationally assigned again (e.g., the original data assign the answer of the observation sample to “don't know” or “don't want to answer” to “–2” or “–1,” and such invalid assignments need to be checked and eliminated one by one). Secondly, the data should be refined to exclude those nonworking people aged between 18 and 64. Then, with the survey year and country name matched, the data obtained from the previous year of UNE rate and other national level data are matched into the GEM individual micro data. Finally, samples with missing variable measurements are removed to obtain a cross-layer data of 66,474 individuals from 50 countries in 2015.

3.2. Variables

3.2.1. Dependent variable

The dependent variable is SE. Based on Stephan et al. (2015), Sahasranamam and Nandakumar (2020), and Torres and Augusto (2020), this article adopts the data from the GEM special survey on SE. GEM classifies entrepreneurial activities by business process phases (e.g., new business, established, and discontinued business), activity types (e.g., high growth, innovation, and internationalization), and activity sectors (e.g., total early-stage entrepreneurial activity, social entrepreneurial activity, and employee entrepreneurial activity). We focused on SE activities and measured participation in SE activities, such as a start-up, owner, or manager. The measurement is based on the answers to the double-choice variable question: “Do you participate in SE activities as a start-up, owner or manager?” If the respondents meet the condition, the assignment is 1, if they do not meet the condition, the assignment is 0.

3.2.2. Independent variable

This article mainly analyzes the effects of individual participants' work experience in NPO on their choice of SE. GEM questionnaire has a special survey on individual professional identity, which addresses individual participants' NEP with the specific question: “Are you employed in the nonprofit or voluntary organization?” A yes answer is assigned to 1, while a no answer is assigned to 0.

3.2.3. Moderating variables

Three moderating variables can potentially affect imprinting: an individual actor's previous EEP, a country's LTO culture, and its UNE rate. The specific measurement methods for the 3 variables are as follows: (1) previous EEP, referring to the method proposed by Estrin et al. (2016) to measure whether an individual has EEP. The specific process is as follows: The index is built based on 2 questions in the GEM survey. If respondents positively answer that (a) they have sold, closed, terminated, or abandoned the business they owned or managed in the past 12 months and (b) the business still exists after they left, they are considered to have EEP, and are assigned a value of 1, while others are assigned a value of 0. (2) National LTO culture uses the method proposed by Graafland and Noorderhaven (2020) for reference. Data are chosen, and the LTO culture indicators are applied in the widely used Hofstede Insights database. Different to the original 4 dimensions, the LTO measurement score is not derived using the measurement method from Hofstede's IBM research, but rather from the method used in the Chinese values survey. The world values survey data are then used to reconstruct more countries. (3) UNE rate is derived from the public data from the World Bank. It calculates the annual UNE rate (the proportion of the total number of unemployed people in the total workforce) in 264 countries or regions around the World and the data are updated each year.

3.2.4. Control variables

Drawing on existing studies, the control variable includes 2 levels. One level is individual trait variables, which

include (1) age of entrepreneurs (AGE) and the age of GEM respondents. Age is an important factor that affects an individual participant's risk appetite, and previous studies have shown that young people have a stronger likelihood of being involved in social entrepreneurial activities (Lepoutre et al., 2013). (2) Gender of entrepreneurs (GEN) and the gender of GEM respondents. The prosocial tendencies of women (Lortie et al., 2017) may result in greater social entrepreneurial willingness. (3) Education level of entrepreneurs (EDU). Educational assignment according to GEM respondents: No education is assigned 0, primary school is assigned 1, junior high school is assigned 2, high school is assigned 3, and bachelor's degree or higher is assigned 4. (4) Entrepreneurs' actual income (INC). According to the GEM question: "What level of society do you think your income belongs to?" The top 33% is assigned 3, the middle 33% is assigned 2, and the bottom 33% is assigned 1. Income is an important factor that affects individual entrepreneurial activities. (5) Entrepreneurship skills (EPS). According to the GEM question: "Do you have the knowledge, skills and experience required to start a business?" Yes is assigned 1 and no is assigned 0. The knowledge and skills of entrepreneurship are important human capital among individuals and this relates to whether individuals engage in SE (Sahasranamam and Nandakumar, 2020). (6) Entrepreneurs' fear of failure (FEA). According to the GEM question: "Does fear of failure prevent you from starting a business?" Yes is assigned 1 and no is assigned 0. Fear of failure determines the way in which individuals define and tolerate uncertainty in the terms of achievement, and this is considered to be a major barrier for entrepreneurial action (Caliendo et al., 2009). The above variables are controlled in order to isolate the effects of individual traits on individual perceptions. The other level is the national level, which includes (1) National GDP growth rate (GDP) from World Bank GDP growth data. GDP growth rate is generally an important indicator for judging a country's potential for development. Previous literature has demonstrated that the national institutions and the cultural environment may affect individual participants' choice of SE (Stephan et al., 2015), and this article has also controlled the influence of the 4 other dimensions of culture and institutions. (2) Power distance (PDI) using power distance cultural measurement scores from Hofstede Insights. (3) Individualism (IDV) using individualized cultural measurement scores from Hofstede Insights. (4) Masculinity (MAS) using masculine cultural measurement scores from Hofstede Insights. (5) Uncertainty avoidance (UAV) using uncertainty avoidance cultural measurement scores from Hofstede Insights. (6) Institutional environment (IN), which is measured by the total score of the national institutional environment in the economic freedom index.

4. Results

Descriptive statistical results of major variables at the national level are shown in **Table 1**. The total sample contains 66,474 observed values from 50 countries, where N represents the number of samples from each country. SE (%) represents the proportion of social entrepreneurship in each country. The data show that there is a huge gap

between the level of entrepreneurship between different countries. LTO culture represents the country's LTO cultural score. UNE represents the national UNE rate. The mean value of SE in the whole sample is 0.06, and the variance is 0.24, which indicates that 6% of the samples choose SE and 94.0% of the samples do not choose SE. The proportion of entrepreneurs and nonentrepreneurs is in line with reality, indicating that the sampling procedure of the database is indeed random sampling, and the total sample has good "unbiased" characteristics. In terms of independent variable and moderating variables, the mean value of NEP is 0.08, indicating that the proportion of individuals with NEP is 8%. The mean value of EEP is 0.01, indicating that the proportion of individuals with EEP is 1%. The mean value of national LTO culture is 46.06, and the standard error is 20.17. The mean value of national UNE rate is 9.82, and the standard error is 7.30.

Table 2 lists the correlation between variables. The results show that there is a significant positive correlation between the individuals' NEP and SE; thus, the preliminary results are consistent with theory. Entrepreneurship experience (EEP) is significantly positively associated with SE, LTO culture is significantly negatively associated with SE, and national UNE rate is significantly negatively associated with SE. In addition, the pairwise correlation coefficients among the control variables, independent variable, and moderating variables are generally less than 0.3. Combined with the collinearity detection, it can be considered that there is no serious collinearity problem among the variables, which is suitable for subsequent hypothesis testing.

4.1. Analysis of regression results

The data were processed as follow to ensure consistency and validity of the model estimates. To avoid the effects of multicollinearity, we measured variables by interaction terms. In addition, variance inflation factor diagnostics were performed on all explanatory and control variables entering the model to exclude the problem of multicollinearity. The empirical analysis of this article is based on the following lines: firstly, conducting regression analysis of the relationship between NEP and SE; secondly, testing the contextual mechanisms that influence the relationship between NEP and SE, that is, analyzing the moderating effects of EEP, long-term orientation culture, and national UNE rates.

4.1.1. A test of the relationship between personal NEP and SE

Table 3 lists the estimation results of the logit regression models of individual participants' NEP and SE. Among them, Model 1 is the baseline model with the test results of the moderating and control variables; Model 2 is the main effects model with the inclusion of independent variables, Models 3–5 are the moderating effects models, and Model 6 is the full model. The results of Model 2 show that there is a significant positive association between personal NEP and SE (coef. = 1.0816, $P < 0.01$) and remains robust in Models 3–5 and full model Model 6 after the addition of moderating variables. This suggests that NEPs do shape individuals with a solid social mission imprint and that individuals show a higher willingness to

Table 1. Descriptive statistics of the major variables at the national level

Country	N	SE (%)	LTO	UNE (%)	Country	N	SE (%)	LTO	UNE (%)
Argentina	799	6.13	20	7.27	Lebanon	610	4.43	14	6.28
Australia	1,017	11.21	21	6.08	Luxembourg	941	14.35	64	5.85
Belgium	1,022	7.44	82	8.52	Malaysia	1,032	0.68	41	2.88
Brazil	765	3.27	44	6.67	Mexico	1,755	2.17	24	4.81
Bulgaria	749	1.2	69	11.42	Morocco	557	1.97	14	9.7
Burkina Faso	434	19.59	27	6.48	The Netherlands	1,197	5.1	67	7.42
Canada	1,559	0	36	6.91	North Macedonia	639	5.48	62	28.03
Chile	2,752	11.26	31	6.66	Norway	1,717	8.04	35	3.48
China	1,698	6.89	87	4.6	Peru	1,624	10.71	25	2.96
Colombia	1,784	11.94	13	8.57	Philippines	744	15.46	27	3.6
Croatia	889	11.36	58	17.29	Poland	813	7.38	38	8.99
Egypt, Arab Rep.	1,219	4.68	7	13.1	Portugal	770	4.29	28	13.89
Estonia	1,163	7.39	82	7.35	Romania	1,085	5.9	52	6.8
Finland	1,190	6.47	38	8.66	Senegal	715	26.57	25	7.63
Greece	1,680	1.67	45	26.49	Slovak Republic	971	6.69	77	13.18
Hungary	1,128	11.44	58	7.72	Slovenia	835	5.03	49	9.67
India	949	5.69	51	2.77	South Africa	887	3.72	34	24.9
Indonesia	2,039	1.77	62	4.05	Spain	7,432	1.57	48	24.44
Iran, Islamic Rep.	899	2.89	14	10.57	Sweden	2,016	6.85	53	7.95
Ireland	1,009	12.59	24	11.86	Switzerland	983	4.88	74	4.83
Israel	1,354	11.82	38	5.89	Thailand	991	2.83	32	0.58
Italy	1,482	6.75	61	12.68	United Kingdom	4,220	6.21	51	6.11
Kazakhstan	839	4.05	85	5.06	United States	995	12.86	26	6.17
Korea, Rep.	805	2.11	100	3.5	Uruguay	764	3.14	26	6.55
Latvia	1,053	2.85	69	10.85	Vietnam	1,904	1.47	57	1.26

SE = social entrepreneurship; LTO = long-term oriented culture; UNE = unemployment.

be socially entrepreneurial, thus Hypothesis 1 is validated. In addition, in the study of the antecedents of SE, besides meeting the statistical significance of the regression results, the economic significance is worth paying attention to. Based on the results of the economic significance calculations and combined with the results of this article, after controlling the effects of other factors, individuals with NEP can have an effect of at least 5.94% on improving the probability of SE among individual participants.

4.1.2. Test of the relationship between personal NEP and SE regulation

Model 3 in **Table 3** analyzes the moderating effect of an individual's prior EEP on the relationship between NEP and SE. The empirical regression results show that the coefficient of interaction term between one's prior EEP and NEP is significantly negative (coef. = -0.6602 , $P < 0.05$), and remains robust in the full model Model 6 (coef. = -0.5886 , $P < 0.05$). This suggests that individuals' prior EEP tends to build a business imprint, and subsequently,

individuals join an NPO that pursues social values. The two perceptions are so different that individuals find it difficult to identify with the NPO culture and tend to weaken the social mission imprint, thus reducing the willingness to be socially entrepreneurial. The moderating effect of EEP plays a weakening role when combined with the moderating effect; thus, Hypothesis 2 is supported.

Model 4 analyzes the moderating effect of the national long-term orientation (LTO) culture on the relationship between NEP and SE. The empirical regression results show that the coefficient of interaction term between LTO and NEP is significantly positive (coef. = 0.0061 , $P < 0.01$), and the results remain robust in the subsequent full model Model 6 (coef. = 0.0059 , $P < 0.01$). This suggests that under an LTO culture, where the national cultural value fits with the NPO culture and tends to maintain and even enhance one's social mission imprint, individuals are more concerned with future-rewarding social and environmental goals, thus increasing the willingness to engage in SE. The moderating effect of an LTO culture plays an

Table 2. Correlation analysis of the major variables

Variables	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. SE	0.06	0.24	1															
2. NEP	0.08	0.27	0.12***	1														
3. EEP	0.01	0.11	0.05***	0.02***	1													
4. LTO	46.06	20.17	-0.04***	-0.04***	-0.04***	1												
5. UNE	9.82	7.3	-0.06***	-0.08***	-0.03***	0	1											
6. AGE	39.36	11.84	0	0.02***	-0.02***	0.07***	0.08***	1										
7. GEN	0.55	0.5	0	-0.07***	0.01***	-0.03***	0.01***	0	1									
8. EDU	2.19	0.1	0.06***	0.02***	-0.02***	0.06***	0.03***	-0.04***	-0.05***	1								
9. INC	2.08	0.81	0.07***	0.01***	0.01***	0.06***	-0.06***	0.03***	0.06***	0.28***	1							
10. EPS	0.49	0.5	0.10***	0.01*	0.07***	-0.12***	-0.03***	-0.01**	0.11***	0.04***	0.08***	1						
11. FEA	0.45	0.5	-0.04***	0	-0.02***	0.09***	0.05***	0.01***	-0.08***	0.01***	-0.03***	-0.12***	1					
12. GDP	3.32	3.31	0.04***	0.03***	0	-0.02***	-0.07***	-0.03***	0.01***	0.01***	-0.01	-0.01	-0.03***	1				
13. PDI	57.62	19.31	-0.03***	-0.06***	0.02***	0.05***	0	-0.11***	0.05***	-0.19***	-0.08***	0.09***	-0.03***	0.05***	1			
14. IDV	47.98	24.24	0.01**	0.06***	-0.03***	0.11***	0.07***	0.12***	-0.04***	0.17***	0.12***	-0.11***	0.04***	-0.08***	-0.73***	1		
15. MAS	47.35	19.02	0.02***	0.04***	0.01**	0	0.01**	-0.05***	0	-0.07***	0	0.02***	0.02***	0.13***	0.23***	0.10***	1	
16. UAV	65.94	22	-0.01***	-0.01***	-0.01*	-0.14***	0.47***	0.04***	0	-0.03***	-0.09***	0.04***	0.04***	-0.34***	0.21***	-0.33***	-0.05***	1
17. IN	66.95	8.59	0.04***	0.12***	-0.02***	0.02***	-0.09***	0.10***	-0.04***	0.14***	0.13***	-0.06***	-0.01***	0	-0.50***	0.51***	-0.10***	-0.06***

N = 66,474. SE = social entrepreneurship; LTO = long-term oriented culture; UNE = unemployment; NEP = NPO work experience; NPO = nonprofit organizations; EEP = entrepreneurial experience; EDU = education level of entrepreneurs; EPS = entrepreneurship skills; INC = entrepreneurs' actual income; GEN = gender of entrepreneurs; AGE = age of entrepreneurs; FEA = entrepreneurs' fear of failure; PDI = power distance; IDV = individualism; MAS = masculinity; UAV = uncertainty avoidance; IN = institutional environment.

P* < 0.1. *P* < 0.05. ****P* < 0.01.

Table 3. Nonprofit organization work experience and social entrepreneurship relationship test

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
NEP		1.0816*** (0.0449)	1.0929*** (0.0449)	1.1068*** (0.0453)	1.1616*** (0.0477)	1.1925*** (0.048)
NEP × EEP			-0.6602** (0.2792)			-0.5886** (0.2771)
NEP × LTO				0.0061*** (0.0022)		0.0059*** (0.0022)
NEP × UNE					0.0363*** (0.0086)	0.0347*** (0.0085)
EEP	0.9176*** (0.0979)	0.8886** (0.1005)	0.9484*** (0.0992)	0.8862*** (0.1003)	0.8927*** (0.1001)	0.9428*** (0.0993)
LTO	-0.0049*** (0.0009)	-0.0041*** (0.0009)	-0.0041*** (0.0009)	-0.0047*** (0.0009)	-0.0042*** (0.0009)	-0.0047*** (0.0009)
UNE	-0.0441*** (0.0032)	-0.0383*** (0.0032)	-0.0383*** (0.0032)	-0.0382*** (0.0032)	-0.0389*** (0.0032)	-0.0387*** (0.0032)
AGE	0.0028* (0.0015)	0.0021 (0.0015)	0.002 (0.0015)	0.0021 (0.0015)	0.002 (0.0015)	0.002 (0.0015)
GEN	-0.0610* (0.0336)	0.0064 (0.0341)	0.0064 (0.0341)	0.0046 (0.0341)	0.0032 (0.0341)	0.0019 (0.0341)
EDU	0.1991*** (0.02)	0.1993*** (0.0198)	0.1983*** (0.0198)	0.1998*** (0.0197)	0.1967*** (0.0198)	0.1965*** (0.0197)
INC	0.2220*** (0.0231)	0.2286*** (0.0231)	0.2292*** (0.0231)	0.2269*** (0.0231)	0.2306*** (0.0231)	0.2295*** (0.0231)
EPS	0.7409*** (0.0361)	0.7402*** (0.0363)	0.7405*** (0.0363)	0.7403*** (0.0363)	0.7395*** (0.0363)	0.7397*** (0.0363)
FEA	-0.2404*** (0.0342)	-0.2424*** (0.0345)	-0.2416*** (0.0344)	-0.2420*** (0.0345)	-0.2409*** (0.0344)	-0.2398*** (0.0344)
GDP	0.0381*** (0.0042)	0.0347*** (0.0042)	0.0347*** (0.0042)	0.0350*** (0.0042)	0.0332*** (0.0042)	0.0335*** (0.0042)
PDI	-0.0080*** (0.0014)	-0.0083*** (0.0015)	-0.0083*** (0.0015)	-0.0084*** (0.0015)	-0.0085*** (0.0015)	-0.0086*** (0.0015)
IDV	-0.0025* (0.0014)	-0.0033** (0.0013)	-0.0033** (0.0013)	-0.0036*** (0.0013)	-0.0035*** (0.0013)	-0.0038*** (0.0013)
MAS	0.0063*** (0.0011)	0.0056*** (0.0011)	0.0055*** (0.0011)	0.0056*** (0.0011)	0.0057*** (0.0011)	0.0057*** (0.0011)
UAV	0.0063*** (0.0011)	0.0051*** (0.0011)	0.0051*** (0.0011)	0.0050*** (0.0011)	0.0051*** (0.0011)	0.0050*** (0.0011)
IN	0.0088*** (0.0023)	0.0044* (0.0023)	0.0044* (0.0023)	0.0048** (0.0023)	0.0045** (0.0023)	0.0048** (0.0023)
_cons	-4.3488*** (0.2161)	-4.1179*** (0.2165)	-4.1177*** (0.2163)	-4.0990*** (0.2162)	-4.1006*** (0.2159)	-4.0780*** (0.2158)
N	66,474	66,474	66,474	66,474	66,474	66,474
Log likelihood	-14,450.277	-14,191.654	-14,188.431	-14,187.464	-14,184.336	-14,177.726
Wald test	1,733.65***	2,303.69***	2,315.99***	2,294.87***	2,277.82***	2,276.37***
Pseudo R ²	.0547	.0716	.0718	.0719	.0721	.0725

Robust standard errors are given in brackets. NEP = NPO work experience; NPO = nonprofit organizations; EEP = entrepreneurial experience; LTO = long-term oriented culture; UNE = unemployment; EDU = education level of entrepreneurs; EPS = entrepreneurs' actual income; INC = entrepreneurs' gender of entrepreneurs; AGE = age of entrepreneurs; FEA = entrepreneurs' fear of failure; PDI = power distance; IDV = individualism; MAS = masculinity; UAV = uncertainty avoidance; IN = institutional environment.

* $P < 0.1$. ** $P < 0.05$. *** $P < 0.01$.

enhancing role based on the moderating effect, thus supporting Hypothesis 3.

Model 5 analyzes the moderating effect of the national UNE rate on the relationship between NEP and SE. The empirical regression results show that the coefficient of the interaction term between national UNE rate and NEP is significantly positive (coef. = 0.0363, $P < 0.01$) and the results remain robust in the subsequent full model Model 6 (coef. = 0.0347, $P < 0.01$). This suggests that a high national UNE rate will easily induce social problems and activate the social mission imprint of individual participants, thus increasing the willingness to engage in SE. The moderating effect of the UNE rate is an enhancing factor based on moderating effect, and thus, Hypothesis 4 is supported.

4.2. Robustness test

4.2.1. Entropy balancing matching

The problem of endogeneity tends to arise when estimating the effect of individual NEP on social entrepreneurial choices. Any relationship between the 2 variables is likely to be spurious if no observed or uncontrollably confounding factors are associated with the 2 factors. In an ideal experiment, individuals would be randomly assigned to have NEP. However, in reality, an individual's choice of NPO job is not random and it may rely on various individual capability attributes to create a match. To address the problem of nonrandom assignment of NEP, we utilized a matching method. The main purpose of this method is to match the experimental group (i.e., individuals with NEP) with the control group (i.e., individuals without NEP) on observable attributes that are most likely to explain why one subject experienced the event and the other did not match on the above. We specifically implemented the entropy balancing matching approach, a common method for reducing heterogeneity between experimental and control groups and mitigating the effects of outliers (Dehejia and Wahba, 2002). First, we constructed a comparable control group by evaluating the experimental and control groups, as well as some common large set of covariates that enhanced the rigor of our matching method. Before pairing, it can be seen that individuals with NEP typically have a higher level of education, since a higher level of education is associated with a greater sense of moral obligation that makes NPOs more attractive to them. To achieve covariate balance between the experimental and control groups, we further applied the entropy balancing method (Hainmueller, 2012), which involves a reweighting scheme that incorporates covariate balance directly into the weighting function applied to the sample units. Traditional balancing methods initially estimate propensity score weights and then calculate a balancing check to determine whether the estimated weights balance the covariate distribution. However, a significant downside of this approach is that the estimated propensity score weights may not balance the covariate moments in a finite sample. Conversely, the good side of entropy balancing is that this method directly adjusts the weights to known sample moments, thus avoiding the need for successive balance checks and iterative searches for propensity score models that may randomly balance prespecified covariates. In other words, entropy balancing allows for

balancing in higher dimensions with no sample loss, greater applicability, and more optimized algorithms (Hainmueller, 2012).

In this article, all control variables appearing in the regression model were selected as characteristic variables. **Table 4** further reports the balance of matched and unmatched samples between the experimental and control groups and shows the balance when matching observations. Logit model regressions were then performed based on the weights and the results are shown in **Table 5**. From the new test results, NEP still shows a significant and robust positive relationship with SE. The 3 moderating effects of individual prior EEP (NEP), national long-term orientation (LTO) culture, and UNE rate remain significant and robust; thus, Hypotheses 1–4 of this article are supported as before. In summary, the results of this article remain highly robust after the entropy balance test.

4.2.2. Propensity score matching (PSM)

The empirical results suggest that individuals with NEP are more likely to engage in social entrepreneurial activities. But the comparison test made between individuals with NEP and those without NEP may have the problem of sample matching bias. To avoid this effect, this article further uses PSM to analyze the possible effect of NEP on social entrepreneurial intentions (Lian et al., 2011).

A simple one-factor comparison test was first conducted between the sample with and without NEP before conducting selective sample matching. The results indicated that the individual action group with NEP differed significantly from the control group without NEP in terms of age (AGE), gender (GEN), educational attainment (EDU), and entrepreneurial skills (EPS). It revealed that those differences in individual traits may lead to endogenous problems in the model and may ultimately bias the findings. In this article, all control variables appearing in the regression model were selected as matching variables, and then, the matching variables were screened using the Logit model. The explanatory variables were 0–1 dummy variables, with 1 indicating NEP and 0 indicating no NEP. The regression results indicated that the variables age (AGE) and educational attainment (EDU) had a significant effect on whether an individual had NEP, and therefore, these 2 variables were used as matching variables in the sample matching.

Based on the fitted values of the Logit model, the corresponding propensity scores were calculated, and the PSM model's most common "nearest neighbor matching method" was used to match the PS values of the NEP group with those of the no NEP group. The matched results satisfied both the common support and balance test, which were eventually tested based on the post-matching samples. The results of the balance test showed that the original division between the control and experimental groups was not random, while the standard deviation after matching showed a large drop and the significance of the t -statistic decreased significantly, indicating that there was no significant difference in the core matching variables between the 2 groups after matching, thus ensuring the randomness of sample selection. The regression results are shown in **Table 6**: NEP and SE have

Table 4. Before and after matching data by the entropy balance method

Variables	NPO Work Experience Group			No NPO Work Experience Group			NPO Work Experience Group			No NPO Work Experience Group		
	Before entropic equilibrium treatment			After entropic equilibrium treatment			Before entropic equilibrium treatment			After entropic equilibrium treatment		
	Mean	Var	Skewness	Mean	Var	Skewness	Mean	Var	Skewness	Mean	Var	Skewness
AGE	40.06	152.3	0.086	39.3	139	0.158	40.06	152.3	0.086	40.06	152.3	0.087
GEN	0.429	0.245	0.287	0.562	0.246	-0.251	0.429	0.245	0.287	0.429	0.245	0.287
EDU	2.241	1.211	-0.445	2.187	0.978	-0.427	2.241	1.211	-0.445	2.241	1.211	-0.445
INC	2.117	0.672	-0.219	2.076	0.657	-0.139	2.117	0.672	-0.219	2.117	0.672	-0.219
EPS	0.5	0.25	0	0.486	0.25	0.056	0.5	0.25	0	0.5	0.25	0
FEA	0.446	0.247	0.218	0.453	0.248	0.191	0.446	0.247	0.218	0.446	0.247	0.218
GDP	3.622	17.59	4.333	3.298	10.39	4.162	3.622	17.59	4.333	3.622	17.59	4.333
PDI	53.71	359.5	0.185	57.95	372.5	0.015	53.71	359.5	0.185	53.71	359.5	0.185
IDV	52.96	762	-0.1	47.56	570.7	0.244	52.96	762	-0.1	52.96	762	-0.1
MAS	49.8	362.8	-0.242	47.15	361.1	-0.184	49.8	362.8	-0.242	49.8	362.8	-0.242
UAV	65.09	475.5	-0.17	66.01	484.6	-0.276	65.09	475.5	-0.17	65.09	475.5	-0.17
IN	70.35	58.57	-1.104	66.67	74	-0.615	70.35	58.57	-1.104	70.35	58.57	-1.104

NPO = nonprofit organization; GEN = gender of entrepreneurs; AGE = age of entrepreneurs; EDU = education level of entrepreneurs; EPS = entrepreneurship skills; INC = entrepreneurs' actual income; FEA = entrepreneurs' fear of failure; PDI = power distance; IDV = individualism; MAS = masculinity; UAV = uncertainty avoidance; IN = institutional environment.

Table 5. Test of the relationship between nonprofit organization work experience and social entrepreneurship after matching with the entropy balance method

Variables	Model 1	Model 2	Model 3	Model 4	Model 5
NEP	1.0350** (0.0459)	1.0429** (0.046)	1.0767** (0.0463)	1.0997** (0.0488)	1.1477** (0.0495)
NEP × EEP		-0.5558* (0.2883)			-0.4846* (0.2881)
NEP × LTO			0.0087** (0.0023)	0.0326*** (0.0086)	0.0086*** (0.0023)
NEP × UNE					0.0326*** (0.0086)
EEP	0.5533** (0.1787)	0.8891** (0.1241)	0.5524** (0.178)	0.5608** (0.1781)	0.8506** (0.1244)
LTO	-0.0022 (0.0015)	-0.0022 (0.0015)	-0.0076** (0.0013)	-0.0022 (0.0015)	-0.0074** (0.0013)
UNE	-0.0178** (0.0063)	-0.0178** (0.0063)	-0.0183** (0.0063)	-0.0362*** (0.0044)	-0.0370*** (0.0045)
AGE	0.0035 (0.0023)	0.0035 (0.0023)	0.0036 (0.0023)	0.0035 (0.0023)	0.0035 (0.0023)
GEN	0.1900** (0.0562)	0.1896** (0.0562)	0.1879** (0.0562)	0.1857** (0.0563)	0.1838** (0.0563)
EDU	0.2817** (0.0316)	0.2807** (0.0316)	0.2830** (0.0315)	0.2794** (0.0316)	0.2799** (0.0315)
INC	0.1569** (0.0381)	0.1577** (0.0381)	0.1525** (0.0381)	0.1595** (0.0382)	0.1556** (0.0382)
EPS	0.7306** (0.0605)	0.7309** (0.0606)	0.7306** (0.0606)	0.7294** (0.0606)	0.7295** (0.0607)
FEA	-0.2169** (0.0578)	-0.2160** (0.0578)	-0.2184** (0.0578)	-0.2144** (0.0578)	-0.2152** (0.0578)
GDP	0.0256** (0.0064)	0.0256** (0.0064)	0.0261** (0.0064)	0.0255** (0.0065)	0.0261** (0.0064)
PDI	-0.0091** (0.0027)	-0.0091** (0.0027)	-0.0090** (0.0027)	-0.0092** (0.0027)	-0.0092** (0.0027)
IDV	-0.0059** (0.002)	-0.0059** (0.002)	-0.0057** (0.002)	-0.0060** (0.002)	-0.0059** (0.002)
MAS	0.0043** (0.002)	0.0043** (0.002)	0.0041** (0.002)	0.0045** (0.002)	0.0042** (0.002)
UAV	0.0024 (0.0018)	0.0023 (0.0018)	0.0027 (0.0018)	0.0025 (0.0018)	0.0028 (0.0018)
IN	-0.0004 (0.0045)	-0.0004 (0.0045)	-0.0009 (0.0044)	-0.0001 (0.0045)	-0.0008 (0.0044)
_cons	-3.6900** (0.4222)	-3.6938** (0.4221)	-3.4533** (0.4181)	-3.5650** (0.4185)	-3.3234** (0.4159)
N	66,474	66,474	66,474	66,474	66,474
Log likelihood	-3,309.0915	-3,308.2408	-3,305.8716	-3,306.6365	-3,302.7409
Wald test	925.65***	978.93***	1,039.41***	1,023.92***	1,154.41***
Pseudo R ²	.0823	.0826	.0832	.083	.0841

Robust standard errors are given in brackets. NEP = nonprofit organizations; EEP = entrepreneurial experience; LTO = long-term oriented culture; UNE = unemployment; EDU = education level of entrepreneurs; EPS = entrepreneurship skills; INC = entrepreneurs' actual income; GEN = gender of entrepreneurs; AGE = age of entrepreneurs; FEA = entrepreneurs' fear of failure; PDI = power distance; IDV = individualism; MAS = masculinity; UAV = uncertainty avoidance; IN = institutional environment.

* $P < 0.1$. ** $P < 0.05$. *** $P < 0.01$.

Table 6. Test of the relationship between nonprofit organization work experience and social entrepreneurship after propensity score matching

Variables	Model 1	Model 2	Model 3	Model 4	Model 5
NEP	1.0621*** (0.0553)	1.0753*** (0.0556)	1.0833*** (0.0563)	1.1370*** (0.0575)	1.1672*** (0.0588)
NEP × EEP		-0.7546** (0.3275)			-0.6803** (0.3271)
NEP × LTO			0.0052* (0.0027)		0.0050* (0.0027)
NEP × UNE				0.0384*** (0.0099)	0.0374*** (0.0099)
EEP	0.7674*** (0.1678)	1.0372*** (0.1883)	0.7654*** (0.1673)	0.7740*** (0.1667)	1.0128*** (0.1889)
LTO	-0.0021 (0.0015)	-0.0021 (0.0015)	-0.0042** (0.0019)	-0.0021 (0.0015)	-0.0041** (0.0018)
UNE	-0.0327*** (0.0057)	-0.0326*** (0.0057)	-0.0324*** (0.0057)	-0.0422*** (0.0064)	-0.0418*** (0.0064)
AGE	0.0036 (0.0023)	0.0035 (0.0023)	0.0036 (0.0023)	0.0035 (0.0023)	0.0035 (0.0023)
GEN	0.1335** (0.0541)	0.1327** (0.0541)	0.1302** (0.0542)	0.1272** (0.0541)	0.1241** (0.0542)
EDU	0.2638*** (0.032)	0.2622*** (0.032)	0.2636*** (0.032)	0.2582*** (0.032)	0.2571*** (0.0319)
INC	0.2196*** (0.0372)	0.2207*** (0.0372)	0.2179*** (0.0371)	0.2232*** (0.0373)	0.2222*** (0.0372)
EPS	0.7302*** (0.0587)	0.7309*** (0.0587)	0.7295*** (0.0587)	0.7295*** (0.0587)	0.7294*** (0.0588)
FEA	-0.2492*** (0.056)	-0.2468*** (0.056)	-0.2488*** (0.056)	-0.2461*** (0.056)	-0.2436*** (0.056)
GDP	0.0282*** (0.0064)	0.0283*** (0.0064)	0.0278*** (0.0063)	0.0268*** (0.0064)	0.0266*** (0.0064)
PDI	-0.0094*** (0.0026)	-0.0094*** (0.0026)	-0.0097*** (0.0026)	-0.0099*** (0.0026)	-0.0101*** (0.0026)
IDV	-0.0051** (0.0021)	-0.0051** (0.0021)	-0.0054** (0.0021)	-0.0054** (0.0021)	-0.0057*** (0.0021)
MAS	0.0021 (0.0019)	0.0021 (0.0019)	0.0022 (0.0019)	0.0023 (0.0019)	0.0024 (0.0019)
UAV	0.0046** (0.0018)	0.0045** (0.0018)	0.0045** (0.0018)	0.0046** (0.0018)	0.0045** (0.0018)
IN	-0.0045 (0.0043)	-0.0045 (0.0043)	-0.0043 (0.0043)	-0.0047 (0.0042)	-0.0046 (0.0042)
_cons	-3.4477*** (0.4121)	-3.4534*** (0.4113)	-3.3436*** (0.4136)	-3.3220*** (0.4099)	-3.2212*** (0.4129)
N	18,515	18,515	18,515	18,515	18,515
Log likelihood	-5,047.6876	-5,044.8299	-5,045.7252	-5,041.4122	-5,037.1063
Wald test	914.75***	915.95***	905.31***	895.17***	884.89***
Pseudo R ²	0.0862	0.0867	0.0866	0.0874	0.0881

Robust standard errors are given in brackets. NEP = NPO work experience; NPO = nonprofit organizations; EEP = entrepreneurial experience; LTO = long-term oriented culture; UNE = unemployment; EDU = education level of entrepreneurs; EPS = entrepreneurship skills; INC = entrepreneurs' actual income; GEN = gender of entrepreneurs; AGE = age of entrepreneurs; FEA = entrepreneurs' fear of failure; PDI = power distance; IDV = individualism; MAS = masculinity; UAV = uncertainty avoidance; IN = institutional environment.

* $P < 0.1$. ** $P < 0.05$. *** $P < 0.01$.

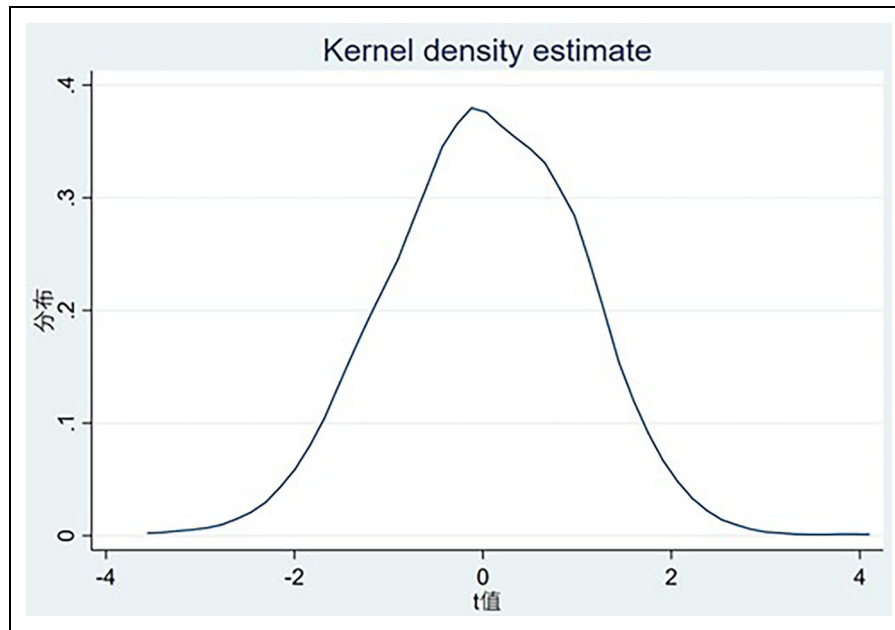


Figure 1. Placebo inspection chart.

a robust positive relationship in each model, which supports Hypothesis 1. The interaction terms of individual previous NEP, national long-term orientation (LTO) culture, and UNE rate all show significant correlations with NEP; thus, Hypotheses 2–4 are supported. In summary, the above hypotheses remain valid after the PSM paired sample, indicating that the empirical results of this article are relatively robust.

4.2.3. Placebo test

As the above findings could potentially be influenced by artificially set or omitted variables, this article also examines the robustness of the main findings using a placebo test. Other possible explanations exist for the results of the analysis described above in this article, including the possibility of certain factors that make an individual work for an NPO and have a high level of social entrepreneurial intentions simultaneously. However, if individual participants' social entrepreneurial intentions neither changed nor decreased when artificially randomizing individuals based on NEP, this would imply that the decrease in social entrepreneurial intentions was not caused by other factors that were potentially omitted. More specifically, this article performs a regression analysis of individual social entrepreneurial intentions through the creation of a random simulation of the explanatory variable $_NEP$ and retaining the proportion of $_NEP$ in the sample that is the same as the proportion of NEP in the above and then using the newly created simulated explanatory variable $_NEP$. If the variation in individual social entrepreneurial intentions is due to differences in the presence or absence of NEP, the new simulated explanatory variable $_NEP$ will then not yield a statistically significant regression coefficient. A placebo test of 1,000 was conducted in order to obtain 1,000 t -test values for the regression coefficient of the simulated explanatory variable $_NEP$. The distribution of t values is shown in **Figure 1**.

As shown in **Figure 1**, none of the t values of the simulated explanatory variable $_NEP$ regression coefficients satisfy or exceed the t values of the real explanatory variable NEP regression coefficients, and the majority of these t values are distributed around 0. In other words, the corresponding regression coefficients are statistically insignificant. The results suggest that artificially randomly specifying whether an individual has NEP does not significantly affect social entrepreneurial intentions, that the regression results in this article are not caused by unobservable factors, and that the relevant findings of this article are relatively robust.

4.2.4. Subsample test of whether a country is an emerging economy

In this article, the sample of countries is grouped according to the UK Economist criteria, with countries with emerging economies set to 1 and vice versa, to 0, and descriptive statistics are analyzed. **Table 7** reports the results after retesting for countries that are not emerging economies. Model 1 is the main effects model; Models 2–4 are the moderating effects models; Model 5 is the full model. The test results show that the NEP and SE of individual participants in Model 1 still show a robust positive relationship in each model and still support Hypothesis 1 of this article. The interaction term $NEP \times EEP$ coefficient in Model 2 is significantly negative (coef. = -1.0000 , $P < 0.01$), and the results remain robust in the subsequent full model Model 5 (coef. = -0.9080 , $P < 0.01$), so Hypothesis 2 is still supported. In turn, the interaction term $NEP \times LTO$ coefficient in Model 3 is significantly positive (coef. = 0.0095 , $P < 0.01$), and the results remain robust in the subsequent full model Model 5 (coef. = 0.0080 , $P < 0.01$), meaning Hypothesis 3 is still supported. Finally, the interaction term $NEP \times UNE$ coefficient in Model 4 is significantly positive (coef. = 0.0457 , $P < 0.01$), and the results remain robust in the subsequent full model Model

Table 7. The results of the retest

Variables	Model 1	Model 2	Model 3	Model 4	Model 5
NEP	1.0576*** (0.0517)	1.0733*** (0.0516)	1.1010*** (0.0523)	1.1461*** (0.0527)	1.1858*** (0.053)
NEP × EEP		-1.0000*** (0.3291)			-0.9080*** (0.3264)
NEP × LTO			0.0095*** (0.0026)		0.0080*** (0.0026)
NEP × UNE				0.0457*** (0.0088)	0.0400*** (0.0088)
EEP	0.8499*** (0.1176)	0.9401*** (0.1147)	0.8453*** (0.1175)	0.8557*** (0.1167)	0.9323*** (0.115)
LTO	-0.0015 (0.0011)	-0.0014 (0.0011)	-0.0023** (0.0012)	-0.0016 (0.0011)	-0.0022* (0.0012)
UNE	-0.0407*** (0.004)	-0.0406*** (0.004)	-0.0399*** (0.0041)	-0.0419*** (0.004)	-0.0411*** (0.0041)
AGE	0.0031* (0.0016)	0.0031* (0.0016)	0.0032* (0.0017)	0.0031* (0.0016)	0.0032* (0.0016)
GEN	0.0373 (0.0392)	0.0363 (0.0392)	0.0329 (0.0392)	0.0316 (0.0392)	0.0281 (0.0392)
EDU	0.1477*** (0.0219)	0.1461*** (0.0219)	0.1480*** (0.0218)	0.1435*** (0.0219)	0.1429*** (0.0218)
INC	0.2427*** (0.0268)	0.2438*** (0.0267)	0.2392*** (0.0267)	0.2449*** (0.0268)	0.2427*** (0.0267)
EPS	0.7301*** (0.042)	0.7307*** (0.042)	0.7302*** (0.042)	0.7293*** (0.042)	0.7300*** (0.0421)
FEA	-0.2976*** (0.0397)	-0.2965*** (0.0397)	-0.2943*** (0.0397)	-0.2967*** (0.0397)	-0.2931*** (0.0397)
GDP	0.0352*** (0.0049)	0.0351*** (0.0049)	0.0354*** (0.0048)	0.0336*** (0.0049)	0.0340*** (0.0049)
PDI	-0.0082*** (0.002)	-0.0082*** (0.002)	-0.0084*** (0.002)	-0.0085*** (0.002)	-0.0088*** (0.002)
IDV	-0.0084*** (0.0019)	-0.0085*** (0.0019)	-0.0091*** (0.0019)	-0.0084*** (0.0018)	-0.0091*** (0.0019)
MAS	0.0043*** (0.0012)	0.0043*** (0.0012)	0.0044*** (0.0012)	0.0045*** (0.0012)	0.0045*** (0.0012)
UAV	0.0040** (0.0016)	0.0040** (0.0016)	0.0037** (0.0016)	0.0044*** (0.0016)	0.0040** (0.0016)
IN	0.0095*** (0.0031)	0.0095*** (0.0031)	0.0101*** (0.0031)	0.0094*** (0.0031)	0.0100*** (0.0031)
_cons	-4.1042*** (0.268)	-4.1054*** (0.2678)	-4.0515*** (0.2686)	-4.0879*** (0.267)	-4.0428*** (0.2677)
N	49,761	49,761	49,761	49,761	49,761
Log likelihood	-10,803.141	-10,797.721	-10,795.954	-10,792.819	-10,783.083
Wald test	1,897.21***	1,911.14***	1,886.59***	1,866.72***	1,867.30***
Pseudo R ²	.0761	.0766	.0767	.077	.0778

Robust standard errors are given in brackets. NEP = NPO work experience; NPO = nonprofit organizations; EEP = entrepreneurial experience; LTO = long-term oriented culture; UNE = unemployment; EDU = education level of entrepreneurs; EPS = entrepreneurship skills; INC = entrepreneurs' actual income; GEN = gender of entrepreneurs; AGE = age of entrepreneurs; FEA = entrepreneurs' fear of failure; PDI = power distance; IDV = individualism; MAS = masculinity; UAV = uncertainty avoidance; IN = institutional environment.

* $P < 0.1$. ** $P < 0.05$. *** $P < 0.01$.

5 (coef. = 0.0400, $P < 0.01$). Hypothesis 4 of this article is still supported. In summary, it can be seen that the results are still strongly robust after the sample replacement test.

5. Discussion and conclusion

Increased awareness of environmental and social problems has positive effects on the research of SE and sustainable development. In this article, the antecedent factors and the mechanism on SE have been deeply considered. Based on the imprinting theory, we analyzed the relationship between individual participants' work experience in NPO and SE, as well as internal and external factors that can affect this relationship. Through an empirical analysis of 66,474 observation samples from 50 countries in 2015, we conclude that NEP is a key factor that affect the choice of individual participants to conduct social entrepreneurial activities. Further research indicated that individual participants' previous commercial EEP will weaken the NPO imprint, thereby weakening the relationship. In countries with an LTO of national culture, individuals can maintain or even enhance the NPO imprint, thus strengthening the relationship. Moreover, the NPO imprint will be activated in countries with a high UNE rate, thus strengthening the relationship.

Johnson and Schaltegger (2020) classified entrepreneurial sustainability into 3 categories, including situational mechanisms (the influence of macrolevel causes on microentrepreneurial orientations, e.g., culture and UNE rate), action-formation mechanisms (the activities and processes of microlevel entrepreneurs, e.g., NPO and commercial experience of entrepreneur), and transformation mechanisms (the influence of microparticipants on macro environment and institutions, e.g., social entrepreneur behavior). The combination of the 3 addresses the integration of all sustainability aspects through a continuum of balance and combines them with economic and noneconomic benefits to create maximum sustainability value (Cohen et al., 2008; Tilley and Young, 2009; Shepherd and Patzelt, 2011). Thus, our study is a validation of their research on the sustainability of entrepreneurship and further specific expansions on particular metrics. The theoretical contributions of this study are given as follows.

First, this study integrated the SE excitation mechanism with imprinting theory and contributed new theoretical perspectives to SE and sustainable development. At the same time, it conducted intensive empirical research to test the assumptions with limited data and made efforts for the empirical research of SE. Existing research focuses on the effects of general human capital on SE, while ignoring the impact of the imprints generated by the specific human capital of individual participants in NEP on subsequent sustainable development behaviors. This study combined the theoretical logic of professional human capital with career imprint as proposed by Estrin et al. (2016) and proposed that NEP, a specific human capital, will brand individual participants with a social mission imprint based on sustainable development, thus directly improving individual participants' willingness and ability to engage in SE. Results indicate that the NEP of individual participants is significantly positively related to

their social entrepreneurial behavior, providing convincing evidence for the above theoretical logic.

Second, this article analyzed the influence mechanism of institutional environment factors, including economic and cultural scenarios, which also affects the choice of SE and realization of sustainable development. Results indicate that discriminating the internal reaction mechanism of individuals to the institutional environment is helpful. This article first considered the impact of the national economic environment and found that countries with higher UNE rates have greater aspiration to solve social problems. On a concrete level, countries with higher UNE rates have a greater willingness to address existing social problems and UNE through a sustainable development transition, in particular through SE and start-ups to reduce UNE while addressing social needs (Warren, 2016). These indicators can play a significant role in further sustainable development. For instance, while the satisfaction of economic goals is the antecedent of sustainable development and transition (Spangenberg, 2005), culture as an atmosphere can have an imprint and a profound impact on sustainable development (Caprar and Neville, 2012). The economic environment will activate the social mission imprint and improve the social entrepreneurial willingness of individual participants. Second, previous LTO cultural studies in the field of SE mostly focused on the direct effect of this informal institution on individual entrepreneurship (Stephan et al., 2015; Hörisch et al., 2017). This study points out that, under an LTO culture, individuals are more concerned about future-rewarding social and environmental goals, which will strengthen the social mission imprint and enhance the social entrepreneurial willingness. These empirical test results are consistent with our understanding. Thus, by linking the NEP of individual participants with the macro institutional environment, this study addressed the need for cross-layer analysis in the field of SE research and addressed the call for a combination of internal and external factors and sustainable development.

Third, this article tries to solve the problem in studying imprint theory in view of Wang et al. (2019), as we try to establish a systematic dynamic analysis framework that addresses imprint formation, weakening, and strengthening to activation. Our studies indicate that individuals with commercial EEP in NPO may have different degrees of social mission because business logic may weaken their social mission imprint. This finding reveals that cognitive conflict is the most critical factor that weakens the imprinting effect, which challenges the persistence hypothesis of imprint theory as pointed out by Marquis and Tilcsik (2013) and improves our understanding of imprinting boundaries. Thus, this study has opened the black box of imprinting; contributed to understanding of the formation of imprinting, the weakening and strengthening of imprinting, and the continuing influence of its interactions with the external environment over time; and thereby expanded the dynamic study of imprinting theory.

Finally, we reveal the intimate relationship between sustainable development and SE. From the imprinting of sustainability in the formative stages of imprinting theory

to the recognition and practice of the concept of sustainability in the personal work experience of NPOs, then to the conflict and harmony with the concept of sustainability in the experience of business entrepreneurship, and finally to the further recognition and embedding of the concept of sustainability in the environment of an LTO culture and the promotion of subsequent personal sustainability inspired by UNE, it can be seen that the concept of sustainable development transformation is deepened and embedded within the whole process. Pursuing sustainable development complements the process of imprinting and together creates the final sustainable SE outcome. It can be suggested that the dissection of how social entrepreneurial behavior evolves is the dissection of the process of sustainable development.

What's more, this article also has some practical implications. Firstly, the dueling effects of the NPO experience imprint and the business experience imprint are a valuable guide to the ever-changing regimes. This dueling effect has led to the further development of SE and, for business-oriented companies, to a revision of corporate behavior and values through CSR and ESG, a fundamental institutional change that is at the core of the sustainable transformation of this era. For example, mandatory ESG disclosure for companies increases the availability and quality of ESG reports, while such institutional requirements urge companies to engage in more socially and sustainably beneficial behavior (Krueger et al., 2021). In addition, our research has educational implications, especially for young people, as it helps them to transform their future social enterprises into sustainable enterprises by strengthening their understanding and recognition of social enterprises at a young age through the branding of SE (Westlund and Gawell, 2012).

Several deficiencies in this study need to be further improved in the future. First, this study proposed the different mechanisms of NEP as a unique human capital in relation to willingness to engage in SE. However, these mechanisms were discussed and searched for evidence mainly by using the theory of argumentation and indirect inspection. Thus, further research can adopt the appropriate experimental design to better reveal the situational conditions and intermediate mechanisms of NEP and SE, which greatly contributes to intensive research on NPO and SE. Second, there may be several types of NPOs with distinct functions and influences in countries under different laws and religious beliefs. Therefore, the external positive effects on NPOs also differ. However, this study did not conduct a more detailed classification of NPOs beyond the definition used. In addition, some special situations may elicit different results. For example, the frequent occurrence of NPOs seeking personal gains will make individual participants lose confidence and motivation in their work, thus bringing about external negative effects. All these topics are worthy of further exploration. Third, the intermediate processes from NPO to SE can still be explored by using the view of institutional entrepreneurship and other theories, so that the specific strategies and behaviors of institutional entrepreneurship can be further analyzed. Fourth, this study used cross-border

sample data to improve the robustness and universality of the research conclusions. However, at the same time, potential omitted variables may still influence the empirical results although we have tried to use the entropy balance method, PSM, and other measures to reduce this interference. Follow-up studies can use long-term tracking data to reduce the limitations of the statistical method. Finally, our research is conducted in the context of making sustainable transitions. In the future, variables of sustainable development or transformation can be considered directly as variables to study the impact on SE so as to obtain more direct relationships and results on sustainable factors.

Data accessibility statement

The data that support the findings of this study are openly available in GEM 2015 APS Global Individual Level Data—Social Entrepreneurship Special Topic at <https://www.gemconsortium.org/data/sets?id=aps>.

The data that support the findings of this study are openly available in THE WORLD BANK at <https://data.worldbank.org/indicator/SL.UEM.TOTL.ZS?end=2021&start=2021&view=map&year=2015>.

The data that support the findings of this study are openly available in Hofstede Insight at <https://www.hofstede-insights.com/product/compare-countries>.

The data that support the findings of this study are openly available in Index of Economic Freedom at <https://www.heritage.org/index/explore>.

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No existing or potential conflict of interest.

Author contributions

Contributed equally to writing of this article: XS, WW, ZW.

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Contributed to acquisition of data: WY, SZ.

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