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Article

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MANAGEMENT | RESEARCH ARTICLE

The effect of social entrepreneurs' human capital on and firm performance: The moderating role of specific human capital

Youngkeun Choi^{1*} and Sugun Chang²

Abstract: This study applies human capital theory to link social entrepreneurs' characteristics and the performance of social ventures. Especially, considering the dualistic nature of social ventures, we investigate two specific human capital of entrepreneurs, such as prior social experience and prior commercial experience. These are associated with the venture's goal of social mission and profit generation, respectively. In the Korean context, social enterprises have another function to provide jobs and increase employment rates in the time of low economic growth and economic inequality. Given this situation, it is necessary that researchers investigate what human capitals of social entrepreneurs are helpful to obtain better social and commercial performance and what specific human capitals may have moderating effects on the relationship between the human capitals of social entrepreneurs and the social and commercial performance of social ventures. In the results, first, that the younger, the highly educated, or from more prestigious universities social entrepreneurs are, the better social performance their social ventures show. Second, the younger, the highly educated, or from more prestigious universities social entrepreneurs are, the better commercial performance their social ventures show. Third, when social entrepreneurs with prior social experience

ABOUT THE AUTHOR

Youngkeun Choi has published peer-reviewed articles in the areas of social entrepreneurship, organizational management, strategy. He has conducted assessments and empirical analysis with employees. The information in the current perspective article is important for social entrepreneurship and innovation. Social entrepreneurs' human capitals affect their firm performance with the interaction of specific human capital.

PUBLIC INTEREST STATEMENT

A social venture is built upon the founding efforts of entrepreneurs who first design the innovative idea of resolving a social problem that cannot be eradicated with governmental help or market intervention. This study examines the relationship between social entrepreneurs' characteristics and firm performance. In the results, first, that the younger, the highly educated, or from more prestigious universities social entrepreneurs are, the better social performance their social ventures show. Second, the younger, the highly educated, or from more prestigious universities social entrepreneurs are, the better commercial performance their social ventures show. Third, when social entrepreneurs with prior social experience graduates from more prestigious, the better social performance their social ventures show than others. Finally, when social entrepreneurs with prior commercial experience have output function background, the better commercial performance their social ventures show than others.

graduates from more prestigious, the better social performance their social ventures show than others. Finally, when social entrepreneurs with prior commercial experience have output function background, the better commercial performance their social ventures show than others.

Subjects: Sociology & Social Policy; Testing, Measurement and Assessment; Business, Management and Accounting

Keywords: social venture; social entrepreneurs; human capital theory; prior social experience; prior commercial experience

1. Introduction

Social ventures entail the application of business models to resolve social problems, such as poverty, food insecurity, and pollution (Wry & York, 2017). The joint pursuit of social mission and financial goal distinguishes social ventures from both commercial ventures where prioritize commercial profits and nonprofits that solely rely on financial inputs from donors (Dees, 1998; Dees & Anderson, 2003; Wry & York, 2017). Due to this unique feature, social ventures have been of interest to organizational scholars. So far, most of the academic attention in the field of social entrepreneurship has given to the challenges social ventures face when internal or external groups disagree with the logic that the organization should prioritize (Ebrahim et al., 2014). Much research in social entrepreneurship has focused on how social ventures can effectively resolve the tensions that arise from conflicting demands related to commercial and social welfare logic (Wry & York, 2017). While these studies provide useful insights to understand already established social ventures, research in early-stage social ventures are still emerging.

A social venture is built upon the founding efforts of entrepreneurs who first design the innovative idea of resolving a social problem that cannot be eradicated with governmental help or market intervention. At the beginning of a new venture, resources such as human capital and financial capital are usually in limited supply.

Human capital, in particular, represents the knowledge and skills individuals bring to the organization (D. P. Dimov & Shepherd, 2005). Thus, research into entrepreneurship has had a positive effect on human capital on entrepreneurial performance, such as the start of entrepreneurship or self-employment, the formation of new ventures, and new venture growth and survival (D. P. Dimov & Shepherd, 2005). Human capital literature generally distinguishes general human capital from specific human capital gained through formal education and overall life experience (Becker, 1975; Estrin et al., 2016). Research efforts focused primarily on how general human capital, including age, education, and years of experience, affected organizational performance. However, recent arguments suggest that specific human capital, which is more closely related to creating value in a specific venture context but limited in its applicability across multiple industries, is likely a more proximal predictor of venture outcomes (D. Dimov & Murray, 2008).

Therefore, this study applies human capital theory to link social entrepreneurs' characteristics and the performance of social ventures. Considering the dualistic nature of social ventures, we investigate two specific human capital of entrepreneurs, such as prior social experience and prior commercial experience. These are associated with the venture's goal of social mission and profit generation, respectively.

2. Theoretical background and hypothesis development

2.1. Human capital theory and social entrepreneurship

Human capital represents the knowledge and skills that individuals bring to an organization (D. P. Dimov & Shepherd, 2005). It is developed through education and previous experience and

thus contributes to the firm's explicit and tacit knowledge. The fundamental argument of the human capital theory is that the better the human capital within the firm, the better the firm's performance in particular tasks (D. P. Dimov & Shepherd, 2005). Specifically, individuals' knowledge and experience increase their cognitive abilities, leading to more productive and efficient activities (Becker, 1975; Davidsson & Honig, 2003). Therefore, entrepreneurs with a greater or higher quality of human capital can better perceive and exploit opportunities for new value creation. Research in entrepreneurship has supported the positive effect of human capital on entrepreneurial outcomes, such as the start of entrepreneurship or self-employment, new venture formation, and new venture growth and survival (Davidsson & Honig, 2003; D. P. Dimov & Shepherd, 2005).

The human capital literature distinguishes between general human capital, typically acquired through formal education and overall life experience, and specific human capital, which is obtained via experience specific to a particular activity or context (Becker, 1975; Estrin et al., 2016). Research efforts have mainly focused on how general human capital, including age, education, and years of work experience, affect organizational outcomes. According to the literature, general human capital encourages motivation to engage in startup activities (Davidsson & Honig, 2003; Estrin et al., 2016) and increases the likelihood of fund-raising success (Gimmon & Levie, 2010), venture performance (Beckman & Burton, 2008; Davidsson & Honig, 2003), and venture survival (Gimeno et al., 1997).

However, recent arguments suggest that specific human capital, which is more closely related to creating value in a particular context of venture but limited in its applicability across multiple industries, is likely a more proximal predictor of venture outcomes (D. Dimov & Murray, 2008). Specific human capital represents the degree of similarity between a new venture and the organization where the entrepreneur had previously worked (Gimeno et al., 1997). Specific human capital accrued through task-specific experiences helps entrepreneurs select knowledge more relevant to the firm's success, especially in cases where experience is both firm and industry-specific (Kor, 2003; Scarlata et al., 2016).

2.2. Social entrepreneur's human capital and firm performance

Related studies generally suggest that older managers tend to have less physical energy and mental enthusiasm and manage to routine analysis with little attention to limited information (Miller, 1991). They cannot also generate new ideas and learn new behaviors (Taylor, 1975). Other studies, on the other hand, argue that as age increases, experience accumulates, leading to better interpersonal skills such as political judgment and bargaining power (Kitchell, 1997). The management environment of new technology-based venture firms is complicated by a large number of environmental factors to be considered in decision-making and is characterized by a high degree of uncertainty in which the environmental factors change rapidly (Tushman & Rosenkopf, 1992). Venture capital believes that to cope with this complex and highly uncertain business environment, the entrepreneur's physical and mental energy and learning skills are more necessary than human skills such as political judgment and bargaining power (Byrne, 2000). The older the manager, the greater the tendency to maintain the status quo systematically. And, given their social status, consumption tendencies, and life expectancy after retirement, financial and career stability becomes important, so they are generally risk averse (Carlsson & Karlsson, 1970). Hambrick and Mason (1984), on the other hand, suggests that young managers tend to pursue risk-taking strategies such as product innovation and financial leverage. Of course, studies have argued that these young managers' high-risk strategies are positively related to corporate growth, while profitability varies widely (Hambrick & Mason, 1984). In particular, lack of resources and uncertainty in the market makes it clear that for a social venture company to succeed, the entrepreneur must take a risk rather than maintain the status quo. Providing resources to social venture firms with high uncertainty, even if they are likely to fail, will likely favor the entrepreneur's risk-taking strategy because they expect excellent social outcomes when successful. Thus, young entrepreneurs with high energy and learning skills and risk-taking have the appropriate human

capital for a highly uncertain business environment. For this reason, the younger the entrepreneurs of social ventures are, the better their social ventures will perform.

H1: The younger the entrepreneurs of a social venture are, the better performance their social ventures will show.

H1-1: The younger the entrepreneurs of a social venture are, the better social performance their social ventures will show.

H1-2: The younger the entrepreneurs of a social venture are, the better commercial performance their social ventures will show.

The educational background can be divided into two types. One means cognitive ability, and the other emphasizes external connection. Cognitive perspective studies consider education as an indicator of a person's various cognitive dispositions. Regardless of their majors, they argue that a higher level of formal education is more receptive to information processing and innovation (Wiersema & Bantel, 1992). Management studies also agree that in this respect, highly educated executives have excellent information processing capabilities, and that educated executives can better find innovative solutions (Finkelstein & Hambrick, 1990). It is argued that managers' education levels and corporate performance are generally positive relationships (Gimeno et al., 1997). However, other studies also suggest that contextual considerations are needed during empirical research because the impact of education on corporate performance may vary depending on the nature of the business environment (Honig, 1998). The business environment of social venture companies is complex, and changes are very uncertain. To survive and grow in such an environment, it is very important to judge the information correctly, so the entrepreneur's high information processing ability will be required. Also, firms with unstable circumstances require high innovation of managers because the more uncertain the environment for survival and growth, the more innovative strategies are required to reduce retaliation of competitors (Zahra & Bogner, 1999). Thus, the higher the education level of the entrepreneurs, the higher the information processing ability and the innovative propensity of the entrepreneurs. For this reason, the higher educated the entrepreneurs of social ventures are, the better their social ventures will perform.

H2: If the entrepreneurs of a social venture are higher educated, the better performance their social ventures will show.

H2-1: If the entrepreneurs of a social venture are higher educated, the better social performance their social ventures will show.

H2-1: If the entrepreneurs of a social venture are higher educated, the better commercial performance their social ventures will show.

Another educational background is the ability to obtain opportunities, information, and support for corporate activities through a network of social elites by educational institutions. Despite the nature of secondary social relations, academic studies originated from Korea's culture have a greater influence on society by forming a closed social group with more members (Lee, 1995). External networks based on educational background include representatives from prestigious universities (Clement, 1975). The experience of mathematics at a prestigious university is not only an educational opportunity but also helps form a social network, considering the influential alumni who come into society later. This alumni relationship is more than just a social group, and it is effectively used later when the manager himself has reached a position where senior contacts are needed. For example, if he graduated from a major French university, *Grandes Ecoles*, he is

known to be alumni with many political, media, and commercial leaders. To gain a competitive advantage in the complex and changing business environment, social ventures have to obtain opportunities and information necessary for management activities. Also, support from other companies through schooling can be used as an important means of preventing retaliation from competitors. Therefore, if an entrepreneur is from a prestigious university, he or she will consider the entrepreneur's ability to connect to the outside world actively and try to provide their resources actively. For this reason, the more prestigious university the entrepreneurs of social ventures graduated from, the better their social ventures will perform.

H3: If the entrepreneurs of a social venture are from more prestigious universities, the better performance their social ventures will show.

H3-1: If the entrepreneurs of a social venture are from more prestigious universities, the better social performance their social ventures will show.

H3-2: If the entrepreneurs of a social venture are from more prestigious universities, the better commercial performance their social ventures will show.

This study divides the entrepreneur's management experience into two. One is the type of job the entrepreneur has experienced before the startup, and the other is the experience in the relevant industry. The functional background does not dictate the manager's strategic choice, but it does have some impact. For example, when Dearborn and Simon (1958) asked managers with different functional backgrounds to solve the same management-related problems, each manager defined a problem in terms of activities and goals based on his or her functional background. Insist on finding a solution. In general, entrepreneurship can be divided into three categories according to its functional background (Hambrick & Mason, 1984). First, output functions that monitor and adjust products and markets, such as product development, marketing, and sales. Peripheral functions are not included in a company's core activities, such as finance. In particular, it is argued that output and throughput functions have distinct effects on behavior for the enterprise and the environment (Miles & Snow, 1978). Executives with output functional backgrounds tend to pursue strategies that emphasize growth, such as product innovation, relevant diversification, advertising, and forward integration. In particular, it is argued that the firms of managers with output function backgrounds are profitable in unstable rather than stable industries. In a highly uncertain business environment, such as a social venture, it is very important for an entrepreneur to quickly identify and respond to market trends and external environmental factors. If the entrepreneur's functional background is an output background, he or she will decide to have a high level of understanding and understanding of the entrepreneur's technology and market trends. For this reason, when the entrepreneurs of social ventures have output background, the better their social ventures will perform.

H4: If the entrepreneurs of a social venture have output background, the better performance their social ventures will show.

H4-1: If the entrepreneurs of a social venture have output background, the better social performance their social ventures will show.

H4-2: If the entrepreneurs of a social venture have output background, the better commercial performance their social ventures will show.

2.3. The moderating effect of social entrepreneur's prior experience

Dees (1998) posited that a social mission forms the key distinction between social ventures and traditional ventures. Impact investors regard social ventures' mission, social entrepreneurs'

authenticity and passion for social change, and ethical orientation as critical assessment factors in addition to dimensions related to entrepreneurial and commercial activities (Miller et al., 2012). Social experience refers to an entrepreneur's previous work experience in government ministries or government agencies, or enterprises with a social aim, and of starting and managing an enterprise with the intention to make a social impact (Scarlata et al., 2016). By engaging in activities in such organizations, individuals can form role identities as social activists and accumulate relevant knowledge on solving societal problems and applying these solutions across multiple contexts. Thus, an entrepreneur's social experience can improve the credibility of the social venture as it can enhance the venture's ability to address its social mission.

The distinctive features of an entrepreneur's knowledge and expertise can make a difference in social ventures' primary goals and orientation. Wry and York (2017) suggested that the entrepreneur's role identity associated with knowledge and competencies in a particular domain likely determines the social venture's approach to addressing its social mission. For instance, entrepreneurs with knowledge and competencies in social welfare areas tend to seek the maximization of social impact in opportunity development. These entrepreneurs are less likely to lose sight of their purpose and values in the quest for organizational efficiency (Ebrahim et al., 2014). Thus, an entrepreneur's social experience can affect the venture's credibility in its support of the social mission and consequently affect the venture's chances of acquiring funding from impact investors. Considering the mission-oriented nature of social ventures, we suggest that social entrepreneurs' prior social experience might increase the contributions of social entrepreneurs' human capital to their social venture's social performance.

H5: Prior social experience of social entrepreneurs will enhance the relationship between their human capital and the social performance of their social ventures.

Even though social and traditional entrepreneurs differ in their ultimate goals and ways of creating value, they both need to acquire external resources in their organizations' early operation to move into the next step (Estrin et al., 2016). In particular, like commercial ventures, early-stage social ventures must acquire seed capital from external investors to create viable products or services (D. Dimov & Murray, 2008) as most entrepreneurs lack sufficient capital to finance projects in general (Gompers & Lerner, 1999). The external financing of seed capital reduces the uncertainty of business circumstances and offers advantages where professional investors provide guidance and advice to new ventures (D. Dimov & Murray, 2008; Gompers & Lerner, 1999). Therefore, one of the primary duties of a social venture's entrepreneurs is to attract financial resources from external investors.

Typical funding sources for early-stage social ventures are impact investors include social venture capitalists (SVCs), philanthropic venture capitalists (PhVC), and fellowship foundations (Nicholls, 2006). These funding organizations aim to create social wealth by financially and strategically supporting organizations to pursue social changes. The funding decision rules of impact investors are unique because of the dual goal and identity of organizations they support (Miller et al., 2010). For instance, assessment factors of SVCs include attributes unique to social ventures such as social mission, an entrepreneur's passion for social change, and community-based networks. In addition to these attributes, SVCs also importantly consider entrepreneurial and commercial attributes such as business experience, innovation capabilities, and educational prestige (Miller et al., 2010). Research provides empirical evidence that the greater the entrepreneur's management experience is, the less likely SVCs are to evaluate the venture as uncertain (Miller et al., 2010). Scholars also found that SVCs tend to put much weight on entrepreneurial and commercial attributes in decisions on social ventures to support (Miller et al., 2010; Scarlata & Alemany, 2009; Scarlata et al., 2016). These findings imply that impact investors select social ventures that can be economically sustainable, because only

economically sustainable social ventures can grow and survive and, consequently, create the intended social impact (Scarlata & Alemany, 2009).

Past research provided both theoretical support and empirical evidence that entrepreneurs' human capital conveys an important signal for ventures' future performance (Hsu, 2007). To enhance a social venture's commercial performance, entrepreneurs' previous commercial experience would be importantly considered. Therefore, we propose that social entrepreneurs' prior commercial experience might increase the contributions of social entrepreneurs' human capital to their social venture's commercial performance.

H6: Prior commercial experience of social entrepreneurs will enhance the relationship between their human capital and the commercial performance of their social ventures.

3. Methodology

3.1. Sample

This study includes all of social ventures certified by the Ministry of Employment and Labor in Korea as social ventures from 2007 to 2010. The Ministry of Employment and Labor certifies social ventures by considering both social value creation and commercial sustainability. The certification condition of social value creation has two elements: job creation, which applies if a firm employs more than 50% of its total employees from a socially disadvantaged class; providing social services, which applies if a firm provides more than 50% of its services for socially disadvantaged class. And the certification condition of commercial sustainability is that the total revenue for six months before the application for certification should be more than 30% of labour expenses for the same period.

3.2. Data

Data were collected by survey. The list of social enterprises was taken from the public website of the Korean Social Enterprise Promotion Agency (KSEPA, <http://www.socialenterprise.or.kr>). This list includes titles, contact information, phone numbers, and addresses for all of the 565 firms. Since the Korean Ministry of Employment and Labor established KSEPA to provide efficient monitoring of certified enterprises, its list of certified social enterprises is taken to be comprehensive. Initial attempts were made to contact representatives of all 565 certified social enterprises by telephone. The purpose and implications of the research were explained, and the representatives were asked to participate in the survey. However, 45 firms refused to participate due to lack of time or based on company policy, and three other firms were in the process of closing. As a result, questionnaires were sent to 517 firms by mail, e-mail, fax, or the Google Drive Form system. In total, 88 responses were received, but 16 were excluded from the statistical analysis due to incompleteness. Thus, the final response rate was 17%.

3.3. Variables

3.3.1. Dependent variable

3.3.1.1. *Social venture's performance.* This variable was measured based on the perceptions of the responding representative of each social venture. The social venture's performance was measured subjectively due to a lack of reliable, objective data. In Korea, firms engaging in social ventures have no obligation to account for their performance to the public. Though the Ministry of Employment and Labor has the performance data for firms engaging in social ventures collected through KSEPA, this data was not available for the purposes of this paper. However, Dess and Robinson (1984) and Pearce et al. (1987) confirmed a strong correlation between subjective and objective performance. This result may also be applied to social performance. Questions were asked about the representative's overall perception of the social performance of his or her

organization. This measure included items regarding how the social mission was addressed and to what extent the venture met its social responsibilities, the extent to which a performance appraisal system had been established, and how well activities for these purposes were implemented. It was measured on a 5-point Likert scale. Scores for these items were averaged to create a social performance score.

3.3.2. *Independent variables*

3.3.2.1. *Age*. The age of the entrepreneur is based on when the resource holders provided the resources. **Education level**. Higher education was defined as a master's degree or higher. It is coded as 1 if the entrepreneur's education level is higher than graduate school and 0 if it is lower than the university. **Prestigious university**. In consideration of Korea's situation, four schools were measured as prestigious universities, including Seoul National University, Yonsei University, Korea University, and KAIST. Among the top five university rankings ranked by JoongAng Ilbo from 2007 to 2010, Pohang University of Science and Technology included (www.univ.joins.com). This is because it was judged that there would be a big difference in the size of the network based on them. It was coded as 1 if the entrepreneur graduated from one or more of the four universities, or 0 otherwise. **Functional background**. It was determined whether the entrepreneur's functional background was an output function, and coded as 1 for an output function background or 0 for throughput or an additional function background.

3.3.3. *Moderating variables*

3.3.3.1. *Prior social experience*. Social experience indicates prior work experience in organizations with a primary social aim. Social experiences include a founder's prior work experience in SVCs or PhVCs, senior management experience at organizations with a social aim, government or government agencies, and founding experience or work experience at a venture with a social aim, and other work experience at organizations with a primary social aim (adapted from Scarlata et al., 2016). Senior management experience indicates work experience as CEO, COO, CSO, and CFO in organizations with a social aim, where the focal individual is not a founder. Government experience indicates work experience in a government branch or for international governmental organizations aimed at promoting economic development and social progress. The sum of months that spent on each experience was measured.

3.3.3.2. *Prior commercial experience*. A founders' prior commercial experience was conceptualized as a founder's work experience at commercial companies (Beckman & Burton, 2008; Scarlata et al., 2016). It included a founder's occupational experience at venture capital (VC) firms, financial experience, senior management experience, consulting experience, entrepreneurial experience as a founder and an employee of a startup, and other work experience at commercially motivated firms (adapted from Scarlata et al., 2016). VC experience indicated the core founders' prior experience of working in traditional venture capital. Financial experience includes investment banking, options trading, commercial banking, and mutual fund portfolio management (Scarlata et al., 2016). Senior management experience includes work experience as CEO, COO, CSO, and CFO in companies where the focal individual is not a founder. The sum of months that spent on each experience was measured.

3.3.4. *Control variables*

Control variables included in this study were firm age, time of certification, firm size, and industry characteristics variables.

- **Firm age**: like many organization-level studies, this study included the founding time of each firm to control for differences resulting from variations in the developmental stage of the social ventures.
- **Time of certification**: this was included to control for the effects of variations in the time since certification. Certification may provide an essential initial resource to a social venture, but the extent of support or the relationship with the target partner may also change over time. In addition, evaluation of the social venture could result in changes after more objective and critical criteria have been developed.

- Firm size: firm size was used to account for the greater resources and choices available to larger firms with a greater ability as well as potential scale advantages.
- Industry characteristics: the industries in which the social ventures were conducted were treated as dummy variables. Industries were classified into three types. First, ventures in social welfare industries were grouped together. Most social ventures operating in the social welfare sphere were also distinguished by the maturity of their industries. These not-for-profit social welfare organizations provided specialized services such as nursing or caring for the underprivileged or injured. This is different from other industries that provide services or products. Second, the remaining social ventures were classified according to the services or products they provided. Consequently, three industry dummy variables were utilized in this study: one for social welfare industries, one for service industries, and the last for product-related industries.

4. Results

4.1. Descriptive statistics and correlations

The features of the sample are described as follows. Some firms were newly founded. Firms <10 years old made up 85.9% of the sample and those <3 years old accounted for 54.7%. Most firms (92.2%) were small or middle-sized (>50 employees). The social ventures observed in this study shared many features with newly founded firms. Table 1 shows the correlations between variables. In the analysis of the control variables, firm age has a negative effect on social performance. In the independent variables, the social partner has a positive effect on social performance, while financial and marketing support has a positive effect on commercial performance.

4.2. Analysis

In order to test hypotheses 1-1, 2-1, 3-1, 4-1, and 5, a series of multiple regression analyses were conducted. Model 1 in Table 2 shows that among control variables, firm age was significantly associated with social performance. It means that the younger a social venture is, the better social performance it makes. Among independent variables, age, educational level, and prestigious school were significantly associated with social performance. It means that the younger, the highly educated, or from more prestigious universities social entrepreneurs are, the better social performance their social ventures show. Model 3 in Table 2 shows that prior social experience moderates the effect of a prestigious school on social performance. It means that when social entrepreneurs with prior social experience graduates from more prestigious, the better social performance their social ventures show than others.

In order to test hypotheses 1-2, 2-2, 3-2, 4-2, and 6, a series of multiple regression analyses were conducted. Model 1 in Table 3 shows that among control variables, firm age was significantly associated with commercial performance. It means that the younger a social venture is, the better commercial performance it makes. Among independent variables, age, educational level, and prestigious school were significantly associated with commercial performance. It means that the younger, the highly educated, or from more prestigious universities social entrepreneurs are, the better commercial performance their social ventures show. Model 3 in Table 2 shows that prior commercial experience moderates the effect of functional background on social performance. It means that when social entrepreneurs with prior commercial experience have output function background, the better commercial performance their social ventures show than others.

5. Conclusions

The core of my tested models can be recapitulated as follows. This study applies human capital theory to link social entrepreneurs' characteristics and the performance of social ventures. These are associated with the venture's goal of social mission and of profit generation, respectively.

Table 1. Descriptive statistics and correlations

	Variables	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1	Firm age	5.38	4.76													
2	Time of certification	1.81	1.06	.354**												
3	Firm size	25.06	19.94	.012	.164											
4	Manufacturing	.32	1.00	-.117	-.126	-.087										
5	Service	.53	.50	.034	-.043	-.145	-.339**									
6	Well-fare	.23	.42	.046	.222 ⁺	.326**	-.174**	-.583**								
7	Age	37.45	.34	.122	.016	-.026	.108	.019	.113							
8	Education level	.66	.23	.181	-.023	.018	.192	-.018	-.190	.101						
9	Prestigious school	.74	.21	-.128	-.118	-.110	.126	.018	-.101	.005	-.123					
10	Functional background	.43	.19	-.113	.017	.118	-.018	-.210	.119	-.200	.101	.015				
11	Prior social experience	.65	.21	-.181	-.110	.121	.051	-.110	.011	-.113	.011	.011	.102			
12	Prior commercial experience	.42	1.12	.022	-.063	.121	.011	.121	-.026	-.122**	.021**	.023**	-.119 ⁺	.122		
13	Social performance	2.12	1.42	-.226*	-.190	.196	-.021	-.080	.024	-.019**	.026*	.001**	.017	.122**	.017	.
14	Commercial performance	2.01	1.25	-.200*	-.109	.112	-.012	-.023	.011	-.010**	.081*	.018**	.009	.110	.008**	.021*

*p < .05, ** p < .01

Table 2. The moderating effect of prior social experience

	Model 1	Model 2	Model 3
Control			
Firm age	-.102 *	-.105*	-.108*
Time of certification	-.043	-.034	-.029
Firm size	.038	.045	.102
Manufacturing	.110	.117	.124
Service	.117	.122	.121
Well-fare(reference)			
Independent variable			
Age	-.231**	-.244**	-.171**
Educational level	.101*	.105*	.082*
Prestigious school	.011**	.022**	.019**
Functional background	.031	.011	.011
Moderator			
Prior Social Expeience (PSE)		.023**	.016**
Interaction			
Age* PSE			-.101
Educational level* PSE			.002
Prestigious school* PSE			.021**
Functional background* PSE			.015
Adj. R ²	.198	.202	.298
F	6.534**	7.920 ⁺	9.012**

*p < .05, ** p < .01

The first research question is what characteristics of social entrepreneurs are helpful in obtaining better social and commercial performance. In the results, first, that the younger, the highly educated, or from more prestigious universities social entrepreneurs are, the better social performance their social ventures show. Second, the younger, the highly educated, or from more prestigious universities social entrepreneurs are, the better commercial performance their social ventures show.

The second research question is that considering the dualistic nature of social ventures, we investigate two specific human capital of entrepreneurs, such as prior social experience and prior commercial experience. In the results, first, when social entrepreneurs with prior social experience graduate from more prestigious, the better social performance their social ventures show than others. Second, when social entrepreneurs with prior social experience have output function background, the better commercial performance their social ventures show than others.

This study makes several contributions. First, this is the first study to apply and test the specific human capital systematically and empirically in the context of social ventures. Until now, the human capital theory has primarily been used as a means to examine the inputs, processes, and outputs of individual social ventures, but no studies have used the model as a complete framework. This study is based on the conceptual model of Scarlata et al. (2016) in which the specific human capital is systematically applied to commercial ventures to elucidate the relationships among entrepreneur's characteristics, resource conditions, and competitive advantage. Given the differences in focus between for-profit enterprises and social ventures, we expected these relationships to differ.

Table 3. The moderating effect of prior commercial experience

	Model 1	Model 2	Model 3
Control			
Firm age	-.002*	-.005*	-.008*
Time of certification	-.053	-.044	-.031
Firm size	.031	.025	.012
Manufacturing	.112	.110	.104
Service	.107	.102	.128
Well-fare(reference)			
Independent variable			
Age	-.081**	-.061**	-.051**
Educational level	.091*	.085*	.062*
Prestigious school	.060**	.071**	.059**
Functional background	.043	.022	.016
Moderator			
Prior Commercial Experience(PCE)		.031**	.023**
Interaction			
Age* PCE			-.123
Educational level* PCE			.013
Prestigious school* PCE			.015
Functional background* PCE			.062**
Adj. R ²	.191	.207	.288
F	6.522**	7.966*	8.932**

*p < .05, ** p < .01

Second, the results suggest that social entrepreneur' specific human capital are important to social venture's performance. Most existing management research on entrepreneur' human capital explores the role of strategic alliances in international business, including large corporations whose primary goal is to improve the economic bottom line. Previous research on ventures conducted for the purpose of creating social value generally focused on nonprofit ventures and their partnerships with a single corporate or government entity or tri-sector partnerships through case studies or anecdotes. Entrepreneurship research in this area has examined networks as a whole and how they impact entrepreneurial ventures. In this study, the effects of social entrepreneurs' specific human capital on the success of social ventures were examined. Thus, this study provides a better understanding of the social entrepreneur's specific human capital framework, which includes numerous characteristics of social entrepreneurs and numerous resources, in which social ventures actually operate.

Finally, this study demonstrates the applicability of the specific human capital to the context of nascent social ventures. This suggests that the human capital theory should be utilized in this context in future studies. The findings of this study also have important implications for policy-makers or practitioners. Among numerous supports in Korea, managerial supports are helpful for incubating the social value of nascent social ventures. And, in Korea, which drives leading policies for social ventures, they need to be systematically and strategically designed in new manners because existing manners of financial supports such as subsidies and donations are not effective and furthermore harmful for social performance of social ventures.

However, although this research provides these contributions, it has some limitations. First, the sample size is small. For the empirical analysis of this research, we contacted all of 565

social enterprises was available to the public on the web site of the Korean Social Enterprise Promotion Agency (KSEPA, <http://www.socialenterprise.or.kr>) which was established by the Korean Ministry of Employment and Labor to provide efficient monitoring of certified social enterprise. However, although we tried my best to get sample data, we didn't get enough ones. However, until recently, social venture research in the field of management has focused primarily on defining the concept of social entrepreneurship and assessing social ventures through anecdotes and case studies. This study contributes to the growing quantitative empirical research in this field and demonstrates that a large-scale analysis of social ventures is feasible. Second, this research doesn't cover economic performance. The economic performance of social ventures is as important as social performance. However, Korean government has driven the relevant policies to create job opportunities and the certification system. The Korean government certifies social ventures regardless of their business feasibilities as long as they satisfy certain conditions. Given this situation, because many social ventures have been certified despite their lack of abilities, very few social ventures create their economic performance. Therefore, the statistical test is impossible. Finally, this study measures the variable of social performance by managers' perception. The reasons why this study uses managers' perceptions of social performance are the following. First, the sample of this study doesn't have objective data that show their social performance. Second, although alternative measures are available, such as the social return on investment and balanced scorecard, these measures focus on financial donation or strategic consulting to social ventures rather than social performance resulting from engagement in social ventures. Social performance depends on their goal, so it seems to be a subjective one rather than objective. Finally, Dess and Robinson (1984) confirmed a strong correlation between subjective and objective performance. However, because the measurement of perception is controversial, future researches need to develop the variables to get objective data.

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