Compassion, Pro-social Motivation and Social Entrepreneurship: An Empirical Investigation

Chul Woo Moon,
School of Business,
Sungkyunkwan University, Korea.
cwmoon@skku.edu

You Sang Koh,
Industry and Strategy Department,
Samsung Economic Research Institute, Korea.

Abstract

This research aims to illuminate some of the affective and cognitive origins of social entrepreneurship by extending and testing a recent theoretical framework of social entrepreneurship. Our structural equation modeling analysis of 179 nascent social entrepreneurs in South Korea indicates not only a direct positive linkage between compassion and prosocial motivation, but also the indirect effects of prosocial motivation on social enterprise creation behavior through perceived meaningfulness and perceived entrepreneurial ability. This quantitative study is among the first to provide empirical evidence about the psychological foundations of social entrepreneurs. Our findings also facilitate an understanding of how the motives of social entrepreneurs differ from the motives of conventional entrepreneurs.

Keywords: Social entrepreneurship, social enterprise creation behavior, prosocial motivation, compassion, cognitive process.
1. Introduction

Theories and empirical evidence in the existing literature on social entrepreneurship are largely insufficient to delineate the great qualities and motives of potential social entrepreneurs. According to a recent series of qualitative review work (Dacin, Dacin, & Tracey, 2011; Hoogendoorn et al., 2010; Mair & Martı´, 2006; Short et al., 2009; Weerawardena & Mort, 2006), previous scholarly efforts on the topic of social entrepreneurship have predominantly been dedicated to conceptual studies or empirical research with qualitative methods. These case studies have provided initial findings on certain individual characteristics of social entrepreneurs, including skills (e.g., Thompson et al., 2000; Turner & Martin, 2005) and abilities (e.g., Alvord, Brown, & Letts, 2004). However, studies that involve qualitative methods are often limited in their suggestion of generalizable results (Short et al., 2009). Furthermore, our empirical knowledge on the individual characteristics of social entrepreneurs is still lacking (Hoogendoorn et al., 2010) in the sense that many different sets of individual characteristics are likely to account for the diverse activities of social entrepreneurs (Dacin, Dacin, & Matear, 2010). Hence, researchers (Dacin et al., 2011; Short et al., 2009) strongly advocate for more research to expand upon existing organizational theories and, in particular, to conduct large-sample empirical tests in order to sustain social entrepreneurship as a meaningful academic inquiry.

The primary purpose of this research is to enrich existing empirical knowledge on the psychological foundations of social entrepreneurs by extending the previous studies. This research builds on the theoretical argument that affect, motivation, and cognition are three key drivers for both conventional (Baron, 1998, 2008; Hayton & Cholakova, 2012; Shane, Locke, & Collins, 2003) and social entrepreneurship behaviors (Dacin et al., 2011; Dees, 2007; Short et al., 2009). In line with this, we expand upon a recent perspective that emphasizes the roles of compassion and prosocial motivation in increasing the likelihood of founding new social enterprises (Miller, Grimes, McMullen, & Vogus, 2012). Guided by concepts in the work of Miller and colleagues, we suggest and empirically examine a theoretical model of social enterprise creation behavior. Specifically, our model regards compassion as an affective explanatory variable that invokes prosocial motivation, which is responsible for three cognitive processes (i.e., perceived meaningfulness, appreciation of non-monetary compensation, and perceived entrepreneurial ability) leading to social enterprise creation behaviors. All of this is elaborated upon in the next section.

2. Theory and Hypotheses

Building on the psychological approach in the social entrepreneurship (e.g., Miller et al., 2012), we delve into the association between prosocial motivation and social entrepreneurship
behavior in individuals by looking at its mechanisms in three ways. In particular, we argue that individuals are more likely to act on social entrepreneurship when they find meaningfulness in their social entrepreneurship behavior (i.e., perceived meaningfulness), when they value non-monetary compensation relative to monetary one (i.e., appreciation of non-monetary compensation), and when they feel competent in their ability to establish new social enterprises (i.e., perceived entrepreneurial ability). We elaborate on each of these mechanisms following our discussion on compassion and prosocial motivation as preceding factors.

2.1 Compassion and Prosocial Motivation

Compassion can be construed as a notable dispositional affect, which is likely to characterize nascent social entrepreneurs. According to the Oxford Dictionaries online, compassion is defined as “sympathetic pity and concern for the sufferings or misfortunes of others.” Because compassion involves “being moved by another’s suffering and wanting to help” (Lazarus, 1991: p. 289), it “arises in witnessing another’s suffering” (Goetz et al., 2010: p. 351). A group of researchers (e.g., Eisenberg et al., 2002; Shiota, Keltner, & John, 2006) have regarded compassion as an enduring affective trait and thus examined the trait-like tendency to experience compassion (Goetz et al., 2010). By virtue of being a dispositional affect, compassion is broader (Nussbaum, 1996) and more enduring than empathy (Batson & Oleson, 1991). Also, empathy refers to sharing the emotional state of others, whereas compassion refers to an altruistic emotion in its own right (Lazarus, 1991). Inspired by the argument that the decision to create a social enterprise hinges on the other-oriented emotion (Dees, 2007), Miller and colleagues (2012) paid a special attention to compassion in terms of its role in “compelling individuals to alleviate others’ suffering” (Batson & Shaw, 1991; Omoto, Malsch, & Barraza, 2009)” (p. 617) and suggested that compassion-driven cognitive ability may directly and indirectly motivate certain individuals to exert greater efforts in creating social enterprises.

Prosocial motivation describes the psychological state that drives nascent social entrepreneurs to persistently commit to their social mission. As Grant (2008a) noted, motivation is a broad term that covers the direction, persistence, and intensity of individual behaviors (e.g., Latham & Pinder, 2005). Earlier, Batson (1987) defined prosocial motivation as the individual desire to exert efforts to benefit others. The concept of prosocial motivation focuses on a specific cause of these humanitarian efforts (Grant, 2008), which is a profound concern for helping others (Grant, 2007). In this sense, social entrepreneurship may be conceptualized as a way to one’s prosocial motivation (Miller et al., 2012).

In this research, we examine the relationship between compassion as a trait affect and prosocial motivation as a state motivation by extending the previous research on social
entrepreneurship. While previous social entrepreneurship scholars have tended to use compassion and prosocial motivation as interchangeable terms, without clearly differentiating the concepts (Miller et al., 2012), we instead argue that the terms are conceptually distinct from one another, and in fact, that one may result in the other. Indeed, compassion and prosocial motivation have evolved separately in existing psychology and organizational behavior literature. As noted above, both dictionary and scholarly definitions of compassion are mainly focused on a feeling of concern for the well-being of others. In contrast, prosocial motivation encompasses a persistency of active effort to benefit others. Conceptually, effort is closer to behavioral outcomes than affect, and a causal relationship between compassion and prosocial motivation has been postulated. The general tendency to value concern for the well-being of others is known to be an individual trait that encourages prosocial motivation (Penner, Dovidio, Piliavin, & Schroeder, 2005). In other words, compassion motivates individuals to have “a subsequent desire to help” (Goetz et al., 2010: p. 351) when they observe the suffering of others (Tsui, 2013). Furthermore, compassion can promote a prosocial motivation to alleviate the suffering of others, even at the expense of self-interests (Batson & Shaw, 1991).

Hypothesis 1: Compassion positively influences prosocial motivation.

2.2 Three Cognitive Processes between Prosocial Motivation and Social Enterprise Creation Behavior

   Relying on the theoretical framework of Miller and colleagues (2012), we focus on three cognitive processes related to the extent to which individuals (1) believe that their entrepreneurship behaviors may help address social problems by alleviating the suffering of others, (2) appreciate the costs and benefits associated with social entrepreneurship in a prosocial way, and (3) feel competent in establishing a social venture. In the context of our empirical investigation, these processes are respectively termed perceived meaningfulness, appreciation of non-monetary compensation, and perceived entrepreneurial ability. We next delineate cognitive processes, which show how these three factors enable prosocially motivated individuals to engage in social entrepreneurship activities.

   a. Perceived Meaningfulness: Broadly, meaningfulness refers to an individual’s perception that his or her behavior is useful and valuable (Kahn, 1990). Individuals recognize the meaningfulness of their work by judging whether it is valuable in terms of their standards (Thomas & Velthouse, 1990). Perceived meaningfulness arises when individuals find that the work requirements fit their beliefs and values (Hackman & Oldham, 1980) and that the work is significant (Pratt & Ashforth, 2003). Perceived meaningfulness is a prominent cognitive outcome that links motivation to attitudinal and behavioral upshots (Hackman & Oldham, 1980).
Hypothesis 2: Prosocial motivation positively influences social enterprise creation behavior through perceived meaningfulness.

b. Appreciation of Non-Monetary Compensation: Although there has been some debate on whether the essence of social entrepreneurship is social value proposition or profitability (Short et al., 2009), it may be more plausible to consider that appreciation of non-monetary compensation is a cognitive route that channels prosocial motivation toward creating a social enterprise in terms of the unique nature of prosocial and altruistic individuals. According to previous research on the non-profit sector (e.g., Preston, 1989; Weisbrod, 1983), altruistic individuals tend to accept lower levels of earned income. Prosocially motivated individuals may envision other possible benefits from their prosocial behavior (Grant & Berry, 2011). For example, engendering a public image as an altruistic person is a crucial moral reward for prosocial behavior (Winterich, Aquino, Mittal, & Swartz, 2013), which is conceptually similar to the prosocial identity perspective of Miller and colleagues (2012). Moreover, individuals possessing strong levels of prosocial motivation may feel compensated as long as they enhance societal value by addressing social problems, even if the work is not necessarily accompanied by financial rewards. Combined with the argument of Miller and colleagues for internalizing societal value, we thus anticipate that non-financial benefits may be appreciated by nascent social entrepreneurs, compelling them in turn to be involved in social enterprise creation behavior.

Hypothesis 3: Prosocial motivation positively influences social enterprise creation behavior through appreciation of non-monetary compensation.

c. Perceived Entrepreneurial Ability. We presume that prosocially motivated individuals who perceive that they would be successful social entrepreneurs will actually be involved in the process of creating social enterprises. Strong prosocial motivation enhances an individual’s confidence in proactively addressing the suffering of others (Batson, Sager, Garst, Kang, Rubchinsky, & Dawson, 1997). This occurs because a prosocial mind enables individuals to be receptive to diverse information and situations, and promotes a willingness to broaden their perspective by stimulating them to engage in cognitive processes in an integrative way (Miller et al., 2012). In fact, according to the broaden-and-build theory (Fredrickson, 1998, 2001), a positive mindset helps individuals to be flexible, creative, open to various information, and effective in dealing with cognitive demands. Thus, we posit that by broadening cognitive and behavioral repertoires, prosocial motivation is likely to assist individuals in developing and maintaining optimism and confidence about being able to successfully establish and manage a social enterprise. Accordingly, we hypothesize that prosocially motivated individuals with greater levels of confidence in their entrepreneurial ability to create social value will exert greater efforts to establish social enterprises in market-based organizations.
Hypothesis 4: Prosocial motivation positively influences social enterprise creation behavior through perceived entrepreneurial ability.

3. Methods

3.1 Sample and Procedure

We analyzed data collected from individuals who were the attendees in 28 social entrepreneurship training programs provided by The Korean Social Enterprise Promotion Agency (KSEPA) during a period of time from 2011 to 2014. The objective of these programs is to help individuals to develop and create viable business models for social enterprises and to realize their pursuit of social values. These individuals are regarded as nascent social entrepreneurs, because attending a training program is a gestation activity for creating a social enterprise, which is a criterion in defining a nascent entrepreneur (Davidsson & Honig, 2003). Our online survey was administered during the summer 2014. The link to the online survey was electronically sent to 28 program managers, and subsequently forwarded to a total of 910 trainees. 187 responses were collected, resulting in a response rate of 21%. After excluding incomplete surveys, our final sample was comprised of 179 respondents. Of the 179 respondents, 44% are female and 60% affiliate themselves with a religion. 48% of the respondents have start-up experience. The average age is 37.7 years (s.d. = 11.5).

3.2 Measures

Respondents were first asked to state any specific social issues or business ideas that led them to a social entrepreneurship training program. This initial description was intended to remind respondents of their previous motives and behaviors in seeking to create a social enterprise. They were then instructed to respond to our survey items based on this description.

The original English items were translated to Korean, and data was collected using the Korean survey. One of the authors, who is fluent in Korean and English, blindly translated the original English survey into Korean. Three Ph.D. students from a top business school in South Korea reviewed the Korean survey and finalized it for readability.

Unless otherwise mentioned, self-questionnaires were reported on a 5-point Likert-type scale (with scores ranging from 1 = strongly disagree to 5 = strongly agree).

a. Compassion: We measured compassion for beneficiaries (alpha = .87) with five items, including: (1) “It’s important to take care of the vulnerable people who may be the beneficiaries or customers of my social enterprise idea,” (2) “When I see someone, who may be the potential beneficiaries or customers of my social enterprise idea, hurt or in need, I feel a powerful urge to take care of them,” (3) “Taking care of others, who may be the potential beneficiaries or customers of my social enterprise idea, gives me a warm feeling inside,” (4) “I often notice people in need of help who may be the potential beneficiaries or customers of my social enterprise idea,” and (5) “I feel strong compassion for the potential beneficiaries or
customers of my social enterprise idea.” We adapted the five-item measure of compassion from the dispositional positive emotion scales suggested by Shiota and colleagues (2006), and then, the original items were modified to capture the respondents’ compassion for potential social enterprise customers (for this and other measures, modification is denoted in italics).

b. **Prosocial motivation:** The four-item measure for prosocial motivation (Grant, 2008), which was adapted from the self-regulation scales of Ryan and Connell (1989), was modified and used to measure the prosocial motivation of potential social entrepreneurs (alpha = .91). These items are: (1) “I am motivated to realize my social enterprise idea because I care about benefiting others through my work,” (2) “I am motivated to realize my social enterprise idea because I want to help others through my work,” (3) “I am motivated to realize my social enterprise idea because I want to have a positive impact on others,” and (4) “I am motivated to realize my social enterprise idea because it is important to me to do good for others through my work.”

c. **Perceived meaningfulness:** Perceived meaningfulness (alpha = .88) was measured with three items, including: (1) “My job activities to realize my social enterprise idea are personally meaningful to me,” (2) “The work I do to realize my social enterprise idea is meaningful to me,” and (3) “The work I do to realize my social enterprise idea is very important to me.” The original items were adapted from Spreitzer (1995) and modified to measure perceived meaningfulness of nascent social entrepreneurs.

d. **Appreciation of non-monetary compensation:** Two items (alpha = .67) were developed to measure appreciation of non-monetary compensation among respondents. As discussed above, non-monetary compensation can be measured by two proxies, including internalization of the societal value created to one’s own utility and acceptance of lower levels of monetary income. Thus, our items include: (1) “I feel compensated if I create societal value or have an impact through realizing my social enterprise idea” and (2) “I willingly accept low personal income as long as I create societal value or have an impact through realizing my social enterprise idea.”

e. **Perceived entrepreneurial ability:** Perceived entrepreneurial ability (alpha = .90) was measured using the original six items from the perceived behavioral control scales of Liñán and Chen (2009). These items are: (1) “To start a firm and keep it working would be easy for me,” (2) “I am prepared to start a viable firm,” (3) “I can control the creation process of a new firm,” (4) “I know the necessary practical details to start a firm,” (5) “I know how to develop an entrepreneurial project,” and (6) “If I tried to start a firm, I would have a high probability of succeeding.” Factors from these items indicate the extent to which an individual is confident in creating a new venture.

f. **Social enterprise creation behavior:** We measured actual progress in creating a social enterprise with seven items for representative gestation activities adapted from the Wave A
questionnaire of the Panel Study of Entrepreneurial Dynamics (PSED) 2 (see http://www.psed.isr.umich.edu/psed/documentation). These items include: (1) “Have you prepared a business plan?,” (2) “Have you received the first outside funding for the new business?,” (3) “Have you prepared any physical space for the new business?,” (4) “Have you registered the new business with the appropriate government agency?,” (5) “Has the product or service that the new business will offer been developed?,” (6) “Have marketing or promotional efforts been started for the product or service?,” and (7) “Has the first income been received from the sale of goods or services for the new business?” Respondents rated these items with two dummy variables (0 = no; 1 = yes). We calculated the index of social enterprise creation behavior by aggregating scores of these items, ranging from zero (no actions at all) to seven points (complete founding of a social enterprise). Rather than using a dichotomous value (yes versus no), this calculated index allows us to measure the extent to which each nascent social entrepreneur had actually engaged in creating a social enterprise to realize the social values of which they were in pursuit.

**g. Control variables:** In order to better assess our hypothesized model and avoid alternative interpretations of our findings, we controlled for gender (0 = male; 1 = female), affiliation with religion (0 = no; 1 = yes), start-up experience (0 = no; 1 = yes), education for social enterprise (0 = no; 1 = yes), and perceived influence of public support (“To what extent do you think public support has influenced your consideration of founding a social enterprise?,” with scores ranging from 1 = not influential at all to 5 = very influential). Some studies (Crant, 1996; Liñán & Chen, 2009) have found that nascent entrepreneurs are male-dominant. Other demographic variables were not considered in our analysis, because previous studies have reported inconsistent evidence on the linkages between most demographic factors and the intentions and actions of entrepreneurship (Shook, Priem, & McGee, 2003). The self-affiliation of individuals with a religion has been known to encourage prosocial and altruistic behaviors (Saroglou, Pichon, Trompette, Verschueren, & Dernelle, 2005; Sprecher & Fehr, 2005), as well as to emphasize empathy as a core virtue, which is a significant antecedent of prosocial motivation (Lam, 2002). Past studies (Davidsson & Honig, 2003; Krueger, 1993; Mair & Noboa, 2006) have indicated that start-up experience is significantly related to entrepreneurship. The relationship between education and entrepreneurship has not been consistent, but business-related education has been shown to have a robust relationship with enterprise creation behaviors (Davidsson & Honig, 2003). Given that most of the respondents (85%) have college degrees, we thus decided to control for social enterprise-specific education rather than the general education level of respondents. Social support is the factor that enables the process of social entrepreneurship within a larger context (Mair & Noboa, 2006).
3.3 Common Method Variance Check

There might be potential common method biases in our data, because the data were collected from survey items imbued with social desirability and responded to by a single source at a single time (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). To address this potential issue, we examined any misleading results emanating from common method variances in two ways. First, we conducted confirmatory factor analysis (CFA) with maximum-likelihood estimation procedures in order to compare the one-factor model and our hypothesized five-factor model (i.e., compassion, prosocial motivation, perceived meaningfulness, appreciation of non-monetary compensation, and perceived entrepreneurial ability). According to Kline (2005), an acceptable model fit is inferred with values of $\chi^2/df$ ratio lower than 3, comparative fit index (CFI) and incremental fit index (IFI) greater than .90, and root-mean-square error of approximation (RMSEA) less than or equal to .08. Table 1 shows the results of model composition between our hypothesized model and the alternatives. The results indicate that our hypothesized five-factor model produced an acceptable and significantly better fit ($\chi^2[df = 80, n = 179] = 170.4, \chi^2/df = 2.13, CFI = .95, IFI = .95; \text{RMSEA} = .08$) to the data, whereas the fit indices of the alternative models are not acceptable. For instance, the one-factor model did not yield an acceptable fit ($\chi^2[df = 90, n = 179] = 771.8, \chi^2/df = 8.58, CFI = .61, IFI = .61, \text{RMSEA} = .21$).

On balance, the results of CFA and a marker variable test show that common method biases are not problematic in our data.

3.4 Analysis

Our theoretical model presupposes that compassion invokes prosocial motivation, which in turn leads to social enterprise creation behavior through three mediation paths (i.e., perceived meaningfulness, appreciation of non-monetary compensation, and perceived entrepreneurial ability). Therefore, a bootstrap analysis based on the Monte Carlo method following the procedures recommended by Preacher, Zyphur, and Zhang (2010) was performed to provide the most robust evidence on the significance and confidence interval (CI) values of the indirect effects.

4. Results

Means, standard deviations, and correlations of variables are summarized in Table 2. The
patterns of correlations are mostly consistent with prior theories and empirical evidence. Social enterprise creation behavior turned out to have moderate positive correlations with all the antecedents considered in this study. Compassion is strongly correlated with prosocial motivation. As expected, start-up experience is positively correlated with religious affiliation and social enterprise creation behavior, but it is negatively correlated with gender (i.e., female).

Table 3 presents a summary of validity and reliability tests to determine the measurement properties of our questionnaire. The results show that all factor loadings were statistically significant at $p < .001$, ranging from .76 to .89 for compassion, .76 to .87 for prosocial motivation, .80 to .89 for perceived meaningfulness, .62 to .83 for appreciation of non-monetary compensation, and .79 to .96 for perceived entrepreneurial ability. We further checked the construct validity of the proposed model by calculating average variance extracted (AVE) and composite reliability (CR) values. All AVEs were over .5, indicating that all the latent constructs obtained convergent validity (Hulland, 1999). All CRs were over .7 (Nunnally, 1978), which confirms that the latent constructs showed convergent validity representing the internal consistency of scales. The discriminant validity was assessed by comparing the AVEs and squared interconstruct correlation estimates (SICs). The results showed that all AVEs are greater than the corresponding SICs, and thus all the latent constructs fulfilled discriminant validity (Fornell & Larcker, 1981).

We found a strong positive linkage between both variables ($\beta = .77, p < .001$), thus supporting Hypothesis 1.

Hypotheses 2, 3, and 4 proposed indirect effects of prosocial motivation on social enterprise creation behavior through three cognitive processes, including perceived meaningfulness, appreciation of non-monetary compensation, and perceived entrepreneurial ability, respectively. Prosocial motivation was found to positively relate to all three cognitive processes, including perceived meaningfulness ($\beta = .62, p < .001$), appreciation of non-monetary compensation ($\beta = .63, p < .001$), and perceived entrepreneurial ability ($\beta = .34, p < .001$). However, it was demonstrated that perceived meaningfulness ($\beta = .22, p < .01$) and perceived entrepreneurial ability ($\beta = .23, p < .01$) appeared to be positively associated with social enterprise creation behavior, whereas appreciation of non-monetary compensation is not significantly related to it ($\beta = .05, ns$). Consequently, Hypotheses 2 and 4 were supported, but Hypothesis 3 was rejected.

Finally, in order to ascertain the significance of the indirect effects of the fully mediated relationships, we performed a parametric bootstrap procedure with 20,000 Monte Carlo replications for the mediation role of the three cognitive processes with controls. The results of the bootstrap tests appear in Table 4, showing the significant mediation effects of perceived meaningfulness (Hypothesis 2; indirect effect = .16, $p < .01$, 95% CI = [.05, .31]) and
entrepreneurial ability (Hypothesis 4; indirect effect = .07, $p < .01$, 95% CI = [0.02, 0.15]) between prosocial motivation and social enterprise creation behavior. Although not hypothesized, our additional bootstrap analysis revealed the sequential mediations of prosocial motivation, perceived meaningfulness (indirect effect = .17, $p < .01$, 95% CI = [0.05, 0.31]), and perceived entrepreneurial ability (indirect effect = .07, $p < .01$, 95% CI = [0.02, 0.16]) between compassion and social enterprise creation behavior. The bootstrapping results thus provide supporting evidence for Hypotheses 2 and 4.

Insert Table 4 about here

5. Conclusion

This research explores the antecedents of social entrepreneurship. Building on a psychological framework involving affect, motivation, and cognition as three key drivers for social enterprise creation behaviors, we suggest that compassion inspires prosocially motivated individuals to create social enterprises through three cognitive processes of perceived meaningfulness, appreciation of non-monetary compensation, and perceived entrepreneurial ability. As one of the first empirical studies to analyze a large sample of working adults, our work contributes to the social entrepreneurship literature by providing empirical knowledge on the psychological processes of social enterprise creation behavior.

References


Grant, A. M., & Campbell, E. M. 2007. Doing good, doing harm, being well and burning out: The interactions of perceived prosocial and antisocial impact in service work. Journal of


Sagawa, S., & Segal, E. 2000. Common interest, common good: Creating value through


Tsui, A. S. 2013. On compassion in scholarship: Why should we care? *Academy of


Table 1: Comparison of Hypothesized and Alternative Models

<table>
<thead>
<tr>
<th>Model</th>
<th>$\chi^2$</th>
<th>df</th>
<th>$\Delta \chi^2$</th>
<th>$\chi^2$/df</th>
<th>IFI</th>
<th>CFI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypothesized five-factor model</td>
<td>170.4</td>
<td>80</td>
<td>—</td>
<td>2.13</td>
<td>.95</td>
<td>.95</td>
<td>.08</td>
</tr>
<tr>
<td>An alternative four-factor model</td>
<td>330.5</td>
<td>84</td>
<td>160.1***</td>
<td>3.93</td>
<td>.86</td>
<td>.86</td>
<td>.13</td>
</tr>
<tr>
<td>An alternative four-factor model</td>
<td>275.3</td>
<td>84</td>
<td>104.9***</td>
<td>3.28</td>
<td>.89</td>
<td>.89</td>
<td>.11</td>
</tr>
<tr>
<td>An alternative three-factor model</td>
<td>573.2</td>
<td>87</td>
<td>402.8***</td>
<td>6.59</td>
<td>.72</td>
<td>.72</td>
<td>.18</td>
</tr>
<tr>
<td>The alternative one-factor model</td>
<td>771.8</td>
<td>90</td>
<td>601.4***</td>
<td>8.58</td>
<td>.61</td>
<td>.61</td>
<td>.21</td>
</tr>
</tbody>
</table>

*a* All chi-square statistics are significant at $p < .05$.

*b* Combining compassion and perceived meaningfulness

*c* Combining compassion and prosocial motivation

*d* Combining perceived meaningfulness, appreciation of non-monetary compensation, and perceived entrepreneurial ability

*e* Combining all variables

*** $p < .001$.  

www.globalbizresearch.org
### Table 2: Descriptive Statistics and Correlations

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>s.d.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Gender</td>
<td>.44</td>
<td>.50</td>
<td>—</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Religious affiliation</td>
<td>.60</td>
<td>.49</td>
<td>.07</td>
<td>—</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Start-up experience</td>
<td>.48</td>
<td>.50</td>
<td>-.17*</td>
<td>.16*</td>
<td>—</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Education for social enterprise</td>
<td>.85</td>
<td>.36</td>
<td>-.10</td>
<td>.01</td>
<td>.00</td>
<td>—</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Perceived influence of public support</td>
<td>3.65</td>
<td>1.19</td>
<td>.08</td>
<td>-.13</td>
<td>-.13</td>
<td>.01</td>
<td>—</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Compassion</td>
<td>4.21</td>
<td>.66</td>
<td>.00</td>
<td>.17*</td>
<td>.18*</td>
<td>-.01</td>
<td>.03</td>
<td>—</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Prosocial motivation</td>
<td>4.28</td>
<td>.64</td>
<td>-.04</td>
<td>.17*</td>
<td>.09</td>
<td>-.05</td>
<td>.06</td>
<td>.68**</td>
<td>—</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Perceived meaningfulness</td>
<td>4.52</td>
<td>.59</td>
<td>-.11</td>
<td>.02</td>
<td>.04</td>
<td>.09</td>
<td>.16*</td>
<td>.52**</td>
<td>.54**</td>
<td>—</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Appreciation of non-monetary compensation</td>
<td>3.70</td>
<td>.91</td>
<td>-.16*</td>
<td>.08</td>
<td>.12</td>
<td>-.01</td>
<td>.10</td>
<td>.41**</td>
<td>.49**</td>
<td>.29**</td>
<td>—</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Perceived entrepreneurial ability</td>
<td>3.37</td>
<td>.87</td>
<td>-.20**</td>
<td>.01</td>
<td>.13</td>
<td>-.03</td>
<td>.06</td>
<td>.29**</td>
<td>.26**</td>
<td>.18*</td>
<td>.47**</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>11. Social enterprise creation behavior</td>
<td>2.90</td>
<td>2.46</td>
<td>-.06</td>
<td>.09</td>
<td>.18*</td>
<td>.12</td>
<td>.14</td>
<td>.19*</td>
<td>.22**</td>
<td>.30**</td>
<td>.27**</td>
<td>.32*</td>
<td>—</td>
</tr>
</tbody>
</table>

* n = 179.

* p < .05. ** p < .01.
Table 3: A Summary of Convergent and Discriminant Validity Tests

<table>
<thead>
<tr>
<th>Scale</th>
<th>Factor loading</th>
<th>Average variance extracted</th>
<th>Composite reliability</th>
<th>Squared interconstruct correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>1. Compassion</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parcel 1</td>
<td>.76***</td>
<td></td>
<td>.88</td>
<td>—</td>
</tr>
<tr>
<td>Parcel 2</td>
<td>.85***</td>
<td>.70</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parcel 3</td>
<td>.89***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Item 1</td>
<td>.76***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Item 2</td>
<td>.87***</td>
<td>.70</td>
<td>.89</td>
<td>.57</td>
</tr>
<tr>
<td>Item 3</td>
<td>.83***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Item 4</td>
<td>.88***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Item 3</td>
<td>.85***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Prosocial motivation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Item 1</td>
<td>.89***</td>
<td>.71</td>
<td>.90</td>
<td>.35</td>
</tr>
<tr>
<td>Item 2</td>
<td>.80***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Item 3</td>
<td>.80***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Perceived meaningfulness</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Item 1</td>
<td>.83***</td>
<td>.54</td>
<td>.71</td>
<td>.27</td>
</tr>
<tr>
<td>Item 2</td>
<td>.62***</td>
<td>.54</td>
<td>.71</td>
<td>.27</td>
</tr>
<tr>
<td>Item 3</td>
<td>.79***</td>
<td></td>
<td></td>
<td>.12</td>
</tr>
<tr>
<td>4. Appreciation of non-monetary</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>compensation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Item 1</td>
<td>.83***</td>
<td>.54</td>
<td>.71</td>
<td>.27</td>
</tr>
<tr>
<td>Item 2</td>
<td>.62***</td>
<td>.54</td>
<td>.71</td>
<td>.27</td>
</tr>
<tr>
<td>Item 3</td>
<td>.79***</td>
<td></td>
<td></td>
<td>.12</td>
</tr>
<tr>
<td>5. Perceived entrepreneurial</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ability</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parcel 2</td>
<td>.96***</td>
<td>.72</td>
<td>.90</td>
<td>.12</td>
</tr>
<tr>
<td>Parcel 3</td>
<td>.79***</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* n = 179.

*** p < .001.
Table 4: Bootstrap Tests for Mediation

<table>
<thead>
<tr>
<th>Indirect paths</th>
<th>Indirect effect</th>
<th>Lower level 95% CI</th>
<th>Upper level 95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prosocial motivation → perceived meaningfulness → social enterprise creation behavior</td>
<td>.16**</td>
<td>.05</td>
<td>.31</td>
</tr>
<tr>
<td>Prosocial motivation → appreciation of non-monetary compensation → social enterprise creation behavior</td>
<td>.06</td>
<td>-.09</td>
<td>.24</td>
</tr>
<tr>
<td>Prosocial motivation → perceived entrepreneurial ability → social enterprise creation behavior</td>
<td>.07**</td>
<td>.02</td>
<td>.15</td>
</tr>
<tr>
<td>Compassion → prosocial motivation → perceived meaningfulness → social enterprise creation behavior</td>
<td>.17**</td>
<td>.05</td>
<td>.31</td>
</tr>
<tr>
<td>Compassion → prosocial motivation → appreciation of non-monetary compensation → social enterprise creation behavior</td>
<td>.06</td>
<td>-.09</td>
<td>.25</td>
</tr>
<tr>
<td>Compassion → prosocial motivation → perceived entrepreneurial ability → social enterprise creation behavior</td>
<td>.07**</td>
<td>.02</td>
<td>.16</td>
</tr>
</tbody>
</table>

*a = 179; bootstrap resamples = 20,000; bias-corrected percentile method; two-tailed significance.

**p < .01.
Figure 1: Final Results of Structural Equation Modeling Analysis

- **Compassion** → **Prosocial motivation**
  - $R^2 = 0.60$
  - $r = 0.77^{***}$

- **Prosocial motivation** → **Perceived meaningfulness**
  - $R^2 = 0.42$
  - $r = 0.63^{***}$

- **Perceived meaningfulness** → **Appreciation of non-monetary compensation**
  - $R^2 = 0.43$
  - $r = 0.62^{***}$

- **Appreciation of non-monetary compensation** → **Perceived entrepreneurial ability**
  - $R^2 = 0.16$
  - $r = 0.34^{***}$

- **Perceived entrepreneurial ability** → **Social enterprise creation behavior**
  - $R^2 = 0.21$
  - $r = 0.22^{**}$

- **Gender**, religious affiliation, education for social enterprise, and perceived influence of public support were controlled.
- **Gender** and perceived influence of public support were controlled.
- **Gender** and start-up experience were controlled.
- **Start-up experience**, education for social enterprise, and perceived influence of public support were controlled.

- $n = 179$. Standardized path coefficients are reported. For ease of presentation, effects of control variables are not reported.

- $p < .01$, $p < .001$.