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# UNDERSTANDING SOCIAL ENTREPRENEURIAL INTENTION THROUGH SOCIAL COGNITIVE CAREER THEORY: A PARTIAL LEAST SQUARES STRUCTURAL EQUATION MODELLING APPROACH

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***Abstract.*** *This research attempted to find empirical evidence that examines the drivers of social entrepreneurial intentions (SEI) through the lens of social cognitive career theory (SCCT). Since the SCCT model of SEI is still in the early stages and needs to be further developed, experts recommend the use of partial least squares structural equation modelling (PLS-SEM) to analyze data collected from 294 business students from a Philippine university. To account for observed heterogeneity, dif-*

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*ferences among senior high school and college business students were explored via multigroup analysis (PLS-MGA). Across all respondents, perceived support and internal outcome expectations have the strongest total effects on SEI, while self-efficacy and agreeableness have marginally significant direct effects and significant indirect effects on SEI. This study contributed to the field of social entrepreneurship by looking at alternate and developing explanations to the formation of SEI apart from conceptual models based on the theory of planned behavior.*

***Keywords:*** *Social entrepreneurial intentions; partial least squares structural equation modeling; social cognitive career theory*

## Introduction

Social entrepreneurship remains to be a field of interest in the Philippines, given the spreading notion that business practices can be applied in solving social problems (Dees, 2001; Habaradas & Aure, 2016). The Global Entrepreneurship Monitor (GEM), through its special report (Bosma, Schott, Terjesen, & Kew, 2015), revealed that that the average prevalence rate of social entrepreneurial activity across GEM participating economies is 3.2%, compared to the rate of startup commercial entrepreneurship, which is 7.6%. Social entrepreneurship, compared to traditional startups, still has room for growth. These activities are mostly linked with the youth with the age from 18 to 34 years old. These developments indicate that businesspeople have begun realizing the possibility of starting organizations and leading movements that simultaneously pursue commercial and social objectives. Specifically in the Philippines, the British Council reported that social entrepreneurs are emerging to tackle social challenges such as women empowerment, alleviation of poverty, and preservation of cultural elements (Darko & Quijano, 2015).

To make sense of this phenomenon, various research studies have examined the possible drivers of social entrepreneurial intentions (SEI). These studies are strongly anchored on prior traditional entrepreneurial intention research, which have tended to use the theory of planned behavior (TPB) (Bacq, Hartog, & Hoogendoorn, 2016; Cavazos-Arroyo, Puente-Diaz, & Agarwal, 2016; Hockerts, 2015, 2017; Mair & Noboa, 2006; Nga & Shamuganathan, 2010; Politis, Ketikidis, & Diamantidis, 2016). The theory of planned behavior is seen as a usable frame to explain the formation of entrepreneurial intention, since entrepreneurship is an activity that requires deliberate, reasoned, and mindful preparation based on one's attitudes, perceived abilities, and one's perception of subjective norms. However, one of the criticisms of the TPB is that subjective norms tend to be a weak predictor of intentions (Miles, 2012). Moreover, the TPB also assumes the behaviorist approach where the environment of a person causes intention and behavior, neglecting personal processes and cognitions such as personality and outcome expectations (Bandura, 1986; Miles, 2012). Since social entrepreneurship is seen as a very challenging activity, it is important to examine formation of SEI not only through the lens of having an environment conducive to behavior,

but more importantly, looking at a person's intentionality or the drivers of proactive dedication to bring about a future action.

As an alternative to the behaviorist approach and the theory of planned behavior, researchers have been exploring social cognitive career theory (SCCT) to understand entrepreneurial intention research (Doan, Jeff, & Ehrhardt, 2011; Lanero, Vázquez, & Aza, 2016; Lent, Lopez, Lopez, & Sheu, 2008; Tran & Korflesch, 2016). SCCT is derived from the field of vocational psychology that strives to explain career-related decision-making behavior, and is anchored on the general social cognitive theory (Bandura, 1986, 1989, 2001). Under this theory, the intention to start a social enterprise can be viewed as being relevant to one's career, which is affected by cognitive-individual factors such as self-efficacy, outcome expectations, and background factors such as personality and perceived support (Tran & Korflesch, 2016). SCCT asserts that individuals can take an active role in pursuing a career path rather than being mere products of their respective environments. Given the difficulties of social entrepreneurship, SCCT proves to be a plausible alternative explanation to one's intention to start a social enterprise.

In a developing and emerging economy like the Philippines, the tenets of SCCT seem useful. Prior case studies of Filipino social entrepreneurs show that their motivation comes from their experiences with the marginalized and the deliberate intention to help shape society for the better (Habaradas & Aure, 2016). Therefore, the formation of SEI is not merely a result of the external environment influencing the individual, but rather, it can be a result of an individual's desire to improve his external environment. Moreover, the Philippines is perceived as a collectivist society, with the indigenous concept of *bayanihan* (loosely translated as "solidarity") being cited as one of the reasons for pursuing a social entrepreneurial career (Habaradas & Aure, 2016). SEI formation can be born out of one's perception of support from others as well as the desire to contribute to the greater collective society. As such, based on theory and literature, it seems that SCCT is a useful frame to understand social entrepreneurial intention.

Surprisingly, a recent scan of the literature shows that there is little empirical research validating SCCT in studying SEI, compared to TPB. Most of the recent research focused on extending the theory of planned behavior (Hockerts, 2017; Mair & Noboa, 2006; Tran & Korflesch, 2016), while Tran and Korflesch (2016) only developed an initial conceptual model for SEI based on SCCT. Since SCCT has roots in career development, it is appropriate to find initial empirical evidence from young business students, who are associated with social entrepreneurial activity (Bosma et al., 2015). Given these research gaps, the main objective of this paper is to provide empirical evidence for the usefulness of social cognitive career theory in understanding the formation of social entrepreneurial intentions.

## Conceptual Model and Hypotheses

*Figure 1* visualizes the conceptual model of social entrepreneurial intentions, developed by Tran and Korflesch (2016). SCCT explains that an intention to pursue a specific career comes from a person's judgement of what they think they can feasibly do (self-efficacy) and the perceived likely effects of the intended action (outcome expectation) (Bandura, 1986, 1989). Moreover, the concept of outcome expectation can be further subdivided into internal and external aspects (Lanero et al., 2016). Internal outcome expectations refer to effects related to personal fulfillment, performance of challenging work, independence, and opportunities for learning. On the other hand, external outcome expectations refer to economic pay, work security, and social recognition.

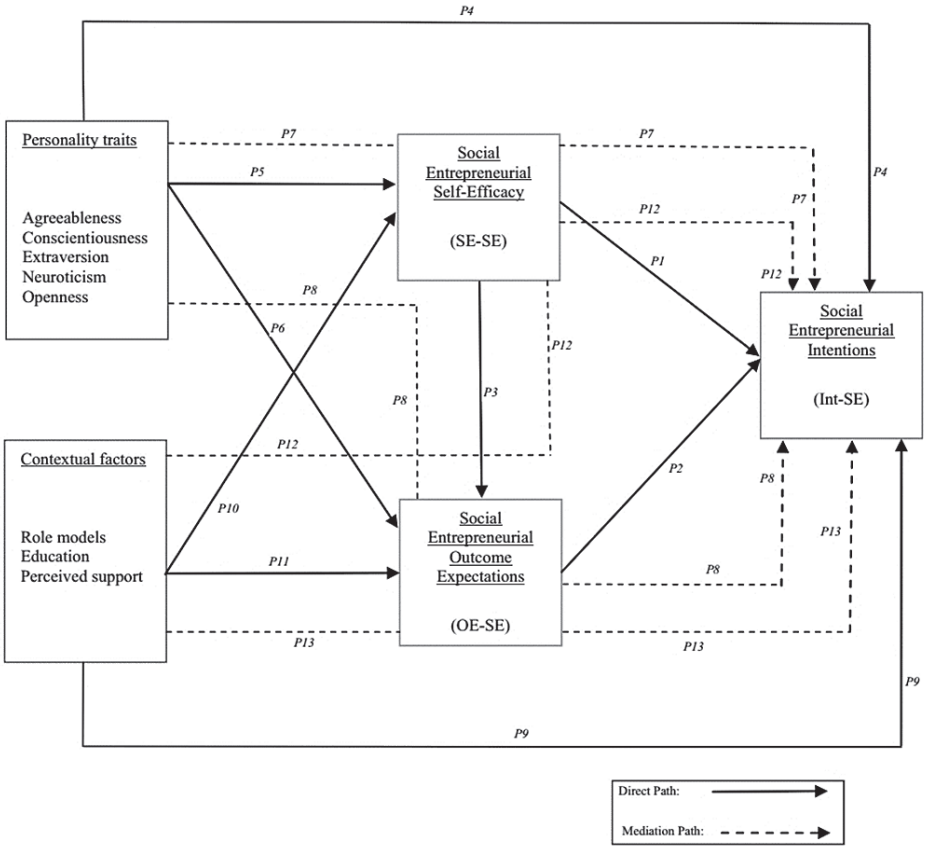


FIGURE 1. **Conceptual model of social entrepreneurial intention anchored on SCCT** (Tran & Korflesch, 2016)

If a person thinks that he possesses abilities to perform an action, and the likely outcome of the action is positive, the theory predicts that this leads to stronger intention. Moreover, the assertion of Tran & Korflesch (2016) anticipates that a higher perceived

self-efficacy can lead to enhanced outcome expectations. Therefore, the first set of hypotheses, which pertain to the main constructs of SCCT, are stated as:

H1-1: Social entrepreneurial self-efficacy will have a direct positive influence on social entrepreneurial intention.

H1-2: Social entrepreneurial internal outcome expectations will have a direct positive influence on social entrepreneurial intention.

H1-3: Social entrepreneurial external outcome expectations will have a direct positive influence on social entrepreneurial intention.

H1-4: Social entrepreneurial self-efficacy will have a direct positive influence on internal outcome expectations.

H1-5: Social entrepreneurial self-efficacy will have a direct positive influence on external outcome expectations.

On the other hand, extending SCCT includes the prospective anteceding and direct effects of personality (Nga & Shamuganathan, 2010) and contextual factors such as perceived social support (Hockerts, 2015, 2017) on social entrepreneurial intention. Tran and Korflesch (2016) justified that based on their review of previous works these anteceding factors have been increasingly linked to self-efficacy, outcome expectation, and even directly linked to intention formation. However, they acknowledge that these factors are more likely to have indirect effects on intention, that is, they anticipate that the classic SCCT constructs would mediate the relationship between the personal-contextual factors and social entrepreneurial intention. Only perceived social support is included in assessing the contextual factors to manage the parsimony of the model. For this paper, all personality traits are operationalized through short-scale items. The study of Nga and Shamuganathan (2010) found empirical evidence that openness, conscientiousness and agreeableness are positively linked with social entrepreneurship, while there was a lack of evidence for neuroticism and extraversion. As such, for personality traits, openness (O), conscientiousness (C), extraversion (E), and agreeableness (A) are inferred to have positive links with SEI. On the other hand, neuroticism (N), which is the opposite of emotional stability, is inferred to have a negative relationship with SEI. Therefore, the second set of hypotheses, which all pertain to constructs used to extend SCCT, are stated as follows:

H2-1: OCEA will have a positive direct influence, while N will have a negative direct influence on social entrepreneurial intention.

H2-2: OCEA will have a positive direct influence, while N will have a negative direct influence on social entrepreneurial self-efficacy.

H2-3: OCEA will have a positive direct influence, while N will have a negative direct influence on internal outcome expectations.

H2-4: OCEA will have a positive direct influence, while N will have a negative direct influence on external outcome expectations.

H2-5: Social entrepreneurial self-efficacy will mediate the relationship between personality and social entrepreneurial intention.

H2-6: Internal outcome expectations will mediate the relationship between personality and social entrepreneurial intention.

H2-7: External outcome expectations will mediate the relationship between personality and social entrepreneurial intention.

H2-8: Perceived social support will have a positive direct influence on social entrepreneurial intention.

H2-9: Perceived social support will have a positive direct influence on social entrepreneurial self-efficacy.

H2-10: Perceived social support will have a positive direct influence on internal outcome expectations.

H2-11: Perceived social support will have a positive direct influence on external outcome expectations.

H2-12: Social entrepreneurial self-efficacy will mediate the relationship between perceived social support and social entrepreneurial intention.

H2-13: Internal outcome expectations will mediate the relationship between perceived social support and social entrepreneurial intention.

H2-14: External outcome expectations will mediate the relationship between perceived social support and social entrepreneurial intention.

## Methodology

Given the complexity of the interrelationships between the exogenous and endogenous variables as well as the empirically unexplored nature of the conceptual model, it is vital to choose an appropriate statistical technique for operationalization. Partial least squares structural equation modeling (PLS-SEM) was selected to examine the development and extension SCCT as recommended by Hair, Hult, Ringle, and Sarstedt (2017) and Lowry and Gaskin (2014). Generally, SEM is recommended for modelling unobservable or latent variables—such as perceptions, intentions, and expectations. Specifically, PLS-SEM is advised when the data does not follow a normal distribution (common in the social sciences analyzing Likert-scale data) and when the model contains multiple mediating relationships (Hair, Hult, Ringle, & Sarstedt, 2014; Hair et al., 2017). This makes PLS-SEM apt for complex models, as well as research studies that are more exploratory in nature. PLS-SEM is also a nonparametric alternative to covariance-based structural equation modelling and ordinary least squares (OLS) regression—making PLS-SEM a robust "silver bullet" (Hair, Ringle, & Sarstedt, 2011) to violation of OLS assumptions and data requirements. Figure 2 visualizes the structural equation model that this research explored which is based on the conceptual model and the hypotheses developed for the study. For ease of presentation, the indicators of the

measurement model, which were all treated as reflective, are not shown in the figure, but are instead detailed in Table 2 of this paper.

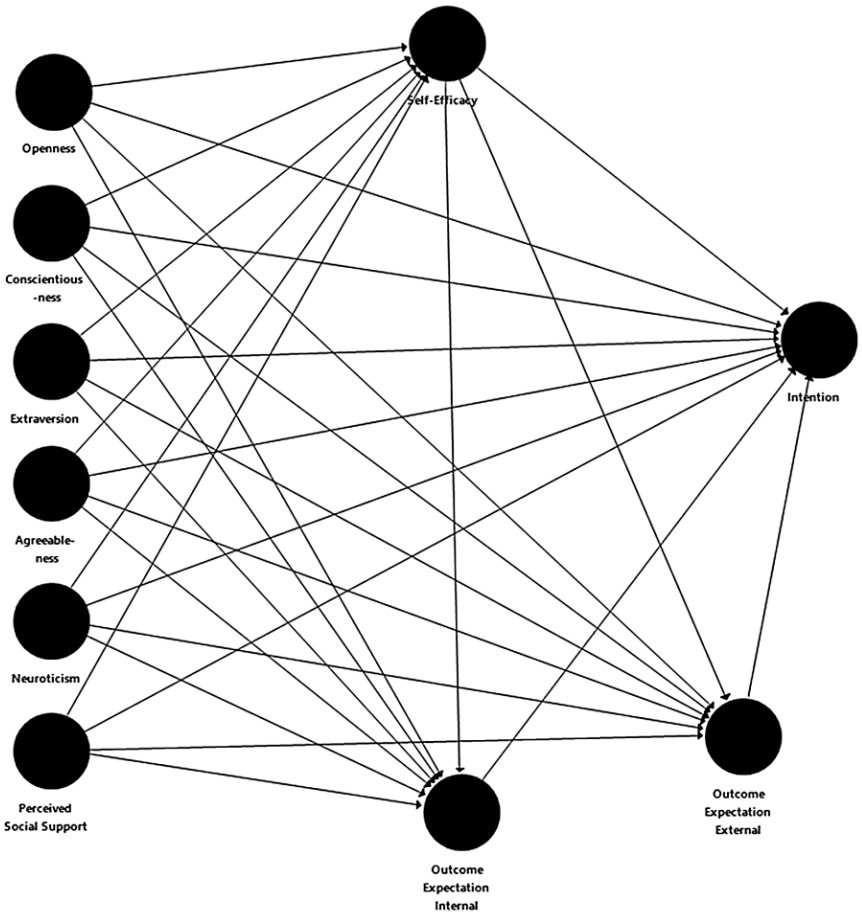


FIGURE 2. **Structural equation model of social entrepreneurial intentions anchored on SCCT**

To account for the contextual factor of education in the conceptual model, this study looked at a business school in a private Catholic university in the Philippines, which is a signatory of the Principles of Responsible Management Education (PRME). The university is also the only private university in the country in the Times Higher Education rankings, which assesses a higher educational institution's quality of teaching, research, and activities aligned with the Sustainable Development Goals (SDGs). Furthermore, the university has seen some of its students and graduates being involved in social entrepreneurial activities, and thus it is a possible source of social entrepreneurs. This research utilized quota and purposive sampling, targeting senior high school and

undergraduate business students of a private business school who are taking or have finished taking basic principles of management courses, where social entrepreneurship is introduced as part of the topics. Researchers recommended targeting these respondents because they are more conscious of thinking about their careers, and because of the notion that social entrepreneurial activities are associated with the youth (Bosma et al., 2015; Nga & Shamuganathan, 2010; Tiwari, Bhat, & Tikoria, 2017). Thus, for the purpose of this research project, education is implied as a control variable since the respondents come from a single university.

The research design primarily used the electronic survey method distributed via Google Forms. Since this study aims to provide initial empirical validation for SCCT, cross-sectional data derived from survey is adequate; however, future studies are recommended to look at longitudinal data to determine if SEI is a reliable predictor of social entrepreneurial behavior. Based on the SCCT conceptual model (Tran & Korflesch, 2016), the constructs were operationalized by utilizing established scales from reputable journals. Items on social entrepreneurial self-efficacy, perceived social support, and social entrepreneurial intention were based on the study of Hockerts (2015, 2017). Items on internal and external outcome expectations were based on the study of Lanero et al. (2016), with modifications by the researchers. Items on personality traits were based on the Mini-IPIP scales developed by Donnellan, Oswald, Baird, and Lucas (2006). There were 41 questions answered in the survey, which were all structured following the Likert scale format from strongly disagree (coded as 1) to strongly agree (coded as 5). Details about the scales are shown in Table 2.

The sample size was computed based on the recommendations of Hair et al. (2014, p. 21) pertaining to the relationships in a structural model. With the maximum number of arrows pointing at a construct (in this case, social entrepreneurial intentions) equaling to 9, setting the significance level to .05, a minimum statistical power of 80% (as recommended by Hair et al., 2014), and minimum $R^2$ of .25, the recommended minimum sample size is 84. This study was able to gather data from 294 respondents, which is well above the recommended minimum. Furthermore, there were 187 undergraduate students and 107 senior high school students that responded, which met the recommended minimum sample size. Thus, each group can be examined using multigroup analysis, which is a technique to account for observed heterogeneity in a sample. To conduct PLS-SEM, the SmartPLS 3.2.7 (Ringle et al., 2015) software was used. All latent variables were considered to have reflective indicators. Factor analyses, tests of construct validity and reliability, tests for discriminant validity, tests for multicollinearity, and model fit were all performed in SmartPLS 3.0, as guided by Hair et al. (2017) and Lowry and Gaskin (2014). The usual PLS algorithm method and bootstrapping ($J$ = 10,000) were employed as suggested by Ringle et al. (2015). As recommended by Kock (2014), this study utilized one-tailed p-value tests of significance since the a priori hypotheses inferred on the direction and signs of the variables relationships, which are backed by prior research. Although Likert scale items are strictly ordinal in nature,

PLS-SEM scholars mention that they can be treated as continuous as long as the Likert scales are properly coded with midpoints (Hair et al., 2017; Lowry & Gaskin, 2014), and nonparametric statistical tools are employed to analyze them.

## Findings

Table 1 details the respondent profile of this research. Through the use of Google Forms, the electronic survey form was sent to students that are part of Facebook groups and learning management system of collaborating faculty members. Google Sheets and Microsoft Excel were utilized to tabulate and code the answers of the students.

TABLE 1. **Respondent profiles**

| Description | Frequency | Percent |
|---|---|---|
| Education (Business students) | | |
| Senior High School | 107 | 36% |
| Undergraduate College | 187 | 64% |
| Total | **294** | **100%** |
| Gender | | |
| Male | 108 | 37% |
| Female | 186 | 63% |
| Total | **294** | **100%** |

The profiles of the respondents in this study show that disparity of distribution between groups of senior high school and undergraduate business students as well as between male and female participants is not great and is therefore comparable. Upon closer inspection, there were no invalid answers and missing items since all Likert scale items are required for answering using Google Form settings, and those who opted to discontinue answering the online survey were not recorded at all. Furthermore, all respondents provided full consent in answering the survey.

### *1. Measurement model*

Before conducting path analysis, it is essential to establish whether the scales measure the latent variables they intended to reflect. Table 2 summarizes the model tests of construct reliability and validity, discriminant validity, non-multicollinearity, absence of common method bias, and goodness-of-fit. To examine construct reliability and validity, each indicator and their respective latent variables were considered in computing for Cronbach's alpha (must be greater than .60), composite reliability (must be greater than .60), and average variance extracted (AVE must be greater than .50). In addition, to assess discriminant validity, cross-loadings of the questions were examined through exploratory factor analysis conducted in SmartPLS. Indicators pertaining to agree-

ableness, conscientiousness, neuroticism, and external outcome expectations were removed until acceptable scores for construct and discriminant validity were achieved, following the recommendations of Lowry and Gaskin (2014) and Hair et al. (2017). There were no significant cross-loadings, and the model passed the Fornell-Larcker and Heterotrait-Monotrait criteria (HTMT) signifying discriminant validity (Hair et al., 2017; Lowry & Gaskin, 2014; Ringle, Wende, & Becker, 2015).

For construct validity and reliability, results were acceptable except for conscientiousness and neuroticism, which had low Cronbach's alpha scores but acceptable composite reliability and AVE scores. Succeeding research can improve on these by testing and utilizing other short-item personality scales. To test for multicollinearity, it is essential to look at variance inflation factors of the indicators (VIF). All VIFs were less than 10.00, hence there was no significant multicollinearity among the indicators. It is also important to test for common method bias, which refers to the possibility of respondents answering in a certain manner due to the way a questionnaire is structured. Since all VIFs had values less than 3.3, it can be concluded that there is no significant presence of common method bias (Kock, 2015).

### *2. Structural model and path analysis*

Since the tests for reliability, validity, and multicollinearity were employed and the measurement model was treated to satisfy important criteria, the structural model and its paths can be analyzed appropriately. Table 3 features path estimates and p-values, which was the result of the PLS algorithm and bootstrapping procedure (*J = 10,000)* performed through SmartPLS, as recommended by Hair et al. (2017) and Lowry and Gaskin (2014).

TABLE 2. **Model tests of reliability, validity, multicollinearity, and goodness of fit based on PLS Algorithm (Ringle et al., 2015)**

| Constructs and Code | Items | Loadings | Variance Inflation Factor | Cronbach's Alpha | Composite Reliability | Average Variance Extracted | R-squared | Adjusted R-squared |
|---|---|---|---|---|---|---|---|---|
| **Agreeableness** | | | | 0.705 | 0.836 | 0.630 | | |
| P_Agree1 | I sympathize with others' feelings. | 0.789 | 1.507 | | | | | |
| P_Agree2 | I am not really interested in others. (-) (removed) | | | | | | | |
| P_Agree3 | I feel others' emotions. | 0.844 | 1.691 | | | | | |
| P_Agree4 | I am not interested in other peoples' problems. | 0.746 | 1.249 | | | | | |
| **Conscientiousness** | | | | 0.452 | 0.760 | 0.624 | | |
| P_Consc1 | I get chores done right away. | 0.609 | 1.093 | | | | | |

| Constructs and Code | Items | Loadings | Variance Inflation Factor | Cronbach's Alpha | Composite Reliability | Average Variance Extracted | R-squared | Adjusted R-squared |
|---|---|---|---|---|---|---|---|---|
| P_Consc2 | I often forget to put things back in their proper place. (-) (removed) | | | | | | | |
| P_Consc3 | I like order. | 0.936 | 1.093 | | | | | |
| P_Consc4 | I make a mess of things. (-) (removed) | | | | | | | |
| **Extraversion** | | | | 0.722 | 0.814 | 0.529 | | |
| P_Extra1 | I am the life of the party. | 0.778 | 1.456 | | | | | |
| P_Extra2 | I don't talk a lot. (-) | 0.679 | 1.410 | | | | | |
| P_Extra3 | I talk to a lot of different people at parties. | 0.859 | 1.427 | | | | | |
| P_Extra4 | I prefer to be in the background. (-) | 0.557 | 1.299 | | | | | |
| **Neuroticism** | | | | 0.511 | 0.800 | 0.667 | | |
| P_Neuro1 | I have frequent mood swings. | 0.876 | 1.133 | | | | | |
| P_Neuro2 | I am relaxed most of the time. (-) | 0.753 | 1.133 | | | | | |
| P_Neuro3 | I get upset easily. (-) (removed) | | | | | | | |
| P_Neuro4 | I seldom feel blue. (-) (removed) | | | | | | | |
| **Openness to Experience** | | | | 0.711 | 0.811 | 0.523 | | |
| P_Open1 | I have a vivid imagination. | 0.601 | 1.312 | | | | | |
| P_Open2 | I have difficulty understanding abstract ideas. (-) | 0.845 | 1.586 | | | | | |
| P_Open3 | I am not interested in abstract ideas. (-) | 0.785 | 1.443 | | | | | |
| P_Open4 | I do not have a good imagination. (-) | 0.633 | 1.502 | | | | | |
| **Social Entrepreneurial External Outcome Expectations** | | | | 0.820 | 0.865 | 0.520 | 0.160 | 0.140 |
| | Becoming a social entrepreneur will... | | | | | | | |
| OutExExt1 | ... give me a positive self-image. (removed) | | | | | | | |
| OutExExt2 | ... give me good social status. | 0.701 | 1.747 | | | | | |
| OutExExt3 | ... offer to me opportunities for professional improvement. | 0.707 | 1.439 | | | | | |

| Constructs and Code | Items | Loadings | Variance Inflation Factor | Cronbach's Alpha | Composite Reliability | Average Variance Extracted | R-squared | Adjusted R-squared |
|---|---|---|---|---|---|---|---|---|
| OutExExt4 | ... let me garner prestige and social recognition. | 0.670 | 1.970 | | | | | |
| OutExExt5 | ... give me economic compensation. | 0.816 | 2.138 | | | | | |
| OutExExt6 | ... grant me work stability. | 0.797 | 1.965 | | | | | |
| OutExExt7 | ... make my peers respect me. | 0.614 | 1.440 | | | | | |
| OutExExt8 | ... allow work flexibility (removed). | | | | | | | |
| **Social Entrepreneurial Internal Outcome Expectations** | | | | 0.785 | 0.862 | 0.610 | 0.283 | 0.265 |
| | Becoming a social entrepreneur will... | | | | | | | |
| OutExInt1 | ... allow me to give back to society. | 0.847 | 2.106 | | | | | |
| OutExInt2 | ... allow me to do meaningful work. | 0.818 | 2.025 | | | | | |
| OutExInt3 | ... let me solve society's most pressing problems. | 0.764 | 1.455 | | | | | |
| OutExInt4 | ... make me feel fulfilled. | 0.686 | 1.359 | | | | | |
| **Perceived Social Support** | | | | 0.835 | 0.901 | 0.753 | | |
| SE_Support1 | People would support me if I wanted to start an organization to help socially marginalized people. | 0.898 | 2.388 | | | | | |
| SE_Support2 | If I planned to address a significant societal problem, people would back me up. | 0.905 | 2.523 | | | | | |
| SE_Support3 | It is possible to attract investors for an organization that wants to solve social problems. | 0.796 | 1.584 | | | | | |
| **Social Entrepreneurial Self-Efficacy** | | | | 0.751 | 0.857 | 0.667 | 0.395 | 0.382 |
| SE_SelfEff1 | I am convinced that I personally can make a contribution to address societal challenges if I put my mind to it. | 0.840 | 1.558 | | | | | |

| Constructs and Code | Items | Loadings | Variance Inflation Factor | Cronbach's Alpha | Composite Reliability | Average Variance Extracted | R-squared | Adjusted R-squared |
|---|---|---|---|---|---|---|---|---|
| SE_SelfEff2 | I could figure out a way to help solve the problems that society faces. | 0.822 | 1.482 | | | | | |
| SE_SelfEff3 | Solving societal problems is something each of us can contribute to. | 0.787 | 1.480 | | | | | |
| **Social Entrepreneurial Intention** | | | | 0.694 | 0.827 | 0.622 | 0.395 | 0.376 |
| SE_Intent1 | I expect that at some point in the future I will be involved in launching an organization that aims to solve social problems. | 0.898 | 1.740 | | | | | |
| SE_Intent2 | I have a preliminary idea for a social enterprise or a social organization on which I plan to act in the future. | 0.855 | 1.657 | | | | | |
| SE_Intent3 | I do not plan to start a social enterprise (-). | 0.572 | 1.166 | | | | | |

TABLE 3. **Results of the PLS Algorithm and Bootstrapping**

| Direct Paths | Path Coefficients (O) | Standard Deviation (STD) | t-Statistics (\|O/STD\|) | p-values |
|---|---|---|---|---|
| Outcome Expectation External -> Intention | -0.088 | 0.068 | 1.282 | 0.101 |
| Outcome Expectation Internal -> Intention | 0.261 | 0.076 | 3.444 | **0.000**** |
| Agreeableness -> Intention | 0.090 | 0.062 | 1.450 | **0.074*** |
| Agreeableness -> Outcome Expectation External | 0.180 | 0.083 | 2.162 | **0.015**** |
| Agreeableness -> Outcome Expectation Internal | 0.321 | 0.085 | 3.788 | **0.000**** |
| Agreeableness -> Self-Efficacy | 0.110 | 0.047 | 2.327 | **0.010**** |
| Conscientiousness -> Intention | -0.060 | 0.053 | 1.135 | 0.128 |
| Conscientiousness -> Outcome Expectation External | 0.130 | 0.066 | 1.970 | **0.024**** |
| Conscientiousness -> Outcome Expectation Internal | 0.052 | 0.056 | 0.934 | 0.175 |
| Conscientiousness -> Self-Efficacy | 0.064 | 0.047 | 1.376 | **0.084*** |
| Extraversion -> Intention | 0.049 | 0.052 | 0.949 | 0.171 |
| Extraversion -> Outcome Expectation External | 0.122 | 0.064 | 1.904 | **0.028**** |
| Extraversion -> Outcome Expectation Internal | 0.060 | 0.057 | 1.051 | 0.147 |
| Extraversion -> Self-Efficacy | -0.024 | 0.049 | 0.488 | 0.313 |

| Direct Paths | Path Co-efficients (O) | Standard Deviation (STD) | t-Statistics (\|O/STD\|) | p-values |
|---|---|---|---|---|
| Neuroticism -> Intention | -0.030 | 0.054 | 0.547 | 0.292 |
| Neuroticism -> Outcome Expectation External | -0.061 | 0.065 | 0.946 | 0.172 |
| Neuroticism -> Outcome Expectation Internal | 0.018 | 0.057 | 0.309 | 0.379 |
| Neuroticism -> Self-Efficacy | 0.097 | 0.048 | 2.033 | **0.021**** |
| Openness -> Intention | 0.014 | 0.055 | 0.260 | 0.398 |
| Openness -> Outcome Expectation External | -0.216 | 0.061 | 3.544 | **0.000**** |
| Openness -> Outcome Expectation Internal | -0.024 | 0.063 | 0.390 | 0.348 |
| Openness -> Self-Efficacy | 0.202 | 0.047 | 4.313 | **0.000**** |
| Perceived Social Support -> Intention | 0.415 | 0.065 | 6.370 | **0.000**** |
| Perceived Social Support -> Outcome Expectation External | 0.197 | 0.064 | 3.066 | **0.001**** |
| Perceived Social Support -> Outcome Expectation Internal | 0.078 | 0.078 | 1.006 | 0.157 |
| Perceived Social Support -> Self-Efficacy | 0.496 | 0.050 | 9.865 | **0.000**** |
| Self-Efficacy -> Intention | 0.090 | 0.065 | 1.390 | **0.082*** |
| Self-Efficacy -> Outcome Expectation External | 0.025 | 0.085 | 0.290 | 0.386 |
| Self-Efficacy -> Outcome Expectation Internal | 0.267 | 0.085 | 3.128 | **0.001**** |

*** p < .05; * p < .10*

The results partially validated the first set of hypotheses. Internal outcome expectation has a very significant effect on SEI, while external outcome expectation did not significantly influence SEI. Self-efficacy only has a marginally significant direct effect on SEI, but proved to be significant on affecting internal outcome expectations. When accounting for total effects (cumulatively considering direct and indirect effects through internal outcome expectations), self-efficacy significantly influenced SEI ($b$ = 0.158, $p$ = .007).

The results also partially validated the second set of hypotheses. Perceived social support has significant direct and indirect effects on intention (total effect: $b$ = 0.496, $p$ < .001) as well as significant direct effects on self-efficacy and external outcome expectations. Personality did not have direct effects on intention, except for agreeableness, which had marginal statistical significance. In addition, agreeableness directly affected self-efficacy, internal, and external outcome expectations. Only agreeableness has a statistically significant total effect on intention ($b$ = 0.176, $p$ = .008) as mediated by internal outcome expectations (specific indirect effect: $b$ = 0.084, $p$ = .018), and the dual-mediator path of self-efficacy to internal outcome expectations (specific indirect effect: $b$ = 0.008, $p$ = .032).

### *3. Multigroup analysis*

To account for observable heterogeneity (Hair et al., 2017), partial least squares multigroup analysis (PLS-MGA) is recommended. PLS-MGA was employed to check whether the results of the path analysis would have differences between senior high school and undergraduate students. Table 4 shows the PLS-MGA results for both groups.

TABLE 4. **Multigroup Analysis**

| Paths | Path Coefficients difference (SHS – College) | p-values |
|---|---|---|
| Outcome Expectation External -> Intention | 0.001 | 0.504 |
| Outcome Expectation Internal -> Intention | 0.104 | 0.746 |
| P-Agreeableness -> Intention | 0.023 | 0.562 |
| P-Agreeableness -> Outcome Expectation External | 0.122 | 0.766 |
| P-Agreeableness -> Outcome Expectation Internal | 0.145 | 0.848 |
| P-Agreeableness -> Self-Efficacy | 0.057 | 0.287 |
| P-Conscientiousness -> Intention | 0.141 | 0.140 |
| P-Conscientiousness -> Outcome Expectation External | 0.005 | 0.514 |
| P-Conscientiousness -> Outcome Expectation Internal | 0.044 | 0.644 |
| P-Conscientiousness -> Self-Efficacy | 0.115 | 0.847 |
| P-Extraversion -> Intention | 0.207 | **0.069*** |
| P-Extraversion -> Outcome Expectation External | 0.020 | 0.440 |
| P-Extraversion -> Outcome Expectation Internal | 0.149 | 0.897 |
| P-Extraversion -> Self-Efficacy | 0.010 | 0.466 |
| P-Neuroticism -> Intention | 0.029 | 0.396 |
| P-Neuroticism -> Outcome Expectation External | 0.053 | 0.648 |
| P-Neuroticism -> Outcome Expectation Internal | 0.025 | 0.594 |
| P-Neuroticism -> Self-Efficacy | 0.103 | 0.167 |
| P-Openness -> Intention | 0.002 | 0.500 |
| P-Openness -> Outcome Expectation External | 0.114 | 0.211 |
| P-Openness -> Outcome Expectation Internal | 0.139 | 0.842 |
| P-Openness -> Self-Efficacy | 0.035 | 0.363 |
| Perceived Social Support -> Intention | 0.017 | 0.449 |
| Perceived Social Support -> Outcome Expectation External | 0.045 | 0.371 |
| Perceived Social Support -> Outcome Expectation Internal | 0.279 | **0.035**** |
| Perceived Social Support -> Self-Efficacy | 0.088 | 0.822 |

| Paths | Path Coefficients difference (SHS – College) | p-values |
|---|---|---|
| Self-Efficacy -> Intention | 0.003 | 0.510 |
| Self-Efficacy -> Outcome Expectation External | 0.254 | **0.074*** |
| Self-Efficacy -> Outcome Expectation Internal | 0.238 | **0.061*** |

*** p < .05; * p < .10*

The results showed that the anteceding effect of perceived social support mattered more for SHS students in terms of influencing internal outcome expectations than undergraduate students. Furthermore, although only marginally significant, the personality aspect of extraversion has more effect on SHS students in terms of SEI, as well as how self-efficacy affects both internal and external outcome expectations. However, the general PLS-SEM model's direct effects on SEI are relatively insensitive to the heterogeneity of the sample, that is, the difference between SHS and undergraduate college groups.

## Discussion, Conclusions, and Recommendations for Future Research

The conceptual model of Tran and Korflesch (2016) was partially validated by the results of the PLS-SEM analysis. In terms of the first set of hypotheses which tackled the classic variables in SCCT, this study discovered that the concept of internal outcome expectations is a more reliable determinant of SEI than external outcome expectations. Literature showed that people who intend to venture on social entrepreneurship are not motivated by pay and work stability, but rather they are motivated by the chance to make a change (Hockerts, 2017). Surprisingly, self-efficacy's direct effect on SEI is only marginally significant, although its total effect on SEI is statistically significant. Self-efficacy alone may not be the most reliable determinant, but it is mediated by internal outcome expectations and is anteceded by agreeableness and perceived social support.

Interestingly, perceived social support has the strongest direct effect on SEI even if it is considered a background factor and not part of the classical SCCT. To help explain the findings, the researchers conducted follow-up interviews with the students, which revealed that they are more conscious of the perception of their peers and family members when it comes to pursuing a career path. Their perceived support system also matters in influencing their beliefs about their capabilities to pursue a specific career (self-efficacy), as well as their consideration on what to expect from embarking on a career path (outcome expectations). The respondents surveyed in this study belong to a generation characterized by hyperconnectivity and being social media natives. Hence, it makes sense that perceptions of others play a significant role on determining SEI. Furthermore, Asian entrepreneurship culture tends to be collectivist rather than individualist (Ip, Wu, Liu, & Liang, 2017), which may help explain why perceived social

support has a stronger direct effect on SEI rather than self-efficacy. Therefore, educators and policy-makers, in advocating social entrepreneurship, should come up with activities that encourage collaboration and group learning—leveraging on the multiple effects of social support while building capabilities and managing outcome expectations.

Among the personality traits, agreeableness is the most reliable anteceding determinant of SEI. Agreeableness pertains to a person's ability to sympathize with others and think about others' problems. Closely related to empathy but not one and the same, people with agreeable personalities tend to think of the welfare others when pursuing a career path (Hockerts, 2017; Mair & Noboa, 2006; Nga & Shamuganathan, 2010). Since social entrepreneurial activities are related with understanding the needs of marginalized communities, it makes sense agreeableness is related with SEI.

In conclusion, this paper has provided initial empirical validation of SCCT as a useful lens in understanding the formation of social entrepreneurial intention. Whereas TPB is limited in explaining intention formation through attitude, norms, and perceived behavioral control, SCCT provided important insights with regard to how students form the intention of pursuing social entrepreneurship as a career. The interplay between perceived social support and internal outcome expectations help illuminate SEI formation—it is important to cultivate an ecosystem of support that frames social entrepreneurship as a venue for meaningful work, solving social problems, and pursuing fulfillment. Whereas papers anchored on the behaviorist approach advance intentions are influenced dominantly by the external environment, this paper positions the formation of SEI as a result of person's proactive pursuit of meaningful work enabled by a support system. Previous case studies validate this finding (Habaradas & Aure, 2016), as social entrepreneurs attribute their motivation to an enabling social entrepreneurial support system as well as their desire to contribute to the development of that same social entrepreneurial support system. This nuance is in line with what the social cognitive career theory tries to explain, compared to the more behaviorist approach of studies based on the theory of planned behavior.

Although this study has explored how SCCT can be operationalized via PLS-SEM, this paper is not without limitations. First, with regard to the improvement of the measurement model, future researchers should explore more reliable personality scales. This study opted for shorter items to minimize respondent fatigue, but this may have sacrificed construct reliability for conscientiousness and neuroticism. Second, this study is limited to a single university, which serves as a control aspect for this study; but this also hinders generalizing the insights to a broader population. Future researchers should attempt to examine a more diverse set of respondents and employ multigroup analysis to possibly account for observable heterogeneity. Third, this study employed PLS-SEM, which is more suitable for initial exploratory studies and extension of theories that this research paper attempted. Since this study has initially validated important variables in determining SEI, future research can further test the theory by employing CB-SEM

(Hair et al., 2017). However, testing the theory on a wider scale via CB-SEM will demand tremendous amounts of sample sizes given the complexity of the conceptual model, especially the number of anteceding variables under personality and contextual factors. Thus, future researchers have the option of confirming the most salient variables (agreeableness, social support, self-efficacy, and internal outcome expectations) or attempting to account for other contextual variables not included in this study (scales on measuring impact of role models and education).

To end, understanding the drivers of social entrepreneurial intentions is a very important task for scholars, practitioners, and policy-makers. In order to do so, multiple theories and models must be explored and tested to surface the most salient variables that determine SEI. Since most studies have already anchored their models on the theory of planned behavior, this paper aspired to be one of the first to empirically test social cognitive career theory. After all, solving society's problems through business is a very noble endeavor, and all stakeholders must work together to advocate such behavior among future business managers and entrepreneurs.

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