

# Social Entrepreneurship among Millennials: A Three Country Comparative Study

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## ABSTRACT

Anecdotally, members of the millennial generation are in many ways different than members of preceding generations. Millennials are said to be more interested in social issues and also more entrepreneurial than Gen Xers or Boomers. Our study examined the extent to which millennials embraced social entrepreneurship with data from 1,114 students from China, Russia, and the USA. We found that perseverance (in all three countries) and proactive personality (in China and USA) predicted social entrepreneurial intent (SEI). We also found that social entrepreneurial self-efficacy (SESE) mediated the relationship between the predictors and SEI: perseverance (in all three countries) and proactive personality (in China and USA). We did not find support for our hypotheses that determinism (a cultural value) or life satisfaction moderated the relationship between predictors and SEI. We did find that concerns about corruption/good government and concerns about the environment moderated the perseverance-SEI relationship for the Chinese in our sample. Concern about corruption also moderated the proactive personality-SEI relationship for the Chinese, but not for the other two countries. Results suggest that for millennials, enhancing social entrepreneurial self-efficacy may be the key to increasing intentions to become a social entrepreneur.

**Keywords:** Social Entrepreneurship, Social Entrepreneurial Self-Efficacy, Determinism, Life Satisfaction

## 1. INTRODUCTION

Social entrepreneurship is an emerging multidisciplinary field at the crossroads of business, government and non-profit organizations that has had significant social and economic impact (Austin, Stevenson & Wei-Skillern, 2006). Broadly speaking, it is a process that catalyses social change (Mair & Martí, 2006) and fosters social progress (Alvord, Brown & Letts, 2004). It involves engaging in innovative activity with a social objective via many different types of organizations, from pure non-profit (Dees, 1998) to social purpose commercial ventures (Bornstein, 2004; Boschee & McClurg, 2003; Emerson, 1999; Emerson & Twersky, 1996; Oster, Massarsky & Beinhacker, 2004). Moreover, it is a subject increasingly included in undergraduate curricula, whether directly or as a topic in other courses such as entrepreneurship or business, society, and government courses. Our study tested hypotheses about predictors of social entrepreneurial intent (perseverance and proactive personality) among 1,144 members of the millennial generation from three countries: China, Russia, and USA, as well as a mediator (social entrepreneurial self-efficacy) and three potential moderators (determinism, life satisfaction, and concern for social problems).

## 2. LITERATURE REVIEW AND HYPOTHESES

In order to understand the reasons behind millennials' intentions to become social entrepreneurs, we reviewed the literature on social entrepreneurship and the characteristics of the millennial generation. We then describe potential antecedents, drawing from the literature on social entrepreneurship, entrepreneurship, management education, and psychology.

### 2.1. Social Entrepreneurship and Social Entrepreneurs

Although there has been a lack of consensus among researchers regarding the definition of social entrepreneurship (Chell, 2007; Dees, Anderson & Wei-Skillern, 2004; Tracy & Phillips, 2007) based on our review of the extant literature and understanding of the interdisciplinary field of social entrepreneurship, we defined it as *the process of addressing and attempting to solve a social problem by formulating creative and innovative solutions which are sustainable and scalable*. A social entrepreneur is an individual who plays the role of change agent in the social sector by: adopting a mission to create and sustain social value (not just private value); recognizing and relentlessly pursuing new opportunities to serve that mission; engaging in a process

of continuous innovation, adaptation, and learning; acting boldly without being limited by resources currently in hand, and exhibiting a heightened sense of accountability to the constituencies served and for the outcomes created (Dees, 1998, p. 4). Aldrich and Zimmer (1986) defined network as "the totality of all persons connected by a certain type of relationship." They viewed entrepreneurship "embedded in the network of continuing social relations." Social entrepreneurs start organizations designed to address a given social problem, join networks of people with similar concerns, and build their own networks, as needed, to mobilize people to action.

## **2.2. Millennials and Social Entrepreneurship**

The past decade has seen a burgeoning scholarly interest in the social entrepreneurship field. Given that social entrepreneurship is an emerging field, the early academic literature focused on distinguishing between social and commercial entrepreneurship (Foster & Bradach, 2005; Mair, Seelos, & Borwankar, 2005) emphasizing the significance of the centrality of social value creation (Austin, Stevenson, & Wei-Skillern, 2006) and several theoretical studies focusing on defining the field and its varied attributes (cf. Mair & Noboa, 2003; Bradach, 2003).

The extant literature has predominantly been theory based. Thus there are few empirical studies and hardly any specifically studying millennials. This study may serve as an initial attempt at providing insights into the factors affecting millennials in the context of social entrepreneurship.

Also known as Generation Y, the Millennials were born after 1982 and came of age between 2000 and 2012. The Millennial generation has been shown to be very different from its previous generations (Strauss & Howe, 1992). The Economist (2000) called millennials [in the developed world]the "net generation," the richest generation in history, the best educated, the healthiest, and the first to grow up knowing nothing of war, famine, disease and poverty. Millennials have never known a world where information was not readily available at the click of a mouse. While the millennial learners operate on short attention spans, demand immediate gratification, and process information in short spurts, they are also keen on multi-tasking and likely to dive into a project with fairly successful outcomes rather than spend time reading instructions. Before they become earners, Millennials are already powerful spenders (Economist, 2000). Studies have found that millennials exhibit a strong affinity for civic engagement, and unlike the previous generation, little "anti-business" bias, yet with a strong desire to improve the world they live in. Millennials may see themselves as global citizens who may not necessarily believe that governments will be effective at solving the world's problems. They have been described in various ways, including: "Global GenXers are acquiring a reputation as fun-loving and rootless, pragmatic and market-oriented, environmentalists and entrepreneurial, technologically smarter but otherwise dumber than older people, and far less interested in politics than in business" (Howe & Strauss, 2009: 291).

Mobilize.org, a non-profit organization that works with and for members of the millennial generation, with a mission to empower and invest in Millennials to create and implement solutions to social problems, reported: "We, the Millennial Generation, are uniquely positioned to call attention to today's issues and shape the future based on the great legacy we have inherited" (Mobilize, 2016).

This paper aims at answering three major research questions: What are some of the factors affecting millennials' social entrepreneurial intent? What is the mechanism by which intrinsic factors such as cultural values, self-efficacy, and life satisfaction affect this relationship? How do the predictors differ among the millennials in the three different countries we studied?

## **2.3. Social Entrepreneurial Intent (SEI)**

Krueger and Carsrud (1993) suggested that entrepreneurial intent is the "single best predictor" of subsequent entrepreneurial behaviour. In other words, cognition precedes and predicts future behaviour. The words of Ajzen (1991:181) provide insight: "Intentions are assumed to capture the motivational factors that influence a behavior; they are indications of how hard people are willing to try, of how much of an effort they are planning to exert in order to perform the behavior. As a general rule, the stronger the intent to engage in a behaviour, the more likely should be its performance." Given that the main aim of the study was to focus on "millennials," (many of whom are just now being exposed to social entrepreneurship and are still too young to have actual experience as social entrepreneurs), we chose to study social entrepreneurial intent as opposed to social entrepreneurial behaviour.

Hence the main dependent variable of the study is social entrepreneurial intent (SEI). We defined SEI for the purpose of the study as the intention to engage in social entrepreneurship within a given period of time (which we operationalized as within five years).

In the study, we examined two personal characteristics of millennials for their potential effect on social entrepreneurial intent: perseverance and proactive personality, as well as a potential mediator, social entrepreneurial self-efficacy and three potential moderators, as shown in Figure 1.

#### 2.4. Perseverance (PER)

Whiteside and Lynam (2001) defined perseverance as the ability to remain concentrated on a tedious or difficult task. Markman, Baron & Balkin found that entrepreneurs scored “significantly higher on self-efficacy and on two distinct aspects of perseverance—perceived control over adversity and perceived responsibility regarding outcome of adversity—than did non-entrepreneurs” (2004: 1). Given the likely obstacles that must be faced in a social entrepreneurial venture, we expect to find the same characteristic among future social entrepreneurs. We expect that students who intend to become social entrepreneurs will be those who are able to persevere in the face of roadblocks, obstacles, naysayers, and difficulties obtaining resources and measuring progress. Our first hypothesis, therefore, is:

*Hypothesis 1. Perseverance will positively affect a millennial’s social entrepreneurial intent.*

#### 2.5. Proactive Personality (PP)

Proactive personality has been identified as a personality facet distinct from the Big 5 personality traits indicating “a relatively stable individual disposition toward proactive behavior” (Bateman & Crant, 1993: 103). Proaction is about creating change, not just taking advantage of it or anticipating it (Bateman & Crant, 1993). Social entrepreneurs are individuals who seek to take actions that will change their environment, at least regarding one social issue about which they are deeply concerned. PP “identifies differences among people in the extent to which they take action to influence their environment” (Bateman & Crant, 1993: 103).

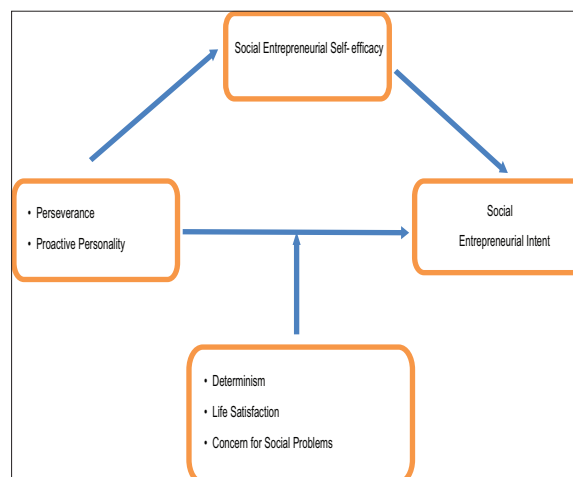
Similar to other entrepreneurs, social entrepreneurs do not allow resource constraints to stop them for taking action. PP is characteristic of people who are “relatively unconstrained by situational forces” as they attempt to effect change in the environment (Bateman & Crant, 1993: 105).” Crant (1996) found that PP predicted variations in entrepreneurial intent (EI) in a study of 181 students, above and beyond the variance explained by gender, education, and having an entrepreneurial parent. Finally, Prabhu et al. (2012) found that PP had a robust relationship with the three different manifestations of EI - general, high growth, and lifestyle. We therefore reasonably expect that PP will also be predictive of social entrepreneurial intent in general, and for those students who are highly concerned with one or more social problem.

We therefore hypothesize:

*Hypothesis 2. Proactive Personality will positively affect a millennial’s social entrepreneurial intent.*

#### 2.6. Concern for Social Problems (CSP)

We were interested in identifying those social problems about which our student samples might be most concerned. Digitalsynopsis.com provided a list of 60 powerful social issues faced by millennials today. Of the 60, we were interested



**Figure 1:** Conceptual Model of Millennials’ Social Entrepreneurial Intent

in major categories that might be relevant globally, such as (a) human rights, (b) human health, (c) corruption and good government, (d) the environment, including climate change, pollution, etc., (e) human suffering, and (f) animal rights.

Essentially we reasoned that SEI will not occur – in fact *could not occur* – unless millennials were deeply concerned about some issue. Only a sufficient level of concern for a social problem would lead a proactive, persevering person to take actions to address a social problem, as opposed to actions to get a good job unrelated to social issues, or start a new for-profit venture with little or few social benefits. We therefore hypothesized a moderating relationship:

*Hypothesis 3. Concern for social problems will moderate the relationship between (a) perseverance and (b) proactive personality and a millennial's social entrepreneurial intent.*

## **2.7. Determinism (DET)**

Culture is a system of socially constructed meanings, values and beliefs that members of a group develop and pass on to others; these meanings and values have resulted from the culture's successful dealings with problems of the environment and the complexities of ordering social relations and integrating people (Jaques, 1952; Schein, 1985). Of the many cultural values that might be considered, we believe that determinism would provide a powerful explanation of why some concerned millennials in the different countries chose to become social entrepreneurs while others may not do so.

Kluckhohn and Strodtbeck (1961) introduced determinism as the degree to which members of a group accept that forces outside themselves determine the success or failure of their actions. McGuire, Fok and Kwong (2006: 24) defined it as "The extent to which people believe that external forces (fate or a Superior Being) control what happens to them (determinism) rather than believing that people are able to control the consequences of their actions (free will). Determinism is a cultural belief that what occurs in life is often or primarily a function of external forces, such as fate, karma, luck, the movement of the stars and planets, or the intervention of a Superior Being." Highly deterministic persons may not exert maximum effort to address a social problem, mostly because they may believe that the outcome is "out of their hands." Determinism may also negatively affect acceptance of "out of the box" solutions."

For these reasons, we expect that determinism will diminish the relationship between social entrepreneurial intentions and its predictors. Hence we propose the moderational framework:

*Hypothesis 4. Determinism will moderate the relationship between (a) Perseverance and (b) Proactive Personality and a millennial's social entrepreneurial intent.*

## **2.8. Life Satisfaction (LSAT)**

Life satisfaction is "a global assessment of person's quality of life according to his chosen criteria" (Shin & Johnson, 1978: 478). Happiness, a related concept, is "primarily a product of the positive assessments of life situations and favorable comparisons of these life situations with those of others and in the past" (Shin & Johnson, 1978: 475). A person judges his/her level of satisfaction not in relation to any external standard, but rather against an internal, self-defined standard (Diener et al, 1985). We believe that some degree of *dissatisfaction* might enhance a young person's intention to address a social problem. A high level of satisfaction, we postulate, will not trigger a need to address a social problem, as it may not be accompanied by a strong desire to make changes, while a low level might lead to complete inaction. We again hypothesize a moderating effect, namely:

*Hypothesis 5. Life Satisfaction will moderate the relationship between (a) Perseverance and (b) Proactive Personality and a millennial's social entrepreneurial intent.*

## **2.9. Social Entrepreneurial Self-Efficacy (SESE)**

We define social SESE as the confidence in one's ability to perform the roles and tasks of a social entrepreneur. Self-efficacy has been consistently shown as an explanatory variable for why people pursue given tasks and persist in their efforts to succeed at them (Bandura, 1997). It has been observed that it is not our objective assessment of our abilities that drives our behavior, but rather our subjective perceptions thereof; in other words, we are motivated to act by our perceived self-efficacy within a given domain (Markman, et al., 2002). We operationalized the definition of SESE as the strength of an individual's belief that he or she is capable of successfully performing the roles and tasks of a social entrepreneur (adapted from Boyd & Vozikis, 1994, Schere et al., 1989). As per Bandura's theory, self-efficacy is developed through students' mastery of skills, identification with

role models, social persuasion by important others (such as peers, parents, professors, and role models), and judgments about their own physiological states (e.g., social entrepreneurship makes me feel exhilarated, rather than frightened or frustrated).

In the present study, we purposely avoided using measures of general self-efficacy such as those suggested by Baron (1988) and used in research by Hmieleski and Corbett (2006) as conceptually self-efficacy expectations generalize to a set of interrelated tasks (Gist, 1987; Zhao et al., 2005). Moreover, Bandura (1997) would argue that self-efficacy could not be associated with a particular person, but instead only to a given person faced with a given task, challenge, or opportunity. We therefore propose the meditational framework for SESE:

*Hypothesis 6. Social entrepreneurial self-efficacy (SESE) will positively affect millennial's social entrepreneurial intent.*

*Hypothesis 7. Social entrepreneurial self-efficacy (SESE) will mediate the relationship between (a) Perseverance and (b) roactive Personality and a millennial's social entrepreneurial intent.*

### 3. METHOD

We collected data from millennials in the three countries and examined direct, moderated, and mediation effects using both regression analyses and multiple-group structural equation modelling (SEM). SEM provides model fit information, which in turn gives information about consistency of the hypothesized mediational model to the data. Finally, SEM addresses the problem of measurement error from the estimation of the relationships among the variables, which is a potential concern in mediation (see Bollen, 1989; Hoyle & Kenny, 1999). After verifying that the data were normally distributed, we replaced missing years of experience with the mean of the respondents for each country; no other data were missing. Prior to running the structural equation model, we verified that multicollinearity was not a severe problem that would preclude interpretation of the regression analyses (Neter, Wasserman, & Kutner, 1983). We tested the model based on the covariance matrix using the maximum likelihood procedure in AMOS 22 (Arbuckle, 2006a; 2006b). Moderated regression analysis (See Aiken & West, 1991; Cohen, Cohen, West & Aiken, 2003; Frazier, Tix & Barron, 2004; Holmbeck, 1997) was used to test the moderation hypothesis.

#### 3.1. Sample and Data Collection

Our sample was comprised of university students of business administration from China, Russia, and the United States. We selected students as our sample because the main focus of our study was millennial's social entrepreneurial intent. We collected 1,163 usable surveys from students in the three countries with responses to our questions plus demographic data (age, sex, year in college, work experience, etc.). Females accounted for 616 respondents were female (54%). Ages ranged between 16 and 40 years old (mean 21.4, std. dev. 3.8). Differences among the respondents from the country were found. The Russians were on average younger (range 16-39, mean 19 years old) than the respondents from the USA (19-40, mean 24.8) and China (16-40, mean 21.4). American students reported higher average work experience (5.1 years, std. 2.4) than did students in the other countries.

The measures we used in the study are discussed below and provided in Appendix 1.

#### 3.2. Measures

*Social entrepreneurial intent* (SEI), the main dependent variable, was measured using a 4-item scale developed for this study asking the degree to which the respondent was interested in (1) *starting a nonprofit or for-profit organization that addresses a social issue that is important to me*; (2) *starting my own organization to solve a social problem in my community*; (3) *joining a network of people who are concerned about solving a certain social problem*; (4) *building a worldwide network of relationship with people who are concerned about solving a certain social problem*. (Mean = 4.16, std. dev. = 1.34, Cronbach's  $\alpha$  = .826).

*Social entrepreneurial self-efficacy* (SESE) was measured using six 7-point Likert scale items we adapted from Prabhu et al., (2012), for example: "Identify a social problem and its root cause;" "Design a business that will address an important social problem;" "Able to find multiple sources of funding" etc. (Mean = 4.52, std. dev. = 1.035,  $\alpha$  = .844).

*Proactive Personality* was assessed with 5 items from Bateman & Crant's (1993) scale, including "I am consistently on the lookout for new ways to improve my life;" and "No matter what the odds, if I believe in something, I will make it happen." (Mean = 4.96, std. dev. = 1.06,  $\alpha$  = .836).

For *Perseverance* we used the 4 items from Whiteside & Lynam's (2001) Perseverance variable in the UPSS Impulsive Behavior scale, for example: "Unfinished tasks really bother me;" and "Once I get going on something, I hate to stop." (Mean = 5.19, std. dev. = 1.137,  $\alpha = .729$ ).

*Determinism* was measured by 7-item scale from McGuire, et al. (2008), including items such as, "Most things are determined by forces we cannot control;" "Whatever is going to happen, will happen no matter what actions people take;" etc. (Mean = 3.47, std. dev. = 1.034,  $\alpha = .715$ ).

*Life Satisfaction* was measured using Shin & Johnson's (1978) 5 item scale, including: "In most ways my life is close to my ideal;" "The conditions of my life are excellent;" "If I could live my life over, I would change almost nothing." (Mean = 4.19, std. dev. = 1.061,  $\alpha = .78$ ).

*Concern for social issues* was measured by a 7-point Likert scale item for six social issues, Animal Rights; Corruption and Good Government; Local Community Issues; Environment (Climate change, pollution, etc.); Human Rights and Human Health, with the question: *How likely – in the next 5 years – it is that you will take action to address the following social problems?"*

Table 1 reports the descriptive statistics, reliabilities, and correlations. Tables 2.1, 2.2, and 2.3 report the means for each country.

#### 4. RESULTS

We found that Americans had a significantly higher SEI score (mean = 4.37) than did the Chinese (4.09) or Russians (4.0) ( $p < .01$ , one tailed). When asked about a specific type of social issue, respondents overall rated human health and human rights the highest (5.01), and animal rights the lowest (3.99). Millennials from Russia were most concerned with human rights (4.75) and human health (4.59), Chinese with human health (5.3) and the environment (5.3), and Americans with human rights (5.14). The Chinese respondents expressed a significantly lower level of life satisfaction (3.88) than did the Millennials from the other two countries. Americans had significantly lower scores for cultural determinism (3.27) than Chinese (3.59) and Russian (3.55) respondents, and significantly higher scores for perseverance and proactive personality (See Tables 2.1-2.3). Americans scored significantly higher on SESE than did Chinese ( $p = .000$ , one tailed), but the difference in SESE scores between Americans and Russians did not reach statistical significance.

The tests of hypotheses were conducted using SEM in accordance to the procedure described by Hoyle and Smith (1994), and using multivariate regressions, with age and work experience as control variables. Figure 1 provides the full structural model with Perseverance as a predictor, while Figure 2 provides the full model with Proactive Personality.

##### 4.1. Effect of Perseverance and SESE on SEI

We found a good fit between the data and the model presenting Perseverance as a direct predictor of SEI as well as SESE as a mediator between Perseverance and SEI (GFI = .97,  $\chi^2/df = 3.145$ , RMSEA = .043) for all the data. When we run multiple group analyses, we found that the model fits the data well for all three samples (GFI = .951,  $\chi^2/df = 1.788$ , RMSEA = .026), although the parameter estimates for paths vary in the different country samples, as one would expect. Figure 1 provides the structural equation model. Table 3 reports the model fit statistics for the full data set and multiple group analyses, and Appendix 2 provides the SEM parameter estimates.

Table 4 provides the multiple regression results, with age and work experience as control variables. The direct relationship between perseverance and SEI was small but significant in each country (USA  $R^2 = .025^*$ ,  $\beta = .122^*$ , Russia  $R^2 = .026^*$ ,  $\beta = .139^*$ , China  $R^2 = .036^*$ ,  $\beta = .190^{***}$ ). Hypothesis 1 was therefore supported.

We next tested the direct relationship between SESE and SEI. Results support Hypothesis 6 (USA  $R^2 = .126^{***}$ ,  $\beta = .335^{***}$ ; Russian  $R^2 = .087^{***}$ ,  $\beta = .265^{***}$ ; China  $R^2 = .109^{***}$ ,  $\beta = .287^{***}$ ). Having determined that SESE was positively associated with SEI, we were then able to test for mediation by SESE of the relationship between the direct predictor, perseverance, and the dependent variable, SEI. Controlling for age and work experience, for the USA and Russian samples, we found full mediation; for China, partial mediation. We therefore conclude that Hypothesis 7(a) was supported.

##### 4.2. Effect of Proactive Personality and SESE on SEI

We also found a good fit between the data and the model presenting Proactive Personality as a direct predictor of SEI as well as SESE as a mediator between PP and SEI (GFI = .971,  $\chi^2/df = 2.742$ , RMSEA = .039) for the full data set. When we ran multiple

**Table 1:** Means, standard deviations, scale reliabilities and correlations

No.	Variable list	Alpha	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
1	AGE	--	21.40	3.785	--														
2	WEXP	--	2.09	3.134	0.796***	--													
3	CSP1_AniRts	--	3.99	1.873	0.016	0.015	--												
4	CSP2_Corpt	--	4.50	1.719	-0.010	-0.027	0.292***	--											
5	CSP3_Envir	--	4.81	1.773	-0.013	-0.038	0.434***	0.471***	--										
6	CSP4_HH	--	5.01	1.675	0.055	0.025	0.322***	0.469***	0.584***	--									
7	CSP5_HRts	--	5.01	1.627	0.044	0.042	0.334***	0.486***	0.468***	0.589***	--								
8	CSP6_Hsuffer	--	4.82	1.589	0.087**	0.067*	0.312***	0.396***	0.422***	0.543***	0.635***	--							
9	CSP	0.828	4.69	1.254	0.039	0.018	0.628***	0.705***	0.771***	0.789***	0.786***	0.737***	--						
10	LSat	0.780	4.19	1.161	0.057	0.140***	0.119***	0.77**	0.036	0.109***	0.092**	0.042	0.109***	--					
11	DET	0.715	3.47	1.034	-0.067*	-0.109***	0.063*	0.079**	0.065*	0.063*	0.045	0.064*	0.087**	0.115***	--				
12	PER	0.729	5.19	1.137	0.202***	0.227***	0.091**	0.125***	0.090**	0.151***	0.198***	0.176***	0.186***	0.159***	-0.078**	--			
13	PP	0.836	4.96	1.060	0.134***	0.239***	0.081**	0.185***	0.077**	0.155***	0.190***	0.187***	0.196***	0.311***	-0.042	0.477***	--		
14	SESE	0.844	4.52	1.035	0.029	0.110***	0.174***	0.184***	0.102**	0.147***	0.191***	0.159***	0.217***	0.291***	0.020	0.317***	0.530***	--	
15	SEI	0.826	4.16	1.342	0.049	0.089**	0.293***	0.235***	0.248***	0.248***	0.272***	0.292***	0.361***	0.184***	0.077**	0.179***	0.186***	0.318***	--

**Table 2.1:** USA: Means, standard deviations, scale reliabilities, and correlations

No.	Variable list	Alpha	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
1	AGE	--	24.80	4.448	--														
2	WEXP	--	5.10	3.747	0.702***	--													
3	CSP1_AniRts	--	4.05	2.012	0.041	0.031	--												
4	CSP2_Corpt	--	4.38	1.789	0.003	-0.012	0.368***	--											
5	CSP3_Envir	--	4.64	1.799	0.008	0.021	0.504***	0.581***	--										
6	CSP4_HH	--	4.99	1.680	0.060	0.056	0.372***	0.558***	0.564***	--									
7	CSP5_HRts	--	5.14	1.656	0.022	0.007	0.349***	0.590***	0.540***	0.623***	--								
8	CSP6_Hsuffer	--	5.03	1.658	0.002	0.006	0.366***	0.502***	0.510***	0.605***	0.688***	--							
9	CSP	0.859	4.71	1.356	0.030	0.024	0.662***	0.777***	0.804***	0.796***	0.808***	0.782***	--						
10	LSat	0.820	4.45	1.252	-0.034	0.057	0.106*	0.039	0.114*	0.167**	0.151**	0.120*	0.150**	--					
11	DET	0.762	3.27	1.137	0.039	-0.030	0.032	0.013	0.034	0.017	0.018	0.071	0.040	0.082	--				
12	PER	0.780	5.68	1.097	-0.006	0.021	0.010	0.077	0.040	0.196***	0.198***	0.169**	0.143**	0.121*	-0.119*	--			
13	PP	0.875	5.36	1.074	-0.052	0.085	0.103*	0.191***	0.112*	0.205***	0.269***	0.256***	0.242***	0.277***	-0.075	0.495***	--		
14	SESE	0.863	4.68	1.119	-0.040	0.018	0.185***	0.203***	0.153**	0.191***	0.211***	0.269***	0.262***	0.243***	-0.080	0.302***	0.523***	--	
15	SEI	0.874	4.37	1.489	-0.032	0.044	0.336***	0.319***	0.330***	0.329***	0.348***	0.458***	0.458***	0.165**	0.056	0.126*	0.185***	0.347***	--

**Table 2.2: China: Means, standard deviations, scale reliabilities, and correlations**

No.	Variable list	Alpha	Number of items	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
1	AGE	--	1	20.15	1.410	--														
2	WEXP	--	1	0.41	0.670	0.215***	--													
3	CSP1_AniRts	--	1	4.15	1.760	-0.112*	-0.021	--												
4	CSP2_Corrupt	--	1	4.64	1.633	0.086	0.040	0.270***	--											
5	CSP3_Envir	--	1	5.30	1.563	-0.024	0.061	0.331***	0.487***	--										
6	CSP4_HH	--	1	5.30	1.492	0.038	0.087	0.248***	0.503***	0.644***	--									
7	CSP5_HRts	--	1	5.08	1.490	0.016	0.087	0.340***	0.460***	0.475***	0.581***	--								
8	CSP6_Hsuffler	--	1	4.93	1.405	0.075	0.083	0.287***	0.367***	0.401***	0.520***	0.652***	--							
9	CSP	0.817	6	4.90	1.128	0.013	0.074	0.591***	0.712***	0.764***	0.791***	0.792***	0.721***	--						
10	LSat	0.705	5	3.88	1.005	-0.002	-0.031	0.119*	0.138**	0.063	0.127**	0.082	0.022	0.130**	--					
11	DET	0.692	7	3.59	0.976	0.056	-0.018	0.042	0.200***	0.098*	0.076	0.048	0.067	0.123**	0.277***	--				
12	PER	0.650	4	5.04	1.013	0.047	0.053	0.188***	0.187***	0.248***	0.196***	0.227***	0.185***	0.283***	0.096*	0.027	--			
13	PP	0.800	5	4.60	0.941	0.047	0.106*	0.100*	0.231***	0.258***	0.231***	0.169***	0.148**	0.260***	0.294***	0.125**	0.416***	--		
14	SESE	0.825	6	4.26	0.932	0.004	0.114*	0.182***	0.193***	0.221***	0.183***	0.183***	0.100*	0.246***	0.329***	0.137**	0.331***	0.541***	--	
15	SEI	0.807	4	4.09	1.187	0.000	-0.006	0.221***	0.224***	0.182***	0.158**	0.216***	0.161**	0.269***	0.214***	0.095*	0.189***	0.232***	0.314***	--

**Table 2.3: Russia: Means, standard deviations, scale reliabilities, and correlations**

No.	Variable list	Alpha	Number of items	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
1	AGE	--	1	18.99	1.805	--														
2	WEXP	--	1	0.81	1.129	0.641***	--													
3	CSP1_AniRts	--	1	3.68	1.824	-0.100	-0.070	--												
4	CSP2_Corrupt	--	1	4.44	1.743	0.018	0.107	0.212***	--											
5	CSP3_Envir	--	1	4.29	1.851	0.008	0.058	0.443***	0.317***	--										
6	CSP4_HH	--	1	4.59	1.832	0.069	0.089	0.312***	0.328***	0.499***	--									
7	CSP5_HRts	--	1	4.75	1.754	-0.095	-0.023	0.287***	0.401***	0.380***	0.556***	--								
8	CSP6_Hsuffler	--	1	4.37	1.677	-0.006	0.005	0.233***	0.315***	0.312***	0.471***	0.540***	--							
9	CSP	0.782	6	4.35	1.231	-0.025	0.041	0.606***	0.616***	0.720***	0.766***	0.758***	0.682***	--						
10	LSat	0.761	5	4.33	1.157	-0.077	0.024	0.198***	0.120*	0.075	0.127*	0.053	-0.011	0.138*	--					
11	DET	0.653	7	3.55	0.95	-0.057	-0.001	0.157**	-0.018	0.031	0.106	0.108	0.100	0.117*	0.068	--				
12	PER	0.675	4	4.78	1.141	-0.082	0.079	0.035	0.174**	-0.003	0.043	0.120*	0.066	0.103	0.199***	-0.013	--			
13	PP	0.780	5	4.99	1.027	-0.041	0.059	0.072	0.230***	0.036	0.140*	0.142*	0.168**	0.188**	0.216***	-0.071	0.440***	--		
14	SESE	0.802	6	4.68	0.997	-0.053	0.090	0.218***	0.212***	0.078	0.169**	0.219***	0.138*	0.248***	0.200***	0.103	0.333***	0.454***	--	
15	SEI	0.794	4	4.00	1.338	-0.086	-0.048	0.312***	0.153**	0.248***	0.246***	0.217***	0.177**	0.328***	0.149**	0.155**	0.142*	0.071	0.280***	--



**Table 3: Model fit for the meditational framework**

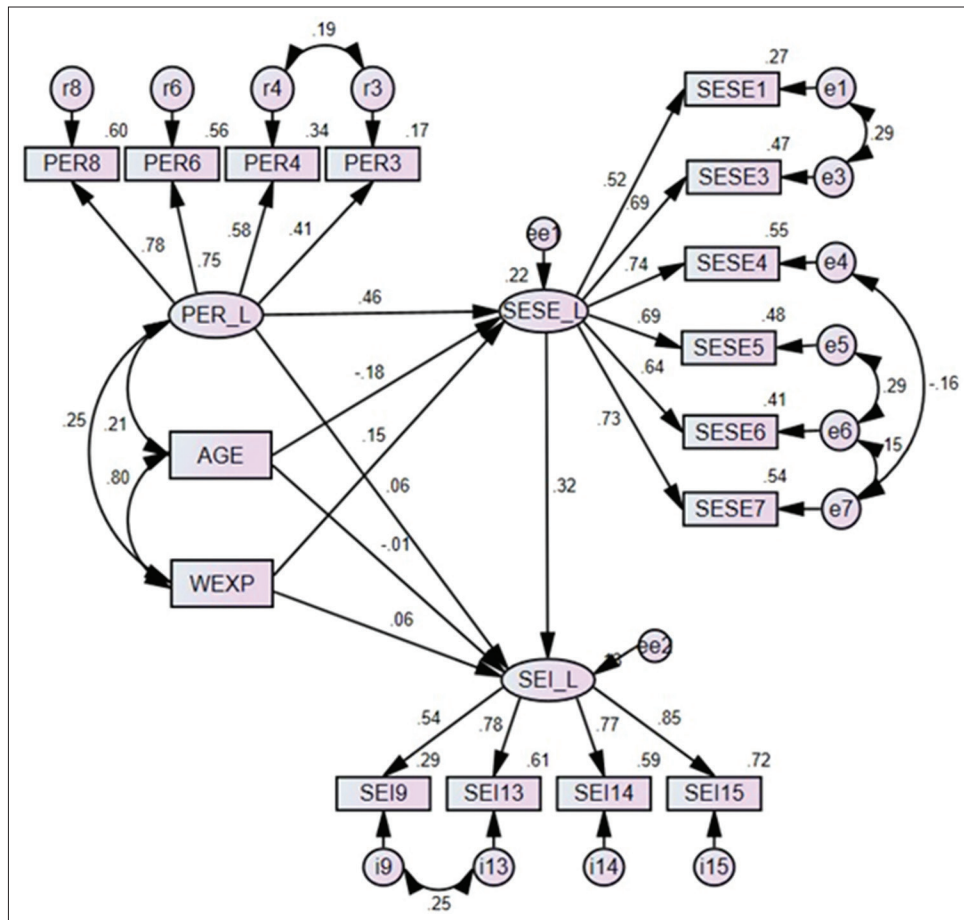
Model	$\chi^2$	df	p	$\chi^2/df$	RMR	GFI	PGFI	NFI	CFI	RSMEA
PER-SEI (a)	87.809	29	0.000	3.028	0.102	0.984	0.519	0.979	0.986	0.042
PER-SESE-SEI (a)	283.033	90	0.000	3.145	0.106	0.970	0.642	0.960	0.972	0.043
PER-SEI (b)	126.201	87	0.004	1.451	0.090	0.978	0.516	0.964	0.988	0.020
PER-SESE-SEI (b)	482.779	270	0.000	1.788	0.114	0.951	0.630	0.927	0.966	0.026

(a)  $N=1,144$  (overall sample); (b) Multiple-group analyses,  $N=454$  (China);  $N=306$  (Russia);  $N=384$  (USA); \*\* $p<0.01$ , \*\*\* $p<0.001$ .  
 PER=Perseverance, SESE=Social entrepreneurial self-efficacy, SEI=Social entrepreneurial intent, PP=Proactive Personality

**Table 4: Regression analyses: PER**

IVs	USA			Russia			China		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Age	-0.125	-0.120	-0.090	-0.094	-0.063	-0.032	0.002	-0.006	0.004
WEXP	-0.132	0.126	0.101	0.013	-0.018	-0.056	-0.006	-0.015	-0.045
PER		0.122*	0.022		0.139*	0.056		0.190***	0.097*
SESE			0.335***			0.265***			0.287***
R2	0.010	0.025*	0.126***	0.008	0.026*	0.087***	0.000	0.036***	0.109***
$\Delta R^2$		0.015*	0.102***		0.018*	0.061***		0.036***	0.073***

\* $p<0.05$ , \*\* $p<0.01$ , \*\*\* $p<0.001$



**Figure 1: Structural Equation Model, Perseverance, SESE, SEI (N = 1,144)**

group analyses, we found that the model continued to have a good fit with the data from the three countries (GFI =.946,  $\chi^2/df=1.784$ , RMSEA =.026). Figure 2 provides the structural equation model. Table 3 (above) reported the model fit statistics.

Controlling for age and work experience, the direct relationship between proactive personality and SEI was significant for USA ( $R^2=.039^{**}$ ,  $\beta =.173^{**}$ ) and China ( $R^2=.055^{***}$ ,  $\beta =.236^{***}$ ), but not for Russia. Hypothesis 2 was therefore partially supported. While we do not have an explanation for why the relationship between PP and SEI was not found for the Russians. We note that Russian millennials in our sample scored slightly lower on SEI than did respondents from the other countries; yet while Russians had lower SEI scores than Americans (mean diff. =-.372,  $p=.000$ , one tailed) and Chinese, the difference with the Chinese was not significant (mean diff. = -.093, n.s.). We can conjecture that the proactive Russians in our sample may be seeking other, non-social opportunities in which to use their proactiveness.

Having previously established that SESE was positively related to SEI (H6), we were next able to test for mediation. For Hypothesis 7(b), we found that SESE fully mediated the relationship between proactive personality and SEI for the US and Chinese sample (see Table 6.) The Russian sample could not be tested since PP did not predict SEI among the Russians. Hypothesis 7(b) was supported for USA and China, but not for Russia.

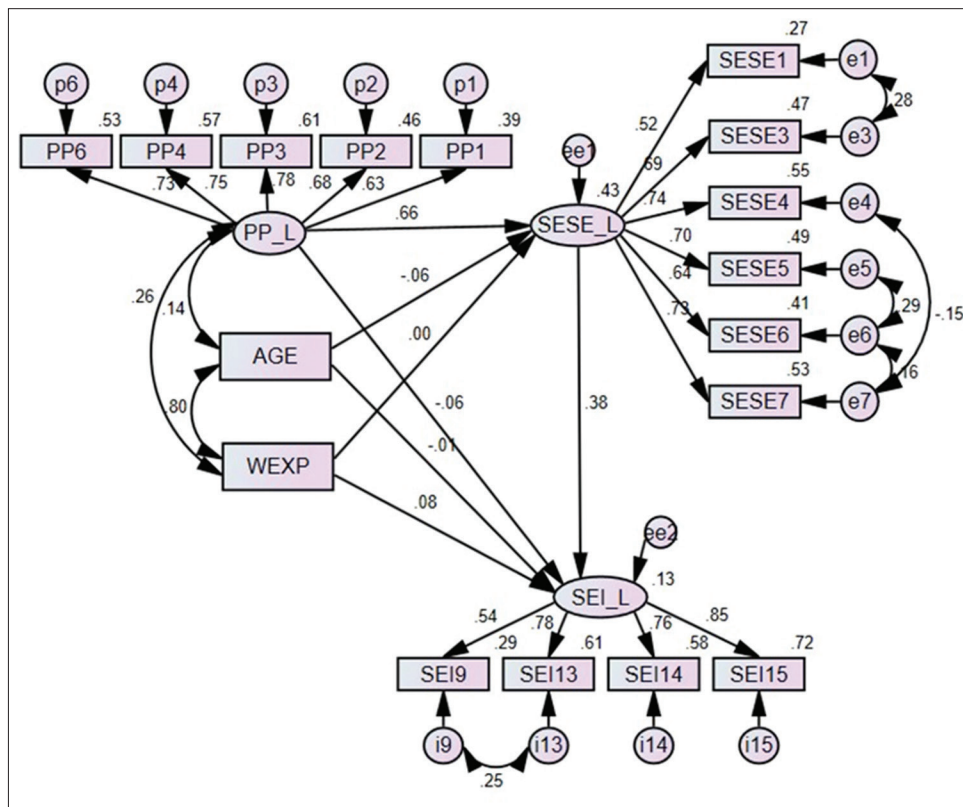
### 4.3. Tests of Moderation

Hypotheses 3, 4, and 5 proposed moderational effects of concern for social problems, determinism, and life satisfaction on the relationship between (a) perseverance and (b) proactive personality, respectively, on SEI. Multiple regression or SEM can be used to test moderation, as the rationale of the analyses is the same in both methods (Frazier, Tix, & Barron, 2004). However,

**Table 5: Model fit for the meditational framework**

Model	$\chi^2$	df	p	$\chi^2/df$	RMR	GFI	PGFI	NFI	CFI	RSMEA
PP-SEI (a)	100.461	39	0.000	2.576	0.092	0.984	0.581	0.981	0.988	0.037
PP-SESE-SEI (a)	290.604	106	0.000	2.742	0.097	0.971	0.672	0.965	0.977	0.039
PP-SEI (b)	180.857	117	0.000	1.546	0.100	0.972	0.574	0.960	0.985	0.022
PP-SESE-SEI (b)	567.229	318	0.000	1.784	0.110	0.946	0.656	0.928	0.966	0.026

(a)  $N=1,144$  (overall sample); (b) Multiple group analyses,  $N=454$  (China);  $N=306$  (Russia);  $N=384$  (USA);  $^{**}p<0.01$ ,  $^{***}p<0.001$ . PER=Perseverance, SESE=Social entrepreneurial self-efficacy, SEI=social entrepreneurial intent, PP=Proactive Personality



**Figure 2: Structural Equation Model, Proactive Personality, SESE, SEI (N = 1,144)**

Frazier, Tix, and Barron, (2004) point out that the use of SEM techniques for testing interaction between continuous variables is complex (Holmbeck, 1997), and there is barely any agreement amongst researchers as to which of the several approaches is the best. Hence we used moderated multiple regression to test hypotheses 3, 4, and 5. We first test the potential moderating effect of social concerns as a composite variable (all concerns). As shown in Table 7, concern for social problems (CSP) was not found to be a moderator. We did find that concerns about corruption/good government and concerns about the environment moderated the perseverance-SEI relationship for the Chinese in our sample (See Figure 3 and 4).

**Table 6: Regression analyses: PP**

IVs	USA			Russia		China		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 1	Model 2	Model 3
Age	-0.125	-0.087	-0.092	-0.094	-0.086	0.002	-0.004	0.005
WEXP	-0.132	0.091	0.103	0.013	0.003	-0.006	-0.030	-0.048
PP		0.173**	-0.009		0.067		0.236***	0.091
SESE			0.347***					0.271***
R <sup>2</sup>	0.010	0.039**	0.126***	0.008	0.012	0.000	0.055***	0.106***
ΔR <sup>2</sup>		0.029**	0.087***		0.004		0.055***	0.051***

**Table 7: Results of tests of moderation of social concerns on PER – SE relationship**

IVs	USA			Russia			China		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Age	-0.125	-0.135*	-0.134*	-0.094	-0.042	-0.040	0.002	-0.002	-0.002
WEXP	0.132	0.127*	0.128*	0.013	-0.042	-0.042	-0.006	-0.029	-0.021
PER		0.057	0.065		0.109*	0.098		0.214**	0.122*
CSP		0.451***	0.437***		0.317***	0.307***		0.236***	0.243***
PER*CSP			0.048			-0.034			0.077
R <sup>2</sup>	0.010	0.224***	0.226***	0.008	0.125***	0.126***	0.000	0.087***	0.093***
ΔR <sup>2</sup>		0.214***	0.002		0.118***	0.001		0.087***	0.006

IVs	USA			Russia			China		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Age	-0.125	-0.133*	-0.133*	-0.094	-0.037	-0.037	0.002	0.018	0.015
WEXP	0.132	0.125	0.125	0.013	-0.014	-0.014	-0.006	-0.014	-0.013
PER		0.118*	0.118*		0.130*	0.128*		0.153**	0.156**
CSP1_AniRts		0.336***	0.336***		0.302***	0.300***		0.194***	0.192***
PER*CSP1_AniRts			0.001			-0.008			-0.069
R <sup>2</sup>	0.010	0.138***	0.138***	0.008	0.116***	0.116***	0.000	0.072***	0.076***
ΔR <sup>2</sup>		0.128***	0.000		0.109***	0.000		0.072***	0.005

IVs	USA			Russia			China		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Age	-0.125	-0.128	-0.129	-0.094	-0.056	-0.053	0.002	-0.020	-0.025
WEXP	0.132	0.136*	0.137*	0.013	-0.036	-0.036	-0.006	-0.018	-0.003
PER		0.098*	0.091		0.117*	0.111		0.154**	0.156**
CSP2_Corrpt		0.314***	0.325***		0.137*	0.131*		0.198***	0.207***
PER*CSP2_Corrpt			-0.025			-0.024			0.112*
R <sup>2</sup>	0.010	0.122***	0.123***	0.008	0.044**	0.045*	0.000	0.074***	0.086***
ΔR <sup>2</sup>		0.113***	0.000		0.037**	0.000		0.074***	0.012*

IVs	USA			Russia			China		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Age	-0.125	-0.116	-0.116	-0.094	-0.050	-0.039	0.002	0.001	0.002
WEXP	0.132	0.117	0.115	0.013	-0.041	-0.042	-0.006	-0.023	-0.012

(Contd...)

**Table 7: (Continued)**

IVs	USA			Russia			China		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
PER		0.109*	0.106*		0.142*	0.112		0.155**	0.143**
CSP3_Envir		0.324***	0.334***		0.251***	0.235***		0.145**	0.163**
PER*CSP3_Envir			-0.022			-0.081			0.095*
R <sup>2</sup>	0.010	0.130***	0.130***	0.008	0.089***	0.094***	0.000	0.056***	0.064***
ΔR <sup>2</sup>		0.120***	0.000		0.081***	0.005		0.056***	0.009*

IVs	USA			Russia			China		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Age	-0.125	-0.136*	-0.136*	-0.094	-0.070	-0.070	0.002	-0.007	-0.005
WEXP	0.132	0.121	0.121	0.013	-0.035	-0.035	-0.006	-0.024	-0.019
PER		0.060	0.057		0.129*	0.128*		0.166***	0.161***
CSP4_HH		0.319***	0.323***		0.249***	0.247***		0.128**	0.138**
PER*CSP4_HH			-0.012			-0.004			0.068
R <sup>2</sup>	0.010	0.122***	0.122***	0.008	0.087***	0.087***	0.000	0.052***	0.056***
ΔR <sup>2</sup>		0.112***	0.000		0.080***	0.000		0.052***	0.005

IVs	USA			Russia			China		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Age	-0.125	-0.134*	-0.134*	-0.094	-0.041	-0.041	0.002	-0.003	-0.001
WEXP	0.132	0.135*	0.134*	0.013	-0.026	-0.026	-0.006	-0.029	-0.023
PER		0.055	0.051		0.117*	0.117*		0.149**	0.156***
CSP5_HRts		0.339***	0.349***		0.199***	0.199***		0.185***	0.192***
PER*CSP5_HRts			-0.030			0.000			0.080
R <sup>2</sup>	0.010	0.135***	0.136***	0.008	0.065***	0.065***	0.000	0.068***	0.075***
ΔR <sup>2</sup>		0.125***	0.001		0.057***	0.000		0.068***	0.006

IVs	USA			Russia			China		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Age	-0.125	-0.121	-0.120	-0.094	-0.063	-0.061	0.002	-0.013	-0.013
WEXP	0.132	0.126*	0.124	0.013	-0.018	-0.020	-0.006	-0.023	-0.018
PER		0.046	0.051		0.127*	0.118*		0.166***	0.166***
CSP6_Hsuffer		0.450***	0.428***		0.168**	0.153*		0.133**	0.135**
PER*CSP6_Hsuffer			0.060			-0.043			0.073
R <sup>2</sup>	0.010	0.222***	0.225***	0.008	0.054**	0.056**	0.000	0.053***	0.058***
ΔR <sup>2</sup>		0.212***	0.003		0.047**	0.001		0.053***	0.005

**Table 8: Results of tests of moderation of determinism on PER – SE relationship**

IVs	USA			Russia			China		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Age	-0.125	-0.129	-0.126	-0.094	-0.048	-0.041	0.002	-0.011	-0.012
WEXP	0.132	0.135	0.131	0.013	-0.028	-0.034	-0.006	-0.012	-0.012
PER		0.131*	0.136**		0.143*	0.145*		0.188***	0.190***
DET		0.081	0.052		0.154**	0.134*		0.091	0.091*
PER*DET			0.050			-0.073			-0.011
R <sup>2</sup>	0.010	0.031*	0.033*	0.008	0.050**	0.054**	0.000	0.044***	0.044***
ΔR <sup>2</sup>		0.021*	0.002		0.042**	0.005		0.044***	0.000

We failed to find that either determinism or life satisfaction moderated the PER – SE relationship (see Tables 8 and 9). Hypotheses 4(a) and 5(a) were not supported.

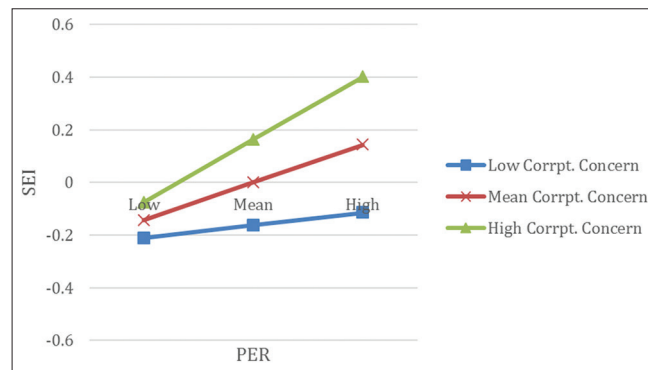


Figure 3: Moderation Effect of Corruption Concern on Relationship PER-SEI Chinese Sample (N=454)

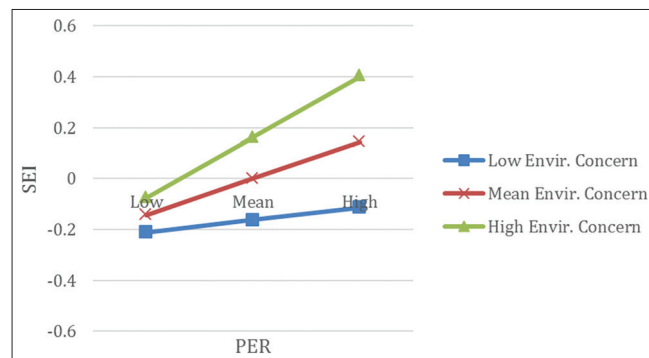


Figure 4: Moderation Effect of Environment Concern on Relationship PER-SEI Chinese Sample (N=454)

Table 9: Results of tests of moderation of life satisfaction on PER – SE relationship

IVs	USA			Russia			China		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Age	-0.125	-0.100	-0.100	-0.094	-0.049	-0.044	0.002	-0.006	-0.007
WEXP	0.132	0.104	0.104	0.013	-0.029	-0.030	-0.006	-0.008	-0.014
PER		0.105*	0.107*		0.116*	0.116*		0.171***	0.179***
LSat		0.143**	0.147**		0.122*	0.097		0.197***	0.202***
PER*LSat			-0.012			-0.073			0.059
R <sup>2</sup>	0.010	0.045**	0.045**	0.008	0.040*	0.045*	0.000	0.075***	0.078***
ΔR <sup>2</sup>		0.035**	0.000		0.033**	0.005		0.075***	0.003

We then examined potential moderators of the relationship between proactive personality and social entrepreneurial intent. We found that concerns about corruption/good government enhanced the relationship for the Chinese sample (See Figure 5), but no other social concerns were found to be moderators. (See Table 10). Hypothesis 3(b) was not supported.

Finally, we examined the possible moderating effects of determinism and life satisfaction. We had expected to find that moderate levels of satisfaction would enhance the relationship between perseverance and SEI and proactive personality and SEI, but the moderation would be less at high levels (very satisfied with life) and low levels (very dissatisfied). However, we did not find that either variable moderated the relationship between proactive personality and social entrepreneurial intent (see Tables 11 and 12). Hypotheses 4(b) and 5(b) were not supported.

## 5. DISCUSSION

The focus of this paper was the drivers of social entrepreneurial intent among millennials in China, Russia, and the USA, namely Perseverance and Proactive Personality. Additionally, it delineated the mediation mechanism of the SEI relationship through SESE.

**Table 10: Results of tests of moderation of social concerns on PP – SE relationship**

	USA			China		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Age	-0.125	-0.123	-0.125	0.002	-0.002	-0.003
WEXP	0.132	0.115	0.120	-0.006	-0.041	-0.038
PP		0.062	0.068		0.178***	0.174***
CSP		0.444***	0.424***		0.226***	0.244***
PP*CSP			0.065			0.042
R <sup>2</sup>	0.010	0.224***	0.228***	0.000	0.102***	0.104***
ΔR <sup>2</sup>		0.214***	0.004		0.102***	0.001
	USA			China		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Age	-0.125	-0.107	-0.108	0.002	0.019	0.018
WEXP	0.132	0.098	0.101	-0.006	-0.028	-0.028
PP		0.138**	0.135**		0.214***	0.216***
CSP1_AniRts		0.323***	0.305***		0.201***	0.198***
PP*CSP1_AniRts			0.050			-0.008
R <sup>2</sup>	0.010	0.142***	0.144***	0.000	0.094***	0.094***
ΔR <sup>2</sup>		0.132***	0.002***		0.094***	0.000***
IVs	USA			China		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Age	-0.125	-0.107	-0.107	0.002	-0.018	-0.023
WEXP	0.132	0.113	0.115	-0.006	-0.030	-0.021
PP		0.113*	0.119*		0.194***	0.195***
CSP2_Corrpt		0.299***	0.281***		0.182***	0.220***
PP*CSP2_Corrpt			0.040			0.104*
R <sup>2</sup>	0.010	0.125***	0.126***	0.000	0.086***	0.095***
ΔR <sup>2</sup>		0.115***	0.001		0.086***	0.009*
IVs	USA			China		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Age	-0.125	-0.091	-0.091	0.002	0.002	0.001
WEXP	0.132	0.089	0.094	-0.006	-0.036	-0.033
PP		0.138**	0.146**		0.202***	0.195***
CSP3_Envir		0.314***	0.286***		0.132**	0.148**
PP*CSP3_Envir			0.069			0.037
R <sup>2</sup>	0.010	0.136***	0.140***	0.000	0.071***	0.072***
ΔR <sup>2</sup>		0.126***	0.004		0.071***	0.001
IVs	USA			China		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Age	-0.125	-0.115	-0.114	0.002	-0.006	-0.006
WEXP	0.132	0.098	0.100	-0.006	-0.037	-0.037
PP		0.108*	0.113*		0.210***	0.210***
CSP4_HH		0.308***	0.296***		0.113*	0.111*
PP*CSP4_HH			0.038			-0.004
R <sup>2</sup>	0.010	0.129***	0.131***	0.000	0.067***	0.067***
ΔR <sup>2</sup>		0.120***	0.001		0.067***	0.000
Age	-0.125	-0.118	-0.119	0.002	-0.003	-0.003
WEXP	0.132	0.118	0.119	-0.006	-0.043	-0.043

(Contd...)

**Table 10: (Continued)**

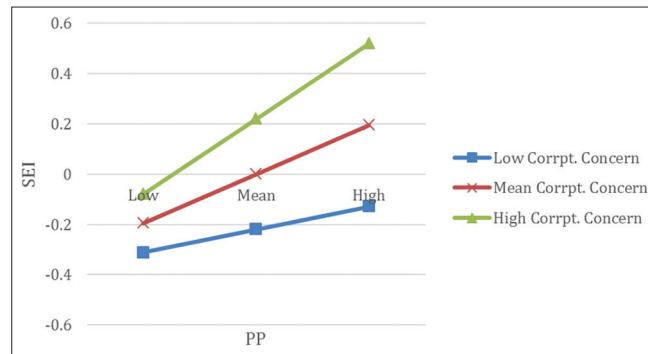
	USA			China		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
PP		0.081	0.081		0.205***	0.206***
CSP5_HRts		0.328***	0.326***		0.185***	0.188***
PP*CSP5_HRts			0.009			0.007
R <sup>2</sup>	0.010	0.138***	0.138***	0.000	0.088***	0.088***
ΔR <sup>2</sup>		0.128***	0.000		0.088***	0.000
IVs	USA			China		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Age	-0.125	-0.111	-0.116	0.002	-0.012	-0.012
WEXP	0.132	0.115	0.123	-0.006	-0.037	-0.039
PP		0.056	0.058		0.217***	0.217***
CSP6_Hsuffer		0.444***	0.420***		0.133**	0.128**
PP*CSP6_Hsuffer			0.076			-0.016
R <sup>2</sup>	0.010	0.222***	0.228***	0.000	0.072***	0.072***
ΔR <sup>2</sup>		0.212***	0.005		0.072***	0.000

**Table 11: Results of tests of moderation of determinism on PP – SE relationship**

IVs	USA			China		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Age	-0.125	-0.095	-0.094	0.002	-0.008	-0.008
WEXP	0.132	0.098	0.097	-0.006	-0.027	-0.027
PP		0.178***	0.179***		0.227***	0.228***
DET		0.076	0.067		0.067	0.066
PP*DET			0.018			-0.004
R <sup>2</sup>	0.010	0.045**	0.045**	0.000	0.049***	0.243***
ΔR <sup>2</sup>		0.035**	0.000		0.059***	0.000

**Table 12: Results of tests of moderation of life satisfaction on PP – SE relationship**

IVs	USA			China		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Age	-0.125	-0.077	-0.077	0.002	-0.004	-0.007
WEXP	0.132	0.079	0.079	-0.006	-0.020	-0.016
PP		0.142**	0.141**		0.188***	0.176***
LSat		0.119*	0.119*		0.158***	0.122*
PP*LSat			0.001			-0.088
R <sup>2</sup>	0.010	0.052***	0.052**	0.000	0.078***	0.084***
ΔR <sup>2</sup>		0.042***	0.000		0.078***	0.006



**Figure 5:** Moderation Effect of Corruption Concern on Relationship PP-SEI Chinese Sample (N=454)

### 5.1. Findings and Contribution

The results of the study not only make a contribution to further understanding of what drives people to choose to become social entrepreneurs, but they also present several questions and the need for additional research. First, we found that perseverance predicted social entrepreneurial intent. Proactive personality predicted SEI for the Americans and Chinese, but not for the Russians. Prior research has shown significant variations in entrepreneurship and innovation in different countries around the world, and some of these differences are explainable by variations in culture (among others: Shane, 1995; Shane et al., 1995; Williams & McGuire, 2010). It is possible that a characteristic of Russian culture would help explain the different findings, or it may simply be that proactive Russians tend to seek other outlets for their proactiveness, whether in employment or in traditional entrepreneurship.

Second, the potential mediating role of SESE was empirically tested. SESE fully mediated the relationship between perseverance and SEI for the US and Russian samples, and partially mediated this relationship for the Chinese sample. We also found that SESE fully mediated the relationship between proactive personality and SEI for the Americans and Chinese. We conclude from this that social entrepreneurial intent can be enhanced by helping proactive, persevering individuals in these countries build their confidence in their ability to start a social enterprise. Although we did not find support for the moderational roles of determinism (a cultural value) or life satisfaction, it was interesting to find that life satisfaction was lowest among Chinese millennials and highest among the Americans, whereas determinism was significantly higher for the Chinese and Russians than the Americans. Future research may explore further how individuals' cultural values and satisfaction with their own lives might be related to the starting of new social enterprises.

### 5.2. Practical Implications

In terms of policy, our findings suggest that, given the vital role played by social entrepreneurial self-efficacy, it is important that educational institutions provide entrepreneurial training through both entrepreneurial education and field work (Tracey & Phillips, 2007). Self-efficacy is developed through students' mastery of skills, identification with role models, social persuasion by important others; it is clearly an area where educators can have a major effect on the development of students' confidence about, and eventually desire to become, social entrepreneurs. Tracey and Phillips (2007) concluded that an effective education in social entrepreneurship must include, but cannot be limited to, acquiring the skills and expertise required in any type of entrepreneurship. Moreover, they point out, social entrepreneurship need not be treated as a stand-alone subject, but instead, "at the appropriate juncture [...] social entrepreneurship should be woven through traditional courses and included in lectures and discussions where relevant" (Tracey & Phillips, 2007: 298). Building confidence in one's ability to become a social entrepreneur can occur when education includes such things as social business plan preparations/competitions, social entrepreneurs as guest speakers (role models), consulting projects and internships (experiential learning), and even writing case studies about social ventures (Tracey & Phillips, 2007).

### 5.3. Limitations

As noted previously, we studied intent, not behavior, with the understanding that cognitive intent is a powerful predictor of later behavior. Our research, however, was not about the drivers of *successful* social entrepreneurship, and we make no claim that intent is related to posterior success. Future research can extend our study to actual behavior. Our findings are potential victims of all the threats to the validity that apply to cross sectional survey research collecting self-reported data, and in particular common method variance which may be due to some respondents providing what they believed to be socially desirable answers (Podsakoff et al., 2003). High correlations between independent and dependent variables reduce the power to detect interaction effects (Evans, 1985); however this was not a problem as we had two significant interactions in the study. Brockner et al. (1997) noted that if common method variance explains significant relationships, there is no rationale for a significant relationship at



one level but not on another. Also, the study lacked sufficient control variables. Finally, the data were collected from students and hence generalizability to other populations may be an issue.

#### 5.4. Future Research

As with all behavioral research, longitudinal studies are necessary to discover the extent to which intent actually translates into actual behavior (Gartner, 1988). Future research can extend the present study by including enacted social entrepreneurial behavior; a longitudinal design would enhance our understanding of the relationships we found in the present study. Future studies should include more situational factors in order to complete the picture, and additional variables proposed in the literature, such as attitudes of social support for SE, entrepreneurs' empathy, perceived feasibility of a given social venture, and others (cf. Mair & Noboa, 2003).

Future research should also include conducting additional tests of construct validity and examining multiple variable interactions – preferably with larger national and international samples that allow us to examine critically cultural variables and country differences and similarities in the antecedents of SEI.

The present study is an initial attempt at studying the SEI of millennials and has thus made a small but significant contribution to the nascent field of social entrepreneurship.

#### 6. REFERENCES

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50, 179-211.
- Aldrich, H. & Zimmer, C. (1986). Entrepreneurship through social networks. *The art and science of entrepreneurship*. Ballinger, Cambridge, MA, 3-23.
- Alvord, S.H., Brown, L.D. & Letts, C.W. (2004). Social entrepreneurship and societal transformation. *Journal of Applied Behavioral Science*, 40(3), 260–282.
- Austin, J., Stevenson, H. & Wei-Skillern, J. (2006). Social and commercial entrepreneurship: Same, different, or both? *Entrepreneurship Theory and Practice*, 30, 1–22.
- Bateman, T.S., & Crant, J.M. (1993). The proactive component of organizational behavior: A measure and correlates. *Journal of Organizational Behavior*, 14, 103-118.
- Bornstein, D. (2004). *How to change the world: Social entrepreneurs and the power of new ideas*. Oxford: Oxford University Press.
- Boschee, J. & McClurg, J. (2003). *Toward a better understanding of social entrepreneurship: Some important distinctions*. Working paper. Dallas, TX: Institute for Social Entrepreneurs. Available at <http://www.se-alliance.org/better-understanding.pdf>
- Bradach, J.L. (2003). Going to scale: The challenge of replicating social programs. *Stanford Social Innovation Review*, (Spring), 19–25.
- Chell, E. (2007). Social enterprise and entrepreneurship. *International Small Business Journal*, 25, 5-26.
- Crant, J.M. (1996). The proactive personality scale as a predictor of entrepreneurial intentions. *Journal of Small Business Management*, 34, 42-49.
- Deal, J.J., Altman, D.G. & Rogelberg, S.G. (2010). Millennials at work: What we know and what we need to do (if anything). *Journal of Business and Psychology*, 25: 191-199.
- Dees, J.G. (1998). Enterprising nonprofits. *Harvard Business Review*, 76(1), 54–65.
- Dees, J.G., Anderson, B.B., & Wei-Skillern, J. (2004). Scaling social impact: Strategies for spreading social innovations. *Stanford Social Innovation Review*, 2 (Spring), 24–32.
- Diener, E.D., Emmons, R.A., Larsen, R.J. & Griffin, S. (1985). The satisfaction with life scale. *Journal of personality assessment*, 49, 71-75.
- Emerson, J. (1999). *Five challenges in social purpose enterprise development*. Working paper. San Francisco: Roberts Enterprise Development Fund. [http://www.redf.org/download/boxset/REDF\\_vol2\\_11.pdf](http://www.redf.org/download/boxset/REDF_vol2_11.pdf)
- Emerson, J., & Twersky, F. (Eds.). (1996). *new social entrepreneurs: The success, challenge and lessons of non-profit enterprise creation*. The Homeless Economic Fund, the Roberts Foundation.
- Foster, W. & Bradach, J.L. (2005). Should non-profits seek profits? *Harvard Business Review*, 83(2), 92–100.
- Howe, N. & Strauss, W. (2009). *Millennials rising: The next great generation*. New York: Vintage.
- Krueger, N.F. & Carsrud, A.L. (1993). Entrepreneurial intentions: applying the theory of planned behaviour. *Entrepreneurship & Regional Development*, 5, 315-330.
- Mair, J. & Martí, I. (2006). Social entrepreneurship research: A source of explanation, prediction, and delight. *Journal of World Business*, 41(1), pp. 36-44.
- Mair, J. & Noboa, E. (2003). Social entrepreneurship: How intentions to create a social enterprise get formed. Working paper no. 521, IESE Business School.
- Mair, J., Seelos, C. & Borwankar, A. (2005). Social entrepreneurial initiatives within the sustainable development landscape. *International Journal of Entrepreneurship Education*, 2, 431–452.
- Markman, G.D., Baron, R.A. & Balkin, D.B. (2005). Are perseverance and self-efficacy costless? Assessing entrepreneurs' regretful thinking. *Journal of Organizational Behavior*, 26, 1–19.
- McGuire, S.J.J., Fok, L. & Kwong, K. (2006). A comparative study of international cultural and ethical values: Preliminary findings and research agenda. *International Journal of Management Theory and Practices*, 7, 1-32.

- Mobilize (2016). Our Mission. Retrieved from <http://www.mobilize.org/#!/about-us/c21cw>
- OECD, (1998). *Fostering Entrepreneurship*. Paris: OECD.
- Oster, S.M., Massarsky, C.W. & Beinhacker, S.L. (2004). *Generating and sustaining non-profit earned income: A guide to successful enterprise strategies*. San Francisco: Jossey-Bass.
- Pache, A. & Chowdhury, I. (2012). Social entrepreneurs as institutionally embedded entrepreneurs: Towards a new model of social entrepreneurship education. *Academy of Management Learning and Education*, 11, 494-510.
- Prabhu, V.P., McGuire, S.J., Drost, E.A. & Kwong, K.K. (2012). Proactive personality and entrepreneurial intent: Is entrepreneurial self-efficacy a mediator or moderator? *International Journal of Entrepreneurial Behavior & Research*, 18, 559-586.
- Shane, S. (1995). Uncertainty avoidance and the preference for innovation championing roles. *Journal of International Business Studies*, 26, 47-68.
- Shane, S., Venkataraman, S. & MacMillan, I. (1995). Cultural differences in innovation championing strategies. *Journal of Management*, 21, 931-952.
- Shin, D.C. & Johnson, D.M. (1978). Avowed happiness as an overall assessment of the quality of life. *Social indicators research*, 5, 475-492
- Strauss, W. & Howe, N. (1992). *Generations: The history of America's future, 1584 to 2069*. Perennial.
- Digitalsynopsis.com, <http://digitalsynopsis.com/inspiration/60-public-service-announcements-social-issue-ads/> Accessed July 22, 3016.
- The Economist (2000, December, 21). Youth, Inc. Retrieved from <http://www.economist.com/node/455191>
- Tracey, P. & Phillips, N. (2007). The distinctive challenge of educating social entrepreneurs: A postscript and rejoinder to the special issue on entrepreneurship education. *Academy of Management Learning and Education*, 6, 264-271.
- Whiteside, S.P. & Lynam, D.R. (2001). The five factor model and impulsivity: Using a structural model of personality to understand impulsivity. *Personality and Individual Differences*, 30, 669-689.
- Williams, L.K. & McGuire, S.J. (2010). Economic creativity and innovation implementation: the entrepreneurial drivers of growth? Evidence from 63 countries. *Small Business Economics*, 34, 391-412.

## APPENDIX 1. MEASURES USED IN THE STUDY

### Social entrepreneurial intent (SEI) (4 items)

*Indicate how interested you are in the following career choices, by selecting a number from 1 (Not at all Interested) to 7 (Very Interested).*

Starting a nonprofit or for profit organization that addresses a social issue that is important to me.

Starting my own organization to solve a social problem in my local community.

Joining a network of people who are concerned about solving a certain social problem.

Building a worldwide network of relationships with people who are concerned about solving a certain social problem.

### Social entrepreneurial self-efficacy (SESE) (6 items adapted from Prabhu et al., 2012)

*Imagine that you are considering starting a business that will address a social problem. On the 1 to 7 scale where 7 = very confident and 1 = not at all confident, Indicate how confident you are that you will be able to do the following things:*

I can identify a social problem and its root cause.

I can design a business that will address an important social problem.

When I believe strongly in something, I am able inspire others to embrace my vision and values.

To start a business or project, I am confident that I will be able to find multiple sources of funding.

I am resourceful - I can muster the money, equipment, and people I need to address a social problem.

I can design a business that is sustainable in the long run; in other words, something that makes enough money to keep it going.

### Proactive Personality (PP) (5 items from Bateman & Crant, 1993)

*Below find a number of statements. Choose a number between 1 (Strongly Disagree) and 7 (Strongly Agree) to indicate how well these statements describe you as you really are.*

I am constantly on the lookout for new ways to improve my life.

Wherever I have been, I have been a powerful force for constructive change.

No matter what the odds, if I believe in something I will make it happen.

I am very good at identifying opportunities.

If I believe in an idea, no obstacle will prevent me from making it happen.

### Perseverance (4 items from Whiteside & Lynam's UPSS Impulsive Behavior scale, 2001)

*Below find a number of statements. Choose a number between 1 (Strongly Disagree) and 7 (Strongly Agree) to indicate how well these statements describe you as you really are.*

Unfinished tasks really bother me.  
 Once I get going on something I hate to stop.  
 I finish what I start.  
 I am a person who always gets the job done.

**Determinism** (7-item scale from McGuire, et al., 2008)

*Please indicate how much you agree with the statements below by checking any number between 1 and 7, where 1 = strongly disagree, and 7 = strongly agree.*

Most things are determined by forces we cannot control.  
 Whatever is going to happen will happen, no matter what actions people take.  
 Success is mostly a matter of good fortune.  
 All people have a path their lives are destined to take.  
 It's better to be lucky than smart.  
 We have little influence over the outcomes of events in our lives.  
 Silence is a useful way to let people know what you are thinking.

**Life Satisfaction** (5 item scale from Shin & Johnson, 1978)

*Please indicate how much you agree with the statements below by checking any number between 1 and 7, where 1 = strongly disagree, and 7 = strongly agree.*

In most ways my life is close to my ideal.  
 The conditions of my life are excellent.  
 I am satisfied with my life.  
 So far I have gotten the important things I want in my life.  
 If I could live my life over, I would change almost nothing.

**Concern for Social Problems (or Issues? Keep it the same everywhere)**

*Please indicate how likely – in the next 5 years – it is that you will take action to address the following social problems, by circling a number from 1 (Very Unlikely) to 7 (Very Likely).* Animal Rights.

Corruption and Good Government  
 Environment (Climate change, pollution, etc.)  
 Human Health  
 Human Rights  
 Human Suffering (Poverty, etc.)

**APPENDIX 2. SEM PARAMETER ESTIMATES**

**Appendix 2: SEM parameter estimates overall**

			PER --> SEI					PER --> SESE --> SEI				
			Unstandard beta	Standard beta	S.E.	C.R.	P	Unstandard beta	Standard beta	S.E.	C.R.	P
SESE_L	<--	PER_L						0.295	0.460	0.029	10.013	***
SESE_L	<--	AGE						-0.034	-0.181	0.009	-3.569	***
SESE_L	<--	WEXP						0.034	0.152	0.012	2.964	0.003
SEI_L	<--	SESE_L						0.638	0.318	0.089	7.214	***
SEI_L	<--	PER_L	0.262	0.204	0.049	5.340	***	0.074	0.057	0.055	1.339	0.181
SEI_L	<--	WEXP	0.049	0.107	0.024	2.032	0.042	0.027	0.060	0.023	1.164	0.244
SEI_L	<--	AGE	-0.025	-0.066	0.019	-1.265	0.206	-0.003	-0.009	0.019	-0.181	0.856

(Contd...)

**Appendix 2: (Continued)**

		PER --> SEI					PER --> SESE --> SEI				
		Unstandard beta	Standard beta	S.E.	C.R.	P	Unstandard beta	Standard beta	S.E.	C.R.	P
PER8	<-- PER_L	1.000	0.776			N.A.	1.000	0.776			N.A.
PER6	<-- PER_L	1.030	0.750	0.057	18.156	***	1.029	0.749	0.053	19.370	***
PER4	<-- PER_L	0.750	0.575	0.047	16.047	***	0.756	0.580	0.046	16.600	***
PER3	<-- PER_L	0.658	0.414	0.056	11.791	***	0.647	0.407	0.055	11.801	***
SESE1	<-- SESE_L						1.000	0.516			N.A.
SESE3	<-- SESE_L						1.346	0.686	0.075	17.918	***
SESE4	<-- SESE_L						1.412	0.739	0.094	15.062	***
SESE5	<-- SESE_L						1.396	0.694	0.092	15.257	***
SESE6	<-- SESE_L						1.260	0.638	0.089	14.230	***
SESE7	<-- SESE_L						1.472	0.732	0.099	14.836	***
SEI15	<-- SEI_L	1.000	0.851			N.A.	1.000	0.851			N.A.
SEI14	<-- SEI_L	0.855	0.772	0.033	25.965	***	0.848	0.765	0.033	26.044	***
SEI13	<-- SEI_L	0.906	0.776	0.035	25.882	***	0.913	0.782	0.035	26.252	***
SEI9	<-- SEI_L	0.635	0.528	0.038	16.711	***	0.646	0.537	0.038	17.044	***
USA											
SESE_L	<-- PER_L						0.288	0.414	0.050	5.727	***
SESE_L	<-- AGE						-0.016	-0.105	0.011	-1.434	0.152
SESE_L	<-- WEXP						0.015	0.080	0.013	1.098	0.272
SEI_L	<-- SESE_L						0.823	0.369	0.160	5.129	***
SEI_L	<-- PER_L	0.197	0.127	0.091	2.178	0.029	-0.038	-0.024	0.098	-0.387	0.699
SEI_L	<-- WEXP	0.062	0.150	0.031	2.017	0.044	0.050	0.121	0.029	1.691	0.091
SEI_L	<-- AGE	-0.044	-0.127	0.026	-1.710	0.087	-0.031	-0.089	0.025	-1.242	0.214
PER8	<-- PER_L	1.000	0.740			N.A.	1.000	0.743			N.A.
PER6	<-- PER_L	1.215	0.883	0.104	11.682	***	1.197	0.874	0.095	12.583	***
PER4	<-- PER_L	0.788	0.590	0.075	10.566	***	0.800	0.602	0.074	10.781	***
PER3	<-- PER_L	0.758	0.470	0.090	8.386	***	0.753	0.468	0.090	8.361	***
SESE1	<-- SESE_L						1.000	0.497			N.A.
SESE3	<-- SESE_L						1.500	0.717	0.139	10.767	***
SESE4	<-- SESE_L						1.510	0.791	0.171	8.829	***
SESE5	<-- SESE_L						1.567	0.711	0.176	8.889	***
SESE6	<-- SESE_L						1.416	0.652	0.169	8.398	***
SESE7	<-- SESE_L						1.739	0.806	0.196	8.880	***
SEI15	<-- SEI_L	1.000	0.851			N.A.	1.000	0.896			N.A.
SEI14	<-- SEI_L	0.855	0.772	0.041	22.649	***	0.919	0.875	0.040	22.707	***
SEI13	<-- SEI_L	0.906	0.776	0.044	21.458	***	0.952	0.847	0.044	21.594	***
SEI9	<-- PER_L	.635	0.528	0.059	11.940	***	0.704	0.576	0.059	12.009	***
Russia											
SESE_L	<-- PER_L						0.251	0.437	0.054	4.681	***
SESE_L	<-- AGE						-0.039	-0.111	0.029	-1.349	0.177
SESE_L	<-- WEXP						0.078	0.138	0.047	1.666	0.096
SEI_L	<-- SESE_L						0.773	0.344	0.213	3.636	***
SEI_L	<-- PER_L	0.204	0.157	0.096	2.131	0.033	0.018	0.014	0.107	0.169	0.866
SEI_L	<-- WEXP	-0.029	-0.023	0.105	-0.276	0.783	-0.093	-0.073	0.104	-0.894	0.371
SEI_L	<-- AGE	-0.048	-0.062	0.065	-0.740	0.459	-0.018	-0.023	0.065	-0.278	0.781
PER8	<-- PER_L	1.000	0.739			N.A.	1.000	0.755			N.A.

(Contd...)

**Appendix 2: (Continued)**

			PER --> SEI					PER --> SESE --> SEI				
			Unstandard beta	Standard beta	S.E.	C.R.	P	Unstandard beta	Standard beta	S.E.	C.R.	P
PER6	<--	PER_L	1.111	0.813	0.122	9.068	***	1.065	0.797	0.108	9.827	***
PER4	<--	PER_L	0.606	0.439	0.092	6.560	***	0.609	0.451	0.090	6.795	***
PER3	<--	PER_L	0.787	0.447	0.118	6.684	***	0.748	0.434	0.114	6.555	***
SESE1	<--	SESE_L						1.000	0.462			N.A.
SESE3	<--	SESE_L						1.485	0.668	0.198	7.497	***
SESE4	<--	SESE_L						1.567	0.694	0.239	6.553	***
SESE5	<--	SESE_L						1.418	0.641	0.220	6.438	***
SESE6	<--	SESE_L						1.261	0.594	0.206	6.113	***
SESE7	<--	SESE_L						1.414	0.641	0.226	6.255	***
SEI15	<--	SEI_L	1.000	0.818			N.A.	1.000	0.830			N.A.
SEI14	<--	SEI_L	0.903	0.772	0.077	11.740	***	0.874	0.757	0.074	11.849	***
SEI13	<--	SEI_L	0.855	0.711	0.076	11.210	***	0.843	0.711	0.074	11.335	***
SEI9	<--	SEI_L	0.550	0.452	0.078	7.025	***	0.549	0.457	0.077	7.166	***
China												
SESE_L	<--	PER_L						0.312	0.467	0.049	6.323	***
SESE_L	<--	AGE						-0.017	-0.033	0.025	-0.676	0.499
SESE_L	<--	WEXP						0.104	0.098	0.053	1.967	0.049
SEI_L	<--	SESE_L						0.510	0.298	0.123	4.152	***
SEI_L	<--	PER_L	0.281	0.237	0.076	3.689	***	0.109	0.096	0.082	1.342	0.180
SEI_L	<--	WEXP	-0.075	-0.041	0.097	-0.769	0.442	-0.125	-0.069	0.094	-1.328	0.184
SEI_L	<--	AGE	-0.005	-0.005	0.046	-0.102	0.918	0.005	0.005	0.044	0.106	0.916
PER8	<--	PER_L	1.000	0.768			N.A.	1.000	0.786			N.A.
PER6	<--	PER_L	0.849	0.587	0.102	8.316	***	0.814	0.577	0.091	8.962	***
PER4	<--	PER_L	0.814	0.606	0.098	8.348	***	0.781	0.595	0.086	9.074	***
PER3	<--	PER_L	0.412	0.273	0.092	4.481	***	0.407	0.276	0.086	4.732	***
SESE1	<--	SESE_L						1.000	0.557			N.A.
SESE3	<--	SESE_L						1.207	0.678	0.102	11.806	***
SESE4	<--	SESE_L						1.282	0.712	0.127	10.071	***
SESE5	<--	SESE_L						1.324	0.719	0.126	10.531	***
SESE6	<--	SESE_L						1.121	0.621	0.121	9.289	***
SESE7	<--	SESE_L						1.196	0.662	0.126	9.487	***
SEI15	<--	SEI_L	1.000	0.800			N.A.	1.000	0.792			N.A.
SEI14	<--	SEI_L	0.786	0.686	0.062	12.663	***	0.782	0.675	0.062	12.676	***
SEI13	<--	SEI_L	0.948	0.762	0.072	13.088	***	0.977	0.777	0.073	13.351	***
SEI9	<--	SEI_L	0.653	0.531	0.070	9.381	***	0.686	0.552	0.071	9.735	***