

# **Antecedent Factors and their Influence on the Young Entrepreneur's Future Sustainable Intentions**

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## **Abstract**

### Antecedent Factors and their Influence on the Young Entrepreneur's Future Sustainable Intentions

Linghao Meng

This exploratory study aims to understand the antecedent factors (sustainable/entrepreneurial orientations, self-determination motivation, and contextualities) that may influence a future young entrepreneur's intentions in developing sustainable enterprise practices (SEP). Adopting humanistic values from a service-dominant logic framework, we evaluate how a future young entrepreneur's mindset can be shaped in adopting sustainable enterprise best practices on ethical and moral altruistic decision-making. Based on the self-determination theory (SDT), we looked at the autonomous and self-regulatory motivation factors as key influencers on the individual decision-making process, and on how he/she weights contextual complexities in deciding to pursue doing good for the wellbeing of the organization and the community or preferring opportunistic self-interested rewarding goals. Combining online surveys and in-depth interviews in Canada and in China, it was found that intrinsic motivation factors influence the development of sustainable entrepreneurial orientations (SO) and sustainable enterprise practices (SEP). Although contextual and cultural factors moderate the effects of intrinsic motivations, one should capitalize on learned behaviors. As suggested through the in-depth interviews with experienced entrepreneurs, future young decision makers should be expressly taught about ethical, social, and environmental issues to develop SEP intentions and potential future sustainable entrepreneurial behaviors.

*Keywords: Sustainable Entrepreneurship (SE); Sustainable Orientation (SO); Sustainable Entrepreneurial Intentions (SEI); Self-determined Theory (SDT)*

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# **Antecedent Factors and their Influence on the Young Entrepreneur's Future Sustainable Intentions**

## **Introduction**

With growing inequalities and failing ecosystems, what should we do to change individual business mindsets in research and business practices? (Lariviere & Kandampully, 2019). Entrepreneurs play an important role in the mezzo level of economic and social ecosystems equilibrium. Shifting our definition of value creation wealth from a profit maximization to understand the societal role as a businessperson is essential (Ng & Vargo, 2019). Our business decisions and actions have ripple effects on the individuals and the community as a whole. For this reason, we must pay attention to the context change to foster innovation (Edvardsson et al., 2018). With the technological revolution, it is easy for those who have more wealth to abuse the system. This study adopts a humanistic and service-dominant logic perspective (Bush et al., 2018; Covellec & Hultman, 2014; Fehrer et al., 2018; Vargo & Lusch, 2008) to evaluate the individual sustainable entrepreneurs in acting with greed and/or moral-ethical values (Abela & Murphy, 2008). In a context where one can distance himself/herself from individual responsibilities, this may be easier than we think as we are using digital interactions as a “grey fuzziness” to design and communicate offerings that may look appealing for some, while co-destroying the ecosystem for others directly and/or indirectly at the micro, mezzo, and macro levels (Carù & Cova, 2015; Plé & Cáceres, 2010). We are not robots but thinkers, and value co-creation based on the engagement process between various actors within a collaborative economy (Sainato, 2020).

The rise of entrepreneurial platforms provides an increase connectivity, technology, engagement, and social connections, creating a blurb line between the customer and the service

provider who has the power to manipulate the collective mind (Fehrer et al., 2018). Entrepreneurs can niche their offerings towards social bubbles. For example, “we produce and sell ecological goods,” while in reality this is false advertising.

In this study, we chose to look at the principal actor’s behavior incorporating some organizational behavior concepts to his/her social responsibility from a service-dominant logic (Matthies et al., 2016); that is to say that every actor provides a service to another actor. He/She has a professional obligation to do what is best for both in order to obtain a win-win exchange while understanding the impact of words, design systems, and actions on other individuals, the local community, the society at large, the global community (Abela & Murphy, 2008). Thus, the theoretical foundation of this study is to view the “customer experience” challenges from the sustainable entrepreneurs’ practices, understanding that he/she has power in bringing together digital, physical, and social realms (Bolton et al., 2018). We are primarily interested in the service strategy of sustainable entrepreneurs shifting from the social washing towards a more responsible SE citizen to avoid co-destruction practices (Echeverri & Skålen, 2011) to offer new business models for teaching and research purposes across disciplines (Keating et al., 2018). The underlying purpose emphasizes the human touch, essential in-service interactions even behind digital platforms (Solnet et al., 2019).

Sustainable entrepreneurship (SE) has been conceptualized from various perspectives, including an organization’s moral complexity (Mort et al., 2002). We take into consideration Dees (1998) and Mort et al. (2002) perspectives: sustainable entrepreneurship business practices must take into consideration the increasing needs for social/economic/environmental good. Such “moral” good is defined as a “passion for sustainable mission dealing with various actual issues,” (Dees, 1998) while it also provides the opportunity of balancing the need to reach new markets and

continue to innovate (Dees, 1998; Mort et al., 2002). In this exploratory study, *innovation* is linked to processes that focus on social entrepreneurial practices (Dees, 1998; Mairi et al., 2012; Segal et al., 2005). Although attention was paid to defining acceptable practices for sustainable entrepreneurs, few scholars demonstrated how a sustainable entrepreneur will or is expected to perform, and what factors influence particular innovative processes that focus on sustainable entrepreneurial practices (Mair et al., 2006).

The purpose of this study is to concentrate on the individual SE (the micro level of the business relationship) and observe the relationship between the individual self-determination motivation factors (SDT) and well-acted sustainable-entrepreneurial intentions. However, SDT and well-acted sustainable intentions, altruistic intentions, may be moderated by individual cultural dimensions (Hofstede, 1984; Mahmood et al., 2019). The research design focuses on identifying how SE orientation in a particular context can trigger self-motivational factors. The self-motivation can be influenced by contextual factors enhancing or impeding the SE performance, such as SE intentions (Doherty et al., 2014; Haugh, 2005; Stam et al., 2014). More precisely, the sustainable entrepreneur considering himself/herself as a social innovator may be influenced by altruistic sustainable values and his/her personal level of fuzzy ethical boundary.

Chapter 1 reviews the theoretical foundation that will provide the basis for our conceptual model and formulation of the hypotheses (Chapter 2). The methodology (Chapter 3) and results (Chapter 4) are presented, followed by a general discussion and managerial implications (Chapters 5). We conclude indicating some limitations and future research avenues (Chapter 6).

## **Chapter 1**

### **Theoretical Foundation**

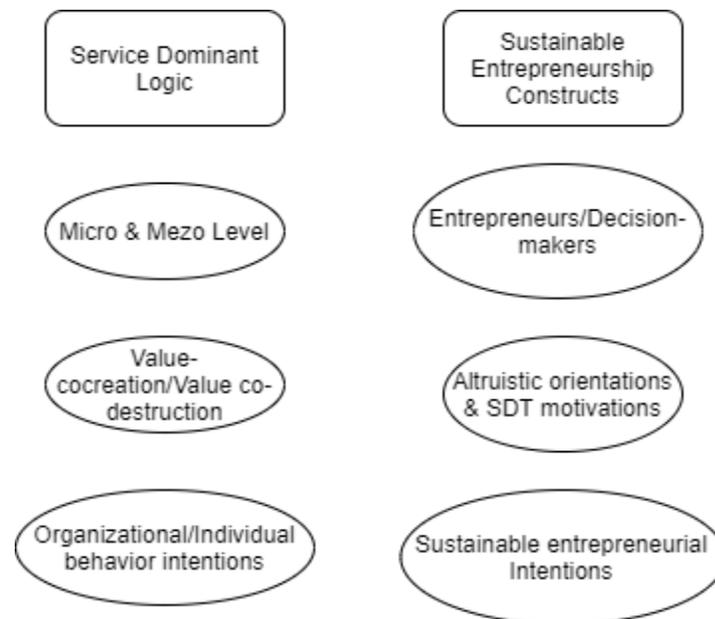
A young decision maker may be influenced by his family cultural context, the support received from different institutions, and his education at the university level. In this exploratory research, we look at some individual antecedent factors that may impact a future decision maker's sustainability decision intention. The new kind of decision maker we discuss in this study is Sustainable Entrepreneur (SE). This new actor should be innovative, proactive, and making decisive moves on economic, environmental, social sustainability issues for themselves or/and their organizations. According to our concerns about the SE, there two main questions we would like to respond. First, is the young decision maker (whether he/she represents his/her own business or certain organizations) familiar with the perspective of the Service-Dominant Logic (SDL) framework, and the sustainability tri-partite values systems? Second, what are the self-motivating specific factors and cultural dimensions that may influence his/her decision making? We infer that an altruistic and/or empathic orientation towards distinct sustainable endeavors will require specific knowledge and expertise for a future young entrepreneurs/decision maker to develop a sustainable framework, and to adjust accordingly his/her sustainable decision intentions and behaviors.

#### **1.1 The service-dominant logic (SDL)**

The service-dominant logic emphasizes the strategic importance of considering different levels of the ecosystem (micro, mezzo, and macro), the equilibrium between value co-creation and co-destruction, and how it is related to individuals' behavioral intentions when collaborating within and outside the organization (Plé & Cáceres, 2010; Vargo et al., 2008). All actors

(individual, teams, and organizations) contribute to exchange knowledge, service-to-service, the co-design of services, and processes to survive in a dynamic and evolving context (Vargo et al., 2008). To avoid greenwashing and misuse of communication strategy, the sustainable entrepreneur must be coherent and monitor short-term and long-term performances considering the impact of his/her decision on the ecosystem (Ferguson et al., 2021). Thus, his/her intentions must go beyond the call of duty and short-term economic performance (Laufer, 2003) (Please refer to Figure 1.1).

**Figure 1.1 Sustainable entrepreneurial orientation from an SDL perspective**



The service-dominant logic framework is founded on the principle that organizations are becoming less product-/good-centered, while service activities and service design are new ways of contributing to the overall business ecosystem taking into consideration sustainability constraints (Vargo & Akaka, 2009). Business decision makers are looking for ways to co-create values as opposed to comparing production efficiency (Callaway & Dobrzykowski, 2009). Specific specializations are necessary to differentiate both individuals, and organizations; while

collaborating through the value creation systems is essential especially for entrepreneurs to survive in a context where sustainability becomes a necessary strategic objective (Mariotti & Glackin, 2007). Callaway and Dobrzykowski (2009) uncover five characteristics of service-oriented entrepreneurs: i) increasingly identify new opportunities; ii) perform in addressing the lifetime use of “product”; iii) keep redefining roles of customers; iv) improve alignment of information/work/performance with their novel goals, and v) combine more, and new actors for co-creation of values. These characteristics provide a base for broadening the definition of what the “sustainable”/green entrepreneur could be. In the present study, we take the lenses of the service-dominant logic (SDL) towards the specialized actor (the sustainable entrepreneur). Most constructs are contextualized within the service-dominant logic. In contrast to Stephen et al. (2009) the explanation on how SDL implications work on the general service-enterprise and the market, we start at the micro level of the ecosystem, and try to identify the antecedent factors and their influence on the young entrepreneur's future sustainable intentions.

Given the growing inequalities and failing ecosystems, how should we change individual business mindsets in research and business practices? (Lariviere & Kandampully, 2019). Entrepreneurs play an essential role in the mezzo level of economic and social ecosystems equilibrium and the micro-level as individual actors. Shifting our definition of value creation wealth from profit maximization to understand a businessperson's societal role is essential (Ng & Vargo, 2019). Our business decisions and actions have ripple effects on the individuals and the community as a whole. For this reason, we must pay attention to the context change to foster sustainable actions (Edvardsson et al., 2018). With the technological revolution, it is easy for those who have more wealth to abuse the system. This study adopts a humanistic and service-dominant logic perspective (Bush et al., 2018; Covellec & Hultman, 2014; Fehrer et al., 2018; Vargo &

Lusch, 2008) to evaluate the individual self-motivation in acting with greed and/or moral-ethical values (Abela & Murphy, 2008).

The humanistic approach is based on the fact that we are not robots, but thinkers. Value co-creation is based on the engagement process between various actors within a collaborative economy (Sainato, 2020). The rise of entrepreneurial platforms provides an increased connectivity, technology, engagement, and social connections, creating a blurred line between the customer and the service provider who has the power to manipulate the collective mind (Fehrer et al., 2018). Entrepreneurs can niche their offering towards “social bubbles”; for example, “we produce and sell ecological goods” while in reality this is false advertising.

As mentioned, we are interested in the service strategy of sustainable entrepreneurship shifting from the social washing or so-called “rosywashing” towards a more responsible citizen with truly sustainable concerns to avoid co-destruction practices (Echeverri & Skålen, 2011), in order to offer new business models for teaching and research purposes. As proposed by Keating et al. (2018), the underlying purpose is to emphasize the human touch, essential in service interactions even behind digital platforms (Solnet et al., 2019).

## **1.2 Altruistic sustainable decision maker**

Before we discuss the sustainable entrepreneurship, we may first give a clear look who could present such new “moral” good, which is defined by Mort (1998). In this study, we referred some hints supported by Dees and Mort (2002). They brought the concepts of behavior orientation and behavior intention to further discuss how SE could make decisions and perform practices while considering the increasing needs for new “moral” (social/ environmental/ economic) good. In their altruistic SE decision pattern, behavior (SE) orientation starts with individual psychological

motivation-decision procedure and end with behavior (SE) intention which further causing self-reflecting on the ecosystem. Individuals' perception on the triple value sustainability is linked to those processes which pushing on altruistic sustainable entrepreneurial decisions (Dees, 1998; Mairi et al., 2012; Segal et al., 2005). Under the SDL contexts, we need pay more attention to such new actor "sustainable entrepreneur" (altruistic decision maker) and how the novel actor co-create value with the contexts and his/her future practices. With regards to the SDL perspective, the new actors' decision pattern analysis is not enough for explain the evolving situations in the future. Mair et al. (2006) consider, such as how we can define the orientation, how we can measure intentions or performances and what is the exact bridge procedure between the process from behavior orientations to behavior intentions. First, we will discuss what could be the potential way for conceptualize the SE intentions in a further step.

Sustainable entrepreneurs aim to create sustainable development through commercial, and entrepreneurial activities (Schaltegger & Wagner, 2011). Therefore, they act simultaneously from a pro-social and pro-environmental concerns, in order to further generate two types of value: *self-enhancing (functioning for economic values)* and *self-transcending (functioning for social and environmental values)* (Dean & McMullen, 2007; Shepherd & Patzelt, 2011). Altruism intention has been conceptualized as one representative symbol demonstrating the desire to begin new sustainable enterprises/ A few literatures also indicates that those new individual actor could practice more altruistically thanks to self-determined motivations and various contextual support (Fehr & Fischbacher, 2003; Mahmood et al., 2019). This indicates that their main altruistic motivation is to help others in need, rather than satisfy their own interests (Santos, 2012). Since altruistic motives are important in developing a sustainable decision mindset, we need to understand the underlying individual motivation factors.

Whether an individual is sustainable-oriented (moral, strategic, and practical) and entrepreneurial-oriented (creative, proactive, and innovative), we need to know what will influence his or her intention to become a real sustainable entrepreneur (Dean & McMullen, 2007; Mort et al., 2002). In order to become an altruistic sustainable entrepreneur, the self-motivation processes that connect behavioral orientations and intentions may be influenced by other contextual and cultural factors, such as perceived support, gender, age, and culture. These factors are further discussed in Chapter 2.

### **1.3 Self-determined motivation theory (SDT)**

Self-determined theory (SDT) explains human motivation factors triggered or influenced by social and environmental factors (Ferguson et al., 2015). SDT provides a basis for understanding the psychological needs to further demonstrate how individuals make actions and to which extent they will take responsibility for such actions (Deci & Ryan, 2000). In other words, applying the SDT, we can discover factors that motivate the individual's altruistic decisions for social value creations or potential destructions.

SDT plays a role in bridging individuals' concerns and their actions on organizational contexts, including entrepreneurial practices (Kirkley, 2016). When we study the origin of sustainable entrepreneurial practices from an SDL perspective, self-determined motivations factors can provide explanations as to why individual entrepreneurs may adopt a sustainable mindset. Since it is not just about psychological stimuli on specific business behaviors (e.g., distributing, shopping, and brand recognizing), we need to see how co-creation or co-destruction processes may influence individuals decisions and actions at the micro level of the ecosystem, and trigger challenges in the overall ecosystem (Kirkley, 2016).

We concentrate on the individual self-determination motivation factors and sustainable/entrepreneurial-oriented entrepreneurship. The organizational or individual sustainable/entrepreneurial-oriented actions can be defined by ensuring trust, image coherency between what is said and done, partnership with other entrepreneurs that trust each other, and social recognition in the community for the quality of goods/services provided. The self-determination motivation factors combine both internal and external factors and can explain three individual psychological needs: autonomy, competence, and relatedness (Ferguson et al., 2015). Furthermore, the controlled and autonomous motivation continuum articulate motivational factors through five-phase regulations (external, introjected, identified, integrated, and intrinsic) (Ferguson et al., 2015).

In this present study, external contextual factors, such as perceived support from the close relationships or the community or other collective consideration derivations, define whether sustainable activities are accepted and less sustainable activities are criticized (Rodriguez-Ricardo et al., 2019; Stam et al., 2014). The moderators of a few contextual factors may affect the external and introjected regulations of self-determined motivation factors in a sustainable entrepreneurship, such as age and gender. The identified regulation could be set as a warning/awareness of the orientation weight (more or less sustainable entrepreneurial oriented), which could drive active motivations to create sustainable entrepreneurial intentions (Stam et al., 2014). This, in turn, would influence the integrated regulation affected by the congruency between what the social entrepreneurs are (orientations) and what they experience (Doherty et al., 2014; Ferguson et al., 2015).

According to Andrew (2014), the performance of a sustainable entrepreneur may be influenced by acting on providing social good and social values, and altruistic intentions. The

individual SE intrinsic motivation, pushing the altruistic intentions could be categorized as personal fulfillment, helping society, non-monetary focus, achievement orientation, and closeness to social problem (Germak & Robinson, 2014).

We further need to identify how sustainable and entrepreneurial orientation in a particular context can trigger the self-motivational factors, and how the self-motivation can impede effects on individuals' intention to become sustainable decision makers. In other words, we are not just looking at financial/social/environmental incentives spurring individuals to do something "good". From the social cognition perspective, the behavior of doing more social/public/environmental goods may be justified by stronger elements than rewards and recognitions (Chung-An & Barry, 2012). Furthermore, we may understand in which conditions public and not-for-profit organizations can be defined from an altruistic perspective (Dan et al., 2010).

#### **1.4 Comparison study and Hofstede individual cultural dimensions**

We look at the principal actor's behavior, incorporating some organizational behavior concepts to his/her social responsibility from a service-dominant logic (Matthies et al., 2016). Every actor provides a service to another actor. He/She has a professional obligation to do what is best for both in order to obtain a win-win exchange, while understanding the impact of words, design systems and actions on other individuals, the local community, the society at large, and the global community (Abela & Murphy, 2008). Thus, this study views the "customer experience" challenges from the sustainable enterprise practices. So, it is necessary to understand how he/she from the micro or mezzo level ecosystem could be further influenced by the bigger context (the ecosystem macro level), including cultures or social realms (Bolton et al., 2018). When applying the SDL perspective in discussing the individual's behavior orientations or intentions, we need a

more complete view from different dimensions. To begin with, we focused on how an individual can become an altruistic sustainable entrepreneur, and how he/she develops self-motivation factors considering contextual and culture specific conditions. Comparing two different cultural contexts (Canadian and Chinese), we focused on general behavior orientations and intentions (Please refer to Figure 2.1). When comparing collectivism or individualism cultures, the notion of self-motivated intentions does not have the same meaning. Thus, we integrated cultural dimensions to understand how some concepts such as the perceived support may be perceived differently (Please refer to Figure 2.2). Both figures will be further explained in Chapter 2.

The cultural dimensions may moderate the relationship between individual-level behavioral concerns, including orientations and individuals' decision intentions of their social value creation. Quoted "collective programming of the mind" (Hofstede, 1980; Hofstede et al., 2010), culture provides people with a meaningful context and knowledge about how to interpret their experiences (Trompenaars & Hampden-Turner, 2012). Culture influences human thought and behavior and provides guiding principles for how people should behave in the sustainable environment and during interactions, both at work and in their personal lives (North, 1990). Individuals from different cultural backgrounds often have been ascribed to different value systems. They determine the definition of what is "good" or "bad" and how those notions relate to the ideals shared by group members (Trompenaars & Hampden-Turner, 2012).

Steven and Dirk (2019) suggest that cultural dimensions influence the entrepreneur's motivations to rebuild their behavior orientations and intentions for social good. The authors base their argument on the cultural context and Hofstede's cultural dimensions – power distance, uncertainty avoidance, individualism vs. collectivism. They suggest that in order to achieve more conspicuous differences from individuals' self-expression about the cultural contexts, cross-

country studies are necessary for empirical research. Therefore, we conduct a cross-country study between Canadian and Chinese young potential entrepreneurs/decision makers, at opposite culture context spectrum.

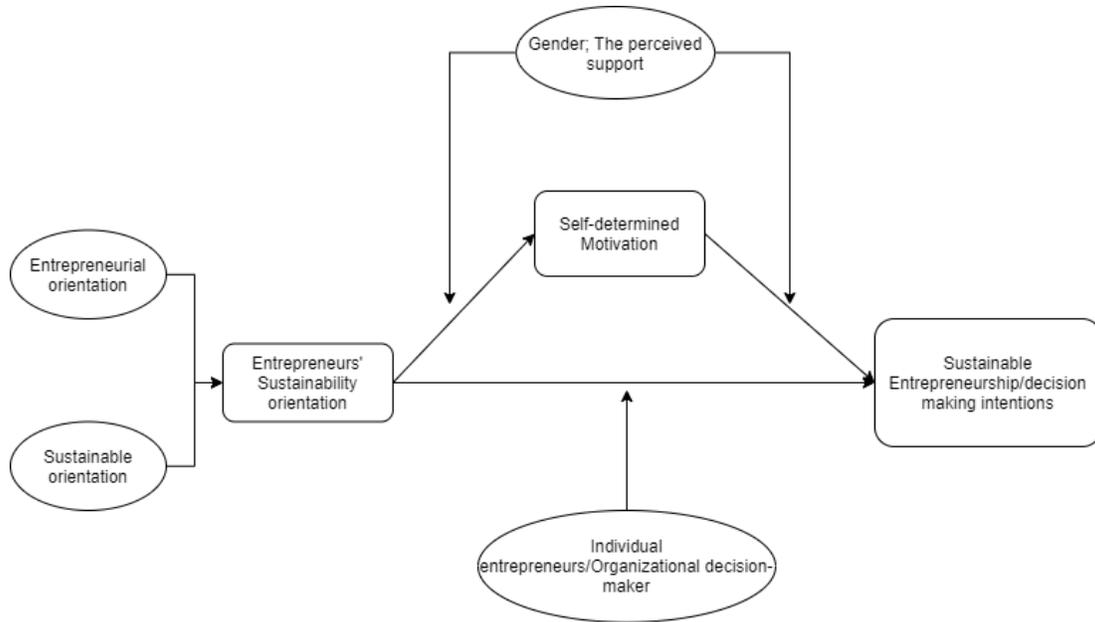
## **Chapter 2**

### **Conceptual Model and Hypotheses Review**

In this chapter, we introduce the concepts and measures leading to the hypotheses to justify the proposed conceptual model (Please refer to Figure 2.1). The dependent variable (sustainable entrepreneurial intentions – SEI) and the independent variable (sustainable entrepreneurial orientations – SEO) are further explained in relation to the mediating effects referring to self-determined motivation theory (SDT). Also, how people define themselves could make effects on what they are oriented, motivated, and further become more intended to do (Doherty et al., 2014). The binary nominal types of decision maker what individuals expect to be may also cause potential influences on individual behavior orientations, motivations, and intentions.

To achieve explicit indicators for demonstrating why individuals are more oriented and intended to become sustainable entrepreneurs, we also discuss potential sub-correlated causes including: age, gender, the perceived support, and cultural dimensions.

**Figure 2.1 The entrepreneur’s sustainable orientation and decision-making intentions conceptual model 1**



**2.1 Dependent variable: sustainable entrepreneurial intention (SEI)**

Sustainable entrepreneurial intention (SEI) expressing corporate social (sustainable) responsibility can be defined as performance measures often used at the mezzo level of SE (Laufer, 2003; Riera & Iborra, 2017). The impact of a sustainable organization in terms of social and environmental value, as defined by Shepherd and Patzelt (2011), might materialize only with future generations (Arnocky et al., 2014). In this case, the new sustainable entrepreneurs should consider future consequences of their decisions and actions which may influence future environment and society (Thelken & de Jong, 2020). Smith and Font (2014) applied SEI to explain sustainable marketing in volunteer tourism, not just discussing the intention to become environmentally responsible but also socially responsible and economically responsible towards

the community and the society. Thus, SEI could be concerned with the triple value of sustainability: economic, social and environmental values.

SEI is defined as one behavioral indicator through which symbolic “sustainable” signal must be expressed and practiced at the same time (Smith & Font, 2014). It relates to the individual’s perception about the triple sustainable values: economy, society, and environment (Ferguson et al., 2021; Paulin et al., 2019). We apply the SEI concept to conceptualize and demonstrate direct effects from future sustainable entrepreneurial orientation in the inter-generational nexus. Strathman (1994) defines the SE intentions as: “the extent to which individuals consider the potential outcomes of their current behaviors and the extent to which they are influenced by these potential outcomes.” If entrepreneurs consider future results of their immediate decisions, they may be able to deal with uncontrollable and unforeseen issues related to sustainability, and achieve self-transcending values (Joireman & King, 2016). We therefore suggest the following hypothesis:

*H1: Individuals who are more sustainable-oriented (sustainable perception) have stronger sustainable entrepreneurial intentions (SEI).*

## **2.2 Independent variable: sustainable entrepreneurial orientation (SEO)**

SEO can be defined as the orientation of social enterprises, categorized to be entrepreneurial (being more innovative to access social goals) and market (being more efficient to access market goals) oriented (Balta & Dwivedi, 2018; Darlington et al., 2012). These precisions help researchers to review the scope and measures of the sustainable entrepreneurial orientation. In fact, SEO can also be defined by how individuals are sustainable-oriented and entrepreneurial-oriented, which leads them to be more altruistic and self-determined in order to work toward the triple values (Dwivedi & Weerawardena, 2018). In this study, four items are included to evaluate

the entrepreneur's sustainable entrepreneurial orientation: *i*) innovativeness, *ii*) proactiveness in risk management, *iii*) management effectual orientation, and *iv*) social mission orientation.

SEO is also linked to how entrepreneurs are more motivated to work for the triple values and how the perceived support from the close relationships leads to changes (Maclean et al., 2013; Phillips et al., 2015). As we mentioned before the H1, individuals who are more sustainable-oriented will aim to generate self-transcending values. However, it doesn't give complete answer dealing with individuals who are currently innovate on management efficiency but in the future will accept retributing for "moral" mission (Dwivedi & Weerawardena, 2018). In this study, the SEO is defined by sustainable-orientation (SO) and entrepreneurial orientation (EO). If the entrepreneur is more concerned about immediate consequences, even taking future developments into account in analyzing future results of the potential strategic moves, he will be less sustainable-oriented and more entrepreneurial-oriented paying attention to the immediate benefits/loss. The SO and EO should tease out the degree of sustainable entrepreneur orientation at the individual level. We therefore suggest the following hypothesis:

*H2: Individuals who are more entrepreneurial-oriented (entrepreneurial characteristics) have stronger sustainable entrepreneurial intentions (SEI).*

### **2.3 Mediator: self-determined motivations factors**

The self-determination motivation combines both internal and external factors, and it can be explained through satisfying three individual psychological needs: autonomy, competence, and relatedness (Ferguson et al., 2015). The process is working from a controlled and autonomous motivation continuum, and seems to be more influential when considering the five-phase regulations (external, introjected, identified, integrated, and intrinsic) (Ferguson et al., 2015). The

five-phase regulations also demonstrate the changes from extrinsic to intrinsic motivations. In other words, these five regulations are expressive forms of conditions supporting satisfaction of the three psychological needs: autonomy, competence, and relatedness. In addition, SDT proposes that further behavior and more engagement towards more activities reflect individuals' orientations, including enhanced performance and creative/innovative decision (connected to the intention to be sustainable entrepreneurs) (Ryan & Deci, 2000). We first introduce how these six regulations conduct the SDT process in SE orientation and intention.

In this study, there may be external contextual factors such as age, gender, the perceived support and collective considerations that may define whether SE activities are applauded and washing performances are criticized (Rodriguez-Ricardo et al., 2019; Stam et al., 2014). The moderating effects from these factors may affect the external and introjected regulations of SD motivation in sustainable entrepreneurship. The identified regulation could be set as a warning/awareness of the orientation weight (more or less sustainable entrepreneurial oriented), which could drive both social entrepreneurs' and marketers' motivation. This, in turn, would influence the integrated regulation affected by the perceived support from the sustainable entrepreneurs' close relationships and their previous experience (Doherty et al., 2014; Ferguson et al., 2015).

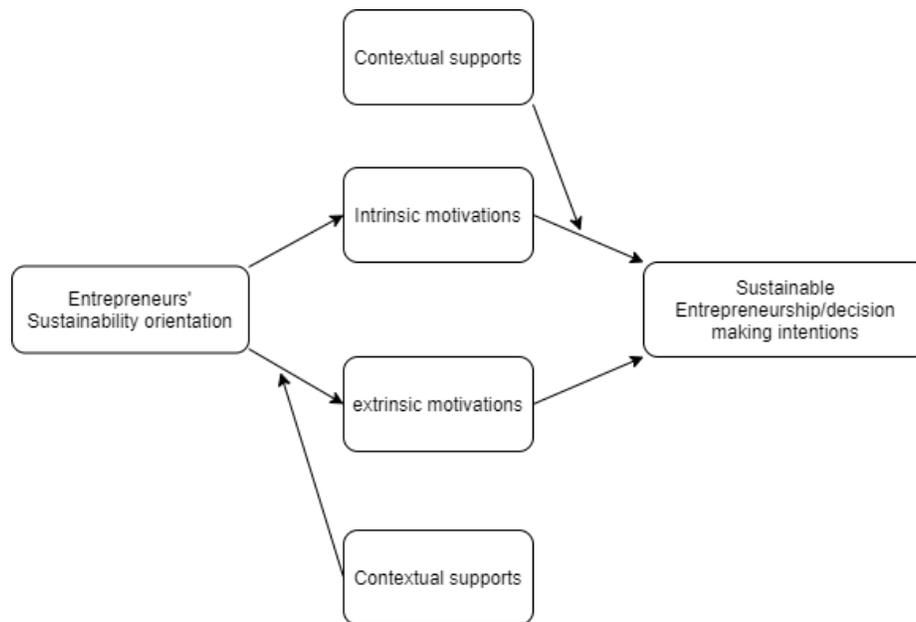
Different from the previous four regulations, the intrinsic regulations come from the human nature close to the direct intrinsic motivation, and may demonstrate an inherent positive tendency toward creativity, novelty, and challenges (Ryan & Deci, 2000). Mostly, the intrinsic regulations could be categorized by three dimensions: intrinsic motivation towards stimulation experience, knowledge achievement, and things accomplishment (Ferguson et al., 2015). These three dimensions are further conceptualized in detail in this study of SE. According to Andrew (2014),

the action intention of a sustainable entrepreneur may be influenced by acting on providing social good, social values, and altruistic intentions. The moral recognition by future move of acting “good” from the fixed context strongly defines individuals' positive stimulation experience in certain periods (Andrew, 2014). Getting known about effective strategies and ecological ways could also bring sustainable entrepreneurial individuals into a new stage of practice (Balta & Dwivedi, 2018). Thirdly, potential social or sustainable accomplishments build up positive expectations for individuals toward enhanced performance (Al-Jubari, 2019). In this study, these three dimensions could be further transformed to: *motivation toward moral recognition experience*, *motivation toward ecological knowledge achievement*, and *motivation toward expecting social and sustainable accomplishments*. Thus, the individual sustainable entrepreneurial intrinsic motivation, pushing the altruistic intentions could be categorized as personal fulfillment, helping society, non-monetary focus, achievement orientation, and closeness to social problem (Germak & Robinson, 2014). At the same time, we should also consider immediate or indirect contextual supports for autonomy and competence needs. The intrinsic motivations may not completely explain the exact feeling of competence or autonomy without considering such contextual supports. That is why we introduced the perceived support, gender, age, and the nominal types as potential contextual factors for understanding the self-determined process from behavioral orientation to intention, as they may be connected to different SDT regulations. Also, since we compared two countries (Canada and China) (Please refer to Figure 2.2), we introduced Hofstede's individual cultural dimensions to further explain contextual factors, and their influence on SDT.

We differentiate the six SDT regulations by extrinsic and intrinsic motivations. Three extrinsic regulations are considered as one group but demonstrated in different items (Please refer to Appendix C). Three intrinsic regulations, which are transformed in the view of SE, provide three

different hypotheses. We are not rejecting the influence from extrinsic regulations but indicating that the contextual factors impact intrinsic and extrinsic motivations differently (Al-Jubari, 2019; Rodriguez-Ricardo et al., 2019). (Please refer to Figure 2.2).

**Figure 2.2 Contextual supports work on Self-determined process**



We therefore suggest the following hypotheses:

*H3: The more sustainable and entrepreneurial oriented individuals are, the more motivated by three (3) extrinsic regulations individuals are to have stronger sustainable entrepreneurial intention.*

*H4a: The more sustainable and entrepreneurial oriented individuals are, the more motivated by moral recognition experience individuals are to have stronger sustainable entrepreneurial intention.*

*H4b: The more sustainable and entrepreneurial oriented individuals are, the more motivated by ecological knowledge achievement individuals are to have stronger sustainable entrepreneurial intention.*

*H4c: The more sustainable and entrepreneurial oriented individuals are, the more motivated by expecting social and sustainable accomplishment individuals are to have stronger sustainable entrepreneurial intention.*

## **2.4 Moderators: binary nominal types of decision makers**

Individual entrepreneurs are increasingly willing to reconsider their recognition upon real “goods”, including those who have been and who will become business professional. The tendency is to commit to sustainability practices (Gerard, 2001), and define eco-efficiency to play the part, as it is becoming the expected norm (Gerard, 2001; Rotmans & et al., 1997).

This is why it is essential to understand the fundamental recognition from the individual’s experience and social life demonstrating his decision-making intentions and behaviors. It is not to dramatically change the sustainable entrepreneurship definition from the individual’s social context, but to restrict how one believes or perceives making decision for the sustainable “good” (Rotmans et al., 1997). For a while, the focus on environmental issues and social good enterprise was on improving environmental quality conditions that could be recognized physically. However, at present, the key issues are on the preservation of sustainability in all three fields (economic, environmental, and social) (Gerard, 2001). So, how people rebuild their recognitions on what sustainable entrepreneurs could do or what we can predict from an entrepreneur who prefers doing more social/economic/environmental “good” becomes significant (Rotmans et al., 1997). What to differentiate from these two nominal types of decision makers depends on whether they are

working for themselves and their vested interests, or for the good of others and the community (Gerard, 2001). In other words, an individual entrepreneur should understand that he/she represents the company's identity. An organization entrepreneurial decision maker may work for/with a broader identity. When we are concerned about the individual entrepreneur's behavior orientations and intentions, from the lenses of the "new" sustainability context, we need to know if he/she understands his future role as a sustainable entrepreneur.

*Individual entrepreneur vs. decision maker in organizations (Binary nominal type of the 'future' decision makers) (Moderating H1 & H2).*

*H5a: If an individual is more sustainable-entrepreneurial orientated, he/she is more inclined to become a sustainable entrepreneur.*

*H5b: If an individual is more sustainable-entrepreneurial oriented, he/she is more inclined to become a proactive sustainable decision maker in an organization.*

## **2.5 Sub-correlated causes**

### ***Perceived supports, age, gender, and self-determined factors***

Hendrik and Gjalt (2020) suggest that perceived support may be influenced by three inter-related moderators (parent influence, age group, and gender). These moderators may explain in part the reason why entrepreneurs have sustainable entrepreneurship intentions (SEI). We integrate these three moderators in the self-determined process for the SE's decision. The age groups may contain distinct inconsistency on both SDT regulations and intention formation (Mair & Marti, 2006), and the role of gender may cause differences on cognition of altruism and attitude toward sustainable entrepreneurship (Steg et al., 2014). The perceived support (from parents) can be

defined as parts of personal perception of whether individuals are capable of performing unfamiliar behavior or making risky but innovative decisions (Ajzen, 1991). Linan and Chen (2009) established a strong relationship between the perceived support and entrepreneurship intention formation. The perceived support could help form actual goals and bring preview on future “career” tasks and complement sustainable practices, which could further explain sustainable entrepreneurial intention (Seelos & Mair, 2005). All those contextual moderators may not be concerned with extrinsic motivations. The reason for why we just mention intrinsic motivations is because extrinsic motivations could be casually affected by those contextual factors. So, for the intrinsic motivation toward experience, to reflect on the sustainable entrepreneurs’ practice, we will more focus on the recognition experience, which represent the socialized causes for specific experiences (Seelos & Mair, 2005). For the intrinsic motivation toward knowledge achievement, we will more focus on the “ecological knowledge achievement” to shrink the definition mixture.

In relation to the moderators, age, gender, the perceived support, please refer to Figure 2.3. The following hypotheses are formulated:

*H6a: Sustainable and entrepreneurial oriented individuals in different age groups are more influenced by extrinsic motivations and have different degrees of intention to become sustainable entrepreneurs.*

*H6b: Individuals who are motivated by moral recognition experience in different age groups have different degrees of intention to become sustainable entrepreneurs.*

*H6c: Individuals who are motivated by ecological knowledge achievement in different age groups have different degree of intention to become sustainable entrepreneurs.*

*H6d: Individuals who are motivated by in different age groups have different degrees of intention to become sustainable entrepreneurs.*

*H7a: Sustainable and entrepreneurial oriented individuals in different gender groups are more influenced by extrinsic motivations and have different degrees of intention to become sustainable entrepreneurs.*

*H7b: Individuals who are motivated by moral recognition experience in different gender groups have different degrees of intention to become sustainable entrepreneurs.*

*H7c: Individuals who are motivated by ecological knowledge achievement in different gender groups have different degrees of intention to become sustainable entrepreneurs.*

*H7d: Individuals who are motivated by expecting social and sustainable accomplishments in different gender groups have different degrees of intention to become sustainable entrepreneurs.*

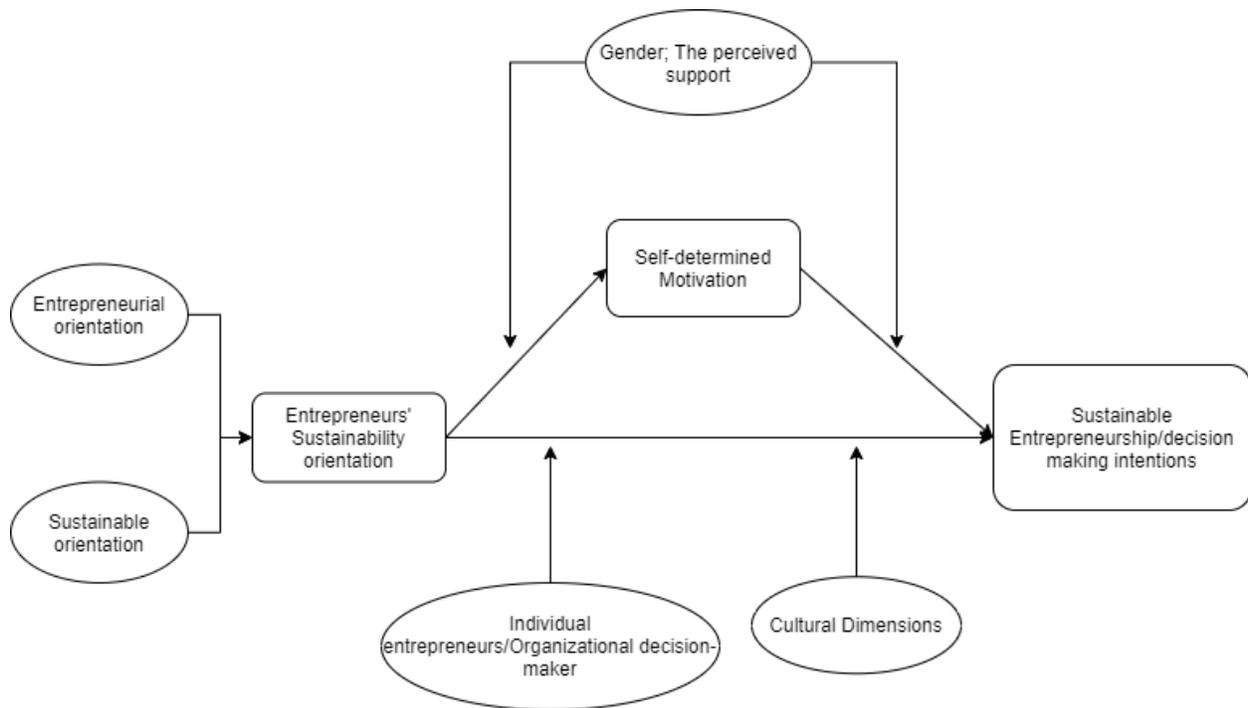
*H8a: The more perceived support SE (sustainable-entrepreneurial) oriented individuals have, the more motivated by extrinsic regulations those individuals are.*

*H8b: Individuals who are motivated by moral recognition experience have strong intention to become sustainable entrepreneurs if they have more perceived supports.*

*H8c: Individuals who are motivated by ecological knowledge achievement have strong intention to become sustainable entrepreneurs if they have more perceived supports.*

*H8d: Individuals who are motivated by expecting social and sustainable accomplishment have strong intention to become sustainable entrepreneurs if they have more perceived supports.*

**Figure 2.3 The entrepreneur’s sustainable orientation and decision-making intentions conceptual model 2**



**2.6 Model 2 and cultural dimensions in SE**

When we propose explanations about individual behavior and motivation, we cannot only take into consideration the micro-level dimensions, especially for demonstrating intention to make moral decisions (sustainable enterprise) (Lekes et al., 2010). Lekes et al. (2010) applied Hofstede (2002) cultural dimensions to explain perceived support from parents and self-motivation formation in neo-entrepreneurship (social entrepreneurship, sustainable entrepreneurship). The authors believed that the cultural dimensions help set up the framework of cultural communication inside and outside the countries’ contexts and define social, economic, and environmental “good” (Please refer to Figure 2.3).

The four cultural dimensions mainly discussed in the entrepreneurship literature (Deci & Ryan, 2008) are: *i*) identity (collectiveness vs individualism/group vs individual), *ii*) gender (Feminine vs Masculine), *iii*) power distance, and *iv*) value uncertainty. “The more complicated the power structure is, the “good” entrepreneurial intention motivated by self-experience is stronger.” (Deci & Ryan, 2008). However, as the author suggests, cultural dimensions are different from contextual facts which can be obtained from demographic data. In our case, we integrate both approaches, Lokes et al.’s (2010) and Ryan’s (2008) perspectives to seek individuals’ perceptions within their respective cultures. Although Lokes et al. (2010) found consistent patterns of cultural dimensions explaining the entrepreneurial intentions, they did not give any views on how cultural dimensions may be applied into explaining self-motivated individuals to become socially, environmentally, and economically responsible, respectively. Thus, we included Lokes et al. (2010) cultural dimensions to tease out similarities and differences between Canada and China after we found inconsistencies in the pretest between respondents’ answers. We looked at measures (specific items defining each culture dimension characteristics) to see if we could explain why sustainable entrepreneurs under specific cultural contexts may have different ways of considering sustainability intentions. We developed six (6) hypotheses that could differentiate individuals from groups’ SE ideology and intentions (Lokes et al., 2010)

*H9a: For individuals who are concerned with pursuing more individual goods, if they are more sustainable-entrepreneurial (SE) oriented, intend to become sustainable entrepreneurs.*

*H9b: For individuals who are concerned with pursuing more group/community goods, if they are more SE oriented, intend to become sustainable entrepreneurs*

Power distance: facts defining “good” and “evil”, weakening or strengthening the hierarchy (Lekes et al., 2010)

*H9c: For individuals who perceive more conspicuous power distance, if they are more SE oriented, intend to become sustainable entrepreneurs.*

Value uncertainty: indicating to which degree the society individuals residing in would like to avoid uncertainty (Lekes et al., 2010)

*H9d: For individuals who are more certain about values supported by their community/society, if they are more SE oriented, intend to become sustainable entrepreneurs*

Feminine vs. Masculine: indicating what characteristics (competition & ambition or relationship & life quality) individuals perceive to be more important (Hofstede, 2001)

*H9e: For individuals who perceive their community/society to be more feminine, if they are more SE oriented, intend to become sustainable entrepreneurs.*

*H9f: For individuals who perceive their community/society to be more masculine, if they are more SE oriented, intend to become sustainable entrepreneurs*

All hypotheses are summarized in Table 2.1.

**TABLE 2.1 List of hypotheses**

| <b>SE-orientation &amp; SE-intention</b>                                                                                                                                                                           |                                                                                                                                                                                                                              |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>H1: Individuals who are more sustainable-oriented (sustainable perception) have stronger sustainable entrepreneurial intentions (SEI).</i>                                                                      | <i>H2: Individuals who are more entrepreneurial-oriented (entrepreneurial characteristics) have stronger sustainable entrepreneurial intentions (SEO).</i>                                                                   |
| <b>Self-determined motivations</b>                                                                                                                                                                                 |                                                                                                                                                                                                                              |
| <i>H3: The more sustainable and entrepreneurial oriented individuals are, the more motivated by (3 extrinsic regulations) individuals are to have stronger sustainable entrepreneurial intention.</i>              | <i>H4a: The more sustainable and entrepreneurial oriented individuals are, the more motivated by moral recognition experience individuals are to have stronger sustainable entrepreneurial intention.</i>                    |
|                                                                                                                                                                                                                    | <i>H4b: The more sustainable and entrepreneurial oriented individuals are, the more motivated by ecological knowledge achievement individuals are to have stronger sustainable entrepreneurial intention.</i>                |
|                                                                                                                                                                                                                    | <i>H4c: The more sustainable and entrepreneurial oriented individuals are, the more motivated by expecting social and sustainable accomplishment individuals are to have stronger sustainable entrepreneurial intention.</i> |
| <b>Binary nominal types of decision makers</b>                                                                                                                                                                     |                                                                                                                                                                                                                              |
| <i>H5a: If an individual is more sustainable-entrepreneurial orientated, he/she is more inclined to become a sustainable entrepreneur.</i>                                                                         | <i>H5b: If an individual is more sustainable-entrepreneurial oriented, he/she will be more inclined to become a proactive sustainable decision maker in an organization.</i>                                                 |
| <b>Contextual support</b>                                                                                                                                                                                          |                                                                                                                                                                                                                              |
| <b>Age</b>                                                                                                                                                                                                         | <b>Gender</b>                                                                                                                                                                                                                |
| <i>H6a: Sustainable and entrepreneurial oriented individuals in different age groups are more influenced by extrinsic motivations and have different degrees of intention to become sustainable entrepreneurs.</i> | <i>H7a: Sustainable and entrepreneurial oriented individuals in different gender groups are more influenced by extrinsic motivations and have different degrees of intention to become sustainable entrepreneurs.</i>        |
| <i>H6b: Individuals who are motivated by moral recognition experience in different age groups have different degrees of intention to become sustainable entrepreneurs.</i>                                         | <i>H7b: Individuals who are motivated by moral recognition experience in different gender groups have different degree of intention to become sustainable entrepreneurs.</i>                                                 |
| <i>H6c: Individuals who are motivated by ecological knowledge achievement in different age groups have different degrees of intention to become sustainable entrepreneurs.</i>                                     | <i>H7c: Individuals who are motivated by ecological knowledge achievement in different gender groups have different degrees of intention to become sustainable entrepreneurs.</i>                                            |
| <i>H6d: Individuals who are motivated by expecting social and sustainable accomplishment in different age groups have different degrees of intention to become sustainable entrepreneurs.</i>                      | <i>H7d: Individuals who are motivated by expecting social and sustainable accomplishment in different gender groups have different degree of intention to become sustainable entrepreneurs.</i>                              |

**TABLE 2.1 List of hypotheses (Continued)**

| <b>Perceived support</b>                                                                                                                                                      |                                                                                                                                                                                              |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>H8a: The more perceived support SE (sustainable-entrepreneurial) (SE) oriented individuals have, the more motivated by extrinsic regulations those individuals are.</i>    | <i>H8b: Individuals who are motivated by moral recognition experience have strong intention to become sustainable entrepreneurs if they have more perceived supports.</i>                    |
| <i>H8c: Individuals who are motivated by ecological knowledge achievement have strong intention to become sustainable entrepreneurs if they have more perceived supports.</i> | <i>H8d: Individuals who are motivated by expecting social and sustainable accomplishment have strong intention to become sustainable entrepreneurs if they have more perceived supports.</i> |
| <b>Cultural dimensions</b>                                                                                                                                                    |                                                                                                                                                                                              |
| <b>Individual</b>                                                                                                                                                             | <b>Group</b>                                                                                                                                                                                 |
| <i>H9a: For individuals who are concerned with pursuing more individual goods, if they are more SE oriented, intend to become sustainable entrepreneurs.</i>                  | <i>H9b: For individuals who are concerned with pursuing more group/community goods, if they are more SE oriented, intend to become sustainable entrepreneurs.</i>                            |
| <b>Power distance</b>                                                                                                                                                         | <b>Value Uncertainty</b>                                                                                                                                                                     |
| <i>H9c: For individuals who perceive more conspicuous power distance, if they are more SE oriented, intend to become sustainable entrepreneurs.</i>                           | <i>H9d: For individuals who are more certain about values supported by their community/society, if they are more SE oriented, intend to become sustainable entrepreneurs.</i>                |
| <b>Feminine</b>                                                                                                                                                               | <b>Masculine</b>                                                                                                                                                                             |
| <i>H9e: For individuals who perceive their community/society to be more feminine, if they are more SE oriented, intend to become sustainable entrepreneurs.</i>               | <i>H9f: For individuals who perceive their community/society to be more masculine, if they are more SE oriented, intend to become sustainable entrepreneurs.</i>                             |

## **Chapter 3**

### **Methodology**

The methodology section covers the following three parts: questionnaire design and pre-tests, open interviews, and online structured surveys. In each section, we discuss the sampling methods and how we conduct data collection for each of the constructs: Sustainable orientation (SO); Entrepreneurial orientation (EO); Sustainable entrepreneurial intention (SEI). Finally, we summarized the methodology design process and data analysis where we show how we linked the quantitative data collection and qualitative reports to enhance the method consistency, and explain why and when we integrated new measures to complete the online survey and data analysis. We iteratively collected and analyzed the data, and review the hypotheses accordingly.

#### **3.1 Questionnaire design and pre-test (with specific sampling method)**

##### *Pre-test*

Most items applied in the pretest were used from a few reviewed studies. However, because we were conducting a comparison study between two different countries (China and Canada), we needed a complete trial for testing the consistency of translated questions. We had one group of Chinese students (n=20) do the Chinese version, and the other Chinese students (n=20) do the English version.

We compared two different groups. They demonstrate less significant differences and deviations. The pilot test displays that both English and translated items used in the questionnaires are recognized and consistent (Please refer to Table 3.1). There were no significant variances between the two groups (standardized total variance =0.02\* at 10% significant level).

**Table 3.1 Pilot test for checking consistence of translated questionnaire (n=336)**

| <i>Construct</i>                | <i>Mean<br/>(M)</i> | <i>SD</i> | <i>P-<br/>value</i> | <i>Chinese<br/>(M)</i> | <i>English<br/>(M)</i> |
|---------------------------------|---------------------|-----------|---------------------|------------------------|------------------------|
| SO                              | 6.21                | 1.08      | 0.08                | 6.11                   | 6.25                   |
| EO                              | 5.44                | 1.20      | 0.19                | 5.34                   | 5.48                   |
| SEI                             | 5.32                | 1.98      | 0.07                | 5.27                   | 5.38                   |
| Total variance (between groups) |                     |           |                     |                        | 0.02*                  |

*Notes: \*\*p<.05; \*p<0.10*

Two pre-tests (Canada, n=169 and China, n=167) were completed using Qualtrics and survey platforms: Mturk (Canada) and Wenjuanxing (China). Based on the pre-tests results, we adjusted the research design model. The principal investigator used sequential questions to ensure the link between the potential sustainable entrepreneur’s self-motivation process and future sustainable intentions. The pre-test helped tease out cultural similarities/differences and other potential antecedent personal factors. As suggested by Shar and Carter (2010), we filter the age groups (18-40 years old) and city resident, for both groups in China and in Canada.

The design of the pre-test questionnaire directed respondents according to their career alternatives and sustainable concerns (Mort, 2002): “What factor may influence your career development in the organization?”. Respondents were asked to indicate their agreement on perspective such as: “I like to take bold action by venturing into uncertainty conditions.” Respondents were assigned to different questions on SE practice intentions: “As a future business decision maker, how important are the following sustainable values within/outside your organization” or “as an entrepreneur ...for my own business.” However, a large portion of respondents only had an abstract concept of sustainable entrepreneurship. We cannot conclude what motivates individuals’ potential intentions merely by studying samples in a large context.

Other than checking mediating effects, we also need the design to demonstrate contextual supports effects especially for “the perceived support.”

Firstly, participants were asked to rate the extent to which they believe their friends, family and fellow students would approve that they become sustainable entrepreneurs (Morianio et al., 2012) with three specific questions : “As a decision maker in my organization, I believe my community will exercise indirect pressure to make me”; “Become a sustainable decision maker in response to my community needs”; “Everyone has someone who influences his/her career development. Please rank from the most influential individuals to the least who impacted your career choice. Items were measured on a seven-point Likert scale (“1” Totally disapprove to “7” Totally approve). Secondly, we used three-item measures adapted to sustainable entrepreneurship (Kolvereid, 1996) and two items adapted to sustainable entrepreneurship measured (Chen, 2009) on a seven-point Likert scale (“1” Totally disapprove to “7” Totally approve) (Please refer to Appendix A). Therefore, our research methods include three parts: pre-test (apply items from altruistic SE study model and check SDT factors works in that pattern), open interviews, and online survey on larger samples including cultural dimension items. Furthermore, the principal investigator conducted a few open interviews with experienced and engaged sustainable entrepreneurs (Please refer to Appendix B).

## **3.2 Online interview and online survey**

### *3.2.1. Online interview*

The pre-test analysis helped justify the need for further clarification on different definitions. The principal investigator conducted online open interviews (total of n=10) to clarify the concepts of sustainable entrepreneurship in practice (China and Canada). We posted invitations on different social media platforms to recruit interviewees and had direct communications with a few entrepreneurs who have online information contacts. We used remote methods to conduct interviews (such as Skype, ZOOM, WeChat, etc.). We gained insightful ideas to explore further effects from altruistic motivations, cultural dimensions on individuals' intention to become a sustainable entrepreneur. This exercise was also fruitful to the design of the online survey. We recruited a few professional social entrepreneurs and sustainable entrepreneurs who do neo-technological business such as AI, sona-motion. The contents were divided in three parts: i) entrepreneurs' own definition on sustainability and their entrepreneurship, ii) individuals' specific characteristics as sustainable entrepreneurs, iii) the influence of cultural dimensions in their work.

The first two parts will be further discussed in Chapter 4. Following a first face-to-face communications, we developed a list of interviewees' opinions on how they believe some cultural dimensions may affect SE decision-making. Interviewees in both countries agreed that the social identity (individualism vs. collectivism) and social gender perception (Masculine) were the two main cultural dimensions. The principal investigator was curious to know which cultural dimensions would influence most the SE decision maker.

### 3.2.2. *Online survey*

The online survey aims to solve three issues: i) How moderators work on intrinsic motivations (Gender and perceived support)? ii) Whether interaction effects exist between contextual support constructs? (we used the perception of triple value (POS) as combined SEO and SO measures); iii) What effects of cultural dimensions would be important to consider? We conducted an online structured surveys (total of n=654) on two platforms, Mturk (Canada n=315) and Wenjuanxing (China n=328). The survey structure is similar to the pre-test with corrections on specific terminology and additions of new questions highlighted in the open interviews. Note, a large sample size is required to enhance the results significance (Shar & Carter, 2010). The moderating effect of cultural and contextual differences in relation to specific perceived support was enhanced by a larger sample size offering greater variance with the comparison study between Chinese and Canadian respondents. We added a new set of questions designed to take into consideration individual cultural dimensions (Hofstede, 2011). With the open interviews, we found significant deviations between answers from different countries' respondents. These results (Please refer to Table 3.2.1) indicated the moderating role of specific individual cultural dimensions: power distance, uncertainty avoidance, individual identity (individualism vs. collectivism) on sustainable entrepreneurial orientations (independent variable), and on individuals' intention to become sustainable entrepreneurs (dependent variable) (Further discussed in Section 3.3.1).

How interviewees perceived the cultural dimensions are summarized in Table 3.2, enlighten further analyses in the final online survey. Items used with interviewees were included in the final structured online survey. After respondents made cognitive image of themselves on the type of decision makers they were (as designed in the pre-test), they were invited to put themselves

in that decision maker's context and consider how potential existing cultural dimension (issues) in their life may affect their business immediately, continually, or in the future.

Although Gillian et al. (2002) suggest that younger individual's decision about entrepreneurship could be more influenced by the perceived support, or other contextual factors, the pre-test results indicated otherwise. We decided to focus on respondents around the age of 19-25 for the online survey.

**Table 3.2: Interviewees' positive perceptions on cultural dimensions**

| <b>Cultural dimensions</b> | <b>Hypotheses</b>                                                                                                                                                               | <b>Canadian<br/>N=10</b> | <b>Chinese<br/>N=10</b> |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-------------------------|
| <b>Individual</b>          | <i>For individuals who are concerned about pursuing more individual goods, if they are more sustainable oriented, intend to become sustainable entrepreneurs.</i>               | 6                        | 5                       |
| <b>Group</b>               | <i>For individuals who are concerned about pursuing more group/community goods, if they are more sustainable oriented, intend to become sustainable entrepreneurs.</i>          | 4                        | 7                       |
| <b>Power Distance</b>      | <i>For individuals who perceive more conspicuous power distance if they are more sustainable oriented intend to become sustainable entrepreneurs.</i>                           | 5                        | 6                       |
| <b>Value Uncertainty</b>   | <i>For individuals who are more certain about values supported by their community/society if they are more sustainable oriented intend to become sustainable entrepreneurs.</i> | 4                        | 3                       |
| <b>Feminine</b>            | <i>For individuals who perceive their community/society to be more feminine if they are more sustainable oriented intend to become sustainable entrepreneurs.</i>               | 4                        | 4                       |
| <b>Masculine</b>           | <i>For individuals who perceive their community/society to be more masculine if they are more sustainable oriented intend to become sustainable entrepreneurs.</i>              | 5                        | 7                       |

### 3.2.3. Comparison study between China and Canada: conclusion of previous sections and summary

The overall study was divided into two studies: *Study 1* and *Study 2*. *Study 1* demonstrated a more valid design and explored potential qualitative answers through open interviews. Pilot tests and pre-tests were prepared to verify the consistency and validity of the proposed conceptual model. The experienced sustainable entrepreneurs provided quotes and various shared experiences, helping us to improve the design of the online survey. *Study 2* applied changes to the online survey design and incorporated a new set of items measuring specific individual cultural dimensions to capture contextual influence, rather than comparing similarities or differences in cultural dimensions between the two countries.

### 3.3 Overview of the methodology design process

The overall study, as mentioned, is composed of two consecutive and related empirical studies to demonstrate the design logic on how we conducted the overall exploratory study, and why we added new items and dimensions in *Study 2*. We considered the service-dominant logic as our main paradigm to ensure at each step inter-related conceptual consistencies. The logic flow of our methodology design process is summarized in Figure 3.1. At first, the pre-test helped demonstrate our original model's validity and reasonable process following up on item designs in establishing relationships between sustainable entrepreneurial orientation and intention (Riera & Iborra, 2017). We verified the translation consistency to ensure quality comparisons. The interview guide was designed in parallel and simultaneously with the online questionnaire. We reminded ourselves the “why for” justifying the next coherent methodological step. We analyzed the pre-test data to understand what could have been missed and where should we pay more attention to

some specific constructs: intrinsic regulations of SDT, nominal types of decision makers, and the influence of individual cultural dimensions.

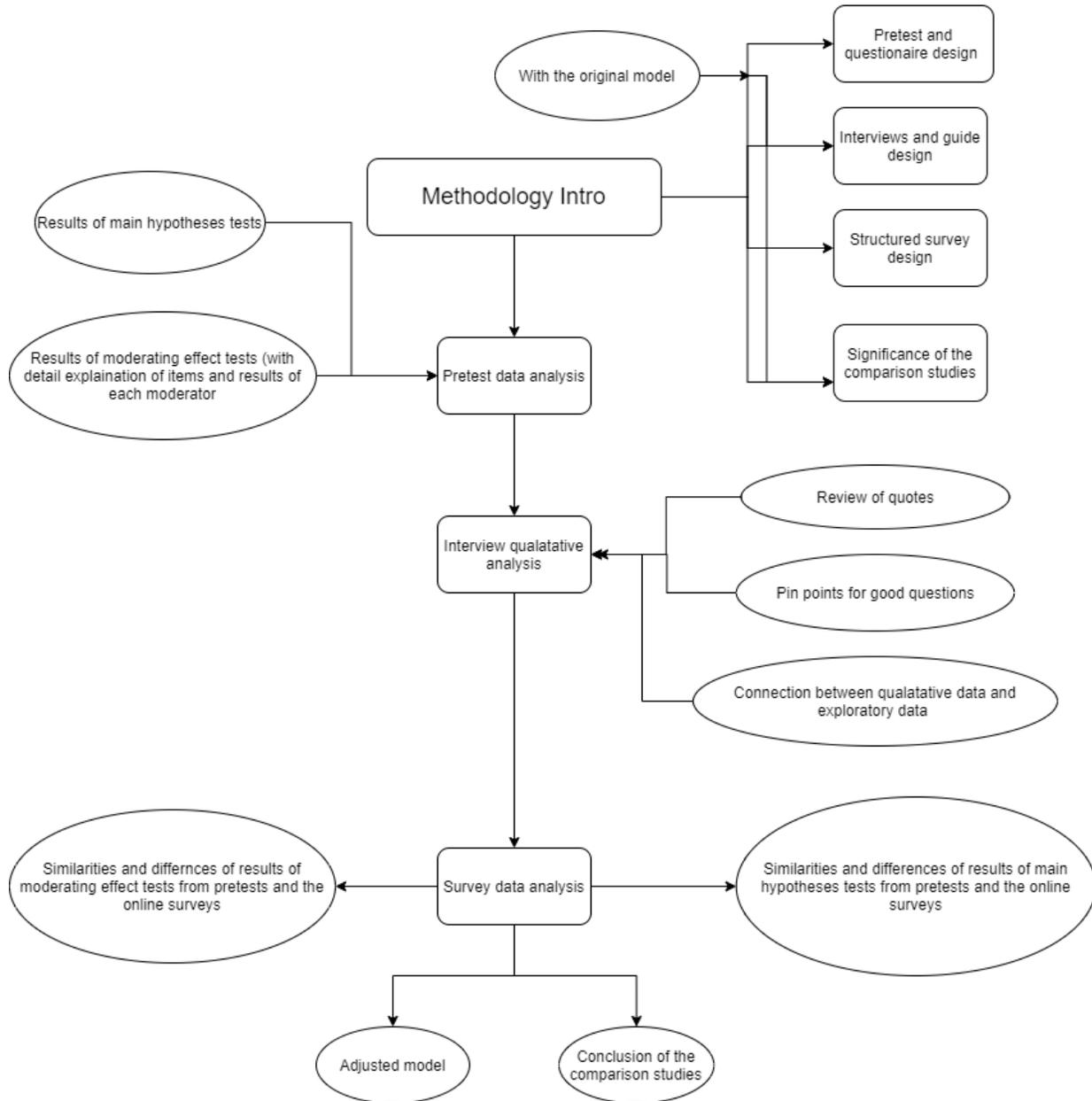
We conducted interviews although we did not do it randomly. Each respondent represented specific entrepreneurial fields with specific concerns. Some respondents' views or opinions could be considered as life doctrine for themselves and others around them:

*“I think, each student, just get graduated from the campus, should take more steps. Get more occupied with something different from your classes, majors, or Greek life. I'm not telling you to be worse, but just try other ways getting new success...” W.K*

We reviewed quotes diligently, separating good/bad questions. The interviews are essential to understand the underlying contextual complexities. We made sure to keep consistency throughout the whole methodological process differentiating qualitative from quantitative data collection to demonstrate the importance of our findings. We also reviewed iteratively the conceptual model and the hypotheses for consistency purposes.

Combining our previous empirical findings to the redesign of the online survey, we increased the sample size to ensure higher variance and significant results with regards to our main goal: what motivates future decision makers to become sustainable entrepreneurs while exploring the SE definition and perception of SE on behavioral sustainable orientations and intentions taking into consideration the individual cultural dimensions. In Chapter 4, step by step results from *Study 1* and *Study 2* are presented before combining them to an overall empirical overview.

**Figure 3.1 Overview of the methodology design process**



## Chapter 4

### Result Analysis

As a reminder, the purpose of this study is to identify antecedent factors and their influence on the young ~~and~~ future sustainable intentions. To do so, we used the Self-Determination Theory (SDT) and clarified the nature and importance of the three levels of intrinsic motivations factors (to know, to experience, to accomplish). We expand the generalizability of the SDT into a new context, future sustainable entrepreneurs' intentions and potential behaviors. Most of the hypotheses were entirely supported (Please refer to Table 4.1). In this chapter, we explain the results of the two-steps data collection having in mind three inter-related elements: items design, hypotheses demonstration and analysis conclusion.

**Table 4.1 Summary of supported hypotheses**

| <b>Hypothesis</b> | <b>Prediction</b>                                                                                                                                                                                                                                                                     | <b>Supported</b> |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| <b>H1</b>         | <i>Individuals who are more sustainable-oriented (sustainable perception) have stronger sustainable entrepreneurial intentions (SEI).</i>                                                                                                                                             | Yes              |
| <b>H2</b>         | <i>Individuals who are more entrepreneurial-oriented (entrepreneurial characteristics) have stronger sustainable entrepreneurial intentions (SEO).</i>                                                                                                                                | Yes              |
| <b>H3</b>         | <i>The more sustainable and entrepreneurial oriented individuals are, the more motivated by (3 extrinsic regulations) individuals are to have stronger sustainable entrepreneurial intention.</i>                                                                                     | <b>Partially</b> |
| <b>H4</b>         | <i>The more sustainable and entrepreneurial oriented individuals are, the more motivated by moral recognition experience/ecological knowledge achievement/expecting social and sustainable accomplishment individuals are to have stronger sustainable entrepreneurial intention.</i> | <b>Partially</b> |
| <b>H5</b>         | <i>If an individual is more sustainable-entrepreneurial orientated, he/she is more inclined to become a sustainable entrepreneur/a proactive sustainable decision maker in an organization.</i>                                                                                       | <b>Partially</b> |
| <b>H6a</b>        | <i>Age Group and Extrinsic Motivations.</i>                                                                                                                                                                                                                                           | No               |
| <b>H6b/c/d</b>    | <i>Age Group and Intrinsic Motivations.</i>                                                                                                                                                                                                                                           | No               |
| <b>H7a</b>        | <i>Gender group and Extrinsic Motivations.</i>                                                                                                                                                                                                                                        | <b>Partially</b> |
| <b>H7b/c/d</b>    | <i>Gender group and Intrinsic Motivations.</i>                                                                                                                                                                                                                                        | <b>Partially</b> |
| <b>H8a</b>        | <i>The Perceived Support and Extrinsic Motivations.</i>                                                                                                                                                                                                                               | No               |
| <b>H8b/c/d</b>    | <i>The Perceived Support and Intrinsic Motivations.</i>                                                                                                                                                                                                                               | Yes              |

## 4.1 Pre-test

### 4.1.1 Pre-test of the overall model (entrepreneurial/sustainable orientation (EO, SO) and sustainable entrepreneurial intention (SEI), self-motivation)

According to Shar and Carter (2010), the results for entrepreneurial intention and orientation analysis Cronbach's alpha should be greater than  $> 0.603$ . There are four main hypothesis models to this study, which are summarized as follow:

*H1 – Individuals who are more sustainable-oriented (sustainable perception) have stronger sustainable entrepreneurial intentions (SEI).*

*H2 – Individuals who are more entrepreneurial-oriented (entrepreneurial characteristics) have stronger sustainable entrepreneurial intentions (SEO).*

*H3 – The more sustainable and entrepreneurial oriented individuals are, the more motivated by (3 extrinsic regulations) individuals are to have stronger sustainable entrepreneurial intention.*

*H4 – The more sustainable and entrepreneurial oriented individuals are, the more motivated by moral recognition experience/ecological knowledge achievement/expecting social and sustainable accomplishment individuals are to have stronger sustainable entrepreneurial intention.*

A pre-test was conducted with a total sample of 336 respondents (Canada, n=165; China, n=171). Although the sample sizes are not equal, the variance demonstrates no significant differences in the means of all items (Please refer to Table 4.1.1).

**Table 4.1.1. Pilot test for checking consistence of translated questionnaire**

| <i>Construct</i>                | <i>Mean</i> | <i>SD</i> | <i>P-</i>    | <i>Chinese</i> | <i>English</i> |
|---------------------------------|-------------|-----------|--------------|----------------|----------------|
|                                 | <i>(M)</i>  |           | <i>value</i> | <i>(M)</i>     | <i>(M)</i>     |
| SO                              | 6.21        | 1.08      | 0.08         | 6.11           | 6.25           |
| EO                              | 5.44        | 1.20      | 0.19         | 5.34           | 5.48           |
| SEI                             | 5.32        | 1.98      | 0.07         | 5.27           | 5.38           |
| Total variance (between groups) |             |           |              |                | 0.02*          |

*Notes: \*\*p<.05; \*p<0.10*

Overall, there are significant correlation between entrepreneurial orientation and intention in both countries (Var CN=0.134  $p<0.05$ , Var CA=0.694  $p<0.05$ ). However, the correlation cannot be totally explained with both standard deviation  $> 2.1$  with a 7-point Likert scale. The first step was to determine which factors are more influential in explaining the model and the four main hypotheses. The significant correlation Cronbach's alpha and the Path coefficient and Coefficient of determination adjusted  $R^2$  are highlighted, intrinsic regulations' results have more reliable relationships (Cronbach  $\alpha > 0.5$ ) (Please refer to Table 4.1.2). The effect variances of entrepreneurial orientation and intention have differences while the participants are differentiated by whether they are individual entrepreneurs/organizational decision makers (Individual  $\beta$  CA=.788>Organization  $\beta$  CA=.557). Canadian and Chinese hold reverse responses (Individual  $\beta$  CN=.756<Organization  $\beta$  CN=.896). Overall, in both countries, respondents have high intrinsic motivations. The three intrinsic motivations (to know, to experience, and to accomplish) are the most reliable and influential indicators demonstrating self-determined motivation.

**Table 4.1.2 Overall sample (N=336) on reliable correlations (Cronbach  $\alpha > 0.5$ )  
by individual and organization\***

| Correlation | Individual     |               | Organization   |               |
|-------------|----------------|---------------|----------------|---------------|
|             | Canada<br>N=84 | China<br>N=79 | Canada<br>N=85 | China<br>N=88 |
| SEO-IE      | .551           | .495          | .342           | .484          |
| SEO-IK      | .248           | .353          | .158           | .302          |
| SEO-IA      |                |               |                | .057          |
|             | <b>.788</b>    | <b>.756</b>   | <b>.557</b>    | <b>.896</b>   |

\*From the view of the type of decision maker (individual/organization)

The results were also analyzed independently for each country in order to see whether in specific context there are differences in how individual decision makers are motivated with regards to become sustainable oriented. There is a significant variation on all three levels of the intrinsic motivations. However, respondents in both countries (Canada and China), who are more sustainable entrepreneurial oriented have higher intentions to develop future sustainable enterprises or make relevant decisions because of their intrinsic motivations. (Please refer to Tables 4.1.3 and 4.1.4). These results were further confirmed by the interviews. We applied the similar interview guide (as the questionnaire) and found most interviewees from both countries were strongly motivated by their recognition experience, achieving ecological knowledge and mission accomplishment upon sustainable issues. Individuals seem to view reality according to their own contexts. Chinese interviewees have a preference in choosing to become organizational decision makers while Canadian are attracted towards becoming entrepreneurs.

**Table 4.1.3 Sustainable entrepreneurial intention - self-determined motivation, sustainable entrepreneurial orientations, short-term & long-term factors (CA) (Sample n=165)**

*Sustainable entrepreneurial intentions Y2*

---

Adjusted R<sup>2</sup>=.372 at 5% significance level

|                                        | B             | SE                  | T             | P            |
|----------------------------------------|---------------|---------------------|---------------|--------------|
| Constant                               | 1.000         | .764                | .721          | .326         |
| F1 -Entrepreneurial orientation (ORG.) | .145          | .458                | 2.353         | .052         |
| F2- Sustainable orientation (ORG.)     | .283<br>.409  | .136<br><b>.134</b> | 1.800<br>.711 | .027<br>.044 |
| F3- Entrepreneurial orientation (ID.)  | -.025         | .293                | .883          | .046         |
| F4- Sustainable orientation (ID.)      | -.014<br>.397 | .509<br>.205        | .741<br>.616  | .014<br>.011 |
| Extrinsic – External                   | .042          | .094                | 1.762         | .526         |
| Extrinsic – Introjected                | .015          | .085                | 1.714         | .495         |
| Extrinsic – Identified                 | .074          | .092                | 2.132         | .238         |
| Extrinsic – integrated                 | .068          | .086                | 1.699         | .008         |
| Intrinsic – Towards Accomplishment     | <b>.010</b>   | .079                | 1.303         | .014         |
| Intrinsic – To Know                    | <b>.246</b>   | .099                | 2.473         | .038         |
| Intrinsic – Experience                 | <b>.237</b>   | .137                | 2.807         | .072         |
| Perceived support                      | .324          | .224                | 2.920         | .002         |
| Short-term concern                     | .255          | .108                | 2.353         | .013         |
| <i>Total variance</i>                  | <i>.149</i>   | <i>.076</i>         | <i>2.132</i>  | <i>.044</i>  |

Other than the motivation commonalities, there is a difference on what the respondents consider a sustainable decision maker; whether he/she is an individual entrepreneur or works in an organization. As shown in Table 4.1.1, Canadian respondents are more oriented towards becoming SE entrepreneurs, while Chinese respondents view themselves as decision makers working for an organization and developing SE practices (Please refer to Table 4.1.4). We cannot completely explain how these differences occur. It will be further discussed by adding cultural dimension items. Overall, the correlation function of the four main hypotheses were analyzed with the 16 coefficients. Besides defining the model function that may help study mediating and moderating effects, the factor analysis determining effective measure demonstrating each variable is also necessary. In conclusion, the preliminary results reveal that individual entrepreneurial-oriented

Canadian are more likely interested in becoming sustainable entrepreneurs while sustainable-oriented Chinese decision maker are more comfortable to do so within an organization context. Interestingly, the mediating intrinsic motivations for both interaction effects, SEO x Intrinsic regulations on SEI, for Canadians and Chinese's respondents are significant (CA: InTK=.246, InE=.237, InTA=.01,  $p < 0.1$ ).

**Table 4.1.4 Sustainable entrepreneurial intention - self-determined motivation, sustainable entrepreneurial orientations, short-term & long-term factors (CN) (Sample n=171)**

| <i>Sustainable entrepreneurial intentions Y2</i> |                                                        |             |              |             |
|--------------------------------------------------|--------------------------------------------------------|-------------|--------------|-------------|
|                                                  | Adjusted R <sup>2</sup> =.242 at 5% significance level |             |              |             |
|                                                  | B                                                      | SE          | T            | P           |
| Constant                                         | 1.000                                                  | .764        | .721         | .385        |
| F1 -Entrepreneurial orientation (ORG.)           | .112                                                   | .328        | 1.714        | .013        |
|                                                  | .198                                                   | .205        | 2.1321       | .025        |
| F2- Sustainable orientation (ORG.)               | .341                                                   | <b>.694</b> | 2.710        | .027        |
| F3- Entrepreneurial orientation (ID.)            | -.005                                                  | .184        | 2.473        | .094        |
|                                                  | -.042                                                  | .411        | 1.720        | .071        |
| F4- Sustainable orientation (ID.)                | .255                                                   | .101        | 1.254        | .007        |
| Extrinsic – External                             | .033                                                   | .075        | 1.762        | .413        |
| Extrinsic – Introjected                          | .057                                                   | .088        | 2.353        | .394        |
| Extrinsic – Identified                           | .064                                                   | .074        | 1.699        | .137        |
| Extrinsic – integrated                           | .020                                                   | .098        | 1.914        | .004        |
| Intrinsic – Towards Accomplishment               | .017                                                   | .124        | 1.303        | .054        |
| Intrinsic – To Know                              | .324                                                   | .189        | .883         | .016        |
| Intrinsic – Experience                           | .173                                                   | .137        | .665         | .054        |
| Perceived support                                | .249                                                   | .181        | 2.473        | .003        |
| Short-term concern                               | .177                                                   | .094        | 1.800        | .011        |
| <i>Total variance</i>                            | <i>.096</i>                                            | <i>.113</i> | <i>2.445</i> | <i>.023</i> |

## 4.2 Moderator analysis: age, gender, and perceived support

We analyzed the *moderating effects of* age, gender, and perceived support (Please refer to Table 4.2.1). Gillian and Jay (2002) suggest to consider the moderating effects of gender, age, perception of sustainability, and perceived support. In addition, we emphasized the difference between individual or organizational decision maker for entrepreneurial orientation and intention. We reviewed the process of applying the contextual factors into functions, according to the four main hypotheses. We also had four functions testing the moderating effects from different variables.

In both countries, *age* was the least moderating factor while *individual entrepreneur* and *organization differences* were the most significant moderators. From the Canadian sample (n=169), individual decision makers have stronger path coefficients, and the effects are more significant while the Chinese sample (n=167) indicates that organizational decision makers have stronger path coefficients, and the effects are more significant.

### 4.2.1 Age

From the results in both countries, different age groups are showing less differences and less significant deviations on their entrepreneurial intentions ( $\beta_{CA}=0.009$   $p<0.1$ ;  $\beta_{CN}=0.047$   $p<0.1$ ) (Please refer to Tables 4.2.1). The mean ages (23-24 years old) for Canadian and Chinese respondents who have more sustainable entrepreneurial intentions are similar. We conclude no significant effects of age differences in both countries on entrepreneurial intentions.

### 4.2.2 Gender

Moriano et al. (2012) apply nominal conditions of gender into the function of relationship between entrepreneurial orientations and entrepreneurial intentions. We analyzed the data using the same process. Within the same contextual conditions (age, perceived support), in both Canada

and China, females have more intentions to be sustainable entrepreneurs. The correlation coefficients are more than .145 (mean coefficient of female gender) in the two countries. We cannot really accept H7a in which extrinsic motivations and SE orientations are less influenced by difference of gender group (*H7a: Sustainable and entrepreneurial oriented individuals in different gender groups are more influenced by extrinsic motivations and have different degree of intention to become sustainable entrepreneurs.*)

However, there exists a marginally significant correlation ( $p < .10$ ) between the degree of perceived support and gender difference. Nevertheless, it is unclear whether the difference in the gender group impacts intrinsic motivations and if it changes the individual's SE intention in the two cultural context studied (Canada and China). Thus, we cannot reject hypotheses H7b/c/d because the main effect from difference of gender group are less influential than the main effect from the perceived support. It is unclear whether it is a direct moderating effect from the gender conditions or from the different degree of perceived support with regards to the gender groups. The results support partially the H7 related to the difference in the gender groups.

#### *4.2.3 Perceived support*

*H8a: The more perceived support SE (sustainable-entrepreneurial) oriented individuals have, the more motivated by extrinsic regulations those individuals are.*

*H8b/c/d: Individuals who are motivated by moral recognition experience/ecological knowledge achievement/expecting social and sustainable accomplishment have strong intention to become sustainable entrepreneurs if they have more perceived support.*

The mean coefficient of perceived support effects is significant which demonstrates positive moderating effects from this factor. However, there is a slight difference of perceived support between Chinese and Canadian respondents. Chinese respondents' perceived support

seems to have stronger effects on the main functions: (H1 & H2,  $\beta=.397>.188$ ,  $p>.05$ ) which is different for Canadian respondents (H1 & H2,  $\beta=.175<.188$ ,  $p<.05$ ) (Please refer to Table 4.2.1). For the Chinese respondents, the perceived support could have more effects on entrepreneurial orientation (H3,  $\beta=.378$ ,  $p<.05$ ) (Please refer to Table 4.2.2).

In fact, Chinese respondents'-oriented characteristics of being an entrepreneur in the future strongly depends on social relations and support of the individual, while in the Canadian sample, respondents indicating perceived support are more concerned about sustainable oriented characteristics (H4,  $\beta=.339$   $p<.05$ ) (Please refer to Table 4.2.3).

**Table 4.2.1 Moderating effects for entrepreneurial/sustainable orientation (EO, SO) and sustainable entrepreneurial intention (SEI)**

| Variable                           | H1: EO -> SEI |                 |      | H2: SO -> SEI |                 |      | China   | Canada  |
|------------------------------------|---------------|-----------------|------|---------------|-----------------|------|---------|---------|
|                                    | B             | T               | P    | B             | T               | P    | $\beta$ | $\beta$ |
| Individual/Organization (Nominal)  | .490          | 5.972           | .000 | .244          | 3.092           | .023 | .414**  | .457*   |
| Gender (FEMALE)                    | .145          | 2.682           | .000 | .132          | 2.994           | .004 | .175**  | .147**  |
| Age – $\mu=24.43$                  | .005          | 0.265           | .085 | .005          | 0.781           | .075 | .047    | .009    |
| Perception of sustainability – POS | .254          | 4.293           | .015 | -.101         | 3.451           | .009 | .259*   | .278*   |
| Perceived support – PS             | .188          | 2.009           | .000 | .220          | 2.770           | .000 | .397**  | .175**  |
| R <sup>2</sup>                     |               | .003            |      |               | .082            |      |         |         |
| $\Delta F$                         |               | <b>17.547**</b> |      |               | <b>28.449**</b> |      |         |         |

\*\*p<.05 \*p<.10 EO – Entrepreneurial orientation; SO – Sustainable orientation; IE – Intrinsic motivation toward experience; IK – Intrinsic motivation toward knowledge

IA – Intrinsic motivation toward accomplishment; – SEI – Sustainable entrepreneurial intention

**Table 4.2.2 Moderating effects for entrepreneurial orientation (EO) and intrinsic motivation (IE, IK, IA)**

| Variable                           | H3.1: EO-IE |                 |      | H3.2: EO-IK |                 |      | H3.3:EO-IA |       |                 | China   | Canada  |
|------------------------------------|-------------|-----------------|------|-------------|-----------------|------|------------|-------|-----------------|---------|---------|
|                                    | B           | t               | P    | B           | t               | P    | B          | t     | P               | $\beta$ | $\beta$ |
| Individual/Organization (Nominal)  | .353        | 3.078           | .029 | .287        | 3.886           | .000 | .310       | 1.963 | .197            | .364**  | .487**  |
| Gender (FEMALE)                    | .133        | 3.182           | .000 | .355        | 3.182           | .000 | .242       | 2.571 | .008            | .141**  | .129**  |
| Age – $\mu=24.43$                  | .005        | 0.265           | .085 | .005        | 0.265           | .085 | .005       | 0.215 | .078            | .070    | .004    |
| Perception of sustainability – POS | .087        | 2.650           | .000 | .097        | 2.571           | .025 | .331       | 3.499 | .018            | .078*   | .094*   |
| Perceived support – PS             | .143        | 2.353           | .002 | .231        | 3.078           | .000 | .192       | 2.602 | .014            | .378**  | .137**  |
| R <sup>2</sup>                     |             | .045            |      |             | .087            |      |            |       | .044            |         |         |
| <b><math>\Delta F</math></b>       |             | <b>12.453**</b> |      |             | <b>18.315**</b> |      |            |       | <b>74.323**</b> |         |         |

\*\*p<.05 \*p<.10

*EO – Entrepreneurial orientation; SO – Sustainable orientation; IE – Intrinsic motivation toward experience; IK – Intrinsic motivation toward knowledge*

*IA – Intrinsic motivation toward accomplishment; – SEI – Sustainable entrepreneurial intention*

**Table 4.2.3 Moderating effects for sustainable orientation (SO) and intrinsic motivations (IE, IK, IA)**

| Variable                           | H4.1:SO-IE |                 |      | H4.2: SO-IK |                 |      | H4.3: SO-IA |                |      | Canada  | China   |
|------------------------------------|------------|-----------------|------|-------------|-----------------|------|-------------|----------------|------|---------|---------|
|                                    | B          | t               | P    | B           | t               | P    | B           | t              | P    | $\beta$ | $\beta$ |
| Individual/Organization (Nominal)  | .284       | 2.228           | .000 | .353        | 3.090           | .020 | .284        | 2.583          | .020 | .199**  | .286**  |
| Gender (Female)                    | .189       | 2.896           | .000 | .158        | 3.291           | .000 | .197        | 3.707          | .000 | .214**  | .275**  |
| Age – $\mu=24.43$                  | .005       | 0.224           | .077 | .005        | 0.690           | .084 | .005        | 0.675          | .088 | .002    | .006    |
| Perception of sustainability – POS | .346       | 3.012           | .024 | .242        | 4.437           | .031 | .231        | 3.883          | .014 | .177*   | .254*   |
| Perceived support – PS             | .065       | 2.374           | .000 | .157        | 4.140           | .000 | .127        | 1.701          | .000 | .339**  | .015**  |
| R <sup>2</sup>                     |            | .074            |      |             | .064            |      |             | .055           |      |         |         |
| <b><math>\Delta F</math></b>       |            | <b>58.667**</b> |      |             | <b>42.442**</b> |      |             | <b>4.823**</b> |      |         |         |

\*\*p<.05 \*p<.1 EO – Entrepreneurial orientation; SO – Sustainable orientation; IE – Intrinsic motivation toward experience; IK – Intrinsic motivation toward knowledge

IA – Intrinsic motivation toward accomplishment; – SEI – Sustainable entrepreneurial intention

### 4.3 Open interviews: qualitative findings

#### 4.3.1. Experiential definition of sustainable enterprise

*“Necessary step to include unresolved issues into new astonishing business field” – T.D.*

A few entrepreneurs started the interview by indicating they recognize the sustainable orientation and ideology. The new generation of entrepreneurs consider to engage in various new forms or non-market governance involving stakeholders for ecological enhancement.

*“The modern civil engineering design is not to program parts in proper functions. We are looking for better future settlement for both society and the ecosystem.” – W.K.*

A few interviewees believe that other than just adding recognized elements for joining into fields of sustainability, the true sustainable begins from inside the organization. Those sustainable entrepreneurs (especially in Canada) would like to create innovative (ecological) values for new stakeholders or even become better stakeholders in the business field itself. In other words, the changes they made are not only aligned with requirements from the original stakeholders.

*“Within the new trends, which are supported and recognized but not executed often, we decided to personalize ourselves and the work.” – W.K.*

The interviewees’ definitions helped conceptualize further the individual future sustainable entrepreneurial intentions. SEI under those cases are not just designing/starting certain sustainable enterprises supplementing what we’re missing in the field but also continually learning and consuming new knowledge and others’ innovations acting like “modern civil engineering.” The individual is willing to know more about related ecological strategies and policies and integrate them into marketing and management practices.

#### 4.3.2. Decision makers' characteristics

We interviewed A.K. with a bachelor's degree in sciences specialized in audio motion. A.K. started an audio software company writing scripts and producing screenplay assisting product located in Montreal. His parents had no experience in starting a business. However, A.K. had developed a university network. The members participated in A.K.'s company's mission, market themselves differently infusing sustainable services, including less-energy-consumption installment, and ecological working practices.

*“Before we actually make a few steps, bringing up those impressive ideas and innovations into our work and life made me feel like accomplishing certain lifetime missions and feel pleasure. You see, we didn't deal with exact unresolved issues. But, we are always willing to be prepared for those things. The ecological ideas make us specialized. And, we can finally extend such ideas into specific actions within and outside.” – A.K.*

Sustainable entrepreneurs are proactive and apply new ideas into their service designs, and strive to innovate while being concerned with long-term performance impacts. They have natural high intrinsic motivation levels which help them grasp the whole context and ensure them with a clear vision on what they need to do to achieve results. Although our interviewees started their business in different fields, most of them think simultaneously of sustainable design of a product or a service with a sustainable management mindset.

However, when we compared the stories considering the cultural origins (Canadian versus Chinese), the perceived support seems to have different meanings when interacting those sustainable entrepreneurs' behavior orientation (like A.K.). When those individual SE reflect on their orientations in different cultural contexts, the perceived support may also be originated

differently, not just from parents influences but also peers'. For further information about the post-interviews, please refer to Appendix B.

#### 4.3.3. Cultural differences

In order to tease out the cultural differences in understanding the core concepts, we conducted the interview process in two stages. In the first stage, we asked for interviewees' definition of sustainability and sustainable entrepreneurship (regarding their works or enterprises). In the second stage, we tried to understand what types of efforts professionals made for achieving recognized sustainable enterprises. We found interesting differences in the interviewee responses:

*"I have an eye for opportunities, I like to seize opportunities as they arise"* – L.N

*"I am constantly learning and making new contacts, finding new avenues of resource, and building my own network. I enjoy the ability to be able to focus on more than one direction"* –

WJ.P

Most Chinese interviewees would begin by saying: "Following up on what the government supports..." In contrast, Canadian respondents would give precise individual behaviors: "regulate your work and enterprise by some fixed rules, don't break them." As we discussed in Section 3.2 (Please refer to Table 3.2), the twenty (20) interviewees bring some outstanding opinions and differences on specific cultural dimension. Chinese interviewees are more concerned with collective thoughts or governing framework that may influence their considerations about whether or not to make more decisive moves towards sustainability. A few Canadian interviewees were in agreement with that statement. However, there are few differences between Canadian and Chinese interviewees upon whether individualistic thoughts or governing framework may affect their concerns. From the gender dimension, Masculine perception may influence more SEs' intentions (although Chinese may agree more on that aspect than Canadian). However, other cultural

dimensions didn't demonstrate explicit concerns from our interviewees. So, we saw the need to explore further Hofstede cultural dimensions (e.g., *Power distance, Value Uncertainty which may be more conspicuous and could be further analyzed in quantitative methods*).

#### **4.4 Online survey**

To generate an understanding of the similarities and differences between Chinese and Canadian entrepreneurs, after analyzing the in depth-interviews, we reviewed the conceptual model and adjusted the questionnaire design adding new items related to different individual cultural dimensions: personal gratification – five items; power distance – five items; individualism v.s. collectivism – five items; uncertainty avoidance – five items (Please refer to Appendix C). This second stage of analysis was guided by the theory building procedures suggested by Eisenhardt (1989); the process of inductive analysis proposed by Lofland (1971), and the literature on grounded theory (Glaser and Strauss, 1967; Strauss and Corbin, 1990; Marshall and Rossman, 1995). Specifically, the deductive analysis of the data involved a more structured survey design. The revised online survey was completed with a total of n=743 respondents (Canadian sample, n=315; Chinese sample, n=328). We further analyzed the demographics, education and work experiences backgrounds, and motivations factors.

Since the central variables in our framework were latent, structural equation modeling was most appropriate to account for this latency and consequent results of the online survey (following analysis works done in the pre-test). The overview of the validity and confidence checks are summarized in Table 4.4.3 The estimated standardized variances on exploratory factor analysis and confirmative factor analysis of both the pre-test and the online survey are smaller than 0.5 (e.g. the variance of correlation between SEO and IE=0.045). The results of our main four hypotheses are in line with the new proposed models (without considering cultural aspects at first), which also

shows the similarity of the underlying model, accepted in the pre-test (CFI-pre-test=0.94, df=91; CFI-online survey=0.89, df=120). Comparing Chinese and Canadian respondents, whether an individual would prefer to become an individual entrepreneur or be employed by an organization, in both cases the respondents indicate their willingness to become sustainable decision makers. The results demonstrate higher correlations between SEO, intrinsic motivations and the preference of being an individual entrepreneur in the Canadian sample (e.g. correlation  $\beta$  of intrinsic motivations=0.942, 0.831, 0.720) (Please refer to Table 4.4.3).

The results demonstrate higher correlations between SEO, intrinsic motivations, and preference of being employed in organizations in Chinese responses (e.g., correlation  $\beta$  of intrinsic motivations=0.754, 0.772, 0.591) (Please refer to Table 4.4.3). When we consider EO and SO together, SEO effects on Intrinsic motivations in both two Countries, we used perception of sustainable values (POS) as better measure for check the interaction on how they most significantly make effects on intrinsic motivations. First, we checked how gender and the perceived worked on intrinsic motivations and how they interact with each other and the POS. Different gender may cause perceived support influence differently on intrinsic motivations ( $p>0.05$ ) (Please refer to Table 4.4.1). Distinct extent of perceived support may cause perception of sustainability influence differently on intrinsic motivations ( $p<0.10$ ) (Please refer to Table 4.4.1). Distinct gender may not cause perception of sustainability influence differently on intrinsic motivations (Please refer to Table 4.4.1).

We verified the moderating effects of gender and the perceived support through the online survey. The results indicate the considerable variance with nominal gender, the perceived support, and the perception of sustainability variables (correlation  $\beta$ =0.151, 0.203, 0.114,  $p<0.1$ ) in the adjusted model of moderating effects on SEI (sustainable entrepreneurial intention) (Please refer

to Table 4.4.1). Since we have a fixed age group (19-25 years old), the moderating effect of age is not considerable across the online survey in both countries. From the adjusted model, female respondents present stronger intrinsic motivations towards SEI, as concluded in the pre-test. The gender variable recorded as a diagonally weighted factor strongly correlates with the perceived support (female's decision on SEI was influenced by the perceived support =0.174 p<0.05) (Please refer to Table 4.4.1), which further explains the reason for less direct effect from gender, as we found in the pre-test.

**Table 4.4.1 Contextual supports interaction effects on intrinsic motivations (coefficients)**

| <b>Model 2</b>        | <b>Unstandardized</b> |           | <b>Standardized</b> | <b>t</b> | <b>Sig.</b> |
|-----------------------|-----------------------|-----------|---------------------|----------|-------------|
|                       | <b>Coefficients</b>   |           | <b>Coefficients</b> |          |             |
|                       | B                     | Std.Error | Beta                |          |             |
| <b>Constant</b>       | 81.012                | 4.451     |                     | 15.100   | .000        |
| <b>Gender Group</b>   | 1.021                 | 1.252     | .151                | -2.544   | .110        |
| <b>(GG)</b>           |                       |           |                     |          |             |
| <b>Perceived</b>      | 1.873                 | 1.025     | .203                | .655     | .012        |
| <b>Support (PS)</b>   |                       |           |                     |          |             |
| <b>Perception of</b>  | 1.098                 | 1.495     | .114                | -.852    | .044        |
| <b>sustainability</b> |                       |           |                     |          |             |
| <b>(POS)</b>          |                       |           |                     |          |             |
| <b>GG_X_PS</b>        | 1.802                 | .785      | .174                | 2.545    | <b>.025</b> |
| <b>PS_X_POS</b>       | .941                  | 1.241     | .088                | 1.547    | <b>.078</b> |
| <b>GG_X_POS</b>       | 1.044                 | 1.746     | .203                | 1.051    | <b>.179</b> |

#### 4.5 Comparative results: cultural aspects

After the pre-test and conducted interviews, we conclude that when individuals have certain altruistic decision pattern-from orientation to intentions, their cultural contexts may further influence their thoughts such as how to define the “perceived support” and how SEI could express. We revised our hypothesized model to include some cultural aspects (from Hofstede cultural individual dimensions) to discover factors that may explain indirect variances across the pre-test and demonstrate a better likelihood moderating model (Please refer to Figure 2.3). The results of integrating cultural aspects in the model indicate significant potentials for changes in H1 and H2 (which in the pre-test just show both EO and SO may cause stronger SEI but present less difference between the two countries people)(EO and SEI; SO and SEI) ( $\Delta F$  of each hypothesis =21.988\*\* and 31.681\*\*), which demonstrates that it is necessary to consider cultural aspects when we compare Chinese and Canadian respondents. There are more differences between the two countries’ results. We tested the moderating effects on the main hypotheses (between sustainable entrepreneur orientation and intentions).

The identity recognition (individualism or collectivism) explains the correlation differently, as expected (China’s higher correlation of collectivism and Canada’s higher correlation of individualism). However, the results only fitted under the 10 percent significant level. The power distance seems to influence individuals who are more entrepreneurial oriented (or with innovative and proactive characteristics) and how they become sustainable (social, ecological, and economic balanced) in their decision-making ( $B=0.743$ ,  $p<0.1$ ) (Please refer to Table 4.4.2). In conclusion, individualism is more significantly on sustainable-oriented Canadian’s decision procedure. ( $p<0.05$  please refer to Table 4.4.2). Collectivism is more significant on sustainable-oriented Chinese’s decision procedure ( $p<0.05$  please refer to Table 4.4.2). Uncertainty Avoidance is more

significantly on sustainable-entrepreneurial-oriented (holding POS) Chinese's decision procedure ( $p < 0.5$  please refer to Table 4.4.2). Power distance is more significant on sustainable-oriented Canadians' decision procedure ( $p < 0.10$  please refer to Table 4.4.2). Among the correlation checks, collectivism identity demonstrates explicit differences between Canadian and Chinese (.575 vs. .247), which is what we expected from the interview conclusions. However personal gratification on life from the nominal view upon gender perception (Masculine vs. Feminine) did not demonstrate significant effects or differences.

**Table 4.4.2 Cultural dimension effects for entrepreneurial/sustainable orientation (EO, SO) and sustainable entrepreneurial intention (SEI)**

| Variable                    | H1: EO -> SEI |                 |      | H2: SO -> SEI |                 |      | China   | CANAD<br>A |
|-----------------------------|---------------|-----------------|------|---------------|-----------------|------|---------|------------|
|                             | B             | T               | P    | B             | t               | P    | $\beta$ | $\beta$    |
| Individualism               | 1.390         | 3.972           | .070 | 1.278         | 2.193           | .023 | .314**  | .657*      |
| Collectivism                | .457          | 2.788           | .091 | -.153         | 3.224           | .005 | .575*   | .247**     |
| Power distance              | .743          | 1.375           | .087 | .489          | 1.375           | .064 | .277*   | .315*      |
| uncertainty Avoidance       | -1.744        | 5.688           | .015 | .905          | 2.788           | .027 | .674**  | .596**     |
| Personal gratification (GP) | .688          | 2.227           | .142 | 1.319         | 3.375           | .225 | .177    | .210       |
| R <sup>2</sup>              |               | .075            |      |               | .154            |      |         |            |
| $\Delta F$                  |               | <b>21.988**</b> |      |               | <b>31.681**</b> |      |         |            |

\*\*p<.05 \*p<.1 EO – Entrepreneurial orientation; SO – Sustainable orientation; IE – Intrinsic motivation toward experience; IK – Intrinsic motivation toward knowledge

IA – Intrinsic motivation toward accomplishment; – SEI – Sustainable entrepreneurial intention

**Table 4.4.3 Complete sample collection for n=743 (Canada-315, China-328 Cronbach's reliability coefficient – entrepreneurial orientation & self-determined motivation**

| Construct                         | Correlation |        | Cronbach's Alpha ( $\alpha$ )    |                              | Correlation |        | Cronbach's Alpha ( $\alpha$ )    |                              |
|-----------------------------------|-------------|--------|----------------------------------|------------------------------|-------------|--------|----------------------------------|------------------------------|
|                                   | F1->Y1      | F2->Y1 |                                  |                              | F3->Y1      | F4->Y1 |                                  |                              |
| Self-determined motivation Y1     | Canada      |        | Entrepreneurial orientation (F1) | Sustainable orientation (F2) | China       |        | Entrepreneurial Orientation (F1) | Sustainable orientation (F2) |
|                                   | Indiv       | Org    |                                  |                              | Indiv       | Org    | Indiv                            | Org                          |
| Intrinsic-Experience              | .942        | .695   | .876                             | .774                         | .342        | .314   | .541                             | .754                         |
| Intrinsic- To Know                | .831        | .353   | .650                             | .742                         | .158        | .302   | .561                             | .772                         |
| Intrinsic- Towards Accomplishment | .720        | .133   | .269                             | .045                         | .133        | .057   | .470                             | .591                         |
| Extrinsic- Identified             | .016        | .298   | .037                             | .149                         | .030        | .163   | .146                             | .379                         |
| Extrinsic- integrated             | .162        | .198   | .008                             | .057                         | .276        | .041   | .184                             | .273                         |
| Extrinsic- Introjected            | .129        | .146   | .302                             | .122                         | .130        | .037   | .098                             | .128                         |
| Extrinsic- External               | .039        | .133   | .096                             | .066                         | .245        | .013   | .173                             | .203                         |

## Chapter 5

### Overall discussion and Managerial Implications

#### 5.1 Overall discussion

Within the service-dominant and sustainability logic, we considered the concept of autonomous motivation (self-determined motivation factors of individuals) to demonstrate how altruistic orientation can modify the individual entrepreneur/decision maker behavioral intentions for “moral” goods. The primary goal was to enhance the conceptual literature on sustainable entrepreneurship and conduct an empirical study linking business ecosystems and individual entrepreneurs/decision makers in two distinct cultural contexts (Canada and China). We enriched our first set of online data collection with in-depth interviews. This led us to review our conceptual model and add new items to our initial online survey. After completing the overall aggregate data analyses, we conclude that individual sustainability orientation can be explained through entrepreneurial intention in business practices. The results are informative for researchers and decision makers interested in the antecedents of sustainable entrepreneurial intention and altruistic orientations. We conclude that antecedent factors to develop a sustainable mindset are critical, researchers and educators must pay attention to the following: i) a clear understanding of the SDT motivation factors, ii) a link between altruistic sustainable entrepreneurial orientation and intentions to develop intrinsic motivation towards a sustainable tri-partite values mentality, and iii) the contextualities that influence the decision makers including the individual cultural dimensions.

Our results indicate the strategic importance of encouraging the development of self-reflection (in other words self-reflecting individuals’ self-back to their orientations and contexts) and sustainable orientations, and practices among future business decision makers. Individuals

should notice that they are not alone in the ecosystem when they are intended to make altruistic moves. There is a gap between what students as potential future entrepreneurs believe they could do, and what they will do later in their career. The literature review and the empirical results with respect to our second hypothesis confirms Chlosta et al. (2006) perspective: less experienced business students need to be educated on ethical, social, and environmental issues for them to develop entrepreneurial intentions and subsequent sustainable potential behaviors. However, Chlosta didn't provide exact answers on how this may work. Other than just defining the pattern, which Dees (1998) and Mort (2002) have done in organizational level, we brought the procedure back to the start point of individuals and apply SDT to connect behavior orientations and intentions. Education could be one way to develop students' orientation, and at the same time further create more contextual supports pushing the SE decision procedure (from peers and from parents' recognition/influences).

We argue that the reason for this detrimental effect of actual entrepreneurial and sustainable orientation can be found primarily within the individual itself; alternative explanations can refer to both autonomous self-determined motivations and external factors such as cultural dimensions or other contextualities that may impact an individual's decision. The level of average sustainability orientation may highlight the challenges we face to develop the future entrepreneur's sustainable mindset. From our exploratory results, intending to be sustainable entrepreneurial through intrinsic motivation to experience, know, and accomplish stimulations is more conspicuous (Hypotheses 3 & 4). In other words, individuals are more likely to admit becoming more sustainable oriented because of "learned" practices than those who have natural intrinsic motivations in developing sustainable decision making and sustainable orientation strategy. There are few differences between Canadian and Chinese respondents.

With regards to the SDT factors and their link between sustainability orientation and entrepreneurial intentions, autonomous motivation factors help individual decision makers adopt a sustainability-orientation in their business practices and seek available opportunities. The impact of sustainability orientation on entrepreneurial intentions could not be attributed to individuals with higher sustainability orientation being more entrepreneurial but would be driven by changes in autonomous expectations and motivations. Note that respondents were considering SDT and other factors mainly through self-reflection (Chlosta et al., 2006).

A broader set of contextual factors has been proposed in the literature to influence the intention (e.g., self-employed status; perceived support). We considered those factors in the qualitative interviews, as suggested by Lüthje and Franke (2003) in their confirmatory factor analysis. Contextual factors can contribute to transforming altruistic orientation and intentions which may help future business individuals further understand how the actual process is created and enhanced.

## **5.2 Managerial implications**

Although we concentrated our efforts in understanding at the individual-level antecedent factors and their influence on the young entrepreneur's future sustainable intentions, we should not neglect the mezzo level of business and non-business relationships around the entrepreneur and its ecosystem. In addition to understand the micro-level of the SE antecedent factors, one should pay attention to the dynamics of interdisciplinary team, resource constraints and capabilities within the organization, the dynamic and turbulent changes outside the organization, balancing the growth with potential failure as a perpetuate equilibrium between agility and fragility, and transformation of the core business through technology shift in addition to take into consideration the ecological and social balance.

We discovered that gender differences explain many relationships in our proposed conceptual model. The results suggest that a fit between the type of entrepreneurial intentions, demographic, and attitudinal factors can best foster sustainable entrepreneurship. Women are sustainability-oriented individuals who tend to pursue sustainable entrepreneurial opportunities. These findings can assist in developing training and support programs for future social entrepreneurs as well as in selecting individuals who are likely to have a higher intention to start a sustainable enterprise.

The combined cultural dimension items expand the demonstration of sustainable orientations and intentions into the level of unconscious common belief. Individuals from different cultures have distinct tendencies of making choices. Few Chinese respondents recognized the obvious power distance from daily life or workplace and expressed their understanding about sustainable orientations. They also indicated their concerns with regards to adopting a framework of future sustainable decision maker. On the other hand, most Canadian individuals who could recognize conspicuous power distance from their life (more or less) could demonstrate more intentions to become sustainable decision makers. Both countries contextual factors seem to influence individuals in different ways. More attention should be devoted to understanding the deeper factors that are rooted in contextualities and their differences, not from a business future positioning, but from an individual perspective to grasp what hinders the entrepreneurial team to adopt a sustainable strategy perspective.

## Chapter 6

### Conclusion, Limitations and Future Research Avenues

This exploratory study aimed to understand, at the individual level, the antecedent factors influencing a young entrepreneur/decision maker in developing sustainable business intentions and practices. We demonstrated how entrepreneur sustainable orientation is mediated by self-determined motivation factors while being moderated by gender, perceived support, the individual and organizational influence, and related contextual cultural dimensions. Our intended purpose was to demonstrate the importance of teaching three related theories in order for young future decision makers to develop sustainable entrepreneurial practices: the triple sustainable values systems, the service-dominant logic, and the self-determined theory. By comparing cultural differences (Canada and China respondents), we reinforce the importance of context specificities at the individual-level (personal background, the individual's role, and the organizational influence), and the strategic importance of teaching in business schools empathy and altruistic behavior to develop sustainable business intentions and practices. One should not neglect gender, personal, and educational backgrounds as critical antecedent factors to succeed in transmitting the sustainable tri-partite values to the next generation. Our study contains a number of limitations while providing interesting future research avenues.

#### 6.1 Limitations

This study remains exploratory and further attention should be devoted to shed light on entrepreneurs who face day-to-day sustainable complex challenges, while being limited by numerous constraints (e.g., business and legal practices, context specificities, cultural differences and ethical/non-ethical practices in ecosystems, balancing internal and external resource

constraints, dynamic contextual shifts that unbalance the vision and strategy overnight, and so on). Furthermore, the cultural comparison shed light on other contextual complexities from the individual and his relationship with different actors in the entrepreneurial/business ecosystem, but also living with constraints outside of his control (e.g., sustainable policy development and applications, unbalanced requirements and constraints for entrepreneurs, and small and medium organizations to face institutional challenges).

Social desirability bias could be another limitation. In a few studies, respondents (including survey participants, interviewees) may prefer giving socially desirable answers or reactions instead of expressing their own feelings from direct reaction on questions (Grimm, 2010). Our study on sustainable entrepreneurs and new “moral” goods (combination of sustainable economic, social and environmental interests) may encourage respondents to be biased in wanting to provide more positive answers to “look” good. For example, whether respondents will actually consider starting their own sustainable business may be difficult to verify, however, they may still choose options or indicate attitude showing their support towards the sustainable cause. Since we more focused on the decision pattern, which mostly help sustainable entrepreneur intention at the end, starting to think in such “positive” way is acceptable in this study. Also, there are a few interviewees who confess that they are doing certain social enterprises to receive government supports. This subject merit attention in future studies. Overall, potential social desirability biases should be considered in this field.

## 6.2 Future research avenues

In business schools, future decision makers should be taught about the strategic importance of true empathy and altruistic behaviors as opposed to greenwashing and rosywashing. They need to be familiarized with three related theoretical concepts: sustainable values systems, the service-

dominant logic, and the SDT motivation factors. Thus, it is suggested to implement a curriculum change and review best practices with graduates after five years confronted to the dynamic context conditions.

*Cross-cultural studies* demonstrate that interdependent supportive behaviors of educated Chinese and North American parents play an important role in the education of their children's' internal goals and motivations, have positive influence, and reinforce cross-cultural business practices (Lekes et al., 2010). The higher the degree of support, the smaller the difference between the individual's actual self and ideal self (Lynch et al., 2009). Although the strength of this relationship varies among different countries, cultural studies should introduce the SDT to better understand the antecedents that may provide more self-motivated autonomy. In this study, the indicators of cultural dimensions demonstrate discrepancy between Canadian and Chinese respondents on how (future) individual entrepreneurs with more altruistic intentions have a better chance to become sustainable entrepreneurs.

Although we demonstrated a relatively complete model explaining the potential self-determined process of future sustainable entrepreneur (Please refer to Figure 3.3) focusing on intrinsic regulations, we did not answer whether intending to be sustainable entrepreneurs is influenced by the reward, the recognition, intrinsic motivation in changing conditions with other cultural factors taking into consideration of mentality evolution (e.g., religious beliefs, family value system, cultural norms in collective culture settings, peers influence, etc.). Thus, future research could pay attention to controlled or normalized interaction from fixed norms and mentality evolution as indicated by the service dominant logic theory; individuals, organizations, and the society are not isolated parts, and we must consider complex interactions at different level of the ecosystems to understand complex problems as they are interacting and influencing each

other. For instance, traditional Chinese culture (e.g., Confucianism, Legalism, Taoism) emphasizes the concepts of respect, filial piety, and obedience. The interaction mode appears in the process of interpersonal interaction in the workplace (upper and lower levels) (Jingdong et al., 2013).

Researchers can further understand the *influencing factors* (including promotion and hindrance) that affect behavioral change or generalization (Vansteenkiste et al., 2010). This includes two levels: one is generalization across contexts, and the other is generalization across activities. The former refers to whether a certain behavior in one situation generalizes to another situation; the latter refers to whether the characteristics of a certain behavior generalize to other behaviors in the same situation. According to cognitive evaluation theory, for these two generalizations, the type of motivational atmosphere in the initial task engagement phase determines whether a certain behavior can be generalized across contexts or activities (Vansteenkiste et al., 2010). Therefore, in-depth research in different “social good” countries, regions, and local communities while defining further different general development of daily life changes amongst those populations can test the cross-cultural applicability of self-determined process on the one hand, and on the other hand, it will also help the further enhance contextualities in the different business settings from individuals to organizations, from organizations to their specific ecosystems.

*Social entrepreneurship* has been conceptualized from various perspectives, including an organization's moral complexity (Mort et al., 2002). In this study, we took Dees' (1998) and Mort et al.'s (2002) perspectives: social entrepreneurship business practices must take into consideration the increasing needs for social good. Social good is defined as a “passion for social mission dealing with various social issues,” while it also provides the opportunity of balancing the need to reach

new markets and continue to innovate (Dees, 1998; Mort et al., 2002). Innovation is linked to processes that focus on social entrepreneurial practices (Dees, 1998; Mairi et al., 2012; Segal et al., 2005). Although attention was paid to define acceptable practices for social entrepreneurs, few scholars demonstrated how a social entrepreneur will or is expected to perform, and what factors influence innovative processes that focus on social entrepreneurial practices (Mair et al., 2006). Defining what is the recognized “social good”, we can apply the self-determined process to demonstrate what are the altruistic social innovations (sustainable entrepreneurial intentions/practices) and why they are becoming more significant in the multi-levels of the business, social, and environmental ecological contexts.

*Digital media involvement and entrepreneurs* may expose themselves to social media and use these platforms to mirror their social entrepreneurship behavior by sending symbolic signals for their proposed social goods (Khajeheian, 2013; Lee & Jung 2018). The digital media platform has developed with literacy and the missing social good, which may keep involved individuals perceiving to be more collective depending on individuals’ experience and cultures (Couldry, 2015). Social media appeals may influence the individual’s motivation on social activities (Ferguson et al., 2015). The perception to be more collective on digital media platforms (stronger perception of connectivity and inclusion, which are two main potential reactions in the digital media contexts) may influence the individual’s positive or negative concerns about sustainable performance (Salemink et al., 2014). In fact, digital media developments also bring the entrepreneurship into a new era in which social resources can be recollected and entrepreneur strategies (content or intermediary advertising) could be reconceptualized in new contexts (Geho & Dangelo, 2012). The involvement of digital media in our daily life is one huge change in the times. We cannot conclude that people from different countries have similar or different modes of

behaviors in social media (Geho & Dangelo, 2012). However, future research may reveal how “virtual” collectiveness and individualism of the cultural dimensions in the modern society impact the sustainable entrepreneurial framework (intentions, behaviors, and outcomes).

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## Appendix A

### Pre-Test Online survey

#### Section 1. Tell us more about your professional development.

1.1 Please indicate your highest level of education completed:

- a. High School
- b. College Business bachelor's degree
- c. Business certificate
- d. MBA
- e. MSc in Business and administration
- f. PhD in Business and administration
- g. Other certificates, please specify:
- h. Prefer not to answer

1.2 Have you any other **formal** professional training (CFA, PMP...etc.)?

Yes

No

X1--Please specify\_\_\_\_\_

1.3 Have you any other **informal** professional training that enhance your business skills in better performing: community work, philanthropic or not-for-profit organizations, sports or artistic activities?

Yes

No

X.1 (If 3 == Yes)... Please specify

1.4 Even in a pandemic context, have you had an international internship experience or more than one? Please specify:

- a. Six months to a year
- b. a year to two years
- c. more than two years
- d. Not applicable

1.5 Even in a pandemic context, have you been part of an **in-person** or more community sustainable events such as social charity, health support, petition for environment issues?

- a. Yes
- b. No

– if yes, what were the most impressive experience you remember? (Please provide the name of the activity, or describe it in a few words)

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1.6 Even in a pandemic context, have you been part of an **online** or more community sustainable events such as social charity, health support, petition for environment issues.

- a. Yes
- b. No

– if yes, what was the most impressive experience you remember? (Please provide the name of the activity, and describe it in a few words)

1.7 To what extent, you believe having experience to study abroad will impact your future business career. (Please indicate from “1” *not important at all* to “7” *extremely important*).

**SECTION 2. Please share your opinion on factors that may influence your future career development**

(Please indicate from “1” Totally Disagree to “7” Totally Agree)

2.1 I will contribute to the organization’s international leading role with regards to the environmental legal protection

2.2 For sustaining the organization’s long-term financial viability, I will help the organization nurture good relationships with the local community

2.3 For sustaining the organization’s long-term financial viability, I will help the organization promote social missions/environmental causes

2.4 For keeping good relationships with the community, I will ensure our business maintains a long-term financial viability

2.5 For keeping good relationships with the community, I will help the organization promote social missions/environmental causes

**Section 3. Tell us more about your future career plan.**

3.1 If not working presently or working part-time, after graduation what do you intend to do professionally advancing your career?

- a. Start my own business
- b. Work with the family business
- c. Look for a job position in a company
- d. Apply for a public sector position
- e. Become an artist

- f. Work for an activist/political/community organization
- g. Exercise a liberal profession
- h. Travel the world

*Note: Questions will be designed differently for Group A- participants who prefer starting their own business and Group B- participants who prefer being employed.*

#### **Section 4. What factor may influence your career development in the organization?**

##### 4.1 What characteristics will help you actualize your future?

(Please indicate from “1” *Totally Disagree* to “7” *Totally Agree*)

- a. I like to take *bold action* by venturing into uncertainty conditions
- b. I am willing to *invest* more time/money on something that might yield a high return
- c. I tend to act “boldly” in situations where I know *risks* exist
- d. I often like to try *new* activities that are not necessarily risky
- e. I like the *adrenaline, challenge and creativity* of a new project as oppose to routine
- f. I prefer *autonomy* and learn myself rather than following rules/other points of views
- g. I favor *experimentation and original approaches* to problem solving rather than using methods others use to solve problems
- h. I proactively *anticipate* problems, needs, or changes
- i. I follow my *instinct* and grasp *opportunities* before others do
- j. I am aware of the political and economic trends and *seek for opportunities* in my field
- k. I like to get things done rather than *wait* for someone else to do it

4.2 As a future business decision maker, to which extent you agree/disagree with the following statements

(Please indicate from “1” *Totally Disagree* to “7” *Totally Agree*).

- a. I will contribute to the organization’s international leading role with regards to the environmental legal protection
- b. I will advocate to recruit and retain qualified employees with professional environmental expertise
- c. For sustaining the organization’s long-term financial viability, I will help the organization nurture good relationships with the local community
- d. For sustaining the organization’s long-term financial viability, I will help the organization promote social missions/environmental causes
- e. For keeping good relationships with the community, I will ensure our business maintains a long-term financial viability
- f. For keeping good relationships with the community, I will help the organization promote social missions/environmental causes

**Section 5. Tell us more about the motivating factors that may influence you to act as a sustainable business decision maker in your organization** (Please indicate from “1” *Totally Disagree* to “7” *Totally Agree*)

*I'm willing to take risk for trying new and unusual activities in my organization as a proactive sustainable entrepreneur...*

Time setting –

**5.1 Amotivation**

... although I do not see the benefit of what I am doing

... although it does not make a difference whether I do them or not

... even though I do not have a good reason for doing them

... even though I believe they are not worth the trouble

**5.2 External extrinsic**

... because I prefer disappointing my colleagues

... because I want to be viewed more positively by certain people

... in order to show others what I am capable of

... in order to attain prestige

### **5.3 Introjected extrinsic**

... because I would beat myself up for not doing it

...because otherwise I would feel guilty for not doing them

... because I force myself to do them

... because I would feel bad if I do not do them

### **5.4 Identified extrinsic**

... in order to help myself become the person I aim to be

... because I chose them as means to attain my objectives

... because I chose them in order to attain what I desire

...because I choose to invest myself in what is important to me

### **5.5 Integrated extrinsic**

... because it is really a part of who I am.

... because it is very meaningful for me

... because it is something, I value deeply

... because it is in line with my personal goals

## **5.6 Intrinsic to experience stimulation**

... in order to feel pleasant emotions

... because of the sense of well-being I feel while I am doing them

... for the pleasant sensations I feel while I am doing them

... for the enjoyable feelings I experience

## **5.7 Intrinsic to know**

... because I like making interesting discoveries

... for the pleasure of acquiring new knowledge

... for the pleasure of learning new, interesting things

... for the pleasure of learning different interesting facts

## **5.8 Intrinsic towards accomplishment**

... because of the pleasure I feel as I become more and more skilled

... for the pleasure I feel mastering what I am doing

... because of the satisfaction I feel in trying to excel in what I do

... because of the pleasure I feel outdoing myself

**Section 6. After five years of business experience, imagine you have decision power.**

(Please indicate from “1” *Totally Disagree* to “7” *Totally Agree*).

**6.1 I intend to ... :**

- a. Consider conjointly economic, environmental, and social values as an entrepreneur (as a decision maker)
- b. Specialize in solving a particular sustainable problem
- c. Become a sustainable decision maker/entrepreneur in response to my community needs

**6.2 As a future decision maker/leader, I believe my community will exercise indirect pressure**

to make me...(Please indicate from “1” *Totally Disagree* to “7” *Totally Agree*).

- a. ... pursue meaningful community ventures
- b. ... invest my time in solving community problems
- c. ... provide financial support to my community
- d. ... share expertise to solve socioeconomic and environmental problems within my community
- e. ... display coherency between my business and my community social-environmental concerns

**6.3 As a future business decision maker**, how important are the following **sustainable values** within/outside your organization. (Please indicate from “1” *Not Important at all* to “7” *Extremely Important*)?

- a. Environmental safety
  - i. *Innovating* in products and services design considering the whole recycling and reuse ecosystem within my organization
  - ii. Participating in the organization whole recycling and reuse system to *develop new industry norms* with business partners and stakeholders (city norms, regional norms, etc.)
  - iii. *Monitoring any type of waste* (toxic, food, electronic, water, plastic etc.) in the product and service design within my organization
  - iv. Participating in the organization waste policy to *develop new industry norms* with business partners and stakeholder
  - v. Considering the *tradeoff* of environmental safety costs and financial risks while innovating in products and services design...
    - a. ... within my organization
    - b. ... with business partners and stakeholders
- b. Economic Benefits
  - i. Justifying the sustainable products and services design through sustainable government regulations ...
    - a. ... within my organization
    - b. ... with business partners and stakeholders
  - ii. Grasping government incentives and financial opportunities (such as taxation policy) to design sustainable products and services ...

- a. ... within my organization
- b. ... with business partners and stakeholders
- c. Social-economic benefits
  - i. Hiring specific *sustainable expertise* to design products/services within my organization
  - ii. Favoring *community control* surveillance of sustainable expertise to protect social/environmental concerns with business partners and stakeholders
  - iii. Favoring *local production* and *transformation* to develop focal specialization within the organization
  - iv. Developing social and local *economic autonomy* for my community (such as food, pharmaceutical supply, education, etc.) with business partners and stakeholders
- d. Community development
  - i. Enhancing not-for-profit initiatives as part of my organization strategies
  - ii. Supporting initiatives from other sustainable entrepreneurs
  - iii. Contributing to innovative research and technological development for my community wellbeing enhancement
  - iv. Contributing to the educational development within my community
  - v. Reducing economic and social disparity working in collaboration with government institutions and my community associations
  - vi. Sharing success and expertise with other stakeholders who desire to develop similar value system

**As a future business decision maker**, how would you **act** towards the sustainable values you rated above (Please indicate from “1” *Highly Unwilling*, “7” *Highly Willing*)?

- a. Working with specific experts on designing your sustainable products/services
- b. Achieving sustainable certification to justify and monitor your products and services design
- c. Sharing with stakeholders and the community you and your partners’ social entrepreneurship achievements
- d. Using social media community platforms to promote you and your partner’ social entrepreneurship achievements
- e. Using social media community platforms to showcase and position you and your partners’ social entrepreneurship achievement
- f. Enforcing transparency in my sustainable decisions within/outside my organization
- g. Engaging in collaborating with...
  - i. ...stakeholders to balance environmental safety costs and financial risks within/outside my organization
  - ii. ...local business groups to deal with environmental safety cost and risks within/outside my organization
  - iii. ... the government to deal with environmental safety cost and risks within/outside my organization
- h. Working closely with the research institutions to advance innovative breakthroughs for my organization and the community

**Section 7. Tell us more about your family-friends influence on your career development.**

7.1 Everyone has someone who influences his/her career development. Please rank from the most influential individuals to the least who impacted your career choice.

- a. Father
- b. Mother
- c. Both parents
- d. Extended family
- e. Friends
- f. Professional colleagues
- g. Educators-mentors
- h. Prefer not to answer

7.2 Please describe your parents' **professional background**:

- a. Are employed in a medium-large organization
- b. Are employed/partner in a small business
- c. Have their own business
- d. Quit working for an organization and decided to start their own business.

7.3 Please specify the profession of your parents who **influenced your career decision**:

- a. Part of a liberal profession
- b. Working in the public sector
- c. An entrepreneur
- d. An employee working in the private sector
- e. An artist

- f. A community leader/politician/activist
- g. Other, please specify \_\_\_\_
- h. Prefer not to share

7.4 **Other than your parents**, please specify the profession of the person who influenced your career decision:

- a. Part of a liberal profession
- b. Working in the public sector
- c. An entrepreneur
- d. An employee working in the private sector
- e. An artist
- f. A community leader/politician/activist
- g. Other, please specify \_\_\_\_
- h. Prefer not to share

## **Section 8. Please indicate your demographic information**

8.1 Your gender:

- a. Female
- b. Male
- c. Transgender
- d. Non-binary
- e. Other
- f. Prefer not to answer

8.2 Your age:

8.3 Your home country:

- a. North America/Central America
- b. South America
- c. Europe
- d. Africa
- e. Asia
- f. Australia
- g. Caribbean Islands
- h. Pacific Islands
- i. Other: \_\_\_\_\_
- j. Prefer not to answer

Thank you for your time. Your participation is important to us. If you desire to obtain a brief overview of the aggregate results for this study, please check the box.

## Appendix B

### Post-Interview Sections

**Section 1.** Please share your opinion on a few cultural factors (Please indicate from “1” Totally Disagree to “7” Totally Agree)

1. The gratification of desires should be fulfilled instantaneously.
2. If you put yourself in a power position, you would prefer to ...
  - a. ... make most decisions without consulting people.
  - b. ... avoid asking the opinions of people too frequently.
  - c. ... avoid as much as possible social interactions with people.
  - d. ... argue with decisions made by your peers or people in higher positions.
  - e. ... delegate important tasks only to people you highly trust.

**Section 2.** How important are the following factors to you? (Please indicate from “1” Totally Disagree to “7” Totally Agree)

1. It is important to have instructions spelled out in detail so that I always know what I am expected to do.
2. It is important to closely follow instructions and procedures.
3. Rules and regulations are important because they inform me of what is expected of me.
4. Standardized work procedures are helpful.
5. Instructions for operations are important.

**Section 3.** Please share your opinions on individuals' contributions to the society (Please indicate from "1" Totally Disagree to "7" Totally Agree)

1. Individuals should sacrifice self-interest for the group.
2. Individuals should stick with the group even through difficulties.
3. Group welfare is more important than individual rewards.
4. Individuals should only pursue their goals after considering the welfare of the group.
5. Group loyalty should be encouraged even if individual goals suffer.

**Section 4.** Please share your opinions on how to tell individuals who intend to start the sustainable entrepreneurship (Please indicate from "1" Totally Disagree to "7" Totally Agree)

1. They will find partners for their future business during their academic experience.
2. They will search for government policy changes on sustainable business.
3. They intend to support their children/ or their younger relatives who desire to start their own business.

## Appendix C

### New Items Added to the Online Questionnaire

**Section 1.** Please share your opinion on a few cultural factors (Please indicate from “1” *Totally Disagree* to “7” *Totally Agree*)

1. The gratification of desires should be fulfilled instantaneously.
2. If you put yourself in a power position, you would prefer to ...
  - a. ... make most decisions without consulting people.
  - b. ... avoid asking the opinions of people too frequently.
  - c. ... avoid as much as possible social interactions with people.
  - d. ... argue with decisions made by your peers or people in higher positions.
  - e. ... delegate important tasks only to people you highly trust.

**Section 2.** How important are the following factors to you? (Please indicate from “1” *Totally Disagree* to “7” *Totally Agree*)

1. It is important to have instructions spelled out in detail so that I always know what I am expected to do.
2. It is important to closely follow instructions and procedures.
3. Rules and regulations are important because they inform me of what is expected of me.
4. Standardized work procedures are helpful.
5. Instructions for operations are important.

**Section 3.** Please share your opinions on individuals' contributions to the society (Please indicate from "1" *Totally Disagree* to "7" *Totally Agree*)

1. Individuals should sacrifice self-interest for the group.
2. Individuals should stick with the group even through difficulties.
3. Group welfare is more important than individual rewards.
4. Individuals should only pursue their goals after considering the welfare of the group.
5. Group loyalty should be encouraged even if individual goals suffer.

**Section 4.** Please share your opinions on how to tell individuals who intend to start the sustainable entrepreneurship (Please indicate from "1" *Totally Disagree* to "7" *Totally Agree*)

1. They will find partners for their future business during their academic experience.
2. They will search for government policy changes on sustainable business.
3. They intend to support their children/ or their younger relatives who desire to start their own business.

**Section 5.** Please share your opinions on internships supported by academic institutions and sustainable enterprises (Please indicate from "1" *Totally Disagree* to "7" *Totally Agree*)

1. If you are looking for an internship position during your academic life, you would be more likely to apply to a sustainable enterprise that is actively collaborating with a university developing sustainable knowledge.
2. If you are looking for an internship position during your academic life, you would be more likely to share your sustainable knowledge while gaining practical experience within the organization.

3. If you decide to start a sustainable enterprise, you will hire or provide an internship to a university student who developed sustainable innovative skills.

**Section 6.** In a vibrant secure environment (students, faculty, alumni across discipline), actions to support your future intensions (Please indicate from “1” *Not Important at all* to “7” *Extremely Important*)

1. As part of a 3-month internship, work closely with an entrepreneur learning and dealing with high uncertainty context and risk management.
2. Collaborate and innovate while learning entrepreneurship skills to deal with real world problems, providing sustainable solutions.
3. Develop the coop-consensus with collaborative management style to deal with real world problems, providing sustainable solutions.
4. Learn and develop critical hub with key players in the community to innovate and collaborate (e.g., keeping contacts with entrepreneurs, link future entrepreneurs with faculties and alumni)

**Appendix D**  
**Ethics Approval Form**



CERTIFICATION OF ETHICAL ACCEPTABILITY  
FOR RESEARCH INVOLVING HUMAN SUBJECTS

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Name of Applicant: Linghao Meng  
Department: John Molson School of Business\Marketing  
Agency: N/A  
Title of Project: The Impact of Social Innovation Orientation on Social Washing for Entrepreneurs  
Certification Number: 30014250  
Valid From: April 23, 2021 To: April 22, 2022

The members of the University Human Research Ethics Committee have examined the application for a grant to support the above-named project, and consider the experimental procedures, as outlined by the applicant, to be acceptable on ethical grounds for research involving human subjects.

A handwritten signature in black ink that reads "Richard DeMont".

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Dr. Richard DeMont, Chair, University Human Research Ethics Committee