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The Sustainable Personality in Entrepreneurship: The Relationship between Big Six Personality, Entrepreneurial Self-Efficacy, and Entrepreneurial Intention in the Chinese Context

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Abstract: This study examined the relationships between Big Six personality and entrepreneurial intention, inclusive of the mediating role of entrepreneurial self-efficacy in the Chinese context. Survey data from 280 college students reveal that Emotional Stability, Conscientiousness, Extraversion, and Interpersonal Relationship were positively associated with entrepreneurial intention. Agreeableness and Openness, however, had no effect on entrepreneurial intention in this study. Mediation analysis further indicated that Emotional Stability, Conscientiousness, Extraversion, and Interpersonal Relationship affected entrepreneurial self-efficacy, thus playing an indirect impact on entrepreneurial intention. In contrast, Agreeableness and Openness had no mediating role in the present study. These findings validate the bridge mechanism of entrepreneurial self-efficacy underlying the relationships between Big Six personality and entrepreneurial intention. These results highlight the direct role of sustainable personality as a predictor of entrepreneurial intention, especially as we note the decisive effect of the Interpersonal Relationship dimension in the Chinese context for the first time.

Keywords: Big Six personality; entrepreneurial self-efficacy; entrepreneurial intention; Chinese context

1. Introduction

Intention is identified as the best indicator that could predict planned behavior especially in the condition that the behavior is hard to be noticed, or has time lags that could not be predicted [1]. Practically, a growing body of research uses intention to predict behavior within the framework of intention-based model [2–4]. As a concept of psychology, entrepreneurial intention is a subjective attitude of potential entrepreneurs who intend to dedicate themselves to entrepreneurial activities [1]. The focus of this research is to identify and validate the psychological factors that influence one's entrepreneurial intention or predict an individual's decision to be an entrepreneur.

Although a wide array of factors, both endogenous and exogenous to the individual [1,5–8], can contribute to entrepreneurial intention [9] and affect one's job decision to be an entrepreneur [10], personality traits are considered particularly relevant [11]. In earlier studies, Shapero and Sokol [12] proposed the entrepreneurial event model that stated personality traits were important predictor of entrepreneurial intention. Rauch and Frese [13] found that personality traits such as adventure, internal

control and achievement motivation were closely related to entrepreneurial intention. Chen et al. [14] and Parker [15] also stated that personality performs an important role on intention. In addition, the topic of social entrepreneurial and personality, identified as one of the five main branches of social entrepreneurship research [16], implies that the meaning of analyzing the relationship between personality and entrepreneurial is deserved to be highlighted.

Goldberg [17] proposed a Big Five personality structure to delineate five factors including Emotional Stability, Conscientiousness, Agreeable, Extraversion, and Openness to analyze individual's personality and then developed the corresponding trait descriptive adjectives (TDA) [18,19], providing a structural perspective to research on personality traits [20]. Previous studies have put on great efforts on exploring the relations between Big Five personality and entrepreneurial intention from a wide variety of perspectives [21–26]. However, there are some contradictory findings about the relationships between Big Five personality traits and entrepreneurial intention in previous studies. Accordingly, more research is necessarily needed to further validate prior findings.

Furthermore, Big Five personality theory was insufficient to explain the personality traits of Chinese people, as Chinese people have quite distinctive psychological activities and personality traits compared with people from other countries [27–33]. Some personality scales such as Sixteen Personality Factor Questionnaire (16PE), Minnesota Multiphasic Per-sonality Inventory (MMPI), and Eysenck Personality Questionnaire (EPQ), have acceptable reliability and validity, yet there exist some insuperable problems when they are used in the Chinese context due to cultural differences [32]. To address this concern, domestic psychologists begin to conduct more appropriate scales by exploring the special properties of Chinese context based on Big Five personalities. For example, Song et al. [30] proposed and designed Big Six personality in Chinese Personality Assessment Inventory (CPAI). In addition, Zhang and Zhou [27] pointed out that interpersonal relationship factor may not be typical in the west and argued that the characteristics of Chinese acquaintance culture are very obvious. For example, Chinese people take great care of prestige, relationship, harmoniousness, flexibility, optimism, and defensiveness, and value their own "face" a lot. It inferred that Interpersonal Relationship is a mirror that reflects the humanistic ethic spirit of Chinese culture. The discovery of Interpersonal Relationship dimension contributes to the Big Six personality model which includes Emotional Stability (low Neuroticism means high Emotional Stability), Conscientiousness, Agreeable, Extraversion, Openness, and Interpersonal Relationship of China. Individuals who have high levels of Interpersonal Relationship can often keep a harmonious relation with others [28], and they are optimistic, sympathetic, take great care of their own prestige and value emotions with others [27], usually developing skillful ability to communicate with others. In addition, Feng and Xi [29] pointed out that the personality traits theory in the West might not be suitable to mirror personality traits of people around the world.

As a unique example, China has special cultural background and social system, and the personality theory based on the Chinese context is needed to describe, explain, predict, or intervene the behavior of Chinese people [34]. Fend and Xi [29] generalized five key characteristics of Chinese people, including face, relationship, kindness, ability and skill, and harmony. Smith [35], on the other hand, depicted his views about Chinese people from a foreigner's perspective. In his book of Chinese characteristics, he illustrated that face is a key to reveal the important characteristics of Chinese people. The face was regarded as a motivation that could drive individuals to pursue self-esteem and self-respect, and match behavior with their role in life, whilst highly valuing relationship [36] and harmony [29] contributes to develop an acquaintance culture in which people could keep a relatively stable and harmonious relationship with others in China. Accordingly, we inferred that the Interpersonal Relationship dimension of Big Six personality represents more Characteristics of Chinese people.

In addition, Yang and Guo [20] suggested that the theory of Big Five personality delineated static personality traits and reflected the stability of personality. However, it seems to fail to take the function of context and the complexity of personality into account, leading to a lack of explanation based on dynamic perspective. According to cognitive-affective system theory of personality (CAPS) [37], not

only structure and stability, but also process and variation of personality should all be considered. Mischel [37] regarded the system of personality as the interaction effect of biological factor and social learning, with continuous interaction between personality system and interpersonal context. Personality could never be separated from the interpersonal context in which one lives [38]; therefore, it has the attribute of sustainability, especially for Big Six personality. In the present study, we proposed that personality might impact sustainable entrepreneurship underpinned by two aspects. On the one hand, according to Kanfer et al. [39], personality was positively associated with job search such as self-employment and employment. More recently, Pappas and Pappas [40] depicted that sustainable personality is embodied by creating harmony and interconnection, as well as cultivating a continuous impact on individual's psychology and behavior. Based on aforementioned studies, we propose that personality has sustainable impacts on individual's development including the aspects of their various intentions, habits, choices, and behaviors, as it provides a perspective that individuals who score high on Interpersonal Relationship have a stronger sense of harmony and interconnection sense that is regarded as a sustainable personality [40]. On the other hand, personality has a dynamic characteristic that would promote the development of personality traits [20] based on the theory of cognitive-affective system of personality [37], whilst the finding of Morizot and Blanc [41], who examined the continuity and change in personality traits revealed that personality should be viewed from a dynamic perspective not be limited to a static perspective. In addition, according to cognitive–affective system theory of personality [37], dynamic trait is very intensively associated with interpersonal relationship. These findings imply that sustainable personality with dynamic characteristic could be developed and shaped to be more suitable for motivating individual to produce higher levels of entrepreneurial intention in specific contexts especially when individual has relatively lower levels of Interpersonal Relationship. Compared to Big Five personality, Big Six personality is the extension and development based on it, and this also contributes the meaning of the sustainable characteristic of Big Six personality.

Only a few studies have examined the associations of Interpersonal Relationship with entrepreneurial intention, however, previous studies had reported correlations between personality traits and individual's behavior, as well as Interpersonal Relationship on intentions [42,43]. For example, Li et al. [42] found that Interpersonal Relationship was positively associated with purchase intention within businesses. In addition, Hu and Zhang [43] found that Interpersonal Relationship in virtual community was positively associated with individual's ecotourism intention. However, to date, there is a lack of research into the test of relationship between Interpersonal Relationship and entrepreneurial intention. It is unclear whether the relation between Interpersonal Relationship, which is one dimension of Big Six personality, and entrepreneurial intention will be positively related. Therefore, we combined the six-factor model of personality [27] and cognitive-affective system theory of personality [37] (CAPS, Mischel) to explore the impacts of Big Six personality on entrepreneurial intention. It is worth noting that the Big Six personality model we defined including Emotional Stability, Conscientiousness, Agreeableness, Extraversion, Openness, and Interpersonal Relationship in our study was adjusted to be more suitable for our purpose, as the design is very explorative.

Furthermore, the impact paths of Big Six personality on entrepreneurial intention deserves further exploration to identify the mechanisms of psychological factors and make effective effort to improve entrepreneurial intention. Self-efficacy as a kind of confidence and belief encourages people to evaluate themselves, is rather significant factor for entrepreneurship [44]. Specifically, entrepreneurial self-efficacy refers to the important prerequisite for a potential entrepreneur to be engaged in entrepreneurial activity [45], and it could reveal the key entrepreneurial activity [46]. Therefore, we can consider entrepreneurial self-efficacy as the antecedent variable of entrepreneurial intention [46]. Some studies have tested the impacts of entrepreneurial self-efficacy on entrepreneurial intention [25,46–49]. In these studies, except for Emotional Stability, the other four dimensions of Big Five personality were all related to entrepreneurial self-efficacy.

Some indirect evidence indicated that entrepreneurial self-efficacy plays a mediating role in the relation of Big Six personality with entrepreneurial intention. Previous studies have illustrated

that personality may influence individual's entrepreneurial self-efficacy [25,50–56]. These findings might need further analysis, whereas personality traits were mostly considered as an inborn result, then entrepreneurial self-efficacy could contribute to people's performance [57]. However, to our knowledge, there is a lack of published research directly examining the relation between Interpersonal Relationship and entrepreneurial self-efficacy, and the mediating role of entrepreneurial self-efficacy in the relation between Big Six personality and entrepreneurial intention. Entrepreneurial self-efficacy, which is not only a predictor variable but also an outcome variable, may be a mediated variable that could explain the relationship between Big Six personality and entrepreneurial intention.

2. Theoretical Development and Hypotheses

2.1. Big Six Personality Related to Entrepreneurial Intention

In line with person-job fit theory, people select and remain in jobs that fit their personalities on the account of the reality that they are more suitable for and perform better at those jobs [58]. Entrepreneurship is one typical type of jobs [59] in the current situation which encourages innovation, contributing to increase welfare and employment rate for a country [60]. For this reason, person-job fit theory would imply that personalities play an indispensable role in the job selection process in which people decide whether to be an entrepreneur.

Practically, previous studies indicated what personality traits the entrepreneurs or individuals with entrepreneurial intention would have. For example, compared with managers, entrepreneurs have higher levels of Emotional Stability [23,61,62], Conscientiousness [21,23,61,62], Extraversion [23,61,62], and Openness [21,23,61,62], but have lower levels of Agreeableness [21,23,62]. Similar to Zhao and Seibert [62], Rauch and Frese [63] found that entrepreneurs had higher levels of Extraversion, while rated comparatively lower on Agreeableness [21,63]. In addition, Zhang and Huang [64] combined cognition and personality traits, and found that Openness was positively associated with innovation. [23,24,65]. In the study of Sun and Zhang [25], entrepreneurial intention was separated into two dimensions: entrepreneurial implementation intention and entrepreneurial goal intention. They found that Agreeableness was negatively associated with entrepreneurial goal intention, while Extraversion was positively associated with this intention. Regarding entrepreneurial implementation intention, Emotional Stability, Conscientiousness and Extraversion were positively related to it, while Agreeableness was negatively related to it. In addition, Wang et al. [11] has indicated that dimensions of Big Five personality except for Emotional Stability played a considerable impact on the conviction aspect of entrepreneurial intention. Interpersonal Relationship, the one dimension of Big Six personality, was proposed based on the Chinese context [27]. We propose that this personality trait will be positively related to entrepreneurial intention for the reason that individuals who have high levels of Interpersonal Relationship often value their face a lot, cherish relationship with others, and treasure ability [29]. Specifically, valuing face contributes much to a social habit that people respect each other [66]. The meanings of face above mentioned are generally considered in two aspects representing the core how to have own face and take care of other's face. We viewed one aspect of Interpersonal Relationship from an aspect of "own face" when disguising entrepreneurship, as earning one's own face may encourage the individual to make something different by innovating or engaging in challenging jobs. China is in the wave of mass entrepreneurship and innovation; therefore, Chinese people who have high levels of Interpersonal Relationship may be more likely to have entrepreneurial intention and eventually engage in real entrepreneurial activities. In addition, cherishing relationship is more likely to strengthen the deep relationship among people [67]. He suggested that virtue is a precondition of relationship. Following his logic, we could imply that people with this trait may be good at communicating with people around him and be praised by others for his good ethics; therefore, this favorable relationship could be a lubricant in gaining supports such as funds, resources, information, and connections from others, and hence accelerate the entrepreneurial process. Similar to face and relationship, treasuring ability is also important to improve one's entrepreneurial

intention [29]. This is underpinned by that people would try to improve their ability and skill when ability becomes a key indicator for evaluating personality; therefore, people's innovation might be inspired or motivated. Accordingly, in the Chinese context, Interpersonal Relationship may have a positively association with individual's entrepreneurial intention. Based on the person-job fit theory and aforementioned studies, the following hypotheses are proposed:

Hypothesis 1 (H1): *Emotional Stability (H1a), Conscientiousness (H1b), Extraversion (H1d), Openness (H1e), and Interpersonal Relationship (H1f) will be positively related to entrepreneurial intention, while Agreeableness (H1c) will be negatively related to entrepreneurial intention.*

2.2. Big Six Personality Related to Entrepreneurial Self-Efficacy

Self-efficacy refers to the belief in one's ability to play good performance in life [68]. Bandura [68] highlighted that people with high levels of self-efficacy tend to set and persist in challenging goals, and show positive attitudes towards difficult and stressful circumstances and failure. In organizational research, previous studies found that there was a relative robust positive association of self-efficacy with job performance [69,70] and work satisfaction [70,71].

Regarding entrepreneurship research, Markman et al. [72] suggested that general self-efficacy was positively related to an intent to start a business. This finding was addressed in his later study [73]. These aforementioned findings suggested that self-efficacy might be a motivation for people to overcome difficulties that may appear in the process of starting a business [74]. Following this logic, Hmieleski and Corbett [75] suggested that entrepreneurial self-efficacy is a context-specific measure of self-efficacy in entrepreneurship which requires innovation and creation, extending the studies of Chen et al. [45] who argued that marketing, innovating, managing, risk-taking, and financial controlling could be used to explain entrepreneurial self-efficacy and found that there were differences in entrepreneurial self-efficacy between entrepreneurs and non-entrepreneurs. Researchers designed their measures of entrepreneurial self-efficacy according to their research themes [45,74], continuously developing and complementing the nature and meaning of entrepreneurial self-efficacy. To date, entrepreneurial self-efficacy refers to the belief that individuals are confident in their own ability of performing specific entrepreneurial activities such as communicating, cooperating, marketing, managing, financial, risk-taking or innovating well. Compared to self-efficacy, entrepreneurial self-efficacy focuses more on specific aspects in entrepreneurship research.

Previous studies suggested that personality traits have significant associations with self-efficacy. For example, Emotional Stability [11,54,56], Conscientiousness [11,50,56], Agreeableness [11,51,53], Extraversion [11,51,53], and Openness [11,52,56] were positively associated with self-efficacy respectively. These findings were based on a genetic perspective that personality traits are mostly inborn [11]. Furthermore, Wang and Cui [28] found that Interpersonal Relationship positively correlated with self-efficacy among senior high school students in China. On the theoretical basis of cognitive-affective system theory of personality, individual's personality is not only affected by personal interactions in specific context, but also influences the interpersonal context in turn. It represents the sustainable characteristic of personality which plays a synergetic effect with the stable characteristic of personality to shape individual's whole personality.

Theoretically, individuals who score high on Emotional Stability are not easily disturbed by negative factors, even in some stressful situations. Bandura [68] proposed a three factors interaction model which illustrated that individual's motivation was the combination effect of behavior, cognition, and context. In other words, people are easily to be affected by their context, as well as influence their context in turn. Therefore, we argue that individuals who have high levels of Emotional Stability could break through the dilemma when they are confronted with unfriendly situations, and have a positive attitude or evaluation toward their innovation ability [76], thereby forming higher entrepreneurial self-efficacy.

People with higher Conscientiousness care more about achievement and advancement; they focus more on the perfect combination of individual's goals and collective goals; they are careful toward their work, and could master what they are doing or responsible for [76]. Combining this logic, we argue that individuals who score high on Conscientiousness could accomplish their tasks or jobs in entrepreneurial activities such as marketing, managing, communicating, financial controlling, and risk-taking with fewer errors, and these achievements are more likely to improve their confidence in themselves, which develops higher entrepreneurial self-efficacy.

Regarding entrepreneurial activities, agreeable individuals attempt to avoid conflicts with others in this process [76]. In other words, from the perspective of Interpersonal Relationship based on the Chinese context, they are good at communicating; they have perfect relationship with others, and value much about family relationship. This personality characteristic may hinder individuals to be an entrepreneur at the very beginning, but it could influence the improvement of their entrepreneurial self-efficacy because of a good state of life.

People who score high on Extraversion are energetic, enthusiastic, and confident; they show great interests in group activities and proactively show themselves [76]. This attribute contributes much to their positive evaluation and attitude which could be explained as entrepreneurial self-efficacy toward their ability when they devote themselves into some challenging tasks such as entrepreneurship. People with obvious Openness personality have open minds about new things; they are willing to try something different [76]. We argue that individuals with this type of personality are more likely to adapt to the new phenomenon, and they could develop higher entrepreneurial self-efficacy when they come into contact with entrepreneurs.

People with high levels of Interpersonal Relationship take great care of their prestige and emotion, and value much about face; they could also handle conflicts, get rid of swing moods well, and keep harmony with others in the Chinese context [27]. Individuals with high levels of Interpersonal Relationship have the desire to be respected by others and gain more abilities and skills [28]; they may be motivated to breed entrepreneurial self-efficacy especially in the wave of mass entrepreneurship and innovation in China. Furthermore, cherishing relationship contributes to a kind of smooth relationship among their social circle for people with this trait [67], so that they are more likely to gain relative supports such as relations, funds, resources, and information when they decide to engage in jobs like entrepreneurship. In addition, according to cognitive-affective system theory of personality (CAPS) [37], individual's personality structure should be regarded not only as a characteristic in stable status, but also as an explanation of interpersonal dynamic in intimate relationship [20]. We argue that the Chinese context that addresses intimate relationship, would accelerate one's formation of cognition, which might contribute to entrepreneurial self-efficacy in current "mass entrepreneurship and innovation" context in China.

Overall, the personality traits encourage individuals to believe in their capabilities and skills, contributing much to entrepreneurial self-efficacy when they engage themselves in entrepreneurial activities. More importantly, the personality system is a sustainable process, affecting individual self-efficacy and contributing to individual sustainability. Therefore, we propose the following hypotheses:

Hypothesis 2 (H2): *Emotional Stability (H2a), Conscientiousness (H2b), Agreeableness (H2c), Extraversion (H2d), Openness (H2e), and Interpersonal Relationship (H2f) will be positively related to entrepreneurial self-efficacy.*

2.3. Entrepreneurial Self-Efficacy Related to Entrepreneurial Intention

Self-efficacy, defined as a belief that individuals are confident in their skills and capabilities, especially when they confront challenge activities, has frequently been adopted to explain the possibility that these people could achieve more favorable outcomes [77,78]. In earlier studies,

Vesalainen and Pihkala [79] suggested that self-efficacy was positively related to entrepreneurial intention. In line with this perspective, Bandura [80] indicated that individuals who score high on self-efficacy typically believe that they have the ability to affect change, as well as control their thoughts and behaviors [11]. According to person-job fit theory, the study of Bandrua [68] replied that individuals who score high on self-efficacy may prefer to jobs such as entrepreneurship that are challenging. Markman et al. [72] also illustrated that general self-efficacy could be adopted to explain actions and behaviors of entrepreneurs, as well as establish links between entrepreneurs or potential entrepreneurs and inventors. In addition, Piperopoulos and Dimov [81] further suggested that self-efficacy was positively related to entrepreneurial intention in courses that were practically oriented. Some Chinese researchers also found that self-efficacy was positively associated with entrepreneurial intention [48,49] based on the Chinese context.

For this study, we defined entrepreneurial self-efficacy as an individual's belief in their ability to have the confidence in identifying the potential value of a new idea, convincing others to adopt an idea, and cooperating well with team members in entrepreneurial activities such as marketing, innovating, managing, risk taking, financial controlling, etc. We argue here that entrepreneurial self-efficacy has a positive effect on individual's entrepreneurial intention. The hypothesis is proposed based on following reasons. On the one hand, people who have higher entrepreneurial self-efficacy are more likely to be sensitive to the entrepreneurial information such as entrepreneurial policy, regulation, funding, etc. On the other hand, higher levels of self-efficacy tend to be related to a belief in one's ability to deal with difficulties or dilemmas [80], encouraging individuals to strengthen their faith in ability for engaging in entrepreneurial activities, even though most others regard entrepreneurship as a job that they are unlikely to choose due to many unpredictable factors in the process. In addition, we design this study from a psychological perspective, as Big Six personality, entrepreneurial self-efficacy, and entrepreneurial intention are concepts in psychology. The theories of person-job fit and cognitive-affective system of personality establish the theoretical foundation to explain the interactions of individual's psychological factors. Therefore, we argue that personality will affect the belief in one's interests, cognitions, and abilities to take entrepreneurial activities when they are confronting a context which addresses "mass entrepreneurship and innovation". For example, China is in a period and transition that improves and strengthens innovation ability through mass entrepreneurship and innovation. This belief could be explained as entrepreneurial self-efficacy, which will play a direct impact on entrepreneurial intention. Accordingly, we propose the following hypotheses:

Hypothesis 3 (H3): *Entrepreneurial self-efficacy will be positively related to entrepreneurial intention.*

Hypothesis 4 (H4): *Entrepreneurial self-efficacy will mediate the relationship of Emotional Stability (H4a), Conscientiousness (H4b), Agreeableness (H4c), Extraversion (H4d), Openness (H4e), and Interpersonal Relationship (H4f) with entrepreneurial intention respectively.*

In brief, the present study is to explore two kinds of relationship: (a) the direct relationship between Big Six personality and entrepreneurial intention; and (b) the mediation effect of entrepreneurial self-efficacy between Big Six personality and entrepreneurial intention.

3. Methodology

3.1. Data Collection and Sample

Participants were recruited from four universities in Guangzhou, China. We conducted a survey among 320 college students, 294 of whom provided survey results, but 14 provided incomplete answers to the question or made the same choices from the first question to the end question. Therefore, we received valid answers of 280 college students, with overall response rate of 87.5% (280/320). In the

final sample, 171 (61.1%) of the participants were females, and the average age of these participants was 20.5 years (range = 18–23).

3.2. Measures

3.2.1. Control Variables

All college students completed questionnaires requesting information about their gender (v1), age (v2), father's education (v3), mother's education (v4), father's occupation (v5), mother's occupation (v6) and family income (v7). The regression analysis, however, shows that all the potential control variables did not impact entrepreneurial intention in the present study ($\beta_{v1} = -0.053$, $\beta_{v2} = 0.042$, $\beta_{v3} = 0.033$, $\beta_{v4} = 0.068$, $\beta_{v5} = -0.084$, $\beta_{v6} = 0.164$, and $\beta_{v7} = -0.075$; all $p > 0.05$; adjusted R square less than 0.001). Therefore, we did not include these demographic variables in the latter modeling analysis in view of model simplicity.

3.2.2. Research Variables

Big Six personality was measured by a new inventory which was reformulated based on Song et al. [30] and Zhang and Zhou [27]. We revised the words of some items to fit into entrepreneurship context, and it consists 23 items assessing six personality dimensions.

Entrepreneurial self-efficacy was measured by a scale that was reformulated based on Lucas and Cooper [82]. This scale mainly intended to measure individual's belief in their ability to identify opportunities, have leadership style, and display persuasion. Therefore, it eventually consisted of three items assessing the individual's recognition about their own skills.

Entrepreneurial intention was measured by a scale that was reformulated based on Davidsson [83] and Mei et al. [84]. It consists of four items assessing individual's attitudes towards entrepreneurial activities.

A five-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree was used to measure these variables. The scales of Emotional Stability (item 1) and Interpersonal Relationship (item 2 and item 7) were reverse-scored, respectively. Cronbach's alpha values for the subscales of Big Six personality were 0.891, 0.756, 0.865, 0.718, 0.771, and 0.905, respectively. Cronbach's alpha value for entrepreneurial self-efficacy was 0.868, whilst the reliability value for entrepreneurial intention was 0.859.

3.3. Reliability and Validity

In the present study, exploratory factor analysis was adopted to identify the underlying relations among above variables, including: (1) Big Six personality, 23 items; (2) entrepreneurial self-efficacy, three items; and (3) entrepreneurial intention, four items.

First, Cronbach's alpha was used to assess variable reliability. As shown in Table 1, the alpha values are ranging from 0.718 to 0.905, all exceeding 0.7 that was regarded as a threshold value to identify the reliability of variables [85]; Second, MPLUS7.4 was adopted to conduct confirmatory factor analysis (CFA) which could be used to estimate convergent validity. Table 1 shows that the CR are ranging from 0.760 to 0.905, which further verifies the reliability of these variables, as well as the factor loadings that almost exceed the 0.7 criteria [85], illustrating a good demonstrate convergent validity.

In addition, one criterion that AVE exceeds other variable's squared correlation is used to assess discriminant validity (Table 1) [86]. The results indicate that the discriminant validity among constructs is good.

Table 1. Factor analysis results of the survey, reliability, and validity.

Factors and Items	CFA Loadings	Cronbach's α	CR	AVE
1. Emotional Stability (ES)		0.891	0.893	0.626
(ES1) I often feel anxious and worried about my learning state	0.771			
(ES2) I would like to try even if the probability of success is very low	0.796			
(ES3) No matter what I do, I am always confident in myself	0.831			
(ES4) I can control my emotions well, without the influence of mood swings	0.776			
(ES5) I always show my leadership skills in team activities.	0.780			
2. Conscientiousness (C)		0.756	0.760	0.514
(C1) I always do well in combining individual goals with organizational goals	0.680			
(C2) I make careful arrangement of everything I do	0.789			
(C3) I have the ability to do my job on the ground	0.677			
3. Agreeableness (A)		0.865	0.869	0.690
(A1) If one doesn't complete the given task as my expectation, I won't blame him.	0.774			
(A2) When I get along with others, I am flexible and will not easily offend others	0.854			
(A3) I think the family bond is the most important emotion in all kinds of relationships	0.861			
4. Extraversion (E)		0.718	0.888	0.566
(E1) When I get along with others, I always actively communicate with them	0.695			
(E2) In group activities, I always do what I want to do	0.805			
5. Openness (O)		0.771	0.772	0.531
(O1) I always think about things with running wild mind	0.780			
(O2) I am always keen on using the latest electronic products	0.673			
(O3) I often spend excess budget	0.730			
6. Interpersonal Relationship (IR)		0.905	0.905	0.577
(IR1) When I encounter difficulties and setbacks in life, I will also be positive and optimistic to face	0.779			
(IR2) I feel tired when I handle things which need much to be considered	0.671			
(IR3) I am flexible in dealing with conflicts in Interpersonal Relationship	0.762			
(IR4) I always try to maintain harmony in communication	0.793			
(IR5) When I encounter setbacks and difficulties, I always comfort myself with "winner" attitude	0.713			
(IR6) I will do things in order to gain appreciation or favor from others	0.815			
(IR7) When my mood is swing, I may do something irrational	0.776			
7. Entrepreneurial Self-efficacy (ESE)		0.868	0.867	0.686
(ESE1) I can identify the potential value of an idea	0.785			
(ESE2) I can effectively convince people who have different ideas with me	0.840			
(ESE3) It is a pleasure to cooperate with others	0.858			
8. Entrepreneurial Intention (EI)		0.859	0.861	0.608
(EI1) I will create venture in the future	0.830			
(EI2) If I could freely make occupational decision, I will create venture	0.739			
(EI3) Considering the various restrictions such as funds shortage or less family support), I will still choose entrepreneurship first	0.784			
(EI4) It is most likely that I will create venture in the next five years	0.762			

3.4. Common Method Bias

To evaluate the common method bias (CMV) in the present study, Harman's one-factor test [87] was applied and the results showed that the first factor only explained about 39.8% of the variance, which did not exceed the 40% threshold [88]. Therefore, the CMV in our study is an unlikely threat.

4. Results

4.1. Descriptive Analyses

As shown in Table 2, means, standard deviations, and correlations among variables indicated descriptive information from multiple perspectives.

Table 2. Descriptive statistics and correlation matrix.

Variables	1	2	3	4	5	6	7	8
1. Emotional Stability	0.791							
2. Conscientiousness	0.315 **	0.717						
3. Agreeableness	0.016	0.005	0.831					
4. Extraversion	0.548 **	0.335 **	0.030	0.752				
5. Openness	0.090	0.075	−0.068	0.135 *	0.729			
6. Interpersonal Relationship	0.674 **	0.460 **	0.051	0.614 **	0.094	0.760		
7. Entrepreneurial Self-efficacy	0.632 **	0.507 **	−0.033	0.636 **	0.175 **	0.712 **	0.828	
8. Entrepreneurial Intention	0.728 **	0.497 **	0.018	0.677 **	0.084	0.821 **	0.792 **	0.780
Mean	2.951	2.443	3.145	2.927	2.890	2.703	2.896	2.585
SD	0.796	0.688	0.859	0.725	0.719	0.720	0.782	0.805

Note: $n = 280$; *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$; the values in diagonal line are square roots of AVE, and most of these values exceed correlations between variables.

Emotional Stability, Conscientiousness, Extraversion, Openness, and Interpersonal Relationship are significantly positively correlated with entrepreneurial self-efficacy at the 0.01 level (r = 0.632, 0.507, 0.636, 0.175, and 0.712; $p < 0.01$). In addition, Emotional Stability, Conscientiousness, Extraversion, Interpersonal Relationship and entrepreneurial self-efficacy are positively correlated with entrepreneurial intention at the 0.01 level, respectively (r = 0.728, 0.497, 0.677, 0.821, and 0.792l $p < 0.01$). In brief, these significant correlations preliminarily support subsequent hypotheses: H1a, H1b, H1d, H1f, H2a, H2b, H2d, H2e, H2f, and H3.

4.2. Analyses of Structural Model

4.2.1. Testing for Total Effect

The first main purpose of this present study was to identify the unique relations of Big Six personality with entrepreneurial intention. We conducted structural equation modeling using MPLUS7.4 to examine these relationships. The results (see Figure 1) were consistent with four hypotheses of Big Six personality. Specifically, Emotional Stability (H1a), Conscientiousness (H1b), Extraversion (H1d), and Interpersonal Relationship (H1f) were positively associated with entrepreneurial intention.

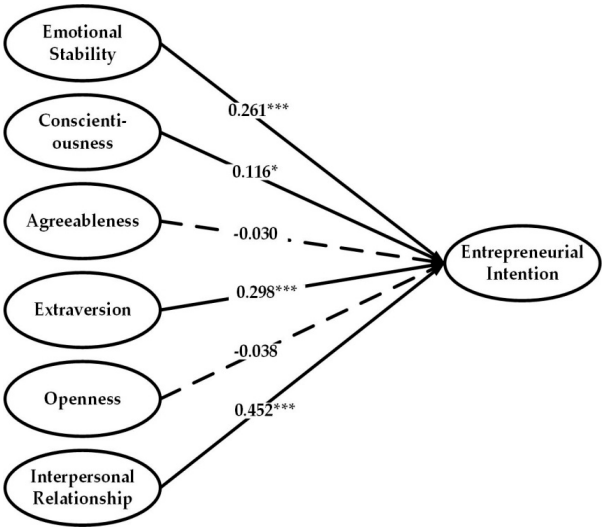

Figure 1. Total effect model of Big Six personality and entrepreneurial intention (n = 280). Note: Dotted lines indicate statistically non-significant relationships between variables; *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

4.2.2. Testing for Mediated Effect

For the purpose of examining whether entrepreneurial self-efficacy played mediating role in the relationships between Big Six personality and entrepreneurial intention, we followed the testing procedure that was proposed by Wen and Ye [89] to assess this mediation.

In addition, to identify the mediational structure among the relative variables, we adopted a latent modeling analysis using MPLUS7.4. Multiple fit indices including chi-square with its degrees of freedom, Comparative Fit Index (CFI), Tucker–Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Square Residual (SRMR) were adapted to evaluate model fit. Usually, the model fit is regarded good when $\chi^2/df < 3$, CFI > 0.95, TLI > 0.95, RMSEA < 0.06, and SRMR < 0.08 [85]. Results illustrated a good model fit, with $\chi^2/df = 1.40$ ($\chi^2 = 527.705$, df = 377), CFI = 0.970, TLI = 0.965, RMSEA = 0.038, and SRMR = 0.039.

Bootstrap method was applied to examine the mediation effects [90], and this method produced 95% confidence intervals by 2000 resamples of the data. The effects are considered significant at $\alpha = 0.05$ when the confidence intervals do not contain zero.

The total effect results (see Figure 1) show that Emotional Stability, Conscientiousness, Extraversion, and Interpersonal Relationship were positively related to entrepreneurial intention respectively. Figure 2 shows that after entrepreneurial self-efficacy entered the model, only Emotional Stability and Interpersonal Relationship were positively associated with entrepreneurial intention. In addition, it was found that Conscientiousness, Extraversion, and Interpersonal Relationship were positively related to entrepreneurial self-efficacy, and entrepreneurial self-efficacy was positively correlated with entrepreneurial intention. To further assess the mediating role of Big Six personality, we adopted the testing procedure proposed by Wen and Ye [89]. Then, we chose 95% CI (Confidence Interval) of each mediating effect constructed by the bootstrap approach to identify the mediating role of entrepreneurial self-efficacy in the relationships between each dimension of Big Six personality and entrepreneurial intention. The sample data were calculated 2000 times and analyzed by bootstrap to examine significance of the mediating effects. Specific results are depicted in Table 3.

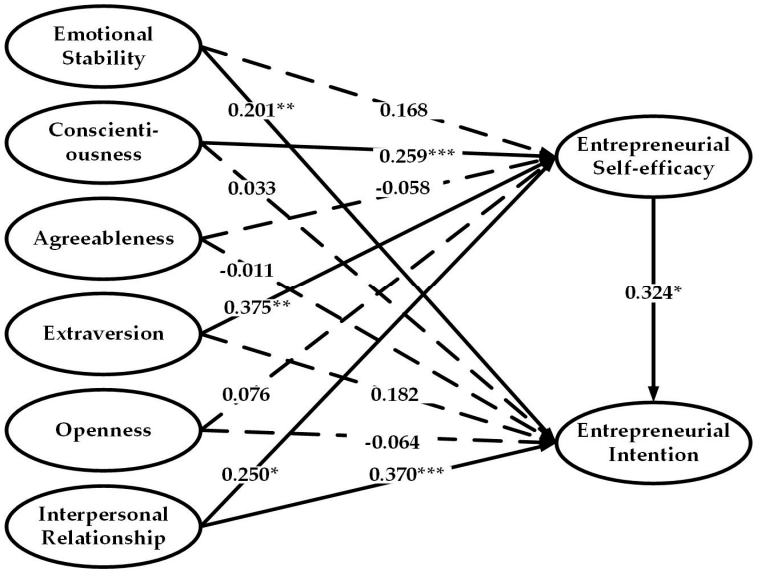

Figure 2. Mediation model of entrepreneurial self-efficacy in relationship between Big Six personality and entrepreneurial intention (n = 280). Note: Dotted lines indicate statistically non-significant relationships between variables; *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

Table 3. The bootstrap results of mediation effect.

Mediating Effect	95% CI
ES → EI	[0.002, 0.156]
C → EI	[0.038, 0.283]
A → EI	[−0.085, 0.008]
E → EI	[0.050, 0.422]
O → EI	[−0.005, 0.079]
IR → EI	[0.008, 0.226]

Note: n = 280; ES, Emotional Stability; C, Conscientiousness; A, Agreeableness; E, Extraversion; O, Openness; IR, Interpersonal Relationship; EI, Entrepreneurial Intention.

Figure 2 shows that Conscientiousness (β = 0.259, $p < 0.001$), Extraversion (β = 0.375, $p < 0.01$), and Interpersonal Relationship (β = 0.250, $p < 0.05$) were positively associated with entrepreneurial self-efficacy, and entrepreneurial self-efficacy was positively related to entrepreneurial intention (β = 0.324, $p < 0.05$) in the mediating effect model. Therefore, we determined that the mediating effects of entrepreneurial self-efficacy according to paths coefficients of Conscientiousness, Extraversion, and Interpersonal Relationship to entrepreneurial intentions are significant, respectively. In addition, the 95% CI of the indirect effect of Emotional Stability on entrepreneurial intention did not include 0, illustrating that the mediation effect of entrepreneurial self-efficacy in the path of Emotional Stability to entrepreneurial intention reached a significant level. Figure 1 shows that Emotional Stability (β = 0.261, $p < 0.001$), Conscientiousness (β = 0.116, $p < 0.05$), Extraversion (β = 0.298, $p < 0.001$), and Interpersonal Relationship (β = 0.452, $p < 0.001$) positively affect entrepreneurial intention respectively, and the direct effects of Agreeableness and Openness on entrepreneurial intention are non-significant, respectively. Consequently, Figure 2 and bootstrap results show that entrepreneurial self-efficacy plays a partial mediating role in the relationship of Interpersonal Relationship with entrepreneurial intention, and that between Emotional Stability and entrepreneurial intention. The entrepreneurial self-efficacy plays a completely mediating role in the relationship of Conscientiousness with entrepreneurial intention, and also that between Extraversion and entrepreneurial intention. The results of the analysis therefore corroborate these hypotheses: H1a, H1b, H1d, H1f, H2b, H2d, H2f, H3, H4a, H4b, H4d, and H4f.

Moreover, Figure 1 shows that the total effects of Emotional Stability, Conscientiousness, Extraversion, and Interpersonal Relationship on entrepreneurial intention are 0.261, 0.116, 0.298, and 0.452, respectively, while corresponding direct effects are 0.201, 0.033, 0.182, and 0.370, respectively, and the indirect effects are 0.054, 0.084, 0.122, and 0.081, respectively. Therefore, the mediating effects size of entrepreneurial self-efficacy on the link from Emotional Stability, Conscientiousness, Extraversion, and Interpersonal Relationship to entrepreneurial intention are 0.207, 0.724, 0.409, and 0.179, respectively.

5. Discussion

The testing of the relationships between Big Six personality, entrepreneurial self-efficacy and entrepreneurial intention in the Chinese context highlights the fact that Big Six personality could be more suitable to explain the personality traits of Chinese people, showing that the findings extend and supplement the previous studies [27–33]. The study calls for further consideration of personality and its effects on individual's entrepreneurial intention when the entrepreneurs or potential entrepreneurs are in different contexts. In this study, survey data from 280 college students are used to examine the effect of personality on entrepreneurial intention and validate the impact of context factor in aforementioned mechanism. More importantly, this exploratory analysis proposed a framework to investigate impacts of Big Six personality on entrepreneurial intention, with entrepreneurial self-efficacy as a mediator. Our main contribution is to reveal the direct role of personality as a predictor of entrepreneurial intention, especially as we note the decisive effect of the Interpersonal Relationship dimension in the Chinese context for the first time. Overall, the results of our study not only replicate previous

studies that examined the impacts of personality traits on entrepreneurial intention, but also extend personality traits by showing that Interpersonal Relationship should be included in the personality studied by researchers who examined personality structure in Chinese context. More importantly, these findings provide a sustainable perspective to consider the relationship between Big Six personality in which Interpersonal Relationship embodies a notion of harmony and interaction among people with a sustainable value and entrepreneurial intention in the process of sustainable entrepreneurship.

First, the current study found that the four of the Big Six personality variables (Emotional Stability, Conscientiousness, Extraversion, and Interpersonal Relationship) were positively related to entrepreneurial intention as expected. It is consistent with previous studies that reported that Emotional Stability [23], Conscientiousness [11,24], and Extraversion [23,24,65] were positively associated with entrepreneurial intention. Individuals who score high on Emotional Stability are usually defined as calm, cool, optimistic, and less emotional. Specifically, they are willing to take risks and uncertainties, and to develop creative thinking to increase entrepreneurial intention. It is more likely that they will be encouraged to engage in entrepreneurial activities. Individuals who score high on Conscientiousness concern much about long-term commitment, showing great interests in challenge environments to achieve good performance, opportunities of advancement, and success [91]. Therefore, they are in a belief in entrepreneurship when access it. While individuals who score high on Extraversion are intended to communicate with others actively, they may have strong self-consciousness and do things in accordance with their own ideas. It is obvious that Extraversion is closely correlated with intense intention. whilst the positive relationship between Interpersonal Relationship and entrepreneurial intention extend the theory of Song et al. [30] and Zhang and Zhou [27] because they specifically mentioned that Interpersonal Relationship as one variable they presumed might be a predictor of the psychological characteristics and behaviors of Chinese people [27]. In addition, Yang and Guo [20] analyzed personality from an interpersonal relationship perspective based on the theoretical foundation of cognitive-affective system theory of personality [37]. They further addressed a view that ego, all cognitions, and emotional characteristics formed, conveyed and sustained in interpersonal relationship, which was once proposed by Markus and Cross [92]. That is to say, interpersonal relationship, which represents a concept of interaction, harmony, and cooperation, could be used to explain cognition factor in individual's personality development. It also provides us with a sustainable perspective that based on the dynamic part of cognitive-affective system theory of personality [37], the theory of personality value [93] and the sustainable development notion of personality value [94–96] when personality is considered. This finding of the close correlation between Interpersonal Relationship and entrepreneurial intention supported and supplemented these previous studies [93–96], whilst implied the impacts of Interpersonal Relationship with sustainable characteristic deserve to be paid more attention. Except for four of the Big Six personality variables, however, similar to Hmieleski and Corbett [75], we found that Openness was not directly related to entrepreneurial intention, and this finding was contradicted with Brice [21] and Ismail et al. [97]. The reason could be that the participants with high levels of Openness were college students who were full of motivation and energy, whilst the characteristic might encourage them to simultaneously be sensitive to many new or interesting things, and have broad interests during this period. Therefore, the college students could not pay much of their attention to only one thing, such as entrepreneurship which is intensively emphasized in the last few years in China. Likewise, college students with high levels of Openness may have a wide range of interests and spare time activities, which limits their chance of entrepreneurship. In addition, similar to the studies of Ismail et al. [97] and Liu [98], our study also found that Agreeableness was not related to entrepreneurial intention. We argue that, although the college students who score high on Agreeableness tend to avoid conflicts, competitions, and keep agreements with others, compared with entrepreneurs or potential entrepreneurs, they lack determination and persistence in their own suggestions; and it could hinder them from having high entrepreneurial intention. Although the direct associations of Agreeableness and Openness with entrepreneurial intention were not verified in our study, we still should not overlook these associations

and more studies are needed to replicate these relations. It is worth noting that the separate impacts of Agreeableness and Openness on entrepreneurial intention have not yet been verified in our study possibly due to the existing boundary conditions, which need to be further explored in future.

Second, the study found that entrepreneurial self-efficacy mediated the relationships among Emotional Stability, Conscientiousness, Extraversion, Interpersonal Relationship and entrepreneurial intention. In the first phase of the mediation effect analysis, Conscientiousness and Extraversion were associated with higher entrepreneurial self-efficacy, and these findings are consistent with previous studies [50,56] and these prior findings [51,53], respectively, as well as the cognitive-affective system theory of personality [37], which suggests the interaction between cognition and personality. Interestingly, Interpersonal Relationship was also positively related to entrepreneurial self-efficacy. This finding extends the studies of Zhang and Zhou [27] and Song et al. [30] who addressed a six factors model of personality structure [30] based on the Chinese context, further emphasizing the impacts of Interpersonal Relationship on explaining the personality traits of Chinese people. Furthermore, it is consistent with the view of cognitive-affective system theory of personality [20,37], which analyzed personality from an interpersonal relationship perspective. The theory suggested that we should view personality from two perspectives both static and dynamic, whilst interpersonal relationship happened to provide a dynamic and continuous perspective to explain the long-lasting influence of personality traits on individual's development, which implies that the personality traits could be developed and shaped to explain personality traits [20,37]. More importantly, this dynamic perspective provides us with a concept of sustainability to view personality, addressing an interaction in personality development that contributes to sustainable entrepreneurship which requires a relative balanced relationship between personality and development. In addition, we propose that the sustainable personality has more profound meanings; for example, the complex behaviors encourage us to view personality in more specific perspectives so that we could have a further and more precise understanding about the individual's personality traits in different contexts. Additionally, as Interpersonal Relationship is a stable personality dimension of Big Six personality, several previous studies preliminarily revealed the relationships between Interpersonal Relationship and related psychological characteristics. For example, the Interpersonal Relationship personality dimension of Chinese people was positively associated with individual's achievement motivation, and positively associated with self-efficacy of senior high school students [28]. This finding mirrors the view that individuals who score high on Interpersonal Relationship are more likely to be encouraged to have high levels of entrepreneurial self-efficacy. In the second phase of the mediation effect analysis, entrepreneurial self-efficacy was positively related to entrepreneurial intention. Entrepreneurial self-efficacy, as a psychological factor, has been documented in several studies [45,81,99–104]. Our findings and those of others are consistent with the social cognition theory [100]. According to this theory, it implies that Individuals' belief in their ability to complete tasks is a core factor that could drive them to generate initiative behaviors; and except that they are confident in their ability to complete tasks and achieve goals, they might lack a sense of motivation to move forward [100]. When people become more self-confident and stick to the dream of entrepreneurial success, they are more likely to devote themselves to entrepreneurial activities [102].

Third, it is worth noting that the further testing of mediating effect of entrepreneurial self-efficacy in the relationship between Big Six personality and entrepreneurial intention, especially between Emotional Stability and entrepreneurial intention, was conducted with bootstrap method [90]. Figure 1, which depicts the results of total effect testing, shows that Emotional Stability was positively associated with entrepreneurial efficacy; however, except its positive relationship with entrepreneurial intention, Emotional Stability was not related to entrepreneurial self-efficacy (see Figure 2). Nonetheless, we could not infer that entrepreneurial self-efficacy did not mediate the relationship between Emotional Stability and entrepreneurial intention, and bootstrap analysis [90] is needed to further test all the mediating effects in this study. Therefore, bootstrap analysis results (see Table 3) show that entrepreneurial self-efficacy positively mediates the associations of Emotional Stability

(partial mediation), Conscientiousness (complete mediation), Extraversion (complete mediation), and Interpersonal Relationship (partial mediation) with entrepreneurial intention. These findings are basically congruent with Sun and Zhang [25]. In their study, entrepreneurial intention was separated into two dimensions: entrepreneurial implementation intention and entrepreneurial goal intention; and their study found entrepreneurial self-efficacy partially mediates the relation between Extraversion and entrepreneurial intention, Conscientiousness and entrepreneurial implementation intention; the entrepreneurial self-efficacy completely mediates the relation between Conscientiousness and entrepreneurial goal intention.

In addition, these findings extend the study of Zhao et al. who found that the adventure personality was associated with entrepreneurial intention [62]. This implies that individuals with high levels of Extraversion who are good at communicating and keen on expressing themselves have a better ability to be able to take risks and coordinate relationship, whilst improving their entrepreneurial self-efficacy through the mechanism of cognition [100] in a period that highlights entrepreneurship, such as the "mass entrepreneurial and innovation" in China. Therefore, this belief in their ability to engage in entrepreneurial activities could play an impact on entrepreneurial intention. Regarding individuals with high levels of Conscientiousness who are good at balancing individual and collective goals, carefully making arrangements, and controlling the whole situation could have a better ability to avoid risks in entrepreneurship and be more sensitive in identifying entrepreneurial opportunities [25]. Similar to the characteristic of Extraversion, this confidence would also affect entrepreneurial intention, and have a further effect on individual's entrepreneurial intention. In addition to the above two variables, our study examined the impacts of entrepreneurial self-efficacy on the association of Emotional Stability with entrepreneurial intention compared with previous studies which explored the mediating role in the relationship between personality traits and entrepreneurial intention from an general self-efficacy perspective [11,105], and found a result that was not in agreement with those of others; for example, Wang et al. [11] did not find the mediating effect of self-efficacy on the relation mentioned above. Interestingly, we found that entrepreneurial self-efficacy partially mediated the relationship between Interpersonal Relationship and entrepreneurial intention. This finding extends these previous studies [27–33], and implies that Interpersonal Relationship could be used to explain the personality traits of college students in entrepreneurship. Although there are very few studies that examined the impact of Interpersonal Relationship, which is regarded as a variable of Big Six personality in our study in explaining individual's personality traits, the finding encourages a future investigation to examine the Big Six personality structure and its mechanism in entrepreneurship.

5.1. Implications

5.1.1. Implications for Research

The results have important theoretical and practical implications. First, the present study extends the entrepreneurial intention literature by introducing a psychological perspective in understanding the factors of personality traits contributing to the intent to create venture. Considering that the Big Five personality is not sufficient to explain the intentions or behaviors of Chinese people [27–33], we examined the relationships between Big Six personality (namely Emotional Stability, Conscientiousness, Agreeableness, Extraversion, Openness and Interpersonal Relationship) and entrepreneurial intention. Combining the cognitive-affective system theory of personality, social cognition, and personal-job fit theory, this study highlights the impacts of personality traits on individual selection in jobs, such as entrepreneurship which is generally full of uncertainties.

Specifically, based on person-job fit theory, we assumed that personality traits could be a clue to evaluate individual's job intention and selection. In this present study, we found that Emotional Stability, Conscientiousness, Extraversion, and Interpersonal Relationship were positively associated with entrepreneurial intention. It implies that these four dimensions certainly impact to different

extents an individual's intention to entrepreneurship. These findings extend the person-job fit theory and provide an empirical evidence to show the rationality and applicability of Big Six personality in evaluating individual's intention. Therefore, the study contributes to the integration of personality traits and entrepreneurship in a specific context.

Furthermore, our study introduces the cognitive-affective system theory of personality [37] and social cognition theory [100] perspectives into the study of the relationships between personality traits and entrepreneurial intention. We designed and examined these relationships from a perspective that combined both static and dynamic ones. The static perspective is underpinned by the logic that personality traits are relatively stable based on a genetic judgment, while cognitive-affective system theory of personality and social cognition theory provide a dynamic logic for us to explore the deep relationship between interpersonal relationship and cognition. These two theories of cognition suggested that interpersonal relationship contributed to the change and development of cognitions, and they in turn could drive a development in personality traits [20]. Combining aforementioned static and dynamic two logics, we propose that Big Six personality, which was highlighted based on the Chinese context, is a sustainable personality. In line with these previous studies, we adopted the Big Six personality model [27] differentiated from the Big Five personality for the Interpersonal Relationship dimension to examine their impacts on entrepreneurial intention, and we found that Interpersonal Relationship exerted impacts on the entrepreneurial intention. In addition, the total testing effect and the mediating effect show that Interpersonal Relationship played the strongest total ($\beta = 0.452$, $p < 0.001$, see in Figure 1) and direct effect ($\beta = 0.370$, $p < 0.001$, see in Figure 2) on entrepreneurial intention respectively compared with the other five dimensions of Big Six personality. These findings imply that Interpersonal Relationship might be more suitable for sufficiently explaining the personalities, intentions or behaviors of Chinese people. Accordingly, this study further develops the theories of cognition and their combination with Entrepreneurship. Importantly, we highlight the suggestion that personality is sustainable based on cognitive-affective system theory of personality [37] and its ever-present impacts on individuals' whole life. The significant effect of Interpersonal Relationship on entrepreneurial intention provides foundation for the suggestion that personality is sustainable. Importantly, the sustainable personality is positively consistent with innovation creation which is closely related to the sustainable development of economy. In the study of Soriano et al. [106], they provided a new method to encourage function of innovations, such as goal innovation or service innovation for consulting companies, contributing to sustainable development for these companies. Therefore, similar to Soriano et al. [106], we should note the sustainable personality of college students who are energetic and innovative.

The direct issue between Big Six personality and entrepreneurial intention aside, the success to support entrepreneurial self-efficacy as a mediator of four (including Emotional Stability, Conscientiousness, Extraversion and Interpersonal Relationship) of the Big Six personality–entrepreneurial intention relationship is partially consistent with the conclusions reached by Sun and Zhang [25]. It should be noted that the mediation testing results showed that entrepreneurial self-efficacy played completely mediating effects in the relationships between Conscientiousness, Extraversion and entrepreneurial intention, while it played partially mediating effects in the relationship between Emotional Stability, Interpersonal Relationship and entrepreneurial intention. For scholars, the aforementioned completely mediating effects imply that among the displacement factors, high Conscientiousness and Extraversion have critical conceptual link with entrepreneurial intention. Krueger et al. [1] suggested that models of entrepreneurial intention primarily focused on the main effects of self-efficacy. Our study extends the study of Krueger et al. [1], providing a mediating perspective of entrepreneurial self-efficacy in the relationship between the aforementioned four of Big Six personality and entrepreneurial intention. Accordingly, the findings encourage us to pay attention to the important psychological factors in the impact mechanism of personality traits on entrepreneurial intention.

Agreeableness and Openness, however, were not associated with entrepreneurial intention. Results from our study suggested that these two dimensions had neither direct impacts nor indirect ones on entrepreneurial intention. The findings were consistent with previous studies [75,98], but contradicted with the studies of Brice [21]. This implies that more studies are needed in the field of entrepreneurship research.

5.1.2. Implications for Practice

Entrepreneurship is closely related to the sustainable economic growth of one country, while sustainable entrepreneurship means a more sustainable contribution to development. The study of Fellnhofer et al. [107] found that the theme of economic developments was one of three central themes that were focused on in the field of sustainable entrepreneurship. In addition, Hernández-Perlines and Rung-Hoch [108] highlighted the important relationship between sustainable entrepreneurs and better economic growth. Therefore, the exploration of the relationship between sustainable personality and entrepreneurial intention deserves to be paid more attention. In this present study, the implications for practice are twofold based on general findings.

On the one hand, the present study investigated personality traits influencing Chinese college students' intention to engage in entrepreneurship, based on the personality traits model proposed with six factors of personality traits in the Chinese context. Previous studies offered little information on impacts of the Interpersonal Relationship dimension of personality traits on entrepreneurial intention. We found that college students with high levels of Interpersonal Relationship are more likely to have entrepreneurial intention, as well as those who score high on Emotional Stability, Conscientiousness, and Extraversion. In addition, cognitive-affective system theory of personality, social cognition and person-job fit theory all contribute to the theoretical foundation of this study; especially the sustainable personality was addressed and highlighted in entrepreneurship by the interpersonal relationship which provides a dynamic perspective to evaluate personality traits. In Chinese context, these finding has implications for governments, universities, and families. As the congruence between individual personality traits and entrepreneurial self-efficacy may impact entrepreneurial intention, innovatively oriented governments should make much efforts to match individual's personality with job selection. Regarding universities, college students should be encouraged to improve the confidence in themselves, the ability in solving problems, and the endurance in persisting their career choice. Furthermore, families, which are the most powerful backing for college students, should pay more attention to the dynamic attribute of personality traits of college students. This sustainable personality could contribute much to many aspects of individuals, such as their values, attitudes, beliefs, and behaviors.

On the other hand, the mediating role of entrepreneurial self-efficacy in the relationship between the four (Emotional Stability, Conscientiousness, Extraversion, and Interpersonal Relationship) of Big Six personality and entrepreneurial intention has implications for governments, universities and families in facilitating entrepreneurship. Governments can target college students or other individuals with preferential policies such as tax preferences, resources support, funds support, and social support for starting a business to raise their entrepreneurial self-efficacy. For example, Mas-verdu et al. [109] suggested that institutional elements could contribute to the design strategy of regional innovation policy based on a region perspective. They argued that governments in some countries should pay more efforts to constitute an innovation framework [109]. In addition, Méndez-Picazo et al. [60] also explored the impacts of governance on economic development, and argued that government could influence entrepreneurship by designing economic growth-enhancing policies to promote economic growth. Consistent with Méndez-Picazo et al. [60], Mas-Tur and Soriano [110] highlighted the importance of technology and consultant assistance provided by government for young innovative companies to develop into stronger businesses. In China, some policies suspend one's schooling without losing one's status as a student for him to engage in entrepreneurship. The results of practice show that individuals have a relatively higher level of enthusiasm towards entrepreneurship. For universities and families, it is essential to gain a belief of the importance to improve entrepreneurial self-efficacy

of college students. Entrepreneurial education programs can expose college students to the business environment, market opportunities, and real-life entrepreneurial situations [9]. Importantly, more financial, emotional, resources, and information support from families have sustainable meanings for the entrepreneurial intention improvement, especially when they exactly match the relative sustainable personality. Therefore, individuals can rely not only on personality traits to hasten entrepreneurial intention, but can rely on personality traits to hasten it by improving entrepreneurial self-efficacy.

The results of this study may also aid in the understanding of the Big Six personality is valuable for identifying and guiding entrepreneurs. Because of the sustainability of personality trait, the individuals with very low Entrepreneur Intention would not be suitable for encouraging and cultivating Entrepreneurship. Even if we increase their entrepreneurship in this case, their intention and behavior would not be sustainable. Conversely, considering the sustainable development of personality, individuals with medium or high entrepreneur intention could be directly trained or through the reinforcement of the mediating effect of self-efficacy. Therefore, our research provides meaningful findings for sustainable entrepreneurship, which emphasizing accurate entrepreneurship with better efficiency and saving social resources.

5.1.3. Limitations

Several limitations of the present study should not be overlooked. First, the present study was cross-sectional that may prohibit drawing casual relationships. In the future, we could apply longitudinal designs to examine the dynamic changes of the relations among Big Six personality, entrepreneurial self-efficacy, and entrepreneurial intention. Additionally, in this study, we collected data based on college students self-report and this method is more likely to lead to high levels of common method bias and thus produce results with bias. Therefore, further studies should make an effort to use multi-method approaches such as 360-degree assessment to replicate our findings for more precise results.

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