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A Study on Sustainable Entrepreneurial Behavior in China from Multiple Perspectives

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Abstract: Sustainable entrepreneurship is an economic activity that integrates entrepreneurial activities with environmental and social sustainability, which is a frontier research field that integrates the triple bottom line of economy, environment, and society. A comprehensive survey was conducted in this study by collecting data from 203 potential entrepreneurs in China, such as employees with work experience, freelancers, and college students, by means of a questionnaire in March 2022. Structural equation modeling (SEM) was employed to investigate the research hypotheses considered, testing the impact of entrepreneurial intention on sustainable entrepreneurial behavior from the perspective of risk perception and institutional environment. The reliability and validity of the measurements are demonstrated. The outcomes from the conducted analyses show that entrepreneurial intention and risk perception do not directly affect sustainable entrepreneurial behavior, while entrepreneurial intention significantly affects risk perception. Moreover, risk perception serves a mediating role in the relationship between entrepreneurial intention and sustainable entrepreneurship. The institutional environment positively predicts sustainable entrepreneurship behavior and could even have a greater effect by reducing risk perception. Hence, this study suggests that the government should provide policy and financial support to create an open, stable, and inclusive institutional environment, to reduce the cost and risk of innovation and entrepreneurship. At the same time, it also provides theoretical and practical references for potential entrepreneurs to improve their entrepreneurial intention and carry out sustainable entrepreneurial behavior.

Keywords: sustainable entrepreneurship behavior; entrepreneurial intention; risk perception; institutional environment; structural equation modeling

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1. Introduction

The concept of sustainable development originated from the United Nations Conference on the human environment in 1972, which put environmental objectives, social objectives, and economic objectives on the same footing [1]. Since the concept was put forward, there has been a wave of entrepreneurship all over the world. In 2019, the global entrepreneurial economy was nearly 3 trillion USD, and the scale of Entrepreneurial Capital was nearly 300 billion USD [2]. However, the differences in economic conditions, technical conditions, and policy support between developed and developing countries lead to different development statuses and economic scales in the field of entrepreneurship. From the development experience of developed countries, sustainable entrepreneurship is an important means to reduce poverty and improve the environment while developing the economy.

As the world's largest developing country, the Chinese government put forward the concept of "mass entrepreneurship and innovation" in the 2015 government work report to promote the multi-channel employment and entrepreneurship of young graduates, migrant workers, and other groups [3]. Since the 18th National Congress of the Communist Party of China, the government has continuously deepened and optimized the service reform,

played the role of the national venture capital guidance fund for emerging industries, and strengthened the leading position of enterprise innovation and entrepreneurship. However, the results of the global national entrepreneurship background index in 2021 show that under the influence of the global spread of COVID-19, entrepreneurs in Europe, America, and Latin America have suffered a huge negative impact, and more than half of the early entrepreneurs in almost all economies are finding it more difficult to carry out entrepreneurial activities than a year ago. China's entrepreneurial ecosystem is also affected by the epidemic, showing the characteristics of a long fluctuation cycle and fast recovery speed. The response of enterprises to the epidemic is relatively lagging [4,5]. At the same time, with the acceleration of economic transformation, more and more serious environmental problems, such as global warming, frequent extreme weather, and intensified desertification, as well as social problems, such as the widening gap between the rich and the poor and prominent structural contradictions in employment, have seriously affected people's daily life. Under the triple guidance of institutional environment, environmental pollution, and social problems, public consumption psychology and consumption expectation have gradually changed. Chinese consumers began to choose green products and services that are conducive to promoting eco-environmental protection and sustainable development. In turn, the change in consumer demand promotes the change of supply, which promotes the emergence of sustainable entrepreneurial enterprises in China and gradually realizes sustainable entrepreneurship that takes into account economic, environmental, and social interests. Relevant research shows that the government plays an important role in the development of sustainable entrepreneurship, with special emphasis on the role of the political system [6]. Furthermore, there is also a strong correlation between the level of entrepreneurial intention and the implementation of sustainable entrepreneurial behavior. People with high entrepreneurial intention may be more likely to start entrepreneurial behavior [7]. Scholars have explained the concept of sustainable entrepreneurial behavior from different levels. For example, some scholars believe that sustainable entrepreneurial behavior is an activity carried out by entrepreneurial enterprises and entrepreneurs to improve environmental quality and social public interests [8]. In a narrow sense, sustainable entrepreneurship is a creative entrepreneurial activity. For emerging companies, the products and services they provide are not only conducive to the environment and society, but also have great potential to occupy more market share [9]. In addition, sustainable entrepreneurial behavior is a new concept arising from the cross-domain connection between micro-entrepreneurial behavior and macro sustainable development [10]. Many studies have shown that sustainable entrepreneurship is an economic activity that balances economic growth, social equity, and eco-environmental interests. However, at present, the overall sustainable entrepreneurial development of Chinese enterprises is still blind, lacking a perfect management system and theoretical framework. Based on social identity theory and resource patchwork theory, we know that the uncertainty perceived by entrepreneurs plays a regulatory role in sustainable entrepreneurial behavior [11]. Some scholars also point out that the change in the environment affects changes to sustainable entrepreneurial behavior, and a good social entrepreneurial atmosphere is conducive to promoting the generation of sustainable entrepreneurial behavior [12,13]. To sum up, scholars' research on sustainable entrepreneurial behavior mainly focuses on concept interpretation, model construction, strategic action, and so on. The research content is limited to the impact mechanism of specific factors, such as the impact of entrepreneurial intention on entrepreneurial behavior [14], and the impact of risk perception on sustainable entrepreneurial behavior [15], which largely ignores the impact of entrepreneurial intention on sustainable entrepreneurial behavior from the new perspective of risk perception and institutional environment, and the degree of impact has not yet reached a consensus. At the same time, innovation is a part of China's national strategy. If we want the long-term and sustainable development of the national economy, we must rely on more innovation and entrepreneurship activities. In the post-epidemic era, it is urgent for potential entrepreneurs to face the impact of COVID-19 on global entrepreneurial ecological capital and demand,

how to make use of the policy and institutional support provided by the state, and how to deal with the serious potential economic, environmental, and social risks. For example, college students are an indispensable part of the group promoting the development of China's entrepreneurial economy. With the continuous improvement of the educational level of college students in the future, they have a higher possibility of entrepreneurship than other groups. Compared with the United States and other developed western countries, Chinese college students' entrepreneurial thinking and entrepreneurial ability are very backward. In addition, at present, under the influence of COVID-19 and the social environment, only a few Chinese college students are carrying out entrepreneurial activities. Therefore, guiding individuals to enhance their entrepreneurial intention and improving the institutional environment to support the entrepreneurship of different groups are extremely important.

In summary, this study mainly discusses the impact mechanism of entrepreneurial intention on sustainable entrepreneurial behavior from the perspective of risk perception and institutional environment, in order to provide suggestions for government departments to support sustainable start-ups and potential entrepreneurs, and to provide theoretical and practical references for potential entrepreneurs with entrepreneurial intentions.

2. Research Hypotheses

2.1. Entrepreneurial Intention, Risk Perception, and Sustainable Entrepreneurship Behavior

Entrepreneurial intention refers to the attitude of entrepreneurs and potential entrepreneurs towards participating in entrepreneurial activities, which is affected by the individual's ability and characteristics, and has an impact on the individual's innovation and entrepreneurship attempt [16]. The trait theory refers to some inherent traits of individuals, and the trait is the basic characteristic that determines individual behavior [17]. There are differences in individual entrepreneurial intentions. Therefore, their probability of engaging in sustainable entrepreneurial behavior is also different. Entrepreneurial intention cannot guarantee the inevitable occurrence of entrepreneurial activities, but those engaged in entrepreneurial activities must take entrepreneurial intention as a guide [18]. In entrepreneurial activities, the entrepreneurial intention of entrepreneurs and potential entrepreneurs affects the decision of whether individuals continue to engage in entrepreneurial behavior [19]. Some scholars regard entrepreneurial intention as a psychological process and believe that it occupies a core position in the whole entrepreneurial process, and that other variables should affect entrepreneurial behavior through entrepreneurial intention [20]. Therefore, we can infer that entrepreneurial intention can encourage sustainable entrepreneurial behavior.

Risk perception is not only the intuitive judgment and attitude towards risk, but also the subjective understanding and psychological feeling of decision makers facing various objective risks in the decision-making process [21]. In this study, risk perception in the context of sustainable entrepreneurship is determined as the measurement of entrepreneurial success probability and the evaluation of individuals' perceived intensity of potential risks. Based on entrepreneurial cognition theory, in similar decision-making situations, there are differences in risk cognition between individual entrepreneurs and non-entrepreneurs. Entrepreneurs' subjective perceived risk level is lower than others, so they engage in risk-taking behavior. We can reasonably infer that the formation of entrepreneurial intention is affected by the degree of individual risk perception [22]. Hence, Hypotheses 1 and 2 are proposed in this article.

Hypotheses 1 (H1). *Entrepreneurial intention encourages sustainable entrepreneurship behavior.*

Hypotheses 2 (H2). *Entrepreneurial intention plays a positive role in risk perception.*

Risk perception is an important variable of cognitive psychology. The study of risk perception plays an important role in the field of sustainable entrepreneurship. Relevant studies have shown that there is a correlation between risk perception, entrepreneurial

intention, and sustainable entrepreneurial behavior [23]. Ignoring risk perception affects the explanatory power of cognitive factors in the field of entrepreneurship [24]. According to the expected utility theory, when faced with the choice of high- and low-risk perception, individuals often refuse the risk-taking behavior of high-risk perception [25]. In the field of entrepreneurship, the degree of risk perception may also affect sustainable entrepreneurial behavior. We speculate that risk perception is a mediator between entrepreneurial intention and sustainable entrepreneurship behavior. This study takes risk perception as an intermediary variable of the impact of entrepreneurial intention on sustainable entrepreneurial behavior. Therefore, Hypotheses 3 and 4 are proposed in this article.

Hypotheses 3 (H3). *Risk perception imposes a positive impact on sustainable entrepreneurship behavior.*

Hypotheses 4 (H4). *Risk perception is a mediator between entrepreneurial intention and sustainable entrepreneurship behavior.*

2.2. Institutional Environment and Sustainable Entrepreneurship Behavior

With the rise of the concept of sustainable entrepreneurship, entrepreneurship research based on institutional theory has become the focus of scholars. According to the theory of institutional logic, multiple institutional logic shapes the rules of organizational actors' cognition and behavior [26]. Based on the scale designed by Busenitz and other scholars, this study divides the entrepreneurial institutional environment into the entrepreneurial regulatory environment, the entrepreneurial normative environment, and the entrepreneurial cognitive environment [27]. So far, scholars generally believe that the institutional environment has an impact on the sustainable entrepreneurial behavior of entrepreneurs and potential entrepreneurs [28–30]. In the early stage of entrepreneurship, the macro system and individual factors of entrepreneurs are the key drivers of sustainable entrepreneurial behavior [28]. The institutional environment of sustainable development is the pre-variable of entrepreneurial activities [29]. The regulatory environment affects the entrepreneurship rate of various countries, so only by regulating the environment can we stimulate high-quality entrepreneurial activities [30]. However, the driving mechanism of the institutional environment for sustainable entrepreneurial behavior is still unclear. Many scholars believe that the risk perception characteristics of entrepreneurs play a regulatory role between the entrepreneurial institutional environment and the entrepreneurial spirit of entrepreneurs [31]. They do not comprehensively consider that the institutional environment can encourage sustainable entrepreneurial behavior by reducing risk perception. Based on the above hypotheses, risk perception has a significant impact on sustainable entrepreneurial behavior, and the institutional environment also has a certain impact on risk perception and sustainable entrepreneurial behavior [32]. It is reasonable to speculate that the institutional environment can encourage sustainable entrepreneurial behavior by reducing risk perception. Hypotheses 5 and 6 are hence suggested as follows.

Hypotheses 5 (H5). *The institutional environment could promote sustainable entrepreneurship behavior.*

Hypotheses 6 (H6). *The institutional environment could encourage sustainable entrepreneurship behavior by reducing risk perception.*

The conceptual framework of this study showcasing the considered hypotheses and relationships between these hypotheses is presented in Figure 1.

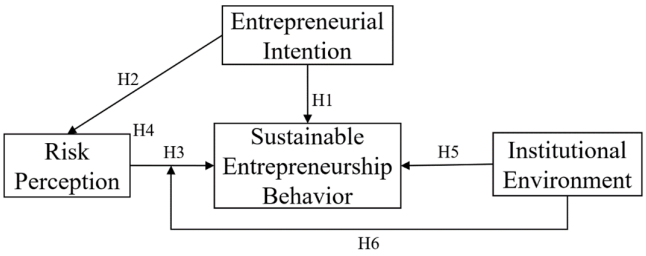

Figure 1. Conceptual model framework.

3. Study Design

3.1. Data Collection

During the formal investigation period, we used online questionnaires as the primary form of data collection. Affected by the epidemic situation and the limitation of human and material resources, we mainly distributed questionnaires online from 9 March to 17 March 2022. We received suggestions from academic experts before the investigation and undertook a pre-survey with 43 online users selected at random. Through modification and adjustment, a total of 269 samples were obtained, 66 unqualified samples were eliminated, and eventually 203 valid samples remained, with an effective rate of 75.46%. The initial screening criteria included the following: (1) duplicate IP address; (2) the answer time is less than 2 min; (3) missing data. The interviewees of this study are not entrepreneurs in the strict sense, but are potential entrepreneurs with entrepreneurial intentions, such as employees, freelancers, and college students with work experience, through the feasible method of scenario simulation, which has been applied by previous studies. Notably, the interviewees of this study come from more than a dozen provinces or municipalities directly under the Central Government of China, such as Hunan, Hubei, and Shanghai, involving disciplines such as economics and management, science and engineering, literature and history, medicine, and so on. The data are well represented.

The 203 effective samples, 50.25% females and 49.75% males, showed a balanced generation ratio. The age proportion structure is younger, with 48.77% accounting for those aged 25 and below. Most of the interviewees have a bachelor's degree, accounting for about 60.1%. Their occupations are distributed in all walks of life, of which students account for 39.9%, and the distribution proportion of other occupations is the same. The majors of the interviewees are mainly economic management, and science and engineering, accounting for 35.47% and 27.09%, respectively, and a few are literature and history, medicine, and other majors. Table 1 shows a summary of the demographic characteristics, including gender, age, occupation, and academic degree of the respondents who filled in the online survey.

3.2. Variable Design

Based on a comprehensive literature review, this study mainly refers to the mature measurement scales in the fields of risk decision making, behavioral economics, and entrepreneurship research at home and abroad, and modifies them in combination with the specific situation of China's entrepreneurship practice to make each item clear [20,32–35]. According to the above research hypotheses, entrepreneurial intention, risk perception, institutional environment, and sustainable entrepreneurial behavior are selected as variables. Among them, risk perception is an intermediary variable and the institutional environment is a regulatory variable. Following the reliability and validity test of the pre-survey structure, some questions were eliminated and adjusted to generate a formal scale comprised of 19 observed variables only. All the answer scales followed the traditional Likert scale. Scores ranged from 1 = "completely disagree" to 5 = "completely agree". All questions had positive descriptions, such that a higher score denoted a stronger consistency.

Table 1. Sample characteristic distribution (n = 203).

Variable	Category	Frequency	Proportion
Gender	Male	101	49.75%
	Female	102	50.25%
Age	25 and under	99	48.77%
	26–35 years old	31	15.27%
	36–45 years old	35	17.24%
	Over 45	38	18.72%
Occupation	Employees of state-owned enterprises, governments, and institutions	39	19.21%
	Employees of private enterprises	38	18.72%
	Freelance	45	22.17%
	Student	81	39.90%
Academic Degree	College degree or below	34	16.75%
	Bachelor degree	122	60.10%
	Master degree	44	21.67%
	Doctoral degree or above	3	1.48%
Major	Economics and Management	72	35.47%
	Science and Engineering	55	27.09%
	Literature and History	31	15.27%
	Medicine and Pharmacy	28	13.79%
	Other	17	8.37%
Entrepreneurial experience	Yes	51	25.12%
	No	152	74.88%

This study refers to the definition of entrepreneurial intention by Krueger and other scholars to select observation variables, and uses five indicators such as detailed business plans and methods with sustainable innovation, and giving up other things for entrepreneurship [20,33]. Similarly, we chose the same five variables as the overall perceived risk of high enterprises [34]. At present, scholars mainly use the institutional framework proposed by Scott to define the institutional environment, which mainly includes three parts: regulation, specification, and cognitive environment. Based on this, scholars such as Busenitz reinterpreted all dimensions of the institutional environment in the field of entrepreneurship [27]. Therefore, four indicators are set to measure the institutional environment, including the diversified funding of entrepreneurs by the government, the support of relevant government departments, and the encouragement of entrepreneurs to carry out innovation and entrepreneurship activities. The observed variables of sustainable entrepreneurial behavior refer to Muñoz and other scholars' definitions of sustainable entrepreneurial behavior [35]. This study measures five indicators: creating and distributing economic value among all stakeholders is conducive to the development of enterprises, and establishing fair transactions with suppliers is conducive to the development of enterprises. The specification of the scale and the questions that were adopted in the questionnaire are presented in Table 2.

3.3. Analysis Methods

We tested the hypotheses with structural equation modeling to explore the impact of independent variables on dependent variables, and the correlation of intermediary effect and regulation effect between the variables. Structural equation modeling has been widely applied in recent studies [36]. Before constructing the structural equation model, the reliability and validity of data were tested using SPSS 26.0. The path analysis, mediating effect test, and moderating effect analysis were performed via structural equation modeling executed using Amos 24.0.

Table 2. Measurement indicators of variables.

Variable	Code	Survey Instrument Statements	Mean	SD	Variance
Entrepreneurial Intention (EI)	EI1	Have detailed business plans and ideas.	2.4	0.982	0.965
	EI2	Choose to give up doing other things and continue to start a business.	2.41	1.047	1.095
	EI3	Family and friends will want you to start your own business.	2.39	0.918	0.843
	EI4	Hope to contribute to social, ecological, and economic development.	3.65	1.148	1.318
	EI5	Think starting a business is an attractive idea.	3.29	1.185	1.405
Risk Perception (RP)	RP1	Think the possibility of starting a business failure is high.	3.99	0.89	0.792
	RP2	Think the overall risk of starting a business is very high.	4.06	0.784	0.615
	RP3	Think the future development of the enterprise is highly uncertain.	3.96	0.849	0.721
	RP4	Think that starting a business may be a loss.	3.93	0.82	0.673
	RP5	Think the establishment of enterprises faces huge economic losses.	2.97	1.105	1.222
Institutional Environment (IE)	IE1	The government can provide diversified funding to entrepreneurs.	3.92	0.883	0.78
	IE2	The government and relevant departments support and encourage entrepreneurs to carry out innovation and entrepreneurship activities.	4.04	0.911	0.83
	IE3	The policies and programs implemented by the government are very important for the development of enterprises.	4.19	0.709	0.503
	IE4	The government can provide entrepreneurs who fail to start a business with the opportunity to start a second business and help them, which is very important for the development of enterprises.	4.01	0.887	0.787
Sustainable Entrepreneurship Behavior (SE)	SE1	Creating and distributing economic value among all stakeholders is conducive to the development of enterprises	4.15	0.73	0.533
	SE2	Establishing fair transactions with suppliers is conducive to the development of enterprises	4.21	0.736	0.541
	SE3	Protecting or restoring the natural environment is conducive to the development of enterprises	4.06	0.839	0.704
	SE4	Creating more employment opportunities is conducive to the development of enterprises	4.17	0.821	0.675
	SE5	Improving human health and well-being is very important for the development of enterprises	4.21	0.769	0.591

4. Study Results

4.1. Reliability and Validity Tests

Reliability analysis is an index to evaluate the consistency and stability of measurement results. Validity analysis is used to test the proximity between the measured value and the actual value. In the fitness analysis of the structural equation model, only the model measurement part is accurate, so it is of practical significance to study further the relationship between potential variables. Therefore, this study first tests the validity of the index variables, and then analyzes the model structure. The applicability of factor analysis is verified by the Bartlett spherical test and KMO test. As shown in Table 3, we found that the KMO test value was 0.848 (>0.6), and in the Bartlett sphericity test χ^2, the significance probability of the statistical value is 0.000 (<0.05), which can be considered as acceptable and meet the standard of factor analysis.

Table 3. KMO and Bartlett sphericity test.

KMO Sampling Suitability Quantity		**0.848**
Bartlett sphericity test	Approximate chi-square	3095.557
	Freedom	171
	Significance	0.000

According to the size analysis of Cronbach's alpha coefficient, we determined whether the measurement scale has reliability, and tested whether there is internal consistency between observed variables and latent variables, by testing congeneric reliability (CR). The Cronbach's alpha coefficient of the scale as a whole is greater than 0.7, which is widely used in academic circles as the judgment standard with high reliability. Notably, the factor load value exceeded 0.5 for all the independent variables considered, which indicates that the observation variable corresponding to each latent variable is highly representative (see Table 4). According to the principle of factor analysis, the observed variable IE3 was eliminated. The overall Cronbach's alpha coefficients were over 0.8, indicating an acceptable reliability level and high internal consistency. As shown in Table 4, the CR and the average variance extracted (AVE) values exceeded ~0.80 and ~0.50, indicating that there is a high degree of internal consistency between the observed variable and the latent variable. Then we used the Harman single factor test to test the common method bias. The test results show that there are 4 factors (>1) with characteristic roots greater than 1, and the interpretation degree of the maximum factor variance is 38.796% (<40%). Hence, there is no serious common method bias in this study.

Table 4. Results of the reliability and validity analysis.

Variable	**Code**	**Factor**				**Cronbach's α**	**CR**	**AVE**
		1	**2**	**3**	**4**			
Entrepreneurial Intention (EI)	EI1			0.821		0.810	0.8664	0.5659
	EI2			0.718				
	EI3			0.790				
	EI4			0.751				
	EI5			0.672				
Risk Perception (RP)	RP1		0.857			0.827	0.8829	0.6089
	RP2		0.883					
	RP3		0.841					
	RP4		0.753					
	RP5		0.506					
Institutional Environment (IE)	IE1	0.541			0.721	0.810	0.8664	0.5659
	IE2				0.728			
	IE3	0.756						
	IE4	0.583			0.696			
Sustainable Entrepreneurship Behavior (SE)	SE1	0.903				0.947	0.945	0.7747
	SE2	0.897						
	SE3	0.831						
	SE4	0.873						
	SE5	0.895						

As shown in Table 5, there is a significant correlation between entrepreneurial intention, risk perception, institutional environment, and sustainable entrepreneurial behavior, and the absolute value of the correlation coefficient is less than the square root of the corresponding AVE, which indicates that there is a certain correlation between each latent variable and a certain degree of discrimination between them. Therefore, it indicates that the discriminant validity of the scale data is ideal.

Table 5. Results of discriminant validity test.

Title 1	SE	IE	RP	EI
SE	0.7629			
IE	0.712	0.8181		
RP	0.109	0.033	0.5657	
EI	0.023	0.173	0.189	0.4466
Square root of AVE	0.8734	0.9045	0.7521	0.6683

4.2. SEM Analysis

Based on these analyses, the reliability and validity of the data were found to be satisfactory. Then we built the primary structural equation model within the Amos 24.0 environment for the validation factor analysis, and conducted an evaluation test for the hypothesis models with the maximum likelihood estimate (MLE). As shown in Table 6, we chose the fitting degree between each hypothesis model and evaluation indexes, such as $\chi 2/df$, the goodness-of-fit index (GFI), and the adjusted goodness-of-fit index (AGFI), etc. Since the fitting effect of the initial model was not at an appropriate level, the observed variable index of the latent variable was not modified, and only the covariance correction index was modified. According to the principle of releasing one parameter at a time, the hypothesis model was modified one by one, until the optimal model was obtained, which was the reason why we added e1–e21. The results from the conducted analysis are summarized in Table 6, and a detailed structure of the developed SEM is illustrated in Figure 2. We can observe that by comparing with the recommended value of the adaptation index, with the exception that the GFI value is very close to the recommended value of 0.9 (acceptable), the fitting values of other adaptation indicators are within the recommended value range (shown in the third column of Table 6). Therefore, such results demonstrate a high degree of accuracy for the developed SEM model.

Table 6. Goodness-of-fit indexes summary of the SEM.

Index	Fitting Standard	Fitting Value
χ^2/df	<3.0	2.181
PGFI	>0.5	0.614
RMR	≤0.1	0.093
GFI	>0.9	0.882
AGFI	>0.8	0.831
RMSEA	<0.08	0.076
TLII	>0.9	0.934
IFI	>0.9	0.950
NFI	>0.9	0.911
CFI	>0.9	0.949

4.3. Empirical Results

4.3.1. Path Analysis

The test results of the research hypotheses, the structural relationship between latent variables, and the estimated values of standardized path coefficients are shown in Table 7. According to the results from the path analysis, the p-value between EI and SE was 0.694 (>0.05), and in addition, the *p*-value between RP and SE was 0.060 (>0.05), without showing any significant correlation. However, there is a substantial positive correlation between EI and RP, as well as between IE and SE. Thus, Hypotheses 1 and 3 are not supported, while Hypotheses 2 and 5 are supported. Entrepreneurial intention and risk perception cannot directly promote sustainable entrepreneurial behavior.

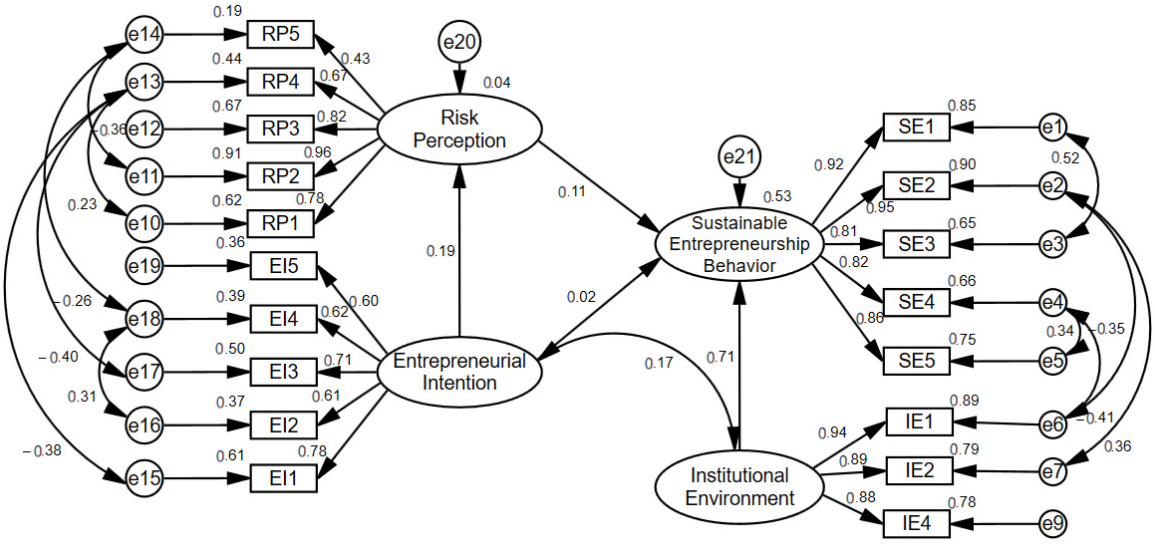

Figure 2. SEM model and standardized path coefficient.

Table 7. Results of structural model path analysis.

	Estimate	S.E.	C.R.	*p*	Hypothesis Test Results
EI→RP	0.172	0.077	2.232	0.026	Supported
EI→SE	0.020	0.051	0.393	0.694	Unsupported
RP→SE	0.103	0.055	1.881	0.060	Unsupported
IE→SE	0.570	0.051	11.236	***	Supported

Note: *** $p < 0.001$.

4.3.2. Mediating Effect Assessment

The bootstrap method is a common evaluation method to test the intermediary hypothesis. Hypothesis 4 was analyzed by means of bootstrapping (see Table 8). By repeating the sampling test on 5000 sub-samples, the mediating effect of RP between EI and SE was tested. The concept model for the RP mediating effect assessment is presented in Figure 3. The test results show that within the 95% confidence interval, the indirect effect exists, which supports Hypothesis 4. As shown in the data, the *p*-value is 0.089, so the mediating effect exists but is not significant. Therefore, RP can be considered a mediator between EI and SE. However, such a mediating effect can be viewed as partial only.

Table 8. Mediating effect test (bootstrapping 5000 times).

Path	Effect	Effect Value	S.E.	Bootstrapping 95%		
				Lower Bound	Upper Bound	*p*
EI→RP→SE	Total Effect (TE)	0.136	0.105	−0.026	0.319	0.163
	Indirect Effect (IE)	0.045	0.042	0.001	0.150	0.089
	Direct Effect (DE)	0.091	0.087	−0.051	0.237	0.281

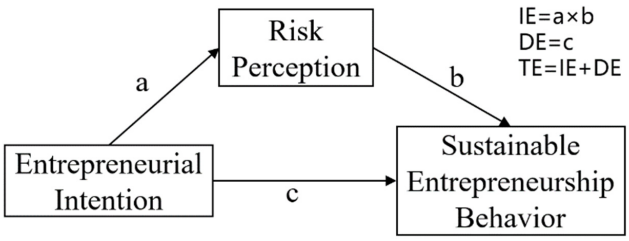

Figure 3. Mediating effect model.

4.3.3. Moderating Effect Assessment

The moderating effect refers to the different effects of independent variables on dependent variables under the influence of the moderator. This study takes the institutional environment as the moderator, to explore whether the introduction of the moderator of the institutional environment strengthens or weakens the relationship between risk perception and sustainable entrepreneurial behavior (see Figure 4).

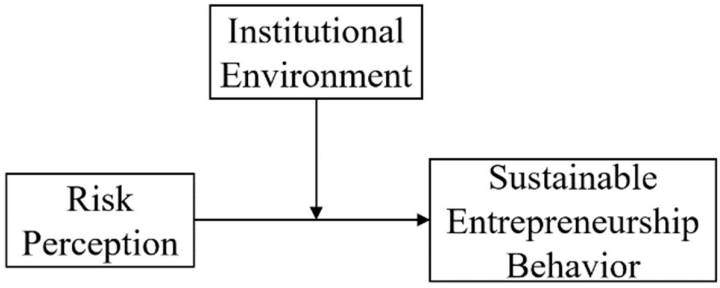

Figure 4. Moderating effect model.

To avoid the problem of multiple collinearities between variables in the moderating effect test, this study "centralizes" the three latent variables. After measuring the mean value of the variable, we subtracted the mean value from the variable value to obtain the centralized value. Then we used Amos24.0 to establish an inspection model (see Figure 5). As shown in Table 9, $p = 0.004$, therefore the moderating effect is significant, and Coeff = −0.111, which indicates that the institutional environment has a negative moderating effect on risk perception and sustainable entrepreneurial behavior. Thus, hypothesis 6 is supported.

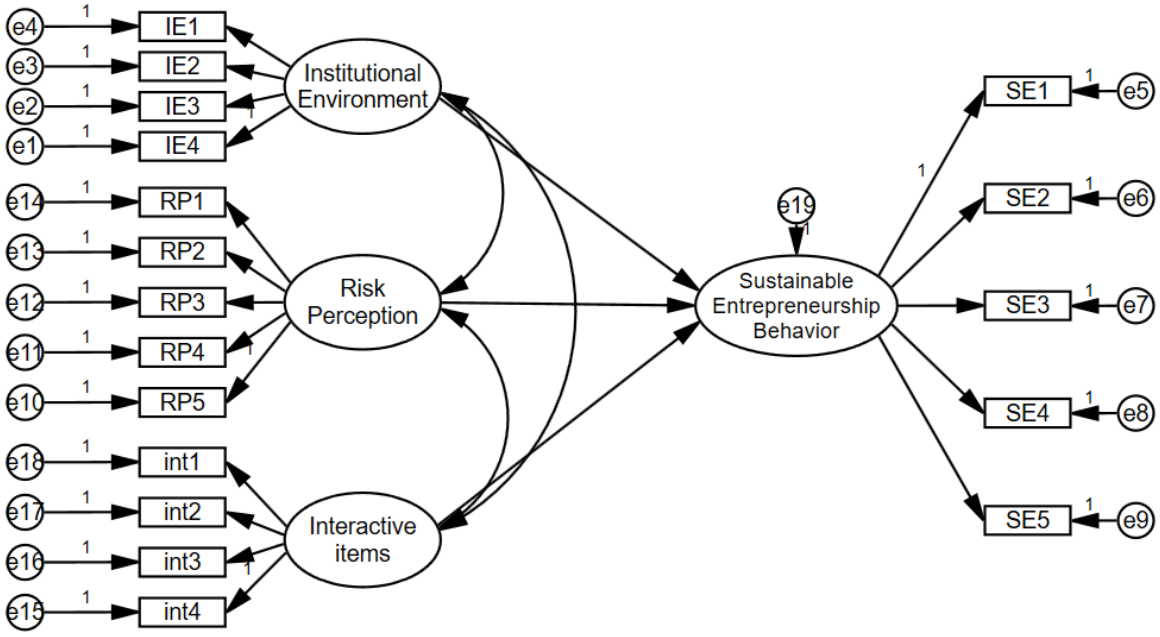

Figure 5. Interactive effect model.

Table 9. Interactive effect path analysis.

	Coeff	Se	t	*p*	LLCI	ULCI
IE→SE	0.092	0.052	1.774	0.078	−0.010	0.194
RP→SE	0.596	0.047	12.591	0.000	0.503	0.689
IE×RP→SE	−0.111	0.038	−2.885	0.004	−0.187	−0.035

In addition, this study uses the simple slope test method to obtain the data according to the adjustment model:

$$Y = \beta_1^* X + \beta_2^* w + \beta_3^* X w + \beta_0 \quad (1)$$

According to the model, the interaction effect diagram is drawn (see Figure 6), in which X represents the independent variable, Y represents the dependent variable, and W represents the regulatory variable. The slope of the straight line in the figure reflects the impact of risk perception on sustainable entrepreneurial behavior under the regulation of the institutional environment, which can intuitively show the role of regulatory variables. The simple test results are shown in Table 10. With the gradual improvement of the institutional environment, the rise of risk perception slows down.

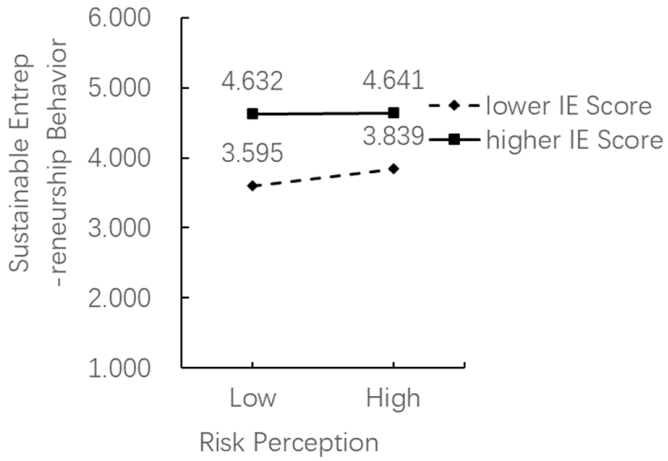

Figure 6. Breakdown of the IE moderating effect.

Table 10. Simple slope analysis.

IE	Effect	se	T	*p*	LLCI	ULCI
−0.690	0.672	0.047	14.296	0.000	0.580	0.765
0.000	0.596	0.047	12.591	0.000	0.503	0.689
0.690	0.519	0.061	8.571	0.000	0.400	0.639

5. Recommendations

5.1. Improve Comprehensive Quality and Risk Perception

Through the empirical analysis, this study found that risk perception plays an intermediary role between entrepreneurial intention and sustainable entrepreneurial behavior, even if it is not significant. Individuals with high entrepreneurial intention can not only more objectively understand the risks that entrepreneurship may face, but also have a higher acceptable degree of risk and stronger ability to perceive risks. They will more accurately identify and avoid risks. As the core of entrepreneurial enterprises, entrepreneurs are the key to developing resources, identifying risks, and making plans. They can cultivate and improve their entrepreneurial ability and risk perception ability through entrepreneurship education and practice. Thus, to ensure the sustainable development of entrepreneurial activities, entrepreneurs need to constantly learn and improve their comprehensive quality and ability.

5.2. Promote Entrepreneurial Intention

Germinating entrepreneurial intention is the first step in sustainable entrepreneurship. The study shows that about 55.17% of the respondents think entrepreneurship is an attractive idea for them, but in fact, only 25.12% of the respondents show actual entrepreneurial behavior, and the entrepreneurial intention is seriously inconsistent with the actual entrepreneurial behavior. According to the study results, we can carry out skill

training and professional education for potential entrepreneurs in society to improve their self-awareness and entrepreneurial confidence. At the same time, we can also adopt different reward methods and development planning guidance for the practice of sustainable entrepreneurial behavior of potential entrepreneurs. In addition, we also need to cultivate entrepreneurs' awareness of risk prevention and risk challenge, guide them to carefully evaluate the feasibility of entrepreneurial opportunities, and improve the success rate of sustainable entrepreneurship in the whole of society.

5.3. Provide Institutional Environment

According to the study data, 80.79% of the respondents believe that if the enterprise fails in the initial stage of entrepreneurship, it is very important for the development of the enterprise that the government can provide entrepreneurs with opportunities and help for secondary entrepreneurship. Government departments should strengthen the function of guidance and service, provide a fairer entrepreneurial atmosphere, more preferential welfare policies, a more secure fault-tolerant mechanism, and an entrepreneurial environment that is brave in innovation, daring to start a business, tolerant of failure, and allows trial and error for start-ups and entrepreneurs. The government can implement preferential tax policies to alleviate the financial pressure on entrepreneurs, to reduce the cost of entrepreneurship. In addition, encouraging secured loans to provide convenient financing services for entrepreneurs, and establishing an entrepreneurship support and growth fund to improve the risk-sharing mechanism are feasible measures that provide a guarantee for the healthy development of sustainable entrepreneurship.

6. Conclusions

This study specifically discusses the impact mechanism of entrepreneurial intention on sustainable entrepreneurial behavior from the new perspective of risk perception and institutional environment, which provides an effective basis for enriching local theories. Moreover, we chose the survey data of potential entrepreneurs to empirically test the mediating effect of risk perception and the moderating effect of the institutional environment. The results show that Hypotheses 2, 4, 5, and 6 are supported. Through further discussion of the empirical test results, the research conclusions are as follows.

6.1. Direct Effect Analysis

The empirical results show that the impact of entrepreneurial intention and entrepreneurial risk on sustainable entrepreneurial behavior is not significant. Most scholars at home and abroad believe that entrepreneurial intention has a significant positive impact on sustainable entrepreneurial behavior [37]. Entrepreneurial intention has a strong predictive effect on individual entrepreneurial behavior, and both individual and social factors must affect behavior by forming intention [16]. In addition, entrepreneurial intention is the decisive condition for entrepreneurial behavior, the intermediary variable of individual and social factors affecting entrepreneurial behavior, or an individual's subjective attitude towards whether to engage in entrepreneurial activities, and the level of entrepreneurial intention determines the possibility of implementing entrepreneurial behavior. In addition, individuals with high entrepreneurial intention are more likely to engage in entrepreneurial activities [38,39]. The conclusion of this study is different from that of existing research, which may be because we use scenario simulation in the study, and the sample size is small. Hence, the study is limited by there being less data availability. Follow-up research can further be carried out based on more extensive and perfect data statistics or large sample questionnaire survey data.

Some studies support that there is a significant negative correlation between risk perception and entrepreneurial intention [22,40,41], but there is no further analysis of the impact of entrepreneurial intention on risk perception. This study creatively puts forward that entrepreneurial intention has a significant positive impact on risk perception. As mentioned above, based on the entrepreneurial cognition theory, in similar decision-

making situations, there are differences in risk cognition between entrepreneurs and non-entrepreneurs. Entrepreneurs and potential entrepreneurs can objectively understand the risks and challenges that entrepreneurship may face. With the support of sufficient entrepreneurial intention, entrepreneurial ability, and entrepreneurial information, the higher their acceptance of risk and the stronger their ability to perceive risk, so the more likely they are to participate in sustainable activities.

This study proves that the institutional environment has a significant positive impact on sustainable entrepreneurial behavior. The more standardized and favorable the institutional environment is, the higher the entrepreneurial atmosphere is, and the public's recognition of start-ups gradually rises, which is not only conducive to the germination and long-term development of start-ups, but also affects the exertion of their value creation function. In addition, the public is also more inclined to choose products and services with green attributes, to promote the growth and development of sustainable start-ups. This conclusion is inconsistent with previous studies. Relevant studies show that some scholars only focus on the impact of entrepreneurial intention and believe that the institutional environment has no impact on sustainable entrepreneurial behavior [42]. Moreover, previous studies on the institutional environment and sustainable entrepreneurial behavior mostly relied on single-level data and theoretical inferences. Only focusing on one level of research cannot accurately understand its impact mechanism on sustainable entrepreneurial behavior. The representative data of this study reflect the impact of the institutional environment on sustainable entrepreneurial behavior. This is a breakthrough in this field.

6.2. Mediating Effect Analysis

Risk perception theory has been deeply studied in the field of marketing, but it has just started in the field of entrepreneurship. This study is of great significance to deeply understand how risk perception affects entrepreneurs' sustainable entrepreneurial behavior, and further clarify the intermediary role of risk perception in entrepreneurial intention and sustainable entrepreneurial behavior. This study creatively found that risk perception does play an intermediary role between entrepreneurial intention and sustainable entrepreneurial behavior, even if the role is not significant. According to Hypothesis 2, entrepreneurial intention has a significant positive impact on risk perception, therefore it can be considered that the stronger the risk perception ability of potential entrepreneurs, the more they can identify and avoid risks, and the stronger their entrepreneurial intention, the more likely they are to engage in sustainable entrepreneurial behavior. In addition, the study found that the mediating effect is not significant. Combined with research Hypothesis 3, the direct impact of risk perception on sustainable entrepreneurial behavior is not significant. It is reasonable to speculate that the reason for this may be that this study does not define risk perception as a static personality trait, but as a dynamic behavior variable. In the future, risk perception can be defined as a dynamic behavior variable to further explore whether the intermediary role of risk perception is significant.

6.3. Moderating Effect Analysis

Some scholars have found that there is a moderating effect between risk perception and sustainable entrepreneurial behavior, but most of them are limited to the variable of entrepreneurial self-efficacy [43,44]. This study creatively proposed that the institutional environment plays a significant moderating role between risk perception and sustainable entrepreneurial behavior, and verified the mechanism of the moderating effect of the institutional environment through empirical research. Although sustainable entrepreneurship is affected by many factors, on the theoretical level, combined with the development of China's industry, a standardized and powerful institutional environment can provide a more stable and reliable development environment, more development opportunities, and a broader development space and market for environmental protection industry, and green products and services. Therefore, potential entrepreneurs' perception of entrepreneurial

risk declines under the moderation of the institutional environment, which is of great significance to promote the development of sustainable entrepreneurship.

The theoretical contribution of this study is the exploration of the impact of entrepreneurial intention on sustainable entrepreneurial behavior from the perspectives of risk perception and institutional environment. The empirical results show that entrepreneurial intention and risk perception do not directly affect sustainable entrepreneurial behavior, while entrepreneurial intention significantly affects risk perception. In addition, risk perception plays an intermediary role in the relationship between entrepreneurial intention and sustainable entrepreneurship. The institutional environment can positively predict sustainable entrepreneurial behavior, and even has a greater impact by reducing risk perception. This provides a theoretical basis for the government to create an open, stable, and inclusive institutional environment for potential entrepreneurs. It also provides a theoretical and practical reference for potential entrepreneurs to improve their entrepreneurial willingness and implement sustainable entrepreneurial behavior. Secondly, this study contributes to international entrepreneurship research by analyzing the data of China, the largest developing country and emerging market. Previous literature on sustainable entrepreneurship mostly relied on the data of a few developed economies. Through the data mining of China, this study contributes to the research on sustainable entrepreneurial behavior in developing countries and puts forward some development suggestions.

However, there are still several limitations to this study. First, the samples from Henan and Hubei provinces were fairly large, while participants from some autonomous regions and special administrative regions were not included. Secondly, the missing data and abnormal data were simply discarded without further analysis. More comprehensive approaches for dealing with missing and abnormal data can be considered as part of future research. Furthermore, in future research, the concept of sustainable entrepreneurship can be further explored, and interdisciplinary research can be carried out. Thirdly, the data used in this study are mainly from China, and there is a lack of data from developed countries, other developing countries, and underdeveloped countries. The difference in respondents' economic backgrounds may also affect the results of the study. Therefore, future research should continue to mine data to explore the sustainable entrepreneurship development of developed countries, developing countries, and underdeveloped countries. With this, the applicability and universality of the research conclusions improves. Fourth, this study does not take into account the different institutional environments and cultural concepts of each country. The cross-regional flow of the population may affect the entrepreneurial intention and risk perception intensity of potential entrepreneurs. Therefore, the sustainable entrepreneurship of immigrants is an interesting direction for future research.

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Institutional Review Board Statement: This project does not involve important ethical experiments on human materials, human tissues animals, etc. In this study, the subjects were visited twice after the end of the experiment to make sure that the subjects had no psychological abnormality and had no mental influence.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: Data available in a publicly accessible repository that does not issue DOIs. Publicly available datasets were analyzed in this study. This data can be found here: [Questionnaire data. Sav].

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