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Opportunities or Threats? The Role of Entrepreneurial Risk Perception in Shaping the Entrepreneurial Motivation

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Abstract: Entrepreneurial risk is an important factor that individuals must consider when starting their own business. The COVID-19 continues to rage, bringing great challenges to China's economy and entrepreneurial activities. In this study, college students encounter greater entrepreneurial risks. There are two opposing views on the role of entrepreneurial risk in shaping individual entrepreneurial motivation: one view that risk is a threat, and the other view that entrepreneurial risk contains opportunity. Existing studies have discussed the issues from individual factors and environment factors, respectively, ignoring the combined effects of individual and environment factors. Person–situation transactions theory points out that individuals usually make their final behavior choices based on their comprehensive evaluation of environmental factors and themselves. Therefore, individual and environment factors should be integrated to investigate the effect of entrepreneurial risk on entrepreneurial motivation. Based on the person–situation transactions theory, this study establishes a theoretical model that entrepreneurial risk perception influences necessity and opportunity entrepreneurial motivation through entrepreneurial self-efficacy and discusses the moderating effect of entrepreneurship policy. A questionnaire survey was conducted on 595 fresh graduates from eight universities in China to obtain relevant data and the Structural Equation modelling was established to test the hypothesis. The results confirm that without the influence of external factors, college students regard entrepreneurial risk as a great threat, which not only weakens their entrepreneurial self-efficacy, but also reduces their necessity and opportunity entrepreneurial motivation. However, with the support of good entrepreneurial policies, entrepreneurial risk can be transformed into an opportunity to improve the entrepreneurs motivation driven by necessity of college students, but the impact on the opportunity motivation is not significant. This study deeply analyzes the dual characteristics of entrepreneurial risk perception in the process of shaping individual entrepreneurial motivation, expands the related research on entrepreneurial risk perception and entrepreneurial motivation, and has important implications for the government and universities to formulate entrepreneurial policies for college students.

Keywords: entrepreneurial risk perception; entrepreneurial self-efficacy; entrepreneurship policy; entrepreneurs motivation driven by necessity; entrepreneurs motivation driven by opportunity; entrepreneurial motivation

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1. Introduction

Entrepreneurial risk is the first factor that entrepreneurs should consider before taking action. MacCrimmon et al. (1998) proposes that entrepreneurial risk includes three perspectives: the size of loss, the likelihood of loss, and expected exposure to loss. Walid and Peng (2022) measures entrepreneurial risk in terms of financial loss, breakdown of social relationships, and personal emotional harm. In this study, entrepreneurial risk refers to some risk factors that would lead to the entrepreneurial activity deviating from expected target, and eventually lead to entrepreneurship failure, such as the uncertainty of entrepreneurial

environment, and the strength and ability of the entrepreneur, entrepreneurial team, and investors (Yang et al. 2017). Entrepreneurial risks exist objectively, but individuals may have different perceptions of the same entrepreneurial risks. The Entrepreneurial risk perception is the subjective perception of the risks and the uncertainties of the results that entrepreneurs know they may face in entrepreneurial activities after collecting effective information based on their existing cognitive ability (Keh et al. 2002). For potential entrepreneurs, entrepreneurial risk perception is an important influencing factor when they decide whether to start a business or not (Ding and Zhang 2016). There are two views on the impact of entrepreneurial risk perception on entrepreneurial motivation, and one is that entrepreneurial risk is a threat, the higher the perceived entrepreneurial risk of an individual, the lower his or her entrepreneurial motivation. Entrepreneurship contains and accompanies all kinds of risks, and individuals try to avoid such risks in the process of entrepreneurship. The higher the perceived entrepreneurial risk of an individual, the lower his or her confidence in entrepreneurial success and, therefore, the weaker the motivation to start a business (Li and Zeng 2018). Especially in the start-up stage, higher risk perception can seriously hinder entrepreneurs' entrepreneurial behavior (Zhao et al. 2005). The other view holds that risks are opportunities, the higher risk, the higher return (Nabi and Linan 2013). For example, Morgan and Sisak (2016) argues that benefits and risks coexist, so not taking risks may also be equal to missing opportunities; Entrepreneurial risk raises the threshold for success, which in turn stimulates stronger entrepreneurial motivation.

Why are there two completely different views? Existing research suggests that, on one hand, individuals are influenced by individual characteristics, such as risk appetite, self-efficacy (Zhao et al. 2005; Zaleskiewicz et al. 2020), risk tolerance (Cheng 2019), and entrepreneurial resources (Kong et al. 2019). In general, individuals feature a high propensity for risk, a strong sense of self-efficacy, and a wealth of resources and they are more likely to view risk as an opportunity, and thus generate entrepreneurial motivation. On the other hand, influenced by external factors, such as entrepreneurship policy, entrepreneurship education (Song and Mu 2022), self-employment grants (Caliendo 2016; Srhoj and Zilic 2021), etc. Usually, strong government measures, financial support, and good entrepreneurship education can mitigate the impact of entrepreneurial risks and encourage more potential entrepreneurs. However, existing research ignores the attitude of individuals towards entrepreneurial risk under the combined effect of internal and external factors. The person–situation transactions theory states that individuals usually make final behavioral choices based on a comprehensive evaluation of external factors and in light of their own circumstances (Furr and Funder 2018). In other words, people who have a conservative attitude towards entrepreneurial risks may change their perception of entrepreneurial risks under the influence of external factors, thereby generating positive entrepreneurial motivation. Therefore, the dual attributes of entrepreneurial risk in shaping individual entrepreneurial motivation should be examined from a holistic and dynamic perspective.

As we all know, the spread of COVID-19 around the world has created a series of risks such as economic downturn and higher unemployment. Regarding the relationship between risk perception and entrepreneurial motivation, most studies have used experimental scenarios or case studies, and real risk scenarios are lacking. Additionally, it has been pointed out that there are different conclusions about the relationship between perception and behavior in real and hypothetical scenarios (Gonzalez-Gadea et al. 2018). Therefore, it is necessary to examine the relationship between entrepreneurial risk perception and entrepreneurial motivation in a real risk scenario, and the outbreak of COVID-19 pandemic provides a realistic scenario for our study.

In order to truly discuss entrepreneurial risk's dual attributes in shaping individual entrepreneurship motivation, we take the COVID-19 pandemic as the situational condition. As shown in Figure 1, this study constructs a theoretical model of entrepreneurial risk perception acting on entrepreneurship motivation driven by opportunity and necessity through entrepreneurial self-efficacy according to the theory of person–situation transactions, to discuss whether entrepreneurial risk perception works differently for the two types

of entrepreneurial motivation. The research objectives of this study are as follows: (1) Have a survey on how college students evaluate entrepreneurial risk under real risk situations. That is, whether college students regard entrepreneurial risks as a negative threat or a positive opportunity. (2) Explore whether college students' evaluation of entrepreneurial risks will change under the influence of external factors. Specifically, it examines whether college students will regard entrepreneurial risk as an opportunity that drives their entrepreneurial motivation under an active entrepreneurship policy. (3) Analyze the differences between individual necessity and opportunity entrepreneurship motivation under the joint action of internal and external factors. The existing researches on factors affecting entrepreneurial motivation either discuss individual factors or examine external factors, which separate the theoretical logic of entrepreneurial motivation formed by the joint action of internal and external factors. This study takes COVID-19 pandemic as the specific research situation, adopting the person–situation transactions theory, and analyzes and compares the differences of entrepreneurial risk's impact on individual entrepreneurship motivation between separately and jointly with external factors, which is of great significance for understanding the dual characteristics of entrepreneurial risk and the formation mechanism of entrepreneurial motivation of college students under real risk situations.

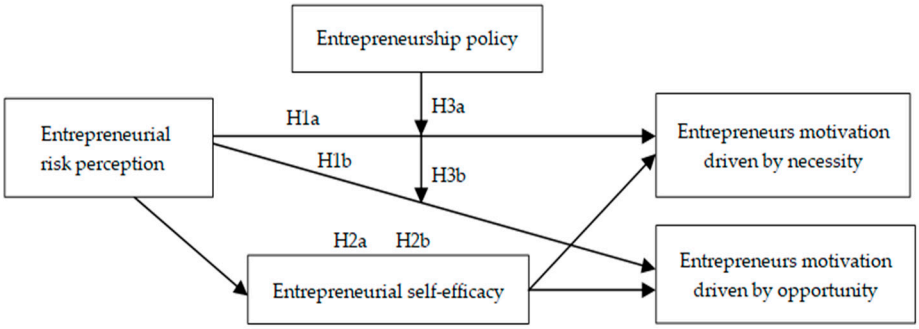

Figure 1. Research model.

2. Literature Review and Hypotheses Development

2.1. Entrepreneurial Risk Perception and Entrepreneurial Motivation

Entrepreneurial risk refers to some risk factors that would lead to the entrepreneurial activity deviating from expected target, and eventually lead to entrepreneurship failure, such as the uncertainty of entrepreneurial environment, the strength and ability of the entrepreneur, entrepreneurial team, and investors (Yang et al. 2017). The risk of creating a new enterprise is unavoidable, so entrepreneurial risk is the most important factor for entrepreneurs to consider in the initial stage of enterprise start-up and business operation. Person–situation transactions theory holds that individuals are not passive or indifferent to external situations; External information will activate a series of internal reactions, then affect individual behavior (Rauthmann 2020). Individual motivation is influenced by three related factors. The first stems from the attitude that an individual holds toward adopting a particular behavior. The second is derived from the external subjective norm, that is, the social pressure that individuals feel about whether to take a particular behavior. The third is perceived behavioral control (Ajzen 2002). Entrepreneurial motivation is the first step in starting a business and is the result of a combination of individual and environmental factors. As an intrinsic motivation to stimulate individual cognition and evaluate the feasibility of entrepreneurial opportunities, entrepreneurial motivation determines the next entrepreneurial action of individuals. According to the theory of person–situation transactions, before individuals generate entrepreneurial motivation, they will make corresponding meaning construction for entrepreneurial risk. How individuals view the potential risks directly affects the intensity of their entrepreneurial motivation. When individuals believe that the more resources and opportunities they have, the fewer obstacles they anticipate, the more motivated they are. Studies have found that

the higher the entrepreneurial risk perceived by individuals, the lower their motivation and willingness to start a business (Laguía González et al. 2019). Krichen and Chaabouni (2021) investigated the impact of the economic shock caused by COVID-19 on the willingness of college students to start a business and found that college students' perception of entrepreneurial risk is stronger than their perception of financial risk and social risk. Zhou et al. (2021) study found that many uncertainties under COVID-19 pandemic could exacerbate entrepreneurs' perceptions of risk, which, in turn, would affect their willingness to start a business. College student entrepreneurs lack relevant work or entrepreneurial experience, have relatively limited entrepreneurial resources, weak cognitive ability, and have less control over entrepreneurial risks. Therefore, the large entrepreneurial risks they perceive will seriously affect their entrepreneurial willingness and motivation (Li and Zeng 2018). At present, China is affected by the COVID-19 pandemic. Faced with a highly uncertain market and economic environment, and relative entrepreneurial advantages and opportunities, it can be speculated that college students will have a stronger perception of entrepreneurial threats and risks. However, when the perceived entrepreneurial risk is greater, the entrepreneurial motivation will be lower.

According to the 2001 report of the Global Entrepreneurship Monitor (GEM), entrepreneurship is classified as necessity entrepreneurship and opportunity entrepreneurship. The former is motivated by obtaining basic necessities essential for survival, while the latter is motivated by realizing potential business opportunities (Reynolds et al. 2001). Entrepreneurs driven by necessity aim to seek a satisfactory job that can meet their requirement of survival and realize their goals. However, their expected goal is not achieved—they do not find satisfactory jobs, but are not willing to stay where they are. Therefore, under the function of self-regulation, they choose to start a business to meet the survival needs of themselves or their families (Yin 2022). Entrepreneurs driven by opportunity motivation see business opportunities and are full of confidence in entrepreneurship. They believe that they have a high probability of success and take entrepreneurship as the best career choice (Fairlie and Fossen 2017). From the results of recent studies, China currently has both opportunity entrepreneurship and necessity entrepreneurship. For example, Li (2020) found that more college students chose necessity entrepreneurship under the influence of COVID-19 pandemic. Kuang et al. (2021) surveyed more than 300 entrepreneurial cases in China, and found that 62.3% were mainly opportunity entrepreneurship, while 36.8% were necessity entrepreneurship. Ren et al. (2022) surveyed 4588 young entrepreneurs in China, and in terms of the primary motivation for starting a business, entrepreneurs motivation driven by necessity accounted for 25.2%. Based on the above analysis, this study classifies entrepreneurial motivation into entrepreneurs motivation driven by necessity and entrepreneurs motivation driven by opportunity. Different entrepreneurial motives drive different types of entrepreneurships.

Fedakova et al. (2018) studied the influence of internal resources (education, skills, relevant personality characteristics, and experience) and external resources (social capital and financial capital) on the willingness of individuals to start a business. It is found that the difference of individual's risk cognition is closely related to internal and external resources-higher internal and external resources can reduce individual's risk perception and enhance their willingness of starting a business. Zichella (2017) found that the uncertainty of the environment and the lack of individual experience had a significant negative impact on entrepreneurial motivation. College student entrepreneurs have very limited internal and external resources. A survey suggests that most young entrepreneurs faced many problems, such as fund shortage, single financing, lack of entrepreneurial management experience, insufficient social resources, and technical innovation ability, which leads to unstable profitability in the early stage of their business, and the probability of business failure is up to more than 90% (Ren et al. 2022). Therefore, their entrepreneurial motivation driven by opportunity or necessity is highly correlated with entrepreneurial risk. College students lack entrepreneurial experience, and internal and external resources. Therefore, it can be speculated that the greater the entrepreneurial risk they perceive, the lower the possibility

of entrepreneurship motivation driven by opportunity and necessity. Accordingly, the following hypotheses are proposed:

Hypothesis 1a (H1a). *Entrepreneurial risk perception is negatively associated with entrepreneurs motivation driven by necessity.*

Hypothesis 1b (H1b). *Entrepreneurial risk perception is negatively associated with entrepreneurs motivation driven by opportunity.*

2.2. Mediating Effect of Entrepreneurial Self-Efficacy

Entrepreneurial self-efficacy is an individual's confidence or belief in achieving entrepreneurial goals and results and performs a crucial role in deciding whether an individual will pursue entrepreneurial career and puts entrepreneurial behaviors into actions (Zichella 2017). Entrepreneurial self-efficacy is the main factor influencing entrepreneurs and their behavior, and is an intrinsic cognitive trait of entrepreneurs. According to social cognitive theory, self-efficacy is influenced by four factors: enactive mastery, role modeling and vicarious experience, social persuasion, and judgments of one's own physiological states, such as arousal and anxiety individual analysis of tasks (Bandura 1977; Li and Zeng 2018). The entrepreneurial self-efficacy of college students is still taking shape, and it is not stable yet, which means that their entrepreneurial self-efficacy can be acquired, weakened, or enhanced over time during their interactions with the external environment (Sun et al. 2017). Currently, due to the severe impact of COVID-19 pandemic, the global economy is in rapid decline, a large number of enterprises are in difficulties due to lockdowns (Wu et al. 2021), and the entrepreneurial environment is not optimistic. Teresiene et al. (2021) found that economic and social restrictions, and constraints caused by the COVID-19 pandemic led to increased economic uncertainty and a decline in investor confidence. Barbosa et al. (2007) confirmed that risk perception would lead to more anxiety, lower sense of control, and lower self-efficacy. For college students, they are bound to subjectively judge the economic or non-economic losses and uncertain results of entrepreneurship before the formation of entrepreneurial decisions, and form an enterprise risk perception. The higher their perception of entrepreneurial risk, the less confidence they have in entrepreneurial success, and the lower their entrepreneurial self-efficacy.

Entrepreneurial self-efficacy is an individual's exact belief in his entrepreneurial ability, which enables an individual to mobilize the necessary motivation, cognitive resources, and a series of actions to complete a task in a given situation (Newman et al. 2019). Entrepreneurial self-efficacy is essential for entrepreneurs to identify opportunities, organize resources, start a business, and succeed. It is a key explanatory variable in the formation of individual entrepreneurial motivation. The higher the entrepreneurial self-efficacy, the more individuals believe that it is practical to start their own business (Newman et al. 2019). The positive role of entrepreneurial self-efficacy in predicting entrepreneurial motivation has been widely confirmed (Liguori et al. 2018). The stronger the individual's self-efficacy, the more motivated the individual is to engage in entrepreneurial activities (Esfandiar et al. 2019). Liu et al. (2019) found that the entrepreneurial self-efficacy of college students had a positive impact on entrepreneurial attitude and intention. Since entrepreneurial self-efficacy is significantly related to individual entrepreneurial motivation and behavior, some scholars even proposed that the improvement of entrepreneurial self-efficacy be used as an indirect criterion for evaluating entrepreneurial education (Mozahem and Adlouni 2021). The stronger the entrepreneurial self-efficacy of college students, the more positive they are in measuring and evaluating their entrepreneurial quality, the more likely they take the initiative, and the more rational they can analyze and identify opportunities, prevent risks, use resources, strengthen self-expectations, and enhance entrepreneurial motivation. Therefore, it can be speculated that entrepreneurial self-efficacy performs a mediating role between entrepreneurial risk perception and entrepreneurial motivation. Therefore, the following assumptions are proposed:

Hypothesis 2a (H2a). *Entrepreneurial self-efficacy mediates the negative relationship between Entrepreneurial risk perception and entrepreneurs motivation driven by necessity.*

Hypothesis 2b (H2b). *Entrepreneurial self-efficacy mediates the negative relationship between Entrepreneurial risk perception and entrepreneurs motivation driven by opportunity.*

2.3. Moderating Effect of Entrepreneurship Policy

Before making entrepreneurial decisions, college students will first judge the entrepreneurial environment, and only when the entrepreneurial environment is perceived to be favorable, their intrinsic motivation for entrepreneurship will be sparked (Zhao et al. 2019). It can be seen that the external environment performs an important role in influencing and shaping the cognition and evaluation of entrepreneurial activities of college students. College students lack entrepreneurial and working experience, so their entrepreneurial willingness and behavior are mainly influenced by external factors, such as society and government. When the environment encourages and supports entrepreneurship, the entrepreneurial motivation of college students will be mobilized (Xu et al. 2020). After comparing and analyzing the similarities and differences between necessity and opportunity entrepreneurship motivation, Yue (2014) found that entrepreneurship driven by opportunity were generally in the fields of science, technology, and innovation where entrepreneurial risks were high, while entrepreneurship driven by necessity were mostly concentrated in the field of traditional products or services, where there were fewer entrepreneurial risks, but their ability to resist risks was weaker, the initial entrepreneurial resources were less, and the entrepreneur's skills were weaker. However, entrepreneurship policy aims to increase entrepreneurial opportunities, improve entrepreneurial skills, and enhance entrepreneurial willingness through a series of institutional measures or policy tools (Bradley et al. 2021). The creation of any new business is the result of a combination of elements, such as entrepreneurs, environment, resources, and opportunities. The function of entrepreneurship policy is to build an appropriate entrepreneurial environment and ensure dynamic coordination among elements (Rigby and Ramlogan 2016). In addition, entrepreneurship policy can also help entrepreneurs obtain necessary resources and promote entrepreneurial success by helping them discover or create business opportunities, implementing effective entrepreneurship education, and creating an organizational learning atmosphere (Kantis et al. 2020).

Entrepreneurs are faced with many risks and uncertainties in the process of entrepreneurship, so they expect more than ordinary members of society to be sheltered by the social security system. A perfect entrepreneurship policy can, to a certain extent, improve individuals' tolerance to risks, reduce their expectation of risks, enhance their sense of security, and eliminate their fear of entrepreneurial failure (Rigby and Ramlogan 2016). When entrepreneurs have enough resources to deal with risks, they become less afraid of risks, because they know that risks often breed opportunities (Morgan and Sisak 2016). In recent years, especially after the outbreak of COVID-19 pandemic, in order to ease the pressure of employment, the Chinese government has formulated a large number of policies and measures to promote college students' entrepreneurship, and governments at all levels have increased their support for college students' entrepreneurship. For example, some regions provide start-up capital of up to 200,000 Yuan, free venues, subsidies in taxation, and other aspects to encourage college students to start their own businesses (Song and Mu 2022). For college entrepreneurs, an effective entrepreneurship policy provides them with the necessary resources to make a more informed assessment of risk. They even see it as an opportunity to stimulate their entrepreneurial motivation. Accordingly, the following hypotheses are proposed:

Hypothesis 3a (H3a). *The entrepreneurship policy has an inhibitory effect on the negative relationship between entrepreneurial risk perception and entrepreneurs motivation driven by necessity. Under a good entrepreneurship policy, entrepreneurial risk may be seen as an opportunity to motivate college students to generate entrepreneurs motivation driven by necessity, and vice versa.*

Hypothesis 3a (H3b). *The entrepreneurship policy has a restraining effect on the negative relationship between entrepreneurial risk perception and entrepreneurs motivation driven by opportunity. Under a good entrepreneurship policy, entrepreneurial risk may be seen as an opportunity to generate entrepreneurs motivation driven by opportunity among college students, and vice versa.*

3. Research Design

3.1. Methodology

In order to verify the theoretical hypotheses, this study collected relevant data through questionnaires and adopted Structural Equation Modelling (SEM) for data analysis. First, common-method variance bias, and reliability and validity tests were performed on all variables to evaluate data quality. Next, descriptive statistical analysis and correlation analysis were performed on the data to determine the suitability for subsequent statistical analysis. Finally, the goodness of fit and path coefficient significance of SEM were referred to verify the theoretical hypotheses. The above steps were conducted using SPSS24 and Mplus 7.0 for statistical analysis.

3.2. Data Collection and Sample

In this research, with the graduates from colleges and universities of this year as the subject of the research, the data collection has been conducted mainly in April 2022, which is to conduct a sample survey on fresh graduates from eight colleges and universities in Sichuan, Henan, and Fujian provinces in China through the online questionnaire survey platform (www.wjx.cn, accessed on 6 April 2022). This research was ethically approved by the Academic Committee of Henan University, and by the appropriate department at the enterprise. In order to ensure the acquisition of real and objective data, we explained the purpose and requirements of the survey to the respondents at the very beginning and emphasized that the questionnaires are to be submitted anonymously and the data is for research use only, so they need to finish it objectively and truthfully. Then, we sent the link of the questionnaire to the respondents who filled in the questionnaire through self-report and anonymously submitted it online upon completing it. For compensation, the respondents received a cash reward of 5 yuan.

In this way, we collected a total of 689 questionnaires. After strict screening, we received 595 valid questionnaires, an effective rate of 86.3%. Among the 595 respondents, 52.7% were women (n = 314) and 47.3% were men (n = 281). Students majoring in management and economics accounted for 65.3% (n = 388), while 34.7% (n = 207) majored in non-business administration. Among the respondents, 69% (n = 410) were from regular undergraduate universities, and 31% (n = 185) were from vocational colleges. Among them, 27.6% (n = 164) came from urban areas and 72.4% (n = 431) from rural areas. On average, 30.9% (n = 184) of the respondents have family members with entrepreneurial experience. On the whole, the distribution of the samples is suitable for subsequent data analysis.

3.3. Study Variables

The scales used in this research are from mature scales generally recognized by scholars at home and abroad, for English scales, after following standard "translation-back translation" procedure, a preliminary questionnaire is formed. 30 students were used as pretest subjects, and the Chinese version of the questionnaire was preliminarily tested to evaluate the scale's validity, reliability, and usability. All items were measured from 1 (strongly disagree) to 5 (strongly agree).

Entrepreneurial risk perception was subjected to the scale compiled by Simon et al. (2000), consisting of five items, including "I'm worried that my starting a business will probably fail." and "I'm worried about the negative impact of startup failure on my future." Entrepreneurial self-efficacy was subjected to the scale compiled by Li and Zeng (2018), which consists of four items, including "I'm confidence in my ability to start a business." and "I can overcome most of the difficulties of becoming an entrepreneur." Entrepreneurship policy were subjected to the scale compiled by Angulo-Guerrero et al. (2017) and Guo et al.

(2021) which comprised five items, including "The government has provided a number of preferential policies for startup activities." and "Local startup systems and regulations are perfect." Entrepreneurs motivation driven by necessity was subjected to the scale compiled by Wang and Zhu (2010), containing five items, including "I will start a business because of poor job prospects," and "I will start a business for the sake of improving my family's life." Entrepreneurs motivation driven by opportunity was subjected to the scale compiled by Chen and Ma (2020), consisting of five items, including "I want to realize my dream of starting a business." and "I can find good business opportunities and start-up projects." By referring to the existing literature, gender, major, school level, household registration, and a family's entrepreneurial background were selected as background or control variables (Liu and Xin 2020).

4. Results

4.1. Common-Method Variance Bias, Reliability and Validity Tests

Considering that the measurement of all variables was self-reported by the subjects may lead to common-method variance bias, this study employed process control and statistical method testing. The following methods were used in terms of process control: (1) All questionnaires should be anonymously completed and submitted online, thereby reducing the investigator's concerns. (2) All scales in the questionnaire were proven to have high reliability and validity. (3) The language of the questionnaire should be objective and neutral, and biased questions must be avoided. In terms of statistical testing, the Harman single factor test and multicollinearity test were adopted to test the size of the common-method variance bias. In Harman's single factor test, exploratory factor analysis was performed on all variables involved. After unrotated factor analysis, there were five factors with characteristic roots greater than 1 and the largest factor explained 27.71% of the total variance, which is less than the critical value of 40%, indicating that the common-method variance bias is insignificant, and will not greatly impact on the research conclusions. As shown in Table 1, the results of confirmatory factor analysis show that the factor loading of all items is greater than 0.7; Composite Reliability (CR) are all greater than 0.7; Average Variance Extracted (AVE) is greater than 0.5, indicating a high degree of confidence in each scale that met the measurement requirements. Additionally, we find no evidence of severe multicollinearity.

Table 1. The Factor Loadings, CR, and AVE.

Construct	Items	Estimate	S.E.	Est./S.E.	*p*-Value	CR	AVE
ERP	ERP 1	0.78	0.02	40.19	0.00	0.89	0.67
	ERP2	0.85	0.02	54.77	0.00		
	ERP3	0.84	0.02	51.37	0.00		
	ERP4	0.79	0.02	40.99	0.00		
ESE	ESE 1	0.85	0.02	56.91	0.00	0.89	0.68
	ESE 2	0.84	0.02	56.13	0.00		
	ESE 3	0.80	0.02	45.61	0.00		
	ESE 4	0.81	0.02	46.95	0.00		
EMN	EMN 1	0.88	0.01	66.80	0.00	0.91	0.76
	EMN2	0.92	0.01	84.01	0.00		
	EMN3	0.82	0.02	53.24	0.00		
EMO	EMO1	0.74	0.02	32.41	0.00	0.80	0.57
	EMO2	0.72	0.02	30.78	0.00		
	EMO3	0.80	0.02	41.02	0.00		
EP	EP 1	0.80	0.02	45.58	0.00	0.90	0.70
	EP 2	0.85	0.02	57.52	0.00		
	EP 3	0.90	0.01	77.76	0.00		
	EP 4	0.78	0.02	41.70	0.00		

Note: ERP is entrepreneurial risk perception, ESE is entrepreneurial self-efficacy, EP is entrepreneurship policy, EMN is entrepreneurs motivation driven by necessity, and EMO is entrepreneurs motivation driven by opportunity.

In this study, Cronbach's α coefficient was used to verify the reliability of each scale. The test results show that Cronbach's α coefficients of entrepreneurial risk perception, entrepreneurial self-efficacy, entrepreneurship policy, necessity, and opportunity entrepreneurship motivation are 0.86, 0.89, 0.89, 0.91, and 0.79, respectively, which were all greater than 0.7. This indicates that the internal variables are highly consistent and meet the measurement requirements. Then, the discriminant validity of each variable was tested. As shown in Table 2, compared with the other models, the five-factor model had the best fitting effect (χ^2 = 294.35, df = 94, χ^2/df = 3.13, CFI = 0.97, TLI = 0.96, RMSEA = 0.06, SRMR = 0.04), suggesting the high differential validity of each scale.

Table 2. Confirmatory factor analysis results of discriminant validity of variables.

Model	Chi-Square	*df*	χ^2/df	CFI	TLI	RMSEA	SRMR
One-factor (ERP + ESE + EP + EMN + EMO)	2851.01	104	27.41	0.55	0.48	0.21	0.14
Two-factor (ERP, ESE + EP + EMN + EMO)	2048.42	103	19.88	0.68	0.63	0.18	0.12
Three-factor (ERP, ESE + EP, EMN + EMO)	1734.57	101	17.16	0.73	0.68	0.16	0.12
Four-factor (ERP, ESE, EP, EMN + EMO)	735.54	98	7.50	0.89	0.87	0.10	0.07
Five-factor (ERP, ESE, EP, EMN, EMO)	294.35	94	3.13	0.97	0.96	0.06	0.04

4.2. Descriptive Analysis and Correlation Analysis

Pearson correlation analysis was employed to test the correlation among the variables. Table 3 details the mean, standard deviation, and correlation coefficient of each variable. Entrepreneurial risk perception was (a) negatively correlated with entrepreneurs motivation driven by necessity (r = −0.15, $p < 0.01$) and (b) negatively correlated with entrepreneurs motivation driven by opportunity (r = −0.26, $p < 0.01$). Meanwhile, the entrepreneurial self-efficacy was (a) positively correlated with entrepreneurs motivation driven by necessity (r = 0.44, $p < 0.01$) and (b) positively correlated with entrepreneurs motivation driven by opportunity (r = 0.45, $p < 0.01$). Next, the necessity and opportunity entrepreneurship motivation were positively correlated (r = 0.49, $p < 0.01$), indicating that subsequent hypothesis verification could be conducted.

Table 3. Mean, standard deviation, and correlation coefficient of variables (n = 595).

Variable	1	2	3	4	5	6	7	8	9	10
Gender										
Major	0.10 *									
School Category	0.15 **	0.19 **								
HR	−0.11 *	−0.07	−0.21 **							
FMEE	0.01	−0.01	0.13 **	−0.08 *						
ERP	0.07	−0.02	−0.11 **	0.05	0.06					
ESE	−0.05	−0.01	0.13 **	−0.04	−0.11 **	−0.25 **				
EP	−0.02	−0.01	0.01	−0.07	0.06	−0.05	0.20 **			
EMN	−0.07	0.02	0.04	−0.02	−0.19 **	−0.15 **	0.44 **	0.29 **		
EMO	−0.07	0.00	0.12 **	−0.01	−0.12 **	−0.26 **	0.45 **	0.16 **	0.49 **	
Mean	1.52	1.76	2.22	1.28	1.69	4.19	1.96	3.41	2.78	1.99
SD	0.50	0.43	0.67	0.45	0.46	0.87	0.93	0.94	1.23	0.93

Note: ** $p < 0.01$, and * $p < 0.05$. male = 1, female = 2; There are two types of majors: non-economics and management = 1, economics and management = 2; In terms of school category, ordinary undergraduate university = 1, higher vocational college = 2; HR is household registration: rural = 1, urban = 2; FMEE is family members' entrepreneurial experience, no = 1, yes = 2. ERP is entrepreneurial risk perception, ESE is entrepreneurial self-efficacy, EP is entrepreneurship policy, EMN is entrepreneurs motivation driven by necessity, EMO is entrepreneurs motivation driven by opportunity. Source: collated by author.

4.3. Hypothesis Testing

H1a and H1b test. Mplus 7.0 was utilized for data analysis in this study. Table 4 itemizes the test results. After controlling specific variables, namely gender, major, school level, household registration, and whether family members have entrepreneurial experience,

entrepreneurial risk perception was found to significantly negatively affected entrepreneurs motivation driven by necessity ($\beta = -0.16$, $p < 0.05$). This validated H1a. Entrepreneurial risk perception have a negatively impact on entrepreneurs motivation driven by opportunity ($\beta = -0.25$, $p < 0.001$), so H1b is confirmed. Among the control variables, gender significantly negatively affected necessity and opportunity entrepreneurship motivation, respectively ($\beta = -0.54$, $p < 0.001$) and ($\beta = -0.49$, $p < 0.001$), indicating that male students exhibited stronger entrepreneurial motivation than female students. Family members' entrepreneurial experience significantly influenced necessity and opportunity entrepreneurship motivation, respectively ($\beta = 0.45$, $p < 0.001$) and ($\beta = 0.21$, $p < 0.01$), indicating that family members' entrepreneurial experience had a positive impact on the two types of entrepreneurial motivation of college students. Finally, the other variables had no significant influence on the two types of entrepreneurial motivation.

Table 4. Direct Effect Result.

Variable	Estimate	S.E.	Est./S.E.	*p*-Value
Gender	−0.49 ***	0.08	−5.87	0.00
Major	−0.12	0.11	−1.10	0.27
School Category	0.09	0.07	1.32	0.18
Household Registration	0.02	0.07	0.28	0.78
Family members' entrepreneurial experience	0.21 **	0.06	−3.23	0.00
ERP → EMN	−0.16 *	0.06	−2.52	0.01
ERP → EMO	−0.25 ***	0.05	−5.25	0.00

Note: *** $p < 0.001$, ** $p < 0.01$, and * $p < 0.05$.

H2a and H2b test. The latent variable modeling method was used to estimate the mediating effect of entrepreneurial self-efficacy between entrepreneurial risk perception and entrepreneurial motivation with Mplus7.0. Setting bootstrap resampling to 5000 times to test H2a. The test results are shown in Table 5. After controlling for gender and the entrepreneurial experience of family members, the coefficient for the indirect impact of entrepreneurial risk perception on entrepreneurs motivation driven by necessity through entrepreneurial self-efficacy was −0.25 ($p < 0.001$). Additionally, the 95% bias-corrected confidence interval ranged from LLCI = −0.35 to ULCI = −0.17, excluding 0, proving that the mediating effect of entrepreneurial self-efficacy between entrepreneurial risk perception and entrepreneurs motivation driven by necessity was established, thereby confirming H2a. Then, the same method was employed to examine the mediating effect of H2b entrepreneurial self-efficacy on entrepreneurial risk perception and entrepreneurs motivation driven by opportunity. According to the findings, the coefficient for the indirect impact of entrepreneurial risk perception on entrepreneurs motivation driven by opportunity through entrepreneurial self-efficacy was −0.26 ($p < 0.01$), and the 95% bias-corrected confidence interval ranged from LLCI = −0.36 to ULCI = −0.17, excluding 0. This verified that the mediating effect of entrepreneurial self-efficacy between entrepreneurial risk perception and entrepreneurs motivation driven by opportunity was established, confirming H2b.

Table 5. The Mediating Role of Entrepreneurial Self-efficacy.

Independent Variable	Dependent Variable	Estimate	S.E.	Est./S.E.	*p*-Value	95% CI	
						Lower	Upper
ERP	EMN	−0.25 ***	0.05	−5.45	0.000	−0.35	−0.17
ERP	EMO	−0.26 **	0.05	−5.38	0.001	−0.36	−0.17

Note: *** $p < 0.001$, and ** $p < 0.01$.

H3a and H3b test. The Product Indicator Approach was used to tested the moderating effect of the entrepreneurship policy. First, the latent variables of entrepreneurial risk perception and entrepreneurship policy were treated with "Groupmean". Next, the latent

variables of the two were paired and multiplied to generate a new indicator. Then, SEM is used to test. The test results showed that the entrepreneurship policy negative moderated the relationship between entrepreneurial risk perception and entrepreneurs motivation driven by necessity with a moderating effect of 0.08 ($p < 0.05$), this implies that a favorable entrepreneurship policy can change the negative relationship between entrepreneurial risk perception and entrepreneurs motivation driven by necessity, thereby confirming H3a. Then, the same method was adopted to test the H3b. The test results showed that the moderating effect of the entrepreneurship policy on the relationship between entrepreneurial risk perception and entrepreneurs motivation driven by opportunity was 0.02 ($p > 0.05$), it was indicated that entrepreneurial risk perception inflicts a weak positive yet insignificant influence on entrepreneurs motivation driven by opportunity, thus H3b is rejected.

In order to analyze the moderating effect of entrepreneurship policy on the relationship between entrepreneurial risk perception and the two types of entrepreneurial motivation in a more intuitive manner, one standard deviation higher than the mean and one lower were used as the grouping criteria to draw the difference map of the impact of entrepreneurial risk perception on the two types of entrepreneurial motivation under different entrepreneurship policy. As shown in Figure 2, it was indicated that entrepreneurial risk perception has a significant positive influence on entrepreneurs motivation driven by necessity and no significant influence on entrepreneurs motivation driven by opportunity under good entrepreneurship policy.

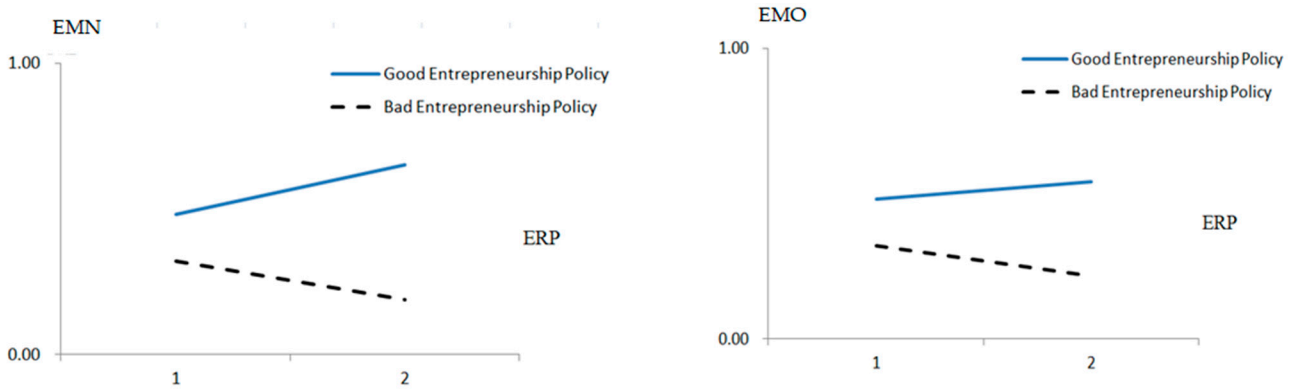

Figure 2. The moderating effect of the entrepreneurship policy. ERP is entrepreneurial risk perception, EMN is entrepreneurs motivation driven by necessity, EMO is entrepreneurs motivation driven by opportunity.

5. Discussion

In order to explore the dual role of entrepreneurial risk perception in shaping individual entrepreneurial motivation under real risk situations, this study introduced the person–situation transactions theory to explore how external factors (entrepreneurial risk) and internal factors (entrepreneurial self-efficacy) affect individual necessity and opportunity entrepreneurship motivation under different entrepreneurial risk. This study proposed six hypotheses, all of which have been verified except H3b. It has been confirmed that: (1) College students' entrepreneurial risk perception has a significant negative impact on both necessity and opportunity entrepreneurship motivation, suggesting that college students regard entrepreneurial risk as a threat. The higher the perceived entrepreneurial risk, the lower their entrepreneurial motivation, and the greater the negative impact on entrepreneurs motivation driven by opportunity. (2) Entrepreneurial self-efficacy performs a partial mediating role between entrepreneurial risk perception and entrepreneurial motivation, which indicates that entrepreneurial risk perception reduces the entrepreneurial self-efficacy of college students, then weakens their necessity and opportunity entrepreneurship motivation. (3) Entrepreneurship policy has a significant negative moderating effect

on the relationship between entrepreneurial risk perception and entrepreneurs motivation driven by necessity, that is, entrepreneurial risk perception can become an opportunistic factor and enhance individual necessity motivation under good entrepreneurship policy. Although good entrepreneurship policy does not show a significant regulation effect on the relationship between entrepreneurial risk perception and entrepreneurs motivation driven by opportunity, the negative effect of entrepreneurial risk perception on entrepreneurs motivation driven by opportunity is suppressed to a certain extent. Specific analyses of this study's conclusions are as follows:

First, without the influence of external factors, college students consider entrepreneurial risk a threat and their necessity and opportunity entrepreneurship motivation will be weakened when they perceive higher entrepreneurial risk. There are two views on the relationship between entrepreneurial risk perception and entrepreneurial motivation: the traditional view regards risk as a threat and, generally speaking, the higher the entrepreneurial risk perceived by an individual, the weaker his or her entrepreneurial motivation (Laguía González et al. 2019; Yang et al. 2015). In particular, for entrepreneurs in the early stages of entrepreneurship, entrepreneurial risk has a greater negative impact on their entrepreneurial motivation and entrepreneurial self-efficacy (Zhao et al. 2005). However, some scholars have found that entrepreneurs with a high degree of entrepreneurial risk perception demonstrate more positive entrepreneurial activities. When entrepreneurs have a more comprehensive understanding of and control over risk, they are not afraid of it, but to see it as an opportunity. They realize that the existence of risk raises the threshold of entrepreneurship and reduces the pressure arising from competition (Morgan and Sisak 2016). Current scholars believe that these two attributes of entrepreneurial risk are mainly related to individual factors, such as individual background, risk tolerance, cognitive style, etc. (Kraft et al. 2017). Ying and Wang (2020) notes that the college students tend to be risk-averse. Due to lack of sufficient economic strength and entrepreneurial experience, they are weak in the prediction and prejudgment of and the control over entrepreneurial risks. When they perceive higher risks, their entrepreneurial motivation will be weakened. This study holds that the joint effects of internal and external factors should be taken into account in shaping individual motivation. We also confirm that, without the influence of external factors, college students' entrepreneurial motivation, especially the entrepreneurs motivation driven by opportunity, will be rapidly lower when they perceive a large entrepreneurial risk. This indicates that, to some extent, without considering the external factors, the relationship between entrepreneurial risk perception and entrepreneurial motivation is affected by individual risk propensity, entrepreneurial resources, entrepreneurial experience, and other factors.

Second, with a favorable entrepreneurship policy, entrepreneurial risks may be transformed into opportunities to enhance college students' entrepreneurs motivation driven by necessity. Some scholars put forward that risk is a "double-edged sword", with potential losses and potential business opportunities coexisting (Miller 2007). In particular, in studies related to opportunity identification, risk is often seen as a potential benefit, an opportunity for firms to make excess profits (Bergner et al. 2021). This study finds that under a positive entrepreneurship policy, college students' negative expectation of entrepreneurial risk is inhibited, and they even regard entrepreneurial risk as an opportunity to stimulate their entrepreneurs motivation driven by necessity. Necessity entrepreneurship is mainly to meet the needs of survival, taking self-employment as the main form (Reynolds et al. 2001). As a result of the COVID-19 pandemic, China's economy is declining, the employment rate is decreasing, and the unemployment rate is increasing. In this case, many college students face the risk of unemployment upon graduation. In order to meet the need of survival, some college students have no choice but to start businesses. Under such circumstances, an effective entrepreneurship policy is of great significance to college students who are motivated to start a business to meet their survival needs, as such policies help greatly alleviate the threat posed by entrepreneurial risks and re-establish their entrepreneurial confidence. Hedia and Habib (2014) found that when supported by active entrepreneurship

policy, such as providing financial loans, capital services, and other policies, entrepreneurs were willing to start businesses even if they perceived risks. As Nabi and Linan (2013) pointed out, entrepreneurs motivation driven by necessity could still be motivated in college students in case of economic recession and high start-up risk. This is because they can be supported by an active entrepreneurship policy, which allows them to assess risks more wisely and see them as opportunities rather than pessimistically believing in "doom". This study also confirms Yin and Wu's (2022) view that an individual's assessment of risk is influenced by a combination of internal and external factors, and manifests as a positive coping behavior under certain conditions.

However, the moderating effect of entrepreneurship policy on the relationship between entrepreneurial risk perception and entrepreneurs motivation driven by opportunity is not significant. The reason might be that the current Chinese entrepreneurship policy is more suitable for necessity entrepreneurship than opportunity entrepreneurship. There are significant differences in the demand of entrepreneurship policy between necessity entrepreneurship and opportunity entrepreneurship. The functions of entrepreneurship policy required by necessity entrepreneurship are mainly to change the employment concept, stimulate entrepreneurial motivation, reduce entrepreneurial risks, and create a fair market environment. The functions of encouragement, support, and help are emphasized. While the entrepreneurship policy required by opportunity entrepreneurship is mainly reflected in entrepreneurial opportunities, entrepreneurial resources, enterprise growth ability, and risk compensation system, etc., and mainly focuses on the promotion, service and guarantee of entrepreneurial activities (Yue 2014). It is possible that the current entrepreneurship policy of provinces and cities in China focuses on encouragement and support, while the entrepreneurial opportunities, resources, and guarantee system available are insufficient. Shane (2009) pointed out that necessity entrepreneurship caused by unemployment tends to perform worse than opportunity entrepreneurship. Dvouletý et al. (2021) similarly found that financial policies provided by the government had a positive effect on the survival of startups and the resolution of social employment, but had mixed results in terms of labor productivity and economic growth rates. However, China's current entrepreneurship policy is likely to attract more underperforming entrepreneurs, which serves as a reminder that the government is more cautious in formulating entrepreneurship policies.

Finally, this study also confirms that there are significant differences between necessity and opportunity entrepreneurship motivation of college students under the influence of internal and external factors. Existing studies have found that individual factors (Murnieks et al. 2020) and environmental factors (Rivero and Ubierna 2021) affect individual entrepreneurial motivation. Theoretically, existing research has separated the logic of the theory of internal and external factors working together to form entrepreneurial motivation. Fedakova et al. (2018) pointed out that in the absence of external resources, there was no significant difference in individuals' perception of entrepreneurial risk and entrepreneurial intention. However, when individuals possess rich external resources, there are obvious differences between entrepreneurs driven by opportunity and necessity in their attitude towards risk and entrepreneurial intention. The research in this study confirms the view of Fedakova et al. (2018) and others that without the influence of external factors, the entrepreneurial risk perception has a negative impact on both necessity and opportunity entrepreneurship motivation of college students; however, under the positive entrepreneurship policy, entrepreneurial risk perception promotes entrepreneurs motivation driven by necessity, but has little effect on opportunity motivation. This indicates that the influence of opportunity and necessity entrepreneurship motivation on individuals will show significant difference under different external environments.

6. Implications

Affected by the COVID-19 pandemic, it is difficult for college students to find jobs in China. The Chinese government proposed driving entrepreneurship with employment

and introduced a series of related policies to promote entrepreneurship among college students. Entrepreneurial risk perception, entrepreneurial self-efficacy, and entrepreneurial motivation are the core indicator for predicting individual entrepreneurial behavior, which can provide a reference for understanding the dilemmas faced by individual entrepreneurs and providing targeted entrepreneurial support. This study discusses the influence of entrepreneurial risk perception on the entrepreneurial motivation of college students and the role of entrepreneurship policy in the context of COVID-19 pandemic. It has important reference value for the government to promote college students' entrepreneurship, and colleges to promote students' employment and entrepreneurship. First, given that entrepreneurial risk has a great negative impact on the entrepreneurial motivation and entrepreneurial self-efficacy of college students, the government should create a stable external economic environment, and formulate effective measures to cope with the common risks in the process of college students' entrepreneurship, so as to reduce their perception of entrepreneurial risk. Second, the government should attach importance to the role of the entrepreneurship policy and formulate targeted entrepreneurship policies according to different entrepreneurial motivations. Considering the characteristics and needs of entrepreneurs motivation driven by necessity, it is advised that the government provide flexible channels for raising funds for entrepreneurship, grant tax reductions and exemptions, and provide various supports in the early stages of entrepreneurship, so that entrepreneurs have external resources for entrepreneurs motivation driven by necessity. For entrepreneurs motivation driven by opportunity, the main role of entrepreneurship policy is to provide entrepreneurial opportunities and support entrepreneurship programs, operations, resources, etc., so as to improve the confidence of college students in entrepreneurship. However, studies have found that government entrepreneurship measures, such as the provision of start-up grants, may have some positive significance in terms of increasing employment, but not for economic growth and entrepreneurial innovation (Caliendo 2016; Srhoj and Zilic 2021), which reminds the government to think about whether the main goal of entrepreneurship policy in the current environment is to create more jobs or to encourage more businesses with good prospects to grow rapidly. College students' capabilities to deal with entrepreneurial risks is obviously weak, so colleges and universities should strengthen the education on entrepreneurial risks, such as the knowledge of risk identification, judgment, and avoidance, so as to improve their risk coping ability and entrepreneurial self-efficacy. At the same time, institutions of higher learning should provide opportunities for college students to have a deep understanding of the current trend of social and economic development, and urge them to discover entrepreneurial opportunities behind technological, cultural and institutional progress, so as to encourage more college students to devote themselves to entrepreneurship.

7. Limitations and Future Research

There are some limitations to this study. First, the research data is derived from the researcher' self-reports, so the common-method variance bias cannot be completely avoided. The Entrepreneurial risk perception is not a stable cognitive characteristic of individuals, so in the future, sampling at different time or experience-sampling methodology can be adopted to improve the accuracy and external validity of the research conclusions. Secondly, the research object of this study is mainly college graduates, who are different from other entrepreneurs in terms of entrepreneurial resources, social networks, entrepreneurial experience, and so on. Therefore, whether the research conclusions of this study are applicable to other types of entrepreneurs needs to be further verified. Third, the study confirms that entrepreneurship policy performs a moderating role in the relationship between entrepreneurial risk perception and entrepreneurs motivation driven by necessity, while the moderating effect on the relationship between entrepreneurial risk perception and entrepreneurs motivation driven by opportunity is not significant. Although we doubt that the current entrepreneurship policy in China may be more applicable to necessity entrepreneurship, it has not been further verified. Next, it is necessary to delve into the

current entrepreneurship policies in China, and explore the impact of different policies on the type of startups, employment, economic growth, innovation, etc. Finally, the study only confirms that the entrepreneurship policy in the external factors has moderating effect on the relationship between entrepreneurial risk perception and entrepreneurs motivation driven by necessity. However, other variables moderating the relationship between entrepreneurial risk perception and entrepreneurs motivation driven by opportunity have not been identified. In the future, whether social support, social responsibility, management, employee turnover (Ip et al. 2021; Altman et al. 2022; Mai et al. 2022; Zheng et al. 2022), and other external factors can moderate the relationship between entrepreneurial risk perception and entrepreneurial motivation can be discussed.

8. Conclusions

In conclusion, taking the COVID-19 pandemic as the situational condition, this study mainly discusses how the entrepreneurial risk perception performs a dual role in shaping individual entrepreneurial motivation. Based on a survey and analysis of 595 recent college graduates from eight universities in China, this study confirms that without the influence of external factors, college students regard entrepreneurial risk as a great threat, which not only weakens their entrepreneurial self-efficacy, but also reduces them engaged in both necessity and opportunity entrepreneurship motivation. However, under the support of good entrepreneurship policy, entrepreneurial risk can be turned into an opportunity to improve college students' entrepreneurs motivation driven by necessity, but its influence on entrepreneurs motivation driven by opportunity is not significant. This indicates that under different scenarios, the entrepreneurial risk perception will play different effects on entrepreneurial motivation. Finally, by adopting the person–situation transactions theory, we discuss the differences between necessity and opportunity entrepreneurship motivation of college students under the influence of external factors (entrepreneurship policy), entrepreneurial self-efficacy, and the individual cognitive factor (entrepreneurial risk perception). We found that in the absence of external resources, entrepreneurial risk has a significant negative impact on both types of entrepreneurial motivation of college students, but with the support of a favorable entrepreneurship policy, the two types of entrepreneurial motivation show significant differences. This study deeply analyzes the dual attributes of entrepreneurial risk in shaping individuals' entrepreneurial motivation, and explores the role of entrepreneurship policy, which provides important enlightenment for society, universities, and governments to promote college students' entrepreneurship and employment and formulate related policy measures.

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