

# The influence of proactive personality on entrepreneurial intentions among college students: a moderated mediation effect

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**Abstract:** Objective: to explore the mechanism between proactive personality and college students' entrepreneurial intention. Methods: A sample of 1,021 college students was recruited in the study to complete proactive personality scale, benign competitive attitude scale, employment pressure scale and entrepreneurial intention scale. Results: (1) Benign competitive attitude partially mediated the effect of proactive personality on entrepreneurial intention. (2) Employment pressure moderated this mediation effect of benign competitive attitude. When employment pressure was low, with the increase of proactive personality, benign competitive attitude and entrepreneurial intention had an ascending trend. But when employment pressure was high, with the increase of proactive personality, college students' benign competitive attitude and entrepreneurial intention had an obviously ascending trend. Conclusion: Proactive personality has a moderated mediating effect influence on entrepreneurial intentions of college students. Proactive personality could directly influence college students' entrepreneurial intention, as well as ultimately influence entrepreneurial intentions of college students by influencing benign competitive attitudes. Employment pressure enhanced the effect of proactive personality on college students' benign competitive attitude and entrepreneurial intention.

**Key words:** proactive personality; benign competitive attitude; employment pressure; entrepreneurial intention

## 1 Introduction

In recent years, the overall number of university graduates in China has risen rapidly, leading to a tightening employment situation. According to the latest information released by the Ministry of Education, the number of university graduates in 2016 exceeded 7.65 million, an increase of 160,000 from 2015, marking a historical peak and the so-called "most challenging employment season". The difficulty in college students' employment is becoming increasingly prominent. Entrepreneurship, as a crucial solution to employment challenges, has garnered significant attention from both the government and the society. Entrepreneurship refers to the process of establishing and managing a company for economic growth and profit [1]. Behind entrepreneurial activities lies entrepreneurial intention. Without this intention, there would be no subsequent entrepreneurial actions [2]. Entrepreneurial intention is an individual's plan to start a new company and consciously put it into practice in the future [3]. Having entrepreneurial intention is a crucial step in the entrepreneurial process. Therefore, the topic of entrepreneurial intention has become an essential research focus in the field of entrepreneurship [4].

Proactive personality refers to an individual's tendency to take actions to change their environment without being constrained by external factors. Individuals with a high level of proactive personality can identify and seize opportunities, showing proactive, persistent characteristics until meaningful changes occur. The proactive personality plays a positive role in behavioral outcomes and significantly predicts career success. According to the "Career Choice Theory", individuals tend to choose professions that align with their personality traits. Thus, individuals with a higher proactive personality are more compatible with entrepreneurial activities. Empirical studies have also consistently shown that proactive personality positively predicts entrepreneurial intentions.

Understanding mediation effects can help clarify how proactive personality impacts college students' entrepreneurial intentions. Few studies have explored potential mediators between proactive personality and entrepreneurial intentions. Based on literature reviews, this paper suggests that positive competition attitude, which can be divided into excessive competition and positive competition, is a worthwhile mediator to consider. A positive competition attitude seeks personal goals in communal living and actively participates in joint exploratory activities to achieve these goals [5]. Campbell posits that one core trait of proactive personality is being proactive [6]. Individuals with a good competition attitude focus on self-development and personal growth during goal completion. Hence, those with a higher proactive personality are likely to have a stronger positive competition attitude. The economic-psychological model of entrepreneurial intention suggests that a stronger competition attitude leads to stronger entrepreneurial intention [7]. Thus, proactive personality might influence entrepreneurial intention through a positive competition attitude. Based on this, Hypothesis 1 is proposed: A positive competition attitude mediates between proactive personality and entrepreneurial intentions.

The influence of a proactive personality on entrepreneurial intentions among university students, mediated by benign competitive attitudes, might exhibit individual differences. As such, it is pivotal to examine if other variables might modulate this intermediary process. With the steady rise in the number of university graduates, employment pressures are intensifying, rendering the job market increasingly challenging for them. This has become a predominant source of stress for university students. However, certain studies indicate that moderate stress can indeed foster individual positivity. Hence, this paper will investigate whether employment pressures moderate the mediating effect of proactive personality on entrepreneurial intentions through benign competitive attitudes.

The "protective factor-protective factor" model proposed by Li Dongping et al. introduces the enhancement hypothesis, suggesting that one protective factor (e.g., employment pressure) may amplify the impact of another protective factor (e.g., proactive personality) on individual development (such as benign competitive attitudes and entrepreneurial intentions). Specifically, for college students with higher levels of employment pressure, the influence of their proactive personality on benign competitive attitudes and entrepreneurial intentions is intensified. Conversely, for those with lower levels of employment pressure, the effect of their proactive personality on benign competitive attitudes and entrepreneurial intentions may diminish. Thus, employment pressure might modulate the impact of proactive personality on benign competitive attitudes and entrepreneurial intentions among college students.

## **2 Objects and methods**

### **2.1 Participants**

A total of 1,021 college students were chosen as research subjects, comprising 499 males and 522 females. There were 240 freshmen, 270 sophomores, 227 juniors, and 284 seniors, with a strong emphasis on their majors.

### **2.2 Instruments**

Entrepreneurial intention questionnaire: The survey employs the "College Student Entrepreneurial Intention Scale" compiled by Li Hailong et al. This scale consists of 12 items, divided into two factors: entrepreneurial goal intention and

entrepreneurial implementation intention. It utilizes a 7-point rating, ranging from "1" (completely disagree) to "7" (completely agree). Higher scores indicate stronger entrepreneurial intentions. The Cronbach's  $\alpha$  coefficient for this scale in this study is 0.96.

Proactive personality questionnaire: The survey adopts the "Proactive Personality Scale" developed by Bateman and Crant, and revised by Shang Jiayin and Gan Yiqun. This scale comprises 11 items, rated on a 7-point scale, from "1" (strongly disagree) to "7" (strongly agree). A higher score signifies a more proactive personality. The Cronbach's  $\alpha$  coefficient for this scale in this research is 0.94.

Benign competitive attitude questionnaire: The study uses the "Benign Competitive Attitude Scale" formulated by Ryckman and revised by Chen Guopeng and Li Juan. The scale contains 14 items, with a 5-point rating system, ranging from "1" (completely disagree) to "5" (strongly agree). A higher score denotes a stronger competitive attitude. In this research, the Cronbach's  $\alpha$  coefficient for this scale is 0.93.

Employment pressure questionnaire: The survey uses the "Employment Pressure Scale" developed by Liu Zhonghua. This scale has 14 items and is composed of four factors: family factors, school factors, professional factors, and personal factors. It employs a 5-point scale, from "1" (no pressure) to "5" (very high pressure). Higher scores indicate greater employment pressure. The Cronbach's  $\alpha$  coefficient for this scale in this study is 0.91.

### 3 Results

#### 3.1 Correlation analysis of variables

The correlation analysis results in Table 1 indicate that proactive personality, benign competitive attitude, and employment pressure are significantly positively correlated with college students' entrepreneurial intentions. There is a positive correlation between proactive personality and benign competitive attitude.

Table 1. Correlation analysis among variables

Variables	1	2	3	4
Proactive personality				
Employment pressure	0.13***			
Benign competitive attitude	0.59***	0.10**		
Entrepreneurial intention	0.62***	0.17***	0.48***	

Note: N=1,021, \*\*P<0.01, \*\*\*P<0.001

#### 3.2 The impact of proactive personality on entrepreneurial intention: a test of the mediated moderation model

In this study, a structural equation model was used for testing. Firstly, the effect of the independent variable (proactive personality) on the dependent variable (entrepreneurial intention) was examined. The results showed that the model fit indices were good with RMSEA=0.03, SRMR=0.01, CFI=0.99, and NNFI=0.99. The proactive personality significantly positively predicts the entrepreneurial intention of college students ( $\gamma=0.68$ ,  $t=21.37$ ,  $P<0.001$ ). Next, a structural equation model was further used to test the mediated moderation model. The results indicated good model fit with RMSEA=0.06, SRMR=0.03, CFI=0.99, and NNFI=0.98. As shown in Fig.1, proactive personality significantly positively predicts benign competitive attitude ( $\gamma=0.36$ ,  $t=10.00$ ,  $P<0.001$ ). The benign competitive attitude, in turn, significantly positively predicts the entrepreneurial intention of college students ( $\gamma=0.31$ ,  $t=13.89$ ,  $P<0.001$ ). Therefore, benign competitive attitude mediates the effect of proactive personality on college students' entrepreneurial intention, supporting Hypothesis 1. Since the effect of proactive personality on entrepreneurial intention remains significant ( $\gamma=0.62$ ,  $t=22.22$ ,  $P<0.001$ ), the benign competitive attitude plays a partial mediating role in the relationship between proactive personality and entrepreneurial

intention of college students. Furthermore, the interaction of proactive personality and employment pressure positively predicts benign competitive attitude ( $\gamma=0.14$ ,  $t=3.87$ ,  $P<0.001$ ), indicating that employment pressure moderates the impact of proactive personality on the benign competitive attitude of college students. The interaction between proactive personality and employment pressure also positively predicts entrepreneurial intention ( $\gamma=0.05$ ,  $t=2.10$ ,  $P<0.05$ ), suggesting that employment pressure moderates the impact of proactive personality on college students' entrepreneurial intention.

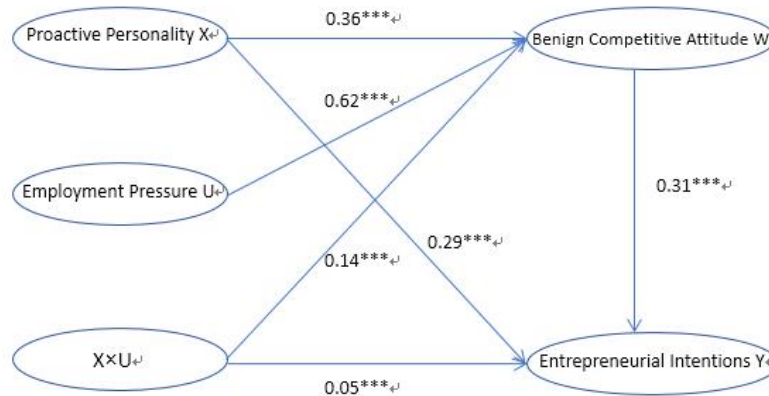


Fig. 1. Mediation model with moderation

To explore how employment pressure moderates the influence of a proactive personality on competitive attitudes and entrepreneurial intentions, Z-scores of +1 and -1 for employment pressure were used, and interaction effect graphs were plotted. From Fig. 2 and 3, it is visually discernible how the influence of proactive personality on benign competitive attitude and entrepreneurial intentions among university students is moderated by employment pressure. Under higher employment pressure, the impact strength of proactive personality on benign competitive attitude among university students is 0.49 ( $P<0.001$ ); under lower employment pressure, the impact strength is 0.22 ( $P<0.001$ ), with a difference value of 0.27 ( $P<0.001$ ). Under higher employment pressure, the influence strength of proactive personality on the entrepreneurial intentions of university students is 0.66 ( $P<0.001$ ); under lower employment pressure, the influence strength is 0.57 ( $P<0.05$ ), with a difference value of 0.09 ( $P<0.05$ ). Therefore, the impact of proactive personality on benign competitive attitude and entrepreneurial intentions of university students intensifies as the level of employment pressure increases.

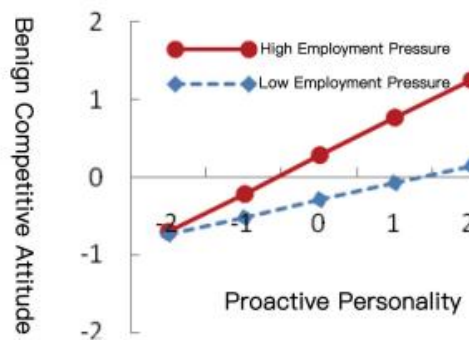


Fig. 2. Moderating effects of employment pressure on the relationship between proactive personality and benign competitive attitude

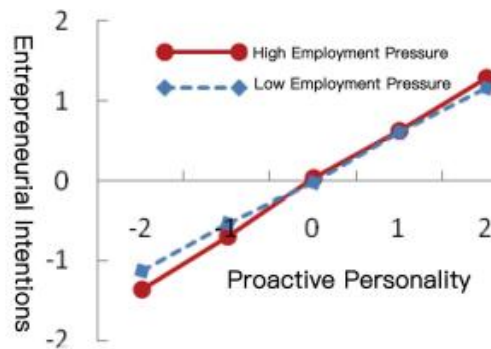


Fig. 3. Moderating effects of employment pressure on the relationship between proactive personality and entrepreneurial intentions

#### 4 Discussion

This study finds that a proactive personality enhances the entrepreneurial intentions of university students, consistent with previous findings. Hence, the influence of a proactive personality on students' entrepreneurial intentions should be given significant attention. The current research has constructed a moderated mediation model, examining the mediating role of benign competitive attitudes between proactive personality and entrepreneurial intentions of students and whether this mediation is moderated by employment pressure.

The research indicates that benign competitive attitudes act as a mediator between proactive personality and entrepreneurial intentions, serving as a "bridge" between the two. Notably, benign competitive attitudes have a partial mediating role. In other words, on one hand, a proactive personality directly affects entrepreneurial intentions. On the other hand, it indirectly influences entrepreneurial intentions through benign competitive attitudes. Students with a stronger proactive personality have more robust benign competitive attitudes, and those with stronger competitive attitudes have higher entrepreneurial intentions. Thus, attention should be paid both to the direct effect of proactive personality on entrepreneurial intentions and its indirect influence through benign competitive attitudes.

The study also reveals that employment pressure positively predicts university students' entrepreneurial intentions, aligning with previous research conclusions. Furthermore, it was found that employment pressure moderates the first half and the direct path of the mediating process of how proactive personality affects students' entrepreneurial intentions through benign competitive attitudes. Under lower employment pressure, there is a change in benign competitive attitudes and entrepreneurial intentions among students with higher (vs. lower) proactive personality levels. However, under higher employment pressure, the increase in benign competitive attitudes and entrepreneurial intentions among students with higher proactive personality levels (vs. those with lower levels) is even more pronounced. This result suggests that one protective factor can amplify the effect of another protective factor. Specifically, in this research, employment pressure reinforces the protective role of proactive personality on students' benign competitive attitudes and entrepreneurial intentions, further providing empirical support for the "protective factor-protective factor model" enhancement hypothesis.

In summary, this study's moderated mediation model adds conditions under which the mediating effect of benign competitive attitudes is more robust, deepening and expanding the mediation model. It also offers insights for practical work by answering how proactive personality impacts certain individuals through which mechanisms. First, the influence of proactive personality on university students' entrepreneurial intentions should be emphasized, thereby bolstering students' proactivity. Secondly, the impact of students' benign competitive attitudes on their entrepreneurial intentions should be recognized and strengthened. Lastly, appropriate employment pressure is not only a protective factor for students' entrepreneurial intentions but also enhances the protective effects of proactive personality on students' benign

competitive attitudes and entrepreneurial intentions. Hence, it's essential to help students adjust their psychological state and view employment pressure rationally.

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### **Conflicts of interest**

The author declares no conflicts of interest regarding the publication of this paper.

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