



Entrepreneurial motivation and well-being: A moderated mediation model of entrepreneurial commitment and perceived progress

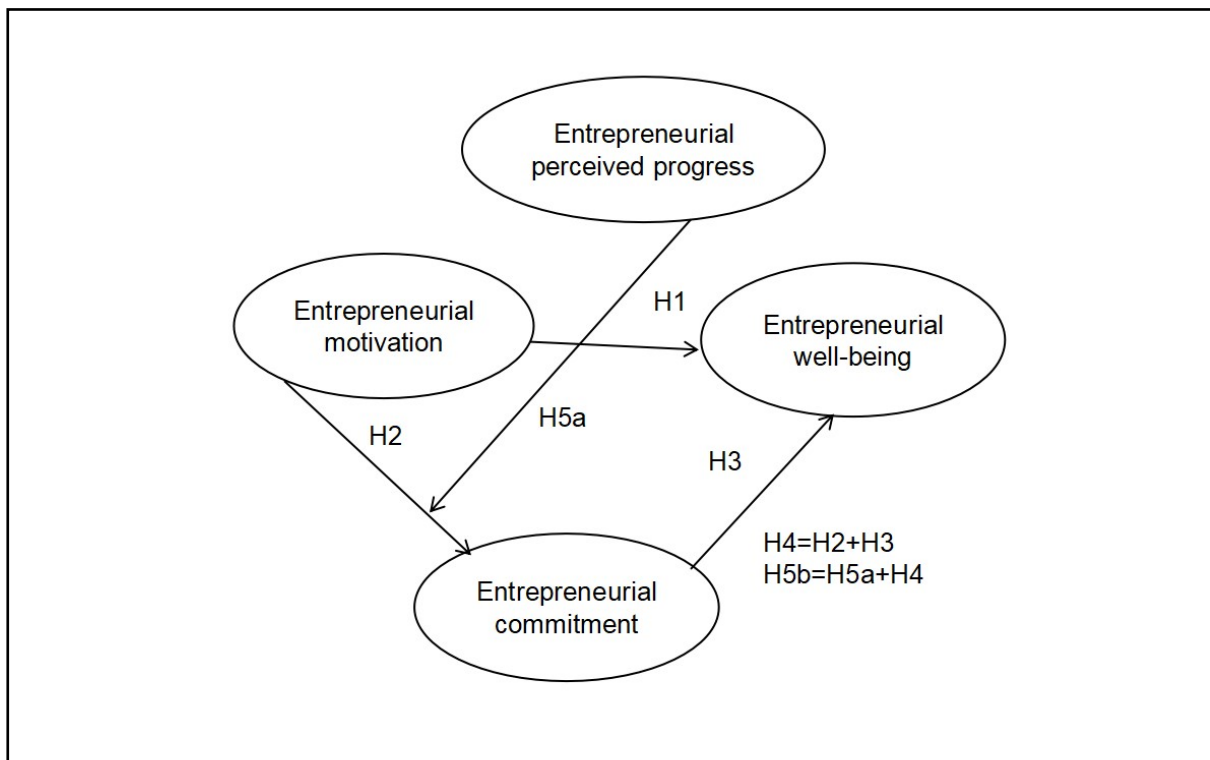
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Graphical abstract




This is the hypothesis test result of this study.


Public summary

- This study explains the relationship between entrepreneurial motivation and entrepreneurial well-being.
- With self-regulation theory as the framework, this study explains the positive effects of entrepreneurs' subjective initiative on entrepreneurial well-being in the hope to further academic thinking. The results show that the indirect effect of entrepreneurial motivation on entrepreneurial well-being through mediating variable is negatively moderated by entrepreneurial perceived progress.
- The research results have certain guiding significance for enterprise talent management. Entrepreneurs should strive to promote the establishment of reasonable and complex goals, encourage self-regulation and improve well-being.

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Abstract: According to self-regulation theory, we explored the relationship between entrepreneurial motivation and entrepreneurial well-being. We developed a moderated mediation model of entrepreneurial commitment linking entrepreneurial motivation and entrepreneurial well-being. Using a sample of 209 entrepreneurs in different industries, we found that entrepreneurial motivation was positively related to entrepreneurial well-being and that this relationship was mediated by entrepreneurial commitment. We further found that the effect of entrepreneurial motivation on entrepreneurial commitment was contingent on the perceived entrepreneurial process. Finally, theoretical and practical implications were discussed for entrepreneurs to take appropriate self-management measures.

Keywords: entrepreneurial motivation; entrepreneurial commitment; entrepreneurial well-being; entrepreneurial perception progress

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1 Introduction

In recent years, excessive competition in industries has promoted organizations to reduce employment, resulting in growing employment pressure in China^[1]. Particularly, the economic impact of the COVID-19 pandemic is likely to create further employment pressure in China. The government's policy indicates that entrepreneurship would be an important means to increase employment opportunities, raise more employment demands and stabilize the job market in the future^[1]. Currently, entrepreneurship has become a popular career choice to a certain extent for many graduates and the unemployed.

Previous studies on entrepreneurship have primarily focused on the performance of startups, and few studies have explored entrepreneurial emotion^[2]. As an interesting entrepreneurial emotion, entrepreneurial well-being is "an important breakthrough to explain some interesting entrepreneurial phenomena or problems"^[2]. The Global Entrepreneurship Monitor developed the subject of subjective well-being and explored the relationship between entrepreneurship and well-being in 2013. Since then, a growing number of studies have begun to identify the factors that shape the emergence of entrepreneurs' well-being from different perspectives, such as job nature^[3] and satisfaction^[4-5]. Entrepreneurial activities have certain risks, uncertainties, and high failure rates^[6-7]; however, Sun and Zhou^[8] found that entrepreneurs have higher well-being than employees. Low entrepreneurial well-being could lead to depressed emotional experience for entrepreneurs. Then, entrepreneurs with poor psychological state might be

unable to cope with the difficulties and are more likely to give up halfway, resulting in the failure of the business^[9]. Extant studies have explored the predictions of entrepreneurial well-being from different aspects: individual characteristics and motivation^[7], social networks^[10], and work characteristics^[11]. In particular, research on entrepreneurial well-being has mainly been conducted in areas such as the USA and the UK, and relevant research in China is still relatively lacking^[2]. Entrepreneurial motivation keeps entrepreneurs from losing his/her goal, maintains entrepreneurial passion, and persists his/her entrepreneurial behavior. Some scholars have found that entrepreneurial motivation can meet different entrepreneurial needs of entrepreneurs and directly affect entrepreneurial well-being^[10]. Moreover, entrepreneurial motivation could lead entrepreneurs to add some control over their thoughts, feelings and behaviors to achieve goals. The realization of goals can bring about the elimination of tension and positive emotions of self-satisfaction, which could improve entrepreneurial well-being. In addition, Baron^[12] found that entrepreneurs will encounter many unpredictable difficulties, which requires that they have a sustainable commitment to entrepreneurship over a long period of time. Commitment protects individuals from the negative effects of stress by enabling people to "attach direction and meaning to their work"^[13]. Similarly, people with high entrepreneurial commitment have higher emotional attachment and recognition, focus more on the benefits brought by entrepreneurship, ignore the risks, and obtain a strong sense of security and belonging, thus improving their entrepreneurial well-being.

Based on self-regulation theory, we speculate that entrepreneurs' motivation could increase entrepreneurial well-being through entrepreneurial commitment. The complexity and risk of entrepreneurship require entrepreneurs to have a certain self-regulation ability; otherwise, it is easy to face entrepreneurial failure. According to self-regulation theory, people will strengthen and maintain their own behaviors by controlling their thoughts, feelings and behaviors to maintain motivation^[14]. Therefore, the more strongly motivated entrepreneurs are, the more purposeful and directed efforts they will make to maintain their momentum. This directional giving that reinforces and maintains one's behavior is an "internal" emotion^[15]. Such "internal" emotions lead entrepreneurs to work hard to achieve the established goals and "bind entrepreneurs to one or more goals"^[16], which conforms to the definition of entrepreneurial commitment. Specifically, when people have certain needs, they will be psychologically disturbed and nervous, thus generating an internal driving force, namely, motivation, which drives people to choose goals to meet their needs^[17]. After the entrepreneur determines the goal, entrepreneurial commitment will encourage the entrepreneur to achieve the goal and make efforts for it^[16]. The goal is satisfied after the effort, the satisfaction of self-actualization; at the same time, as the needs have been met, psychological anxiety and tension have been eliminated, so well-being has been improved^[18].

Some studies show a negative cycle between progress perception and effort. For example, individuals maintain a certain amount of self-doubt^[19]. This indicates that the smooth progress of a task might lead to a feeling that he/she is now well prepared to tackle the challenge, thus resulting in insufficient effort at the next stage. Similarly, we speculate that when entrepreneurial perceived progress is high, entrepreneurs feel that they are fully prepared for risks at present, which might make the efforts in the next stage insufficient and weaken entrepreneurial commitment.

Currently, the Chinese government has issued relevant policies and invested resources to encourage entrepreneurship. Entrepreneurship has gradually been integrated into mainstream career choices and has become a new career choice in the future. If the well-being of entrepreneurs is low, it may lead to negative feedback, and then the resource cost invested in entrepreneurship is not reasonably utilized^[20-22], making the contribution of entrepreneurship lower than expected. Thus, exploring how to effectively improve entrepreneurial well-being is urgently needed. Based on self-regulation theory, we developed a moderated mediation model in which

entrepreneurial commitment was theorized as a unique mechanism underlining why entrepreneurial well-being is influenced by entrepreneurs' motivation. Additionally, progress of entrepreneurial perception was proposed to be a relevant boundary condition to influence such a relationship. The overall model is shown in Fig. 1. This study aims to build a well-being mechanism for entrepreneurs in line with the new situation to help people deepen their understanding of the entrepreneurial process, make better career choices, make their own judgments, and constantly offer feedback on the relevant influence mechanism to adjust themselves.

2 Hypothesis development

2.1 Entrepreneurial motivation and entrepreneurial well-being

The motivation mentioned in this study is the initial motivation of entrepreneurship, which represents the reason entrepreneurs choose to start their own business in the first place. Initial entrepreneurial motivation is the internal motivation that guides individuals to engage in entrepreneurial activities and makes them move toward certain goals and is the internal force that encourages and guides individuals to take actions to achieve entrepreneurial success^[23-24]. Early studies assume that the generation and strengthening of entrepreneurial motivation is the primary link in the entrepreneurial process, so theoretical studies on the definition and influencing factors of entrepreneurial motivation in the early stage are numerous. Theories about the definition of motivation can be "drive" and "incentive" theories^[25]. Typical entrepreneurial motivations include internal motivations such as independence and seeking opportunities^[26-27]. External factors such as unemployment, unsatisfactory work treatment, and frustration are also encountered^[28-29]. This study investigates the overall initial motivation level of entrepreneurship using Kuratko's Four-Factor Model Scale^[30] to integrate the above motivation types. Traditional entrepreneurial motivation studies usually focus more on the interpretation of task performance, mainly from the perspective of improving the external environment for entrepreneurship, increasing entrepreneurial opportunities, and providing resource support to take measures targeted at external factors for the occurrence and development of entrepreneurship to improve performance^[27]. With the further deepening of research, the trend of domestic research has gradually transformed into the training of internal shaping and motivation for entrepreneurs^[31]. Researchers of entrepreneurial motivation have progressively realized the importance of

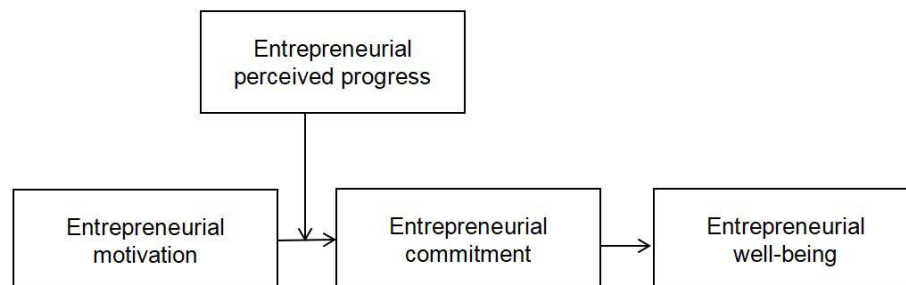


Fig. 1. Theoretical model.

entrepreneurs' subjective initiative. Some scholars have found that entrepreneurial motivation can reflect different entrepreneurial needs of entrepreneurs and directly affect entrepreneurial well-being. In previous studies, well-being was mostly measured by satisfaction. Therefore, early studies on entrepreneurial motivation and entrepreneurial well-being were obtained by studying the relationship between entrepreneurial motivation and satisfaction. For example, Carree and Verheul explored the effect of entrepreneurial motivation on entrepreneurial satisfaction (income satisfaction, psychological burden satisfaction, and leisure time satisfaction) and found that a high level of entrepreneurial motivation improves entrepreneurial satisfaction^[10].

In the early stage of well-being research, the two main concepts were "hedonism" and "eudemonic". The central viewpoint of "hedonism" is that well-being is the maximization of the number of happy emotions that people experience and the time to maintain such positive emotions and the minimization of the number of unhappy emotions that people experience and the time to maintain such negative emotions^[32]. "Eudemonic" holds that the well-being of an individual lies in the realization of their potential, talent, and personal value. The emotion brought by self-actualization is well-being^[33-35]. According to these two theories, two completely opposite viewpoints emerge from the conclusions of entrepreneurial well-being research. One view points out that the risk and uncertainty of starting a business lead to more work pressure for entrepreneurs^[8] and that the flexibility of starting a business leads to longer working hours. These factors may make entrepreneurs feel physically and mentally exhausted, which can offset the positive effect of starting a business on well-being. According to the theory of "hedonism", as the number of negative emotions such as pressure and time of physical and mental fatigue of entrepreneurs increases, well-being decreases. Another point of view is that entrepreneurs with higher autonomy can make full use of market rules and have higher income returns^[36-37]. The increase of income, economic status, and autonomy of entrepreneurs are conducive to improving their well-being^[38]. According to the "eudemonic" theory, entrepreneurship increases autonomy and enables entrepreneurs to fully tap their self-potential. The rise of economic status brought by high income brings self-actualization satisfaction and thus improves well-being.

From the perspective of entrepreneurs, this study posits that entrepreneurial well-being comes not only from more positive emotional experiences perceived by individuals but also from the relief of nervousness and negative emotions, namely, the satisfaction of the current state to a certain extent^[39]. Entrepreneurial well-being includes not only the satisfaction of entrepreneurial activities but also the overall feeling of entrepreneurs in the whole entrepreneurial process. Entrepreneurship is a long and complex goal realization process involving multiple activities. According to self-regulation theory, to maintain their entrepreneurial motivation, entrepreneurs should strengthen and maintain their behaviors by controlling their thoughts, feelings, and behaviors and make efforts to achieve their goals. The achievement of goals can lead to the elimination of tension and positive feelings of self-satisfaction. The decrease in negative emotions and the

increase in positive emotions represent the improvement of entrepreneurial well-being. Other studies have also confirmed that there is a certain influence relationship between entrepreneurial motivation and entrepreneurial well-being. For example, entrepreneurial motivation positively affects subjective well-being^[40]. There is a positive correlation between the satisfaction of different needs of entrepreneurs and well-being^[41]. Therefore, the following hypothesis is presented:

Hypothesis 1 (H1). Entrepreneurial motivation will be positively related to entrepreneurial well-being.

2.2 Mediating role of entrepreneurial commitment

Entrepreneurial commitment is derived from organizational commitment and occupational commitment in the field of organizational behavior, and it is a new construct generated by integrating entrepreneurship research^[42]. The definition of entrepreneurial commitment can be divided into two theories. The first is "behavior theory". The representative view is that entrepreneurial commitment is defined as "a series of actions or decisions carried out over time, and because these actions or decisions are integrated into the process of new business establishment, it is difficult to identify the sequence of past events leading to these actions or decisions"^[43]. It mainly emphasizes the dynamic nature of behavior or decision making and follows the definition of commitment from the perspective of social psychologists. Some scholars have analysed the connotation of entrepreneurial commitment from the perspective of the entrepreneurial process. From this perspective, entrepreneurial commitment is defined as "the moment when an individual begins to invest a large amount of time, energy, money, intelligence, emotional and relationship resources into the entrepreneurial project"^[44]. The second is "state theory". "State theory" focuses on the emotion of entrepreneurship and firm belief in entrepreneurial values and emphasizes that entrepreneurial commitment is a result or a state^[45]. In essence, entrepreneurial commitment is "a kind of traction that binds entrepreneurs to one or more goals", reflecting the intensity of individual identification and participation in entrepreneurship^[16]. This study focuses on the subjective initiative of entrepreneurs, so it agrees with the view of "state theory" and holds that entrepreneurial commitment is the effort and emotional investment that entrepreneurs make purposefully to achieve entrepreneurial goals. The dimension of emotional commitment in entrepreneurial commitment scale proposed by Tang^[16] is used for measurement. It reflects the recognition and attachment of entrepreneurs to entrepreneurial value.

From the current research results, commitment theorists always paid more attention to explaining the outcome variables of common organizational behaviors such as employee retention or demission with commitment^[46] and rarely studied the antecedent variables of commitment. According to self-regulation theory, the more strongly motivated entrepreneurs are, the more purposeful and directed their efforts will be to maintain their momentum. This directional giving that reinforces and maintains one's behavior is an "internal" emotion^[15]. Such "internal" emotions lead entrepreneurs to work hard to achieve the established goals and "bind entrepreneurs to one or more goals"^[16], which conforms to the

definition of entrepreneurial commitment. Therefore, the following hypothesis is presented:

Hypothesis 2 (H2). Entrepreneurial motivation will be positively related to entrepreneurial commitment.

With the deepening of research, explanations of outcome variables affected by commitment are gradually expanding. Some studies further take other related variables, such as well-being, as outcome variables affected by commitment^[46]. Commitment protects individuals from the negative effects of stress because it enables people to “attach direction and meaning to their work”^[13]. When people encounter problems, they grow more insecure and face more threats to belonging, and at these moments, commitment “can bring stability and belonging to people”^[13]. This increased sense of security and belonging can buffer the negative effects of stress on work attitudes and health. Without commitment, protecting oneself from stress and its consequences is impossible^[42]. People with high commitment have higher emotional attachment and recognition, focus more on enjoying the benefits of entrepreneurship, ignore the risks, and acquire a strong sense of security and belonging, thus improving their well-being. In contrast, those with low commitment cannot develop emotional attachment to the enterprise and do not agree with the relevant activities of the enterprise, which are more likely to produce tension and pressure and reduce well-being. A higher entrepreneurial commitment means a higher degree of emotional attachment to the enterprise, a higher degree of recognition, and a higher positive attitude toward entrepreneurship. Therefore, the following hypothesis is presented:

Hypothesis 3 (H3). Entrepreneurial commitment will be positively related to entrepreneurial well-being.

In conclusion, the motivation of entrepreneurs can lead to the direction of destination and effort. The more entrepreneurs invest in startups, the higher the entrepreneurship commitment, the higher their stability and sense of belonging. Entrepreneurs engaged in high commitment are actively in the process of care, so despite the risk of all kinds of pressure, they can relieve pressure and enhance well-being. Therefore, the following hypothesis is presented:

Hypothesis 4 (H4). The relationship between entrepreneurial motivation and entrepreneurial well-being will be mediated by entrepreneurial commitment.

2.3 Moderating effect of entrepreneurial perception progress

Perceived progress refers to people’s “subjective evaluation of how well they have accomplished the desired goal,” that is, whether they think they have made great progress or achieved phased results, whether there are difficulties, and whether they have been solved in their efforts toward this goal^[47]. The progress of entrepreneurial perception is to test the degree to which entrepreneurs constantly struggle to achieve their entrepreneurial goals during the entrepreneurial process.

Recently, some scholars have carried out useful explorations of how to maintain positive regulation mechanisms in the process of complex goal realization^[48]. The assessment of the progress of early goals is regarded as an important basis and motivation for individuals to plan their follow-up

activities and make efforts for them, and it has been widely and continuously considered by scholars. Although recent studies on entrepreneurship have begun to focus on the effect of entrepreneurs’ perceived progress on their efforts, huge controversies remain over the causality of previous theories, especially the effect of perceived progress on individual efforts owing to the complexity of the applicable context. Some studies show a negative cycle between progress perception and effort. For example, individuals maintain a certain amount of self-doubt^[19]. The smooth progress of a task can lead to a feeling that the individual is now well prepared to tackle the challenge, thus resulting in insufficient effort at the next stage. In contrast, many scholars have used another theoretical perspective of self-regulation to understand the realization of complex goals. Scholars in the field also believe that “positive progress will motivate individuals to invest less effort”. Recent empirical studies of management psychology also find that in the process of task completion, “individuals who receive positive performance feedback will reduce their future work involvement to a certain extent”. The positive effect of entrepreneurs’ entrepreneurial motivation on entrepreneurial commitment can be influenced by the difference in entrepreneurs’ perceived entrepreneurial progress. The higher the entrepreneurial motivation is, the higher the entrepreneurial enthusiasm is, and the easier it is to strengthen the investment in entrepreneurship, thus enhancing entrepreneurial commitment. When the perceived entrepreneurial progress is high, entrepreneurs feel that they are fully prepared for the current risk, and the efforts in the next stage become insufficient, thus weakening the entrepreneurial commitment. Therefore, the following hypothesis is presented:

Hypothesis 5a (H5a). The relationship between entrepreneurial motivation and entrepreneurial commitment will be negatively moderated by entrepreneurial perceived progress.

Combining Hypotheses 4 and 5a, this study proposes a moderated mediation hypothesis (as shown in Fig. 1). To achieve the goals set by entrepreneurial motivation, entrepreneurs make efforts in entrepreneurial activities, carry out actions with purpose, and rationalize these behaviors into their commitments. They use the sense of belonging and security brought by commitments to relieve anxiety and pressure, bring self-satisfaction, and then improve well-being. When they perceive higher business progress and entrepreneurs more easily achieve their goals and objectives, entrepreneurs become all for the business risk of failing and the current risk to have enough. These will be implemented in the next phase, thus reducing the lower entrepreneurial commitment and ultimately the feeling of belonging and sense of security; They don’t do a good job of relieving stress and achieving self-satisfaction, which can reduce well-being. The indirect relationship between entrepreneurial motivation, entrepreneurial commitment, and entrepreneurial well-being is weakened accordingly. Therefore, the following hypothesis is presented:

Hypothesis 5b (H5b). Entrepreneurial perceived progress will negatively moderate the first half of the indirect relationship between entrepreneurial motivation and entrepreneurial

well-being through entrepreneurial commitment.

3 Research methods

3.1 Research samples and procedures

The data of this study were collected from entrepreneurs in Anhui Province through a questionnaire survey and snowball sampling method. The data were collected by contacting relevant entrepreneurial alliances and then spreading to entrepreneurs known by alliance members. The relevant person in charge was contacted, and entrepreneurs were summoned online. The authors issued questionnaires through the network platform. To improve the quality of the answers, screening questions were set. Those who passed the screening questions were selected as valid questionnaires, and participants with valid questionnaires were given gifts. A total of 267 entrepreneurs from a variety of industries responded to the survey. To reduce common method bias, two waves of surveys were conducted with a 2-week interval between each administration. In the first-wave (T1) survey, the entrepreneurs who participated in the survey were invited to report entrepreneurial motivation, entrepreneurial commitment, entrepreneurial perception progress, and their own demographics. Two weeks later (T2), participants were asked to indicate their level of well-being at starting a business. All English scales were translated into Chinese following standard translation and back-translation procedures. A seven-point Likert scale was used for all variables in this study. After deleting the unqualified questionnaires, 209 questionnaires were successfully matched at the two time points, and the questionnaire recovery rate was 78%.

3.2 Measurement scales

In terms of the selection of the scale, such as the entrepreneurial motivation scale, no major modifications were made on the basis of the clear Chinese version. In terms of the design of the scale without a clear Chinese version, it was adapted according to China's national conditions and modified according to expert opinions.

Entrepreneurial motivation: We measured entrepreneurial motivation with a 16-item scale developed by Kuratko^[30]. A sample item was "The initial reason I choose to start a business is to control my career destiny". The Cronbach's alpha of the scale was 0.90. Entrepreneurial commitment: We adapted Tang's^[16] four-item entrepreneurial commitment scale. A sample item was "Compared with other options, I prefer to establish my own business". The Cronbach's alpha of the scale was 0.78.

Entrepreneurial perceived progress: This study adopts four items adapted from the perceived progress scale^[47] proposed by Brunstein. A sample item was "I have achieved a lot of success in pursuing goals related to entrepreneurship". In this study, the Cronbach's alpha of the scale was 0.81.

Entrepreneurial well-being: This scale adopts three items revised by Shir's entrepreneurial well-being scale^[48]. A sample item was "Do you feel more energetic after this entrepreneurial practice compared with before starting a business?" The Cronbach's alpha of the scale was 0.94.

Control variables: According to previous studies on factors influencing entrepreneurial well-being^[18], this study controlled for the gender, age, educational background, model entrepreneurship, entrepreneurial years, and enterprise size of entrepreneurs. Gender was measured using dummy variables: 1 for females and 0 for males. Age was measured in four categories: 20–30 years old, 31–40 years old, 41–50 years old, and 50 years old and older. Educational background was measured in six categories: below high school, high school, associate, bachelor, master, doctor, and above. Example entrepreneurship is the success of friends and relatives around the business: the count is 1; no count is 0. Start-up years are measured in four categories: less than 1 year, 1–3 years, 3–5 years, and more than 5 years. Business size is measured in five categories based on the number of employees: less than 10, 10–30, 31–50, 51–100, and more than 100.

3.3 Analytical strategy

In this study, IBM SPSS Statistics 24.0 statistical software was used for descriptive statistical analysis and regression analysis. MPLUS 7.4 software was used to perform confirmatory factor analysis. Finally, to test the mediating hypothesis and moderating hypothesis, we utilized a bias-correlated bootstrap procedure by SPSS/SAS macro PROCESS developed by Hayes.

4 Research results

4.1 Confirmatory factor analysis

Before testing our hypotheses, we performed confirmatory factor analyses (CFAs) to assess the discriminant validity of the measures. The CFA results (in Table 1) show that the hypothesized four-factor model fits the data well ($\chi^2/df= 2.17$, RMSEA = 0.08, CFI = 0.94, TLI = 0.92) compared to other alternative models.

4.2 Descriptive statistical analysis

The mean value, standard deviation, and correlation

Table 1. Comparison of measurement models.

Models	Factors	χ^2	df	χ^2/df	RMSEA	CFI	TLI
Model 1	EM; EC; EPP; EW	316.96	141	2.25	0.08	0.94	0.92
Model 2	EM+EC; EPP; EW	505.68	144	3.51	0.11	0.87	0.85
Model 3	EM+EC+EPP; EW	756.39	146	5.18	0.14	0.78	0.75
Model 4	EM+EC+EPP+EW	1026.74	147	6.98	0.17	0.69	0.63

[Note] EM stands for entrepreneurial motivation. EC stands for entrepreneurial commitment; EPP represents entrepreneurial perceived progress; EW stands for entrepreneurial well-being; + means as a union factor.

coefficient of the main variables in this study are shown in Table 2. Entrepreneurial motivation was positively related to entrepreneurial well-being ($r = 0.32, p < 0.01$), entrepreneurial motivation was positively related to entrepreneurial commitment ($r = 0.39, p < 0.01$), and entrepreneurial commitment was also positively related to entrepreneurial well-being ($r = 0.55, p < 0.01$). In addition, entrepreneurial perceived progress was significantly positively related to entrepreneurial commitment and entrepreneurial well-being ($r = 0.44, p < 0.01; r = 0.50, p < 0.01$).

4.3 Hypothesis testing

Hierarchical regression analysis was used to analyze the main effect. The independent variable was entrepreneurial motivation; the control variables were gender, age, education background, model entrepreneurship, and enterprise years; the mediation variable was entrepreneurial commitment; and the dependent variable was entrepreneurial well-being. With the increase in variables in the model, the R^2 of the model increases. The F test of the model with independent variables and intermediary variables also passes. The hierarchical regression method was used to examine the related hypotheses. Tables 3 and 4 provide the steps of the hierarchical regression method to test the hypotheses. Model 4 shows that entrepreneurial motivation has a significant positive effect on entrepreneurial well-being ($\beta = 0.33, p < 0.01$). Model 2 shows that entrepreneurial motivation has a significant positive effect on entrepreneurial commitment ($\beta = 0.39, p < 0.01$). Model 5 shows that entrepreneurial commitment has a significant positive effect on entrepreneurial well-being ($\beta = 0.54, p < 0.01$). In Model 6, when entrepreneurial motivation and entrepreneurial commitment are included in the regression model, entrepreneurial commitment has a significant effect on entrepreneurial well-being ($\beta = 0.48, p < 0.01$), and the positive effect of entrepreneurial motivation on entrepreneurial well-being significantly decreases ($\beta = 0.14, p < 0.05$). Thus, entrepreneurial commitment plays an intermediary role between entrepreneurial motivation and well-being and has a partial mediating effect. To verify the mediating effect more accurately, the bootstrap method was adopted, and the SPSS/SAS macro PROCESS was used to test the mediating effect. Bootstrap sampling was repeated 5000 times, and the confidence

interval level was set at 95%. The results show that the mediating effect of entrepreneurial commitment is significant, with a coefficient of 0.30 and 95% CI = [0.14, 0.52].

4.4 Analysis of moderating effect

The test results are shown in Table 4. After controlling for the main effect of entrepreneurial motivation and entrepreneurial perceived progress, the interaction term of entrepreneurial motivation and entrepreneurial perceived progress has a negative effect on entrepreneurial commitment ($\beta = -0.24, p < 0.01$), indicating that entrepreneurial perceived progress has a significant moderating effect on entrepreneurial motivation and entrepreneurial commitment. To clarify the direction and trend of the moderating effect, the data of the mean value of entrepreneurial perceived progress plus or minus one standard deviation were selected to draw the moderating effect graph of entrepreneurial perceived progress. As shown in Fig. 2, the positive relationship between entrepreneurial motivation and entrepreneurial commitment weakens with the increase in entrepreneurial perceived progress. The gap in entrepreneurial commitment of entrepreneurs with different entrepreneurial perceived progress decreases with the increase in entrepreneurial motivation.

4.5 Analysis of moderated mediating effects

To further test the moderated mediation effect, the bootstrap method was applied to integrate the mediation and moderating effects into the same analysis framework to verify the moderated mediation model. The specific analysis results are shown in Table 5. Under the condition of low entrepreneurial perceived progress, the indirect effect from entrepreneurial motivation to entrepreneurial commitment and then to entrepreneurial well-being is significant, with 95% CI = [0.23, 0.62], excluding zero. Under the condition of high entrepreneurial perception progress, the indirect effect value is less than that of low entrepreneurial perception progress and is not significant, and the 95% CI = [-0.06, 0.27], including zero. The difference between groups is significant ($\beta = -0.34, SE = 0.11$). The 95% unbiased confidence interval is [-0.56, -0.12], excluding zero. Finally, the PROCESS macro analysis shows that the index of moderated mediation is -0.08, the 95% CI = [-0.12, -0.03], and the confidence interval does not

Table 2. Descriptive statistics and correlation coefficients of study variables.

Variables	M	SD	1	2	3	4	5	6	7	8	9	10
1 Entrepreneurial motivation	5.53	1.06	0.90									
2 Entrepreneurial commitment	5.29	1.28	0.39**	0.78								
3 Entrepreneurial perceived progress	4.36	1.92	0.16*	0.44**	0.81							
4 Entrepreneurial well-being	4.77	1.67	0.32**	0.55**	0.50**	0.94						
5 Gender	1.25	0.44	0.01	0.03	-0.12	0.05	—					
6 Age	2.01	0.62	0.01	0.05	0.09	0.03	0.00	—				
7 Degrees	4.42	0.79	0.12	-0.05	0.05	-0.07	-0.34**	0.10	—			
8 Model entrepreneurship	1.22	0.42	0.08	0.03	0.06	-0.01	0.00	-0.11	0.11	—		
9 Years of enterprise	2.69	0.98	0.00	0.04	0.01	-0.06	0.12	0.43**	-0.20**	0.32**	—	
10 Enterprise scale	1.82	1.11	-0.07	-0.07	0.04	-0.17*	-0.06	0.15*	-0.20**	0.14*	0.51**	—

[Note] $N=209$. The reliability coefficient alpha is marked on the diagonal, * $p < 0.05$, ** $p < 0.01$.

Table 3. Results of multiple regression analysis.

Variables	Entrepreneurial commitment		Entrepreneurial well-being				
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	
Control variable	Gender	-0.01	-0.02	0.00	-0.01	0.01	0.00
	Age	0.06	0.07	0.10	0.10	0.01	0.07
	Degrees	-0.08	-0.12	-0.13	-0.17	-0.10	-0.12
	Model entrepreneurship	0.05	0.03	0.06	0.04	0.03	0.03
	Years of enterprise	0.05	0.03	-0.06	-0.07	-0.08	-0.09
	Enterprise scale	-0.13	-0.10	-0.19	-0.16	-0.12	-0.12
Independent variable	Entrepreneurial motivation		0.39**		0.33**		0.14*
Mediating variable	Entrepreneurial commitment				0.54**		0.48**
	R^2	0.02	0.17**	0.05	0.15**	0.33**	0.34**
	ΔR^2		0.15		0.11**	0.28**	0.19**
	F	0.65	5.83**	1.62	5.11**	13.94**	13.05**
	ΔF		36.29**		24.92**	83.86**	58.40**

[Note] $N=209$. * $p<0.05$, ** $p<0.01$. The coefficients in the table are standardized regression coefficients.

Table 4. Moderating effect of entrepreneurial perceived progress.

Variables	Entrepreneurial commitment			
	Model 7	Model 8	Model 9	
Control variable	Gender	-0.01	0.03	0.05
	Age	0.06	0.01	-0.00
	Degrees	-0.08	-0.10	-0.14
	Model entrepreneurship	0.05	-0.01	0.01
	Years of enterprise	0.05	0.08	0.09
	Enterprise scale	-0.13	-0.12	-0.12
Main effect	Entrepreneurial motivation		0.33**	0.29**
	Progress of entrepreneurial perception		0.40**	0.41**
Moderating effect	Entrepreneurial motivation \times entrepreneurial perceived progress			-0.24**
	R^2	0.02	0.32**	0.38**
	ΔR^2		0.30**	0.05**
	F	0.65	11.87**	13.29**
	ΔF		44.70**	17.05**

[Note] * $p<0.05$, ** $p<0.01$. All tests were two-tailed, $N=209$. The coefficients in the table are standardized regression coefficients, and the independent variables and moderating variables have been centrally processed.

include zero. These results indicate that the moderated mediation effect is significant.

5 Conclusions

To explain the relationship between entrepreneurial motivation and entrepreneurial well-being, this study constructed a moderated mediation model with entrepreneurial commitment as the mediator and entrepreneurial perceived progress as the mediator. The model is based on self-regulation theory, and some hypotheses are introduced accordingly. Based on a two-stage survey of 209 entrepreneurs, this study finds that ① entrepreneurial motivation is positively correlated with entrepreneurial well-being; ② entrepreneurial commitment plays

a mediating role in the relationship between entrepreneurial motivation and entrepreneurial well-being; ③ entrepreneurial perceived progress negatively moderates the relationship between entrepreneurial motivation and entrepreneurial commitment; ④ the indirect effect of entrepreneurial motivation on entrepreneurial well-being through the mediating variable is negatively moderated by entrepreneurial perceived progress. The theoretical contribution and practical enlightenment of this research are mainly shown in the following three points.

First, this study successfully links entrepreneurial motivation and entrepreneurial well-being. In the past, research on entrepreneurial well-being mostly focused on macro industry and job characteristics^[11,19]. Taking local entrepreneurs in

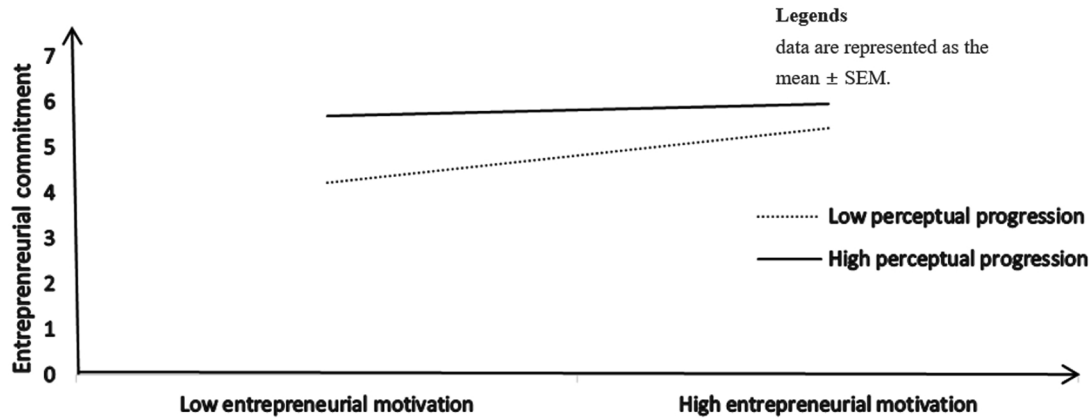


Fig. 2. Interaction of entrepreneurial motivation and entrepreneurial perceived progress on entrepreneurial commitment.

Table 5. Analysis results of moderated mediating effects.

Moderator variable	Indirect effect	SE	95% confidence interval
Low entrepreneurial perceived progress	0.4	0.1	[0.23, 0.62]
Medium entrepreneurial perceived progress	0.21	0.07	[0.10, 0.38]
High entrepreneurial perceived progress	0.06	0.08	[-0.06, 0.27]

[Note] $N=209$. The three values are the mean and 1 standard deviation above or below it. SE stands for standard error.

Anhui as the subject, this study explores the effect of entrepreneurial motivation on their well-being from the micro level of personal characteristics, which connects the theories of macro level and micro level of entrepreneurial research and enriches the research development in this field. It also explores the factors that positively affect well-being and well-being to provide richer and more powerful information to help entrepreneurs manage themselves effectively. Other studies have also pointed out that entrepreneurial motivation has a positive impact on subjective well-being^[40], but the data used are foreign databases, and the conclusions cannot be directly applied to China’s national conditions, so the data in our study are closer to China’s reality. In addition, it is pointed out in the study that there is a positive correlation between the satisfaction of different needs of entrepreneurs and well-being^[41]. The motivation classification adopted in the study is relatively simple and fails to fully conform to the actual situation, resulting in reduced reliability of the data. The motivation classification in our study is more diversified, and the situations it reflects are more specific.

Second, this study explores the effect of entrepreneurial motivation on entrepreneurial well-being and proposes an intermediary variable: entrepreneurial commitment. Entrepreneurs with high entrepreneurial commitment work hard to start their own business, have a higher sense of belonging and security, and have less time to pay attention to risks that may lead to various pressures to relieve pressure and improve well-being. At the same time, they achieve self-satisfaction while realizing their goals, which then improves their well-being. The results of this study enrich the research on entrepreneurial commitment and reveal a more complete influence mechanism.

Third, the progress of entrepreneurial perception provides a new interpretation for exploring the mediating effect of entrepreneurial commitment on entrepreneurial motivation and

entrepreneurial well-being. The results also show that entrepreneurs with high perceived progress have higher entrepreneurial commitment than those with low perceived progress. The findings of this study provide suggestions for the effective self-management of entrepreneurs. Entrepreneurs should strengthen the importance of self-regulation while improving their entrepreneurial motivation. Entrepreneurs are encouraged to adjust their perception of the progress of complex goals in time, establish new standards, and strengthen entrepreneurial commitment to improve well-being.

The results have some implications for the development of entrepreneurship. Research on entrepreneurs’ motivations and commitment can help entrepreneurs find appropriate responses to the current situation, reduce negative perceptions, and improve well-being. This study expands the research on entrepreneurial well-being by analyzing the psychological mechanism of entrepreneurial motivation influencing entrepreneurial well-being. At the same time, the research results have a certain guiding significance for enterprise talent management. Entrepreneurs should see that with strong entrepreneurial motivation, the progress of entrepreneurial perception may lead to the weakening of entrepreneurial commitment and strive to promote the establishment of reasonable and complex goals, encourage self-regulation and improve well-being. There are still some deficiencies in this study that must be addressed. Although this study collected data from different time points, it is still unable to clearly point out the causal relationship and draw a more complete conclusion. Future studies can adopt experimental methods or collect cross-lagged panel data to test the causal relationship to provide more powerful evidence. This study only collected data from the Chinese context. In the future, data from different countries can be collected for verification, and cultural variables can be introduced to conduct cross-cultural research on entrepreneurial well-being.

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Conflict of interest

The authors declare that they have no conflict of interest.

Biographies

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References

- [1] Wei J, Quan Y H. Entrepreneurial motivation, entrepreneurial environment and entrepreneurial happiness: An empirical study on “second generation entrepreneurs”. *Journal of Management*, **2014**, *11* (9): 1349–1357.
- [2] Yu X Y, Meng X T, Cai L, et al. Entrepreneurship and well-being: A literature review and prospects. *Foreign Economics & Management*, **2018**, *40* (8): 30–44.
- [3] Naudé W, Amorós J E, Cristi O. “Surfeiting, the appetite may sicken”: Entrepreneurship and happiness. *Small Business Economics*, **2014**, *42* (3): 523–540.
- [4] Lange T. Job satisfaction and self-employment: autonomy or personality? *Small Business Economics*, **2012**, *38* (2): 165–177.
- [5] Bradley D E, Roberts J A. Self-employment and job satisfaction: Investigating the role of self-efficacy, depression, and seniority. *Journal of Small Business Management*, **2004**, *42* (1): 37–58.
- [6] Uy M A, Foo M, Song Z. Joint effects of prior start-up experience and coping strategies on entrepreneurs’ psychological well-being. *Journal of Business Venturing*, **2013**, *28* (5): 583–597.
- [7] Shepherd D A, Cardon M S. Negative emotional reactions to project failure and the self-compassion to learn from the experience. *Journal of Management Studies*, **2010**, *46* (6): 923–949.
- [8] Sun Z H, Zhou L. Research on the relationship between work well-being, work life quality and work performance. *Statistics and Decision*, **2009** (11): 92–94.
- [9] Aldwin C M, Revenson T A. Does coping help? A reexamination of the relation between coping and mental health. *Journal of Personality and Social Psychology*, **1987**, *53* (2): 337–348.
- [10] Carree M A, Verheul I. What makes entrepreneurs happy? Determinants of satisfaction among founders. *Journal of Happiness Studies*, **2011**, *13* (2): 371–387.
- [11] Uy M A, Sun S, Foo M D. Affect spin, entrepreneurs’ well-being, and venture goal progress: The moderating role of goal orientation. *Journal of Business Venturing*, **2017**, *32* (4): 443–460.
- [12] Baron R A. Behavioral and cognitive factors in entrepreneurship: Entrepreneurs as the active element in new venture creation. *Strategic Entrepreneurship Journal*, **2007**, *1*: 167–182.
- [13] Kobasa S C. Commitment and coping in stress resistance among lawyers. *Journal of Personality and Social Psychology*, **1982**, *42* (4): 707–717.
- [14] Bandura A. Moral disengagement in the perpetration of inhumanities. *Personality and Social Psychology Review*, **1999**, *3* (3): 193–209.
- [15] Ramdass D, Zimmerman B J. Developing self-regulation skills: The important role of homework. *Journal of Advanced Academics*, **2011**, *22* (2): 194–218.
- [16] Tang J. Environmental munificence for entrepreneurs: Entrepreneurial alertness and commitment. *International Journal of Entrepreneurial Behaviour and Research*, **2008**, *14* (3): 128–151.
- [17] Robichaud Y, McGraw E, Roger A. Toward the development of a measuring instrument for entrepreneurial motivation. *Journal of Developmental Entrepreneurship*, **2001**, *6* (2): 189–201.
- [18] Johan W, Boris N, Nadav S, et al. Entrepreneurship and well-being: Past, present, and future. *Journal of Business Venturing*, **2019**, *34* (4): 579–588.
- [19] Bandura A, Locke E A. Negative self-efficacy and goal effects revisited. *Journal of Applied Psychology*, **2003**, *88* (1): 87–99.
- [20] Easterlin R A, Angelescu L. Happiness and growth the world over: Time series evidence on the happiness-income paradox. *IZA Discussion Paper*, **2009**: 4060.
- [21] Bauer I, Wrosch C. Making up for lost opportunities: The protective role of downward social comparisons for coping with regrets across adulthood. *Personality and Social Psychology Bulletin*, **2011**, *37* (2): 215–228.
- [22] Blanton H, Stapel D A. Unconscious and spontaneous and complex: The three selves model of social comparison assimilation and contrast. *Journal of Personality and Social Psychology*, **2008**, *94* (6): 1018–1032.
- [23] Baum J R, Locke E A, Smith K G. A multidimensional model of venture growth. *Academy of Management Journal*, **2001**, *44* (2): 292–303.
- [24] Zhang K J, Lei J S. The research on the entrepreneurial motivation of university students based on the achievement goal theory. *Studies in Science of Science*, **2012**, *30* (8): 1221–1227.
- [25] Carsrud A, Brännback M. Entrepreneurial motivations: What do we still need to know? *Journal of Small Business Management*, **2011**, *49* (1): 9–26.
- [26] Cassar G. Money, money, money? A longitudinal investigation of entrepreneur career reasons, growth preferences and achieved growth. *Entrepreneurship & Regional Development*, **2007**, *19* (1): 89–107.
- [27] Segal G, Borgia D, Schoenfeld J. The motivation to become an entrepreneur. *International Journal of Entrepreneurial Behavior and Research*, **2005**, *11* (1): 42–57.
- [28] Leon S, Kelly G S. Deciding on an entrepreneurial career: A test of the pull and push hypotheses using the panel study of entrepreneurial dynamics data. *Entrepreneurship Theory and Practice*, **2007**, *31* (5): 733–752.
- [29] Lucy L. Unemployment and new business formation. *International Small Business Journal*, **1997**, *15* (3): 78–82.
- [30] Kuratko D F, Hornsby J S, Naffziger D W. An examination of owner’s goals in sustaining entrepreneurship. *Journal of Small Business Management*, **1997**, *35* (1): 24–33.
- [31] Duan J Y, Wang P, Zhu Y L. Entrepreneurial motivation research: Conceptual structure, influencing factors and theoretical model. *Advances in Psychological Science*, **2012**, *20* (5): 698–704.
- [32] Ryff C. The structure of psychological well-being revisited. *Journal of Personality and Social Psychology*, **1995**, *69* (4): 719–727.
- [33] Diener E, Oishi S, Tay L. Advances in subjective well-being research. *Nature Human Behavior*, **2018**, *2* (4): 253–260.
- [34] Diener E, Lucas R E, Scollon C N. Beyond the hedonic treadmill: Revising the adaptation theory of well-being. *Social Science Electronic Publishing*, **2006**, *61* (40): 305–314.
- [35] Diener E. Subjective well-being: The science of happiness and a proposal for a national index. *American Psychologist*, **2000**, *55* (1): 34–43.
- [36] Stel A V, Thurik R, Carree M. The effect of entrepreneurship on national economic growth: An empirical analysis using the GEM data base. Zoetermeer, Netherlands: EIM Business and Policy Research, **2014**: Scales Research Reports N200320.
- [37] Carree M A, Thurik A R. The impact of entrepreneurship on

- economic growth. In: Handbook of Entrepreneurship Research. Dordrecht, Netherlands: Kluwer Academic Publishers, **2003**: 437–471.
- [38] Schjoedt L. Entrepreneurial job characteristics: An examination of their effect on entrepreneurial satisfaction. *Entrepreneurship Theory and Practice*, **2009**, *33* (3): 619–644.
- [39] Ryan R M, Deci E L. On happiness and human potentials: A review of research on hedonic and eudaimonic well-being. *Annual Review of Psychology*, **2001**, *52* (1): 141–166.
- [40] Cheng J Q, Luo J L, Li S W, et al. Entrepreneurial motivation and entrepreneur's subjective well-being: The moderating effect of social norm. *Scientific and Technological Progress and Countermeasures*, **2020**, *37* (6): 46–52.
- [41] Su X H, Zhou Y, Yang S N. Where does entrepreneur well-beings come from? The moderating role of male chauvinism and perceived fairness. *Research on Financial and Economic Issues*, **2019**, *431* (10): 130–137.
- [42] Chen J A, Tao Y, Chen R. A review of frontier research of entrepreneurial commitment and future prospects. *Foreign Economics & Management*, **2014**, *36* (6): 24–31.
- [43] Bruyat C, Julien P A. Defining the field of research in entrepreneurship. *Journal of Business Venturing*, **2001**, *16* (2): 165–180.
- [44] Fayolle A, Basso O, Tornikoski E T. Entrepreneurial commitment and new venture creation: A conceptual exploration. In: Handbook of Research on New Venture Creation. Northampton, MA: Edward Elgar Publishing, **2011**: 160–182.
- [45] Erikson T. Entrepreneurial capital: The emerging venture's most important asset and competitive advantage. *Journal of Business Venturing*, **2002**, *17* (3): 275–290.
- [46] Meyer J P, Stanley D J, Herscovitch L, et al. Affective, continuance, and normative commitment to the organization: A meta-analysis of antecedents, correlates, and consequences. *Journal of Vocational Behavior*, **2002**, *61* (1): 20–52.
- [47] Brunstein J C. Personal goals and subjective well-being: A longitudinal study. *Journal of Personality and Social Psychology*, **1993**, *65* (5): 1061–1070.
- [48] Shir N, Nikolaev B N, Wincent J. Entrepreneurship and well-being: The role of psychological autonomy, competence, and relatedness. *Journal of Business Venturing*, **2019**, *34* (5): 105875.