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# The influence of work values of college students on entrepreneurial intention: The moderating role of psychological capital

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**Purpose:** The aim of this study is to determine the influences of work values on entrepreneurial intention among college students. The moderating role of psychological capital was also examined.

**Materials and methods:** A total of 723 college students were investigated with work values questionnaire, entrepreneurial intention scale and positive psychological capital Questionnaire.

**Results:** Work values was significantly and positively correlated with entrepreneurial intention ( $r = 0.23, P < 0.001$ ); Psychological capital was significantly and positively correlated with entrepreneurial intention ( $r = 0.33, P < 0.001$ ); Psychological capital did not moderate the relationship between work values and entrepreneurial intention ( $\beta = 0.02, P > 0.05$ ); Hope moderated the relationship between work values and unconditional entrepreneurial intention ( $\beta = 0.09, P < 0.05$ ). The relationship between work values and unconditional entrepreneurial intention was stronger in the high hope group (simple slope = 0.21,  $p < 0.001$ ) than in the low hope group (simple slope = 0.07,  $p < 0.001$ ).

**Conclusion:** Hope moderates the relationship between work values and unconditional entrepreneurial intention. Improving the quality of hope can be used as an intervention to improve college students' unconditional entrepreneurial intention.

## KEYWORDS

work values, entrepreneurial intention, psychological capital, college students, hope

## Introduction

Entrepreneurship is purposeful behavior (Krueger et al., 2000), and entrepreneurial intention plays a very important role in the process of starting a business, especially in the early stage of the business, where the intention to start a business is considered to be an important part of the enterprise (Baron, 2007). Entrepreneurial intention is a psychological state in which individuals bring attention, energy and behavior toward a specific goal, and an entrepreneurial idea can only be realized through the entrepreneurial intention (Bird, 1988). According to the theory of planned behavior, intention predicts how much effort people are willing to make in order to achieve the goal of behavior, to determine the subjective probability of taking a special behavior, and intention directly determines the behavior, the stronger intention, the more behavior (Ajzen, 1991). So entrepreneurial intention predicts whether individuals tend to start their own business, which is the key to the emergence of entrepreneurial behavior.

For decades, entrepreneurship has been object of many academic studies, it has found that the personal predisposition and family, economic, and cultural contexts that most influence the option for the development of entrepreneurial projects (Jardim et al., 2021). However, it is not sufficiently clear what kind of personal predisposition are related to entrepreneurial intention. Some researchers have found that entrepreneurial intentions are influenced by personality traits, such as age, sex, education, family businessman, risk, neuroticism, kindness, emotional intelligence (Chang and Wang, 2009; Espiritu-Olmos and Sastre-Castillo, 2015; Liu et al., 2016; Mei et al., 2019). Most of the general personality traits are stable and hard to change and the researches how to improve entrepreneurial intentions are limited. Thus, most of the previous studies are more conceptual than empirical, neglecting the cognitive and behavioral results (Jardim et al., 2021).

Values are cognitive, deliberate and evaluative determinants of goals (Veroff and Smith, 1985), can predicting behavioral intention (Eyal et al., 2009), and constitute the basic of individual behavior (Matusik et al., 2008). The research also identifies values can predicting behavioral intentions in the condition of value-expressive (Maio and Olson, 1995). In the process of entrepreneurship, one's personal values determine her entrepreneurial intentions (Hollenbeck and Whitener, 1988; Jaén and Liñán, 2013). Bird (1988) confirmed the entrepreneur's values, beliefs and needs were the foundations of the intentional process to entrepreneurial activity. Work values represent the cognitive recognition of the way to strive for, and the important of work values lies in the capacity to guide goal setting, so they are important in explaining human actions (Hueso et al., 2021). Fayolle and Liñán (2014) found personal values to work played a key role in making the entrepreneurial decisions. Gorgievski et al. (2011) researched that the criteria to define success

in entrepreneurial endeavors was related to personal values. There is already evidence that personal values differ in their effect on the formation of entrepreneurial intentions (Hueso et al., 2021). However, the research of examining the specific values that relate to entrepreneurial intentions and behavior is limited. And the studies of the relationship between work values and entrepreneurial intentions are still few. The formation of entrepreneurial intention is not yet clear.

The present study aims to determine the influences of work values on entrepreneurial intention among college students, which provides theoretical and empirical basis for exploring the cultivation mechanism of entrepreneurial intentions among college students. In addition, college students play a leading and driving role in innovative entrepreneurship, and the goal of boosting employment through entrepreneurship will be reached, so as to increase the rate of employment in entrepreneurship ultimately.

## Theoretical basis and research hypothesis

### Psychological capital

Psychological capital, like traditional human capital and social capital, belongs to the human resources of the organization and plays an important role in maintaining the competitive advantage. Based on organizational behaviorism and positive psychology, psychological capital shifts the focus from "who are you" to "who are you going to be," which is a state-like rather than a trait that can be acquired and effectively developed through learning (Avolio and Luthans, 2006). The American scholar Luthans et al. (2007) defined psychological capital as: The positive psychological state of individual development is composed of four positive psychological factors—self-efficacy, optimism, hope and resilience. Self-efficacy is an individual's belief that one can mobilize motivation, cognitive resources and action plans to succeed (Stajkovic and Luthans, 1998); Optimism has both positive and motivational attributes, with optimistic individuals characterized by perseverance, achievement and health, which can make positive attribution to success; Hope is related to positive outcomes, such as perceived control and the ability to cope with stress, difficulty, and high hope individuals will elaborate plans, and there are at least two alternative paths to achieve the goal in order to be able to switch paths in time when they encounter obstacles; Resilience is an individual's psychological resilience in the face of difficulties and adversity (Luthans et al., 2005). Therefore, self-efficacy, optimism, hope and resilience play an important role in entrepreneurship, and the synergy of these four structures may be greater than the sum of each component, each having a unique feature,

when integrated, works synergistically to elevate the potential behavior of the individual. Psychological capital is like a jigsaw puzzle, and each structure is a piece of that puzzle (Papanikos, 2011). Optimists are able to find opportunities in any situation, they use them to set high goals, and they believe they can achieve goals and find a path to success. In order to achieve goals, individuals need a high level of self-efficacy, which means they will put in the effort to achieve goals. Then they will look for solutions to many of the problems they face in starting a business to achieve goals, and if they fail in the first attempt, they will have the resilience to fight again until succeed. Studies have suggested that psychological capital has a significant effect on entrepreneurial intentions (Ghani et al., 2013; Ke et al., 2013; Peng et al., 2014), and that the higher the individual's psychological capital, the stronger their entrepreneurial intentions. Therefore, the following hypothesis is proposed:

H1: psychological capital affects college students' entrepreneurial intentions positively.

## Work values

Work values are a domain-specific set of values. Work values are people's evaluation of the needs of social occupation, that is a reflection of life values on the issue of work (Huang et al., 1994). Prominent theories of vocational development from Holland, assign work values a central role in vocational preferences and choices (Holland, 1997). Work values represent an individual's perception of the importance people place on different job characteristics and the types of rewards they seek to attain (Lechner et al., 2017). Work value motivates college students to aspire to a career when they graduate. In the study, we distinguish between three work value dimensions: health factors (e.g., good pay; good welfare; good work environment; housing), prestige status (e.g., high social status; high profile company; high economic status), self-development (e.g., opportunities for education; playing to talents; fair competition; more autonomy).

According to Maslow's (1943) Hierarchy of Needs, from the low level to the high level, the human needs are divided into physiological needs, security needs, belonging and love needs, self-esteem needs, and self-realization needs. The lower level needs must be satisfied before the higher level needs are pursued (Maslow, 1943). The personal needs of college students in career choice process are different due to their family background, ideal pursuit and professional skills. Different needs lead to different evaluations of social occupation. It has been concluded that work values have a significant predictive effect on entrepreneurial intentions (Hirschi and Fischer, 2013; Espiritu-Olmos and Sastre-Castillo, 2015), and that work values

may influence the psychological state in which individuals direct their attention, energy, and behavior toward planned occupational behaviors. Therefore, the following hypothesis is proposed:

H2: work values affect college students' entrepreneurial intentions positively.

## Moderating effects of psychological capital on work values and entrepreneurial intentions

There is, a few of studies suggesting that work values do exert its influence on entrepreneurial intentions (Hirschi and Fischer, 2013; Espiritu-Olmos and Sastre-Castillo, 2015; Sebor, 2017), but it is still unclear as to whether work values directly influence entrepreneurial intentions. Psychological capital is a construct that was first adopted in the workplace to symbolize positive psychology (Wang et al., 2014). Previous studies have focused on the positive relationship between psychological capital and employee performance (Luthans, 2011), competitive advantage (Youssef and Luthans, 2010), and business excellence (Hsu et al., 2014). Some researches on entrepreneurial intentions have focused on the effect of the subdimension of psychological capital. Such as, Robledo et al. (2015) found optimism had a positive effect on entrepreneurial intentions; Saeid et al. (2011) confirmed the effect of self-efficacy. The study of the relationship between psychological capital and entrepreneurial intentions is just emerging.

Furthermore, from the positive psychology perspective, the study exploring the influences of work values on entrepreneurial intention is very limited. And only several studies have explored the indirect effect of psychological capital. Zhu et al. (2021) found entrepreneurial self-efficacy played a mediating role between entrepreneurial values and entrepreneurial intentions. Sun and Xu (2020) found that entrepreneurial psychological capital moderates the relationship between work values and entrepreneurial intentions; Zhao and Chen (2018) confirmed psychological capital had a moderating effect on the relationship between work values of prestige and status and entrepreneurial execution intention. That showed the reasons for the low entrepreneurial intention of college students were largely related to their internal psychological factors.

According to the theory of planned behavior, perceived behavior control refers to the perceived difficulty of performing behavior (Ajzen, 2011). The stronger the individual's perceived control behavior to achieve the goal, the more likely the individual is to succeed. Psychological capital can be understood as a form of perceived behavior control, whose connotation is the control of the behavioral perception in the process of achieving the goal. Perceived behavior control plays a role in the

relationship between behavioral attitude and entrepreneurial intention (Zaremohzzabieh et al., 2019). Therefore, work values may be modulated by psychological capital in influencing entrepreneurial intentions. The following hypothesis is proposed:

H3: psychological capital plays a moderating role between the relationship work values and college students' entrepreneurial intentions.

## Methodology

### Participants

The data this study came from 723 college students in Jiangxi Province, China, who were asked to participate voluntarily. The sample was composed of 153 freshmen, 193 sophomores, 253 juniors and 124 seniors, and there were 80 boys and 643 girls.

### Measurement

#### Work values questionnaire

To assess work values, we used a questionnaire designed by Ling et al. (1999). There are 22 items in the questionnaire, which was divided into three dimensions: health factors, prestige status, and self-development. All questions were rated on a five-point Likert scale (strongly disagree = 1, strongly agree = 5). The reliability of this questionnaire was verified to be good (Cronbach's  $\alpha$ , 0.93).

#### Entrepreneurship intention questionnaire

Entrepreneurial Intention Questionnaire of Martin revised by Obschonka et al. (2010), was divided into two dimensions, unconditional entrepreneurship intention and conditional entrepreneurship intention, with three items in each dimension. Questions were rated on a five-point Likert scale (strongly disagree = 1, strongly agree = 5), the higher the overall score, the stronger the intention to start a business. The reliability of the questionnaire was verified (Cronbach's  $\alpha$ , 0.91).

#### Psychological capital questionnaire

The Positive Psychological Capital Questionnaire (PPQ) was developed by Zhang et al. (2010), a total of 26 items, divided into four dimensions: self-efficacy, resilience, hope and optimism. A seven-point scale was used, ranging from 1 (not at all) to 7 (fully), the higher the total score, the higher the psychological capital level. The Cronbach  $\alpha$  coefficient of the scale was 0.87, which indicates that the variables meet the requirement of reliability.

## Data processing

The collected data were processed by SPSS22.0 software. The statistical methods used were factor analysis, reliability analysis, descriptive analysis, analysis of variance, correlation analysis, and regression analysis.

## Empirical results

### Common method deviation test

The Harman one-way factor test of the scale showed 9 factors with the eigenvalue greater than 1, and the variation explained by the first common factor is 21.46%, which is less than the critical standard of 40%. Therefore, there is no serious common method deviation in this study (Zhou and Long, 2004).

### Descriptive analysis

The results of the descriptive statistical analysis of college students' entrepreneurial intention and its sub-dimensions are shown in Table 1. The results show that the average score of college students' entrepreneurial intention is 3.08, which is at an average level, with the average score of unconditional entrepreneurial intention being 2.84, which is below the average level, while the intensity of conditional entrepreneurial intention is slightly higher than that of unconditional entrepreneurial intention.

### Statistical analysis of difference

The results of the statistical analysis of differences in entrepreneurial intention and its sub-dimensions among college students on the demographic variables of gender, family location and whether parents are entrepreneurs or not are shown in Table 2 and it can be concluded that the intensity of entrepreneurial intention is significantly higher for male students than female students, with an effect size of 0.58; The level of entrepreneurial intention is significantly influenced by the entrepreneurial behavior of parents, and the intensity of entrepreneurial intention is significantly higher for students whose parents are entrepreneurs than for those whose parents are not entrepreneurs, with an effect size of 0.22; There was no significant difference in the variables of family location, but the degree of entrepreneurial intention of students in urban areas is higher than that of students in rural areas. In the sub-dimension of entrepreneurial intention, the difference effect of unconditional entrepreneurial intention in population variables is more than that of conditional entrepreneurial intention.

TABLE 1 Descriptive statistics of college students' entrepreneurial intentions and its dimensions.

	Entrepreneurial intention	Conditional entrepreneurial intention	Unconditional entrepreneurial intention
M	3.08	3.32	2.84
SD	0.76	0.86	0.81

TABLE 2 Statistical of differences in demographic variables among college students' entrepreneurial intention and its dimensions.

Demographic variable		Entrepreneurial intention M (SD)	<i>t</i>	<i>d</i>	Conditional entrepreneurial intention M (SD)	<i>t</i>	<i>d</i>	Unconditional entrepreneurial intention M (SD)	<i>t</i>	<i>d</i>
		Gender	Male	3.47 (0.87)	4.29***	0.58	3.71 (0.88)	4.38***	0.52	3.23 (1.01)
	Female	3.03 (0.73)			3.27 (0.85)			2.80 (0.77)		
Home location	Towns	3.11 (0.77)	0.76	0.06	3.33 (0.89)	0.23	0.02	2.89 (0.80)	1.19	0.09
	Rural	3.07 (0.76)			3.31 (0.85)			2.81 (0.82)		
Whether the parents are entrepreneurs	Yes	3.23 (0.73)	2.05*	0.22	3.43 (0.80)	0.08	0.15	3.04 (0.80)	2.43*	0.27
	No	3.06 (0.76)			3.30 (0.87)			2.82 (0.81)		

*N* = 723; \**p* < 0.05, \*\*\**p* < 0.001.

TABLE 3 Correlations among work values, psychological capital, and entrepreneurial intentions.

	Entrepreneurial intention	Conditional entrepreneurial intention	Unconditional entrepreneurial intention	Psychological capital	Self-efficacy	Resilience	Hope	Optimism
Work values	0.23***	0.24***	0.17***	0.18***	0.10**	0.04	0.21***	0.22***
Prestige and status	0.28**	0.24***	0.27***	0.10**	0.07	0.01	0.11**	0.13***
Health factors	0.045	0.10**	-0.02	0.10**	0.03	0.01	0.16***	0.16***
Self-development	0.22***	0.26***	0.14***	0.26***	0.17***	0.10**	0.30***	0.30***
Conditional entrepreneurial intention				0.31***	0.27***	0.18***	0.28***	0.29***
Unconditional entrepreneurial intention				0.30***	0.30***	0.18***	0.22***	0.26***
Entrepreneurial intention				0.33***	0.31***	0.19***	0.28***	0.30***

*N* = 723; \*\**p* < 0.01, \*\*\**p* < 0.001.

## Correlation analysis

Subsequently, the relation of the work values, psychological capital and entrepreneurial intentions were estimated through a point biserial correlation by Pearson correlation approach. In Table 3 the values of correlation's coefficients can be observed. The results demonstrated that the three variables of work values, psychological capital and entrepreneurial intention are significantly correlated in two, but the correlation coefficients are not high, that is, the level of correlation is average. The prestige and status dimension and self-development dimension of work values were significantly and positively correlated with the entrepreneurial intentions, while the correlation between health factors and the entrepreneurial intentions

was not significant and the correlation with unconditional entrepreneurial intention was negative. The sub-dimensions of work values were all significantly and positively correlated with psychological capital, but only the self-development was significantly correlated with all four sub-dimensions of psychological capital. Furthermore, the four sub-dimensions of psychological capital were significantly correlated with entrepreneurial intentions and its sub-dimensions.

## Validation of moderation effects

The influences of work values on entrepreneurial intention among college students and the moderating role of psychological capital were examined. Firstly, the

TABLE 4 Validation of moderation effects.

	Model 1 entrepreneurial intention		Model 2 entrepreneurial intention		Model 3 unconditional entrepreneurial intention		Model 4 unconditional entrepreneurial intention	
	<i>B</i>	<i>t</i>	<i>B</i>	<i>t</i>	<i>B</i>	<i>t</i>	<i>B</i>	<i>t</i>
Work values	0.19	5.27***	0.19	5.31***	0.14	3.77***	0.15	3.99***
Psychological capital	0.27	7.34***	0.27	7.33***				
Work values × Psychological capital			0.02	0.68				
Hope					0.16	4.15***	0.16	4.23***
Work values × Hope							0.10	2.76**
<i>R</i> <sup>2</sup>	0.17		0.17		0.10		0.11	
<i>F</i>	16.32***		14.73***		8.93***		8.87***	

*N* = 723; \*\**p* < 0.01, \*\*\**p* < 0.001.

independent, dependent, and moderating variables were standardized. Secondly, demographic variables such as gender, family location, and whether parents are entrepreneurs were as control variables, work values as independent variables, and psychological capital as moderating variables. Finally, the interaction term (occupational value × psychological capital) was added to the regression equation. The results were shown in Table 4. From the model 1, the main effect of work values on entrepreneurial intention was significant, and the main effect of psychological capital on entrepreneurial intention was also significant, that is to say, work values can predict entrepreneurial intention and hypothesis 1 was true. Psychological capital can predict entrepreneurial intentions, hypothesis 2 is confirmed. From the model 2, the interaction effect was not significant. Therefore, psychological capital did not play a moderating role in the relationship between work values and entrepreneurial intentions of college students, and hypothesis 3 did not hold. Further, the relationship between the sub-dimensions of variables was explored. It showed that the

main effect of work values on unconditional entrepreneurial intention was significant, and the main effect of hope on unconditional entrepreneurial intention was significant from model 3. In Model 4, the interaction effect between work values and hope was significant, so it was hope to have a moderating effect on the relationship between work values and unconditional entrepreneurial intention.

To more clearly reveal the moderating effect of hope in the relationship between the work values and unconditional entrepreneurial intention, a simple slope test was conducted. We divided into high-hope group and low-hope group according to the criteria of one standard above and below the mean of hope and the results were shown in Figure 1. The positive correlation between career values and entrepreneurial intention was stronger in the case of high-hope level (simple slope 0.21, *p* < 0.001), and weaker in the case of low-hope level (simple slope 0.07, *p* < 0.001).

### Conclusion and discussion

This paper draws the following main conclusions:

- (1) Work values have a significant effect on college students' entrepreneurial intentions.
- (2) Psychological capital has a significant effect on college students' entrepreneurial intentions.
- (3) Psychological capital does not moderate the relationship between work values and entrepreneurial intentions among college students;
- (4) The hope dimension of psychological capital moderates the relationship between college students' work values and unconditional entrepreneurial intentions.

From the study, firstly, college students have no strong desire to start a business, especially have an even lower unconditional entrepreneurial intention. That is, students are more inclined to start a business if they have sufficient financial support, good



partners, and good market prospects, whereas in the absence of these conditions, individuals are less likely to engage in entrepreneurial activities. There are a lot of uncertainty factors, especially in the early stage of entrepreneurship, which is even unrewarding. Then the physiological needs are not guaranteed, so students have no strong entrepreneurial intention at this stage, especially unconditional entrepreneurial intention.

Regarding the relation between the values, the results of the study confirm that prestige and status and self-development are significantly correlated with the entrepreneurial intention, while health factor are not significantly correlated with entrepreneurial intentions and have a negative correlation with unconditional entrepreneurial intention. Health factors include high income, stable employment, elegant working environment, reliable health insurance and pension. Entrepreneurship is unstable, has a poor working environment, no medical insurance and pension, and needs to invest more money without return in the early period. Therefore, college students with strong perception of hygienic factors have a weaker entrepreneurial intention and are less likely to start a business, even the deeper the students' perception of health factors, the weaker the degree of unconditional entrepreneurial. The correlation between prestige and status and entrepreneurial intention was stronger than that of self-development. That is to say, students with a strong perception of prestige and status are more inclined to choose entrepreneurship.

Psychological capital and its four dimensions are all significantly and positively correlated with entrepreneurial intention. That indicate that the higher the level of psychological capital, the stronger the entrepreneurial intention the students are. Individuals with a high level of psychological capital could regard their future more positively, and believed that they are in control the process of entrepreneurship. Students with positive psychological qualities such as self-efficacy, hope, optimism, and resilience are more inclined to start their own business. They have confidence that they can complete the challenging work of starting a business, they are able to solve the problems encountered in the process of starting a business, they can positively attribute to their success, and they can demonstrate strong willpower in the face of entrepreneurial adversity.

Both work values and psychological capital have significant predictive effect on entrepreneurial intention. Further, the study reveals that psychological capital don't play a moderating role between work values and entrepreneurial intention of college students by hierarchical regression analysis, while hope has significant moderating effect on the relationship between work values and unconditional entrepreneurial intentions. Specifically, the work values of students with high levels of hope are more predictive of unconditional entrepreneurial intentions than those with low levels of hope. Conditional entrepreneurial intentions indicate the degree to which individuals are inclined to start a business if there is sufficient funding, good markets and good partners. College students with unconditional

entrepreneurial intentions will consciously understand the process and methods of business start-up, regardless of the external conditions, and they start the business due to intrinsic motivational factors such as the personal interests and values. Therefore, the level of unconditional entrepreneurial intentions can better reflect the trend of college students after graduation.

## Implications

Cultivate work values in college education is a key factor affecting students' entrepreneurial intention. Actually, only the work values are not enough. Therefore, this paper established a moderation effect in which psychological capital moderated the relationship between work values and entrepreneurial intention. We conclude the work values of students with high levels of hope are more predictive of unconditional entrepreneurial intentions than those with low levels of hope.

According to the hope theory model proposed by [Snyder et al. \(1991\)](#), hope is an acquired tendency of individuals to think and act and is a cognitive trait, as well as a kind of motivational state, a fusion of goal-focused, motivational thinking and path thinking. Motivational thinking is an individual's necessary motivation and beliefs to stimulate himself to move along a set goal, while path thinking is the individual's perceptions and beliefs about his ability to find effective ways to achieve a goal. High-hope individuals are more likely to choose goals with uncertainty, to challenge difficulty problems, and to make impossibility possible. When high-level students pursue the goal of entrepreneurship, their path thinking will inevitably produce a path to achieve the goal of entrepreneurship, and have the confidence to achieve. Studies have shown that high hopefuls are able to make more assertive judgments about how to achieve work goals ([Woodbury, 1999](#)), and are able to find the positive and clear pathway, while the low hopefuls have much weaker path thinking, and the pathways are vague and unclear ([Snyder et al., 1998](#)).

As to the goal of starting a business, the college students with high-level of hope can decisively find the successful path, and can quickly adjust to find an alternative path if they encounter difficulties in the process of starting a business, and have strong willpower to achieve the entrepreneurial goals. Therefore, we can train college students acquiring the quality of hope in the process of entrepreneurship education.

## Limitation and future research

Firstly, the sample of this study is limited, which can only explain the general situation in Jiangxi Province, China, but cannot explain the overall situation of the whole country. Secondly, the number of female college students selected is much large than of male college, which may lead to the fact

that entrepreneurial intention characteristics of male students are not obvious and those of female students are too prominent in the study results. In addition, the measurement tools need to be further developed and revised to make it more applicable to the local students in China.

Currently, few scholars research about the mechanism of work values affecting entrepreneurial intentions, especially from the positive psychology perspective which can be researched in the future.

## Data availability statement

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

## Author contributions

LT: conceptualization, methodology and formal analysis, software, writing – original draft, and preparation.

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