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Empirical Study on Regulating Effect of Logistic Support on Cultivation of College Students' Entrepreneurial Intention*

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***Abstract*—In the outline of the 12th Five-Year plan, China clearly put forward the development strategy of "Innovative Country". The spirit of "universal innovation and entrepreneurship" has been put forward as a major national policy. On the one hand, it can effectively stimulate the growth of domestic economy; on the other hand, it has a strong regulatory role in redeploying the labor market resources, achieving labor diversion, reducing unemployment and easing employment pressure. Based on the principle of ternary interactions theory model, this research put forward a new model of research to sum up and deduct the "content and mode of entrepreneurship education" model of Zhang Gaoyu, associate professor of Shanghai Jiaotong University, and the mode of "entrepreneurial education's function mechanism of college students' entrepreneurial intention" of Dr. Li Jingwei of Nankai University. Through quantitative analysis of relevant sample data, we explore the moderating role of logistical support in the cultivation of college students' entrepreneurial intention. Finally, it gives reasonable explanations and countermeasures.**

Keywords—entrepreneurship education; logistical support college students' entrepreneurial intention; regulating effect

I. INTRODUCTION

Entrepreneurship is a conscious and planned activity (Bird,1988). The innovation and entrepreneurship activity are the driving force for a social system to continue to develop at the economic level, which has played a bridge and link function to transform science and technology into real productive forces. From the height of national economic development strategy, in recent years, China has put forward a series of policies based on “innovative and entrepreneurial” to promote economic development and transformation. In order to achieve the stated goals of the 12th Five-Year development plan and realize the scientific transformation of growth mode of China's socialist market economy, from the perspective of talent education and training, cultivating qualified builders with "innovative entrepreneurial consciousness and solid entrepreneurial skills" has gradually become one of the contents of reform of higher education in China. In the 12th Five-Year Plan Outline (2011), it is pointed out that technological progress and technological innovation should be the direction of China's economic development during the "12th Five-Year Plan" period in order to realize the scientific transformation of China's socialist market economy structure. It means that the era of economic transformation in mainland China has arrived. At the same time, the upsurge of college students' entrepreneurship is also booming among young people. Relying on relevant information, especially in the Global Entrepreneurship Monitor of Tsinghua University, compared with other countries in the world, entrepreneurial activities in China are in the middle stage and are gradually improving. From the overall situation of the whole country, the entrepreneurship index is around 12.3. As a new field of higher education reform in China, entrepreneurship education is attracting more and more attention.

II. MODEL OF INFLUENCE OF ENTREPRENEURSHIP EDUCATION ON ENTREPRENEURIAL INTENTION OF COLLEGE STUDENTS

First, through document research and summarizing, it is found researchers that all kinds of related researches both at home and abroad are based on ternary interactions theory of Bandura (1986). It is explicitly proposed in the ternary interactions theory that individual behavior is influenced by environmental factors and individual cognition. Moreover, the three elements are interdependent and affect each other. In combination with the purpose of this study, the ternary interactions theory is chosen as the most basic theory of this study. Then, through the induction and summary of its deductive path, it is found out the branch path of research in the field of college students' entrepreneurial behavior.

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Secondly, through the combing of relevant literature, it is found that most of the researches on individual cognition and attitude tendency are based on the Ajzen's planned behavior theory model. Bird (1988) put forward in his research that the theory of planned behavior considers that individual intention is the expected result achieved under planned behavior. It is a process to create a new enterprise and needs time and plans, so this theory is applicable to entrepreneurial intention research. Thus, it has been found that a large number of related studies, based on the ternary interactions theory mode determinism combined with the theory of planned behavior, explain individual cognition in ternary interactions theory through individual attitude. At the same time, under the premise of combining the ternary interactions theory and the theory of planned behavior, Phillip H. Phan (2002) proposed a theoretical model of influence of entrepreneurial attitude and entrepreneurial beliefs on entrepreneurial intention under the premise of environmental factors as moderating factors. Furthermore, Christian Luthje and Nikolaus Franke (2003) propose a theoretical model of influence of entrepreneurial attitude and entrepreneurial environment on creativity.

Finally, Li Jingwei (2013) put forward the main factor that taking value as the explanation content of entrepreneurial belief becomes a moderating factor, and taking entrepreneurship education as the explanation of environmental factors is the main factor. And another main factor, entrepreneurial attitude, is a theoretical model of impact of entrepreneurial orientation. And Zhang Gao Yu (2015) put forward the main factors of personal quality training, team quality training and entrepreneurial experience communication, the logistics support as the adjustment factor, entrepreneurial knowledge, entrepreneurial awareness quality and entrepreneurial ability as the main factors affecting personal accomplishment. The training of division of cooperation and training of crisis response ability are the main factors influencing the cultivation of team quality. Taking celebrities' lectures and alumni experience exchange as the main factors affecting the exchange of entrepreneurial experience, from the perspective of entrepreneurship education goal, it reconstructs the theoretical model of entrepreneurial education's impact on entrepreneurial behavior.

Based on a large number of predecessors' theoretical findings, with the problems and purposes explored in this study, this study will study the moderating effect of logistical support on the entrepreneurial intention of a university's students in Guangdong province to explore the moderating role of logistic support in adjusting the impact mechanism of entrepreneurship education on college students' entrepreneurial intention. Then we can find out the shortcomings and advantages of logistic support work, and give some suggestions for adjustment.

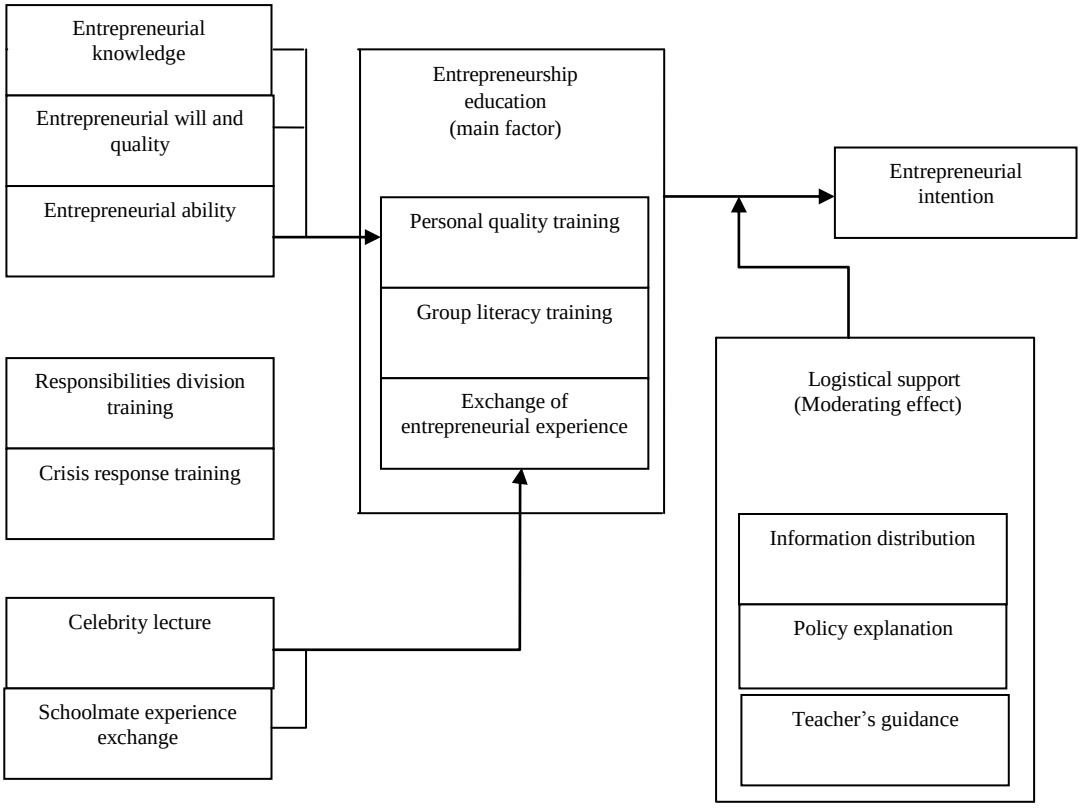

Fig. 1. Influence model of entrepreneurial education on entrepreneurial intention. (Collected by researcher).

The deductive logic of theoretical model in this study is the conclusion of Li Jingwei's 2013 research findings is that "school teaching factors" constitute an important factor affecting the formation of college students' entrepreneurial intention. Then Zhang Gao Yu's model of entrepreneurship education in 2015 was substituted to explain the content of "school teaching factors". Finally, the purpose of this study is to reduce the dimension of relationship model between Dr.

Jingwei (2013) entrepreneurial intentions and give up the two perspectives of "student attitude" and "vocational values". The impact of entrepreneurship education on entrepreneurial intention is formed in this study, as shown in “Fig. 1”.

4 hypotheses are proposed based on the theoretical model, as shown in “Table I”.

TABLE I. ASSUMPTIONS AND CONTENT

H1	The higher degree of recognition of logistics support work is, the greater the impact of entrepreneurship education on college students' entrepreneurial intention is.
H2	The higher university students' concern for information dissemination is, the greater impact of entrepreneurship education on college students' entrepreneurial intention is.
H3	The higher students' attention to the detection and interpretation work is, the greater impact of entrepreneurship education on College Students' entrepreneurial intention is.
H4	The higher university teachers' concern for teachers' guidance work is, the greater impact of entrepreneurship education on college students' entrepreneurial intention.

a. Collected by researcher

III. EMPIRICAL RESEARCH AND CONCLUSION

A. Relevance

As shown in "Table II", through analyzed by SPSS software, it found in the sample data of scale that there is a positive correlation between logistics support and entrepreneurial intention, and the correlation coefficient of Pearson is: 0.099 (P < 0.05). There is a positive correlation between the "information release" dimension and entrepreneurial intention, and the Pearson correlation coefficient is 0.119 (P < 0.05); there is a positive correlation between the "policy explanation" dimension and entrepreneurial intention, and the Pearson correlation coefficient is 0.020 (P=0.685); there is a positive correlation between the dimensions of "teacher guidance" and entrepreneurial intention, and the Pearson correlation coefficient is 0.037 (P=0.454). A correlation analysis between the above one dimension and three dimensions and constructs reveals that, the P value of Pearson correlation coefficients for policy explanation dimension and teacher guidance dimension are higher than 0.10, 0.685 and 0.454 respectively. The probability of correlation between these two variables and entrepreneurial intention is only 31.5% and 54.6% respectively, which is lower than generally accepted belief interval over 90%. Therefore, it can be preliminarily judged that there is a very weak correlation between policy explanation and teacher guidance and college students’ entrepreneurial intention. And the Pearson related values of the "logistics support" and the three dimensions "information release", "policy explanation" and "teacher guidance" are 0.099, 0.119, 0.020 and 0.037 respectively, and the absolute values of correlation coefficients are very small. This shows that even if there is correlation, it is also very weak. This point precisely explains, why the influence coefficient of entrepreneurial education on entrepreneurial intention of college students has not changed much after the adjustment variable is introduced into the equation after regression analysis.

TABLE II. CORRELATION ANALYSIS BETWEEN LOGISTICS SUPPORT AND ENTREPRENEURIAL INTENTION OF COLLEGE STUDENTS

Main Research Variables	Entrepreneurial Intention	Logistical Support	Information Distribution	Information Distribution	Teacher Guide
Entrepreneurial intention	1				
Logistical support	0.099＊＊	1			
Information distribution	0.119＊＊	0.433＊＊＊	1		
Information distribution	0.020	0.403＊＊＊	0.451＊＊＊	1	
Teacher guide	0.037	0.393＊＊＊	0.453＊＊＊		1

a. The number of samples is 408

b. ＊ denotes P＜0.10 ; ＊＊ denotes P＜0.05 ; ＊＊＊ denotes P＜0.01

c. Collected by researcher

B. Influence Relation

As shown in Table 3, logistical support plays a role in regulating the entrepreneurial intention of college students. Logistic support is used as a moderator variable in the regression equation of entrepreneurial education to university students' entrepreneurial intention. The multiple logistic regression equation of “logistic support adjustment effect research model” is analyzed by using SPSS1 software. The DW (Durbin-Watson) index of the model is 2.124, and the DW value is close to 2, which shows that there is no autocorrelation phenomenon between the residual terms of the model. In variance analysis, the F value was 1155.709, and the corresponding significant level was 0, less than the significant level 0.05. The variance expansion factor (VIF) is between 5.974 and 7.701, and there is no serious multicollinearity among variables. The influence coefficient of individual literacy training (GP) on college students' entrepreneurial intention (CX) has changed slightly after the introduction of HJ (GP) (B:0.497 - 0.515, P < 0.01). The impact coefficient group quality training (QP) on college students' entrepreneurial intention has changed slightly (CX) (B:0.276 - 0.310, P < 0.01). The influence coefficient of entrepreneurial experience exchange (CJ) on college students' entrepreneurial intention (CX) has changed slightly (B:0.251 - 0.268, P < 0.01). Logistic support (HJ) has an impact coefficient on college students' entrepreneurial intention (CX) (B= -0.069, P < 0.05). Logistical support (HJ) has a negative correlation effect on college students' entrepreneurial intention, and the absolute value of correlation coefficient is very low.

TABLE III. LOGISTICAL SUPPORT FOR THE ADJUSTMENT COEFFICIENT OF COLLEGE STUDENTS' ENTREPRENEURIAL INTENTION

Relationship Model of Entrepreneurial Education on Entrepreneurial Intention of College Students	Logistics Support Before Adjustment		Logistics Support After Adjustment	
	B coefficient	*Significance*	*B coefficient*	*Significance*
Personal quality training (GP)	0.497	0.000	0.515	0.000
Group quality training (QP)	0.276	0.000	0.310	0.000
Exchange of entrepreneurial experience (CJ)	0.251	0.000	0.268	0.000

[a.] Collected by researcher

In the study of the relationship between information release and college students' entrepreneurial intention, the information release is used as a moderator variable in the regression equation of entrepreneurial education to university students' entrepreneurial intention. By using SPSS software, we analyze the multiple linear regression equation of "information release moderating effect research model". The DW (Durbin-Watson) index of the model is 2.127, and the DW value is close to 2, which shows that there is no autocorrelation phenomenon between the residual terms of models. In variance analysis, the F value was 1150.941, and the corresponding significant level was 0 which is less than the significant level 0.05. The variance expansion factor (VIF) is between 5.980 and 8.875, and there is no serious multicollinearity among variables. The influence coefficient of individual quality training (GP) on college students' entrepreneurial intention (CX) has changed slightly (B:0.497 - 0.515, P < 0.01) after the introduction of "XF". The impact coefficient of group quality training (QP) on college students' entrepreneurial intention has changed slightly (CX) (B:0.276 - 0.303, P < 0.01). The influence coefficient of entrepreneurial experience exchange (CJ) on college students' entrepreneurial intention (CX) has changed slightly (B:0.251 - 0.263, P < 0.01). The influence coefficient of information release (XF) on college students' entrepreneurial intention (CX) is (B= -0.064, P < 0.1). Information publishing (XF) has a negative correlation effect on college students' entrepreneurial intention, and the absolute value of correlation coefficient is very low.

TABLE IV. LIST OF ADJUSTING RELATIONSHIP COEFFICIENT BETWEEN INFORMATION RELEASE AND COLLEGE STUDENTS' ENTREPRENEURIAL INTENTION

Relationship Model Of Entrepreneurial Education On Entrepreneurial Intention Of College Students	Information Release Before Adjustment		Information Release After Adjustment	
	B coefficient	*Significance*	*B coefficient*	*Significance*
Personal quality training (GP)	0.497	0.000	0.515	0.000
Group quality training (QP)	0.276	0.000	0.303	0.000
Exchange of entrepreneurial experience (CJ)	0.251	0.000	0.263	0.000
Information release (XF)	——	——	-0.064	0.093

[b.] Collected by researcher

In the study of relationship between policy explanation and college students' entrepreneurial intention, the policy explanation is used as a moderator variable in the regression equation of entrepreneurial education to university students' entrepreneurial intention. Through using SPSS software, the multiple linear regression equation of "policy explanation adjustment effect research model" was analyzed. The DW (Durbin-Watson) index of model is 2.143, and the DW value is close to 2. In variance analysis, the F value was 1,159.821, and the corresponding significant level was 0, less than the significant level of 0.05. The variance expansion factor (VIF) is between 5.027 and 8.824, and there is no serious multicollinearity among variables. The influence coefficient of individual literacy training (GP) on college students' entrepreneurial intention (CX) has slightly changed (B:0.497 - 0.523, P < 0.01) after the introduction of "policy explanation (ZJ)"; the influence coefficient of group quality training (QP) on college students' entrepreneurial intention (CX) has slightly changed (B: 0.276 0.314, P < 0.01). The influence coefficient of entrepreneurial experience exchange (CJ) on college students' entrepreneurial intention (CX) has slightly changed (B:0.251 - 0.261, P < 0.01). The influence coefficient of policy explanation (ZJ) on College Students' entrepreneurial intention (CX) is (B= -0.082, P < 0.05). Policy explanation (ZJ) has a negative correlation effect on college students' entrepreneurial intention, and the absolute value of correlation coefficient is very low with a weak influence.

TABLE V. LIST OF ADJUSTING RELATIONSHIP COEFFICIENT BETWEEN POLICY EXPLANATION AND COLLEGE STUDENTS' ENTREPRENEURIAL INTENTION

Relationship Model of Entrepreneurial Education on Entrepreneurial Intention of College Students	Policy Explanation Before Adjustment		Policy Explanation After Adjustment	
	B coefficient	*Significance*	*B coefficient*	*Significance*
Personal quality training (GP)	0.497	0.000	0.523	0.000
Group quality training (QP)	0.276	0.000	0.314	0.000
Exchange of entrepreneurial experience (CJ)	0.251	0.000	0.261	0.000
Policy explanation (ZJ)	——	——	-0.082	0.017

[a.] Collected by researcher

In the study of relationship between teacher guidance and college students' entrepreneurial intention, teachers' guidance is used as a moderator variable to the entrepreneurial education's regression equation of entrepreneurial intention of college students. By using SPSS software, the multiple linear regression equation of "research model of teacher guidance regulating effect" is analyzed. The DW (Durbin-Watson) index of the model is 2.130, and the DW value is close to 2, which shows that there is no autocorrelation phenomenon between the residual terms of models. In variance analysis, the F value is 1148.708, and the corresponding significant level is 0.000, less than significant level of 0.05. The variance inflation factor (VIF) is between 4.986 and 8.749, and there is no serious multicollinearity between variables. The influence coefficient

of individual quality training (GP) on college students' entrepreneurial intention (CX) has slightly changed (B:0.497 - 0.509, P < 0.01) after the introduction of "teacher's guidance (JZ)"; the influence coefficient of group quality training (QP) on college students' entrepreneurial intention (CX) has changed slightly (B:0.276 - 0.298, P < 0.01). The influence coefficient of entrepreneurial experience exchange (CJ) on college students' entrepreneurial intention (CX) has changed slightly y (B:0.251 - 0.260, P < 0.01). The influence coefficient of teacher guidance (JZ) on college students' entrepreneurial intention (CX) is (B= -0.047, P=0.147 > 0.1). Teacher guidance (JZ) has a negative impact on college students' entrepreneurial intention, and the impact is not significant.

TABLE VI. LIST OF ADJUSTING RELATIONSHIP COEFFICIENT BETWEEN TEACHER'S GUIDANCE AND COLLEGE STUDENTS' ENTREPRENEURIAL INTENTION

Relationship Model Of Entrepreneurial Education On Entrepreneurial Intention Of College Students	Policy Explanation Before Adjustment		Policy Explanation After Adjustment	
	B coefficient	*Significance*	*B coefficient*	*Significance*
Personal quality training (GP)	0.497	0.000	0.523	0.000
Group quality training (QP)	0.276	0.000	0.314	0.000
Exchange of entrepreneurial experience (CJ)	0.251	0.000	0.261	0.000
Teacher's guidance (JZ)	——	——	-0.082	0.017

[a.] Collected by researcher

Logistical support should normally play a positive role in the formation of entrepreneurial intention (Zhang Gaoyu, 2015). But a sample in the three dimensions of logistic support is used as a moderator, which are substituted into the regression equation of impact of entrepreneurship education on college students' entrepreneurial intention. Combining the data analysis of correlation analysis and influence analysis, we find the following problems: first, the correlation between logistic support, information release, policy explanation, teacher guidance and entrepreneurial intention of college students is very weak; second, the introduction of variable variables in the regression analysis did not cause a dramatic change in the influence coefficient of independent variables of the three dimensions of entrepreneurship education and the factors of entrepreneurial intention; third, the relationship between logistics support, information release, policy explanation, teacher guidance and college students' entrepreneurial intention is negative, very weak or not obvious.

Based on many years' experience in entrepreneurship education, the reasons causing the above three problems are as follows: First, due to step-by-step entrepreneurship education, the entrepreneurship education curriculum system and logistical support system have been divorced from the actual work. That is, entrepreneurship education is subordinate to the teaching system because of its credits, and the logistical support is an administrative system. And the two are lack of linkage mechanism, causing the mechanism to be disjointed. Second, because of lack of systematic coverage of entrepreneurial education's knowledge system and philosophy for a long time, there is lack of deep understanding of entrepreneurship education and logistical support, leading to a disconnection in understanding. Third, it is found in the study that the logistics support has a reverse effect on the entrepreneurial intention of college students, which may be caused by the administrative apportionment of three - dimensional content of logistics support surface when transferred to the college students of communication major. That is, the function of administrative guidance and administrative order is greater than the function of education, guidance and persuasion, which causes the students of communication major to be rebellious. It is also possible that there are other links between logistical support and entrepreneurship education. And it is possible to explore the mystery in future structural equation analysis.

Through the analysis of logistic support data on the regression equation of college students' entrepreneurial intention adjustment, we can draw the following three conclusions:

First, there is a weak correlation between logistical support and entrepreneurial intention of college students, or no correlation.

Second, logistics support plays a weak role in regulating entrepreneurship education and college students' entrepreneurial intentions, and it will hardly change the influence relation and intensity of entrepreneurship education on entrepreneurial intention. That is, from the perspective of current sample data, logistical support can hardly play a regulatory role.

Third, logistical support has a slight adverse effect on college students' entrepreneurial intention. That is to say, "the more attention the university students have towards logistics support, the lower desire they have for entrepreneurial intentions."

IV. COUNTERMEASURES AND SUGGESTIONS

In the process of empirical analysis, it is found some unexpected results in logistical support. In the correlation analysis, there is a weak correlation between the three dimensions of logistics support and entrepreneurial intention of college students, or no correlation. During the analysis of regulating effect, logistical support, information release, policy explanation and teacher guidance almost hardly shape the impact of entrepreneurial education on college students' entrepreneurial intention. Even if there is a regulatory effect, there is a reverse regulation. This phenomenon does not meet the logistic support work of entrepreneurship education proposed by Zhang Gaoyu (2015). It can play a positive role in regulating the formation of college students' entrepreneurial intention. It can be concluded that logistical support has not been a positive driving force. At present, the conclusion of weak reverse hindrance is presented. Combined with this conclusion and samples from the actual situation of colleges and universities, the researchers put forward some suggestions to improve logistical support for entrepreneurship education for adjusting cooperation mechanism and strengthening service function. Through research, we find hidden problems and

analyze the causes of the problems, so as to find a breakthrough to solve the problem, suit the remedy to the case and finally solve the problem. How to carry out the work of entrepreneurship education in the future and adjust the function of logistic support to make it play an expected regulatory role, there are several ideas that can be discussed in this study. First, adjust the linkage mechanism between logistical support and entrepreneurship education. The previous logistical support has been out of step with entrepreneurship education, which results in lack of positive interaction between the two aspects. Whether the relationship between the two aspects can be merged, that is to say, all of them should be incorporated into the unified system of entrepreneurship education from the establishment of staff institutions to the delimitation of the work scope to achieve a comprehensive merger and increase the linkage between the two mechanisms. And it can achieve the unity of driving force and adjustment power to promote the entrepreneurial intention of college students. Secondly, it is necessary to improve the administrative auxiliary mode of information release, policy explanation and teacher guidance. The work of these three dimensions should be directly incorporated into the teaching of entrepreneurship education courses, which does not exist as an administrative auxiliary system alone. And the adjustment function of logistic support is integrated into the body of entrepreneurship education. Thirdly, we should improve the regulatory mode and avoid administrative apportionment and directives. Through the formulation and implementation of relevant documents, the work content related to information release, policy explanation and teacher's guidance desalinates the color of its administrative instructions and strengthens the awareness of service, from the past supervision, guidance and command into a new paradigm of service, guarantee and understanding.

V. CONCLUSION

To sum up, in terms of the data analysis of universities based on sample sources, logistical support does not play a positive role in the formation of college students' entrepreneurial intention. Although this situation is beyond the expectations and assumptions of the study, the result of this negative support is the value of this research. In the empirical analysis, the found hidden problems are the significance of scientific research. After the empirical analysis, the research conclusions are sorted out, and the solutions are put forward based on the causes of problems in the conclusion. Whether these countermeasures can effectively adjust the current problems still need further verification in practice.

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