Constraints on Problems of Rural Manpower Capital Training and Exploitation in China

Shi Dong-mei[1], Tong Lei[2], Wang Hui-jun*

1. Trade College, Shijiazhuang University of Economics, Shijiazhuang, Hebei, 050031, China
2. Collage of Business, Normal University of Hebei, Shijiazhuang, Hebei, 050031, China
*Hebei Academy of Agriculture and Forestry Sciences, Shijiazhuang, Hebei, 050031, China

Abstract

In recent years, researches on rural human capital are of great concern,but for how to effectively use the rural human capital is scanty. It is the important subject to improvement rural labor force peasant quality to solve rural human capital utilization. The paper combined with two method of questionnaire survey and depth interview to investigation condition of rural labor force training in Hebei province and quantitative analyzed the desire of rural labor force to take part in training. It is shown which can affect farmers' willingness to take part in training include farmers' own factors, family factors, policy propaganda and training institutions, etc. When making training plans the relevant government departments should be taken into account actual situation of the farmers, combining the special training and practical technical training, combining theory with practice, combining training institutions and enterprises. At last,we found out the restriction factors of rural human capital transfer in China,and put forward some suggestions and measures to solve the problems.

Keywords: RURAL HUMAN CAPITAL, EDUCATION AND TRAINING, RESTRICTING FACTOR

1. Introduction

Early human capital scientists defined the connotation of human capital. Theodore w.schultz gives such a definition, "Human capital is reflected in man's know-ledge, ability and health". But for the rural human capital definition, there still has no final conclusion [1]. China rural human capital has been successful transferred, however, because of the restrain of their conditions, they can only be engaged in some low level work(Chen Ying,2013). It is an important work to accelerate to help farmers become urban residents, and is the essential current step to integration of urban and rural development in current, which was point of in the Third Plenary Session of the 18th CPC Central Committee.

But it is obviously low of rural labor force's comprehensive quality in our country, which is not conducive to the development of urban and rural integra-

tion process[2].According to statistics in 2014, China's agriculture employee was educated 6.87 years per capita, such as agriculture, forestry, animal husbandry and fishery industry. The ratio of population's education level below junior is 93.6% of the total population in agriculture industry. Xu Qing-guo (2007) research suggests that Chinese farmers training work improved the comprehensive quality of the farmers but also have some problems [2].In recent years, china's government departments organized many kinds of training programs for poverty alleviation, such as sunshine training, [2]green certificate training, agriculture vocational education training and so on. the training not only obtained the farmer's wild participation but also obtained certainty effect[3].

There are different participated willingness of different regions and some heterogeneity of the rural labor force, which affected the training achievement

transformation [4]. Through analysis on result of field survey, we found that training will of rural labor force influenced by subjective and objective factors, also been effect by the role of rational and irrational factors [5-7].

In this paper, we choose four counties in hebei province as sample, using in-depth interviews and questionnaire survey, the intention and the actual situation of rural labor force training to do the research, and made a detailed statistical analysis, the effect factors of rural labor force training will do the comprehensive evaluation, for the effect factors of rural labor force training will make objective analysis.

2. Variable Select and Explain

Wang(2005)argued that the rural human capital refers to the rural labor condensed on physical fitness, know-ledge, skills and which could enhance the ability of rural labor productivity, which could be called the ability for condensation performance a human capital stock form[8]. Through look up relevant research literatures and analysis concrete practice and investigation, this paper divided factors of affecting rural labor force training will into economic factors, policy factors and training institution factors and so on, the detail settings as follows.

1.1. Personal Factors of Training Demand

Rural labor force's personal factor not only include farmer's natural attributes such as gender, age, and education level of acquired factors, whether as village cadres, but also including the trainee satisfaction evaluation on previous training and reasonable degree evaluation of training schedule, etc., these factors have a certain impact for peasant choosing whether to attend training in the later. The paper assumptions that personal character of respondents is the important factor to affecting the rural labor force participate in education and training.

1.2. The Economic Conditions of Training Demand

The survey found that the peasant family economic income will also play an important role for its education training. For peasant family whose economic income is higher will take an active part in training, in order to broaden their horizons, increase the operation and management skills, improve the comprehensive quality.

For farmers whose family economic income is low will expect to take part in government's free training, such as poverty alleviation projects are suitable for poor farmers to participate in. The family as soon as possible to get rid of poverty will more intense to attend training. This article assume that family economic income will affect the will of the rural labor force to participate in training, but for different training the way of influence will be different.

1.3. the Factor of Training Institution

Training institutions is train suppliers, different body of offer training, training content and training time arrangement has a certain impact to influence farmers to choose participate in training.

(1) The choose of main training body

The main body to provide training course for rural labor force training include government departments, professional associations, private training institutions, leading enterprises, colleges, and many other subjects [8]. According to the survey, farmers take in training provided for government departments accounted for 52.34% of the total sample. At present, the government is the main suppliers of our country's training program.

According to the survey, farmers are more willing to participate in training services by college provide. However, in fact only 6.94% training services was provided by university and moderate specialist school. This situation is obviously not meet farmers demand, and affected the farmers' willingness to training. Training provided by the professional associations and leading enterprises accounted for 15% of the total training services, to a certain extent, also affects the farmers to participate in training.

(2) The choice of training content

Because of the low education level of rural labor force, the arrangement of the training content will also affect the rural labor force to participate in training. According to the survey, before the training plan, if survey questionnaire or held a meeting to solicit the opinions of the trainees for training content design, understand the trainee current training needs, and make market survey, it will target, to increase the trainees to participate. Existing training content generally designed by suppliers, training often does not meet the demand of the trainees, so can reduce the trainee to participate the training [9].

(3) Training schedule arrangement

According to the survey, in currently, most of the training course arrangement is short notice. The trainee knows training news when the training is open, it accounts for 57.14% of the total sample. Famer accepts training news within three days, accounts for 21.43% of the total sample. Famer accepts training news within a week; account for 11.90% of the total sample survey, about 9.52% was informed longer.

Due to be informed hurriedly, trainees have no time to understand the training contents and the effect of practical application, combined with no time to arrange personal schedule, these situation will affect the

trainees to participate training and affects the effect of training. If the training notice be informed in advance notice, and issued publicity materials, it will make the trainees have plenty of time to understand the training content, and prepared for various arrangements, and to improve training participation intention.

3. Variable Definition and Description

First of all, name and value assignment variable, and to calculate the mean of all the variables, make the direction judgment of the expected effect. This article will defined explained variables as Y, answer to "yes", the assignment is 1, answer "not willing" assignment of 0; To be explained variable naming and related instructions are shown in table 1.

4. Inspection of the Model

According to the needs of this study, using the binary classification logistic regression, the econometric model is set up as shown as Fig.(1):

$$Y = \alpha_1 X_1 + \alpha_2 X_2 + \alpha_3 X_3 + \alpha_4 X_4 + \alpha_5 X_5 + \alpha_6 X_6 + \alpha_7 X_7 + \alpha_8 X_8 + \alpha_9 X_9 + \alpha_{10} X_{10} + C + \mu \quad (1)$$

Table 1. Variable Definition and Description of Rural Labor Force

Varible Name	Variable Naming	Variable Assignment	Expectations Affect Direction	Mean Value
The Age Of The Trainees	X_1	Year	+/-	37.43
The Sex Of The Trainees	X_2	0=Women; 1=Men	+	0.63
The Education Level Of Trainee	X_3	1=Under Primary School; 2= Junior High School; 3= Senior High School; 4= College Degree Or Above	+	2.72
If The Trainee For The Village Cadres	X_4	0=No; 1=Yes	+	0.26
The Trainee's Family Income Level	X_5	1= 0.5 Million Yuan Or Under; 2=0.5-1 Million Yuan; 3=1-1.5 Million Yuan; 4=1.5-2 Million Yuan; 5= 2 Million Yuan Or Above	+	2.32
Whether Solicit Opinions For Training Contenfrom From The Trainees	X_6	0=Not Ask For; 1=Ask For	+	0.56
How Long In Advance Know Training Information	X_7	1=One Day; 2=Less Than Three Days; 3=One Week; 4=Two Weeks; 5=Longer	+	2.32
Whether Training Schedule Is Reasonable	X_8	0=Unreasonable; 1=Reasonable	+	0.73
The Training Fee Of Farmers Can Accept	X_9	1=10-50 Yuan; 2=50-100 Yuan; 3=100-200 Yuan; 4= 200 Yuan Or More		2.57
Satisfaction With The Training Of Farmers	X_{10}	1= Not Satisfied With; 2= General; 3= Satisfied; 4= Very Satisfied With		2.15
Farmers' Willingness To Attend The Training	Y	Y=0 Unwilling, Y=1 Willing		

Used backward conditional, entry date to Eview3 to carry out tests, two kinds of measurement estimates results are shown in table 2 and table 3.

As the model estimation results, we can write the formula as shown as fig.(2).

$$Y=0.02X_1+0.42X_2+0.43X_3+0.94X_4-0.12X_5+ 0.99X_6+0.37X_7+0.87X_8+0.44X_9+0.49X_{10}-4.61 \quad (2)$$

Regression results indicate that the variable X_1, X_2, X_5 coefficient is not zero probability is greater than 0.1, no significant in the model is not zero, thus removing the variables X_1, X_2, X_5, input data into program EVIEWS Logistic regression analysis, the results are shown in table 3.

As the model estimation results, we can write the formula as shown as fig.(2).

Table 2. Model Estimation Results (1)

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	-4.60626	1.17095	-3.93375	0.0001***
X_1	0.02045	0.01672	1.22316	0.2213
X_2	0.41893	0.38181	1.09721	0.2725
X_3	0.43098	0.19457	2.21504	0.0268**
X_4	0.94053	0.46433	2.02556	0.0428**
X_5	-0.12022	0.16547	-0.72652	0.4675
X_6	0.98799	0.35368	2.79344	0.0052***
X_7	0.36745	0.15836	2.32025	0.0203**
X_8	0.87393	0.37812	2.31125	0.0208**
X_9	0.44295	0.16081	2.75440	0.0059***
X_{10}	0.48572	0.26120	1.85950	0.0630*

Note: ***, **, * respectively show in 1%, 5% and 10% significant level outstanding.

Table 3. Model Estimation Results (2)

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	-3.8169	0.8933	-4.2724	0.0000***
X_3	0.3338	0.1820	1.8334	0.0667*
X_4	0.9792	0.4545	2.1543	0.0312**
X_6	0.9287	0.3453	2.6889	0.0072***
X_7	0.4033	0.1545	2.6107	0.0090***
X_8	0.8551	0.3687	2.3190	0.0204**
X_9	0.4449	0.1548	2.8733	0.0041***
X_{10}	0.5530	0.2541	2.1754	0.0296**

Note: ***, **, * respectively show in 1%, 5% and 10% significant level outstanding.

$$Y=0.33X_3+0.98X_4+0.93X_6+0.40X_7+0.86X_8$$
$$+0.44X_9+0.55X_{10}-3.82 \qquad (2)$$

Regression results show that the variable X_6, X_7, X_9 coefficient is zero probability is less than 0.01, which shows that three variable coefficient at 1% significant level; Variable X_4, by 8 X_{10} coefficient of zero probability is greater than 0.01, less than 0.05, which shows that three variable coefficient at 5% significant level; Variable coefficient of the X_3 is zero probability is greater than 0.05, less than 0.1, indicates that the variable coefficient to 10% significance level, so the model through the test [10].

5. Analysis on Regression Results

According to the test results of the model, the significant factors effect on the will of the rural labor force training mainly includes: the X_3 (degree of the culture of the rural labor force) and X_4 (whether farmers village cadres), X_6 (whether to solicit opinions from the farmers' training content), X_7,(farmers how long in advance that the training time), X_9 (farmers can accept the training fee), X_8 (training schedule), X_{10} (satisfaction on previous training) etc., the direction of affect is positive.

First, regression results of whether in advance arrangement views solicited on the training content from the trainee shows that this variable is one of the important factors affecting the trainee to attend training. If the training department can fully understand the requirements of the trainee in advance, will be based on the actual demand and the market need to design the training content, the trainee willingness to participate in the training will also increase [11].

Second, setting up reasonable training fee is also the important factors that affect farmers to participate in the training. According to the survey, 64.86% of respondents believe that training cost is too high, 32.05% of respondents believe that the current train-ing expenses moderate [12], shows that the very important reason of farmers did not participate in the training is can't accept training expenses. Formulate reasonable training expenses will be raising farmers' willingness to participate in training.

Third, regression results of whether is a village cadres shows that village cadres to participate in training will is strong. The reason for this is that village cadre is the main organizer. They have more chance to better understand the training content. But also reflects the village cadres training propaganda work does not reach the designated position. If given training specific arrangement notice to the villagers early, the villagers [13] must have time to better arrange their own time to improve the farmers' willingness to participate in.

Fourth, receive training trainees how long in advance notice and the specific arrangement of training time also is the important factors to affect their participation in training. Relevant departments for specific arrangements to inform the trainee training time earlier, willingness to trainees to attend the training will be the stronger.

Fifth, the trainee on previous training satisfaction evaluation is also the important factors that affect their participation in training. If the trainees have higher satisfaction of the before training, it shows training department's training effect is obvious and welcomed by the farmers, the famer to take part in to the training once again will also improve [14], this situation will improve famers training will.

Sixth, the farmer's own cultural degree is also an important factor to influence to participate in training. According survey the higher cultural level the stronger willing to participate in training and have well effect and higher achievements [15-17]. This situation suggests that the trainee education level is the important factors that affect training intention.

6. Conclusion

For a long time, Chinese government has paid more attention to the improvement of farmers' quality to promote agricultural development and relieve" three rural issues". To completely improve farmers' comprehensive quality, Town adopts theoretical training and practical instruction[18]. In respect of theoretical training, farmers mainly receive agricultural scientific and technological education as well as agricultural development philosophy education, and relevant legal lectures are needed[19].

According to the above analysis, in the training work of rural labor, the rural labor force's personal factors in addition to the education degree variables, the other variables such as gender, age are not impor-

tant factors to impact participate in training. The influencing factors of rural labor force to participate in training will more like training subject selection and the reasonable arrangement of the training itself. So, the supply of training main body should be according to the degree of the culture of the rural labor force and the actual demand to arrangement training content ahead of the training and analysis demand of training time. Only in this way can reasonable arrangement of training time and content. In addition, the training propaganda work is also very important, village cadres should play the role of propaganda and guidance to make the farmers to participate in training. Only to do a good job of training of rural labor force, in the current process of the construction of the urban and rural integration, to play the positive role of rural labor force, but also conducive to the urbanization of the rural surplus labor transfer and agricultural modernization development.

Conflict of Interest

The authors confirm that this article content has no conflicts of interest.

References

1. Chen Ying, Zou Yu-you, Chen Yao. Constraints on Problems of Rural Surplus Manpower Capital Transfer inChina[J]. Journal of Northeast Agricultural University(English Edition). December 2013 Vol.20 No.4 87-92.

2. Xu Qingguo, Huang Feng. Thinking About New Peasants Training Work [J]. Journal Of Hunan Agricultural University (Social Science Edition), 2007 (01):53-55.

3. Yi Zhong-ying. How to Understand The New Rural Construction of 20 Words Policy [J]. Journal Of Western Economic Weekly, 2007 (04):6-9.

4. Li Xiao-Cui. Chongqing Farmers Training Present Situation, Problems and Countermeasures Research [D]. ChongQing University. 2009:26-35.

5. Wang F. China's rural human capital investment analysis[D]. Sichuan University, Chengdu. 2005.6:55-59.

6. Li Cun-chao. Study of The Problem of Farmer Education And Training In Hebei Province [D]. Hebei Agricultural University. 2009:4-36.

7. Shi Dong-mei. Suburban Land-Lost Farmers In Hebei Province Alienation Empirical Research [D]. Hebei Agricultural University. 2009.6:34-45.

8. Li Jie. Give Play To The Resource Advantage Of Vocational Education In Rural Labor Force Training. Jiujiang Vocational Education For Rural Labor Transfer Service Survey [J]. Journal Of Jiujiang Vocational And Technical College, 2010 (01):19-21.

9. Jiang Hua-pu. Strengthen The Rural Labor Force Training Improve Farmers' Employment Skills[J]. Journal Of Economic Perspectives: The Middle Of. 2011, (4):131.

10. Xu Qingguo, Huang Feng. Thinking About New Peasants Training Work [J]. Journal Of Hunan Agricultural University (Social Science Edition), 2007 (01):53-55.

11. Fombrun C, Foss C. Business Ethics: Corporate Responses to Scandal[J]. Corporate Reputation Review, 2004, 7(3): 284-288.

12. Nelson, R&PhelPs. Investment in human, technological diffusion and economic growth [J], American economic review, 1996, (56).

13. Schultz, T.Paul. Wage Gains Associated with Height as a Form of Health Human Capital [J] Yale Economic Growth Center Discussion Paper, 2002 (841) : 36-38.

14. Yang Qing. The Farmer Training Abroad Overview [J]. Rural Work Communication. 2008, (8):22.

15. Zhang Le-tian. The Education Role Of Rural Labor Transfer And Problems - Australia, Malaysia, China, Bangladesh, Comparative Study Of Comparative[J]. Education Research. 2005 (01):68-86.

16. Gu Yu. Japan's Social Transition Vocational And Technical Education[D]. The Northeast Normal University. 2006(07):56-67.

17. Liu Hui-Bian. Research on Vocational Education For Rural Labor Transfer Training Service Countermeasures[J]. Vocational education research. 2006(02):6-7.

18. Chunming GONG, Hui NI. Realistic Significance and Practical Exploration of Cultivating New Professional Farmers in China[J]. Asian Agricultural Research 2013, 5(1):73–75.

19. LIU Ning. A research on the Effect of rural human capital drain on regional agriculture growth: Based on the Panel Data of 13 Major Grain Production Provinces[J]. POPULATION&ECONOMICS. No. 4, 2014:23-32.

Enterprise Technological Innovation and Market Innovation of Innovative Management

Jiaying Chen, Shaojiang Lin, Zhiyi Meng

Sichuan Agricultural University, Sichuan, China, Email: linshaojiang@163.com

Corresponding author is Shaojiang Lin

Abstract

The enterprise should break the situation that the technological innovation and market innovation are separated from each other, which should set up the technological innovation and market innovation management from the angle of total innovation management; it is a very urgent issue under the challenge of the current environmental changes. In this paper, it takes the concept and definition of technological innovation management as the starting point, with the aid of the interpretation of the related content of technological innovation and enterprise technological innovation management, combined with the theoretical model of technological innovation, discussing and exploring the enterprise technological innovation as well as the choice of market innovation strategies.

Keywords: TECHNOLOGICAL INNOVATION, MARKET INNOVATION, INNOVATION MANAGEMENT

1. Introduction

Science and technology can play more and more important role in the social and economic development, in today's market economy environment, the competition between enterprises finally is in the competition of core technology; enterprise can guarantee itself not to be eliminated by the market only by having constant technological innovation, the only way that enterprises can maintain long-term competitive advantage is the continuous and effective management of technological innovation, which can strengthen their own core technology capabilities. Technological innovation management has become the most important catalyst for the success of the enterprise to obtain the market competition. Under the challenge of technological changes, technological innovation management began to enter into the eyes of Chinese entrepreneurs in 1998 [1]. In 2000, the management of technological innovation has become the new exploration direction for Chinese enterprises, which can also be called as "The Year of Technological Innovation Management". Technological innovation man-