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Cultivating New-type Farmers Based on the Theory of Human Resources Development

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Abstract Under the direction of theory of human resources development, this thesis analyzes the impact of rural human resources development on cultivating new-type farmers. Firstly, it increases the input of rural basic education; secondly, it reinforces the vocational education and technology training; thirdly, it promotes the rural medical and public health services; fourthly, it quickens the rural labor transfer. The status quo of China's rural human resources has been analyzed as follows: in terms of the quantity of rural human resources, the status quo is large and quick-developed base of rural human resources, high labor participatory rate, and constitution of low age; in terms of the quality of rural human resources, the status quo is the ubiquitous low quality of rural human resources, low technological level of rural human resources, and overall low physical quality of farmers; in terms of the structure of rural human resources, the status quo is the irrational industrial structure distribution and imbalanced regional structure distribution. The thesis also discusses the edification of theory of human resources development in cultivating new-type farmers. First, in terms of the control over quantity of rural human resources, it is to keep the stability of family planning policy, and expedite the transfer of rural surplus labor; second, in terms of promoting the quality of rural human resources, it is to bolster the development of reserve rural labor force resources, to construct the adult educational training system with Chinese characteristics, and to build rural primary health care system; third, in terms of adjusting the structure of rural human resources, it is to perfect rural human resources market, and adjust rural economical structure and talents structure.

Key words Development of human resources, New-type farmers, Educational training, Rural surplus labor force, China

Fifth Plenary Session of the 16th Central Committee of the Chinese Communist Party put forward the important historical task of building the socialist new village. *Several Opinions of the CPC Central Committee and State Council on Advancing Construction of Socialist New Village* noted that promoting the overall quality of farmers and cultivating literate new-type farmers who understand technology and know operation, is the urgent need of constructing socialist new village. In 2007, Committee's Document No. 1 *Several Opinions of the CPC Central Committee and State Council on Developing Modern Agriculture and Advancing Construction of Socialist New Village* noted clearly that building a modern agriculture must rely on educated and skilled new-type farmers; exert the advantages of rural human resources; increase the investment of human resources development substantially; comprehensively improve the quality of rural workers in order to provide the powerful talent intellectual support for the construction of socialist new village. Thus, the rural population or the rural labor force has been raised to the height of human resources. Through development of human resources in rural areas, we can promote farmers' ability of innovation, work and learning, so as to foster the new-type literate farmers who can understand technology and operation. Consequently, the process of cultivating new-type farmers is also a process of human resources development.

1 The overview of the theory of human resource development

Human resources development is based on ideas of human resources in classical economics, human capital thought in Marxist political economy and modern human capital theory proposed by Schultz. This term first appeared in 1967, propounded by Nadler in Washington University of the United States. Through probing into the organization and enterprises, and researching human resource development, he proposed that the enterprises should train, educate and develop employees according to the employees' wish and the requirements of job^[1]. In the 1970s, the Japanese management miracle in manufacturing field drew scholars' attention on human resource development. In the mid-80s, after the human resources theory was disseminated into China, the related research activities obtained much attention and rapid development.

Along with further research, scholars have profound understanding of human resources development in comparison with the original definition. It is generally believed that human resource development is a process of using, shaping, reshaping and developing of human resources through learning, education, training, management and other effective means to achieve certain economic goals and development strategies. Developers can be the government, institutions, schools, organizations, associations, private institutions, and public organizations, and can also be employers, supervisors, individuals and so on^[2]. The development of human resources focuses on the control over quantity of human resources, structural optimization and efficient allocation, which includes both quantity and quality of human resources development: first, control the

population size, so that human resources can be maintained to promote the economic and social development of appropriate scale; second, through education and other means to enhance the quality of human resources, so as to have the physical strength, intelligence, skills, values and so on which are necessary for participation in social life, and on this basis, to conduct a reasonable allocation to fully exert its potential.

The concept of human resource development in rural areas is the specification of the concept of human resource development in rural areas, and develops with the development of human capital theory and the theory of human resources development. As early as the 1950 years, in the agricultural economics study of human capital investment, Schultz noticed the role of human capital investment in traditional agriculture transformation. And after comparing the economic policy and effects in developing countries, he noted that the only way to alleviate poverty is to improve the quality of people. Thus, according to the human resources of the rural reality, using the theory of human resource development to promote rural farmers to cultivate a new human resources development, is important for the development of new socialist village.

2 The impact of development of rural human resources on cultivating new-type farmers

The main content of the Eleventh Five-Year Plan is to build a new socialist village. And in order to achieve this goal, it requires a lot of educated and skilled new-type farmers. It is to increase the quality of the farmers, while an important aspect of rural human resources development is cultivating new-type farmers. The content of cultivating new farmers is exactly the direction of human resource development. The human resource development in rural areas directly affects the intensity of the practical effect of new-type farmers.

2.1 Increasing investment in rural basic education can improve the cultural quality of rural people The basic education is the way to enhance the quality of farmers in rural areas, and also is the most important form of human resources development in rural areas. By the basic knowledge and skills obtained from basic education, we can enable farmers to acquire profuse knowledge, foster farmers' interest about knowledge, increase their awareness of information and improve farmers' capabilities of decision-making. In the meantime, it provides the possibility of promoting occupational mobility of rural labor force, industry mobility and regional mobility, and enables farmers to select one or more jobs so as to increase income.

2.2 Reinforcing the vocational education and technical training can improve the professional skills of farmers Vocational education and technical training is the professional approach of human resource development in rural areas and the commonly used form of human resource development in rural areas. Through classroom teaching, practice, field guidance and other methods, we can improve farmers' agricultural production skills on farming, new agricultural machinery use, cultivation, and breeding; impart non-agricultural production

technology knowledge to farmers on computer, welding, and mechanical maintenance; instruct the legal knowledge on keeping a lookout of public security and safeguarding right to farmers; promote farmers' awareness of preventing and controlling AIDS, avian flu and other infectious diseases; make farmers improve their manner of behavior in terms of knowledge, skills, moral, and law, so as to make farmers competent for their jobs, or get more opportunities to change jobs.

2.3 Developing the rural medical security system can improve the quality of the farmers' health Rural health care is vital to ensuring good health condition for the quality of farmers, and also an important part during human resource development in rural areas. Through developing rural medical and health care, establishing and improving rural health care system, and enhancing the quality of the farmers' health, we can make farmers have great energy in productive labor activity, enhance the adaptability of workers to the labor intensity, ensure the labor quality and efficiency of farmers, and keep good genetic quality of human resources in rural areas^[3].

2.4 Accelerating the transfer of rural labor force can improve the quality of farmers Transfer of rural labor force is an important way of improving the farmers' quality, and also an important form of the rational allocation of human resources in rural areas. Migration will make workers exposed to the new environment where they meet different people and strengthen social contact. This not only can improve their ability of confronting with various changes and risks, capability of information acquisition and interpretation, the ability of capturing the economic opportunities, and capabilities of management, but also can broaden their horizons and improve their mobility and ability, so as to increase income.

3 The status quo of China's rural human resources

In the light of the practice of China's rural human resources development, the human resource development in rural areas has made remarkable progress. The central and local governments increase investments every year on human resources development in rural areas; popularize the nine-year compulsory education; encourage the investors to give priority to the development of vocational education in rural areas; speed up construction of rural health care infrastructure; spare no efforts to break the barriers of urban and rural household registration; guide hundreds of millions of migrant workers into the job market. However, in terms of the status quo of China's rural human resources, there still have outstanding problems compared to the objectives of cultivation of new-type farmers.

3.1 The quantity of rural human resources

3.1.1 Large and quick-developed base of rural human resources. Although since the 1970s, China has started plans to control population growth, the quantity of China's rural population and rural labor force have been increasing, From 1995 to 2005, China's rural population increased by 32.329 million while the proportion of total population decreased by 3.1%. In the meantime, the rural human resources increased by 53.555 mil-

lion while the proportion of total rural population increased by 4% , and the proportion of total population increased by 1.3% . It shows that the growth rate of rural human resources is significantly faster than the growth rate of rural population. Large and quick-developed base of rural human resources, on the one

hand, can meet the needs of the labor force to maintain the rapid economic growth during economic expansion, but on the other hand, the laggard development of quality of labor force seriously restricts the quality of China's economic growth (Table 1).

Table 1 Statistics of population of China from 1995 to 2005

Year	Population × 10 ⁴	Rural population × 10 ⁴	Rural population // %	Rural human resources × 10 ⁴	Rural human resour- ces / Rural population // %	Rural human resources / Population // %
1995	121 121	91 674.6	75.7	45 041.8	49.1	37.2
2000	126 743	92 819.7	73.2	47 962.1	51.7	37.8
2001	127 627	93 382.9	73.2	48 288.9	51.6	37.8
2002	128 453	93 502.5	72.8	48 526.9	51.9	37.8
2003	129 227	93 750.6	72.5	48 971.0	52.2	37.9
2004	129 988	94 253.7	72.5	49 695.3	52.7	38.2
2005	130 756	94 907.5	72.6	50 387.3	53.1	38.5

Note: The data are from *China Rural Statistical Year book* in 2006.

3.1.2 High labor participatory rate and constitution of low age. In China's rural human resources, participation rate of labor forces aging from 16 to 29 is significantly higher than that of the city. In 2005, the China's working population accounted for 21% of the total population. 75 % of working population was in rural areas, and the labor force participation rate reached 86% , 9.5 percentage points higher than the city. The high labor force participation rate and low age composition of rural population indicates that rural youths receive inadequate education, and prematurely step into the social production and the employment market. These workers often can only engage in simple labor, which to a certain extent, leads to the low quality of rural human resources, and increases pressure of rural employment and the transfer of surplus labor. Many scholars' researches show that 1/3 of China's rural labor force is the surplus labor force. According to China's rural labor force of about 490 million people to calculate, the surplus scale of rural labor force in

2005 reached 160 million^[4].

3.2 The quality of rural human resources

3.2.1 The ubiquitous low quality of rural human resources. China's farmers have low average years of schooling. And the labor forces with middle school qualification or less are still the majority, and the general scientific and cultural level is not high. During the period from 1995 to 2005, the rate of rural illiteracy or semi-literate dropped by 6.6% ; the proportion of labor forces with primary school education decreased by 9.93% while the proportion of labor forces with middle school education increased by 12.11% , but the increase margin of those labor forces with high school education or more was only 3.87 % . In 2005, the labor forces with higher education than the middle school only accounted for 52.22% , which shows that the main body of rural workers in the primary industry is the labor force with middle school qualification; the proportion of illiteracy and workers with primary school education is still high. (Table 2)

Table 2 Statistics of education of rural workers in China

Year	Illiteracy	Primary school	Junior middle school	High middle school	Technical secondary school	Above junior college
1995	13.47	36.62	40.10	8.61	0.96	0.24
2000	8.09	32.22	48.07	9.31	1.83	0.48
2001	7.69	31.14	48.88	9.65	2.02	0.61
2002	7.59	30.63	49.33	9.81	2.09	0.56
2003	7.39	29.94	50.24	9.68	2.11	0.64
2004	7.46	29.20	50.38	10.05	2.13	0.77
2005	6.87	27.23	52.22	10.25	2.37	1.06

Note: The data are from *China Rural Statistical Year book* in 2006.

3.2.2 Low technological level of rural human resources. With the implementation of strategy of promoting agriculture by applying scientific and technological advances, the farmers have realized the importance of the development of agricultural science and technology, but the technical quality of farmers is still at a relatively low level. According to the China Association for Science's survey in more than 30 provinces, autonomous regions and municipalities in 2003, we can find that the proportion of current level of scientific literacy in China of the public was 1.98% ; the rural population with the scientific literacy was 0.7% , 3.4 percentage point lower than city. Due to the low technological quality, most farmers can only engage in simple traditional farming. Most farmers had poor ability of understand-

ing agricultural technical knowledge and accepting it, which seriously affected the popularization of new achievements on agricultural science and technology and promotion of the use in large areas, and restricted agricultural science production levels.

3.2.3 Overall low physical quality of farmers. For a long time, China has been practising the " one country, two policies" system. The level of rural medical and health services in China are weak, together with the lack of nutrition and other reasons, leading to the general poor physical quality of the rural labor force. In the light of the two indicators, namely the international general infant mortality and life expectancy, the health status of Chinese population is not good. According to *China's*

Summary of Health Statistics in 2009 published by Ministry of Health, it shows that, during the period from 1991 to 2008, although the rural infant mortality rate decreased by 39.6 %, but the infant mortality rate was still 2.8 times that of the city. According to data from the fifth national census in 2000, it shows that China's life expectancy in 2000 was 71.4 years. The life expectancy is 75.2 years for the urban population, 69.5 years for rural population.

3.3 The structure of rural human resources

3.3.1 The irrational industrial structure distribution. As China's secondary and tertiary industries get the rapid development, rural human resources are gradually transferred to other non-agricultural industries, but the proportion of rural labor force engaged in primary industry remains high. From 1995 to 2005, the rural labor force engaged in husbandry and fisheries presents the downward trend from 32.3345 million in 1995 to 29.975 5 mil-

lion in 2005. But the rural labor force engaged in secondary and tertiary industries only increases from 12.707 3 in 1995 to 20.411 8 in 2005. From the industry distribution, the proportion of the labor force engaged in agricultural production is high while the proportion of other non-agricultural labor force is low. In 2005, the labor force that engaged in husbandry and fishery accounted for 59% of the total rural labor force, 5 times the proportion of other non-agricultural labor force in the total rural labor force, and 20 times the proportion of other non-agricultural labor force engaged in transportation, storage, postal and telecommunication services. However, there are diminishing arable lands. With the development of labor productivity and technology, it is bound to have a large number of surplus labor forces, and bring enormous pressure to the construction of new village. (Table 3)

Table 3 Statistics of employment structure of rural workers in China

× 10⁴

Year	Number of rural laborers	Agriculture, Forestry, Animal Husbandry & Fishery	Industry	Construction	Transportation, Storage, Postal and Telecommunication services	Wholesale, Retail trades and Catering services	Other non-agricultural Industries
1995	45 041.8	32 334.5	3 970.7	2 203.6	983.0	1 170.4	4 379.7
1999	46 896.5	32 911.8	3 593.0	2 531.9	1 115.8	1 584.6	4 779.4
2000	47 962.1	32 797.5	4 108.6	2 691.7	1 170.6	1 751.8	5 441.9
2003	48 971.0	31 269.6	4 937.1	3 201.1	1 328.2	2 059.2	6 185.9
2004	49 695.3	30 596.0	5 438.9	3 380.5	1 475.9	2 701.6	6 102.4
2005	50 387.3	29 975.5	6 011.5	3 653.2	1 567.3	2 937.7	6 242.0

Note: The data are from *China Statistical Year book* in 2006.

3.3.2 The imbalanced regional structure distribution. In the light of the quantity of rural human resources, there is big regional difference of China's human resources in rural areas. *The Second National Agricultural Census Major Figures Communiqué* published by National Bureau of Statistics shows that the 10 eastern provinces accounting for 9.5% of total land area hold 37.3% of the China's rural labor resources, while the 12 western provinces and autonomous regions accounting for 68.9% of total land area hold 28.5% of the China's rural labor resources. This uneven geographical distribution of population seriously hampers the economic development. In terms of quality, the level of education of China's human resources in the rural areas decreased gradually from east to west, showing regional imbalance. In late 2006, the illiterate rate of China's rural labor force is 4.6% in eastern areas, 6.7% in central areas, 10.7% in the western areas, and 2.6% in north-east. The overall quality of rural labor force in the western areas is low. In addition, due to the relatively developed economy of the eastern regions, it makes lots of high-quality rural human resources in western regions move to the east, so the imbalance of rural human resources is more serious.

4 The edification of theory of human resources development in cultivating new-type farmers

4.1 Controlling the quantity of human resources in rural areas

4.1.1 Maintaining the stability of the family planning policy. Since the 1970s, China has introduced the family planning poli-

cy, which inhibits the rural long-term rapid growth of population gradually. But the impact of rural traditional concept, coupled with the inertia of population development, will make population hover, even rise. Therefore, we should vigorously continue to control the population, and improve population quality, optimize the family planning policy, and regulate and control the number of the rural population. First of all, change the concept of reproduction in rural areas; actively promote late marriage and eugenics. Secondly, combine the common wealth and the family planning work to lay down a variety of policies beneficial to farmers in terms of the collective welfare, division of house sites, land contracting, education of children. Finally, establish a social security system conducive to family planning, so as to address people's worries and inspire their intrinsic motivation to practice family planning.

4.1.2 Quickening the transfer of rural surplus labor force. Urbanization of rural areas is the requirement of well-off target posed by 16th National Congress of Communist Party of China, while the construction of small towns can provide a broad space for the transfer of rural surplus labor force, and be an important means to promote the transfer of rural surplus labor force. We should vigorously promote marketization process of the construction of small town infrastructure; encourage businesses and individuals to participate in construction of small towns; actively guide township enterprises to gather in the cities and towns so as to absorb a large number of rural labor forces and create more investment and consumption demand. In turn, this can create a good opportunity for rural enterprises, especially the small and medium serving enterprise^[5].

4.2 Enhanceing the quality of human resources in rural areas

4.2.1 Promoting development of rural reserve labor force. Basic education in rural areas is still very weak, and nine-year compulsory education has not been completely popularized. The proportion of illiteracy is also relatively high. Therefore, it is necessary to increase investment on rural basic education in China; spare no efforts to improve the quality of labor resources in rural areas. We should establish a rural education investment guarantee mechanism; gradually increase national and provincial financial support for rural nine-year compulsory education; reform the primary and secondary education content and methods to make the vast majority of the graduates qualified for employment.

4.2.2 Constructing adult education and training system with Chinese characteristics. Rural adult education and vocational training shoulder task of popularizing rural education and training rural talents. Therefore, we must vigorously develop the rural adult education and vocational training system, which become the important means of developing rural human resources and training new-type farmers. According to people at different levels of education, we should continue to reinforce all kinds of adult education, based on the agricultural technology station, cultural centers, vocational schools, and agricultural colleges, in order to establish the perfect farmers' technological education and training system. At the same time, adult education and vocational education should be combined in order to provide practical technical skills for farmers who go out to adapt to the demands of modern urban civilization, and the pace of life.

4.2.3 Establishing a rural primary health care service system. Increase financial investments at all levels on rural health service; normalize the transfer payment and improve utilization of funds; propel the construction of rural health service system, and establish the rural cooperative medical care system and medical assistance system for poor households, in order to improve farmers' health condition. According to the local rural public health programs, strengthen the comprehensive improvement of environmental sanitation; provide family planning services, and maternal and child health services to improve the health of the rural population. In terms of the medical insurance and pension insurance, we can achieve the low level security at first. When conditions permit, we can gradually build other social insurance system in rural areas, such as maternity insurance, industrial injury insurance, and unemployment insurance.

4.3 Adjusting the structure of human resources in rural areas

4.3.1 Perfecting the human resources market in rural areas. Through exerting the role of market in allocating rural human resources, we should effectively improve the structure, further weaken the planned allocation of human resources in rural areas, and regulate reasonably the allocation of human resources in the industry. First, establish and perfect the urban and rural human resources market, and abolish employment discrimination policies restricting migrant workers in city to achieve the harmony of urban and rural employment. Second, lay down relevant policies on employment management services, vocational training and social security, and provide a full range of

services for the rural labor force. Third, strengthen the construction of labor market information network, so as to form a service network covering urban and rural employment and give full play to modern information technology in human resource allocation. Finally, give full play to the role of private employment agencies, and labor organizations, so as to overcome obstacles to labor mobility in the market.

4.3.2 Adjusting rural economic structure and talents structure. The status of irrational economic structure in rural areas has led to the unreasonable employment structure of rural human resources in rural areas. Therefore, development of new-type farmers in rural areas must focus on strengthening the rural economic structure adjustment. First, adjust the internal structure of the primary industry, so that more rural human resources engage in cultivation of cash crops such as fruit, drug, and tobacco, and pay attention to improving the technological content of agricultural products. Second, adjust the relationship structure of three industries to shift more rural human resources to secondary and tertiary industries. Meanwhile, we should strengthen rural talents restructuring, optimize the structure of human resources, and promote reasonable distribution of talents in industry and regions.

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