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Review and Prospect of Development Capability of New Generation Farmers

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Abstract In the context of dual economic structure, there occurs shift of numerous rural surplus labors in China. As a special group lingering about in the edges of urban and rural areas, the new generation farmers become a hot spot of research. How to help them smoothly become successors of China's agricultural modernization construction is a focus of academic circles. Based on literature review, this paper analyzed connotation of development capability of new generation farmers from agricultural modernization, thinking ability construction, system and policy, and new farmers. Finally, it came up with prospect for development of new generation farmers.

Key words New generation farmers, Development capability, Agricultural modernization, Surplus labor, Urban areas, Rural areas

No. 1 document of central government in 2013 issued guideline for industrial modernization, informationization, urbanization and agricultural modernization. The development of agricultural modernization becomes an essential part for accelerating China's modernization process and comprehensively strengthening national power. However, after new China was founded, China's agriculture made huge sacrifice in the priority development of heavy industry and eastern regions, leading to insecure agricultural infrastructure and weak development strength^[1]. Carefully contemplating three rural issues in China, agricultural operation and rural construction steadily advance with historical development and farmers have experienced fundamental change. Before the reform and opening up, farmers' development is succession of themselves and farmers develop with historical evolution. After the reform and opening up, due to break of household registration system, the cost for labor shift is reducing, the income gap between eastern and western regions and urban and rural areas is widening. In short term, there occurs shift of numerous rural labor^[2]. In this shift, rural areas still exist, agriculture still develops, but farmers suffer from serious level breaking.

In the context of agricultural modernization development, the previous generation farmers gradually exit from historical stage. As for whether new generation farmers can assume such historical mission and whether new generation farmers have development ability suitable for agricultural modernization development, different scholars have different opinions. At present, there are extensive researches about new generation migrant workers, but there are few researches about new generation farmers. Here, it is of great

realistic significance for studying development capability of young farmers in rural areas. Therefore, on the basis of sorting and conclusion of related literature, we analyzed development capability of new generation farmers and discussed prospect of their development.

1 Connotation of development capability of new generation migrant workers

The new generation farmer is a relatively new concept and there is still no unified definition. Wang Chunguang firstly put forward the concept of new generation farmers. In his opinion, since the 1990s, China's rural labor flow showed intergenerational differences, mainly in flow motivation and social traits. He included farmers born after the 1990s and mainly doing works instead of farming into new generation farmers^[3]. In No. 1 document of central government of 2010, the concept of new generation migrant workers was proposed. With reference to this concept, some scholars made a preliminary definition of the new generation farmers^[4]. Liu Fubing *et al* stated that the new generation farmers are those farmers born in the 1980s and 1990s, having rural household registration and growing up in rural areas, mainly including migrant workers and rural residents left behind for farming^[5]. At present, two aspects of new generation are basically unified; one is born in the 1980s and 1990s, and the other is growing up in rural areas and having rural household registration. However, there still exists a dispute about whether those self-employed farmers flowing to cities belong to new generation farmers. Some scholars object that in the construction of agricultural modernization, only those farmers living in rural areas are major force of agricultural construction. These young farmers are deeply rooted in rural areas, familiar with rural areas, and have high development capability. Thus, those farmers are representative of new generation farmers. In the research of Sun Houze *et al* about development capability of new generation farmers, they took new generation migrant workers as a

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group of new generation farmers^[6]. Gao Yuan *et al* excluded young migrant workers from new generation farmers and defined new generation farmers as farmers living in rural areas and mainly engaging in agricultural production^[7].

Extensive researches of development capability of farmers mainly focus on how to improve self ability of farmers. Wang Xianglin pointed out that development capability of farmers is the ability of farmers to independently obtain resources, develop production, improve living conditions, and realize political pursuit in certain system and policy environment, and it is multi-level ability integrating physical fitness, intelligence, skill, and potential ability^[8]. Zeng Yanhua stated that the development capability of farmers is the ability of improving production and living conditions using nature and transforming nature^[14]. Some scholars considered the development capability of farmers as improvement of farmers' human capital, and stated that the development capability mainly includes internal ability (self factor), external ability (external condition), and comprehensive ability. In addition, some scholars combined development ability of farmers and human capital resources, and held that the development of rural human capital is favorable for improving development capability of farmers. For example, Jeffery proposed that improvement of rural human resources is of great significance for development capability of farmers and sustainable development of rural areas. The improvement of development capability of farmers is the changes of farmers' ability through organized learning and training in certain time. The development capability of farmers is various kinds of ability of farmers based on physical, intelligent, skill and potential ability and the ability of using existing production factors to improve living and seek for development^[19].

At present, there are few researches about connotation of development capability of new generation farmers. Sun Zehou *et al* put forward six abilities, *i. e.* moral ability, intelligent ability, physical ability, technical ability, psychological ability and mental ability for development of new generation farmers^[6]. The definition of development capability of new generation farmers is definition of new generation farmers. The academic circle has basically formed the unified concept of the development capability of new generation farmers. However, there is still dispute about concept of the new generation farmers, such as new farmers, new generation migrant workers, professional workers, and traditional farmers. There are similar points and also respective background and significance of these concepts.

2 Theoretical exposition of development capability of new generation farmers

2.1 Comparative analysis of new farmers and new generation farmers The concept of new farmers was put forward in the 10th Five-Year Plan. It is of great significance for China's agricultural modernization and is favorable for alleviating the conflict between excessive labor population and little resources. The cultivation of new farmers and new generation farmers is to improve de-

velopment capability of farmers, promote new socialist countryside construction, and improve modern agricultural level. As major force of agricultural modernization construction, improvement of their development capability is of great significance. There are similarities and differences between new farmers and new generation farmers in research object, concept background and basic characteristics, as listed in Table 1. New generation farmer is an existing concept and reflects current agricultural development situation at the background of labor shift, while new farmer mainly focuses on requirements for farmers to respond to existing problems of agricultural labor. From the static perspective, new farmers not only are farmers born in 1980s and 1990s, but also include previous generation farmers. From the dynamic perspective, new generation farmers are start of cultivation, and the terminal point is cultivating new farmers with rural feeling and emotion, having skills and technologies, good at operation, and having knowledge and modern thinking (Fig. 1). Although new generation farmers and new farmers represent different research groups, domestic researches fail to separate them.

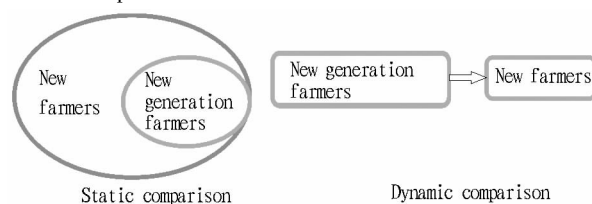


Fig. 1 Static and dynamic comparison of new farmers and new generation farmers

2.2 Capability of new generation migrant workers and agricultural modernization Agricultural modernization is an essential part of China's modernization process, and the development capability of farmers is a factor restricting China's agricultural modernization development. After reform and opening up, due to the gap of China's urban and rural dual economic structure, there occurs shift of numerous labors. In the context of shift of numerous labors, Zhang Xinmin *et al* put forward the concept of "Farmer Shortage" from shrinkage of number of farmers, institutional imbalance, anxiety of quality, and shortage of successors, and held that "Farmer Shortage" is an important mechanism restricting China's agricultural modernization^[9]. How to solve shortage of rural labors and farmer shortage gradually becomes hot spot of researches. Gao Yuan *et al* pointed out major methods for improving development capability of new generation farmers include taking new generation farmers as major force of new professional farmers, encouraging them to devote to agricultural development and rural construction, and taking farming as major profession, to become new generation farmers with knowledge, good at operation and technologies and skills, and stressing on decorum^[8].

2.3 Construction of development capability and thinking ability of new generation farmers With numerous young labor working in cities, rural labors left behind are serious insufficient. How to make benefit demand of separate farmers form systematic power of speech to attract attention of local government or

related departments concerns improvement of development capability of new generation farmers. Yang Hua stated that it is required to strengthen thinking innovation of new generation farmers through training, learning, and knowledge popularization in the process of new socialist countryside construction. Through providing knowledge education and skill training for local farmers, it is recommended to improve subjective initiative of farmers^[15]. Yang Chunjuan

et al believed that ideological education of farmers plays a great role in new socialist countryside construction, and the overall ideological situation of farmers takes on weak cognition of government public trust, prominent subject awareness, accelerated liberation of minds, and pursuit for new life, while there are also problems of high pressure of living, low self quality, weak awareness of responsibility and obligation, and complex ethical ideas^[10].

Table 1 Comparison of researches between new farmers and new generation farmers

Farmer groups	Research objectsBackground	Characteristic traits	
New generation farmers	Born in the 1980s and 1990s, mainly including migrant workers and those engaged in farming	The concept of new generation migrant workers was firstly put forward in No. 1 document of central government 2010. Later, scholars evolved this concept into the concept of new generation farmers.	High cultural quality, changes of thinking and ideas, weakened family responsibility awareness, and declined agricultural production willingness
New farmers	Without limitation of years of birth	The concept of new farmers was put forward in the 10th Five-Year Plan. It is of great significance for China's agricultural modernization and is favorable for alleviating the conflict between excessive labor population and little resources.	Deep agricultural and rural feeling, distinct professional characteristic, strong modern awareness and modernized production and operation capability, and definite economic man attribute and higher social status

2.4 The relation between development capability of new generation farmers and systems and policies

Systems and policies are external environment of development of agriculture, farmers and rural areas and also major factor influencing development capability of new generation farmers. However, since both systems and polices are difficult to quantify, academic circles mainly make simple analysis in theories and there are few empirical analysis. Liu Chunnian *et al* put forward recommendations for improving policy environment from public services, financial system, urban and rural separation system, and separate household operation, and from levels of central government, local government and rural economic cooperatives^[16]. Jiang Yufeng *et al* held that development capability of farmers is internal power of rural development, improper system factor and policy factor are major reasons for weak development capability of farmers, local government should energetically cultivate rural social organizations, promote rural social development, and help farmers to accumulate social capital^[17].

2.5 The relation between development of new generation farmers and rural human resources

Rural human resources are organic integration of physical, mental ability and skills of rural people. They are ability of farmers reached in the process of utilizing and improving natural resources, mainly including physical, skill, and cultural quality. There are many similarities in concept definition between rural human resource development and farmers' development capability. Thus, analyzing factors influencing development of rural human resources will have great reference for improving development capability of new generation farmers.

In the 1960s, American economist Schultz stated that human resource investment such as knowledge, technology, physical power and quality is more important than investment of material capital^[18]. The construction of rural human resource is a long-term investment process. In short period, it is difficult to obtain direct

return. Therefore, local farmers lack investment awareness of human resources. With constant improvement of market, mobility of market elements is gradually increasing. And the function of market in human capital allocation and talent flow is gradually manifesting. In China, there are numerous rural labors but relatively little farmland. After reform and opening up, due to prominent gap of dual economy, numerous farmers become migrant workers. With lapse of the time, there are problems of old aging and hollow villages in rural areas. How to improve development capability of existing farmers and improve level of farmers for "separately working" have become hot spots of researchers. Chen Zhifa *et al* came up with controlling rural labor stock and constantly improving human resource quality to solve related problems according to current situations of the supply of rural human capital exceeding demands in quantity but in short supply in quality^[11]. Gao Qiang *et al* stated that increasing human capital investment can optimize rural human resource structure and realize the objective of controlling rural population stock and improving population quality^[12]. They selected survey samples and made an empirical analysis on rural human capital stock and Gini coefficient of 1995-2008 and verifying rural human capital stock is helpful for optimizing rural human capital structure and improving development capability of farmers^[12].

3 Measurement of development capability of new generation farmers

At present, the measurement of development capability of new generation farmers can be carried out through empirical analysis by multiple dimension construction method and it is recommended to develop scales for measuring development capability of new generation farmers. Preparation of these scales generally includes three level and multiple dimensions and indicators for each dimension are different. Through analyzing characteristics and external envi-

ronment factors of farmers in detail, Zeng Yanhua divided development capability of farmers into 13 indicators^[8], as shown in Fig. 2. The merit lies in overall consideration, while the drawback lies in difficult quantification of some indicators. In addition, only theoretical basis was put forward, but no practical test was given.

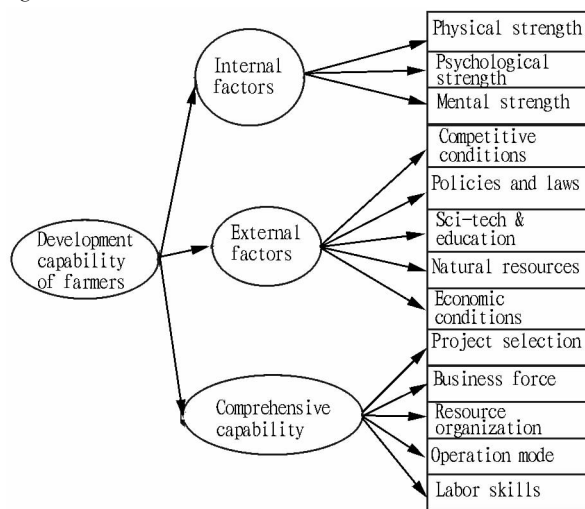


Fig. 2 Building of indicators for development capability of farmers

The scale for measuring development capability of new generation farmers was designed by analytic hierarchy process (AHP). There are many similar indicators, but there is still no uniform classification of indicators at dimension level. Sun Zehou *et al* adopted definition of human resources when designing structure indicators for development capability of new generation migrant workers, made an overall consideration from knowledge, technology, attitude, individual character, and production performance, forming moral ability, intelligent ability, physical ability, and technical ability, and adding psychological ability and mental ability, as shown in Fig. 3, and came up with 6 simple hypotheses, namely, there are positive correlation between moral ability, intelligent ability, physical ability, and technical ability, and adding psychological ability and mental ability and development capability of new generation farmers^[6]. On this basis, they cooperated with Zeng Wenjia *et al* in a social survey on new generation farmers in Hunan, Hubei, Henan, Shanxi, Anhui, and Jiangxi provinces. They made practical application on the basis of questionnaire by factor analysis research method. Through confidence test, they reached the conclusion that Cronbach's coefficient alpha of psychological ability, technical ability, physical ability, moral ability, and intelligent ability is higher than 0.6, the reliability is acceptable, while Cronbach's coefficient alpha of mental ability is slightly lower than 0.6, the reliability is relatively low, and the scale of mental ability needs further perfection^[6]. On the basis of scale of Sun Zehou, Shi Jingyang *et al* selected representative measurement factors and made measurement and comparison of development capability of new generation farmers in central areas. The values assigned for each question adopted Likert-Type five-point scale

method. They made empirical analysis on the basis of extensive questionnaire using grey comprehensive evaluation model, and reached an acceptable conclusion^[13].

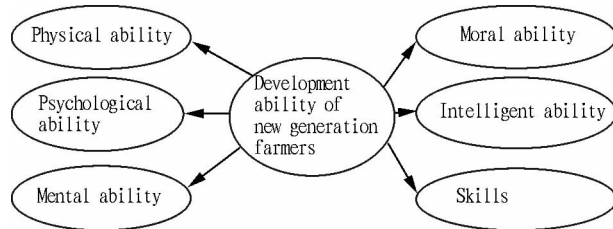


Fig. 3 Building of indicators for development capability of new generation farmers

With gradual improvement of theoretical foundation, theoretical indicators for development capability of new generation farmers are gradually forming, and health, education, technology, and interpersonal interaction of new generation farmers will be basically unified, but there is still dispute about indicator regression and dimension design. At present, quantitative measurement of development capability of new generation migrant workers is relatively difficult, and there is still no uniform scale.

4 Recommendations and prospects

The concept of development capability of farmers is basically unified, but there is still dispute about concept of development capability of new generation farmers. The dispute mainly lies in whether new generation migrant workers with rural household registration belong to new generation farmers, and most of these farmers have become urban residents. Factors influencing development capability of new generation farmers mainly include ideology, organization and training, information acquisition, and ethical concepts. The estimation about development capability of new generation migrant workers is basically forming, and basic indicator system has basically formed common understanding. However, there is still great dispute about indicator regression and dimension design. Some scholars made an overall consideration from internal and external factors. Some scholars made studies from development capability of new generation farmers. Many studies neglect external factors such as policies and laws. Therefore, it is recommended to make studies from following three aspects.

4.1 Further making clear relevant concepts At present, in order to improve agricultural modernization and increase farmers' income, China has set forth many requirements for agricultural operating entities. Under these requirements, name of farmers is varied, such as conventional farmers, new farmers, new generation farmers, professional farmers, and new professional farmers. These concepts have many intersections. In future, researches should focus on comparison between these concepts, to compare differences, and make clear concepts, to lay theoretical foundation for future researches.

4.2 Making systematic theoretical analysis using advantages of cross-disciplines The development capability of new generation farmers involves multiple disciplines, such as Sociology, Eco-

nomics, Management and Psychology. However, theoretical researches about these are extensive and separate, and there are few classic theories to support these researches. Through search of related literature, papers of related theoretical analysis are basically coming from general periodicals and few are from authoritative periodicals. In future, it is recommended to further combine theoretical advantages of multiple disciplines and make theoretical analysis on development capability of new generation farmers.

4.3 Making further exploration of scales and effective empirical analysis At present, academic circles have designed many scales for development capability of new generation farmers, but most scales focus on self development of farmers. Few researches focus on external factors such as policies and environment, and few researches care about empirical analysis on development capability of new generation farmers. Most researches are based on scales and related factors, while few researches touch upon dynamic analysis and comparative analysis of time series and panel data. In future, it is recommended to make extension on the basis of scales, consider time changes in empirical analysis, and make dynamic analysis on changes in development capability of new generation farmers.

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(From page 76)