

A Review on the Research of Digital Technology Empowering the Integration and Development of Rural Industries

Huachao Zha *, Chengchen Hu

School of Economics, Anhui University of Finance and Economics, Bengbu, Anhui 233030, China

* Corresponding author: Huachao Zha (Email: allen19811026@126.com)

Abstract: The innovation and application of digital technology to promote the integration of rural industries and better comprehensively improve the efficiency of rural industrial development has important practical significance. Therefore, this article conducts research on existing literature related to the empowerment of digital technology in the integration and development of rural industries, specifically from four aspects: the theoretical mechanism of digital technology empowering the integration and development of rural industries, research on digital technology and its measurement methods, research on issues related to the integration and development of rural industries, research on the efficiency of rural industry development, and research on digital technology empowering the integration and development of rural industries, And summarize and analyze the main shortcomings of existing literature research, and finally, focus on Anhui Province as an example to propose future research prospects.

Keywords: Digital Technology; Integration of Rural Industries; Research Review.

1. Introduction

Effectively improving the level of digital technology empowering the integration and development of rural industries, continuously promoting the optimization and allocation of rural production factors, is of great significance for accelerating China's agricultural and rural modernization construction and promoting comprehensive rural revitalization.

The report of the 20th National Congress of the Communist Party of China pointed out that "the most arduous and arduous task of building a socialist modernized country in all respects still lies in rural areas", and it is necessary to "prioritize the development of agriculture and rural areas, adhere to the integration of urban and rural development, and facilitate the flow of urban-rural factors". The Guiding Opinions of the Ministry of Agriculture and Rural Affairs on Expanding the Multiple Functions of Agriculture and Promoting the High-Quality Development of Rural Industries, released in 2021, pointed out that we should "promote the integrated development of rural agriculture, culture and tourism", "adhere to the development of agriculture through science and technology", and actively guide agriculture to "achieve industrial digitization and digital industrialization". So, how to accelerate the integration and development of rural industries, digital rural and agricultural modernization construction, accelerate the improvement of urban-rural factor allocation efficiency, better promote the optimization of rural production factor allocation, better promote the implementation of rural revitalization strategy, and faster promote China's agricultural and rural development has become an important theoretical research topic at present.

The extensive practice in the field of rural revitalization in China has shown that using technological means to promote the deep integration and development of rural industries is an important way to accelerate the modernization of agriculture and rural areas in China. In this context, Anhui, as an

important agricultural province in central China, should play a more important role in accelerating the integration and development of rural industries, better promoting the optimal allocation of rural production factors, better promoting the implementation of rural revitalization strategies, and faster promoting the agricultural and rural development of central China. Of course, how to better promote the efficiency level of digital technology empowering the integration and development of rural industries has been highly valued by the Anhui Provincial Government. The "Anhui Rural Revitalization Strategic Plan (2018-2022)" (referred to as the "Plan") released in 2018 pointed out that "driving the acceleration of capital, talent, technology, industry and other factors to gather in rural areas is expected to stimulate unprecedented new momentum for rural development". However, at the same time, the "Plan" also emphasizes that "the problem of imbalanced and insufficient development in agriculture and rural areas in our province is still widespread", such as "the imperfect system of supporting and benefiting agriculture, the heavy task of rural financial reform, and the urgent need to improve the reasonable flow mechanism of factors between urban and rural areas". Therefore, this article conducts a study on the literature related to the empowerment of rural industry integration development by digital technology. It will specifically review the theoretical mechanism of digital technology empowerment of rural industry integration development, research on digital technology and its measurement methods, research on issues related to rural industry integration development, research on the efficiency of rural industry development, and research on digital technology empowerment of rural industry integration development, The main shortcomings of existing literature research will be summarized and analyzed. Finally, with Anhui Province as the key research object, future research prospects will be proposed.

2. Research on the Theoretical Mechanism of Digital Technology Empowering the Integration and Development of Rural Industries

The empowerment of digital technology for the integrated development of rural industries has a profound theoretical foundation. Existing research has not only conducted in-depth analysis and exploration of concepts such as digital technology, rural industries, industry city integration, urban-rural integration, cultural integration, environmental integration, lifestyle integration, deep integration of rural agriculture, culture, tourism and health, integration of the entire agricultural industry chain, efficiency of rural industry development, and rural supply chain, but more importantly, The existing literature focuses on exploring the theoretical mechanism of digital technology empowering the integration and development of rural industries from three levels: supply side, demand side, and governance side.

2.1. At the Supply Side Level

Firstly, the innovation and application of digital technology help rural residents, agricultural enterprises, and rural collectives participate in the process of rural industrial integration and development in various forms. This not only changes the value creation method of rural agricultural, cultural, tourism, and health enterprises, strengthens the management effectiveness of rural economic production and operation entities in production and operation, but also helps to improve the coverage and depth of rural inclusive finance services, And the improvement of the efficiency and quality of integrated development of rural industries. Secondly, the integration and widespread application of digital technology in the agricultural, cultural, tourism, and health industry chain has promoted professional division of labor among enterprises on the value chain of the agricultural, cultural, tourism, and health industry, strengthened the synergy of the supply chain of the agricultural, cultural, tourism, and health industry, and the value creativity of the value chain of the agricultural, cultural, tourism, and health enterprise. It has also expanded the carrier of value creation in rural industries. Once again, the improvement of rural digitalization level has weakened the boundaries of rural agricultural, cultural, tourism, and health industries, giving rise to various "cross-border" new development models such as "agricultural, cultural, tourism, health, tourism, tourism, and health". This has enhanced the vertical and horizontal integration development level of the agricultural, cultural, tourism, and health industry, helping to extend, supplement, and strengthen the entire chain of rural industries, and comprehensively enhancing the value acquisition ability of the agricultural, cultural, tourism, and health industry.

2.2. At the Demand Side Level

The popularization and application of digital technology can have a positive impact on the demand side from both purchasing desire and purchasing ability. On the one hand, the transformation of sales models for agricultural products, rural cultural, tourism, and health products and services, as well as the development and promotion of domestic and cross-border e-commerce platforms in rural areas, will help rural agricultural, cultural, tourism, and health enterprises expand their advertising coverage, enhance the effectiveness, diversity, and low-cost of customer acquisition, and

continuously stimulate the enhancement of domestic and foreign consumption desires and the release of diversified consumption needs, Generate incentive effects for collaborative cooperation among rural agricultural, cultural, tourism, and health enterprises. On the other hand, promoting the popularization and application of transaction services related to purchasing power such as mobile payment and online consumer credit in rural areas and rural residents can help reduce transaction costs, expand transaction scale, and improve transaction efficiency of rural agricultural, cultural, tourism, and health products and services, which is conducive to the agglomeration and collaborative progress of rural agricultural, cultural, tourism, and health industries. In addition, digital technology is also conducive to the comprehensive supply chain development of village collectives, cooperatives, growers, farmers, and rural enterprises. It helps to break the urban-rural division and regional barriers of rural market demand quickly, with low investment and convenience, promote the establishment of a unified rural market, and accelerate the integration and development of rural industries.

2.3. At the Governance Level

Embedding digital technology into rural governance can reshape the structure of rural governance, enhance the precision, intelligence, and effectiveness of rural governance, help enhance the development confidence and service determination of micro entities related to rural industries, and play a positive role in empowering the integrated development of rural industries in Anhui. Digital technology reshapes rural governance structure, enhances rural organizational leadership, village affairs transparency, rural culture, rural rule of law, resolution of rural conflicts and disputes, clean construction of grassroots small and micro power, diversification of rural governance, and rural service capacity for agriculture. This will help reshape service value, integrate public service functions, and enhance governance subjectivity (Li Xiaoyun et al., 2021) [1], broaden rural governance boundaries, and reshape rural governance processes Optimizing the rural governance system and enhancing rural digital governance capabilities (Huang Xinhua et al., 2022) [2], as well as improving farmers' digital literacy, stimulating digital governance vitality, and narrowing the urban-rural digital divide (Ding Bo, 2022) [3], have a positive effect, leading to a significant improvement in the level of rural public services, public management, and public safety protection, thereby helping to improve the external environment for the integrated development of rural industries, Empowering and enhancing the integrated development of rural agriculture, culture, tourism, and health industries in Anhui.

3. Research on the Measurement of the Integration Development Level of Digital Technology and Rural Industries

The in-depth and effective research on digital technology and its measurement, as well as the measurement of the level of rural industrial integration development, has important reference value for a clearer understanding of China's rural industrial integration development and faster promotion of China's agricultural and rural development.

3.1. Research on Digital Technology and its Measurement Methods and Related Issues

Previous studies have pointed out that digital technology is a collective term for various digital technologies, mainly including the Internet, blockchain, big data, cloud computing, artificial intelligence, and other content. The measurement methods mainly include using internet development as a proxy variable and constructing a comprehensive indicator system to calculate the digital technology development index (Jiang Song et al., 2020; Liu Ziyu, 2023) [4-5]. Chinese scholars have proposed different measurement methods for measuring the level of digital technology development. On the one hand, it can be measured from two dimensions: digital basic resources and digital interconnection (Ren Zhuanzhuan et al., 2021) [6]; On the other hand, measurement and analysis can also be conducted from the aspects of business income, employees, internet and mobile phone usage, and inclusive financial development in the development of the digital technology industry (Wang Qin et al., 2022) [7]; Of course, some scholars also measure it from dimensions such as digital technology infrastructure, application level, and development environment (Liang Huichao et al., 2022) [8]. These measurement results all indicate that the development level of

digital technology in China has been greatly improved, highlighting China's outstanding achievements in digital technology research and development innovation and active implementation and application. However, at the same time, there is significant regional heterogeneity in the development level of digital technology in various provinces, cities, and regions in China, which overall shows that the eastern region has the highest level of digital technology development. The development trend of digital technology in the central and western regions is relatively weak.

3.2. Research on the Measurement of the Level of Integrated Development of Rural Industries

Firstly, after analyzing existing research, it was found that the evaluation system for rural industry integration development can be constructed by scientifically and systematically selecting indicators from four dimensions: agricultural development, rural cultural industry development, rural tourism industry development, and rural health industry development (see Table 1), and the level of rural industry integration development can be measured and analyzed.

Table 1. Evaluation System for the Integration and Development of Rural Industries

Dimensional indicators	Evaluation content	Specific indicators
Agriculture	Agricultural inputs	Ratio of effective irrigation area to sown area of grain crops (%)
		Proportion of agricultural workers in rural areas (%)
		Total power of agricultural machinery per unit (kW/ha)
		Fertilizer usage intensity (tons/hectare)
		Usage of agricultural plastic film (ton/hectare)
	Agricultural output	Growth rate of agricultural industry development (%)
		Per capita agricultural, forestry, animal husbandry, and fishing output value (yuan/person)
		Grain output efficiency (grain yield per unit area (kg/ha))
		Per capita disposable income of rural residents (yuan)
Development of rural cultural industry	Rural cultural industry investment	Number of public libraries
		Number of museums
		Number of rural cultural stations
		Degree of protection of rural characteristic culture (%)
	Output of rural cultural industry	Culture, Sports, and Media Expenditure (yuan)
		Number of cultural and creative enterprises
		Number of personnel in cultural and creative enterprises (person)
Development of rural tourism industry	Investment in rural tourism industry	Number of tourism characteristic towns
		Number of county-level star rated hotels
		Number of county-level A and above scenic spots
	Output of rural tourism industry	Number of tourists received (person times)
		Tourism income in rural areas (10000 yuan)
		Poor evaluation of tourism in rural areas (%)
Development of rural health industry	Investment in rural health and wellness industry	Number of rural nursing homes
		Rural ecological environment protection efforts (%)
		Rural health infrastructure investment (10000 yuan)
		Rural medical conditions (number of medical personnel)
	Output of rural health and wellness industry	Number of rural health care construction sites
		Number of rural health and wellness demonstration villages
		Positive rating of rural health land (piece)

The summary of Table 1 shows that 29 specific indicators can be selected from both input and output levels to measure and study the agricultural development index, rural cultural industry development index, rural tourism development index, rural health industry development index, and final index, and then analyze the true level of rural industry integration development. For the measurement methods of indices, existing research generally uses standardized methods to

perform dimensionless processing on the level data of basic indicators, and then uses methods such as entropy method, principal component analysis, coefficient of variation method, or analytic hierarchy process to measure the weight values of each basic indicator. Finally, simple linear weighting method, Euclidean distance method, or anti Euclidean distance method are used to calculate the index value.

Furthermore, based on the measurement results in Table 1

and the approach of XieYuntian (2022) [9], the degree of integration and development of rural industries can be measured by utilizing the coupling coordination degree of rural industries and the respective contribution values of agricultural, cultural, tourism, and health industries to coupling coordination. The formula used is:

$$D_i = \sqrt{X_i \times G_i} \quad (1)$$

Among them, D_i represents the degree of integration of rural industries, X_i represents the coordination degree of agriculture, rural cultural industry, rural tourism industry, and rural health industry, and G_i represents the contribution value of these four industrial subsystems to the degree of integration. The numerical value of D_i is between 0 and 1, and the closer the value is to 0, the lower the fusion degree; The closer the value is to 1, the higher the degree of integration, that is, the better the integration status of rural industries. Of course, due to the inconsistent use of indicators and methods, there are also certain differences in the calculation results.

4. Research on the Empowerment of Digital Technology and the Integration and Development of Rural Industries

4.1. Research on Issues Related to Digital Technology Empowerment

Existing research has pointed out that high-quality development of agriculture is the only way to achieve agricultural modernization. Digital technology helps to promote deep integration of the agricultural industry chain, strengthen intelligent control of agricultural production links, and promote precise cultivation of agricultural business entities. It is the core element and important driving force for high-quality development of agriculture (Yang Jianli et al., 2021; Luo Qianfeng et al., 2022) [10-11]. At the same time, digital technology, with its advantages of reducing transaction costs, improving resource utilization, and reducing information asymmetry, effectively promotes the digital transformation of rural economy, governance, culture, ecology, and other aspects, providing new opportunities for the implementation of rural revitalization strategies (Li Jian, 2022) [12]. Digital technology provides new opportunities, driving forces, and vitality for the integrated development of urban and rural areas (Xie Lu et al., 2022) [13], and is a key element in promoting the integrated and innovative development of rural cultural and tourism industries (Lu Renjing, 2022) [14]. Empirical research shows that digital technology has a promoting effect on the integration and development of the tourism industry and the tertiary industry, and the impact of digital technology on the integration and development of the tourism industry and the tertiary industry shows a U-shaped change (Liang Huichao et al., 2022) [15].

4.2. Research on Other Related Issues of Rural Industrial Integration and Development

A large amount of literature has paid attention to the connotation, characteristics, motivations, models, integration degree calculation, and path design of the integrated development of rural industries. It is believed that rural cultural tourism integration, agricultural tourism integration, and health tourism integration are important focus points to promote the integrated development of rural primary,

secondary, and tertiary industries, and agricultural, cultural, and tourism industries should be included in a unified indicator system, Measure the level of integrated development of rural industries by measuring the development index that includes different rural industries (XieYuntian, 2022; Yang Binbin, 2022; Zhang Chunyan, 2022) [16-18].

The existing literature has further conducted research on the measurement of factor allocation efficiency in urban and rural industrial development, and mainly follows the following two ideas:

One is to measure the efficiency of factor allocation in urban or rural areas separately, and to compare and analyze urban and rural areas in a single research system. As Schultz (1964) and Sahota (1968) found [19-20], although developing countries have limited types of resource elements and single production techniques in traditional agriculture, the allocation of factor resources is already in its optimal state. Zhang Rixin et al. (2009) studied the market factor allocation mechanism of China's new rural construction starting from the allocation mechanism of new rural construction factors [21]. Li Zhiguo (2021) used the Stochastic Frontier Analysis (SFA) method to estimate the total factor productivity of China's urban manufacturing industry by establishing a transcendental production function, in order to reflect the factor allocation status of urban areas in China [22].

The second is to incorporate urban and rural areas into the same research framework, using the random frontier function method, Aoki production function method, and non-agricultural and agricultural sector factor mismatch coefficient method to measure and analyze the factor allocation efficiency of China's urban-rural industrial development. For example, Xi Jianguo et al. (2011) used a stochastic frontier model that surpasses the logarithmic production function to calculate the change rate of factor allocation efficiency in each province [23]. Zhuomacao (2021) used the deductive Aoki production function accounting framework to calculate and found that the overall level of human capital mismatch in China has improved and shows a structural change trend [24]. Zhou Fangming (2021) constructed a factor mismatch model between the agricultural and non-agricultural sectors, and found that the allocation of factors in China's nonagricultural sectors is showing a positive trend year by year, but the factor mismatch in the agricultural sector is severe and has improved since 2014 [25].

5. Brief Review and Future Prospects

5.1. Brief Review

In the context of the new era, Chinese scholars have conducted fruitful research on the theoretical mechanism of the impact of digital technology on the integrated development of rural industries, the definition and measurement methods of digital technology, the connotation and measurement index system construction of China's rural industrial integration development, as well as the efficiency of rural industrial development and empirical evidence of digital technology empowering rural industrial integration development, And has achieved a large number of fruitful research results.

Of course, in the current macro-economic environment where digital technology and rural industry integration are highly valued, although relevant research has important reference significance and theoretical reference value, there

are at least three areas that can be expanded: firstly, how to more comprehensively interpret the connotation of rural industry integration development? How to distinguish the characteristics and stages of the integrated development of rural industries? And how to conduct more convincing measurement analysis? Secondly, how to systematically classify the main factors that contribute to the development of rural industries in China, such as labor, capital, land, technology, and data, while fully considering the implementation background of the rural revitalization strategy, and incorporate these factors into the same framework for in-depth research on input, output, and smooth circulation? And how to more scientifically evaluate the input-output efficiency of factors in the integrated development of rural industries in China? Thirdly, how to reasonably design feasible paths to better leverage the role of digital technology in empowering the integrated development of rural industries in China? How to take Anhui Province, the most important agricultural province in central China, as an example to conduct in-depth theoretical and survey analysis research work, and then propose more targeted and constructive countermeasures and suggestions.

5.2. Future Research Prospects

Given the scarcity of existing literature specifically targeting major agricultural provinces in China, future research on digital technology empowering the integration and development of rural industries may place more emphasis on more micro level research in provinces, cities, and regions in China. For example, there may be a large number of related studies taking Anhui Province as an example to make up for the shortcomings of this research.

5.2.1. Investigation and Analysis of the Current Situation and Difficulties in the Deep Integration Development of Rural Industries in Anhui Province

Future research can be based on the actual situation in Anhui, by collecting and organizing existing relevant literature, and combining first-hand information obtained through field research, to summarize and analyze the current situation and main challenges faced by the deep integration development of rural industries in Anhui. It is possible to explore the real situation of the integration and development of agriculture, rural cultural industry, rural tourism, and rural health industry in Anhui under the background of the rapid development and widespread application of digital technologies such as the Internet, blockchain, big data, cloud computing, 5G, and artificial intelligence, and specifically involve the process, laws, and phased characteristics of the deep integration and development of rural industries in Anhui. It is also possible to explore the potential difficulties in the deep integration and development of rural industries in Anhui, which can be specifically explored from technical factors, infrastructure construction in rural areas, urban-rural digital divide, rural financial investment, rural digital talent construction, as well as social capital investment in rural areas, high-quality labor supply in rural areas, foundation for rural industrial integration and development, and digital rural governance.

5.2.2. Empirical and Policy Design Research on Rural Areas in Anhui Province

Future research may focus more on analyzing the mechanism of digital technology empowering the deep integration development of rural industries in Anhui, and then

scientifically and reasonably construct the "Anhui Rural Industry Development Evaluation System" to measure and compare the development level of rural industry integration in Anhui, as well as the problems manifested in rural industry integration development. Of course, empirical analysis of the impact of digital technology on the deep integration development of rural industries in Anhui, especially exploring the threshold effect, direct effect, and indirect effect of digital technology on the deep integration development of rural industries in Anhui, will also be an important issue that urgently needs further research in the future.

At the same time, based on the research and analysis conclusions, there are five models for the integrated development of rural industries in Anhui, namely: the development model led by ecological rural leisure and health preservation, the development model driven by characteristic agricultural viewing experience, the development model attracted by characteristic rural folk vacation tourism, the development model supported by rural natural appreciation of green health, and the development model expanded by rural agricultural science education. Conduct in-depth research and analysis. By analyzing the characteristics, resource requirements, and development strategies of these five development models, and from the perspectives of rural industrial chain and value chain, we focus on exploring the empowering role of digital technology in these five development models, summarizing the achievements and still existing shortcomings in rural areas of Anhui Province, and proposing corresponding solutions and implementation strategies. Finally, draw a path map of digital technology empowering the deep integration development of rural industries in Anhui, and design policy recommendations for digital technology empowering the deep integration development of rural industries in Anhui from the perspectives of strengthening institutional leadership, improving digital rural construction, promoting rural digital talent cultivation, consolidating data connectivity, and promoting digital development of rural industries.

Acknowledgments

This study was funded by the 2023 Anhui Province Research and Development Plan Project "*Research on Measuring and Improving the Efficiency of Urban and Rural Factor Allocation in Anhui from the Perspective of Rural Revitalization*" (No. 2023AH050209); The research achievement of the 2022 Anhui Province Social Science Innovation and Development Research Project "*Research on the Deep Integration of Digital Technology Empowering Rural Agriculture, Culture, Tourism and Health*"(No. 2022 CX044).

References

- [1] Li Xiaoyun, Deng Song, Hu Jia. Empowering Township Government Services with Digital Technology: Logic, Obstacles, and Approaches [J]. *Electronic Government*, 2021 (08): 29-39.
- [2] Huang Xinhua, Chen Baoling. Governance Dilemma, Digital Empowerment, and Institutional Supply: The Realistic Logic of Digital Transformation in Grassroots Governance [J]. *Theoretical Journal*, 2022 (01): 144-151.
- [3] Ding Bo. Digital Empowerment or Digital Burden: Practical Logic and Reflection on Digital Rural Governance [J]. *Electronic Government*, 2022 (08): 32-40.

- [4] Jiang Song, Sun Yuxin. Empirical Study on the Impact of the Digital Economy on the Real Economy [J]. *Research Management*, 2020 (05): 32-39.
- [5] Liu Ziyu, Luo Mingzhong. The impact of digital technology on the common prosperity of farmers: a "gap" or a "bridge"? [J]. *Journal of Huazhong Agricultural University (Social Sciences Edition)*, 2023 (01): 23-33.
- [6] Ren Zhuanzhuan, Deng Feng. Digital Technology, Factor Structure Transformation, and High-Quality Economic Development [J]. *Soft Science*, 2023 (01): 9-14+22.
- [7] Wang Qin, Yang Ying, Cheng Xinwei. Research on the Integration and Development of Jiangsu's Cultural Industry and Digital Technology Industry [J]. *Art 100*, 2022 (02): 51-56+70.
- [8] Liang Huichao, Ren Lixuan. Research on the Path of Digital Technology Promoting the Integrated Development of Tourism and Three Industries [J]. *Finance and Trade Research*, 2022 (06): 12-25.
- [9] Xie Yuntian. Research on Rural Economic Development in Northeast China's Three Provinces from the Perspective of Cultural and Tourism Integration [J]. *Scientific Decision Making*, 2022 (06): 125-135.
- [10] Yang Jianli, Zheng Wenling, Xing Jiaoyang, JinWenwen. Digital technology empowers high-quality agricultural development [J]. *Shanghai Economic Research*, 2021 (07): 81-90+104.
- [11] Luo Qianfeng, Zhao Qifeng, Zhang Lixiang. Theoretical framework, efficiency enhancement mechanism, and implementation path of digital technology empowering high-quality agricultural development [J]. *Contemporary Economic Management*, 2022 (07): 49-56.
- [12] Li Jian. The Inner Mechanism and Policy Innovation of Digital Technology Empowering Rural Revitalization [J]. *Economic System Reform*, 2022 (03): 77-83.
- [13] Xie Lu, Han Wenlong. Theoretical Logic and Implementation Path of Digital Technology and Digital Economy Assisting Urban Rural Integration Development [J]. *Agricultural Economic Issues*, 2022 (11): 96-105.
- [14] Lu Renjing, Yu Riji. The Value Implication and Practice Path of Digitalization Assisting the Integrated and Innovative Development of Rural Culture and Tourism Industry [J]. *Nanjing Social Sciences*, 2022 (05): 152-158.
- [15] Liang Huichao, Ren Lixuan. Research on the Path of Digital Technology Promoting the Integrated Development of Tourism and Three Industries [J]. *Finance and Trade Research*, 2022 (06): 12-25.
- [16] Xie Yuntian. Research on Rural Economic Development in Northeast China's Three Provinces from the Perspective of Cultural and Tourism Integration [J]. *Scientific Decision Making*, 2022 (06): 125-135.
- [17] Yang Binbin, Wei Jie, ZongYixiang, Wang Junqin. Measurement of Rural Industrial Integration Development Level [J]. *Statistics and Decision*, 2022 (02): 125-128.
- [18] Zhang Chunyan, Zi Mingguai, Zhou Meng, Luo Jing. Measurement of Rural Tourism Integration and Its Influencing Factors: A Case Study of Qianshan City in the Dabie Mountains [J]. *Progress in Geographic Science*, 2022 (04): 595-608.
- [19] Schultz, T.W. *Transforming Traditional Agriculture* [M]. New Haven: Yale University Press, 1964.
- [20] Sahota, G S. Efficiency of Resource Allocation in Indian Agriculture [J] *American Journals of Agricultural Economics*, 1968 (03): 584-605.
- [21] Zhang Rixin, Wang Guangshen, Wan Junyi. Research on the allocation mechanism of market factors in the construction of new rural areas [J]. *Modern Economic Exploration*, 2009 (04): 68-71.
- [22] Li Zhiguo, Wang Jie. Development of the Digital Economy, Allocation of Data Elements, and Productivity Improvement in Manufacturing Industry [J]. *Economist*, 2021 (10): 41-50.
- [23] Xi Jianguo, Hong Qi. Measurement of the Change Rate of Factor Allocation Efficiency in Various Provinces of China: Based on the Stochastic Frontier Model [J]. *Jiangxi Social Sciences*, 2011 (4): 79-82.
- [24] Zhuoma Cao. Analysis of the Mismatch Effect between Factor Allocation and Human Capital in China by Industry [J]. *Journal of Beijing University of Technology (Social Sciences Edition)*, 2021 (04): 113-123.
- [25] Zhou Fangming. Coordinated Measurement and Evolutionary Analysis of Urban Rural Factor Allocation in China [J]. *Statistics and Decision Making*. 2021 (23): 54-58.