ISSN: 2688-9323

Research on the Effect and Countermeasures of Digital Empowerment for High-Quality Development of Rural Eco-Industries

-- Empirical Evidence based on Data from 16 Cities in Anhui Province

Dan Wu*

School of Finance and Public Administration, Anhui University of Finance and Economics, Bengbu, China

Abstract

In the organic system of rural eco-industry, giving full play to the productivity of data elements has a profound impact on the high-quality development of rural eco-industry. This paper adopts the entropy weight method to measure the rural digitalization level of each municipality in Anhui Province from 2010 to 2020, and constructs an econometric panel model of rural digitalization index and eco-industry development. The regression results show that digitalization has positive empowerment benefits for rural eco-industry development. In addition, the heterogeneity analysis of different cultural and educational resources in the model finds that it restricts the degree of influence of both to a certain extent, and the influence coefficient is higher in areas rich in cultural and educational resources. Therefore, stimulating the inner life of digital industry, strengthening digital technology training, enhancing cultural and educational resources, and activating ecological industry development elements have positive significance in accelerating the construction of digitally empowered rural eco-industry development.

Keywords

Digitalization; Rural Eco-industry; Entropy Method; Regression Analysis; Heterogeneity Analysis.

1. Introduction

With the development of modern digital technology, digital empowerment of rural revitalization has become a trend, and the 14th Five-Year Plan has made clear arrangements for promoting the construction of digital countryside. Rural eco-industry is the key to China's adherence to the "two mountains" theory, implementation of sustainable development strategy, construction of ecological civilization system to promote comprehensive green transformation of economic and social development, and also a response to the realistic problem of strengthening ecological civilization construction. As an important part of rural revitalization, the construction of an effective circulation mechanism for high-quality development of rural ecological industries requires strengthening the effectiveness of rural digital governance and giving full play to the productivity of data elements in the organic system of rural ecological industries. From the yearbook data released by the National Bureau of Statistics, the total output value of agriculture, forestry, animal husbandry and fishery industry has grown by about 4.2% annually on average, and the rural industry has made certain achievements in economic development and is now in a new development stage of consolidating the achievements of poverty eradication and comprehensively promoting the rural revitalization

ISSN: 2688-9323

strategy. At the same time, the construction of ecological civilization in China has entered the fast lane, and the concept of "green water and green mountains are the silver mountain of gold" is deeply rooted in people's hearts, so the development potential of ecological industries is vast. How to stimulate the development vitality of rural eco-industry and consolidate the revitalization under the new development stage in line with the policy demand is a development issue that should be considered at present. It is worth paying attention to the fact that the digital economy is also in the stage of rapid development in the same period, with the scale of digital economy added value in 47 countries around the world in 2021 being USD 38.1 trillion, accounting for 45% of GDP. The application of digital information technology has driven many industries such as Internet finance and e-commerce forward, overcoming the shortcomings in traditional transactions and significantly contributing to the development of social economy. So can digital technology significantly contribute to the high-quality development of rural eco-industries? Through which factors does digitization empower rural eco-industries? Is the mechanism of its influence on industrial development moderated by the difference in cultural and educational resources? To address these questions, this paper analyzes the effects and influencing factors of digitization on the high-quality development of rural eco-industries, using the data of each prefecture-level city in Anhui Province as an indicator, in order to make a small contribution to the implementation of China's strategy and the construction of ecological civilization, and to provide suggestions for the deep integration of rural eco-industries and ecological revitalization.

2. Review of Literature

2.1. Digital Economy Drives the Development of Other Industries

Digital technology is the foundation of modern information technology. The drive and popularity of digitalization have enabled various industries in different fields to develop steadily and enjoy more specialized information technology services, breaking the traditional time and space restrictions, and promoting the digital transformation of industries and the construction of digital China in an efficient and convenient way. In terms of research on digitally enabled industrial development, most scholars affirm the positive effects of digital technology, which provides a clear direction for this paper on digitally enabled rural ecological industrial development. Wooding[1](2022) argues that economic growth in the new era has become inseparable from the intrinsic drive of the digital economy, and in this context, the digital transformation of industries has become an inevitable direction. It can be seen that digitalization has become a major trend for the development of society, and digital technology is widely used in various fields. Chinese scholars have also made detailed analysis of digital technology applications in various fields. For example, in the field of education, Zhu Zhiting and Hu Jiao[2](2022) proposed the connotation of the concept of digitalization in education and analyzed its mechanism logic through the theory of variables, using the advantages of digital technology to promote the education system to have stronger operational vitality and service value; for manufacturing enterprises, Bai Fuping et al[3]. The stronger the degree of intellectual property protection and environmental dynamics, the more obvious the enhancement benefits.

2.2. High-quality Development of Rural Eco-industry

From the perspective of high-quality development of rural eco-industry, eco-industry has become a hot topic of concern for all walks of life, and the existing literature mainly focuses on three aspects of research. First, based on the development of industrial integration, Wang Yan et al. [4](2022) take the three southern Xinjiang prefectures as an example, from the perspective of ecological position, on the basis of developing agriculture, through the organic combination with science and technology, industry and ecological environment, integrating one, two and three industries, and propose that the radiation-driven role of the central city should

ISSN: 2688-9323

be focused. Second, from the perspective of industrial structure, we promote the construction of rural ecological industries through the adjustment of industrial structure. Based on industrial ecosystem and Logistic symbiosis model, Cui Wenjing et al. [5](2022) measured the diversity index of industries and the symbiosis pattern among industries, and the comprehensive evaluation concluded that the diversity of industrial ecosystem and the entropy increase trend of the whole system are significant, and the integration of three industries in rural areas can be promoted by adjusting the structure of industrial ecosystem. However, due to the large number of factors influencing the ecological industrial structure, its accuracy still needs to be verified by multiple studies. Third, based on the influence mechanism, mechanism development-related countermeasures are proposed. As early as 2012, scholars Zheng Xiangjuan and Ren Chunxiao[6] took Ningbo, Zhejiang Province, as a base point and elaborated that agriculture could become one of the new growth points for local economic development, while proposing four combinations of eco-industry: combination with resource endowment, combination with food safety, combination with agricultural science and technology, and combination with increased investment. In the light of China's current economic development level and status, the development of eco-industry is still inseparable from these four combinations, but the development level of the study area is not comparable to that of other regions, which makes the study also have certain limitations.

2.3. The Empowering Effect of Digitalization on the High-Quality Development of Rural Eco-industries

From the above literature analysis, the research on digital empowerment and high-quality development of rural eco-industries has been explored in depth from different aspects by scholars. The empowering effect of digital economy on rural industries can be divided into two aspects: Li Benqing and Yue Hongzhi[7](2022) conducted an empirical study on the relationship between digital economy and high-quality development of agriculture; Zhang Yunping and Luan Jing[8](2022) analyzed the mechanism and constraints of digital economy empowering rural revitalization from a theoretical perspective. Combined with the existing literature in academic circles, there are abundant studies on the digital economy promoting the development of rural industries in China but less attention is paid to the rural eco-industry, which lacks to reveal the effect of digital empowerment on the high-quality development of rural eco-industry and the possible regional heterogeneity due to the differences of factors. Compared with previous studies, this paper will clarify the bottlenecks in the development of rural eco-industries and make reasonable use of digitalization as an opportunity to promote industrial development. In addition, from the perspective of cultural and educational resource differences, we analyze the differences in empowerment effects brought by resource endowments, and empirically explore the mechanism of the role of developing digital technology to empower rural eco-industries based on the data of 16 cities in Anhui Province from 2010 to 2020, and explore the rural development paths to promote domestic eco-industries.

3. Theoretical Analysis and Hypothesis Formulation

3.1. The Effect of Digitalization in Empowering the High-Quality Development of Rural Ecological Industry

The significance of rural digitization is to effectively enhance the modernization of rural governance, narrow the development divide between urban and rural areas, bring into play the driving role of information technology for rural revitalization, and provide a strong foundation for the new development pattern. The technological advantages brought by digitization provide dividends for rural economic development and contribute to the information power of the rural

ISSN: 2688-9323

economy in a new era (Yang Mei and Wang Yuan mow[9] , 2022). Rural areas generally have information asymmetry, single production structure, and differences in development resources in the development process, while digitization can realize the rational allocation of information resources with the help of digital technology, enhance the governance capacity of digital industry, and develop each distinctive rural digital economy model by giving full play to the advantages of digital technology (Ning, Yang[10], 2022), which provides more diversified conditions and a broad business scope, and promote the effective integration of digital technology and rural ecological industries. In addition, digital technology breaks the limitations of traditional development, and the pace of digital construction of various circulation channels in rural areas creates a digital propaganda platform for the development of various industries, realizes digital transactions and other channels, and promotes the construction of rural modernization (Liu Lei[11], 2022). With the help of such platforms, rural eco-industries can easily build a bridge of industry + market, thus enhancing the utility of consumers and also widening the space of industries to promote the high-quality development of rural eco-industries.

Hypothesis 1: Digitalization effectively empowers the high-quality development of rural eco-industries.

3.2. Differentiation of Cultural and Educational Resource Elements

The empowering effect of digitization on rural ecological industry may have non-linear influence by the interference of other factors, as the basic assumption above is also the analysis under the premise of homogeneous regional development. With the continuous improvement of science and technology and the gradual optimization of national economic level, there are still large differences between urban and rural economic development. The lack of rural resources is the main reason for the existence of urban-rural development differences, while rural cultural and educational resources are important conditions for strengthening the cultivation of rural talents, promoting farmers' skills training, promoting rural economic growth, and achieving rapid rural economic development (Zheng Yunping[12], 2022). Therefore, the differences in regional resource endowments, especially cultural and educational resources, should be taken into account. Wang Dingxiang and Ran Ximei[13](2022) conducted an empirical analysis with human resource variables that included years of education as an indicator and found that the richer the accumulation of rural human capital, the more beneficial digital technology is to enhance the integration development of rural industries. The degree of effect of digitally empowering high-quality development of rural eco-industries varies in different regions with different cultural and educational resources. In summary, the following hypotheses are proposed.

Hypothesis 2: There is heterogeneity in the degree of digital empowerment of high-quality development of rural eco-industries in rural areas with different levels of culture and education.

4. Empirical Tests

4.1. Variable Selection

4.1.1. Explanatory Variables

High-quality development of rural eco-industry (Eco): Referring to the research of Lu Zhaoyang and Du Yutong [14] on high-quality development of agriculture, we construct an evaluation index system and adopt the entropy value method to calculate the weights of each index in the evaluation index system of high-quality development of rural eco-industry to measure the high-quality development of the final rural eco-industry. The specific steps are as follows.

ISSN: 2688-9323

Table 1. Evaluation index system of high-quality development of rural ecological industry

Explanatory variables	Primary indicators	Secondary indicators	Direction
High-quality development of rural eco-industry	Economic efficiency	Total output value of agriculture, forestry, animal husbandry and fishery	+
		Per capita gross product	+
	Social benefits	Annual per capita disposable income of rural residents	+
		Expenditure on agriculture, forestry and water affairs	+
		Urban population share	+
	Environmental benefits	City-wide afforestation area	+
		Per capita water resources	+

In the first step, the indicators in the indicator system are standardized as follows.

$$X_{ijt} = \frac{x_{ijt} - \min(x_{ijt})}{\max(x_{ijt}) - \min(x_{ijt})} \quad (1)$$

Where X_{ijt} is the standardized value of the jth indicator in province i in year t, x_{ijt} is the raw data of the indicator, max(x_{it}) is the maximum value of the jth indicator in all provinces, and min(x_{it}) is the minimum value. (i=1,2, ..., m; j=1,2, ..., n; m is the number of provinces, n is the number of indicators)

In the second step, the normalization of indicators:

$$Z_{ijt} = X_{ijt} / \sum_{i=1}^{m} X_{ijt} \quad (2)$$

In the third step, the entropy value of each indicator is calculated:

$$E_j = -\frac{1}{lnmn} / \sum_{i=1}^{m} Z_{ijt}\, lnZ_{ijt} \quad (3)$$

In the fourth step, the redundancy of the entropy values of each indicator is calculated:

$$D_j = 1 - E_j \quad (4)$$

In the fifth step, calculate the weights of each indicator:

$$W_j = D_j / \sum_{j=1}^{n} D_j \quad (5)$$

Sixth step, calculate the impact index:

$$Y_{ijt} = 10^3 \sum_{j=1}^{n} W_j * Z_{ijt} \quad (6)$$

4.1.2. Core Explanatory Variables

Rural digitalization (Dig): China has not yet clearly defined and calculated the indicators of rural digitalization, so this paper draws on the research of Zhou Shengqi and Wu Huanhuan [15] (2023) on the development of rural digital economy combined with the availability of data, and constructs the index system with the number of rural delivery lines, Internet broadband access and cell phone subscribers at the end of the year, and the total amount of telecommunication business, and calculates the digitalization index using the entropy value method.

Table 2. Comprehensive evaluation index system of rural digitalization

Primary indicators	Primary indicators	Direction
Rural digitalization	Rural delivery lines	+
	Number of cell phone year-end subscribers	+
	Number of Internet broadband access users	+
	Total amount of telecommunication business	+

ISSN: 2688-9323

4.1.3. Control and Moderating Variables:

The development of rural eco-industry and digital economy cannot be separated from the support of hydropower resources and is also closely related to agricultural development. Referring to Song Min et al [16]. The study of digital economy empowered agricultural resilience on the selection of control variables, the control variables were selected as: (1) rural residents' electricity consumption (Elc): the logarithm of rural residents' electricity consumption was selected to represent; (2) social and economic scale (Vol): the logarithm of total retail sales of social goods was used to represent; (3) government control level (Gov): the logarithm of general government public service expenditure was represented. (4) Cultural and educational resources level (Edu): this variable is used as a moderating variable to calculate the cultural and educational resources level index with the help of regional years of education per capita, the number of higher education schools and the proportion of regional education expenditure to fiscal expenditure.

4.2. Model Setting

To test the above hypotheses, a data measurement model for 16 cities in Anhui Province is established to test whether digitalization effectively empowers the high-quality development of rural eco-industries, and the following model is constructed.

$$Eco_{i,t}=\alpha+\beta Dig_{i,t}+\mu_1 LnElc_{i,t}+\mu_2 LnVol_{i,t}+\mu_3 LnGov_{i,t}+\gamma Edu_{i,t}+\eta_i+\lambda_t+\varepsilon_{i,t} \quad (7)$$

Where Eco is the high quality development of rural eco-industries, Dig is rural digitalization, Elc, Vol, Gov denote control variables, Edu is the moderating variable, ε denotes the random perturbation term of the model, α is the constant term, β, μ and γ are the coefficients of each explanatory and moderating variable, which are the individual effects and time effects of the existence of the model, respectively, and the explanatory variables correspond to the subscript i for region, t for time.

4.3. Data Sources

In this paper, we take 16 cities under Anhui Province as the research object and study the regional data of 16 prefecture-level cities from 2010 to 2020, and the original data are mainly from China Statistical Yearbook and Anhui Statistical Yearbook. The data involved in all explanatory variables in this paper are shown in the following table.

Table 3. Descriptive analysis of data of baseline econometric model variables

Variable Type	Variable	Obs	Mean	Std.Dev.	Min	Max
Explanatory variables	High-quality development of rural eco-industry	16×11	318,051	181,967	27,277	924,972
Core explanatory variable	Rural Digitalization	16×11	5.682	6.352	0.00730	45.33
Control variable	Rural residential electricity consumption	16×11	9.683	6.356	0.910	39.83
	Level of government regulation	16×11	241,878	139,726	61,999	818,848
	Socio-economic scale	16×11	2,263,661	3,007,481	192,275	17,615,181
Moderating variable	Cultural and educational resources	16×11	0.00568	0.00922	0.000522	0.0430

ISSN: 2688-9323

5. Analysis of Empirical Results

5.1. Baseline Regression Analysis

In this paper, we choose Stata/MP 17.0 software to conduct Hausman test on the benchmark econometric model, and the test result Prob>chi2 and tends to 0. The original hypothesis of "choose random effect model for regression analysis" is rejected, and the alternative hypothesis of "choose fixed effect model" is accepted. The alternative hypothesis of "choosing a fixed-effects model for regression analysis" is rejected, and a fixed-effects model is accepted. The results of the fixed-effects regression model showed that the coefficient of impact of rural digitalization on the level of quality development of rural eco-industry was positive, and the rural eco-industry would increase by 50.63 units when the level of rural digitalization continued to develop by 1%. The core explanatory variable rural digitalization level passes the significance test at 1% level, indicating that rural digitalization significantly contributes to the high-quality development of rural eco-industry, confirming hypothesis one. In fact, from the reality, the level of rural digitization and the development of rural eco-industry in all places have improved to some extent with the development of time, and digital technology can indeed influence the high-quality development of rural eco-industry to some extent. In China, eastern regions such as Shanghai and Shenzhen, which have a high degree of digitalization, have relatively developed digital technology and a correspondingly high level of development of rural eco-industries; however, for western regions such as Xinjiang and Tibet, which have a low degree of digitalization, digital technology is less developed and the development level of rural eco-industries is low. In addition, cultural and educational resources, rural residents' electricity consumption, the scale of socio-economic development and the level of government control all play a positive role in the development of rural eco-industries at certain significance levels, and have a positive impact on promoting the high-quality development of eco-industries. The specific results are shown in the following table.

Table 4. Baseline econometric model regression results

Primary indicators	(1)	(2)
	FE	RE
Dig	5,063.498***	5,148.830***
	(8.03)	(7.58)
Edu	9992001.738**	-1067723.377
	(2.12)	(-0.69)
lnElc	29,956.625**	60,614.227***
	(2.41)	(4.52)
lnVol	65,763.977***	53,405.290***
	(6.40)	(4.62)
lnGov	34,667.912**	35,445.116**
	(2.47)	(2.23)
Constant	-1187725.259***	-1022061.063***
	(-6.88)	(-5.27)
Observations	176	176
R-squared	0.852	
Number of city	16	16
City FE	YES	YES
Year FE	YES	YES
F test	0	
r2_a	0.832	
F	177.8	

ISSN: 2688-9323

5.2. Baseline Econometric Model Robustness Test

5.2.1. Substitution of Explanatory Variables

This paper adopts the method of replacing the explanatory variables to test the robustness of the benchmark econometric model, and constructs model by replacing the explanatory variable rural eco-industry with the indicator of gross output value of agriculture, forestry, animal husbandry and fishery (million yuan), which measures the development of rural eco-industry.

The test results in the case show that the direction of the coefficients of the explanatory variables digitization index, level of cultural and educational resources, rural residents' electricity consumption, socioeconomic scale, and level of government control are basically consistent with the regression results of the benchmark model, and the results are significant at the 1% level, and the level of rural digitization still positively promotes the development of rural eco-industries, so the model is robust. The test results are shown in the following table.

Table 5. Robustness test

Primary indicators	Replacement of explanatory variables	Adjustment of sample period	Adjustment of sample size
	Opv	Shorten the time window	Tailoring
Dig	3.242***	4,775.398***	4,867.856***
	(6.22)	(4.63)	(8.18)
Edu	11,031.154***	16862542.359***	13607616.508***
	(2.83)	(3.78)	(3.16)
lnElc	28.905***	35,374.739**	24,770.784**
	(2.81)	(2.38)	(2.18)
lnVol	48.293***	53,898.284***	70,924.007***
	(5.68)	(3.51)	(7.41)
lnGov	30.815***	45,657.830***	30,213.872**
	(2.65)	(3.09)	(2.35)
Constant	-931.709***	-1202803.507***	-1215727.526***
	(-6.53)	(-5.13)	(-7.74)
Observations	176	160	176
R-squared	16	16	16
Number of city	0.835	0.878	0.870
City FE	YES	YES	YES
Year FE	YES	YES	YES
F test	0	0	0
r2_a	0.814	0.851	0.853
F	157.3	67.10	207.0

5.2.2. Adjusting the Sample Period

The time span of the model sample is adjusted. In this paper, the original sample data is the panel data from 2010 to 2020, and considering the impact of the epidemic suffered in 2020, the data of 2020 year is excluded from the robustness test, the time window of the sample is shortened, and the sample period is adjusted for regression. The variables of the test results still positively promote the high-quality development of rural eco-industry, the core explanatory variable rural digitalization and the variables cultural and educational resources and socio-economic scale pass the test at the 1% significance level, the rural residential electricity consumption passes the significance test at the 5% level, and the model passes the robustness test.

ISSN: 2688-9323

5.2.3. Transformation of Sample Size

The coefficients and the degree of change of the regression results are basically consistent with the original regression results, and rural digitalization still positively promotes the development of rural eco-industry at the 5% significance level, which further verifies the reliability of the above conclusions and test results, and the original econometric model is robust. The test results are as follows.

5.3. Heterogeneity Analysis

Considering the relevance of differences in the level of rural cultural and educational resources to the process of digitally influencing the development of rural eco-industries, this paper divides the sample into areas with high cultural and educational resources and areas with low cultural and educational resources, and conducts a heterogeneity analysis of the relationship between the influence of different cultural and educational resources on the development of rural eco-industries with reference to the study of Jiang Zhan[17](2022).

The analysis of the model results showed that regardless of the differences in cultural and educational resources in different regions, the circulation of digital technology in rural areas was significantly beneficial to the development of rural eco-industries, and the coefficient of rural digitalization was positive and passed the significance test at the 1% level. However, there are differences in the degree of effect for regions with different levels of cultural and educational resources, and the degree of effect of digital empowerment for high-quality development of rural eco-industries is better in areas with high cultural and educational resources, and the growth units in areas with high cultural and educational resources are larger than those in areas with low cultural and educational resources at 1% of rural digital development. The economic significance can be significantly shown that for the regions with good economic level conditions and abundant educational resources in the east of China, the development rate of eco-industry will be significantly higher than that of the western regions with insufficient educational resources. Therefore, there is heterogeneity of rural cultural and educational resources for the process of digitally empowered rural eco-industry development, which verifies hypothesis two above.

Table 6. Heterogeneity analysis

VARIABLES	Full sample	Low cultural and educational resource areas	High cultural and educational resource areas
Dig	5,063.498***	2,451.576***	10,324.138***
	(8.03)	(3.63)	(10.08)
Control variables	YES	YES	YES
Constant	-1187725.259***	-1210803.015***	-887,682.114***
	(-6.88)	(-5.54)	(-4.11)
Observations	176	88	88
City FE	YES	YES	YES
Year FE	YES	YES	YES
F test	0	0	0

6. Conclusion and Policy Recommendations

Based on sustainable development strategy, China takes reform and innovation as the core, closely links ecology and industrialization, and promotes the organic integration of ecology and industry. As a non-negligible part of rural revitalization is limited by the level of rural digitalization and cultural and educational resources, this paper constructs an empirical model

ISSN: 2688-9323

of panel data to deduce the inner logic and put forward theoretical hypotheses on the moderating effect of heterogeneity caused by differences in culture and resources in different regions on the high-quality development of eco-industry, and then argues for the impact brought by factor differences in combination with the above data analysis. The argument finds that rural digitalization has an obvious positive correlation to the high-quality development of eco-industry, which means that strengthening digitalization is beneficial to the development of eco-industry; meanwhile, the influence mechanism of empowerment effect is also positively influenced by the level of culture and education, which verifies that the higher the level of culture and education resources, the better the development level of high-quality development of eco-industry. Combined with the above arguments, the following suggestions are made on how to improve digital promotion of rural eco-industry development in the new development stage.

6.1. Increase the Construction Investment to Stimulate the Internal Life of the Industry

In terms of financial investment, it is necessary to further increase the support for the construction of digital countryside, accelerate the deployment of infrastructure with digital supply chain as the core, provide reasonable subsidies for the construction of various information infrastructures, and accelerate the pace of infrastructure construction. At the same time, promote the construction of demonstration projects in rural digital industry belts, set up special funds to support, provide financial incentives and assistance for the development and construction of digital technologies for rural areas, adopt supportive policies for rural small and micro enterprises related to them, and adopt special policy preferences and reductions in taxation and other aspects to stimulate endogenous construction momentum. In addition, we encourage villagers with high quality to start digital businesses, set up business grants and business loans to stimulate rural entrepreneurship, further promote the expansion and development of rural digital industries, and add bricks and mortar to the construction of digital villages.

6.2. Strengthen Digital Technology Training and Enhance Cultural and Educational Resources

The continuous progress and development of digital technology on the Internet makes the digital economy gradually integrate into the economic life of the public and become an important part of the national economic development, and digital culture also becomes one of the main forms of cultural development. Popularizing the digital awareness of all people, enhancing the digital technology of all people, and strengthening the digital technology training of the general public have a positive role in promoting the digital literacy of our nationals, and also add to the construction of Digital China. In terms of rural digitalization, the level of culture and education in rural areas is limited, and there is an urgent need to improve the level of culture and education resources, strengthen the accumulation of resources, and narrow the gap between urban and rural areas. In addition, the educational resources in the eastern and western regions of China differ greatly, and the breadth and depth of the promotion of the digital economy are bound to differ to a certain extent. Through the government's financial expenditure on education, the construction of solid regional education can narrow the differences in educational resources in different regions, so that all people can receive cultural education. At the same time, the government will provide digital technology training that better suits the needs of the rural labor force, strengthen the cultivation of talents in rural areas, alleviate the problem of insufficient talent reserves in rural areas, improve the digital creativity of farmers, and make the concept of digitalization penetrate into the hearts of the people.

ISSN: 2688-9323

6.3. Optimize the Structure of Rural Eco-Industry and Activate the Elements of Eco-Industrial Development

General Secretary Xi Jinping proposes to build an ecological economic system by combining "industrial ecology" and "ecological industrialization", and in the integration of the two, a green and circular ecological economic system can be established as the main body. The development of rural ecological industries can be organically integrated with primary, secondary and tertiary industries, optimize the industrial structure in the process of organic industrial integration, give full play to the driving force of digital elements, and build special digital industrial chains. We will strengthen the transformation and upgrading of traditional industries, take regional characteristics as the carrier, create a brand of special culture, help ecological industries such as ecological agriculture and ecological tourism to achieve economic growth, and adopt energy-saving and environmental protection technologies to help the transformation process of the "two mountains". The development of eco-industry is inseparable from the support of elements. To promote the construction of eco-industry, it is still necessary to broaden the scope of the market, use digital information technology and the Internet medium, improve the effective connection with the e-commerce industry, improve the circulation of the industrial market, and stimulate the vitality of elements for rural eco-industry.

References

[1] Wu Ting: Opportunities, challenges and realization path of rural tourism development in the context of digitalization (Agricultural Economy), (2022), No.2, p.133-135.

[2] Zhu Zhiting, Hu Jiao: Theoretical framework of digital transformation in education (Journal of Chinese Education), (2022), No.04, p.41-49.

[3] Bai Fuping, Liu Donghui, Dong Kaiyun: How digital transformation affects the financial performance of firms--a multiple mediating effect analysis based on structural equations (East China Economic Management), Vol. 36 (2022), No.09, p.75-87.

[4] Wang Yan, Sheng Xiaodan, Gong Xinshu: Evaluation and spatial correlation analysis of integrated development of rural industries from the perspective of ecological location--a case study of three southern Xinjiang prefectures (China Agricultural Resources and Zoning), Vol.25 (2022), No.02, p.1-13.

[5] Cui Wenjing, Chen Jing, Lin Ziqi, Xu Jiayi: Study on the Diversity of Rural Industries and Symbiosis Patterns of One, Two and Three Industries in Guangzhou City (Rural Economy and Technology), Vol. 33 (2022), No.09, p.87-92.

[6] Zheng Xiangjuan, Ren Chunxiao: Rural eco-industry development mechanism and policy recommendations--Ningbo City, Zhejiang Province as an example (Journal of Jiangxi Agricultural University (Social Science Edition)), Vol.11 (2012), No.03.

[7] Li Benqing, Yue Hongzhi: Digital economy enables high-quality agricultural development: theoretical logic and empirical test (Journal of Jiangxi University of Finance and Economics), (2022), No. 06, p.95-107.

[8] Zhang Yunping, Luan Jing: Digital economy empowering rural revitalization: theoretical mechanism, constraints and promotion path (Reform), (2022), No.05, p.79-89.

[9] Yang Mei, Wang Yuanzhong: Advantages, dilemmas and path choices of high-quality development of rural economy in the context of digitalization (Agricultural Economy), (2022), No.07, p.30-32.

[10] Ning Yang: Practical achievements, problems and governance paths of rural digital economy development (Agricultural Economics), (2022), No.03, p.45-47.

[11] Liu Lei: The impact of digital construction of circulation on rural modernization (Business and Economic Research), (2022), No.19, p.136-139.

[12] Zheng Yunping: Research on the value of cultural resources for rural economic development (Journal of Nuclear Agriculture), Vol.36 (2022), No.12, p.2570.

ISSN: 2688-9323

[13] Wang Dingxiang, Ran Ximei: Rural digitalization, human capital and integrated development of rural industries-empirical evidence based on provincial panel data in China (Journal of Chongqing University (Social Science Edition)), Vol.28 (2022), No.02, p.1-14.

[14] Lu Zhaoyang, Du Yutong: An empirical study of digital economy empowering high-quality agricultural development (China Circulation Economy), Vol.36 (2022), No.11, p.3-14.

[15] Zhou Shengqi, Wu Huanhuan: Digital economy contributes to common prosperity: a study of its role and mechanism (Research World), Vol.25 (2022), No.02, p.1-10.

[16] Song Min, Liu Xinyu: Research on the mechanism of digital economy empowering agricultural resilience: an analysis of the mediating effect based on human capital (Jiangsu Social Science), Vol.25 (2022), No.02, p.1-10.

[17] Jiang Zhan: Mediating and moderating effects in empirical studies of causal inference (China Industrial Economics), (2022), No.05, p.100-120.