

The Impact of Branding on the New Quality and Productivity of Agriculture

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Abstract: The improvement of agricultural new quality productivity is influenced by both the supply and consumption sides. This article explores the impact of the development of geographical indication agricultural products on the new quality productivity of agriculture. From the perspective of innovation theory and industrial cluster theory, geographical indication agricultural products can promote the coordinated development of the entire agricultural industry chain through technological empowerment and industrial agglomeration, increase residents' income, and thereby improve the level of new quality productivity in agriculture. This article is based on provincial panel data and adopts a double fixed effects model. The empirical results show that the quantity of geographical indication agricultural products has a positive and significant impact on the level of agricultural new quality productivity. To provide a theoretical basis for subsequent research on new agricultural productivity in various regions, and to offer reference opinions for the development of geographical indication agricultural products.

Keywords: Geographical Indication Agricultural Products, Agricultural New Quality Productivity, Brand Effect, Industrial Clusters, Innovation Theory

1. Introduction

Productive forces are people's capacity to transform and affect the natural environment. The president of Xi put forward the concept of "new quality productivity" for the first time during the eleventh collective learning of the Political Bureau of the 20th CPC Central Committee. New quality productive forces are the basic contents of the improvement of the workers, the means of work, the objects and the optimization of their combination. Science and technology innovation is the dominant factor in it, which meets the requirements of current high-quality development and Chinese path to modernization. In 2025, the No. 1 central document of the Central Government pointed out that scientific and technological innovation should lead to the gathering of advanced production factors, and new agricultural productivity should be developed according to local conditions. This is an efficient means to implement the strategy of "storing grain in technology", One of the key measures to do well in agriculture, countryside and peasants is the necessary response for China's transition from agriculture power to agriculture power.

Agriculture is the foundation of a country, but how can agriculture enhance the productivity of new agricultural qualities? The whole agricultural industry chain connects various links and entities such as agricultural research and development, production, processing, and consumption into an effective and coordinated organic whole. Meanwhile, as a special agricultural resource, GI is an

important lever to increase the value-added of agricultural products. The Notice on Implementing Projects for Agricultural Production Development in 2020 from the Ministry of Agriculture and Rural Affairs stresses that to promote the development of quality agriculture, it is essential to improve the overall production capability of GI products, and to promote the standardization of the whole industrial chain. However, the development of GI has been hampered to different extent by the supply and demand side. On the supply side, tight funding chains can have a huge impact on agricultural product production. Due to insufficient funds, quality control issues [1] and the problem of large-scale development of agricultural products [2] restrict the marketing of GI products; Wang [3] pointed out that the expansion of GI's brand is often constrained by the need to upgrade technology in the supply chain. The financial constraints and the lower end of the supply chain often create a big barrier, which makes it hard for the brand to realize the scale and the high-end development. In terms of consumption, it is mainly due to the backwardness of consumers' consumption concepts. Insufficient consumer awareness and low willingness to purchase [4]. frequent occurrence of counterfeiting issues has led to a crisis of trust.

The possible marginal contributions of this article are as follows. Firstly, broaden the path for improving the productivity of new agricultural products and supplement practical testing on the consumer side; Secondly, enrich the relevant research on geographical indications of agricultural products, and explore in the theoretical analysis section how geographical indication agricultural products drive the improvement of agricultural new quality productivity through endogenous driving; Finally, empirical testing of brand effects provides practical and feasible countermeasures and suggestions for improving the level of agricultural new quality productivity.

2. Literature review

2.1. Agricultural new quality productivity

The new agricultural quality productivity is driven by technology innovation, which makes the agricultural production method change fundamentally by optimizing and combining the factors of rural production, so as to achieve sustainable agricultural development. Research on new quality productivity mainly focuses on the conceptual connotation of new quality productivity [5][6], level measurement [3], influencing factors [7][8], and mechanism of action [9][10].

The symbol of new quality productivity is the increase in total factor productivity, Beginning with new agricultural quality workers, new agricultural labor materials, and new agricultural quality workers, comprehensive science and technology innovation, system innovation. [11]. In the past studies, the development level of agricultural new quality productivity is usually used to measure the entropy weight method, and shows significant spatiotemporal differences. Wan et al. [12] found that the agricultural new quality productivity in various regions shows an absolute convergence trend, which is more pronounced in areas with lower agricultural new quality productivity indices, fully demonstrating the significant effectiveness of China's support policies for agricultural development in the central and western regions in the past decade. On the regional factors, the eastern area is the most developed, and the middle area is the second, and the west is lower. The influencing factors of agricultural new quality productivity mainly focus on three aspects: technology, production factors, and systems and policies. Firstly, the revolutionary breakthrough of technology in agricultural new quality productivity, the supporting role of rural infrastructure construction in new quality productivity, and the construction of a technical talent system. Sun [13] proposed in the article that innovative technologies can improve agricultural productivity, thereby promoting the intelligent transformation of agriculture. Ma [14] believe that the construction of new infrastructure can amplify the empowering effect of digital technology on the new quality productivity of agriculture. Guo [15] proposed in his research on agricultural green total factor productivity that the level of rural human

capital is closely related to the application of new agricultural productivity technologies and the improvement of agricultural production efficiency. Secondly, Luo et al. [16] In their research on empowering agriculture with digital technology, it is suggested that the interaction of data ecology factors is essential to the cultivation of new quality productivity in agriculture. Combined with Chen's analysis of the mechanism of the role of agricultural new quality productivity in rural industrial integration [17]. It is found that agricultural new quality productivity can promote the transfer of rural labor to industries. Wang [18] verified through empirical testing that inclusive finance can empower the transformation of agricultural production methods, thereby affecting the green development of agriculture. Thirdly, Guo et al. [19] advocated the construction of systematic policy tools in their research to enhance policy synergy and support the intelligent and digital development of new agricultural productivity. Through the analysis of new quality productivity that it has been found that the efficiency and quality of brand management and construction in agricultural product brand building, and expand the consumer market [20]. Yang and Wang [21] found through summarizing the empowering role of new quality productivity in agricultural product production, brand building, and consumption that new quality productivity can dramatically enhance the value and market competitiveness of agricultural ecological products. Huang et al. [22] comprehensively described the positive influence of agricultural new quality productivity on agricultural product brand building and consumer markets by constructing the "three major systems" framework.

2.2. Geographical indication agricultural products

As an effective carrier for promoting the economic development of regional characteristic agricultural products, geographical indication products have unique identification, strong market penetration, high market pricing, and low substitutability, which are the key to improving agricultural quality, efficiency, and competitiveness. Current research on geographical indications agricultural products mainly focuses on development paths [23][24], current development status [25][26], influencing factors [27][28] and so on.

Current consumers are willing to pay a certain premium to obtain safer agricultural products by evaluating the value of improving the quality of agricultural products. Geographical indications have played an important role in creating regional characteristic agricultural product brands, promoting the branding construction, market-oriented operation, and industrial development of agricultural products. Firstly, geographical indication agricultural products can release the signal of "high quality and good price" [29], utilizing their brand driving effect to achieve market premium through differentiated positioning [30][31], thereby increasing consumers' premium payments [32]. Secondly, a characteristic industrial cluster of geographical indication agricultural products will gradually form around the upstream, midstream, and downstream of geographical indication agricultural products, thereby triggering economies of scale effects. Build a centralized management production industry system for enterprises within the cluster, strengthen control over production inputs, and increase economic benefits [33]. The coordinated development of the entire industry chain, improve industrial efficiency, and effectively promote the vertical extension and horizontal integration of the agricultural industry chain by integrating production, processing, circulation, sales, and other links [24].

The development features of GI agricultural products in China are remarkable. First of all, the GI certification system of Chinese GI has become more and more extensive [25]. Secondly, there are significant regional differences in regional distribution. Sichuan leads the country with 500 registrations, ranking third with an increase in the number of registrations but a slowing growth rate. Fourthly, brand building lags behind. Socioeconomic, natural environment, government policies, and other factors have a wide and profound impact on the development of geographical indication agricultural products. The digital economy can improve the efficiency and quality of brand building [30]. Yang et al. [27] found in their research on digital platforms that cultural stories and online

interactions of geographical indication agricultural products can enhance consumers' willingness to purchase. Secondly, geographical indication agricultural products have a high dependence on natural resource endowments [23]. Green mountains and clear waters are like mountains of gold and silver. Relying on the natural resources of the place of origin to cultivate geographical indications for agricultural products and achieve nearby prosperity is an effective path to explore and establish a long-term mechanism for increasing farmers' income [29]. In addition, the level of government attention has a significant impact on the enthusiasm for declaring geographical indications for agricultural products. Local governments increase technical services and promotion efforts through policy guidance and support, providing strong guarantees for the sustainable and healthy development of geographical indication agricultural products.

Most existing literature explores the improvement path of agricultural new quality productivity from the perspective of production and circulation links, while there is little exploration of the consumption link. The branding construction of geographical indication agricultural products fully utilizes their unique premium characteristics, increases the added value of agricultural products, enhances market competitiveness, and forms brand effects [34]. Brand effect of geographical indication agricultural products can form industrial clusters, and the industrial cluster effect feeds back the improvement of agricultural product brands by enhancing the quality and reputation of agricultural products [31]. Branding construction of geographical indication agricultural products has increased the added value of agricultural products, enhanced the economic vitality of agricultural areas, and promoted the development of new agricultural productivity.

3. Theoretical analysis

As an important brand resource, the development of geographical indication agricultural products can be explained from two perspectives: innovation theory [33][35] and industrial cluster theory [36], which drive the new quality productivity of agriculture.

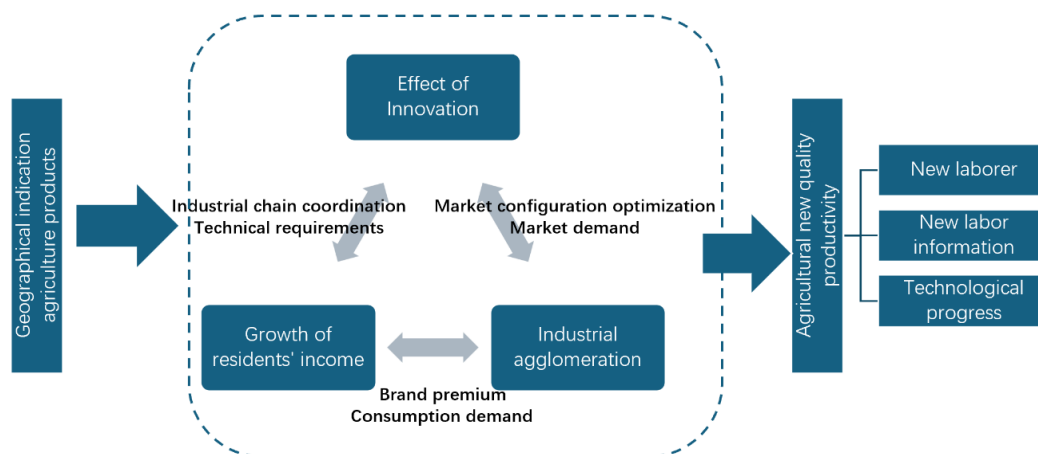
Firstly, from the perspective of innovation theory, geographical indications of agricultural products can leverage technology to empower the transition of new agricultural productivity and unleash their innovative effects. According to innovation theory, the core of new quality productivity lies in technological revolutionary breakthroughs and innovative allocation of production factors. The two requirements of the quality production process and quality control system of geographical indication agricultural products can force enterprises to innovate in technology. Wang and Ma [33] pointed out in their research that the branding of geographical indications has shifted from single certification to technology integration innovation, and the application of digital technology has significantly improved the technical elasticity coefficient in agricultural production functions. Geographical indication agricultural products can promote collaborative innovation in the upstream and downstream industrial chains through technological spillover effects, utilizing smart agriculture technology to reduce resource consumption and improve quality. Geographical indication agricultural products promote the innovative application of digital elements and unleash their innovative effects through the linkage of standardized production systems and technological innovation.

Secondly, from the perspective of industrial cluster theory, geographical indications promote industrial chain reconstruction by leveraging their agglomeration effects. The industrial clustering of geographical indication agricultural products is an important path for the development of new agricultural productivity. Industrial clusters build competitive advantages through industrial agglomeration, concentration of production factors, coordination of related industries, and strategic interaction among enterprises. Geographical indications can attract capital, talent, and other factors to specific regions through their unique resource endowments, promoting the extension of the entire agricultural chain and forming a specialized division of labor in the industrial chain. Industrial clusters

are achieved through the aggregation of various industries, reducing transaction costs and improving factor allocation efficiency, in order to optimize resource allocation and promote productivity growth.

The driving force of geographical indication agricultural products on new quality productivity is essentially a dynamic coupling of innovation theory and industrial cluster theory. Utilizing technological innovation to promote the intelligence of the technology enabled industrial chain, drive industrial agglomeration, and industrial clusters, in turn, enable the leap of new quality productivity through optimized resource allocation, bringing market demand for technological innovation. Industrial clusters enhance brand potential and achieve product premium and efficiency increase, in order to increase residents' income. The increase in residents' income stimulates the expansion of production scale, and the industrial agglomeration phenomenon brought about by economies of scale is the only way to achieve market expansion effects. Expand the production scale of industries, reduce costs, and attract more industrial agglomeration to extend the industrial chain. The increase in residents' income has increased their willingness to pay for high value-added agricultural products, forcing the upgrading of production technology and achieving innovative effects. Technological innovation not only affects a single link, but also enhances overall efficiency through upstream and downstream collaboration in the industrial chain. Through technological innovation, our goal is to connect the agricultural supply chain and value chain to promote cross-border integration of primary and secondary markets. By embedding technology into the industrial chain to increase the added value of products and increase farmers' income [37]. Based on innovation theory and industrial cluster theory, this article integrates geographical indication agricultural products and agricultural new quality productivity into the analysis framework, forming three paths of innovation effect, industrial cluster, and farmers' income increase. These three paths form a strong internal driving force loop, enabling geographical indication agricultural products to empower workers, labor materials, and technology, and achieving a leap in the level of agricultural new quality productivity. As shown in Figure 1.

Figure 1: Influence mechanism



4. Research design

4.1. Variable definition and data source

4.1.1. Explained variable

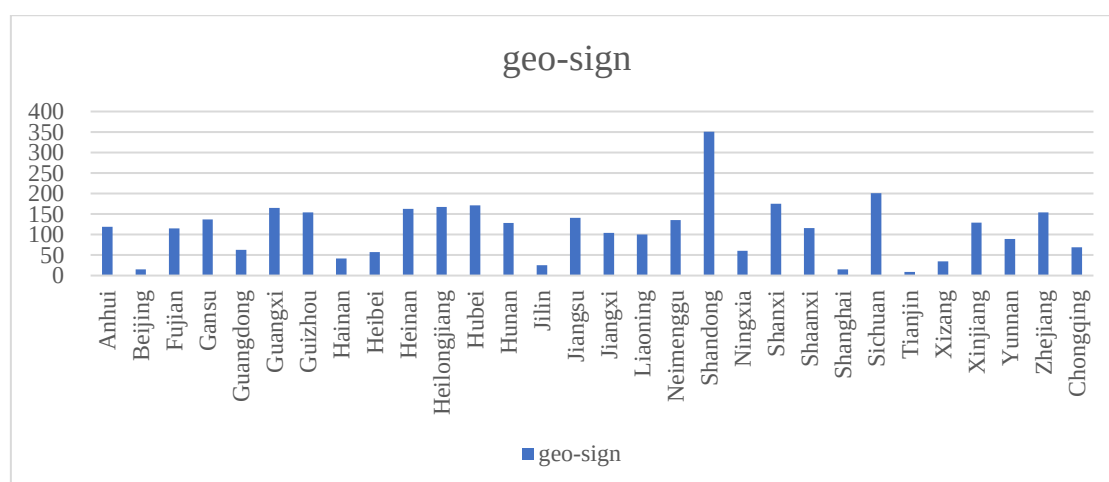
The core explanatory variable of this article is the level of agricultural new quality productivity. The basic connotation of agricultural new quality productivity includes the leap of the three physical

elements and their combinations of laborers, labor materials, and labor objects. Its connotation is rich, and it should be comprehensively evaluated by constructing an indicator system from multiple dimensions. Compared to traditional new quality productivity, agricultural new quality productivity emphasizes more on the technological application ability of agriculture and rural areas in terms of laborers, labor materials, and labor objects. Zheng et al. [38] proposed that the core elements should be laborers, labor materials, and labor objects, gradually introducing new quality productivity into all fields of agriculture and rural areas, and achieving the orderly development of new quality productivity in agriculture. Existing research often uses entropy weight method to construct indicators of agricultural new quality productivity level. To ensure the scientificity and comprehensiveness of the indicators, this article draws on the research of Judy et al. [39] to select indicators from three aspects: agricultural laborers, agricultural labor objects, and agricultural labor materials to construct a comprehensive evaluation index system for agricultural new quality productivity. Based on the three elements of productivity composition, this article constructs a measurement index system for the level of new quality agricultural productivity among Chinese provinces, which includes 7 primary indicators and 15 secondary indicators. Among them, the employment situation of the primary industry and the length of optical cable lines were determined by referring to the methods of Jiang and Yin [40] respectively. The method proposed by Wang and Qian [41] determines the number of agricultural science and technology personnel per unit of labor and the investment in agricultural R&D funds. The method proposed by Chen, Yang et al. [42] determines land area, agricultural technology investment, and energy conservation and environmental protection.

4.1.2. Core explanatory variables

The core explanatory variable is the development of geographical indication agricultural products. The original data used comes from the China Green Food Development Center, covering geographical indication information of multiple provinces in China from 2008 to 2022. It includes the registration year, product name, province and city name, product category, certificate holder name, and corresponding certificate number. In order to facilitate visual display, the raw data should be organized and sorted. Invalid data rows were deleted to form a data structure containing year, province, province code, and corresponding geographic identifier. And arranged in ascending order by year, it can intuitively show the quantity of geographical indication agricultural products in each province in a specific year, ensuring the consistency and accuracy of the data. As shown in Figure 2.

Figure 2: The number of geographical indication agricultural products



From the data in Figure2, it can be seen that the quantity of GI agricultural products varies significantly among different provinces. The average amount of GI agricultural products in 9

provinces, including Guangxi, Guizhou, Henan, Heilongjiang, Hubei, Shandong, Shanxi, Sichuan, and Zhejiang provinces, is in high value, and the development of GI agricultural products has great advantages. Anhui, Fujian, Gansu, Hunan, Jiangsu, Inner Mongolia, Jiangxi, Liaoning, Shanxi, and Xinjiang are all in the middle; Among them, there are 11 provinces, including Beijing, Guangdong, Hainan, Hebei, Jilin, Ningxia, Shanghai, Tianjin, Xizang, Yunnan, and Chongqing. Agricultural products with GI are few in quantity, and their development is relatively backward.

4.1.3. Control variables

In addition to the core explanatory variables, the article draws on existing research [15,43-45] and selects control variables including infrastructure level [43] (k_1), land use capacity [45] (k_2), total power of agricultural machinery [44] (k_3), and rural human capital [15] (k_4). The level of infrastructure is an opportunity for the development of the geographical indication industry [46] and also a support for sustainable agricultural development [47]. Use the natural logarithm of road mileage to represent the level of infrastructure [43]. Land use capacity refers to utilizing the natural attributes of the land system to ensure the quality stability of geographical indication agricultural products and enhance the effective supply capacity of agricultural products. The land use capacity is represented by the proportion of effective irrigation area to the total sowing area of crops [45]. The total power of agricultural machinery can improve production efficiency and promote the development of agricultural scientific and technological productivity. Rural human capital provides technical support for new agricultural formats, expressed the ratio of the number of agricultural, forestry, animal husbandry, and fishery workers to the total number of urban and rural employment [15].

4.2. Model

This article uses a spatiotemporal dual fixed effects panel regression model for empirical testing, with the following formula:

$$Y_{it} = \beta_0 L.Y_{it} + \beta_1 L.geosign_{it} + \beta_2 geosign_{it} + \beta_3 Controls_{it} + \mu_i + \tau_t + \varepsilon_{it}$$

Among them, Y_{it} represents the annual level of agricultural new quality productivity in each province. For the convenience of observation and estimation, *newp* is expanded by 100 times as Y . *Geosign* represents the quantity of geographical indication agricultural products in each province each year. $L.Y$ and $L.geosign$ respectively represent lagged terms. $Controls_{it}$ represents the annual controlled variable situation of each province. The rest of the letters represent regional fixed effects, temporal fixed effects, and random errors.

4.3. Descriptive statistics of variables and data sources

To grasp the general rules of GI's influence on the new productivity of agriculture, and for the sake of completeness and feasibility, Hong Kong, Macau and Taiwan were excluded from the analysis; In this paper, we take a sample of 30 provinces (Autonomous Communities, Central Government Areas, Hong Kong, Macau and Taiwan) for empirical analysis. Descriptive statistics for the variables are given in Figure 2. In the calculation of the development of new quality productivity in agriculture, all input variables are derived from statistical data from the China Rural Statistical Yearbook from 2010 to 2022.

5. Empirical results

After controlling for the lagged terms of the explanatory and dependent variables, according to Table 1, the quantity of geographical indication agricultural products has a significant positive impact on the level of agricultural new quality productivity. The regression coefficient of the lagged term of agricultural new quality productivity is positive and significant, it shows that the new quality productivity of agriculture is developing continuously, and the early stage has a remarkable promotion effect. The delay factor for quantities of GI agricultural products is negative and substantial. The reason for this is that the creation of GI requires a lot of capital at the beginning and takes some time to gain market share, so it is hard to get results in the short run. With the addition of control variables, the conclusion is still robust.

Table 1: Empirical results

Y	(1)	(2)
<i>L.Y</i>	0.596(11.23)	0.567(9.41)
<i>L.geosign</i>	-0.084(-2.96)	-0.085(-3.02)
<i>geosign</i>	0.066(2.27)	0.062(1.94)
<i>k1</i>		1.386(0.55)
<i>k2</i>		0.004(2.21)
<i>k3</i>		-0.002(-2.18)
<i>k4</i>		51.533(1.34)
<i>cons</i>	8.561(12.01)	-9.355(-0.32)
<i>province</i>	Yes	Yes
<i>year</i>	Yes	Yes
<i>R</i>	0.274	0.613

6. Conclusions

Based on the above conclusions, this article proposes the following countermeasures and suggestions. Firstly, support and cultivate a group of leading enterprises in geographical indication agricultural products, farmer professional cooperatives, and family farms. Give full play to the exemplary and leading role of leading enterprises, promote green production technology models, such as clean production areas and waste recycling technologies. Encourage farmers' professional cooperatives to carry out joint operations, integrate resources, improve production efficiency and market competitiveness. Guide family farms to operate on a moderate scale and improve their management level. Secondly, promote the development of online and offline integration models, actively carry out market promotion activities through brand marketing, fully leverage the brand premium effect of geographical indication agricultural products, and enhance consumers' awareness and loyalty to geographical indication agricultural products. Thirdly, promote the construction of geographical indication agricultural product industry clusters, with government providing policy support such as financial subsidies and tax incentives, establishing resource sharing platforms, and promoting the formation of integrated industrial clusters. By building the brand of geographical indication agricultural products, we can drive the development of upstream and downstream industries, achieve economies of scale, and enhance the overall competitiveness of the industry.

References

- [1] Li, Z., Liu, L., & Liu, H. (2012). Research on the challenges and countermeasures of ensuring the quality and safety of agricultural products in China. *China Forum on Science and Technology*, (10), 132–137.

- [2] Shao, L., Zhang, M., & Cheng, X. (2021). *Research on the Financing Model of Agricultural Production Enterprises in China: Based on the Perspective of Supply Chain Finance*. *Chinese Journal of Agricultural Mechanization*, 42(03), 227–236.
- [3] Wang, W. (2016). *Research on the Enhancement of Brand Competitiveness of Agricultural Products with Geographical Indications in China*. *Journal of Finance and Economics*, (08), 80–86.
- [4] Dong, Y., & Qian, W. (2022). *The Problem of "Free Rider" in the Construction of Regional Public Brands of Agricultural Products: A Research on Governance Based on Digital Traceability, Transparency and Assurance System*. *China Rural Observation*, (06), 142–162.
- [5] Dou, S., Ding, D., & Zhang, S. (n.d.). *New Qualitative Productivity in Agriculture: Who's Talking and What's Talking?* *Journal of Northwest A&F University (Social Sciences)*, 1–10.
- [6] Xie, A., & Shao, J. (2025). *The Concept of New Qualitative Productivity and Its Mechanism Re-explored: On Its Practice in the Field of Agriculture and Rural Areas*. *Hebei Academic Journal*, 45(01), 20–29.
- [7] Cai, J., & Li, Y. (2024). *Path selection for cultivating and developing new quality productivity in the field of agriculture*. *People's Forum*, (24), 75–77.
- [8] Wang, S. (2025). *The Promoting Effect of Digital Twin on New Agricultural Productivity: Logical Basis, System Architecture and Evolution Path*. *Science and Technology Management Research*, 45(01), 28–36.
- [9] Li, J., & Liu, A. (2024). *The impact of digital new quality productivity on carbon emission efficiency*. *Statistics and Decision*, 40(24), 23–28.
- [10] Huang, W., & Zhao, Y. G. (2025). *The internal logic, key problems and effective paths of new quality productivity empowering the silver economy*. *Asia-Pacific Economy*, (01), 1–11.
- [11] Huang, J. (2024). *New Productivity in Agriculture: Connotation and Extension, Potential, Challenges and Development Ideas*. *China Rural Observation*, (05), 19–34.
- [12] Wan, J., Zhang, Q., & Lu, Y. (2025). *Research on the Mechanism of Green Technology Innovation Promoting the Formation of New Agricultural Productivity*. *Journal of Minzu University of China (Philosophy and Social Science)*, 52(01), 85–98.
- [13] Sun, Z. (2025). *Digital Intelligence Technology Empowers New Quality Productivity in Agriculture: Internal Mechanism, Driving Factors and Realization Approach*. *JAC Forum*, (01), 100–106.
- [14] Ma, Y., & Zhou, Y. (2024). *An empirical study on the promotion of digital technology to the formation of new quality productivity in agriculture*. *East China Economic Management*, 38(12), 1–8.
- [15] Guo, H., & Han, W. (2024). *How New Agricultural Productivity Promotes the Leap of Agricultural Green Total Factor Productivity*. *Journal of Southwest University(Social Sciences)*, 50(06), 182–196.
- [16] Luo, G., & Song, X. (2025). *Institutional Configuration of Digital Ecology Empowering the Cultivation of New Agricultural Productivity: Based on Necessary Conditions Analysis and Dynamic Qualitative Comparative Analysis*. *China Circulation Economics*, 39(01), 115–126.
- [17] Chen, J., Cui, W., & Fang, J. (2024). *New Agricultural Productivity and Rural Industrial Integration: Mechanism and Empirical Test*. *Finance and Economics*, (12), 50–61.
- [18] Wang, L., & Ma, J. (2023). *Mechanism and Effect of Digital Inclusive Finance on Agricultural Green Development*. *Journal of South China Agricultural University (Social Sciences Edition)*, 22(06), 14–27.
- [19] Guo, X., & Lv, Z. (2024). *The connotation characteristics, development retardation and practical path of new agricultural productivity*. *Zhongzhou Academic Journal*, (08), 38–45.
- [20] Zhao, H., & Ma, Y. (2025). *Integration of new agricultural productivity, new agricultural management entities and rural industries*. *Journal of Shenzhen University (Humanities and Social Sciences)*, 42(01), 69–79.
- [21] Yang, Y., & Wang, F. (2025). *New Quality Productivity Empowers the Modernization of China's Agricultural Industry Chain: Theoretical Logic and Practical Innovation*. *Scientific Management Research*, 43(01), 89–98.
- [22] Huang, B., & Kong, X. (n.d.). *New Agricultural Productivity Empowers Farmers to Increase Income: Theoretical Mechanism and Practical Path*. *Journal of China Agricultural University (Social Sciences)*, 1–13.
- [23] Liu, J. (2024). *Analysis of the structural characteristics and influencing factors of agricultural products with geographical indications in China*. *Journal of Arid Land Resources and Environment*, 38(07), 79–86.
- [24] Han, Y., Yao, Y., Shi, Y., et al. (2022). *Research Status and Prospect of Agricultural Products with Geographical Indications in China*. *Jiangsu Agricultural Sciences*, 50(15), 232–239.
- [25] Wang, B., Lu, Z., Zhang, Y., et al. (2021). *A Brief Discussion on the Development Status and Brand Building of Geographical Indications for Agricultural Products*. *Modern Food*, (23), 34–39.
- [26] Huang, T., Xiao, F., & Liao, Q. (2021). *Research on the Brand Strategy of Geographical Indication Agricultural Products under the Background of Rural Revitalization: A Case Study of Ganzhou Geographical Indication Agricultural Products*. *Modern Commerce & Trade Industry*, 42(26), 1–3.
- [27] Yang, C., Wu, L., & Zhu, M. (2024). *Analysis on the upgrading strategy of the whole industrial chain of agricultural products empowered by e-commerce with geographical indications: A case study of pineapple in Shenwan, Zhongshan*. *Taiwan Agricultural Exploration*, (05), 26–34.

- [28] Li, H. (2024). *Spatial distribution and influencing factors of geographical indications of agricultural products in Henan Province*. *Agriculture and Technology*, 44(20), 175–180.
- [29] Ai, W., Zhang, Y., & Yang, J. (2025). *Can Geographical Indications of Agricultural Products Reduce the Income Gap between Urban and Rural Areas at the County Level*. *Journal of Guizhou University of Finance and Economics*, (02), 32–42.
- [30] Zhang, X., Bao, J., & Xu, S. (n.d.). *Exploration of the path of China's agricultural brand building under the background of digital economy*. *Agricultural Resources and Regional Zoning in China*, 1–12.
- [31] Chang, G. (2024). *Branding strategy and economic benefits of agricultural products under the strategy of rural revitalization*. *Director of Village Committee*, (23), 246–248.
- [32] Wu, C., Xia, Z., & Luo, W. (2019). *Analysis of the deviation between consumers' willingness and behavior to buy GI agricultural products online*. *Issues in Agricultural Economics*, (05), 110–120.
- [33] Song, X., Li, X., & Zhang, J. (2023). *Research on the Impact of Geographical Indication Agricultural Products on the Income Gap between Urban and Rural Areas: Based on the panel data of 30 provinces in China*. *Empirical analysis of Science & Technology Industry*, 23(18), 89–98.
- [34] Wang, Y., & Ma, F. (2017). *Research Progress and Prospect of Geographical Indications of Agricultural Products from the Perspective of Economics*. *Journal of Anhui Agricultural University (Social Sciences)*, 26(03), 43–48.
- [35] Zhao, M., & Du, R. (2024). *New Quality Productivity Promotes the Green Transformation of the Whole Agricultural Industry Chain: Theoretical Logic and Path Selection*. *Journal of Agricultural Modernization*, 45(05), 723–732.
- [36] Luo, G., & Song, X. (n.d.). *New Qualitative Productivity of Agriculture in China: Generation Mechanism, Spatiotemporal Characteristics and Regional Differences*. *Agricultural Resources and Regional Zoning in China*, 1–14.
- [37] Zhang, L., Tian, J., & Ning, Z. (2024). *The Development of New Productivity in Agriculture and the Transformation of Traditional Agriculture*. *Teaching and Research*, (10), 93–106.
- [38] Zheng, J. (2023). *Promoting Agricultural Modernization with New Quality Productivity: Theoretical Logic and Development Path*. *Price Theory & Practice*, (11), 31–35.
- [39] Judy, & Ye, L. (2024). *New Productivity of Agricultural Productivity in China: Horizontal Measurement and Dynamic Evolution*. *Statistics and Decision*, 40(09), 24–30.
- [40] Jiang, X., & Yin, T. (2025). *New quality productivity of agriculture in China: level measures, regional differences and obstacle diagnosis*. *Statistics and Management*, 40(02), 26–35.
- [41] Wang, G., & Qian, L. (2024). *Measurement of the level of new agricultural productivity and its impact on high-quality agricultural development*. *Statistics and Management*, 39(09), 43–52.
- [42] Chen, H., Yang, J., Zhang, P., et al. (2024). *Research on the basic connotation, level measurement and obstacle factors of new agricultural productivity in provinces along the "Belt and Road"; proceedings of the 31st Annual Conference of the Chinese Society of Technology and Economics, Beijing, China, F*.
- [43] Ma, W., You, L., & Ren, Q. (2025). *Mechanism and Effect of New Agricultural Productivity Empowering Industrial Resilience*. *Macroeconomic Research*, (02), 18–40.
- [44] Tang, X., Wang, Y., & Jiang, J. (2024). *Research on the Mechanism of Agricultural and Rural Digital Economy Empowering Agricultural Productive Service Industry*. *Chinese Journal of Agricultural Mechanization*, 45(03), 278–286.
- [45] Han, H., & Yang, D. (2023). *Research on the spatial spillover effect of agricultural industrial agglomeration on the growth of agricultural green total factor productivity*. *Journal of Arid Land Resources and Environment*, 37(06), 29–37.
- [46] Chen, R. (2016). *Research on the Mechanism of Geographical Indication Agricultural Products Affecting Rural Economic Development* [Master's thesis].
- [47] Liu, H. (2021). *Evaluation of sustainable agricultural development in regions integrating geographical indications* [Master's thesis].