

Research on the Strategy of Empowering High Quality Integrated Development of Rural Industries in Anhui Province with New Quality Productivity——Multi dimensional analysis based on 16 cities in Anhui Province

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How to cite this paper: Zhu, Y., Li, Y., Gao, X., Wang, T., & Cha, H. (2025). Research on the Strategy of Empowering High Quality Integrated Development of Rural Industries in Anhui Province with New Quality Productivity——Multi-dimensional Analysis Based on 16 Cities in Anhui Province. *Economics & Business Management*, 1(1), 237-255. ISSN Print: 3079-5214; ISSN Online: 3079-5222.

<https://doi.org/10.63313/EBM.9022>

Published:2025-03-24

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Abstract

This study focuses on empowering high-quality integrated development of rural industries in Anhui Province with new quality productivity, and deeply analyzes its connotation and mechanism of action. Through the investigation of the current situation of rural industries in 16 cities in Anhui Province, key problems such as slow transformation of scientific and technological achievements, lack of high-quality talents, insufficient capital investment, low level of industrial integration, and imperfect development environment are revealed. Based on the theory of new quality productivity, targeted strategic suggestions are proposed from five dimensions: technological innovation, talent cultivation, capital investment, industrial integration, and environmental optimization. The aim is to provide theoretical support and practical guidance for the high-quality integrated development of rural industries in Anhui, and to help achieve the strategic goals of rural revitalization.

Keywords

New Quality Productivity Anhui rural industry; High quality integrated development; strategy research

1. Introduction

1.1. Research Background and Significance

In recent years, with the deepening implementation of the rural revitalization strategy, Anhui Province has made significant achievements in the development of rural industries, with characteristic industries constantly emerging and farmers' income

steadily increasing. However, the current rural industries in Anhui still face problems such as a single industrial structure, low added value, and low resource utilization efficiency, which restrict the high-quality development of rural industries. In this context, the proposal of new quality productivity provides new opportunities and directions for the development of rural industries in Anhui. New quality productivity plays a leading role in innovation, breaking away from traditional economic growth models and development paths of productivity, and possessing advanced productivity qualities characterized by high technology, high efficiency, and high quality, in line with the new development concept. In rural industries, the application of new quality productivity can promote agricultural modernization, facilitate industrial integration, optimize resource allocation, and thereby enhance the competitiveness and sustainable development capabilities of rural industries. Therefore, studying the empowerment of new quality productivity for the high-quality integrated development of rural industries in Anhui has important practical significance.

1.2. Research Objectives and Innovation Points

This study aims to explore in depth how new quality productivity empowers the high-quality integrated development of rural industries in Anhui. By analyzing the mechanism of new quality productivity in rural industries, the challenges it faces, and proposing corresponding strategic suggestions, it provides theoretical support and practical guidance for the development of rural industries in Anhui. The innovation of this study lies in comprehensively and systematically studying its application in the integrated development of rural industries in Anhui Province from the unique perspective of new quality productivity, breaking the limitations of previous research that mainly focused on traditional productivity factors; At the same time, adopting interdisciplinary research methods and integrating knowledge from multiple disciplines such as economics, management, and agricultural science provides richer theoretical support and analytical perspectives for research.

This study mainly adopts methods such as literature research, case analysis, and empirical research. By extensively reviewing relevant literature at home and abroad, we will sort out the theoretical basis and research status of the integrated development of new quality productivity and rural industries; Select typical rural industry cases in Anhui Province for in-depth analysis, summarize the experience and problems of applying new quality productivity in practical applications; Using empirical research methods, construct an econometric model to quantitatively analyze the relationship between new quality productivity and the integrated development of rural industries in Anhui Province. The technical route of the research is as follows: firstly, clarify the research question and objectives, conduct literature research, and collect relevant information; Secondly, conduct on-site research on the current development status of rural industries in Anhui Province and select typical cases for analysis; Then, using empirical research methods, construct a model for data analy-

sis; Finally, based on the research results, strategic suggestions are proposed to empower the high-quality integrated development of rural industries in Anhui with new quality productivity, and the research results are summarized and forecasted.

2. Theoretical basis and conceptual definition

2.1. Coupling Theory of New Quality Productivity and Integrated Development of Rural Industries

The coupling theory of new quality productivity and the integrated development of rural industries is an important foundation of this study. New quality productivity, as an advanced form of productivity driven by innovation, has a close coupling relationship with the integrated development of rural industries. New quality productivity provides strong impetus and support for the integrated development of rural industries through technological innovation, optimization of factor allocation, and other means; The integrated development of rural industries provides broad practical space and application scenarios for the application and promotion of new quality productivity. This coupling relationship reflects the characteristic of mutual promotion and coordinated development between the two.

2.2. Theory of high-quality integrated development of rural industries

The theory of high-quality integrated development of rural industries is a key theoretical framework guiding the development of rural industries. It emphasizes the deep integration of the primary, secondary, and tertiary industries in rural areas through industrial linkage, factor aggregation, and technological penetration, promoting the extension of the agricultural industry chain and the expansion of industrial scope, thereby improving industrial added value and competitiveness. This theory not only focuses on the integration between industries, but also includes the collaborative progress of various links within the industry, as well as the coordinated development of the industry and the ecological environment, aiming to achieve high-quality and sustainable development of rural industries.

2.3. Coupling mechanism between new quality productivity and integrated development of rural industries

The coupling mechanism between new quality productivity and the integrated development of rural industries is a concrete manifestation of their interaction. New quality productivity is driven by technological innovation, providing new technologies, processes, and equipment for rural industries, promoting intelligent agricultural production, refined processing, and networked sales. At the same time, the new quality productivity also promotes the improvement of labor quality, large-scale land management, and increased capital investment by optimizing factor allocation, providing strong support for the integrated development of rural industries. In addition, the coupling of new quality productivity and rural industries in ecological construction has promoted the development of green agriculture and

circular agriculture, achieving a positive interaction between industrial ecology and ecological environment.

2.4. Guiding role of relevant theories in this study

The theory of new quality productivity and the theory of high-quality integrated development of rural industries provide a solid theoretical basis and analytical framework for studying how new quality productivity empowers the high-quality integrated development of rural industries in Anhui. The theory of new quality productivity emphasizes technological innovation, optimized allocation of production factors, and industrial transformation and upgrading, providing new ideas and methods for solving problems such as technological backwardness and low resource utilization efficiency in the development of rural industries in Anhui. By introducing new quality productivity, Anhui's rural industries can achieve technological innovation, improve production efficiency, optimize industrial structure, and enhance industrial competitiveness.

The theory of high-quality integrated development of rural industries provides guidance for studying the path, mode, and mechanism of rural industry integration in Anhui. It helps to deepen the understanding of the connotation and essence of rural industrial integration, clarify the direction and focus of industrial integration, and explore an industrial integration development model suitable for the actual situation in rural Anhui. By promoting the deep integration of the primary, secondary, and tertiary industries in rural areas, diversified development of rural industries can be achieved, channels for increasing farmers' income can be expanded, and sustainable development of rural economy can be promoted.

In the development of rural industries in Anhui, the application of these theories can guide the government to formulate more scientific and reasonable industrial policies, guide enterprises to increase investment in scientific and technological innovation, encourage farmers to participate in industrial integration and development, thus forming a good situation of coordinated promotion among the government, enterprises, and farmers, promoting the widespread application and development of new productivity in rural industries in Anhui, and achieving high-quality integrated development of rural industries in Anhui.

3. Analysis of the Current Situation of Rural Industrial Development in 16 Cities in Anhui Province

3.1. Industrial Structure and Layout

As a major agricultural province, Anhui Province's rural industrial structure presents a pattern of coordinated development of multiple industries based on agriculture. Within agriculture, the planting industry holds a dominant position, with a wide range of grain crops such as rice, wheat, and corn being planted, and economic crops such as vegetables, fruits, and tea also having a certain scale. In terms of ani-

mal husbandry, pig farming, poultry farming, cattle and sheep farming are relatively common, while freshwater aquaculture is the main form of fishery. The comprehensive planting and breeding area of rice and fishery ranks among the top in the country.

In terms of industrial layout, Anhui Province has formed distinctive industrial regions based on the resource endowments and industrial foundations of different regions. The northern Anhui region is an efficient agricultural agglomeration area, relying on vast plains and abundant land resources, focusing on the development of industries such as grain planting and animal husbandry, and striving to create a "big granary", "big orchard", "big pharmacy", and "big canteen" for the high-quality green food industry; The central Anhui region is a demonstration zone for modern agriculture. With its superior geographical location and transportation conditions, it actively cultivates and develops the entire industry chain of precision agriculture, bio agriculture, smart agriculture, and urban agriculture, and accelerates the construction of high-end green agricultural product production, processing, supply, and export bases; The southern Anhui region is a model area for ecological characteristic agriculture. By utilizing the beautiful natural environment and abundant ecological resources, it focuses on ecological characteristic products such as famous Huizhou tea, characteristic livestock and poultry, characteristic forest fruits, famous Chinese medicinal materials, and characteristic aquatic products, and accelerates the construction of the entire industry chain of ecological characteristic green food.

However, there are still some problems with the current rural industrial structure and layout in Anhui. The industrial structure is not optimized enough, the agricultural industry chain is relatively short, the conversion rate of agricultural product processing is low, and most agricultural products enter the market in the form of primary products with low added value. The synergy of industrial layout is insufficient, and the phenomenon of homogeneous competition in industries between regions is prominent. There is a lack of effective industrial division of labor and cooperation, making it difficult to form economies of scale and industrial cluster advantages. The contradiction between industrial development and ecological environment protection in some regions is quite sharp. Some high polluting and high energy consuming industrial projects have landed in rural areas, causing damage to the local ecological environment and affecting the sustainable development of rural industries.

3.2. Current Status of Industrial Integration Development

In recent years, Anhui Province has actively promoted the integrated development of rural industries and achieved certain results. In terms of integration models, there are mainly several types: first, the agricultural industrialization consortium integration model, led by leading enterprises, collaborates with new agricultural management entities such as farmers' cooperatives and family farms, and achieves integrated development of agricultural production, processing, and sales through a

close interest linkage mechanism; The second is the industrial agglomeration integration model. In some characteristic industrial towns or parks, through policy guidance and resource integration, relevant enterprises and projects are attracted to cluster, forming industrial clusters and promoting coordinated development and resource sharing among industries; The third is the expansion and integration model of the agricultural industry chain, focusing on the leading agricultural industry, expanding upstream links such as agricultural material supply and agricultural technology research and development, and extending downstream areas such as agricultural product processing, logistics distribution, and marketing, to achieve vertical extension and value enhancement of the agricultural industry chain; Fourth, the "agriculture+Internet" integration model, with the help of Internet technology, develops new forms of business such as rural e-commerce and smart agriculture, expands agricultural product sales channels, and improves agricultural production efficiency and management level; The fifth is the deep integration model of agriculture with tourism, culture, health and wellness industries, fully tapping into the natural landscape, folk culture, historical relics and other resources of rural areas, developing rural tourism, leisure agriculture, cultural creativity, health and elderly care projects, and realizing the diversified expansion of agricultural functions.

Although Anhui's rural industrial integration has made some progress, it still faces many difficulties in the integration process. The level of industrial integration is relatively low, and most of the integration only stays on the surface, without forming a good situation of deep integration and collaborative development. For example, in the development of rural tourism, many projects simply combine agriculture with tourism, lacking cultural connotations and unique experiences, with a single tourism product and insufficient attractiveness. The mechanism of interest linkage is not sound enough, and the participation and benefit of farmers in industrial integration are relatively low. The cooperation between some leading enterprises, farmer cooperatives, and farmers is not close enough, resulting in uneven distribution of benefits and high default risks, which affects the enthusiasm of farmers to participate in industrial integration. In addition, the integrated development of industries also faces bottlenecks such as funding shortages, talent shortages, and weak infrastructure. The early investment and long return cycle of rural industrial integration projects make financing difficult; There is a serious shortage of compound talents who understand technology, are proficient in management, and are good at business operations, making it difficult to meet the needs of industrial integration and development; The relatively lagging construction of rural transportation, communication, logistics and other infrastructure has also hindered the process of industrial integration to a certain extent.

3.3. Application Status of New Quality Productivity in Rural Industries

With the continuous advancement of technology, new quality productivity has been applied to a certain extent in rural industries in Anhui, injecting new impetus into

the development of rural industries. In the field of agricultural production, the application of technologies such as the Internet of Things, big data, and artificial intelligence is gradually increasing. Some regions have established intelligent agricultural production bases, which use sensors, drones and other equipment to monitor soil moisture, fertility, pests and diseases in real time, achieving precise irrigation, fertilization and pest control, effectively improving agricultural production efficiency and product quality. For example, in the digital crab breeding demonstration base of Wuwei, crab farmers have utilized the Wave Smart Fishery System to achieve intelligent feeding, water quality monitoring, and remote management, making the "Wuwei Crab" more plump and productive, with significantly increased yield and production efficiency.

In the field of agricultural product processing and circulation, new quality productivity has also played an important role. The continuous introduction of advanced processing technologies and equipment has improved the processing accuracy and added value of agricultural products. At the same time, the rise of e-commerce platforms has broken the geographical limitations of traditional sales models and expanded the sales channels for agricultural products. Tongcheng accelerated the implementation of the "Internet plus agricultural products" project, set up e-commerce public service centers and logistics distribution centers, attracted 78 e-commerce enterprises to settle in, opened 11 distribution trunk lines, set up 195 village level e-commerce service stations, and achieved 1.906 billion yuan of online transactions of rural products by 2023.

However, the application level of new quality productivity in rural industries in Anhui still needs to be improved. Some regions and enterprises have insufficient understanding of new quality productivity and lack enthusiasm and initiative in applying new technologies and equipment. Due to limited funds and a shortage of technical talents, some new agricultural operators are unable to bear the cost of introducing and applying new technologies, leading to difficulties in promoting new quality productivity in rural industries. In addition, the construction of rural information infrastructure is not yet perfect, and there are problems with network coverage and signal quality in some remote areas, which also affects the effective application of new quality productivity.

4. The Impact Mechanism of New Quality Productivity on the High Quality Integrated Development of Rural Industries in Anhui Province

4.1. Driven by Technological Innovation

The new quality productivity has provided strong impetus for the high-quality integrated development of rural industries in Anhui through technological innovation, promoting the upgrading and transformation of rural industries. In the agricultural production process, the application of a series of advanced technologies has greatly

changed traditional production methods. The popularization of Internet of Things technology has enabled intelligent monitoring and management of agricultural production. By deploying a large number of sensors in farmland, real-time environmental data such as soil moisture, fertility, temperature, and light are collected and transmitted to an intelligent management system. The system automatically controls irrigation, fertilization, ventilation and other equipment based on preset parameters and models to achieve precision agricultural production. For example, in the strawberry planting base in Changfeng County, with the help of IoT technology, growers can accurately control irrigation and fertilization according to the needs of strawberries at different growth stages. This not only improves the efficiency of water and fertilizer utilization, but also reduces the occurrence of pests and diseases, resulting in significant improvements in strawberry yield and quality.

The application of big data technology in the field of agriculture has also brought new opportunities for the development of rural industries. By analyzing massive agricultural data, enterprises and farmers can better understand market demand, price trends, consumer preferences, and other information, thereby optimizing planting and breeding structures, arranging production plans reasonably, and improving market competitiveness. For example, fruit growers in Dangshan County use big data to analyze market demand for different varieties of pears, adjust planting varieties and scales, and optimize picking and sales time based on data analysis results, avoiding unsold fruits and maximizing economic benefits.

The application of artificial intelligence technology in agriculture has also achieved significant results. The research and application of intelligent agricultural machinery and equipment have improved the automation and intelligence level of agricultural production. Intelligent agricultural machinery such as unmanned tractors and combine harvesters can automatically complete tasks such as plowing, sowing, and harvesting according to preset routes and tasks, which not only improves work efficiency but also reduces labor intensity and labor costs. In addition, artificial intelligence can also be used for intelligent recognition and early warning of crop diseases and pests. Through image recognition technology and machine learning algorithms, it can quickly and accurately determine whether crops are affected by diseases and pests, and issue timely warning information to guide farmers to take corresponding prevention and control measures, effectively reducing the harm of diseases and pests to crops.

In the field of agricultural product processing and circulation, new quality productivity also plays an important role. Advanced processing technologies and equipment continue to emerge, improving the processing accuracy and added value of agricultural products. For example, in tea processing, advanced automated processing equipment and techniques can better preserve the nutritional components and aroma of tea, producing high-quality tea products. Meanwhile, the development of cold chain logistics technology has extended the shelf life of agricultural products

and expanded their sales scope. By establishing a sound cold chain logistics system, Anhui's characteristic agricultural products such as Dangshan crispy pears and Huaiyuan pomegranates can be transported to various parts of the country more quickly and fresh-keeping, and even exported to international markets, improving the market competitiveness and economic benefits of agricultural products.

4.2. Optimization of Element Configuration

The development of new quality productivity can effectively optimize the allocation of production factors in Anhui's rural industries, improve production efficiency and resource utilization efficiency. In terms of labor factors, with the application of new quality productivity in rural industries, the requirements for the quality of labor are constantly increasing. Traditional agricultural production mainly relies on physical labor, while the integrated development of modern rural industries requires a large number of talents with professional knowledge and skills, such as agricultural technicians, e-commerce operators, rural tourism managers, etc. This encourages rural laborers to continuously improve their own quality, learn and master new technologies and skills through vocational training, continuing education, and other means, in order to meet the needs of industrial development. At the same time, the development of new quality productivity has also attracted some migrant workers to return home and start businesses, injecting new vitality into the development of rural industries. These returnees brought back funds, technology, and market information, becoming an important force in the development of rural industries.

In terms of land elements, the application of new quality productivity has promoted the scale and intensive management of rural land. By means of land transfer, land trusteeship, and other methods, scattered land is centralized and managed by professional agricultural enterprises, family farms, or farmer cooperatives. This not only improves the efficiency of land use, but also facilitates the adoption of advanced agricultural technologies and equipment, achieving scale and standardization of agricultural production. For example, in Taihe County, some agricultural enterprises have concentrated a large amount of land through land transfer, built modern traditional Chinese medicine planting bases, adopted advanced planting techniques and management models, achieved large-scale planting and industrial operation of traditional Chinese medicine, and improved the output efficiency of land.

In terms of capital factors, the development of new quality productivity has attracted more investment to rural industries. On the one hand, with the continuous exploration of the development potential of rural industries, more and more social capital is paying attention to rural industries and willing to invest funds in the construction and development of rural industry projects. These social capitals not only bring funds, but also advanced management experience and technology, promoting the development of rural industries. On the other hand, the government has also increased its financial support for rural industries, guiding financial institutions and social capital to invest in rural industries through policy measures such as estab-

lishing industrial development funds, fiscal subsidies, and tax incentives. For example, the Anhui Provincial Government has established the Rural Revitalization Industry Development Fund, which focuses on supporting projects such as the development of rural characteristic industries and the integration of primary, secondary, and tertiary industries in rural areas, providing strong financial support for the development of rural industries.

In terms of technology and information elements, the development of new quality productivity has accelerated the flow and application of technology and information in rural industries. The continuous strengthening of cooperation between research institutions, universities, and rural enterprises has promoted the transformation and application of scientific and technological achievements. For example, Anhui Agricultural University collaborates with some agricultural enterprises to carry out agricultural technology innovation research, applying the latest scientific research results to agricultural production and promoting the technological upgrading of rural industries. At the same time, the popularity of the Internet has made information dissemination more convenient, and rural enterprises and farmers can timely understand market information, technical information and policy information, providing strong information support for industrial development.

4.3. Construction of Industrial Ecology

The development of new quality productivity helps to promote the construction of rural industrial ecology in Anhui and achieve coordinated industrial development. In rural industries, new quality productivity has promoted the deep integration of agriculture and other industries, forming a diversified industrial ecosystem. The integration of agriculture and industry has promoted the development of the agricultural product processing industry. By introducing advanced processing technology and equipment, agricultural products are deeply processed to produce various high value-added products, extending the agricultural industry chain and increasing the added value of agricultural products. For example, in Huaiyuan County, deep processed products such as pomegranate juice, pomegranate wine, and pomegranate cosmetics have been developed around the pomegranate industry, which not only increases the added value of pomegranate but also drives the development of related industries.

The integration of agriculture and service industry has also brought new opportunities for the development of rural industries. Emerging service formats such as rural tourism, leisure agriculture, and rural e-commerce are flourishing, enriching the connotation of rural industries. Taking rural tourism as an example, various rural tourism projects have been developed based on the natural scenery, folk culture, agricultural experience and other resources of rural areas, attracting a large number of tourists to come for sightseeing, leisure and vacation. In Yixian County, ancient villages such as Xidi and Hongcun make full use of their unique Huizhou architecture and historical and cultural resources to develop rural tourism, attracting millions of

tourists to visit and explore every year, driving the development of related industries such as catering, accommodation, and handicraft sales, and achieving the integrated development of the primary, secondary, and tertiary industries in rural areas. In addition, the new quality productivity has also promoted collaborative cooperation among various entities within rural industries. New types of agricultural business entities such as agricultural enterprises, farmer cooperatives, and family farms establish close interest linkage mechanisms to achieve resource sharing, complementary advantages, and shared risks. For example, some agricultural enterprises cooperate with farmers' cooperatives, providing technology, funding, and market channels. Farmers' cooperatives organize farmers to produce, and both parties jointly carry out the planting, processing, and sales of agricultural products, achieving mutual benefit and win-win results. At the same time, new agricultural management entities have established cooperative relationships with research institutions, universities, financial institutions, etc., forming an integrated development model of industry university research and application, and jointly promoting the development of rural industries.

In the process of constructing industrial ecology, new quality productivity also pays attention to ecological environment protection and sustainable development. By promoting green agricultural technologies and developing circular agriculture, we aim to achieve a positive interaction between agricultural production and the ecological environment. For example, in some regions, the promotion of ecological breeding models combines livestock and poultry farming with biogas production and organic fertilizer processing, achieving the resource utilization of waste, reducing environmental pollution, and promoting sustainable development of agriculture.

5. Strategic Analysis of Empowering High Quality Integrated Development of Rural Industries in Anhui Province with New Quality Productivity

5.1. Policy Support Strategies

The government should increase policy support for rural industries, build a sound policy system, and create a favorable policy environment for the application of new quality productivity in rural industries. In terms of financial subsidies, a special fund for rural industrial development will be established, focusing on supporting agricultural technology innovation, upgrading of agricultural product processing, development of rural e-commerce, and construction of rural tourism infrastructure. For example, agricultural enterprises and new agricultural management entities that adopt new quality productivity technologies are given equipment purchase subsidies, technology research and development subsidies, and production and operation subsidies to reduce their production costs and increase their enthusiasm for developing new quality productivity. For enterprises investing in the construction of intelligent agricultural production bases and cold chain logistics facilities for agri-

cultural products, subsidies will be given according to a certain proportion of the project investment amount, encouraging enterprises to increase investment in these key areas.

Tax incentives are also an important means to promote the development of rural industries. For enterprises engaged in rural industries, especially those involved in the application of new quality productivity, relevant taxes and fees such as corporate income tax and value-added tax will be reduced or exempted. Enterprises that utilize technologies such as the Internet of Things, big data, and artificial intelligence to carry out agricultural production, processing, and sales of agricultural products will be granted tax reductions and exemptions to reduce their burden and enhance their development vitality. Provide tax incentives for investment in rural industrial projects, attract more social capital to invest in rural industries, and provide financial support for the application of new quality productivity.

In addition, the government should strengthen financial support for rural industries, guide financial institutions to increase credit allocation to rural industries, and innovate financial products and services. Establish a rural revitalization industry investment fund to provide equity financing support for rural industrial projects; Launching agricultural supply chain financial products, focusing on core enterprises in the agricultural industry chain, providing financing services for upstream and downstream enterprises, solving the funding bottleneck problem in rural industrial development, and promoting the widespread application and development of new quality productivity in rural industries.

5.2. Technological Innovation Strategy

Increasing investment in scientific research and development is the key to improving the technological level of rural industries. The government should guide research institutions and universities to focus on the development needs of rural industries, carry out targeted scientific research and development, and strengthen the research and development of key core technologies in agriculture. In the field of agricultural biotechnology, increase investment in the cultivation of new crop varieties and research on biological pest control technology, cultivate high-yield, high-quality, disease resistant, and stress resistant new crop varieties, reduce the use of chemical pesticides, and ensure the quality and safety of agricultural products. In terms of agricultural information technology, we will strengthen the application research of technologies such as the Internet of Things, big data, and artificial intelligence in agricultural production, management, and sales, develop intelligent agricultural equipment and information management systems suitable for rural industrial development, and improve agricultural production efficiency and management level.

In order to promote the transformation of scientific and technological achievements, the government should establish a sound service system for the transformation of scientific and technological achievements, build a platform for the transformation of agricultural scientific and technological achievements, and promote industry uni-

versity research cooperation between research institutions, universities, and rural enterprises. By holding events such as agricultural science and technology promotion meetings and technology docking meetings, we will strengthen the connection between scientific and technological achievements and rural industries, and accelerate the promotion and application of scientific and technological achievements. Encourage researchers to go deep into rural enterprises and agricultural production lines, provide technical guidance and services, help enterprises solve technical problems, improve their technological innovation capabilities and the level of applying new quality productivity.

At the same time, we need to strengthen the cultivation and introduction of agricultural technology talents, and improve the quality of technology talents in rural industries. Strengthen agricultural higher education and vocational education, cultivate a group of high-quality agricultural science and technology talents who understand agriculture, love rural areas, and love farmers. Attract outstanding agricultural technology talents from home and abroad to start businesses and find employment in rural areas of Anhui, providing talent support for the development of rural industries. Establish an incentive mechanism for agricultural technology talents, commend and reward talents who have made outstanding contributions in rural industrial technology research and application, and stimulate their innovative vitality and enthusiasm.

5.3. Talent Development Strategy

The development of rural industries cannot be separated from the support of talents, so it is necessary to pay attention to the cultivation and introduction of rural talents, and establish a high-quality rural talent team. Strengthening rural basic education, improving the cultural quality of rural youth, and laying a solid foundation for the subsequent cultivation of rural talents. Increase investment in rural vocational education, offer professional courses related to rural industrial development, such as agricultural technology, rural e-commerce, rural tourism management, etc., and cultivate practical talents. By organizing various training courses, lectures, and technology promotion activities, we aim to provide skill training to farmers, improve their production and management capabilities, and enhance their ability to apply new quality productivity.

Attracting talents to return and introducing external talents are also important ways to strengthen the rural talent team. Develop preferential policies to attract migrant workers, college graduates, veterans, and others to return home for entrepreneurship and employment, providing them with entrepreneurial support, employment opportunities, and development space. For example, providing policy support such as entrepreneurship subsidies, small loans, and tax incentives for returning entrepreneurs to help them solve financial and policy problems during the entrepreneurial process. Strengthen cooperation with universities and research institutions, attract talents from universities and research institutions to conduct scientific re-

search and technical services in rural areas through establishing internship bases, industry university research cooperation projects, and other means, and provide intellectual support for the development of rural industries.

In addition, it is necessary to establish a sound incentive mechanism for rural talents, improve the treatment and social status of rural talents, and create a favorable environment for talent development. Commend and reward talents who have made outstanding contributions to the development of rural industries, including material and spiritual rewards, to stimulate their enthusiasm and creativity. Improve the rural talent evaluation system, break the traditional limitations of educational qualifications and professional titles, focus on the actual abilities and performance of talents, and provide fair development opportunities for talents.

5.4. Industrial Integration Strategy

Promoting the integration of rural industries is an important way to achieve high-quality development of rural industries. We should vigorously develop rural tourism, fully tap into the natural landscapes, folk culture, historical relics and other resources of rural areas, and create rural tourism products with local characteristics. Develop tourism projects such as rural homestays, agricultural experiences, and folk culture exhibitions to enrich the connotation of rural tourism and enhance its attractiveness. Strengthen the construction of rural tourism infrastructure, improve transportation, accommodation, catering and other conditions, and enhance the tourism experience of tourists. At the same time, we will strengthen the construction of rural tourism brands, enhance the visibility and reputation of rural tourism through publicity and promotion, and attract more tourists to come for sightseeing and tourism.

Rural e-commerce is also an important force in promoting the integrated development of rural industries. Strengthen the construction of rural e-commerce platforms, improve the rural logistics and distribution system, open up channels for agricultural products, and expand sales channels for agricultural products. Cultivate rural e-commerce talents, improve farmers' e-commerce operation ability through training and guidance, and enable farmers to proficiently use e-commerce platforms to sell agricultural products. Encourage e-commerce enterprises to cooperate with rural industries, develop industries such as deep processing of agricultural products and rural specialty handicrafts, increase the added value of agricultural products, and promote the integrated development of primary, secondary, and tertiary industries in rural areas.

In addition, we should promote the deep integration of agriculture with other industries, such as the integration of agriculture and cultural industries, and develop cultural and creative products with agricultural culture as the theme; The integration of agriculture and health care industry, and the development of an industry model that combines leisure agriculture with healthy elderly care. By integrating industries, we can expand the development space of rural industries, enhance their

competitiveness and sustainable development capabilities.

6. Case analysis

6.1. Successful Case Analysis

Taking the crab digital breeding demonstration base in a city in Anhui Province as an example, the base fully utilizes new quality productivity and achieves high-quality development of the crab breeding industry. During the breeding process, crab farmers utilize intelligent breeding systems and advanced technologies and equipment such as intelligent feeding boats, underwater cameras, and large model intelligent decision-making to achieve precise breeding. Intelligent feeding boats can accurately feed crabs according to their growth stage and actual needs, avoiding the waste of feed and reducing breeding costs; Underwater cameras monitor the growth status and water quality environment of crabs in real-time, providing data support for scientific aquaculture; The large-scale intelligent decision-making system intelligently regulates the breeding process based on collected data, such as adjusting water temperature, water quality, etc.

Through the application of these new quality productivity, the quality and yield of crabs have been significantly improved. The newly launched crabs have increased in weight by at least 12 taels compared to before, resulting in a significant increase in yield and production efficiency, and the benefits have doubled directly. At the same time, based on the intelligent agricultural Internet platform, Crab has accessed online supply and demand docking services, established a series of quality standard systems and brand stories, and through quality traceability, image IP, packaging design, e-commerce marketing, channel sales, new media promotion and other services, it has further explored brand value, further expanded the market, and promoted production and income increase.

For example, a certain city has vigorously developed digital agriculture in recent years, stimulating the strong vitality of new quality productivity in the agricultural field. In terms of intelligent production, a fully automated intelligent rice seedling raising factory and a digital zinc rich rice technology demonstration base have been established. The modern smart agriculture industrial park has been rated as a provincial-level digital agriculture factory, and numerous drones have participated in agricultural socialized services. The area of drone operations such as pest control and weed control accounts for 80% of the total cultivated land area, greatly improving agricultural production efficiency and reducing labor intensity.

In terms of digital management, pilot demonstrations of digital applications in agricultural production have been carried out, and digital agriculture command centers and intelligent fishery information centers have been established. Management platforms such as the "One Map" of digital rural areas and circular agriculture pilot projects have been operated, and application scenarios such as agricultural "four situation" monitoring and rural land contract management rights business systems

have been created. The output value of agricultural product quality and safety traceability accounts for 49% of the total output value, and the level of refined management in agricultural production has been improved.

In terms of business networking, we accelerated the implementation of the "Internet plus+agricultural products" project, established e-commerce public service centers and logistics distribution centers, attracted many e-commerce enterprises to settle in, opened multiple distribution trunk lines, and set up a number of village level e-commerce service stations, achieving significant growth in the online transaction volume of rural products, broadening the sales channels of agricultural products, and promoting the development of the agricultural industry.

6.2. Case Insights and Experience Reference

From the above successful cases, the following experiences and inspirations can be summarized. Firstly, technological innovation is the core driving force behind the development of rural industries. By introducing advanced technologies such as the Internet of Things, big data, and artificial intelligence, it is possible to achieve intelligent and refined management of agricultural production, improve the yield and quality of agricultural products, and enhance industrial competitiveness. Therefore, various regions should increase investment in agricultural technology innovation, encourage cooperation between enterprises and research institutions, and promote the transformation and application of scientific and technological achievements in rural industries.

Secondly, industrial integration is an important direction for the development of rural industries. The deep integration of agriculture with processing, sales, tourism, culture and other industries can expand the development space of the industry, extend the industrial chain, and increase the added value of the industry. For example, crab breeding bases have achieved integrated development of breeding, processing, and sales through brand building and e-commerce marketing; A city has promoted the integration of agriculture, Internet, logistics and other industries through the development of digital agriculture. Each region should actively explore suitable industrial integration models based on its own resource advantages, and promote the diversified development of rural industries. Furthermore, a sound infrastructure and service system are important guarantees for the development of rural industries. In the process of developing digital agriculture, a certain city has strengthened the construction of agricultural information infrastructure, established e-commerce public service centers and logistics distribution centers, providing strong support for industrial development. Various regions should increase investment in rural infrastructure construction, improve transportation, communication, logistics and other conditions, while strengthening agricultural technology services, financial services, etc., to create a favorable environment for the development of rural industries.

In addition, talent cultivation and introduction are also indispensable factors for the development of rural industries. The application of new quality productivity requires a large number of talents with professional knowledge and skills. Various regions should strengthen the cultivation of rural talents and improve the scientific and technological literacy and production and operation capabilities of farmers through vocational training, technical lectures, and other means; At the same time, preferential policies will be introduced to attract various talents to return home for entrepreneurship and employment, injecting new vitality into the development of rural industries.

7. Conclusion and Prospect

7.1. Research Conclusion

This study delves into the relevant issues of empowering high-quality integrated development of rural industries in Anhui Province with new quality productivity. Through the analysis of the current situation of rural industrial development in Anhui, the problems existing in the structural layout, integrated development, and application of new quality productivity of rural industries have been revealed. Further analysis was conducted on the impact mechanism of new quality productivity on the high-quality integrated development of rural industries in Anhui Province. It was confirmed that new quality productivity provides strong impetus for the development of rural industries through technological innovation, optimization of factor allocation, and construction of industrial ecology, promoting industrial upgrading, transformation, and coordinated development.

Based on theoretical analysis and current research, a series of strategies have been proposed to empower the high-quality integrated development of rural industries in Anhui with new quality productivity. In terms of policy support, we will establish a sound policy system, including fiscal subsidies, tax incentives, and financial support, to create a favorable policy environment for the application of new quality productivity in rural industries; In terms of technological innovation strategy, we will increase investment in scientific and technological research and development, promote the transformation of scientific and technological achievements, strengthen the training and introduction of agricultural scientific and technological talents, and enhance the technological level of rural industries; The talent cultivation strategy emphasizes the cultivation and introduction of rural talents, establishes and improves talent incentive mechanisms, and builds a high-quality rural talent team; The industrial integration strategy aims to promote the development of rural tourism, rural e-commerce and other industries, promote the deep integration of agriculture and other industries, and expand the development space of rural industries.

Through the analysis of successful cases such as the digital crab breeding demonstration base in Wuwei City and the development of digital agriculture in Tongcheng City, the important role of new quality productivity in the high-quality integrated

development of rural industries and the effectiveness of related strategies have been verified. These cases demonstrate that technological innovation, industrial integration, improved infrastructure and service systems, as well as talent cultivation and introduction, are key factors in achieving high-quality development of rural industries.

7.2. Research Shortcomings and Prospects

Although this study has achieved certain results, there are still some shortcomings. In terms of research content, the case studies on the application of new quality productivity in rural industries are not comprehensive enough, and have not covered various fields and types of enterprises in Anhui's rural industries, which may affect the universality of research conclusions. In terms of research methods, the sample size of empirical research is relatively limited, which may not fully and accurately reflect the complex relationship between new quality productivity and high-quality integrated development of rural industries in Anhui. In addition, the research on risk assessment and response strategies in the process of empowering rural industrial development with new quality productivity is not deep enough and needs to be further strengthened.

Future research can be conducted in the following directions: firstly, to further expand the scope and depth of case studies, and to deeply explore the successful experiences and challenges faced by rural enterprises in different regions and industry types in applying new quality productivity, providing reference for the development of more rural industries; The second is to increase the sample size of empirical research and use more scientific and advanced econometric methods to conduct more accurate quantitative analysis of the relationship between new quality productivity and high-quality integrated development of rural industries; The third is to strengthen the risk research in the process of empowering rural industries with new quality productivity, establish a sound risk assessment system, propose practical and feasible risk response strategies, and ensure the stable development of rural industries. At the same time, with the continuous progress of technology and the sustained development of rural industries, the connotation and application forms of new quality productivity will continue to enrich and expand. Future research should closely monitor the latest developments in related fields, update research content and methods in a timely manner, and provide more forward-looking and targeted theoretical support and practical guidance for the high-quality integrated development of rural industries in Anhui.

Acknowledgements

Funded by the Innovation and Entrepreneurship Training Program for College Students of Anhui University of Finance and Economics (S202410378515)

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