

Development Model and Optimization Path of Wenzhou's Endogenous Industries under the Rural Revitalization Strategy

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Abstract

This paper focuses on the development of Wenzhou's endogenous industries under the rural revitalization strategy. Although there have been achievements in the rural development of Wenzhou, some areas rely on exogenous forces to lift themselves out of poverty, facing problems such as inefficient allocation of production factors and underdeveloped industries. Therefore, it is imperative to explore the development path of endogenous industries. The development of endogenous industries is of great significance in economic, social, cultural, and ecological aspects. For example, it can promote economic diversification, create employment, inherit culture, and protect the ecology. However, it faces difficulties such as the lag of emerging industries, insufficient technological empowerment, lack of innovative talents, and weak brand awareness. To this end, the article proposes optimization paths, including intensively studying local resources, relying on technology to improve efficiency, cultivating "double - qualified" talents, and carving out characteristic brands, so as to enhance industrial competitiveness and contribute to the rural revitalization of Wenzhou.

Keywords

Endogenous Industries Rural Revitalization Development Dilemmas Optimization Paths.

1. Introduction

The 20th National Congress of the Communist Party of China pointed out the need to comprehensively promote rural revitalization and accelerate the modernization of agriculture and rural areas. In the process of building a modern socialist country in an all - around way, the most arduous and formidable tasks still lie in rural areas. We should adhere to the priority development of agriculture and rural areas, adhere to the integrated development of urban and rural areas, and unblock the flow of urban and rural elements. We should accelerate the construction of a strong agricultural country and solidly promote the revitalization of rural industries, talents, culture, ecology, and organizations. We should consolidate and expand the achievements of poverty alleviation and enhance the endogenous development momentum of poverty - stricken areas and people who have been lifted out of poverty. In recent years, the infrastructure conditions in rural areas of Wenzhou have been greatly improved, the living standards and quality of farmers have been significantly enhanced, and the value of the unique natural and cultural resources in rural areas has gradually emerged. These development achievements have laid a solid foundation for Wenzhou to promote rural revitalization and continuously pursue the goal of common prosperity for all people.

However, although some areas have achieved poverty alleviation relying on exogenous forces such as government assistance and investment promotion, they have failed to form the ability

of independent and sustainable development. Some even have a "habitual dependence" on external assistance and the phenomenon of "waiting, relying, and asking for", and there is still a risk of returning to poverty. At the same time, the problem of inefficient allocation of production factors in rural areas is still prominent. The rural development led by some township governments has problems such as repeated construction, inefficient operation, and waste of funds. Rural industries are not developed enough, and a large number of young and middle - aged labor forces still go out to work, leading to the exacerbation of "hollowing - out" in rural areas and the weakening of community functions. The low degree of farmers' organization, lack of right to speak, weak self - development ability, and lack of spiritual life not only fail to make villagers the dominant force in rural development but also bring problems such as extensive agricultural management, dilapidated rural landscapes, loneliness, depression, and even suicide among the left - behind population. To achieve the goal of comprehensively promoting rural revitalization by 2035, promote the all - around modernization of agriculture, rural areas, and farmers, and realize the balanced development and common prosperity of urban and rural areas, it is necessary for rural areas in Wenzhou to explore new development paths to solve the problems left over from the past development and unbalanced issues.

In 2023, the "Several Policy Opinions on Cultivating New Kinetic Energy in Agriculture and Rural Areas and Implementing the Rural Revitalization Strategy" formulated by the Wenzhou Municipal Government pointed out that it is necessary to increase support for the cultivation of agricultural and rural talents, the construction of agricultural live - streaming e - commerce platforms, professional cooperatives, and family farms, and improve the endogenous development momentum of rural areas. To consolidate the achievements of poverty alleviation, China must focus on cultivating the endogenous driving force in rural areas, enhance the ability of rural independent development, follow the path of endogenous rural revitalization, achieve rural revitalization, and move towards common prosperity.

Driven by the rural revitalization strategy, the rural society in Wenzhou has shown a new situation of vigorous development, and a number of unique and dynamic endogenous rural industries have emerged. These industries rely on the resources endowment such as capital, land, technology, and labor force owned by the rural areas themselves, actively participate in market competition, keenly adapt to the market development environment, and accurately absorb external production factors to achieve high - quality development. The endogenous rural industrial economy is not only deeply rooted in the local soil, showing a strong local flavor, but also maintains an open attitude, with excellent market adaptability and competitiveness. In the development process, it has created a large number of jobs for rural people, effectively alleviated the rural employment pressure, stabilized the rural social structure, and continued and inherited the fine traditions. In addition, the endogenous rural industry also plays a crucial role in improving the level of rural social governance and maintaining rural social stability, and has become an important force in promoting the comprehensive revitalization of rural areas in Wenzhou.

2. Significance of the Development of Wenzhou's Endogenous Industries

2.1. Economic Significance

Firstly, it promotes the diversified development of the economy. The endogenous rural industry model encourages the utilization of the rich natural resources and unique cultures in rural areas to develop diversified industries such as characteristic agriculture, rural tourism, agricultural product processing, and handicraft production. This breaks the traditional single - industry structure in rural areas. For example, in the mountainous areas of Yongjia, through the development of characteristic agricultural product cultivation and rural tourism, not only has

the sales revenue of agricultural products increased, but also the development of service industries such as catering and accommodation has been driven, expanding the channels for rural economic growth and improving the rural economy's ability to resist risks.

Secondly, it enhances the added value of industries. Endogenous industries focus on the in-depth development and utilization of local resources. By developing intensive processing of agricultural products and the development of cultural and creative products, the industrial chain is extended. For instance, the yellow rice cake processing enterprises in Pingyang have developed from simple rice cake production to developing yellow rice cake products with various flavors and packaging, as well as cultural and creative products related to yellow rice cake culture, greatly increasing the added value of products and farmers' income.

Thirdly, it attracts external investment. With its unique development model and market potential, the endogenous rural industry can attract the attention and investment of external capital. When rural industries show good development prospects and return on investment, enterprises and social capital will actively participate in rural industry projects. For example, some large enterprises invest in the construction of rural tourism resorts and modern agricultural industrial parks, injecting new funds and vitality into the development of rural industries and further promoting rural economic development.

2.2. Social Significance

Creating job opportunities: The development of endogenous rural industries provides a large number of job positions for rural residents, covering multiple fields such as production, service, and management. Whether they are farmers engaged in agricultural production, or skilled craftsmen and service personnel, they can find suitable jobs locally. Taking rural tourism as an example, positions from tour guides, homestay attendants to tourism project planners are all held by local residents, effectively solving the employment problem of rural labor force and reducing the outflow of population.

Promoting rural social stability: Stable employment and economic income are important foundations for rural social stability. The endogenous rural industry model enables rural residents to live and work in peace and contentment in their hometowns, reducing family separations and social problems caused by working away from home. At the same time, the increased cooperation and communication among villagers during the process of industrial development enhance the cohesion and centripetal force of rural society, maintaining the harmony and stability of rural society.

Improving the level of rural social governance: In the process of rural industrial development, a group of rural capable people have become an important force in promoting the development of local industries. With their excellent qualities, high prestige, and outstanding abilities, they have won the respect of villagers and become active talents in promoting rural social governance. In the process of invigorating villages and enriching the people, a group of rural capable people have achieved "getting rich first" relying on production factors such as technology, capital, land, and management, making important contributions to rural industrial revitalization and rural social governance, and gradually becoming the backbone of promoting rural governance. Through field research, it is found that some rural capable people have been elected to the village "two committees" successively. With a high sense of mission and efficient action, they offer suggestions for rural governance and become the core backbone of rural social governance.

2.3. Cultural Significance

Firstly, inheriting and promoting rural culture: The endogenous rural industry model attaches great importance to the excavation and utilization of rural culture. Through the development of industries such as cultural tourism, folk custom experiences, and traditional handicrafts, the

rural historical culture, folk customs, and traditional techniques are inherited and displayed. For example, Cangpo Village in Yongjia relies on the ancient village culture to develop rural tourism. During the process of visiting the ancient village, tourists learn about the local historical culture and traditional etiquette customs, enabling these precious cultural heritages to be inherited and promoted.

Secondly, enhancing cultural identity and sense of belonging: Rural culture is the spiritual bond of rural residents. The development of endogenous rural industries enables rural residents to understand and recognize their own culture more deeply, enhancing their cultural identity and sense of belonging to their local culture. At the same time, the dissemination and exchange of rural culture during the process of industrial development also enhance the influence of rural culture, enabling rural residents to inherit and develop their culture more confidently.

Thirdly, promoting cultural innovation: In the process of developing endogenous rural industries, rural culture is combined with modern elements, giving birth to new cultural forms and contents. For example, the development of rural cultural and creative products using modern information technology and the holding of rural cultural activities with modern characteristics inject new vitality into rural culture and promote the innovative development of rural culture.

2.4. Dilemmas in the Development of Wenzhou's Endogenous Rural Industries

Firstly, promoting ecological protection and restoration: The endogenous rural industry model emphasizes ecological environment protection. The development of many industries depends on a good ecological environment. For example, the rise of industries such as eco - tourism and organic agriculture has prompted rural areas to pay more attention to ecological protection and restoration work. Through measures such as the systematic governance of mountains, waters, forests, fields, lakes, and grasslands and the promotion of green agricultural technologies, the rural ecological environment has been improved, achieving a virtuous interaction between industrial development and ecological protection.

Secondly, promoting the sustainable use of resources: Endogenous rural industries focus on the rational development and sustainable use of rural natural resources. For example, when developing the agricultural product processing industry, attention is paid to the resource utilization of agricultural product waste. By establishing an agricultural waste resource utilization center, livestock and poultry manure, crop straws, etc. are converted into organic fertilizers, biogas, etc., reducing resource waste and environmental pollution and realizing the circular and sustainable use of resources..

3. Dilemmas in the Development of Wenzhou's Endogenous Rural Industries

In the tide of rapid economic development and industrial transformation and upgrading, the development of emerging industries in Wenzhou lags relatively. There is a significant gap compared with advanced cities in China, and the development of Wenzhou's endogenous rural industries faces many difficulties.

3.1. Lagging Development of Emerging Industries

Firstly, limited industry scale. Emerging industries in Wenzhou account for a relatively low proportion in the overall economic structure and have not formed industrial clusters with strong competitiveness. Taking the big data industry as an example, Guiyang, with its first - mover advantage, has attracted many leading enterprises to settle in. Its big data industry has a large scale and a complete ecosystem. In contrast, Wenzhou has few big - data - related enterprises with a narrow business scope. It is difficult to form economies of scale, unable to

effectively drive the coordinated development of upstream and downstream industries, and thus contributes little to regional economic growth.

Secondly, technological innovation shortcomings. The development of emerging industries highly depends on technological innovation, but Wenzhou performs poorly in this regard. Most enterprises have insufficient R & D investment and lack independent R & D capabilities and core technologies. In the battery technology field of new - energy vehicles, enterprises like CATL have achieved key technological breakthroughs. However, relevant enterprises in Wenzhou have weak R & D capabilities and rely on external technology introduction for key technologies. This not only incurs high costs but also faces the risk of technology restrictions, making their products less competitive in the market.

Thirdly, shortage of talent resources. Talent is the core driving force for the development of emerging industries, but Wenzhou has great difficulties in attracting and retaining high - end talents. Compared with first - tier cities, Wenzhou lags in terms of salary, career promotion opportunities, and urban supporting facilities. As a result, outstanding scientific, technological, and management talents are reluctant to settle in. In the artificial intelligence industry, professional algorithm engineers and data scientists are scarce, making it difficult for enterprises to carry out complex technological R & D and application expansion work.

Fourthly, narrow financing channels. The development of emerging industries from the start - up to the growth stage requires a large amount of capital support. However, emerging industry enterprises in Wenzhou generally encounter financing difficulties. Traditional financial institutions are cautious in lending to them due to the high risks and long payback periods of emerging industries. At the same time, the development of capital markets such as venture capital and private equity investment in Wenzhou lags behind, and enterprises find it difficult to obtain sufficient funds for technological R & D, equipment purchase, and market promotion, restricting the expansion speed of the industry.

Fifthly, policy implementation deviations. Although the government has introduced a number of policies to support emerging industries, there are problems of ineffective implementation in practice. Some policies have insufficient support and are difficult to meet the development needs of enterprises. The application procedures for some policies are cumbersome, and the approval time is long, affecting the enthusiasm of enterprises. There is a lack of coordination in industrial layout and park planning in policies, and an effective policy synergy to promote industrial development cannot be formed.

3.2. Insufficient Technological Empowerment

In the process of Wenzhou's industrial development, the short - board of scientific and technological investment is particularly prominent, and this problem is even more significant in Wenzhou's endogenous rural industries. The lack of technological empowerment in endogenous rural industries has become a key constraint on low rural industrial productivity, low product technology content, and the loss of industrial - type talents.

Firstly, in the production field, the application of cutting - edge technologies such as big data, cloud computing, and blockchain in Wenzhou's rural industries is extremely limited. Currently, the development of rural industries still overly relies on traditional mechanized operations and a large amount of labor input. For example, in the agricultural product planting link, most farmers still carry out farming operations based on experience and fail to use big data to analyze factors such as soil fertility and climate conditions for precision planting. In the breeding industry, there is also a lack of awareness and ability to use Internet of Things technology to monitor the breeding environment and animal growth in real - time. The lack of investment and application of these new technologies makes it difficult to improve the production efficiency of rural industries, and the product quality and output are also restricted to a certain extent.

Secondly, in the circulation field. The development of rural industries is marked by obvious blindness and lag. Due to the ineffective use of technologies such as big data, blockchain, and cloud computing, rural industry practitioners have serious cognitive biases regarding information such as market supply and demand situations, development prospects, and potential risks. For example, during the peak season of agricultural product sales, agricultural products often remain unsold due to an inability to accurately grasp market demand. And during production, they may blindly follow the trend of planting or breeding due to a lack of scientific judgment of market trends. Big data can help scientifically analyze market demand, blockchain technology can promote accurate supply - demand matching, and cloud computing can empower marketing, but the application of these technologies in Wenzhou's rural industries is far from enough, and the ability of information dissemination technology in product promotion also needs to be improved urgently.

Finally, the problem is also prominent in the consumption field. Some rural industries in Wenzhou are still confined to the traditional consumption mode, and the online virtual consumption mode has not been fully explored and utilized. With the rapid development of Internet technology, consumers' shopping habits are gradually shifting online, but some rural industries in Wenzhou have failed to keep up with this trend in a timely manner. In addition, the ability to use VR and AR technologies to achieve refined content dissemination needs to be improved urgently. Through these technologies, consumers can more intuitively understand the characteristics and advantages of rural products, but currently, the application of these technologies in Wenzhou's rural industries is almost non - existent, seriously affecting the market competitiveness and market share of products.

3.3. Lack of Innovative Talents

Talent, as the core element driving industrial development, faces a severe shortage in the development of Wenzhou's endogenous rural industries, which has become a key factor hindering the high - quality development of rural industries. Affected by the relatively remote geographical location of rural areas, the profound influence of traditional farming culture, and the level of economic development, the current talent team in rural areas cannot meet the urgent needs of endogenous rural industries for high - quality development.

Firstly, in terms of business management talents. Such talents are as crucial as guiding beacons for endogenous rural industries. However, the reality is not satisfactory. The shortage of business management talents makes rural industries struggle in many key aspects. In terms of management planning, there is a lack of systematicness and foresight, and it is impossible to formulate a development strategy that adapts to market changes. In terms of marketing, due to the lack of professional marketing methods and concepts, rural characteristic products are difficult to open up a broad market and realize their due economic value. When attracting investment, due to the lack of professional communication and docking capabilities, it is difficult to attract sufficient external funds and high - quality projects, seriously restricting the large - scale and modern development of rural industries.

Secondly, the shortage of scientific and technological innovation talents is also prominent. In the current era of rapid technological development, scientific and technological innovation is the core driving force for industrial transformation and upgrading. However, in Wenzhou's endogenous rural industries, the shortage of scientific and technological innovation talents is widespread. This makes rural industries slow to absorb and apply new technologies and new equipment, resulting in slow industrial transformation. They still rely on traditional production methods and technologies, and the development momentum is obviously insufficient. For example, in the field of agricultural product processing, due to the lack of professional scientific research talents, it is impossible to develop high - value - added products, and the market competitiveness of products is weak.

Finally, the shortage of professional and skilled talents is also a major problem. Due to the limited ability of rural areas to cultivate professional and skilled talents by themselves, and the influence of factors such as geographical location and development opportunities when attracting external talents, it is difficult. This makes endogenous rural industries face many difficulties in the development process. Taking the packaging design of agricultural products as an example, due to the lack of professional design talents, the packaging concept is old-fashioned and unable to attract consumers' attention. In the breeding industry, the lack of new breeding technologies leads to low breeding efficiency and insufficient disease prevention and control capabilities, seriously affecting the economic benefits of the industry.

3.4. Lack of Brand Awareness

In recent years, Wenzhou's rural industries have made certain progress in brand building, and brand awareness has increased. Many rural industries have come to realize the importance of brands for industrial development and have actively engaged in brand building. However, overall, there are still very few rural industry brands with wide influence and strong creativity, and there are many deep-seated reasons behind this.

Firstly, the phenomenon of "undervaluing brands" is relatively prominent. Some rural industries, in the process of development, lack long-term planning and strategic vision, focusing only on short-term economic benefits and not fully recognizing the key role of brand building in the sustainable development of industries. They believe that brand building is just a cosmetic act rather than a core element of industrial development. This wrong concept leads these rural industries to ignore the improvement of product quality, the shaping of brand images, and the cultivation of brand culture in the production and operation process, resulting in a lack of stamina for industrial development and making it difficult to stand out in the fierce market competition.

Secondly, the problem of "brand homogenization" is serious. Although some rural industries have realized the importance of brand building, in the actual operation process, due to a lack of innovation awareness, they often simply imitate the models of other successful brands without deeply exploring the unique advantages and cultural connotations of their own industries. This leads to a lack of differentiation in brand images, positioning, and product characteristics among many rural industry brands, making it difficult to demonstrate their respective development characteristics and cultural spirits. For example, among agricultural product brands, the packaging designs, promotional slogans, and product positions of many brands are very similar. This makes it difficult for consumers to have a clear understanding and a strong desire to buy when facing numerous rural industry brands, seriously weakening the market competitiveness of rural industry brands.

Finally, the "market-orientation" process of brands lags behind. In the current 5G era, the speed and mode of information dissemination have undergone tremendous changes. However, some rural industries still adhere to traditional concepts and methods in brand promotion, with single promotion means and limited communication channels, unable to keep up with the pace of the times in a timely manner. They are not good at using new media platforms, live-streaming on the Internet, and other emerging communication methods to promote industry brands to the forefront of the consumer market. This results in many high-quality rural industry products remaining unknown, missing many development opportunities and severely restricting the development and growth of rural industries..

4. Optimization Paths for the Development of Wenzhou's Endogenous Rural Industries

4.1. Intensively Research the Characteristics of Local Resources to Drive Industrial Upgrading and Transformation

Firstly, conduct a meticulous assessment of resources to unearth their potential value. In the development process of Wenzhou's endogenous rural industries, accurately grasping the regional resource advantages of rural areas is the top priority. This requires the organic combination of stock assessment and value assessment, which complement each other and jointly lay a solid foundation for industrial development. Stock assessment is a crucial link in comprehensively sorting out the rural resource inventory. Wenzhou's rural areas are rich in diverse natural resources. During the assessment, it is necessary to carefully count the cultivated land area and soil fertility levels. For example, some rural areas in Yueqing have fertile soil, suitable for the development of characteristic fruit and vegetable cultivation. At the same time, record the types of vegetation and coverage of forests. Mountainous areas such as Taishun have lush forests and abundant forest resources. In terms of cultural resources, traditional handicrafts should be sorted out, such as the inheritance of the tie - dyeing technique in Cangnan, as well as unique folk activities and historical relics. After mastering the resource status through stock assessment, resource integration can be accelerated. For example, concentrate and transfer scattered small - scale farmlands, and uniformly plan the cultivation of characteristic agricultural products such as 瓯柑 to form large - scale and standardized production, improving agricultural production efficiency. For idle ancient houses, such as the ancient dwellings in the Nanxi River Basin of Yongjia, social capital can be introduced, and combined with the local farming - and - studying culture, they can be transformed into characteristic homestays or cultural exhibition halls to achieve efficient resource utilization. At the same time, innovate the allocation of factors, optimize the allocation of factors such as land, labor, and capital, and provide strong support for industrial development. Value assessment focuses on exploring the potential value of local resources. A professional team composed of market analysis experts, economists, etc., should be formed, and scientific assessment methods should be used. Taking the characteristic agricultural product of Wenzhou, bamboo shoots, as an example, through market research, analyze its market demand and price trends in the Yangtze River Delta region to judge its market development potential; evaluate its driving effect on local employment, such as driving surrounding farmers to participate in planting, picking, processing, etc.; consider its significance for rural cultural inheritance. The cultivation of bamboo shoots is closely related to the local traditional farming culture. Through accurate value assessment, plan in advance and seize the opportunity to transform local resources into the driving force for industrial development. During the assessment process, conduct in - depth research to determine key elements such as resource scarcity, uniqueness, and market demand, and use scientific methods such as the market comparison method and the income capitalization method to ensure the accuracy and reliability of the assessment results and provide a basis for formulating industrial development strategies.

Secondly, drive industrial upgrading and promote coordinated development. Promoting industrial advancement is the core of achieving high - quality development of Wenzhou's endogenous rural industries. On the one hand, based on national policies and closely combining with local resource advantages, plan industrial development from a macro perspective. For example, relying on its island resource advantages, Dongtou develops marine fishery, island tourism, and other industries with the support of national policies for the marine economy. Endogenous rural industries rely on local resources, gather the strength of the government, enterprises, social organizations, and villagers, and under the support of policies, plan the industrial layout as a whole. Build characteristic agricultural industrial parks, such as the flower

and seedling industrial park in Ruian, concentrating planting, processing, sales, and other links to form a complete industrial chain, enhancing the industrial agglomeration effect and scale benefits. On the other hand, strengthen the communication and cooperation between rural industries in different regions. Actively organize rural industry practitioners to participate in various exhibitions and seminars to strengthen communication with other regions. Establish industrial cooperation alliances, such as the rural tourism cooperation alliance of various counties and urban areas in Wenzhou, and jointly develop tourism routes. Carry out project cooperation, such as the cooperation between mountainous rural areas and plain rural areas to develop agricultural product deep - processing projects, and the cooperation between coastal rural areas and inland rural areas to carry out mountain - sea - linked tourism, realizing the rational flow of resources and production factors between regions, complementing each other's advantages, and jointly promoting Wenzhou's rural industries to a higher stage of development.

4.2. Rely on Advanced Science and Technology to Improve Industrial Efficiency

Firstly, create an innovation ecosystem to activate the innovation vitality of industries. In the development process of Wenzhou's endogenous rural industries, creating a good scientific and technological innovation ecosystem is the core driving force for stimulating innovation vitality. By carefully designing the entire chain of industrial projects, regarding the industry from the initial creative concept, through the intermediate R & D, production, to the final market sales as an organic whole, and implementing it in an integrated manner. Taking Wenzhou's characteristic 瓯柑 industry as an example, from the seedling cultivation link, introduce advanced gene technology to cultivate better - quality and more disease - resistant 瓯柑 seedlings; during the planting process, use Internet of Things technology to monitor soil moisture, fertility, and pest and disease conditions in real - time, achieving precise irrigation, fertilization, and pest and disease control; in the post - harvest processing stage of 瓯柑, develop new preservation technologies to extend the product's shelf - life; in the sales link, use e - commerce platforms and big - data analysis to accurately position the target customer group and formulate marketing strategies. To achieve this whole - chain technological upgrade, it is necessary to integrate the scientific and technological innovation forces of all parties. Encourage local universities, such as Wenzhou University, to set up special research projects for rural industries, organize scientific research teams to conduct in - depth research in rural areas, and carry out technological research on the problems in industrial development. At the same time, actively introduce external scientific research resources and establish cooperative relationships with well - known domestic and foreign agricultural research institutions to introduce advanced planting, breeding technologies, and agricultural product processing techniques. Through these measures, give full play to the key role of science and technology in the optimization and upgrading of rural industries, and promote the transformation of traditional rural industries into modern industries with high scientific and technological content and high added value.

Secondly, build innovation platforms to promote the efficient sharing of resources. Building scientific and technological innovation platforms is a key bridge for the deep integration of rural industries and science and technology. Focus on the urgent technological needs of Wenzhou's rural industries, such as the demand for intelligent aquaculture equipment and green and environmentally friendly feed in aquaculture, and the demand for high - efficiency and energy - saving processing technology and food safety testing technology in agricultural product processing, and conduct overall resource allocation. The government increases investment in scientific and technological innovation platforms, building fully - functional and advanced agricultural science and technology research and development centers, agricultural science and technology incubators, etc. For example, in Dongtou District, which is rich in fishery resources, build a marine fishery scientific and technological innovation platform equipped with advanced

water quality monitoring equipment, aquaculture technology research and development laboratories, etc. Encourage enterprises to independently build R & D platforms. Some large agricultural product processing enterprises in Wenzhou can set up special R & D centers focusing on new product research and development and technological innovation. Continuously optimize the operation mechanism of scientific and technological innovation platforms, and strengthen the cooperation and communication between platforms. Regularly hold science and technology achievement promotion meetings, technical exchange meetings, etc., to promote the connection between scientific research achievements and rural industries. Establish a science and technology achievement sharing database, and rural enterprises and practitioners can conveniently obtain the required scientific and technological achievements and technical information according to their own needs. Through these methods, achieve a seamless connection between scientific and technological achievements transformation and the development needs of rural industries, improve the effectiveness of scientific and technological achievements transformation, and promote the optimization and upgrading of the rural industrial structure.

Finally, strengthen data integration to improve the efficiency of scientific and technological transformation. Strengthening the integration of scientific and technological resource information and industrial data is an important support for improving the efficiency of transforming science and technology into productive forces. Establish a city - wide rural scientific and technological resource sharing network system, integrate various types of scientific and technological resource information, including scientific research projects, scientific research achievements, scientific and technological talents, etc., to achieve the interconnection of scientific and technological resources. Improve the quality of science and technology intermediary services and cultivate a group of professional science and technology intermediary service institutions. These institutions have an in - depth understanding of the actual needs of rural industries and provide accurate scientific and technological information consultation, technology transfer docking, and other services for rural enterprises and practitioners. For example, according to the needs of rural agricultural product processing enterprises, science and technology intermediary service institutions screen suitable agricultural product preservation technologies and equipment, and assist enterprises in communicating and cooperating with technology providers. Provide scientific theories and technical guidance for the development of rural industries in a timely manner, and carry out technical training and expert lectures through a combination of online and offline methods. Online, use Internet platforms to offer online courses on agricultural science and technology knowledge, expert online Q & A, etc.; offline, organize expert teams to go deep into rural areas for on - site technical guidance and demonstration. Through these measures, enhance the efficiency of transforming science and technology into productive forces, and let science and technology truly become a powerful driving force for promoting the development of Wenzhou's endogenous rural industries.

4.3. Cultivate a "Double - Qualified" Talent Cluster to Boost the Quality and Efficiency of Industries

Firstly, deepen talent cultivation to consolidate the foundation of industrial development. In the process of promoting the vigorous development of Wenzhou's endogenous rural industries, talent is a key element. Continuously relying on rural industry talent support projects to vigorously cultivate "double - qualified" talents has become an important support for industrial upgrading. Taking advantage of national policies, actively explore a two - wheel - driven mechanism for rural industry talent cultivation, paving a solid path for talent growth. On the one hand, strengthen in - depth cooperation with professional institutions such as scientific research institutes and universities. By holding various high - quality lectures, invite well -

known experts and scholars in the industry to share cutting - edge technologies and development trends in rural industries, broadening the horizons of industrial backbone. Regularly hold seminars to organize industrial backbone and scientific research personnel to jointly discuss solutions to practical problems in industrial development, such as the bottleneck of deep - processing technology of agricultural products and the improvement of service quality in rural tourism. Open training courses to conduct systematic professional knowledge training covering multiple fields such as agricultural science and technology, marketing, and enterprise management, comprehensively improving the comprehensive quality of industrial backbone. At the same time, continue and improve the "mentoring" talent incubation mechanism, pairing experienced senior talents with young talents to impart experience and technology hand - in - hand, reserving a large number of new - type talents for industrial development. For example, a certain rural area in Wenzhou cooperates with a local agricultural university to regularly organize training courses. After training, the industrial backbone returned to the countryside and successfully introduced new planting technologies, improving the yield and quality of agricultural products. On the other hand, actively undertake the scientific research talent assistance project and actively attract "double - qualified" talents to settle in the industry. Establish a talent transfer mechanism with scientific research institutes and universities to attract "double - qualified" talents who have both solid theoretical knowledge and rich practical experience to engage in rural industries. The arrival of these talents not only brings advanced concepts and technologies but also accelerates the "incubation" process of industrial talents. By participating in practical projects and guiding the work of industrial backbone, their professional and technological innovation capabilities can be further improved. For example, in the field of agricultural product e - commerce, the introduced "double - qualified" talents helped rural enterprises build e - commerce platforms and optimize marketing models, achieving a significant increase in agricultural product sales.

Secondly, strengthen the construction of think - tanks to empower the cultivation of "double - qualified" talents. Strengthening the construction of think - tanks is an important measure to promote the development of rural industries and the cultivation of "double - qualified" talents. Rely on scientific research institutions or universities to establish industrial development research centers, providing a fertile soil for the growth of "double - qualified" talents. The high - quality development of rural industries is inseparable from the wisdom and strength of "double - qualified" talents. Therefore, it is necessary to accelerate the construction of think - tanks with foresight. Actively cooperate with well - known scientific research institutions and universities to establish professional industrial research centers. For example, in Wenzhou's characteristic fishery industry, cooperate with marine scientific research institutions and universities to establish a fishery industry research center, gathering a group of experts, scholars, and technical experts in the fishery field. Through activities such as project research and technological research, a "small high - land" where "double - qualified" talents gather is formed. The establishment of the industrial research center can effectively promote the integration of "production - study - research". On the platform of the research center, scientific research personnel can quickly apply the latest scientific research achievements to actual production, and industrial personnel can feedback the problems in practice to scientific research personnel, promoting theoretical innovation. In such an environment, "double - qualified" talents can continuously improve their theoretical level and enhance their practical ability. By consolidating the main forces of theoretical innovation and technological application, inject continuous new vitality into the development of rural industries, and promote Wenzhou's endogenous rural industries to move forward steadily on the path of innovative development.

4.4. Meticulously Carve out Characteristic Brands to Cultivate the Foundation of Industrial Reputation

In today's highly competitive market environment, establishing brand awareness and creating characteristic brands have become an inevitable choice for the connotative development of rural industries. A successful brand is not only an intuitive display of the industrial image but also the key to enhancing industrial competitiveness and winning the recognition and praise of consumers. For Wenzhou's endogenous rural industries, creating unique industrial brands is undoubtedly an important direction for promoting sustainable industrial development.

Firstly, carefully build characteristic brands to demonstrate industrial charm. A brand, as a key symbol of the external manifestation of industrial culture, is a concentrated reflection of the soft power of an industry. Wenzhou's endogenous rural industries should adhere to the concept of "one product for one place" and accurately position the direction of industrial development. For example, the tea industry in Taishun, with its unique natural environment and long - standing tea culture, clearly positions itself with high - quality green tea and black tea as the core. In the process of brand building, deeply integrate industrial characteristics with scientific and technological innovation. Introduce advanced tea - planting technologies, such as intelligent irrigation and green pest control technologies, to ensure excellent tea quality; use modern processing techniques to retain the unique flavor and nutritional components of tea. At the same time, explore and integrate excellent industrial culture. The tea - making process in Taishun has been passed down for thousands of years. Incorporate this profound cultural heritage into brand stories, endowing the brand with unique charm. However, brand building is just the first step. Strengthening brand protection is equally important. On the one hand, pay attention to trademark registration, timely protect the brand name, logo, etc. legally, and prevent infringement. On the other hand, establish a brand quality supervision system, strictly control product quality, and ensure that the brand image is not damaged. Through a sound brand protection mechanism, enable rural industry brands to develop steadily in the market.

Secondly, conduct diversified publicity and promotion to enhance brand influence. In the information age, expanding publicity methods and increasing promotion efforts are key measures to enhance brand awareness and reputation. Adopt differentiated promotion strategies for different consumer groups. For high - end consumers who pursue a quality life, high - end tasting events can be held, inviting professionals and the media to participate, demonstrating the excellent quality and unique cultural connotations of products. For the young consumer group, use social media platforms to release interesting and fashionable short videos and graphic content to attract their attention. Take the initiative to embrace new business forms and models, and use innovative forms such as online exhibition halls and studios to comprehensively display industrial brands. Taking the rural tourism brand of Yongjia as an example, through the online exhibition hall, tourists can enjoy the beauty of ancient villages and traditional folk cultures without leaving home. With the help of the live - streaming studio, the host can share the fun and special activities of rural tourism in real - time, increasing consumers' immersive experience and stimulating their consumption desire. In addition, strengthening the interactivity of social media is also an important means to enhance brand stickiness. Actively reply to consumers' messages and comments, solve their questions and problems, and make consumers feel respected and cared for. Carry out online interactive activities, such as lucky draws and Q & A, to increase consumers' participation. By establishing good communication channels, eliminate the estrangement between consumers and the brand, win their trust, and thus enhance the reputation and loyalty of the industrial brand. Through carefully creating characteristic brands and diversified publicity and promotion, Wenzhou's endogenous rural industries will surely stand out in the market, achieve sustainable development, and inject strong impetus into rural revitalization

5. Conclusion

The development of Wenzhou's endogenous rural industries is of far - reaching significance for rural revitalization. It has achieved certain results in economic, social, cultural, and ecological aspects. However, it currently faces many challenges. The lagging development of emerging industries, insufficient technological innovation, shortage of talents, and financing difficulties restrict its scale expansion. Insufficient technological empowerment in the production, circulation, and consumption fields affects industrial efficiency and market competitiveness. The lack of innovative talents restricts industrial upgrading and transformation. The deficiency in brand awareness makes it difficult for products to stand out in the market.

In the future, Wenzhou should unswervingly promote the development of endogenous rural industries. Deeply explore local resources, conduct scientific assessment and rational allocation, promote industrial upgrading and regional coordination, and form a development pattern of complementary advantages. Increase investment in science and technology, create an innovation ecosystem, build platforms to promote the transformation of scientific and technological achievements, and improve industrial efficiency. Attach importance to the cultivation of "double - qualified" talents, strengthen the construction of think - tanks, and provide intellectual support for industrial development. Meticulously create characteristic brands, strengthen brand protection, publicity, and promotion, and enhance brand influence. Through these measures, it is expected to break through the development bottlenecks, achieve high - quality industrial development, promote rural economic prosperity, improve the level of rural social governance, inherit and innovate rural culture, and promote the comprehensive revitalization of Wenzhou's rural areas and the realization of common prosperity.

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