

Construction and Optimization of Zhoushan's Marine Economy Growth Pole from the Perspective of Maritime Power

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ABSTRACT

Guided by the ongoing national strategy of building China into a maritime power, the main themes of the economic and social development of the Zhoushan Archipelago New Area, Zhejiang, China, in the new era are efficiently utilizing its natural endowment and location advantage, giving full play to the international logistics economy and the marine leisure tourism economy, and developing a marine economy growth pole with strong leadership and radiation effects as soon as possible. After analyzing the current situation of the marine economy in the Zhoushan Archipelago New Area, the advantages of constructing a marine economy growth pole in Zhoushan and the functional positioning of the growth pole, this paper proposed to accelerate the optimization and adjustment of the three pillar industries in the Zhoushan Archipelago New Area. Furthermore, it is necessary to give full play to the mechanism of “government guidance + market participation,” promote the “polarization + radiation” effects of the marine economy growth pole in Zhoushan, and boost the economic and social development of Zhoushan's surrounding areas through the radiation effect.

Keywords: Maritime Power, Zhoushan, Growth Pole, Industrial Optimization

1. INTRODUCTION

The 21st century is a century defined by the ocean. Developing a high-quality marine economy and building China into a maritime power is the only way to realize the great rejuvenation of the Chinese nation. Under this background, the Party and the state have attached great importance to the “blue economy” and put forward the strategies of building China into a maritime power and jointly building the 21st Century Maritime Silk Road. As a country with abundant land resources and vast sea territory, China boasts a marine territorial area of 2.997 million km² and a coastline of more than 18,000 km, which showcases its huge potential for developing the marine economy. However, compared with the United States, Japan and other western developed countries, China still lags far behind in the development and

utilization of marine resources, and its marine economy is still in the growth stage. With the advancement of the national strategy of building China into a maritime power, the marine economy is expected to emerge as a new growth point of China's economic development.^[1] In 2019, China's marine economy output totaled RMB 8941.5 billion, increasing by 6.2% compared with 2018 and accounting for 9.0% of China's GDP. Although the figure declined to RMB 8,001 billion in 2020 due to the COVID-19 pandemic, the importance of marine economy to China's national strategic development cannot be underestimated. Zhoushan, the only state-level new area composed of islands in China, enjoys unique advantages in the development of marine economy. The construction of the Zhoushan Archipelago New Area is vital to the successful implementation of the national strategy of building China into a maritime power.

Therefore, it is necessary for Zhoushan to firmly grasp the strategic opportunity, accelerate the industrial adjustment and optimization, develop a new growth pole of marine economy with Zhoushan characteristics, strengthen its radiation effect on the development of surrounding areas, and lead the megatrend of marine economy development in Zhejiang and even in China.

The “growth pole” theory was first proposed by the French economist Perroux in 1955. He believed that economic growth is not simultaneously uniform over an entire region, but takes place around a specific pole (or point) with variable intensities. Subsequently, economic growth spreads to linked industries or regions through diverse channels, leading to varying effects on the economy as a whole.^[2] It is noted that the “growth pole” put forward by Perroux (1955) is not a specific geographic concept but an abstract economic concept, which refers to “some economic units such as industries or enterprises with economic and technological advantages in a certain environment.” This economic unit (propulsive industry) can drive the growth of other industries through the link with the peripheral economies or industries, which is referred to as the expansion-driven and “investment-oriented” growth of peripheral economies proposed by T. Scitovsky. On this basis, the industrial links centered on the propulsive industry are expanded, further strengthening the concentration of linked industries or innovative enterprises and thus forming a large industrial consortium or industrial cluster. In this way, the radiation effect on economic activities will be amplified. This functional effect of the growth pole is called the growth pole effect.^[3] It is noted that not all regions have what it takes to develop a growth pole. Perroux (1955) believed that the formation of a growth pole should require at least three preconditions. First, a number of highly innovative and technically advanced enterprises should be concentrated in the region, and innovation gives major impetus to the spatial polarization of growth poles. Second, the economies of scale should function effectively. Third, there should be an excellent external environment tailored for economic development. Boudeville (1957) gave a specific geographic character to Perroux’s conception and proposed the concept of “regional growth poles.” He defined the regional growth pole as a number of expanding industries located in an urban area and stimulating further development of economic activities throughout its zone of influence.^[4] Myrdal (1957) studied the mechanism of growth poles, and proposed that a “geographic dual economy” will be formed over the process of “circular cumulative causation.” Specifically, the economically developed areas (growth poles) and economically underdeveloped areas co-exist, and the flow of the production factors between the two areas will result in the backwash effect and the spread effect.^[5] The backwash effect refers to the situation when production factors keep flowing into the regions with growth poles. The spread effect means that economies of scale will decline, and the resource factor

will flow back to the peripheral areas after the economy of the growth pole reaches a certain point, thus driving the economic development of the nearby localities through the radiation effect.^[6]

It can be concluded that growth poles are associated with growth from the perspective of “propulsion” and “spatial agglomeration,” and the conceptual connotation of growth poles can be viewed from the following two aspects. (1) Growth pole is a type of propulsive industry in the economic space. (2) The “pole” in the growth pole indicates a certain geographic significance. It refers to the growth center, which is the center of urban areas or their localities where geographic agglomeration occurs. Moreover, the operation mechanism of growth poles mainly emphasizes the “polarization effect” and the “diffusion effect” during the regional economic unbalanced development. The influence of the economic growth pole on the regional economy is mainly reflected in the phased formation and interaction of the two effects. Finally, as for the study of the application of the growth pole theory, the existing research focuses on the feasibility analysis of constructing regional growth poles. The research of industrial selection and optimization in the process of regional economic development is still lacking. Guided by the growth pole theory under the background of the national strategy of building China into a maritime power, this paper deeply analyzed the conditions and foundations of constructing a growth pole in the Zhoushan Archipelago New Area. After analyzing the positioning and functions of the growth pole, this paper concluded that the Zhoushan Archipelago New Area should focus on developing a “propulsive industry.” Then, it further discussed the way to maximize the polarization effect of the growth pole based on industrial agglomeration and put forward relevant countermeasures and suggestions.

2. FAVORABLE CONDITIONS AND FOUNDATIONS OF CONSTRUCTING ZHOUSHAN’S MARINE ECONOMY GROWTH POLE

During the process of ocean exploitation and utilization, Zhoushan has embarked on a path from simplicity to complexity with increasing breadth and depth. In this process, Zhoushan keeps accumulating favorable conditions and successful experience, grasps the precious opportunity of building China into a maritime power and Zhejiang into a strong maritime province, and thus lays a solid foundation for the construction of marine economy growth pole in the new era. In 2019, the added value of Zhoushan’s marine economy reached RMB 90.55 billion, increasing by 10.5% compared with 2018, accounting for 66.5% of the GDP and ranking first in the province. With the fast growth of the marine economy output, Zhoushan has gradually highlighted its competitive advantage in the marine economy development zone of Zhejiang Province, and

has emerged as the prefecture-level city with the highest proportion of marine economy in China. Among domestic cities, Zhoushan has unique advantages in developing the marine economy and building a marine economy growth pole, including policy advantage, location advantage, archipelago resource advantage and fishery resource advantage.

First, the policy advantage is prominent. After the strategy of building China into a maritime power was put forward at the 18th CPC National Congress, the Zhoushan Archipelago New Area became the first state-level strategic planning area with the theme of marine economy and the provincial economic and social administration rights. *Zhejiang Zhoushan Archipelago New Area Development Plan* (hereinafter referred to as the “Plan”) gives important policy support for the construction of Zhoushan’s marine economy growth pole. According to the Plan, the “early pilot and implementation” policy and special preferential policies will be released to support the construction of the Zhoushan Archipelago New Area. One of the purposes of approving the Plan by the state is to promote the in-depth development of the cooperation in finance, industry, information, science, technology and talent cultivation in the Yangtze River Delta region, extend into the Pacific Economic Circle, and facilitate the resource sharing and division of labor with the surrounding port countries and regions. Moreover, through the construction and management of the Zhoushan Archipelago New Area, the Chinese economy will participate in international economic and technological cooperation and competition on a larger scale and at a higher level, thus making Zhoushan an important marine economy growth pole in China. A series of supporting policies put forward in the Plan will provide a strong institutional guarantee for promoting the sound and rapid development of the Zhoushan Archipelago New Area.

Second, the location advantage is remarkable. The Zhoushan Archipelago New Area is located in the T-shaped intersection of China's south-to-north shipping routes and the golden waterway of the Yangtze River. Neighboring the economically developed Yangtze River Delta region and facing the Pacific Economic Circle, Zhoushan serves as a main maritime gateway of China’s sea-river combined transportation and a window of the Yangtze River basin opening to the world. Zhoushan also boasts rich deepwater coastline resources and favorable conditions for port construction. The coastline that can be used for building berths is as long as 1,538 km, and the deepwater coastline is 279.4 km long, accounting for 18.4% of the total length of China's coastline. The coastline suitable for building berths above 10 thousand tons with a water depth of more than 10 m is 183.2 km in length. The coastline devoted to port construction with a water depth of more than 20 m is as long as 100 km. Such excellent deepwater coastline resources provide favorable conditions for Zhoushan to build deepwater ports. Currently, Zhejiang has initially formed a coastal

port system with the “Ningbo-Zhoushan Port” as the mainstay and the ports in northern Zhejiang, Wenzhou and Taizhou as the supplement. After the projects, such as Zhoushan Cross-sea Bridge, Hangzhou Bay Bridge and East Sea Bridge, were completed and put into service, Zhoushan has been integrated with the Yangtze River Delta region more closely, which provides new opportunities, possibilities and conditions for Zhoushan's new round of economic development and further demonstrates its important position in the development of Zhejiang into a strong maritime province. The geographic advantage of Zhoushan makes it not only an important south-to-north sea transportation hub, but also an important hub to facilitate the sea-river combined transportation in eastern China, which lays a solid foundation for the development of marine economy in the Zhoushan Archipelago New Area.

Third, the island resources are abundant. Zhoushan is the largest island city in China. Tectonically, it belongs to the Southeast Zhejiang Fold Belt of the South China Fold System. The majority of the rocky coast endows Zhoushan with a geomorphic phenomenon characterized by tortuous shorelines, well-developed beaches, and numerous islands. The coastline of the Zhoushan Archipelago New Area stretches for 2,448 km in total. Composed of 1,390 islands of different sizes, the city covers a total area of 22,200 km² and boasts a sea area of 20,800 km², which is 15.2 times that of the land area. Due to the subtropical monsoon marine climate, the Zhoushan islands boast four distinct seasons, a comfortable climate and excellent mountain vegetation, in addition to a perennial broad-leaved forest and beautiful scenery. To facilitate the establishment of the state-level Zhoushan Archipelago New Area, Zhoushan must give full play to its archipelago advantages. Zhoushan is famous for its widely-distributed state-level scenic spots, represented by Zhujiajian Island, Mount Putuo, and Taohua Island. Combining the marine Buddhist cultural landscape, island beach landscape, mountain and sea landscape, historical figures landscape and fishing customs, Zhoushan serves as a tourist resort and recuperation paradise. In addition, a large number of important transshipment terminals are under construction in many islands, such as Baosteel Majishan Ore Terminal in Majishan Island, Zhejiang Energy Zhoushan Coal Transshipment Terminal in Liuheng Island, and Shanghai International Shipping Center Yangshan Deepwater Port in Shengsi County. If these islands can be fully developed and constructed based on the characteristics of each island, Zhoushan will not only give full play to its complementary tourism advantages, but also develop into an archipelago with multi-functional comprehensive utilization.

Finally, the fishery resources are rich. The Zhoushan sea area is located on the western coast of the Pacific Ocean with a wide variety of marine organisms, and is abundant in fishery resources with high economic value. According to relevant data, there are as many as 1,163

marine species in the waters near Zhoushan, including planktons, nektons, and benthos. Specifically, Zhoushan boasts 328 species of nearshore fish, 15 species of crabs, over 60 species of shrimps and over 100 kinds of marine organisms with economic value. Zhoushan Fishing Ground, the largest estuarine spawning ground in China, offers the optimized spawning conditions for various aquatic creatures, such as marine commercial fishes and shrimps, thus earning the reputation as “the fishing capital of China.” As China's largest aquatic products processing and export base, Zhoushan is proud of its top research and development ability, management expertise, and technical power in China. Over the past few years, Zhoushan has cultivated a large number of world-famous aquatic product brands which have exported a wide range of aquatic products to many countries and regions around the globe. However, due to the problems such as offshore pollution and declining fish resources in recent years, the fishery in Zhoushan is in a dilemma. To overcome these difficulties and explore a new path to developing the fishery economy, Zhoushan urgently needs to adjust and optimize the structure of the marine fishery, speed up the development of pelagic fishery, improve the anti-storm deepwater net cage technology, and facilitate the development of modern fishery.^[7]

3. POSITIONING AND FUNCTIONS OF ZHOUSHAN'S MARINE ECONOMY GROWTH POLE

The major development strategies of building China into a maritime power and the 21st Century Maritime Silk Road underline the importance of developing a “blue economy.” Zhejiang has become the main battlefield of the national endeavor to build China into a maritime power, and Zhoushan has played a key role in it.^[8] As is clearly noted in the Plan, the Zhoushan Archipelago New Area will step up efforts to develop into a pilot area of the marine economy with the highest opening level, the best quality of growth, the optimized industrial structure, and the strongest development momentum in Zhejiang. As its advantageous industries keep expanding, the area will distinguish itself as an important growth pole driving the economic development of the Yangtze River Delta region. Relying on a series of national supporting policies, favorable location conditions, abundant marine resources, distinctive island resources and flexible operation systems, the Zhoushan Archipelago New Area is poised to achieve a booming marine economy. With the aim to accelerate the construction of the Zhoushan Archipelago New Area into a pilot area devoted to facilitating the development of Zhejiang into a strong maritime province, a pilot area of comprehensive marine development and an important growth pole of the economic development of the Yangtze River Delta region, Zhoushan should devote itself to constructing a growth pole with the Zhoushan Archipelago New Area at its core. Geographically, the Zhoushan Archipelago New Area should fulfill its

function as a growth center. The overall planning should be carried out for various resources devoted to the marine economic development in Zhejiang, and even the whole Yangtze River Delta, and resource factors such as talents, capital, technologies and information should be concentrated and brought into full play in the Zhoushan Archipelago New Area through diverse channels.^[9] Specifically, under the guidance of the Plan, it is necessary to strengthen the overall planning of the cities within the Yangtze River Delta region, speed up the development of the marine economy centered on the Ningbo-Zhoushan Port sea area and supporting cities, further promote the construction of the land-island transportation network, and give full play to the economic development advantages of the Yangtze River Delta region. With the “comparative advantage” of developing the marine economy, Zhoushan should strengthen the economic cooperation with the surrounding areas, improve the economic strength of the Zhoushan Archipelago New Area through cooperation, and give play to its demonstration area effect of marine economy development. This is also the overall goal and direction of constructing the growth pole in the area.

4. SELECTION AND OPTIMIZATION OF LEADING INDUSTRIES FOR CONSTRUCTING ZHOUSHAN'S MARINE ECONOMY GROWTH POLE

Zhoushan is a city built around the sea and thriving on the sea. With remarkable advantages in “harbor, scenery and fishery” resources, the Zhoushan Archipelago New Area occupies a unique position in the development of Zhejiang and even China. In the context of building China into a maritime power, the Zhoushan Archipelago New Area should grasp the strategic opportunity. Under the guidance of “promoting the structural upgrade of the secondary industry, speeding up the cultivation of the tertiary industry and optimizing the structure of the primary industry,” Zhoushan should give full play to its advantages of island resources, select and develop the leading industries, and push forward the optimization and upgrading of the industrial structure. Based on this, Zhoushan should focus on building industrial growth points centered on leading characteristic industries such as harbor industry, port logistics, marine tourism and modern fishery, so as to drive the coordinated economic development of related industries and surrounding areas, and boost the leapfrog economic development of the Zhoushan Archipelago New Area.

4.1. Building a logistics industry growth point centered on the construction of deepwater ports in Zhoushan

The “Ningbo-Zhoushan Port” is a transshipment and

reserve base for bulk strategic materials and a large-scale container transshipment terminal in China. As an important intersection of the 21st century Maritime Silk Road, the Ningbo-Zhoushan Port can effectively build a platform for communicating with neighboring countries along the route and enhancing the economic, trade and cultural exchanges with other countries by virtue of its advantages, which will directly affect the development of China's import and export trade economy. In addition to its abundant port resources, the Zhoushan Archipelago New Area also enjoys the unique advantage of being located in the T-shaped intersection of China's south-to-north shipping routes and the golden waterway of the Yangtze River. For this reason, the ports in Zhoushan are expected to develop into the important hub ports for the sea-river combined transportation in Zhejiang and the important international hub ports in the Asia-Pacific region, which gives Zhoushan priority in the port development of Zhejiang. Achieving the logistics growth point centered on the deepwater ports means making unremitting efforts to develop and expand international trade with the Asia-Pacific region. Besides giving full play to the location advantage of the Zhoushan islands and the comparative advantages of deepwater channels and deepwater coastline resources, Zhoushan should be determined to develop a number of deepwater ports, effectively play its role as an international logistics terminal for bulk commodities, as well as build a comprehensive linkage system which consists of sea-land linkage, sea-river linkage, port-shipping linkage, port-industry linkage, and port-trade linkage. Further efforts must be made to facilitate the concentration of port-shipping service resources, including finance, information, intermediaries, and customs in Zhoushan's deepwater ports, develop a port-shipping growth point centered on the development of deepwater ports in Zhejiang, and build these deepwater ports into the world-class ports in the long term.

4.2. Building a tourism industry growth point centered on island tourism development

The Zhoushan Archipelago New Area is rich in marine tourism resources. Boasting several state-level and province-level scenic spots, it is well known as a holiday island resort in the eastern coastal areas of China with multiple functions such as sightseeing, entertainment, summer vacation, leisure, rehabilitation and sea sports. To build a growth point centered on island tourism, Zhoushan should fully take into account the characteristics of island tourism resources in the new area, creatively develop scenic spots based on the characteristics of each island's geographic environment, and develop the island tourism industry through diverse channels. Due to the polarization effect, the interaction between island tourist attractions should be enhanced, and the interaction of island tourism resources should be effectively utilized to promote the marine tourism growth

point centered on the development of island tourism. On the one hand, Zhoushan should optimize the tourism industrial development mode of the Zhoushan islands, integrate relevant tourism resources, explore its profound marine culture and religious culture, and build itself into a sea garden city and an international ecological leisure island. The industrialization of tourism will facilitate the development of related industries and further promote the economic and social development of surrounding areas. On the other hand, the Zhoushan and the surrounding coastal cities are competing with each other for tourists, which should be fully considered during the tourism development of the Zhoushan islands. It is proposed that Zhoushan should adopt the development strategy of "regional linkage," actively engage with the Shanghai market, and integrate into the tourism system of the Yangtze River Delta region so as to fully utilize the rich customer resources in Jiangsu, Zhejiang and Shanghai. Furthermore, Zhoushan should enhance the core competitiveness of its island tourism products and facilitate the joint marine tourism development in the Yangtze River Delta region, which will benefit Ningbo, Shanghai, Hangzhou Bay and the eastern Zhejiang, with the Zhoushan island tourism as the mainstay.

4.3. Building a modern fishery growth point centered on the construction of new marine ranches and aquatic product intensive processing industry

Marine fishery is a traditional pillar industry with unmatched advantages in Zhoushan. Although it occupies a unique position in the industrial development of Zhejiang and even China, it still remains at the low end of the industry chain. As the marine fishery resources decline on a global scale, Zhoushan urgently needs to shift the development mode of the marine fishery from the traditional resource-oriented mode, and actively explore new marine industries such as pelagic fishery, modernization of fishery and transformation of marine fishery products into industrial products.^[10] To build a modern fishery growth point centered on marine ranches and aquatic products deep-processing, Zhoushan should not only rely on its traditional fishery, but also absorb and integrate the resource factors necessary for the development of modern fishery such as funds, talents, information, and technologies. It must innovatively improve the technologies for deepwater aquaculture and aquatic products deep-processing, optimize the structure of the fishery industry, and promote the formation of a relatively complete modern fishery industry chain covering fishing, breeding, processing and sales of aquatic products. Specifically, on the one hand, it is necessary to strengthen the awareness of environmental protection and sustainable development, strictly control the over-exploitation of offshore fishery resources, actively develop ecological fishery and energy-saving fishery, combine ecological benefits with social and

economic benefits, and create a new quality-and-efficiency-oriented fishery development mode.^[11] On the other hand, marine fishery colleges and universities should be devoted to nurturing a wide range of professional talents for the construction of new marine ranches and the intensive processing of aquatic products. Moreover, various scientific research forces must join hands to develop aquaculture technologies and promote the industrialization of fishery achievements.

5. CONCLUSION

The marine economy has emerged as the focus of a new round of international economic competition and development. In response to the call of the national strategy of building China into a maritime power, Zhoushan should adhere to the principle of “equal priority to protection and development,” fully utilize the mechanism of “government guidance + market participation,” promote the regional concentration of marine industry, facilitate the transformation of marine economy development from extensive to intensive, and realize the optimal allocation of resources. Specifically, under the planning and guidance of the government, market participants should engage in orderly competition in the market economy to promote the concentration of the three marine-related pillar industries in the Zhoushan Archipelago New Area. The geographic and spatial agglomeration of marine-related industries in the Zhoushan Archipelago New Area provides the prerequisite for the economic radiation effect. The enhanced interaction between all participants in the cluster is conducive to the optimization and expansion of the characteristic industry chain and the formation of a stronger polarization effect featuring the concentration of resource factors such as talents, capital, technologies, and information in the growth pole region. Therefore, it will further enhance the self-development capability and comprehensive competitiveness of the characteristic industrial clusters, promote the economic development of the Zhoushan Archipelago New Area with the marine economy as a key growth point, and drive the economic and social development of Zhejiang and even the Yangtze River Delta region through the radiation effect.

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