

Analysis on the Influence of Port on City Economic

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Abstract

As an important infrastructure for the national economic and social development of countries with coastlines or sea ports, ports are doors to the outside world, gathering points and hubs for land and water transportation, and focus points for various industries. As a national comprehensive transportation hub and a port for the collection and distribution of import and export goods, it has developed into a hub connecting railway, highway, air and other transportation modes. It is also a powerful driving force for the development of coastal cities and regions. The status of modern ports in national economic activities has not only been a gateway for the import and export of goods into and out of China, but also played an important role in promoting the economic development of port cities and even coastal city clusters, and had a significant impact on the adjustment and upgrading of industrial structure and people's lifestyle in this region. This paper first introduces the theory of port and city economic interaction, expounds the connotation and characteristics of port and city economic interaction, and analyzes the development trend of port and city economic interaction. Then, it analyzes in detail the positive and negative effects of ports on urban economic development, and finally puts forward some countermeasures and suggestions for the integrated development of ports and urban economy, hoping to provide some reference ideas for policy makers to develop ports and promote urban economic development.

Keywords

Urban economy, Income of residents, Foreign investment, Ecological environment.

1. Introduction

The promoting effect of port on the economic development of a city refers to the direct and indirect economic contribution of port and port hardware facilities to the social and economic development of the city during the process of investment and construction and after the port is built and used. These economic effects include the economic effects directly reflected in the port users, as well as the overall indirect economic effects generated by promoting and driving the development of other relevant industrial sectors in the city. In addition to playing its basic role of cargo handling, ports have also derived many auxiliary functions, such as trade role, industrial processing role, logistics hub role and information exchange role. With the diversified development of the port's function, the port's influence on the city's economic development has shown many aspects and profound influence. The construction of the port not only positively promotes the development of the original industry and service industry in coastal cities, but also has a positive impact on attracting investment, providing employment opportunities, increasing government tax revenue and increasing residents' income in coastal cities. From a deeper level of consideration, the construction and development of the port plays an important role in the adjustment of the industrial structure of the whole city cluster and the formation of the layout of opening to the outside world.

2. The Related Theory of Port and City Economic Interaction

2.1. The Connotation of the Interaction between Port and City

For a port city, there is an old saying that "the port is used by the city, and the city depends on the port". Throughout the history of the world, the development of ports and cities in many developed countries and regions has complemented each other. The port gave birth to the city and promoted the prosperity of the city economy. On the contrary, the development of urban economy also promotes the development of port, that is to say, port development and urban economic development promote each other [1]. In the process of economic interaction between port and city, on the one hand, they require them to cooperate with each other, so as to form a joint force and realize the good development of the whole system. On the other hand, in the process of interactive development, port and urban economy will inevitably between two subsystems have development speed or size is not consistent, not harmonious, such as port construction than in the city's economic development needs, a waste of resources or port didn't catch up with the pace of the development of urban economy development level, which leads to the function of the port will not get sufficient play, so as to restrict the further development of urban economy [2]. And this kind of temporary not harmonious or growing mismatch and found new gap for the coordinated development of both, to ask for updates, opened up a new way, thus become the port and urban economy to coordinate interaction of thrust, making the coordinated development, under the condition of new interactive new and realize the improvement of the whole system development.

Therefore, the interactive development of port and city economy not only realizes the interaction in the development, but also achieves the development in the interaction. The interaction in development is an active and efficient process between them. The development in the interaction is sustainable development. Only when the port and city economy have achieved good interaction and integrated development can they achieve scientific and sustainable development.

2.2. The Interactive Characteristics of Port and City Economy

Port and city economy are two open systems, which are interrelated with each other, but at the same time have some contradictions. The interactive development between port and urban economy has the following main characteristics:

1. From the perspective of development time, the relationship between port and urban economy has obvious stages

From the first generation to the fifth generation, the functions of ports have been constantly improved, and the relationship between ports and cities has also been constantly developing and evolving. In this process, ports have also presented obvious stages, from the growth period to the development period, then to the mature period and to the stagnation period.

2. From the perspective of development, the relationship between port and urban economy is obviously dynamic

Both ports and port cities themselves are constantly developing and changing, and the relationship between them in different stages is also constantly changing. The good relationship between port and urban economy in a certain stage does not mean that this relationship is also reasonable in the next stage. The relationship between them often shows the changing characteristics of the cycle of equilibrium -- imbalance -- equilibrium [3]. Therefore, the relationship between port and urban economy is dynamic, and the impact of port on urban economy should be studied from the perspective of development.

3. From the perspective of development function, the relationship between port and urban economy has obvious interactivity

First of all, human economic and social activities depend on water flow, while ports rely on rivers, rivers and oceans to provide transportation, trade and other services for human beings. In the process of development, they derive and drive the development of other industries, thus forming port cities. That is to say, ports play a very important leading role in urban development and become the foundation of urban economic prosperity. Second, as urban economies continue to grow, there is a growing need for broader connections with the outside world and for transport. At this time, because of its unique location and function, the port has become an important node for transportation and other requirements. Therefore, the port has also generated a large number of flows of personnel, materials, information and capital, and directly generated the port industry, which enables the port to grow and prosper continuously. Therefore, without a city, the port loses its support; Thirdly, the continuous growth and prosperity of the port and the continuous strengthening of the port's domestic and international contacts make the port city more widely and closely connected with the outside world, which not only further improves the image, popularity and competitiveness of the port, but also wins more development opportunities for the port city. Therefore, without a thriving port, it is impossible to have a fast and sustainable port city. It can be seen that due to the interdependence and mutual promotion between cities and ports in human economic and social activities, such interaction is both an interaction in development and a development in interaction. It has been a common phenomenon in the world's major ports and port cities for hundreds of years to build a city according to the port, port for city use and port city integration, and it will continue to be the main theme of port city development in the future.

2.3. The Interactive Characteristics of Port and City Economy

In different historical period and social development stage, the interactive process of port and city economy will present different characteristics. With the continuous acceleration of economic globalization and informatization, the interaction between port and urban economy presents the following development trends:

2.3.1. The Scope of Interaction between Port and Urban Economy is Larger

In the past, the interaction between port and city was mainly limited to one city and one port, and the space scope was relatively limited. However, with the increasingly mature economic interaction between ports and cities, the continuous enrichment of port connotation and the increasingly advanced information technology, the scope of interaction between ports and cities is gradually expanding, from one port to one city to the interaction between a port and multiple cities or even the whole surrounding area.

2.3.2. The Degree of Interaction between Port and Urban Economy is Closer

With the advent of the era of Marine economy, ports, as the key link between oceans and cities, will be continuously expanded in the scale of port development to realize the effective utilization of Marine resources and make the Marine economy a new highlight of urban economic growth [4]. Therefore, taking the port as the core foundation and the Marine development as the purpose, the in-depth development and utilization of port resources, the development of port economy, the further expansion and improvement of the industrial structure of the port and port city, and the promotion of the sustainable and efficient development of the port and port city economy become the future development trend.

2.3.3. Port and City Economy Interact in a More Ecological Way

In the era of energy crisis and environmental crisis, it is very necessary to accelerate industrial optimization and upgrading, build a resource-saving and environment-friendly green port and sustainable urban economy. As an important part of the city, the port not only attaches importance to its own sustainable development, but also makes efforts for the green economy and low-carbon economy of the city. The interactive development of port and city economy will

be guided by the sustainable development of port and city economy, and the way of interaction will move towards intensive, low carbonization and ecological development.

3. The Influence of Port on Urban Economic Development

3.1. Positive Impact of Port on Urban Economy

3.1.1. Port Tax Contributes to the City Economy

Tax payment level is an important index to evaluate the contribution of port to urban economic effect. Tax revenue is the main source of local fiscal revenue, and stable fiscal revenue is a necessary guarantee for the smooth implementation of government work [5]. With the gradual deepening of China's foreign trade links, the handling capacity of ports is also gradually improving, and the tax revenue contributed by ports is also increasing year by year. In fact, a large part of the financial revenue of coastal cities comes from the profits and taxes paid by the ports.

3.1.2. Provide a Large Number of Urban People with Jobs

At present, with the increase of mechanization degree, loading and unloading efficiency and the proportion of bulk cargo containerization, the employment opportunities directly provided by ports will be reduced accordingly. But active ports provide additional employment opportunities, which means that ports indirectly provide a large number of employment opportunities. The solution to the problem of urban employment will also affect the local economic development.

3.1.3. The Port Attracts a Large Amount of Foreign Investment

The existence of port is one of the main advantages of port city to attract foreign capital. The economic activities of the port have created good traffic conditions for the port city, made it possible for the trade between the port city and other regions and other countries, promoted the foreign cooperation and exchange of the port city and the region, and thus attracted a large amount of foreign investment. The injection of foreign investment also makes a certain contribution to solving the problem of urban employment and increasing the vitality of urban trade, thus affecting the development of urban economy.

3.1.4. Promote the Improvement of Urban Residents' Income

The effect of a port on a city's economy can also be measured by the income level of its inhabitants. In economics, there is a concept called the "multiplier effect", that is, an increase in investment will lead to a larger or even multiple increase in GDP[6]. Port economy refers to a regional economy formed by the organic combination of port transportation industry and related industries developed relying on ports, which is highly comprehensive and correlated. The development of the port not only needs the support of warehousing, transportation, logistics, processing, trade, finance, insurance, agency, information and port-related services, but also greatly drives the development of these industries. Therefore, port economy has a large multiplier effect. Port economy drives the economic production level of the whole region through the forward and backward multiplier effect, and also drives the regional consumption level by driving the regional industrial production. Therefore, the income level of urban residents can reflect the contribution of port economy to the urban economy.

3.1.5. Drive the Optimization of Urban Industries

Port economy drives industrial adjustment and optimization mainly in two aspects: first, the expansion of port scale and the construction of infrastructure can increase the proportion of the secondary industry in GDP; Second, with the development of the port, the rapid development of the regional industry and commerce, financial industry, catering and entertainment, service industry and other related tertiary industries has been promoted,

resulting in the increasing proportion of the added value of the tertiary industry in GDP and further optimization of the industrial structure[7]. The development of port economy brings about the industrial optimization of the city. As a result of the industrial optimization, the allocation of various resources, such as capital and human resources, is more reasonable and the effective utilization of resources can be realized, so as to promote the better and faster development of urban economy.

3.2. The Negative Impact of Ports on Urban Economy

3.2.1. Pollute the City's Ecological Environment

Water pollution: In the process of port development, sewage generated by ships and production is the main cause of water pollution near the port. The ship's washing water and pressing water are important sources of pollution in the water area. The discharge of the oil tanker's washing tank water after loading oil is called washing water. This part of the water contains a lot of oil pollution, which causes serious pollution to the water area. Ballast water means that an oil tanker will fill the oil tank with water after unloading oil in order to maintain the balance of the hull, and it needs to be discharged before loading oil. The oil content in this part of water is relatively high, which will also cause great pollution to the water area [8]. In addition, the daily discharge of pollutants from ships and port manufacturers will also bring great pollution to the waters.

Air pollution: The development of ports will also bring great pollution to the atmosphere, mainly dust and waste gas produced by port production activities. The port will produce more dust pollution during the loading, unloading and storage of ore, coal and other bulk cargoes. The emission of waste gas mainly includes the emission of ships and container trucks, the emission of waste gas from relevant production enterprises, and the volatilification of crude oil and other volatile gases during transportation.

Noise pollution: With the continuous development of society, noise pollution has gradually become a new important source of pollution, which also brings certain harm to human health. In the process of port construction and development, large loading and unloading tools and ship loading and unloading operations bring more noise pollution. In addition, in the cargo distribution system, the noise from cars, trains and other ships also brings noise pollution to the city.

3.2.2. Occupy the City's Natural Resources

The occupation of urban resources by ports is mainly reflected in the following two aspects: on the one hand, renewable resources such as land, shoreline and water resources; On the other hand, mineral resources and other non-renewable resources [9]. The development and expansion of port away from the use of land resources, the land resources of our country is relatively nervous, therefore in the process of port construction and development, through the reclamation of land resources, expanding port in the port cover an area of resources is calculated, the port's land area should include reclamation, formed from around the area of land resources. The occupation of water resources by ports mainly refers to the industrial water consumption of ports. The production and development of ports require a large amount of fresh water resources, including domestic water and industrial water[10]. Port production needs to occupy a lot of energy resources, mainly including coal, oil, electric energy, etc., which can be converted into electricity according to the amount of energy when calculating these energy resources.

4. Suggestions to Promote the Port and City Economic Integration

4.1. Coordinate Port Area Relationship

Port and hinterland are interdependent and mutually reinforcing. Port is the gateway of hinterland, through the output of goods, input so that hinterland external economic relations can be carried out, thereby promoting the development of hinterland economy. Hinterland is the basis for the survival and development of the port, it continues to provide goods for the port and digest the goods from the port. Hinterland economy is more developed, freight volume is bigger, the requirement to port capacity is taller also, promote the scale of port and its are in national economic activity action increases increasingly thereby. Port hinterland of the construction should combine regional economic development, in accordance with the port function regionalization should follow plan coordinated with city area overall planning, port function layout and increase coordinated industry layout planning, function layout and shoreline resources, and urban traffic, the principle of coordinated development space layout planning, identify future port development trend of large-scale and specialization. In terms of port development, the comparative advantages of port and the city should be brought into full play according to local economic development level and economic structure, and according to different functions and positioning of port and city, so as to build port and city integration and promote the coordinated development of port economy, city economy and regional economy.

4.2. Strengthen Port Investment and Construction

We will further expand financing channels and strengthen the construction of port facilities. To develop port economy, investment in port construction is the foundation. In future port construction, whoever can attract investors has the hope to become a main hub port or shipping center. Large port and waterway groups come to invest in the port not only to bring the capital needed for construction, but also to bring information, supply of goods and routes, etc. At the same time, it can promote the improvement of enterprise management level and enhance the popularity of the port. To do big do strong, therefore, the port economy, will be a "government push, intermediary services, enterprise mainly" principles of the marketization, specialization, the mode of cooperation, actively use the market means to take stock system, the owner, joint venture cooperation, the sale or lease management, attract the investment construction of container yard, the owner wharf, warehouse facilities and other facilities, transportation, loading and unloading of a sino-foreign joint venture company, to open up routes and market at home and abroad, to build port in joint venture cooperation, establish a diversified investment mechanism, a new breakthrough in development of port economy.

5. Conclusion

Port hinterland of the construction should combine regional economic development, in accordance with the port function regionalization should follow plan coordinated with city area overall planning. The comparative advantages of port and the city should be brought into full play according to local economic development level and economic structure, and according to different functions and positioning of port and city, so as to build port and city integration and promote the coordinated development of port economy, city economy and regional economy. In the future, we should expand financing channels and strengthen the construction of port facilities. To develop port economy, investment in port construction is the foundation.

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