

Innovative Development Path for Ningbo Service Outsourcing under "the Belt and Road Initiative"

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Abstract: As "the belt and road initiative" is a brand-new path for China's opening up to the outside world, the existing studies mostly focus on the current situation of economic and trade cooperation between China and countries along the "belt and road", but seldom analyze the influence mechanism of "the belt and road initiative" on the development of service outsourcing. Therefore, in this paper, on the basis of analyzing the innovative development of Ningbo's service outsourcing, focusing on the influence mechanism of "the belt and road initiative" on the innovative development of service outsourcing, the innovative development path for service outsourcing in Ningbo is put forward under "the belt and road initiative".

Keywords: service outsourcing; innovative development; development path

1. Introduction and Literature Review

Ningbo, as an important node city of the Maritime Silk Road, a comprehensive experimental zone of the belt and road initiative and a demonstration zone of economic and trade cooperation between China and Central and Eastern Europe, has a solid foundation for trade with the belt and road initiative countries, and is also facing a good opportunity to cooperate with countries along the belt and road initiative as a demonstration city of service outsourcing. Wang Xinong [1] believed that as there are many development opportunities for service outsourcing under the "the belt and road initiative", we should fully understand the issues of outsourcing culture integration and investment promotion methods, and establish a service outsourcing multinational cooperation pilot zone

or park. Dai Jun [2] found that factors such as "the belt and road initiative" policy support, per capita wage of service outsourcing practitioners, Internet development, online delivery and security technology played an important role in promoting the undertaking of "the belt and road initiative" international service outsourcing. In this paper, "circulation theory" is used to explain the influence of "the belt and road initiative" on service outsourcing industry, and the innovative development path of service outsourcing is put forward in combination with the development trend of service outsourcing and the new change trend of international industry.

2. Status Quo of Innovation and Development of Service Outsourcing in Ningbo

2.1. The Scale of Offshore Service Outsourcing Continues to Grow

From 2011 to 2017, Ningbo has achieved rapid development in service outsourcing export volume, service outsourcing contract realization amount and offshore service outsourcing realization amount (Table 1). In 2017, the realization of service outsourcing reached RMB 29,085 billion, of which the realization of offshore service outsourcing amounted to US\$ 2.007 billion. The offshore service outsourcing accounted for an increasing proportion of the service trade exports year by year but a smaller proportion as a whole. If cooperation with countries along the "the belt and road initiative" is strengthened and new markets and fields are explored, the economic benefits brought by offshore service outsourcing will be immeasurable.

Table 1. Export value of service outsourcing and offshore outsourcing realization in Ningbo (unit: US\$ 100 million)

Years	2011	2012	2013	2014	2015	2016	2017
Offshore outsourcing realization amount	2.80	4.10	6.03	9.10	12.79	16.45	20.07
Growth	—	46.40	47.10	50.90	40.55	28.61	24.70
Export of trade in services	16.13	28.76	44.87	54.54	60.14	63.28	74.62

Proportion of offshore outsourcing to exports	17.00%	14.26%	13.44%	16.69%	21.27%	26.00%	26.90%
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Source: Ningbo Statistical Yearbook

2.2. KPO Ratios Continue to Rise but Remain Weak

From 2011 to 2016, the proportion of KPO in the realization of service outsourcing increased continuously, from 11.3% to 18.34%, up by more than 60% (Table 2).

The proportion of offshore service KPO also keeps climbing, but it is still in a weak position when compared with the proportion of ITO which is as high as 37.5%, so there is still much room for development.

Table 2. Service outsourcing structure in Ningbo City

Years	2011	2012	2013	2014	2015	2016
ITO (10 ⁸ yuan)	35	50.06	77.78	75.76	93.50	121.45
Offshore ITO	/	3.26	4.85	5.94	8.20	9.78
BPO (10 ⁸ yuan)	40.63	54.08	45.39	42.68	58.72	57.42
Offshore BPO (10 ⁸ yuan)	/	1.57	1.88	1.92	2.74	4.12
KPO (10 ⁸ yuan)	10.01	10.41	20.86	22.20	32.20	42.42
Offshore KPO (10 ⁸ yuan)	/	0.49	1.04	1.45	1.85	2.55
The proportion of KPO in the outsourcing realization of the whole city	11.3%	9.10%	14.50%	15.80%	17.30%	18.34%
The proportion of KPO to offshore service outsourcing undertaken	/	9.20%	13.40%	18.60%	14.40%	15.52%

Source: Ningbo Municipal Commission of Commerce

2.3. The Scale of Service Outsourcing Enterprises has increased

As shown in Figure 1, the scale of outsourcing enterprises expanded rapidly from 608 in 2011 to 1,407 in

2017, an increase of 2.31 times, and the number of outsourcing employees increased from 26,000 in 2011 to 53,900 in 2017, an increase of 2.1 times, which became an important way to absorb social labor, especially college students.

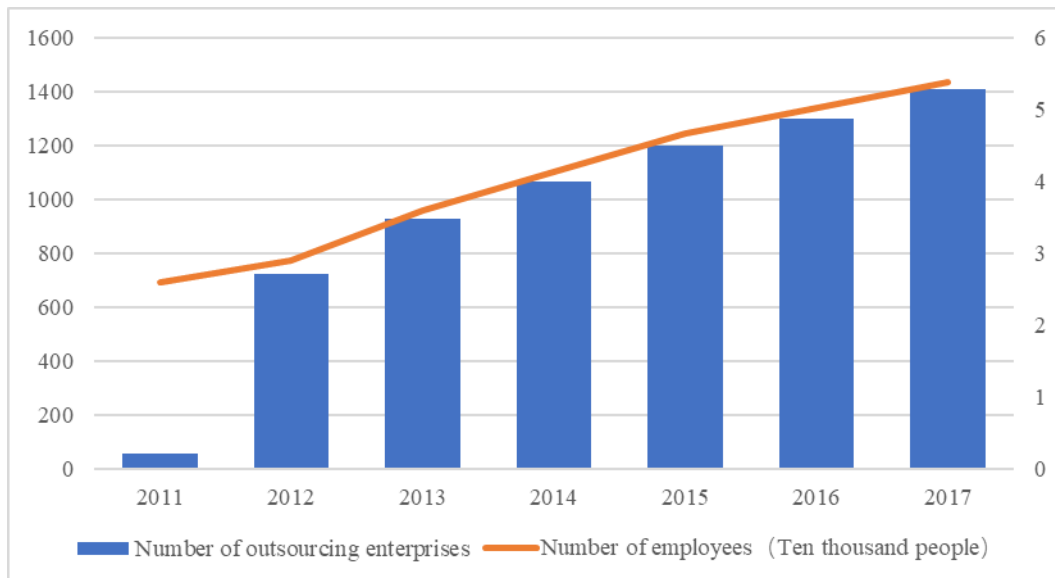


Fig. 1 Changes in the number of service outsourcing enterprises and employees in Ningbo from 2011 to 2017

Source: Ningbo Statistical Yearbook

2.4. The Proportion of "the Belt and Road Initiative" Countries has Increased Rapidly

From 2011 to 2016, the United States was still the major contracting country for service outsourcing in our country, but the number of contracting countries along the "the belt and road " increased significantly (Fig. 2). In 2017, the service outsourcing contracts of countries and regions in the market along "the belt and road" accounted for 15.0%, up 29.0% year-on-year, with a strong development momentum. Among them, 16 countries in Central and Eastern Europe saw a 46.5% increase in the service outsourcing contract execution, which was the largest contracting amount in the "the belt and road initiative" countries.

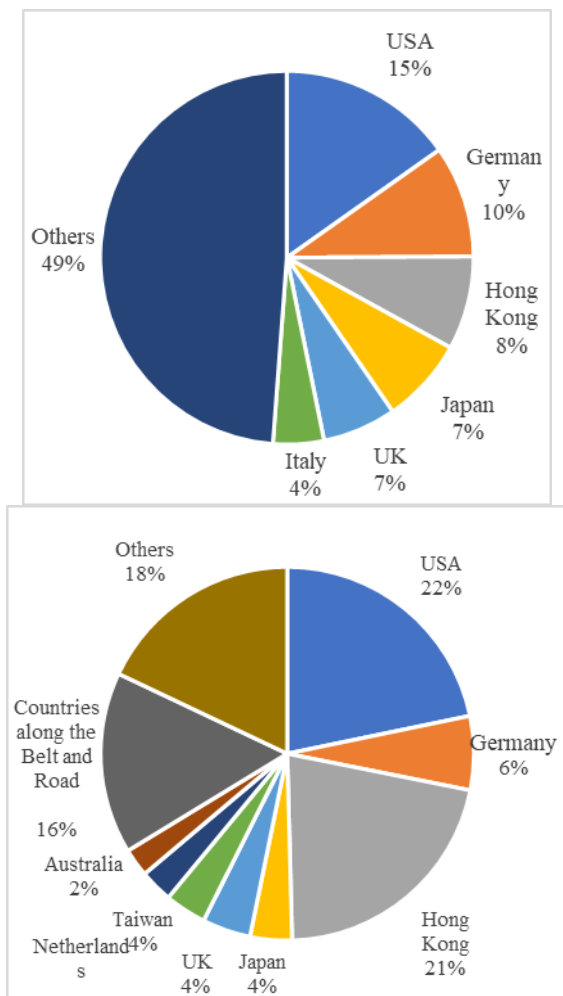


Fig. 2 Distribution of offshore service outsourcing undertaking sources in Ningbo in 2011 and 2016

Source: Ningbo Statistical Yearbook

2.5. New Industrial Models Began to Emerge

In Ningbo, there have been eight industrial belts along the coast, along the bay and along the road, and eight manufacturing centers, including petrochemical, automobile, iron and steel, electronic information, paper making, machinery and equipment, clothing, and home appliances, which have formed a strong magnetic field effect for service outsourcing and have also spawned many new business formats. For example, CYYUN Co., Ltd. generates monitoring data reports in massive network information every day according to customer demand, which is convenient for customers to control and handle events. The development model of CYYUN, from cost leading to scale winning to value-driven upgrading, reflects that service outsourcing is also upgrading in industry with the core path of innovation.

3. Impact of "the Belt and Road Initiative" on Innovation and Development of Service Outsourcing in Ningbo

3.1. The Impact Mechanism: Trade Circulation Theory

China has an irreplaceable position in the total economic output with the advancement of economic globalization and the shift of the world economic center. Since the "the belt and road initiative" was put forward, the operation of the world economy has become a "double circulation" system with China as the intermediary: one circulation is between China and developed countries, with industrial division of labor, trade, investment and indirect capital flow as carriers, and the other circulation is between China and developing countries in Asia, Africa and Latin America, with trade and direct investment as main carriers (see figure3).

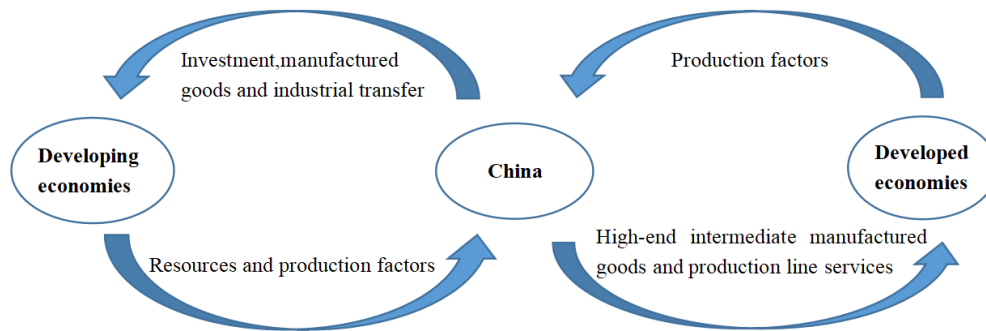


Fig. 3 Double circulation model of global value

Zhang Hui [3] combined "the belt and road initiative" with circulation theory, and thought that the world economic circulation system gradually formed a "double circulation" system with China as the intermediary, and that the "the belt and road initiative" strategy was an optimal path choice. Zhang Hui et al. [4] analyzed that China is located at the node position to form a double circulation value chain from the perspective of intermediate products and final commodities that import intermediate products and export commodities from developing countries, export intermediate products and import commodities from developed countries. Similarly, in the global value chain, the upward circulation is the output of production factors of developed economies, which are transported to developing economies represented by China, while developing economies export high-end intermediate products and productive services to developed economies. Downward circulation is the circulation among developing economies, in which the more developed developing economies represented by China import the required resources and export the manufactured goods through direct investment in other developing economies, and at the same time transfer their own industries. Generally speaking, China connects the economic cooperation between developed and developing countries, forming a global division of labor system and playing an important role in the global value chain. Lan Qingxin et al. [5] also emphasized that China is increasingly becoming the hub of developed and developing countries in the double circulation value chain. The implementation of "the belt and road initiative" provides an important development space and platform for circulation between China and developing countries. Chen Jian et al. [6] pointed out that China has the foundation of market, technology and capital in building its own-led regional value chain. In the trade circulation with developing countries, the proposal of "the belt and road initiative" has brought development opportunities for countries along the route, and improved their right to speak in international status. Moreover, the regional value chain led by China is helpful to build "Community of Shared Future for Mankind". Hong Junjie [7] pointed out that China's open economy is a process of actively

embedding into the value chain of developed countries on the one hand, and striving to lead the value chain of developing countries on the other hand. At present, China has actually become the "hub" of the circulation of these two value chains. Thus, China should actively respond to the call of the 19th National Congress, promote the inclusive development and benign interaction of double circulation, and promote the development of China's industry to high value.

3.2. Impact Paths

3.2.1. Impact of market expansion path

"The belt and road" spans 64+1 countries in Asia, Africa and Europe, among which some countries or regions have relatively insufficient production capacity but abundant resources, which complement China's relatively excess production capacity. Ningbo has entered a critical period of industrial transformation and upgrading in the "14th Five-Year Plan" period. With the continuous expansion of the service outsourcing industry, the continuous improvement of its market structure and the optimization of the "the belt and road initiative" are increasingly significant.

Many countries and regions along the "the belt and road" have good market and potential in service outsourcing, and a broad space for cooperation. For example, South Asia and Southeast Asia with India and China as the core are the key areas of global offshore outsourcing; Central and Eastern Europe, mainly Poland and Czech Republic, have gradually become a new outsourcing center; Ireland is one of the birthplaces of global service outsourcing business; Russia has advantages in the number of engineers and scientists, and has made great achievements in IT software outsourcing. China is more economically complementary in cooperation and competition with these regions due to the differences in language and culture, outsourcing capacity and value chain with countries along the line.

In recent years, there are 121 two-way investment projects between Ningbo and Central and Eastern European countries, and 15 Central and Eastern European countries pavilions have been opened in Hungary. In

terms of tourism cooperation, Ningbo has established sister city relations with 20 cities in 16 countries in Central and Eastern Europe for not only cooperation in trade and investment but also sharing tourism resources in tourism.

3.3.2. Impact of market distribution

With the continuous advancement of "the belt and road initiative", the source of service outsourcing in Ningbo has also changed to some extent. In 2011, developed countries and regions were the major recipients of offshore services in Ningbo, with the United States as the largest source (accounting for 15%), followed by Germany, Hong Kong, Japan, the United Kingdom and Italy (accounting for 9.7%, 8.1%, 7.4%, 6.4% and 4.4% respectively). Since the "the belt and road initiative", countries and regions along the line have been increasing their outsourcing in Ningbo City. In 2016, the amount of service outsourcing from countries along "the belt and road" reached US\$ 232 million, accounting for 15.77%, more than that in the United States.

With the acceleration of the construction of the "the belt and road initiative" connectivity project, Central and Western Asia will have more demand for industrial technology, information technology and professional services. The Southeast Asian market has maintained steady growth and has a mature market base. With the concentration of Chinese and geographical advantages, it has great market development potential. The Middle East and North Africa have a large market space. In the future, there will be more optimistic cooperation opportunities in developing cloud services, system development, internet services and other fields in this emerging market.

3.2.3. Impact of market quality

"The belt and road initiative" has opened up a new international market for China's service outsourcing and improved the quality of the market to a certain extent. The major outsourcing needs of countries and regions along the "the belt and road" include high-end KPO business such as information technology operation and maintenance and engineering technology services, supply chain management services, inspection and testing services, cloud computing, data processing and analysis and e-commerce platform services, software research and technology services, industrial design and IC design services, medical and pharmaceutical research and development services. The amount of KPO implemented by Ningbo has increased from 694 million yuan in 2011 to 4.242 billion yuan in 2017, a sixfold increase, indicating that the deepening of "the belt and road initiative" can optimize Ningbo's outsourcing structure, which is conducive to enhancing the value of outsourcing enterprises and promoting economic transformation and development.

At the same time, Ningbo has carried out educational cooperation and exchanges with Central and Eastern European countries, and has established cooperative relations with more than 40 Central and Eastern European universities, receiving about 200 students from Central and Eastern European countries to study and exchange

every year, which provides an important platform for the exchange and flow of talents.

4. Suggestions on Innovative Development Path of Ningbo Service Outsourcing under the "Belt and Road Initiative"

4.1. Carry Out Outsourcing Business in Accordance with the Needs of the "the Belt and Road Initiative" Countries

Since industrialization and informatization of most countries along the "the belt and road" are lagging behind, major project cooperation such as infrastructure interconnection and capacity cooperation can be used as an intermediary to drive outsourcing of services such as R&D design, information technology, supply chain management, advertising creativity and finance. Outsourcing enterprises shall be encouraged to increase the proportion of KPO businesses with high added value and high technology content, support enterprises' innovative investment in technology research and development and management mode, and formulate new outsourcing standards with international standards.

4.2. Develop High-End Outsourcing Business based on Advantageous Industries

Ningbo should make full use of its advantages in traditional manufacturing, software outsourcing, industrial design and engineering contracting, actively promote the contracting of outsourcing business in countries along the "the belt and road", bring into play the role of intermediary carriers such as industrial parks, learn high-end technology from countries along the "the belt and road", and introduce its high-quality talents and business to promote the industrial upgrading of service outsourcing. Enterprises shall be encouraged to strengthen the construction of innovative platforms and maker spaces such as big data and cloud computing in service outsourcing parks, and promote social innovation models such as crowdsourcing, mass creation and crowdfunding.

4.3. Vigorously Enhance the Competitiveness of Service Outsourcing Enterprises

Because Ningbo has a large number of service outsourcing enterprises, but they are generally small, which do not have scale effect and are in a weak position in international competition, enterprises shall be encouraged to comprehensively sort out effective enterprise resources and form industrial clusters with distinctive characteristics by means of restructuring, mergers and acquisitions and strategic cooperation, so as to improve the scale effect and agglomeration effect of enterprises and realize resource complementarity. While improving their soft power, enterprises also need to increase the added value of outsourced products, and realize the leap from "Made in Ningbo" to "Created in Ningbo".

4.4. Cultivate and Introduce Service Outsourcing Professionals

There is a big gap between the number of service outsourcing employees in Ningbo and those in a strong

service outsourcing cities, which is not only reflected in the number but also reflected in the professional quality of employees.

4.4.1. Speeding up school-enterprise cooperation to train professionals

Enterprises and higher vocational colleges shall jointly set up outsourcing-related majors, train the types of talents needed by enterprises according to their needs, and ensure the precise positioning of personnel training. It is necessary not only to build and improve the personnel training mechanism, introduce professional training consulting companies to cooperate with schools and enterprises, cultivate professional talents with professional knowledge and practical operation ability, strengthen the professional quality training and service awareness of professional outsourcing talents, but also strengthen the language training of talents and improve their cross-cultural communication ability.

4.1.2. Introducing high-end service outsourcing talents

The gathering of high-end service outsourcing talents, to a certain extent, determines the height of local service outsourcing business. The talents are not only cultivated but also developed by providing them with salary, housing and social welfare, and giving comprehensive consideration to their family welfare, household registration transfer, entry and exit management, etc. to give them humanistic care and create a good atmosphere.

4.5. Accelerate the Transformation of the Development Model of Service Outsourcing

In the aspect of enterprise management mode, the internal division of labor should be established and improved. For example, large enterprises with solid strength can choose the inverted T model of the United States, medium-sized enterprises with average strength can choose the olive model of the European Union, and small enterprises with weak strength can choose the pyramid model of Japan. As the service outsourcing enterprises in Ningbo are generally small in scale, they should pay attention to cooperation and mutual support to form an ecological industrial chain.

4.6. Optimize the Development Environment of Service Outsourcing

4.6.1. Playing the role of industry associations

Ningbo Service Outsourcing Association shall play a leading role as a good market regulator and decision maker to ensure the exchange of industry information, data sharing, coordinated development between regions, and improve the efficiency of the industry. Enterprises shall assist the issuance and implementation of policies, seize the development opportunities of the new policy, improve their competitive advantages, and create a good business environment.

4.6.2. Strengthening the protection of intellectual property rights and improving relevant laws and regulations

Efforts and policy support should be stepped up for the cultivation of independent intellectual property rights and

service outsourcing with good innovation ability, to severely crack down on the infringement of intellectual property rights, to intensify the crackdown on piracy, and to improve the legislation of intellectual property rights. Enterprises should establish the awareness of patent application and protect their rights and interests more effectively.

4.6.3. Broadening the financing channels of enterprises

The government should implement the national monetary policy, take some effective measures to alleviate the financing difficulties of enterprises, relax the restrictive conditions of enterprise financing, broaden the financing channels and improve the diversified financing mechanism. Moreover, it should increase support to outsourcing enterprises, accelerate the development of credit, and establish credit risk compensation funds.

4.6.4. Improving the construction of supporting facilities

While improving the infrastructure construction, cultural environment, economic environment and policy environment, the government should increase its support for the communication industry, especially the investment in the unlimited broadband network, ensure the smooth network and information security, and strengthen the management of the network database.

5. Conclusions

Service outsourcing is an important indicator to measure a city's comprehensive competitiveness, and innovative development of service outsourcing is the theme of the times. According to the analysis of trade circulation theory, the service outsourcing undertaking countries have become the hub of resources, technology and information flow between developed and developing countries, and the implementation of "the belt and road initiative" has become an important platform to promote the economic development of countries along the route and promote the transformation and upgrading of service industry in undertaking countries. Ningbo, as a comprehensive experimental zone of "the belt and road initiative" and a demonstration zone for economic and trade cooperation between China and Central and Eastern Europe, has rapidly increased its business share with "the belt and road initiative" countries, and its innovative development model has started to generate, showing a good development trend. Therefore, the opportunities brought by "the belt and road initiative" should be fully utilized to enhance the strength of the enterprise, the cooperation platform should be used to carry out high-end service outsourcing business, and realize the leapfrog development of service outsourcing innovation.

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