

Poverty Alleviation Mode With Seafarer Characteristics and Planning in Western China

Yanmin Lu^{1,*}

¹*China Maritime Service Center, China Waterborne Transport Research Institute, Beijing, 100088, China*

**Corresponding author. Email: luyanmin@wti.ac.cn*

ABSTRACT

Since 2012, the Maritime Safety Administration of China has been exploring and building a characteristic poverty alleviation way that combines the advantages of poverty alleviation by developing industries, poverty alleviation by education, poverty alleviation by culture and poverty alleviation by promoting employment, which directly helps 14,000 poor people of 4000 poor families get rid of poverty and become rich, and meanwhile it brings the blue ocean culture to the Western China with only yellow land. This paper comprehensively summarizes and explains the poverty alleviation mode with seafarer characteristics, analyzes the great potential for development of seafarer industry in Western China and provides demand forecasts and development planning for the future development of seafarers in Western China.

Keywords: *Industrial economy, poverty alleviation, Western China, seafarer, mode, planning*

1. INTRODUCTION

Poverty is one of the most serious challenges facing the world today, and development of the industrial economy is an important measure to get rid of poverty. In 2012, the Maritime Safety Administration together with the local government of Yan'an City, under the guidance of the Poverty Alleviation Office of the State Council and the Ministry of Transport, creatively matched the shipping needs specially with the labor resources in Western China based on the industrial demand and actual situation in Western China, and established a base for training seafarers in Western China, forming a four-in-one (poverty alleviation by developing industries, poverty alleviation by education, poverty alleviation by culture and poverty alleviation by promoting employment) characteristic poverty alleviation industry in Western China. As of the end of 2019 [The author conducted random return investigation to 400 graduates from the western seafarer training base in May~June 2020. Unless indicated clearly with the source of a quotation, all the data is calculated by the author based on the actual investigation and statistics.], the base has trained nearly 4,000 seafarers who have been employed. The per capita monthly income for the first three years of employment, from the third year to the fifth year and after working for more than 5 years are approximately US\$723, US\$1158 and as high as US\$2,460 respectively, which directly help about 14,000 families get rid of poverty and become rich, achieving a poverty relieve rate of 100%.

2. "4433" INDUSTRY DEVELOPMENT AND POVERTY ALLEVIATION MODE WITH SEAFARER CHARACTERISTICS IN WESTERN CHINA

The poverty alleviation by developing industries is the core of the poverty alleviation mode with seafarer characteristics in Western China. It is to take the seafarer industry as the main front of poverty alleviation to accurately match the poverty alleviation with industry development based on the historical background and strategic needs of China's construction of a powerful shipping nation. Poverty alleviation by education is the driving force of the industry. Through mutual complementation of educational resources between the Western and Eastern China, the shipping education can be greatly developed in Western China with high-skilled and high-quality seafarers are trained to achieve ability-driven poverty alleviation. Poverty alleviation by culture is the internal driving force. By spreading and promoting shipping culture in Western China, young people in Western China are attracted to devote themselves into shipping industry, go out to the sea, broaden their views and enhance the yearning and confidence of the poor for a better life, thus achieving spirit-driven poverty alleviation. Poverty alleviation by employment is the path to get rid of poverty. All trained and qualified personnel are employed after the order-based training and job-oriented training, etc., and the people are helped to get rid of poverty and become rich through stable employment and high income.

2.1. Four-party Cooperation to Guarantee the Development and Implementation of the Project

In the implementation of poverty alleviation through training seafarers in Western China, the government, society, market and maritime academies shall give full play to their respective roles, and a cooperation mode based on East-West collaboration and school-enterprise alliances is adopted. Poverty alleviation through training seafarers in Western China is jointly launched by the transport and maritime affairs department, Yan'an government and Yan'an Historic District Construction Promotion Association as well as other government departments and social organizations. Yan'an Vocational and Technical College is taken as the training base, and shipping enterprises are deeply involved in the joint construction and joint promotion. The transport and maritime affairs department provides special supports in seafarer education and training policies, seafarer exam, certification and coordination of shipping resources. The eastern maritime institutes and Yan'an Vocational and Technical College sign cooperation agreement on teaching resources to help the local school improve its soft power through exchange of teachers, teaching and research guidance, and teacher training, etc. Tianjin Crew Service Industry Association and coastal shipping companies get involved in the student training at early stage, and a training mechanism for enterprises to participate in the whole process and teaching according to the needs of enterprises will be established to ensure the pertinence and applicability of vocational education and training, and to lay a technical foundation for the smooth employment in future.

2.2. Four Parties Cooperate to Ensure That Funds are Raised in Place

It means "some funds from government subsidy, some from enterprise advancement, some from social donation and some from school exemption". The Yan'an Municipal Government has issued a policy to provide free training and living subsidies to trainees involved in the training of ordinary crew and inland watercraft crew, who are classified as poor junior high school or high school graduates, or poor migrant labors; in addition to the national vocational education subsidy to be granted, the senior seafarers participating in higher vocational education and the students from poor families majoring in international cruise servant will receive a one-time poverty alleviation and aid subsidy of approximately US\$435 per person. The non-poor persons participating in the corresponding seafarer training will receive a subsidy of US\$290 per person. The shipping companies involved in the order-based training and job-oriented training will advance part of the training costs according to the training agreements, which will be repaid by the seafarers when they are employed and the living standards of their

families are improved. The school will grant partial reductions of the remaining training charges and other fees to ensure that the expenses borne by individuals do not exceed 50%. At the same time, some maritime universities and institutes, maritime agencies and social enterprises, etc. have donated a large number of professional equipment and facilities for seafarer training in the construction of the base. The financial supports from multiple channels ensure that students will not be unable to participate in training due to tuition problem.

2.3. All Students Successfully Educated through Three Modes

Two types of seafarers respectively for marine ships and inland waterway ships will be trained through three modes, including academic education, skill training and oriented training of navy officers. For the students at the educational level of high school and technical secondary school, higher vocational education in ship driving and marine engineering may be provided. For the students at only junior high school education and below, or whose families are in special difficulties and urgently need to find jobs to get ride of poverty, short-term skill training in sailor, mechanics and ship servant, etc. for about 3-4 months may be provided. According to their qualifications and market demand, the students will find jobs on marine ships or inland waterway ships after graduation. The salary for a seafarer serving a marine ship is higher, but the requirements for skills are also higher. The salary for an inland waterway ship sailor is lower, but the employment threshold is also lower. In 2016, the western seafarer base becomes one of China's 24 pilot colleges for job-oriented training of navy officers, where job-oriented training of navy officers is developed. As of the end of 2019, the base has enrolled and trained more than 2,600 seafarers for marine ships, including 336 navy officers, and trained more than 1,400 inland waterway ship sailors.

2.4. Trainees are Fully Employed through Three Modes

All the qualified trainees are fully employed and get ride of poverty through three employment modes, including order-based training, job-oriented training and independent choosing job. The maritime department coordinates the shipping companies to sign order-based training agreements with the western seafarer training base and students, so that the company is involved in all aspects of student training, and the students may directly join the company after graduation. The North Sea Fleet has signed job-oriented training agreements with the western seafarer training base, which will train and deliver special sergeants with good morality and skills to the army and effectively support the military-civilian integration strategy. Double-channel choosing meeting will be held for the marine graduates at the base every year with sufficient jobs

provided to support the graduates to choose jobs independently. Diversified employment service measures will ensure all the qualified graduates involved by the poverty alleviation with seafarers characteristics are fully employed.

3. ANALYSIS ON THE DEVELOPMENT POTENTIAL OF SEAFARER INDUSTRY IN WESTERN CHINA

The feasibility, importance and urgency of poverty alleviation through training seafarers in Western China originate from the actual demand for seafarers in the international and Chinese markets, and are highly fit with the sailor development rules in the world and the actual characteristics of culture and human resources in the western region.

3.1. Continuous Expanded Global Shortage of Senior Seafarers and Seafarer Supply Center Transferred to the East

According to the World Seafarer Resources Report [1], in Table 1, the global supply and demand gap for senior seafarers is 16,500 people in 2015. It is expected that the gap will expand to 92,000 people in 2020 and to 147,500 people in 2025. The gap is expanding year by year. In recent years, the supply of seafarers in Western countries has continued to decline, but the seafarers training in China, Philippines and India has been rapidly increased, and the growth of senior seafarers has accelerated[2], gradually approaching one-third of the world's total number of senior seafarers. The seafarers supply center has been transferred from the Western countries to the Eastern countries.

Table 1 Global supply and demand for seafarers (10000 people)

Year	2005	2010	2015
Supply	46.6	62.4	77.4
Demand	47.6	63.7	79.05
Gap	1	1.3	1.65

3.2. Steady and Orderly Growing of Chinese Fleet Brings Strong Demand for Seafarers

According to statistics from the Ministry of Transport, as of the beginning of 2019, the actual maritime merchant shipping capacity of China has been 270.18 million deadweight tons (DWT), ranking second in the world after

Greece, where Chinese ships (flying Chinese flags) account for about 32%. From 2000 to 2019, the number of Chinese ships is increased from 2,100 to 3,414 (above capacity of 300GT), with an average annual growth rate of 2.7%. Although there are uncertain situations, such as Sino-U.S. trade frictions and COVID-19 epidemic, it is expected that Chinese fleet will expand steadily and orderly [3] in consideration of the overall international shipping market trend and the favorable policies, such as “encouraging the ships flying a flag of convenience” to return to China, and in the next five years or so, the growth rate is conservatively estimated to be around 2%, and China may own around 3850 ships by 2025.

According to the industry rules, a marine ship shall be assigned with 16 people on the average. Then in 2025, about 61,500 seafarers are required on board to meet the demand of all Chinese marine ships. Meanwhile, overseas assignment of Chinese seafarers has been progressed positively, with an average annual growth of about 4%. In 2019, the number of seafarers assigned overseas is 155,400[4]. It is comprehensively estimated that in 2025, the number of seafarers assigned overseas will be 211,300. According to the accepted calculation method of the seafarer industry, the number of seafarers required shall be the number of seafarers on board multiplied by the seafarer reserve factor, and taking into account China's statutory holidays and rest days as well as the maximum working hours of the seafarers, etc., the seafarer reserve factor is taken as 1.6, and 436,500 seafarers are required to be on service in China in 2025. In 2019, there were 377,000 active seafarers in our country. In summary, the seafarer gap by 2025 is expected to be 59,500, and the seafarer industry has a very broad space for development.

3.3. The Western Region Have Rich Human Resources, and the Seafarer Industry is Shifting from the East to the West

From the perspective of human resource supply[5], the number of young men in their 20s and 30s in the five western provinces, including Sichuan, Guizhou, Shaanxi, Qinghai, and Ningxia, will be 13.08 million, and the number of young women will be 12 million according to the results of the sixth national census. In 2019, the supply ratio of seafarers in China (excluding Hong Kong, Macao and Taiwan regions) was 5.59 seafarers/10,000 people, and the supply ratio in the eastern regions was 9.43 seafarers/10,000 people, while the supply ratio of the above five western provinces was only about 1.51 seafarers/10,000 people, which accounts for only 27.1% of the national average level, only 16.0% of the supply ratio of the eastern regions. There is still a large space for supply of seafarers.

From the perspective of the seafarer development rules, the more developed the economy and the higher the living standards of the people, the lower the willingness of people to become a seafarer. In the eastern regions of China, especially in the economically developed coastal

areas, the number of seafarers has decreased and the aging problem is more evident. Furthermore, the number of young people engaged in sailing job has decreased. With the gradual deepening of poverty alleviation projects through training seafarers in the western region, the acceptance to marine culture in the western regions has increased significantly, and the professional competitiveness for seafarers remains high. The seafarer industry is shifting to the western regions.

In general, there are great potential, large market demand and obvious advantages in poverty alleviation resources for training seafarers in the western region. It plays an important role in supporting the opening-up and economic development of the western region, improving people's living standards and realizing the strategic transfer of seafarer supply in our country.

4. SPEEDING UP THE PLANNING OF PATH FOR THE DEVELOPMENT OF CHARACTERISTIC POVERTY ALLEVIATION INDUSTRY THROUGH TRAINING SEAFARER IN THE WESTERN REGIONS.

For the characteristic poverty alleviation industry through training seafarer in the western regions, the joint meeting mechanism led by the transport and maritime departments and participated by the government departments in the western regions, shipping and labor enterprises, industry organizations and maritime colleges shall be continuously improved in order to accelerate the development of seafarers in the western regions, collect resources from all the parties concerned to the maximum and jointly promote the development of this industry.

4.1. Establish Three Characteristic Seafarer Industry Bases

The joint education mechanism of maritime institutions shall be promoted and improved, and the high-quality maritime education resources in the eastern regions shall be properly and fully utilized. A "one-to-one" or "many-to-one" normalized joint school-running mechanism shall be promoted in the eastern and western regions in the principle of "resource sharing, combination of learning and training, joint development with partner". Under the overall development guideline of "focused support, multi-point promotion and radiating driving", two more institutions, in addition to the "western seafarers training base" in Yan'an, will be selected in Sichuan and Guizhou to build new western seafarer education bases of a certain size and provide all-round services combining on-site training, on-site examination and on-site certification for western seafarers.

4.2. Develop an Open, Transparent, Standard and Orderly Western Seafarer Market System

The leading role of the market shall be fully demonstrated in the development of western seafarers to stimulate the market vitality, optimize allocation of resources and improve the efficiency of development. The information of the western seafarers shall be disclosed more widely in the market, and the "Annual Report on the Development of Western Seafarers" shall be formulated to announce the development status of the western seafarers. Western Region Seafarers Service Association, Seafarers Mental Health Consultation Agency and other proper industry organizations shall be set up, and a market credit system for the western seafarers shall be established to strengthen market supervision and the self-management, self-restriction and self-supervision of the industry[6].

4.3. Establish and Improve a Public Service System for the Western Seafarers

A sharing platform led by the government and participated by enterprises, trade unions, social organizations and other parties shall be established to integrate service resources and service capabilities and provide seafarers with career planning, employment guidance, legal assistance, information consultation and other public service products in order to promote the growth and career development of seafarers[7]. Modern information technology shall be fully utilized so as to promote the e-government model of "Internet+Seafarer" in the western regions and provide one-stop e-government window services. A career guidebook for western seafarers may be formulated to provide professional guidance for the western seafarers.

4.4. Explore and Build a Funds Guarantee System for the Development of Western Seafarers

All possible forces shall be mobilized to build a funds guarantee system by diversified investments. The local governments shall be actively coordinated to obtain local special poverty alleviation funds, etc. specifically for the development of western seafarers. A special educational fund for targeted poverty alleviation by training seafarers in the western regions may be established to support the poor students majoring in shipping education with tuition and partial living expenses. A western seafarer education fund may be established or the western seafarer education is integrated into the support range of the National Education Development Foundation.

ACKNOWLEDGMENT

This work was supported by the science and technology project of the Maritime Safety

Administration of PRC-Research on the Compilation of China's Crew Development Plan (2021-2035) (No. 0745-2041CCIEC016/02), and the forward-looking project of the China Waterborne Transport Research Institute-Research on the Index System of the Maritime Construction Outline for Building a Powerful Transport Country (No. 2020QZ-SY00103B).

REFERENCES

- [1] Yao Wenbing, Chen Liang. Summary of BIMCO/ICS 2015 Maritime human resources report, *World Shipping*, 40(1) (2017) 11-13.
- [2] Patrik Aspers, Carl Sandberg. Sailing together from different shores: labour markets and inequality on board merchant ships, *Global Networks*, 20(3) (2020).
- [3] Qi Bin, Du Liang, et al. Review of the world ship market in 2019 and outlook for 2020, *Shipbuilding*, 31(01) (2020) 1-14.
- [4] Crew Division of MSA, People-oriented to promote the healthy development of the crew-Interpretation of the "2019 China crew development report", *China MSA*, 2020(07) 26-27.
- [5] Census office of the state council, population and employment statistics department of the national bureau of statistics. China 2010 Census Data [EB/OL]. <http://www.stats.gov.cn/tjsj/pcsj/rkpc/6rp/indexch.htm>.
- [6] Samrat Ghosh, Benjamin Brooks, et al, Authentic versus traditional assessment: an empirical study investigating the difference in seafarer students' academic achievement, *Journal of Navigation*, 73(4) (2020).
- [7] Yuan Gu, Dongbei Liu, et al, The effects of Chinese seafarers' job demands on turnover intention: the role of fun at work, *International Journal of Environmental Research and Public Health*, 17(14) (2020).