

# ***China-ASEAN Free Trade Port from a Global Perspective: International Cooperation Mechanism for Maritime Vocational Education***

**Xinyi Ma, Jianheng Huang\*, Rui Wang, Yongkang Shi**

*Key Laboratory of Philosophy and Social Science in Hainan Province of Hainan Free Trade Port International Shipping Development and Property Digitization, Hainan Vocational University of Science and Technology, Haikou, 571126, China*

*\*Corresponding author: 27945208@qq.com*

**Keywords:** China; ASEAN; Free Trade Port; Maritime Vocational Education; International Cooperation Mechanism

**Abstract:** This paper delves into the development trends of China-ASEAN Free Trade Ports on a global scale, with a focus on the international cooperation mechanisms in maritime vocational education. Firstly, it provides a detailed introduction to the concept of free trade ports, their development background, and their significance for trade in the Middle East. It emphasizes the crucial role of maritime vocational education within this cooperative framework, elucidating its importance for the stable development of international trade and the shipping industry. Regarding cooperation mechanisms and internationalization models, this paper discusses how they can promote talent cultivation and regional economic development, highlighting the critical role of technological innovation and industry development in international cooperation. Through an in-depth analysis of the development of free trade ports and the cooperation mechanisms in maritime vocational education, this paper aims to provide theoretical and practical references for promoting cooperation between China and ASEAN countries and driving regional economic growth.

## **1. Introduction**

China and ASEAN countries play significant and prominent roles in global trade, and the establishment of free trade ports has opened a new chapter in their regional cooperation, bringing both new challenges and opportunities. In this context, maritime vocational education, as a crucial field, holds undeniable importance in talent cultivation and regional economic development through its international cooperation mechanisms. This paper aims to delve into the mechanisms of international cooperation in maritime vocational education under the China-ASEAN Free Trade Ports and their profound impact on overall regional development. By dissecting this cooperation model, we will explore how it provides new opportunities for talent cultivation and economic development, as well as its role and significance in promoting robust economic growth across the entire region.

## **2. Development of China-ASEAN Free Trade Ports**

### **2.1. Overview of Free Trade Ports**

A free trade port, also known as a free trade zone, is an economic policy implemented in a specific geographical area aimed at promoting trade and investment. These areas are typically established in locations of strategic importance, such as major seaports or airports, to facilitate international trade and logistics. The core idea of a free trade port is to attract foreign investors and promote economic development by offering a range of favorable policies, such as tax exemptions, simplified customs procedures, and a more liberal economic environment. These measures are intended to reduce operating costs for businesses, enhance the international competitiveness of the region, and serve as a vanguard for national economic reform and openness.[1]

Characteristics of free trade ports include lower tariffs and a more flexible regulatory environment, which play an important role in stimulating foreign trade and attracting international capital. In addition to financial and tax incentives, free trade ports often have special policy frameworks to support the development of emerging industries, encourage innovation and technology transfer, and promote international cooperation. These economic zones have become important tools in the context of globalization and economic integration, aiming to accelerate economic activities within the region by relaxing policy restrictions and providing favorable conditions, thereby enhancing international trade efficiency and driving rapid local economic development.[2]

### **2.2. Development Background of Free Trade Ports**

The rise of free trade ports is one of the key measures in economic cooperation between China and ASEAN countries, responding to changes in the global economic landscape and supporting the concept of free trade. Its development background involves various factors, including the international trade situation, the trend of globalization, and the need for regional economic cooperation.

The development of free trade ports stems from responses to the continuously changing international trade situation.[3] As the process of globalization accelerates, trade relationships become increasingly complex and interdependent, leading to ongoing adjustments and reforms in international trade policies and rules. The establishment of free trade ports aims to adapt to this trend of change, providing a more flexible and open trading environment for China and ASEAN countries.

Simultaneously, the trend of globalization is also driving the development of free trade ports. The trend towards global economic integration has led to increasingly close economic ties between countries, intensifying both cooperation and competition on the international stage. As a product of this globalization background, free trade ports aim to further promote economic cooperation between China and ASEAN countries by optimizing trade policies and facilitating measures, thereby creating more opportunities for participating nations.

This initiative also responds to the demand for regional economic cooperation. China and ASEAN countries possess abundant economic resources and potential, but they also face respective developmental challenges. The construction of free trade ports is aimed at addressing these challenges, further deepening economic ties between these countries, enhancing cooperation levels, and jointly promoting economic development. The construction of free trade ports in this context is intended to bring more cooperation opportunities to participating countries and drive shared prosperity across the entire region.[4]

### **2.3. Significance of Free Trade Ports for China-ASEAN Cooperation**

The future construction of free trade ports holds significant and far-reaching implications for cooperation between China and ASEAN countries, impacting multiple key areas. Firstly, free trade ports aim to promote liberalization of trade and investment between the two sides, breaking down trade barriers and enhancing trade facilitation. This model provides a more open and flexible environment for both countries at the policy and regulatory levels, creating favorable conditions for strengthening economic cooperation and providing new impetus for regional economic connectivity and development.

Secondly, the construction of free trade ports provides a powerful platform for promoting economic complementarity and resource sharing. Participating countries are able to better integrate and utilize their respective advantageous resources, achieving resource complementarity and sharing, thereby strengthening economic ties among cooperating countries. This integration and complementarity of resources provide a more favorable environment for cross-border trade and investment, driving industrial cooperation and development (Bi, 2021), and bringing more business opportunities and development space to all participating countries.

At the same time, free trade ports serve as important measures to enhance regional economic competitiveness and strengthen regional integration cooperation. They not only help countries to be more closely connected economically but also create more cooperation opportunities for China and ASEAN countries. By jointly promoting economic development, strengthening trade links, and enhancing industrial cooperation, the free trade port model is expected to promote economic prosperity across the entire region, enhancing its competitiveness and status in the global economy. This initiative provides broader development space for both sides, establishes a more solid foundation for mutual development and cooperation, and also provides new opportunities for the sustainable development of the regional economy.[5]

## **3. International Cooperation Mechanism in Maritime Vocational Education**

### **3.1. The Importance of Maritime Vocational Education**

Maritime vocational education plays an indispensable role in the global economy. Its core function lies not only in cultivating high-quality seafarers and maritime professionals but also directly influencing the stable operation of international trade and shipping industry (Mustain, Herlina, 2019). The education in this field covers a wide range of content, including maritime skills, safety standards, international regulations, and environmental protection, all of which are crucial for ensuring and promoting the stability and sustainable development of the shipping industry.

Firstly, maritime vocational education serves not only as a source of cultivating professionals but also as the cornerstone for ensuring maritime transportation. It provides the necessary platform and curriculum for nurturing maritime professionals with specialized skills and extensive experience (Rusi et al., 2020). These professionals cover various aspects including navigation, maritime safety, mechanical maintenance, emergency response, etc., providing solid talent support for ensuring the safety and smooth operation of vessels.

Secondly, maritime vocational education has a direct and significant impact on international trade and the shipping industry. As the shipping industry is a vital component of international trade, high-quality maritime vocational education directly relates to the smooth operation of international trade. Qualified seafarers not only represent the level of vessel operations but also serve as crucial links in ensuring the smooth functioning of the international trade chain.[6]

Lastly, the scope of maritime vocational education extends far beyond technical skills to include topics such as international standards and regulations, environmental protection, and more. The

educational content in these areas is crucial for enhancing the overall level and sustainable development of the global shipping industry. The comprehensiveness and professionalism of maritime vocational education are not only related to the professional competence of individual seafarers but also crucial for the stability and development prospects of the entire shipping industry (Mustain et al., 2021).

### **3.2. Overview of Cooperation Mechanisms and Models**

The overview of cooperation mechanisms and models encompasses diverse forms of collaboration, aimed at providing maritime vocational education with more comprehensive and internationalized teaching content and learning opportunities. Key components of these cooperation mechanisms include the establishment of internationalized curricula and teaching systems. This entails integrating international standards and regulations to ensure that educational content aligns with the needs and standards of the global maritime industry. By designing internationalized curricula covering various aspects such as maritime technology, safety management, and environmental protection, students can acquire professional knowledge and skills in line with international standards.

Additionally, cooperation mechanisms may also involve international student exchange programs. These programs provide students with opportunities for cross-cultural exchange and practical experiences, allowing them to study and practice at maritime education institutions in different countries. Through such exchange programs, students can gain insights into maritime practices and education systems in different countries, cultivating a global perspective and cross-cultural communication skills.[7]

Cooperation mechanisms may also include collaborative research projects and teacher training. This cross-national cooperation can promote academic exchanges in the maritime field, fostering innovation and development. Additionally, teacher training is essential to ensure that educators possess internationalized educational concepts and teaching skills, thereby better guiding students on the path of internationalized maritime education.

The implementation of these cooperation models not only enriches the content and forms of maritime vocational education but also provides students with broader development opportunities. Through these international cooperation models, students can access diverse learning resources and experiences globally, thereby enhancing their competitiveness and adaptability in the global maritime industry. This cross-national cooperation not only benefits education in the maritime field but also promotes the training of talents in the global maritime industry and the enhancement of internationalization levels.

### **3.3. Sharing of Educational Resources and Faculty Training**

One of the key aspects of international cooperation in maritime vocational education lies in the sharing of educational resources and faculty training. This aspect encompasses various forms of collaboration aimed at enhancing educational quality and promoting the implementation of international standards, thus laying a solid foundation for international cooperation in maritime vocational education.

Firstly, resource sharing is an important component of collaboration. Collaborating institutions can jointly develop courses, integrate high-quality teaching resources, and fully utilize their respective educational characteristics and strengths to provide students with a more diverse and enriching learning experience. This resource sharing enriches the curriculum content, meets the diverse learning needs of students, and enhances educational quality.

Secondly, sharing teaching resources helps promote cross-border cooperation and exchanges. This may involve sharing resources such as textbooks, laboratory facilities, and teaching technologies.

Through this sharing, students can gain broader and deeper learning experiences, while also promoting exchange and cooperation among educational institutions, thereby advancing the global standard of maritime education

On the other hand, faculty training is also crucial. By providing faculty training courses, teachers can access international teaching concepts and advanced teaching methods, continuously improving their own teaching standards. This kind of faculty training helps teachers better adapt to the needs of international education, providing higher quality teaching (Katranaş et al., 2020), and advancing the international cooperation of maritime vocational education to a higher level.

Overall, the sharing of educational resources and faculty training provide a solid foundation for international cooperation in maritime vocational education. This form of cooperation promotes the development of global maritime education, allowing students and teachers to benefit from an internationalized education system, laying the groundwork for the cultivation of maritime professionals with greater international competitiveness.

### **3.4. Technological Innovation and Industry Development**

Technological innovation and industry development play a crucial role in the international cooperation of maritime vocational education. This collaborative aspect not only focuses on imparting traditional knowledge but also emphasizes the introduction of the latest technology, engineering, and innovative concepts to promote the sustainable development of the maritime sector and industry advancement.

Technological innovation, as an integral part of maritime vocational education, focuses on integrating the latest technological achievements into the teaching system. Through international cooperation, educational institutions can collaborate with leading industry technology companies and research institutions to incorporate the latest maritime technology into the curriculum, ensuring that students keep pace with the latest industry developments and possess the technological literacy required to address future challenges.

Collaborative research projects serve as platforms to promote technological innovation and industry development. Transnational cooperation projects typically aim to address current challenges faced by the maritime industry and promote the research and application of new technologies. These collaborative projects not only accelerate the pace of technological innovation but also provide more efficient and safer solutions for the maritime industry.

Technological innovation may also involve collaboration among shipping companies, technology enterprises, and educational institutions. This collaborative model can promote the transformation and application of research results, translating innovative concepts into practical applications, thereby bringing more possibilities for cutting-edge technology to the industry and laying a solid foundation for the industry's future development.[8]

Overall, technological innovation and industry development, as important aspects of international cooperation in maritime vocational education, are reflected not only in the updating and development of educational content but also in the future and sustainable development of the entire maritime industry. This international cooperation not only cultivates professionals who can adapt to future technological requirements but also propels the continuous advancement of the global maritime industry.

## **4. Impact of Cooperation Mechanisms on Regional Economic Development**

### **4.1. Contribution of Talent Cultivation to Regional Economic Development**

Talent cultivation plays a crucial role in international cooperation in maritime vocational education.

High-quality maritime talents nurtured through international collaboration make significant contributions to regional economies. These professionally trained individuals not only possess exceptional skills but also have an international perspective and cutting-edge professional knowledge. Their emergence not only enhances the overall level of the regional shipping industry but also contributes significantly to the development of economies in various countries.

These highly skilled maritime professionals, nurtured under international cooperation, receive comprehensive education and possess rich practical experience and the ability to tackle diverse challenges. They are not only familiar with the latest maritime technologies and global industry standards but also adept at handling complex maritime situations, ensuring the efficient operation of the shipping industry. The emergence and engagement of these talents play a crucial role not only in enhancing the safety and efficiency of maritime transport within the region but also in bringing new vitality and competitive advantages to various sectors of the regional economy.

Therefore, these maritime professionals with international perspectives and professional skills substantially drive the modernization and development of the regional shipping industry, contributing significantly to the economic growth and sustained progress of various countries. Their contributions extend beyond the shipping sector, playing crucial roles in international trade, logistics, and other fields, contributing significantly to the diversification and overall development of the regional economy.

#### **4.2. Impact of Cooperation Models on Economic Growth**

Cooperation models in maritime vocational education have brought significant positive impacts on regional economic growth. This cooperation is not just about educational exchanges but also provides robust support for the economic growth of countries within the region.

Firstly, sharing educational resources and cross-border teacher training promote the cross-border flow of technology and knowledge. This flow not only accelerates the dissemination of advanced technology and best practices but also enhances the professional competence and competitiveness of countries in the maritime domain. Through such cross-border collaboration, the regional shipping industry has witnessed comprehensive improvements in technology, safety standards, and management, thereby propelling the development of related industry chains.

Secondly, this form of economic cooperation strengthens economic ties within the region. Through enhanced cooperation, countries in the region have established closer partnerships in maritime vocational education, jointly developing educational systems and nurturing high-quality talents. This cooperation not only plays a role in the maritime shipping industry but also injects new momentum into the growth of the entire regional economy, promoting the healthy development of related industry chains.

Lastly, this cooperation model provides new ideas and development opportunities for the healthy growth of the regional economy. Sharing educational resources and teacher training promote higher-level talent cultivation, providing more stable and efficient support for the regional shipping industry and thus influencing the stability and growth of the entire regional economy. This cooperation model provides broader space for the diversified development of various countries' economies, driving sustainable growth in the regional economy.[9]

#### **4.3. Regional Economic Integration and Sustainable Development**

The international cooperation mechanism in maritime vocational education has profound implications for regional economic integration and sustainable development, playing a crucial role in promoting cooperation and exchanges among countries in the region, advancing green, efficient, and sustainable growth.

Firstly, this cooperation model not only enhances the overall level of education but also provides new opportunities for cooperation and exchanges among countries in the region. Through sharing educational resources, conducting student exchange programs, and teacher training, countries in the region have established closer ties in maritime vocational education, promoting the exchange of experience and knowledge and strengthening cooperation and mutual trust among countries in the region.

Secondly, emphasis on environmental protection, international standards, and regulations in educational content lays a solid foundation for the sustainable development of the regional economy. International cooperation in maritime vocational education focuses on teaching technical skills, safety standards, and environmental protection awareness in line with international standards, empowering students to play an active role in environmentally friendly shipping. This helps drive the green transformation of the regional shipping industry and contributes significantly to sustainable development.

Therefore, the international cooperation mechanism in maritime vocational education not only enhances the level of education but also plays a crucial role in promoting regional economic integration and sustainable development. By strengthening regional cooperation and promoting green development, this cooperation mechanism provides crucial support and guarantees for the coordinated growth and sustainable development of economies in the region

## 5. Conclusion

In this paper, we have delved into the importance and mechanisms of international cooperation in maritime vocational education under the context of China-ASEAN Free Trade Ports. We have emphasized that cooperation mechanisms not only have profound impacts on talent cultivation but also actively promote the development of regional economies. In the future, further improving this cooperation mechanism, enhancing the sharing of educational resources, and deepening cooperation continuously will be crucial steps to drive the internationalization process of maritime vocational education between China and ASEAN countries. These efforts will not only provide a broader platform for nurturing more high-quality maritime talents but also promote sustainable economic growth in the region and lay a solid foundation for future development. This increasingly strengthened cooperation will play a pivotal role in promoting international exchanges, expanding development space, and strengthening economic integration.

## Acknowledgement

The 2021 Hainan Province Philosophy and Social Science Planning Project "The Impact of Free Trade Port Policy on the Development of Port Logistics in Hainan and Countermeasures", and the 2023 Hainan Province Key Teaching Reform Research Project "Research on the Construction of a Model for Co-construction and Sharing of High-quality Resources in Higher Vocational Education in Hainan Under the Game Theory Thinking" (Hnjg2023ZD-60) interim results; Project Source: Key Project of Higher Education Teaching Reform in Hainan Province, Project Number: (Hnjg2024ZD-69), Project Title: Research on International Cooperation in Maritime Vocational Education under the Construction of Hainan Free Trade Port in "China-ASEAN" Context.

## References

- [1] Liu Zhu, Gao Wenjing. *Promoting the Internationalization of Maritime Vocational Education through the Integration of Production and Education under the Belt and Road Initiative* [J]. *Modern Vocational Education*, 2019(07): 30-31.
- [2] Zang Aiqing, Fan Xin. *Exploring Maritime Vocational Education in Inland Areas from the Perspective of Supply-Side Structural Reform* [J]. *Management Observation*, 2018(16): 116-117.

- [3] Hu Xiaoli. *Research on Forms of Cooperation in Maritime Vocational Education between China and Foreign Countries: A Case Study of Jiangsu Maritime Vocational and Technical College* [J]. *Chinese and Foreign Entrepreneurs*, 2019(36): 126-127.
- [4] Cao Jiangneng. *Research on Innovation of School-Enterprise Cooperation in Maritime Majors in Higher Vocational Colleges* [J]. *Pearl River Shipping*, 2020(19): 21-22.
- [5] Chen Mingguang. *Exploring Approaches to Maritime Cooperation Based on the "Wuyuan" Regional Advantage* [J]. *Learning Society*, 2018(01): 34-37.
- [6] Shao Kai. *Strengthening Cooperation between Maritime Vocational Colleges and Port Enterprises to Promote Regional Economic Development* [J]. *Commerce*, 2016(30): 271.
- [7] Mustain I, Herlina Y. *STEM for establishing energy literacy in maritime vocational education* [J]. *Scientiae Educatia: Jurnal Pendidikan Sains*, 2019, 8(2): 131-140.
- [8] Mustain I, Iskandar E, Nuryaman D. *Navigation Lamp Model on Maritime Vocational Education Integrated With STEM Approach: Analysis and Design*[C], *Physics Conference Series. IOP Publishing*, 2021, 1764(1): 012149.
- [9] Katranas G, Riel A, Corchado-Rodríguez J M, et al. *The SMARTSEA education approach to leveraging the Internet of Things in the maritime industry*[C]//*Systems, Software and Services Process Improvement: 27th European Conference, EuroSPI 2020, Düsseldorf, Germany, September 9–11, 2020, Proceedings 27. Springer International Publishing*, 2020: 247-258.