

# Institutional Opening-up and Differentiated Breakthrough: A SWOT Profile of Hainan Higher Education Competitiveness

Shuoyuan Chen, Zeming Kong\*

*School of International Communication and Arts, Hainan University, Haikou, China*

*\*Corresponding author: Zeming Kong.*

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## Abstract

In the critical period where the construction of the Hainan Free Trade Port (FTP) is advancing from “policy implementation” to “customs closure operation”, institutional opening-up has become the core engine driving the high-quality development of regional higher education. Anchored in the new context of institutional opening-up, this paper utilizes the SWOT analysis method to systematically examine the realistic foundation and developmental trends of the core competitiveness of Hainan higher education. The study finds that while Hainan higher education enjoys the first-mover advantages of overlapping FTP policy dividends and distinct geographical characteristics, it simultaneously faces the dual challenges of a weak disciplinary foundation, lagging intensive development, and intensified external regional competition. The entry into force of RCEP and the facilitation of factor flow brought by the customs closure operation provide strategic opportunities for enhancing capacity in education services trade. Based on this, the paper proposes improvement pathways: differentiating to build the “Study in Hainan” brand, collaboratively constructing research and innovation alliances, deepening the mechanism of industry-education integration, and promoting the modernization of education governance capabilities. The aim is to activate endogenous dynamics through institutional integration and innovation, building a characteristic higher education system with international competitiveness, and providing a “Hainan Paradigm” for the nation to explore new models of opening up in education.

## Keywords

institutional opening-up, Hainan Free Trade Port, higher education, core competitiveness, SWOT Analysis

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## 1. Introduction

Driven by the dual forces of increasingly fierce global higher education competition and the national promotion of high-level opening up, the internationalization of education has become a critical pathway for regional higher education to enhance its core competitiveness. As the only Free Trade Port with “Chinese characteristics” being constructed across the entire island, Hainan has been endowed with the strategic mission of creating an “International Education Innovation Island”. Its higher education internationalization not only concerns its own development but also carries the significant function of serving the broader picture of national opening up. The institutional dividends brought by the impending “customs closure operation” in 2025 and

the new space for regional education services trade opened by the implementation of RCEP are significant. However, a lack of clear practical pathways and theoretical guidance remains on how to systematically advance higher education internationalization within the new context of institutional opening-up. Based on the realities of the Hainan FTP construction, this paper systematically reviews the current status of its higher education internationalization, analyzes deep-seated issues, and proposes targeted countermeasures, aiming to provide a reference for national strategic functional zones exploring new models of educational opening up.

## **2. The Main Connotation of Core Competitiveness in Higher Education**

Academia defines the core competitiveness of a university as a unique capability formed over a long period, enabling the university to maintain sustainable development amidst competition. It is built upon the university's strategic resources and involves the ability to acquire, create, and integrate resources. Its core constituent elements are talent cultivation capability and scientific research capability [1]. In recent years, Hainan's higher education internationalization has made significant progress. At the policy level, the Master Plan for the Construction of the Hainan Free Trade Port explicitly supports high-level overseas universities specializing in science, engineering, agriculture, and medicine to operate independently in Hainan. At the practical level, the Lingshui Li'an International Education Innovation Pilot Zone has attracted 26 domestic and foreign universities, including Tongji University, Shanghai Jiao Tong University, and Abertay University (UK), initially forming a model of institutional integrated innovation characterized by "Big Sharing + Small Colleges" and "Five Mutuals and One Commonality". Sanya Yazhou Bay Science and Technology City has gathered 18 universities, such as Zhejiang University and Ocean University of China, focusing on tropical agriculture and deep-sea technology. Furthermore, the establishment of independent operating projects by overseas universities, such as Bielefeld University of Applied Sciences (Hainan) and EHL Hospitality Business School (Hainan), marks a new stage in China's opening up of higher education. By 2025, the number of Chinese-foreign cooperative education institutions (projects) at the undergraduate level and above in the province has grown steadily, accelerating the formation of an internationalized operational pattern.

## **3. SWOT Analysis of Hainan Higher Education Competitiveness**

From the macro perspective of institutional opening-up, the construction of the Hainan Free Trade Port has entered a critical period, moving from "policy implementation" to "comprehensive customs closure". Systematically applying the SWOT model to analyze Hainan's higher education competitiveness helps to clarify its true position regarding resource endowments, institutional environments, and external competition, thereby providing a scientific basis for enhancing core competitiveness.

### **3.1 Strengths: Superposition of Policy Dividends and Agglomeration of Characteristic Disciplines**

The advantages of Hainan higher education are primarily reflected in the first-mover advantage of institutional innovation and the resource endowments of its geographical characteristics. In recent years, guided by the strategy of serving the FTP construction, Hainan's higher education has continuously optimized its layout and strengthened policy support, showing a positive trend of deep integration between discipline construction and industrial development, significantly enhanced research capabilities, and an accelerated pattern of educational opening up. Relying on the unique tropical island geographical environment, Hainan universities have initially formed a discipline cluster with regional distinctiveness in fields such as tropical agriculture, marine science, and tropical medicine. For instance, Hainan University focuses on tropical crop genetic breeding and South China Sea ecological conservation, with research directly serving major strategic needs such as national food security, maritime power, and ecological civilization construction.

Simultaneously, policy dividends are significant. On June 1, 2020, the Master Plan for the Construction of the Hainan Free Trade Port explicitly proposed building a "Science, Engineering, Agriculture, and Medicine International Education Innovation Island". On September 1, 2025, the Provincial Party Committee and Provincial Government issued the Implementation Opinions on Accelerating the Construction of a Strong Education Province, proposing a "1248" framework. This targets the creation of a new highland for educational opening up, a new benchmark for digital education, a new engine for comprehensive education reform, and a new model for the integrated advancement of education, technology, and talent. Research capabilities have

also achieved historic breakthroughs. In 2025, universities in Hainan Province were approved for 445 National Natural Science Foundation projects, a year-on-year increase of 11.81%. Uniquely, relying on the advantages of institutional integration and innovation, the Lingshui Li'an International Education Innovation Pilot Zone serves as a core carrier, planning to reach a scale of 18,000 faculty and students by 2027. Hainan is effectively transforming from “fixing shortcomings” to “forging long boards”, utilizing policy dividends to align disciplines with industries and steadily improve research capabilities.

### **3.2 Weaknesses: Weak Disciplinary Foundation and Lagging Intensive Construction**

Hainan higher education still faces multiple disadvantages. The overall weakness of disciplinary strength is a core shortcoming, specifically the lack of universities directly affiliated with central ministries. As one of the nine provinces in China without a ministry-affiliated university, it has only one “Double First-Class” construction university. The fourth round of discipline assessment revealed a characteristic “absence of top-tier peaks and lack of high-level plateaus”: a lack of A-class top disciplines and a very low proportion of disciplines rated C- or above nationally [2]. Although Hainan University has gathered 83 national-level high-level talents, strong disciplinary leadership remains difficult to form. At the provincial level, support for world-class discipline construction is insufficient, and no special “Provincial World-Class Discipline Construction Plan” has been issued. Financial investment in characteristic disciplines lags significantly behind other central and western provinces (such as Jiangxi, Guangxi, Chongqing).

This issue directly impacts the capacity for high-level talent cultivation. Although there has been an increase in master's and doctoral training—specifically the addition of 9 doctoral points in the recent degree authorization audit—the total volume remains small, and the number of degree-granting units has not grown. The scale of doctoral talent is small, and the proportion is low compared to the national average. Furthermore, the integration of industry and education remains at a shallow stage of cooperation. Enterprise participation lacks endogenous motivation, and issues such as imperfect training base mechanisms and curriculum content lagging behind industrial development are prominent. A mechanism for the effective transformation of research results into local industry services has not been established; there is a “two skins” phenomenon where research is disconnected from market demand, and the organic connection between the education chain, talent chain, industrial chain, and innovation chain requires further development.

### **3.3 Opportunities: The Opportunity of Customs Closure and Deepening Regional Cooperation**

Concurrently, Hainan higher education is welcoming significant strategic opportunities. Following the full implementation of RCEP (Regional Comprehensive Economic Partnership), the flow of education, talent, and technology within the region has accelerated. Hainan can leverage this to deepen educational cooperation with ASEAN countries in fields such as cross-border e-commerce, healthcare, and tourism management. Crucially, the official launch of island-wide customs closure operation in December 2025 marks the comprehensive landing of the FTP policy system. After customs closure, the regulatory model of “opening the first line, controlling the second line, and freedom within the island” will greatly enhance the convenience of cross-border flows of personnel, goods, funds, and data, creating institutional dividends for higher education internationalization. For example, universities importing teaching and research equipment can enjoy a broader “zero tariff” list, and procedures for foreign teachers and international students will be simplified.

Furthermore, the customs closure operation promotes Hainan to accelerate the construction of a public service system aligned with international standards, including high-level international schools and hospitals, significantly enhancing urban livability and talent attraction. At the national level, high-energy innovation platforms such as the Nanfan Breeding National Laboratory and the Deep Sea Technology Innovation Center provide solid support for universities to conduct frontier research. Additionally, the surge in demand for talent in emerging fields like smart logistics and digital trade forces universities to accelerate professional structural adjustments. Geographically, Hainan is the maritime hub connecting China to Southeast and South Asia, providing convenience for cross-border education cooperation. The “Study in Hainan” brand is poised to capture the trend of returning international education consumption and attract students from RCEP member countries.

### **3.4 Threats: Intensified Regional Competition and the Pressure of the “Siphoning Effect”**

In an open environment, Hainan higher education inevitably faces dual pressures from domestic and international sources. Internationally, Southeast Asian countries like Singapore and Malaysia possess mature English education systems and international environments, posing direct competition to Hainan in attracting international students and faculty. Domestically, strong educational regions like the Guangdong-Hong Kong-Macao Greater Bay Area (GBA) and the Yangtze River Delta, with their robust economic foundations and mature industry-education ecosystems, continue to exert a “siphoning effect” on Hainan’s high-end talent and quality student sources. Specifically, neighboring Guangdong Province far exceeds Hainan in patent authorization and innovation capability, exacerbating the difficulty for Hainan universities to retain talent.

Moreover, although the vision of an “International Education Innovation Island” has been proposed, Hainan’s “soft environment” for internationalization requires optimization. The proportion of international students is low, the scale of international schooling is insufficient, and most international cooperation remains focused on extensive expansion rather than deep, intensive synergy. Additionally, the supporting service system for international talent—regarding housing, medical care, and children’s education—is imperfect, and a full English teaching environment and multicultural atmosphere have not yet fully formed. These “weak points” constrain Hainan’s ability to allocate quality higher education resources on a global scale.

## **4. Pathways for Enhancing the Core Competitiveness of Higher Education in Hainan Province**

### **4.1 Guided by Differentiation Strategy: Creating the “Study in Hainan” Brand and an International Highland**

The enhancement of core competitiveness stems primarily from precise operational positioning and differentiated development paths. Drawing lessons from the “small but specialized/exquisite” philosophy of “pocket-sized” world-renowned universities, Hainan universities should not blindly pursue becoming “large and comprehensive”. Instead, they should focus on comparative advantages and achieve breakthroughs through differentiated competition [3]. They should rely on the unique institutional advantages of the FTP to deeply mine the two core IPs of “Tropical Characteristics” and “Free Trade Port”. Emphasis should be placed on developing full English-taught degree programs in tropical agricultural technology, marine life sciences, and FTP cross-border finance and logistics, creating irreplaceable disciplinary peaks. Universities should actively integrate into the RCEP education cooperation framework, establish “ASEAN International Student Special Scholarships”, and implement a more active localized internationalization strategy. By launching pilots for mutual recognition of vocational qualifications with ASEAN countries, Hainan can build a regional education community, becoming a hub and window for China’s higher education opening up to ASEAN and “Belt and Road” countries.

### **4.2 Driven by Collaborative Innovation: Building High-Level Strategic Alliances and Research Platform Systems**

University strategic alliances are vital mechanisms for resource sharing, complementary advantages, and creating world-class universities. Hainan should break the limitations of individual university development and utilize carriers like the Lingshui Li’an International Education Innovation Pilot Zone and Yazhou Bay Science City to promote a shift from “physical spatial gathering” to “chemical reaction fusion”. Chinese-foreign cooperative education must transition from simple “curriculum introduction” to deep institutional alignment involving “standard co-construction, joint research, and qualification mutual recognition”. Drawing on the mechanism of Australia’s “Group of Eight”, Hainan should establish collaborative innovation consortiums between universities, research institutes, and industry enterprises. Key focus areas should include deep-sea technology, biomedicine, and artificial intelligence to co-construct joint research institutes, enhancing overall research strength and international discourse power through “clustered development”. Relying on industrial parks, universities should co-build technology transfer centers and industry-academia-research demonstration bases with local leading enterprises, accelerating the transformation of research results into practical productivity through “Government-Industry-Academia-Research-Application” synergy.

### **4.3 Deep Integration of Industry and Education: Perfecting the Mechanism for Cultivating Applied Innovative Talent**

The root of core competitiveness lies in the quality of talent cultivation. Facing new demands from industrial upgrading, Hainan universities need to establish an “Applied Innovation” orientation, building a talent cultivation system closely docked with the industrial chain. They must consciously view serving economic and social development as a powerful driver for enhancing competitiveness [4]. An integrated model of “Talent Cultivation—Technological Innovation—Industrial Application” should be implemented, incorporating academic competitions and innovation/entrepreneurship education into the professional curriculum. Most discipline competitions should adopt forms united with industry enterprises, pushing marketable works to companies to deepen integration and promote result transformation [5]. Based on the layout of key industries in the FTP, universities should dynamically adjust discipline and professional structures and strengthen interdisciplinary integration. By establishing Modern Industrial Colleges and introducing industry standards and corporate resources, the organic connection between the education chain, talent chain, industrial chain, and innovation chain can be achieved, cultivating high-quality applied innovative talents adaptable to future development.

### **4.4 Modernization of Governance Capabilities: Optimizing the Ecology for International Talent Development**

The construction of first-class universities cannot proceed without a first-class governance system and environmental guarantees. Hainan should be guided by the modernization of education governance to break down institutional barriers restricting talent flow and create an open and inclusive academic ecology. “For a country to open up, it must first advance the opening up of people, especially talent” [6]. Hainan should fully utilize the legislative power of the FTP to optimize facilitation measures for foreign teachers and international students regarding entry/exit, residency, and work permits. Simultaneously, the supply level of high-quality public services, such as international schools and hospitals, must be improved to build a talent attraction environment with global competitiveness. Finally, a policy of “simultaneous introduction and cultivation” should be persisted in; while vigorously introducing high-level overseas talent, emphasis must also be placed on the international cultivation of local teachers. By establishing evaluation and incentive mechanisms aligned with international standards, a high-level faculty team possessing both international vision and teaching/research capabilities can be built, providing the intellectual engine for the sustained enhancement of core competitiveness.

## **5. Conclusion**

Based on the perspective of institutional opening-up, this paper has conducted a comprehensive analysis of the core competitiveness of Hainan higher education using the SWOT model. The research indicates that Hainan higher education is in a critical period of transformation from “extensive scale expansion” to “intensive quality improvement”. The island-wide customs closure operation in 2025 is not only a milestone in the construction of the Hainan Free Trade Port but also a touchstone for testing the effectiveness of higher education internationalization. The key to enhancing core competitiveness lies in transforming unique policy advantages into realistic operational efficiency. Hainan universities must adhere strictly to the main line of “institutional opening-up”, break traditional path dependencies, insist on differentiation and distinctiveness in discipline layout, strengthen synergy and sharing in resource allocation, and focus on application and innovation in talent cultivation. On one hand, they must actively align with major national strategies and the demands of key industries in the FTP to solve the “research-application disconnect” through deep industry-education integration. On the other hand, they must benchmark against high-standard international education rules to optimize the “soft environment” for international schooling, fundamentally reversing the passive situation where talent “cannot be brought in or kept”. Looking to the future, Hainan higher education should strive to build a new highland of educational opening up facing ASEAN and radiating globally. Through continuously deepening institutional reform, it aims not only to achieve a leap in its own core competitiveness but also to provide replicable practical samples and theoretical support for Chinese higher education to participate in global education governance at a deeper level and in broader fields.

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## Conflicts of Interest

The authors declare no conflict of interest.

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