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Review Article

Beyond Scale Expansion: Exploring the Structural Imbalances in China's Transnational Higher Education through the Lens of Resource Dependence Theory

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Abstract

China's transnational higher education has achieved significant growth in scale; yet its rapid expansion may conceal the deep-seated structural problems. In this study, we conducted a comprehensive quantitative analysis based on official statistical data, aiming to map the current development landscape of Chinese-Foreign Cooperation in Running Schools and identify the problems and challenges. The research has revealed four key structural imbalances: imbalanced distribution of program levels; imbalanced disciplinary distribution; dual imbalance in partner countries and foreign university levels and imbalanced geographical distribution. Drawing on resource dependence theory, our analysis demonstrates that these imbalances are the inevitable result of the asymmetric dependence relationship formed by Chinese and foreign partner universities in the process of pursuing key resources. Although this research focuses on the Chinese context, it has broader implications for transnational higher education worldwide. Five implications for policy and practice have been proposed at the end of this article.

Keywords:
Chinese-foreign cooperation in running schools, imbalance, resource dependence theory, transnational higher education

1. Introduction

Transnational Higher Education (TNHE) has become a key driving force for the internationalization of higher education, profoundly reshaping the landscape of global knowledge production and dissemination (Knight, 2008). The international framework constructed by the General Agreement on Trade in Services (GATS) has institutively paved the way for the global marketization and cross-border practice of educational services (Hou et al., 2014). Driven by this, many developing countries (such as China, Vietnam, Malaysia, and the United Arab Emirates) have become importers of educational services, actively introducing projects and resources from major educational exporting countries such as the United States, the United Kingdom and Australia (Altbach & Knight, 2007). From the establishment of a branch campus by the University of Nottingham in Malaysia, to the layout of New York University in ABU Dhabi and Shanghai, and to the thousands of cooperation projects among countries, TNHE is reshaping the global education landscape.

TNHE is regarded to be a reform measure that China takes to respond to globalization and meet the demand of students for tertiary education opportunities and the economic development (Mok & Han, 2016). As one of the largest emerging higher education markets in the world, China has accumulated a huge volume of Chinese-foreign cooperative education practices over the past four decades, providing a unique sample for the world to observe how TNHE evolves in specific social, political and economic contexts (Yang, 2008). In China, TNHE mainly stands for Chinese-Foreign Cooperation in Running Schools (CFCRS) (Zhongwai Hezuo Banxue). It has been playing an important role in promoting the educational quality, expanding international exchanges, and introducing high-quality educational resources (Hou et al., 2014; Yang, 2008). There are only subtle differences in meaning between CFCRS and TNHE in Chinese higher education (Hu & Willis, 2017), therefore, these two terms will be used interchangeably in this article for the convenience of discussion.

As Mok (2021) contends, there are two types of transnational cooperation in the Chinese higher education context: CFCRS programs and CFCRS institutions. Institutions are joint venture educational entities that can be either non-independent schools or colleges connected to a Chinese parent university (e.g. Jilin University Lambton College) or fully independent universities with their own legal person status (e.g. The University of Nottingham-Ningbo).

CFCRS programs, on the other hand, are curriculum-based collaborations that do not create a distinct legal entity. Both forms involve collaboration between Chinese and foreign universities, including partners from Hong Kong and Macau.

Currently, the structural problems and deep-seated challenges that have long been overshadowed by the growth in quantity of CFCRS have become increasingly prominent. These challenges not only concern the fairness, quality and sustainable development of higher education in China, but also pose significant questions to the theory and practice of global TNHE. Therefore, it is of urgent importance to closely examine these issues.

The literature has shown that scholars have conducted fruitful studies on TNHE in China from various dimensions. For instance, some focused on the governance model and policy evolution (Mok & Han, 2016), while others delve deeply into micro-level issues such as cross-cultural teaching and student experience in TNHE (Hou et al., 2014). Recent systematic literature reviews have also pointed out the common challenges faced by global TNHE, such as quality assurance, cultural adaptation, and commercialization (Tran et al., 2023). Although existing studies have explored specific aspects of TNHE in China, they mostly rely on policy text analysis, qualitative research, case studies or small-scale questionnaire surveys, lacking comprehensive and macroscopic quantitative analysis based on official authoritative statistical data. Therefore, it is difficult to reveal the systematic and structural problems and deficiencies of CFCRS in China. Filling this gap is of vital importance as it can elevate our understanding of the issue from fragmented case observations and partial knowledge to an accurate grasp of the overall situation, thereby providing a solid empirical foundation for more precise policy intervention and theoretical interpretation.

This study aims to map the landscape of China's TNHE based on the latest official statistics from the Information Platform for Supervision of CFCRS of the Ministry of Education of China, identify the predominant problems, and analyze the reasons in combination with the Resource Dependence Theory (RDT). Therefore, the major research questions of this study are:

1) What are the predominant challenges and problems characterizing the current landscape of TNHE in China?

2) What are the reasons for these challenges and problems in the light of RDT?

Through this research, we expect to provide policymakers with data-based evidence support to help identify the optimization direction of resource allocation and development strategies. At the same time, it contributes systematic empirical analysis from China to international TNHE research, enriching the comparative research materials on the internationalization of global higher education.

2. Theoretical foundation

RDT originated from management and organizational behavior. It claims that the survival of an organization depends on external resources, and thus its behavior is shaped and influenced by the availability of these resources (Pfeffer & Salancik, 2003). Pfeffer and Salancik (1978) contend that: 1) the most important thing for an organization is survival; 2) organizations need resources to survive, but they usually cannot produce these resources on their own; 3) the organization must interact with the factors in the environment it relies on, and these factors usually include other organizations; 4) survival is thus based on an organization's ability to control its relationships with other organizations. An important feature of the RDT is that dependencies can be mutual. Just as one organization depends on another two organizations can also depend on each other simultaneously. When the dependence of one organization exceeds that of another, power becomes unequal (Ma, 2005). Organizational dependency not only includes resource dependencies such as technology and knowledge, but also dependencies in aspects such as organizational structure, culture, and relationship network (Jiang et al., 2024).

RDT provides a powerful and brand-new perspective for explaining the behavior of public higher education institutions (Fowles, 2014). Elaborating the relationship between universities and the environment, Sun (2016) deems that we mainly emphasize four typical resources: finance, human resources, information and knowledge (research and development achievements and evaluation plans), as well as products and services. Dependence is understood as the degree of demand for resources and the availability of resources in an environment (Frooman, 1999). If a university cannot obtain the resources controlled by other institutions and at the same time cannot acquire these resources from elsewhere through other means to achieve its own operational goals, it can only rely on other institutions.

RDT aligns with the core logic of CFCRS well, which is why it has been chosen as the theoretical lens for this research. RDT holds that the survival and development of any organization must rely on key resources in the external environment. CFCRS is precisely a strategic alliance formed by both Chinese and foreign universities to obtain their own resources needed, and it is a resource exchange with programs or institutions as the carrier of cooperation. Chinese universities aim to introduce high-quality courses, advanced pedagogical ideas and academic reputations. Foreign universities, on the other hand, aim to tap into the Chinese market, attract students and generate income. Therefore, this theory regards cooperative education as a rational behavior of resource exchange, providing the most direct theoretical perspective for analyzing its driving forces.

3. Research methodology

Data for this study was obtained from the Information Platform for the Supervision of CFCRS (https://www.crs.jsj.edu.cn/), which is supervised by the Department of International Cooperation and Exchange of the Ministry of Education in China. It is currently the only officially designated channel by the Chinese government for administrative licensing, quality supervision and information disclosure of CFCRS. The main reasons for choosing this website are:

Legal validity: In China, all legal CFCRS institutions and programs approved or reviewed by the Ministry of Education must be registered and publicly displayed on this platform. Educational activities not included on this platform do not have legal effect. Thus, this database eliminates the interference of informal educational activities and can precisely define the boundary of research samples.

Comprehensiveness of information: The website comprehensively collects key fields such as the educational entity, foreign partner universities, educational levels (undergraduate/postgraduate), distribution of disciplines and majors, and educational locations, etc. This provides detailed and accurate first-hand data support for this research to quantitatively analyze the structural characteristics of CFCRS programs and institutions from multiple dimensions.

Currency of the data: The website data is updated in real time based on the approval and review results of the Ministry of Education, covering the existence status of the educational entity (such as enrollment in progress, suspension of enrollment, etc.), ensuring that the analysis of this study is based on the current effective educational status.

All the raw data collected was entered into Microsoft Excel, forming the basic database of the research. The core of the analysis process is to conduct multi-dimensional classification and quantitative comparison of data. Based on the research objectives, All programs and institutions should be classified according to five key dimensions: the location of the school (Eastern, Central, Western, Northeast), the discipline category (such as Engineering, Management, Art, etc.), the educational level (undergraduate, postgraduate), the foreign partner country (by country), and the level of the foreign partner university (stratified by referring to authoritative rankings such as QS World University Rankings).

Following this, we conducted frequency statistics and percentage calculations for different categories under each dimension, thereby clearly outlining the quantitative distribution characteristics of TNHE at all levels. Through the horizontal and vertical comparisons of these quantitative results, this study was able to precisely identify and verify the current structural imbalance phenomena, providing a solid empirical basis for subsequent theoretical analysis.

4. Results

Based on a systematic analysis of the collected data, we identified several key challenges and problems, all of which were related to imbalance.

4.1. Imbalanced distribution of program levels

The statistics have shown that among the total 1,195 CFCRS programs, there are as many as 994 undergraduate-level programs, accounting for 83.18%. In sharp contrast to this is the weakness of postgraduate education. There are currently 178 master's degree programs, accounting for 14.9%. Doctoral programs are even fewer, with only 23, accounting for merely 1.92%. This structure characterizes the reality that CFCRS is often positioned as a supplement to undergraduate educational resources rather than serving as a platform for participating in the production of global cutting-edge knowledge and cooperation in advanced technologies.

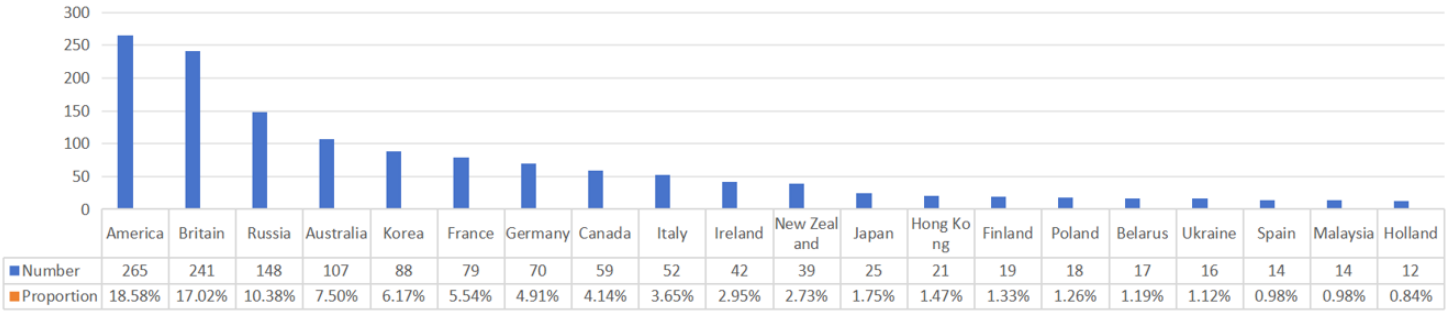
4.2. Imbalanced disciplinary distribution

The country distribution of foreign collaborators reflects the diversity of educational resources and the breadth of a global perspective. Figure 1 shows that

the international partners of CFCRS in China are highly concentrated in traditional Western educational powerhouses, and most of the cooperating countries are developed countries in the world, with a serious lack of diversity.

Figure 1

Distribution & Proportion of the Foreign Partner Countries



	America	Britain	Russia	Australia	Korea	France	Germany	Canada	Italy	Ireland	New Zealand	Japan	Hong Kong	Finland	Poland	Belarus	Ukraine	Spain	Malaysia	Holland
Number	265	241	148	107	88	79	70	59	52	42	39	25	21	19	18	17	16	14	14	12
Proportion	18.58%	17.02%	10.38%	7.50%	6.17%	5.54%	4.91%	4.14%	3.65%	2.95%	2.73%	1.75%	1.47%	1.33%	1.26%	1.19%	1.12%	0.98%	0.98%	0.84%

Specifically, the total number of CFCRS programs with the United States (265) and the United Kingdom (241) exceeds 500, thus these two countries have become the main partners of cooperation. Russia (148) and Australia (107), which follow closely behind, also have a considerable gap compared to the top two. The programs of the top four countries accounted for the majority (63.68%) of the total, forming a highly concentrated core circle of "the United States, the United Kingdom, Australia and Russia". In contrast, the participation of other European countries such as Germany (70) and France (79) was limited, and the number of collaborators from countries along the Belt and Road and the vast number of developing countries was even smaller, such as Malaysia (14).

4.3. Dual imbalance in partner countries and foreign university levels

Chinese universities are the main body of CFCRS, and the degree of their participation directly determines the overall quality and development scale of CFCRS. Our data shows that as of June 2025, there were a total of 1,365 higher education institutions at the undergraduate level and above in China (Ministry of Education of the People's Republic of China) http://www.moe.gov.cn/jyb_xxgk/s5743/s5744/202506/t20250627_1195683.html), of which 586 universities hosted CFCRS, the overall participation rate is 42.93%, More than half of the universities are still not implementing CFCRS. This indicates that for the majority of Chinese universities, CFCRS is deemed to be a supplementary activity, not an essential component of their mission. As a result, the popularity and influence of CFCRS are fundamentally restricted, and the capacity for international cooperation needs to be enhanced.

As the provider of high-quality educational resources, the academic level and international reputation of foreign universities are important guarantees for the quality and academic level of CFCRS. According to the statistics of this study, among 1,453 institutions and programs, the number of foreign partner universities ranked among the top 500 in global university rankings is 306, accounting for 21.1%. In other words, nearly 80% of the foreign partners universities are ranked outside the top 500 in the QS World University Rankings. This not only restricts the overall quality improvement of CFCRS, but also reveals that certain Chinese universities may have a tendency to prioritize quantity over quality in the selection of partners, which in turn leads to the overall unsatisfactory results of CFCRS.

To further explore the quality structure of foreign partners, we conducted an investigation on the top 20 universities outside the Chinese mainland with the largest number of collaborations. It can be seen from Table 1 that a significant structural differentiation is presented. We have observed that there are indeed some of the world's elite research universities in the cooperation, such as the University of New South Wales (ranked 19th by QS) and the University of Manchester (ranked 34th by QS), which indicates that the elite education that oriented towards knowledge introduction and improvement of teaching quality does exist. However, another noteworthy phenomenon is problematic. A large number of institutions ranked in the lower-middle range or even failing to make it into the rankings still establish cooperative relationships with many Chinese universities by virtue of their proactive international market strategies. For instance, Southern Cross University, which has six cooperative programs/institutions, ranks 576th, while Anglia Ruskin University and the University of Bolton even failed to enter the QS 2025 ranking. This phenomenon profoundly reveals the "dual-track motivation" that drives CFCRS: one is the "elite-

driven" centered on academic reputation, and the other is the "business-driven" centered on market expansion and tuition income. It is precisely the extensive existence of the latter that has led to the macro situation mentioned earlier where nearly 80% of the foreign partners rank outside the top 500, thereby undermining the overall reputation of CFCRS and posing a potential educational quality risk to students.

Table 1

Top 20 Foreign Partner Universities by Number of Programs and Institutions (with QS 2025 Rankings)

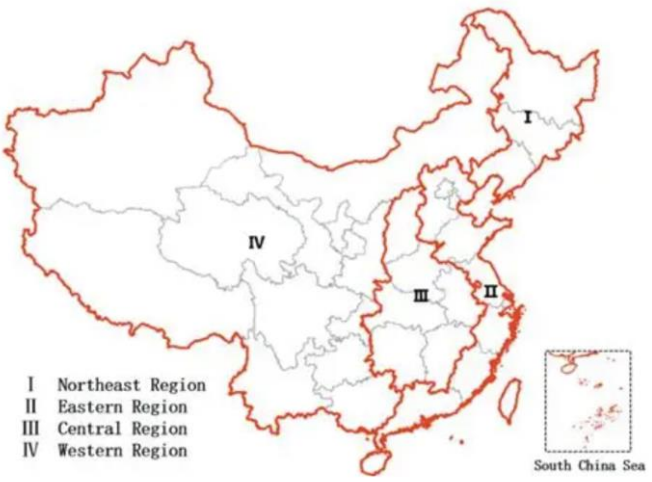
No.	University	No. of Programs & Institutions	Ranking
1	The Hong Kong Polytechnic University	10	57
2	State University of New York	10	460
3	University of Wisconsin System	9	116
4	Queen Mary University of London	8	120
5	University of Reading	8	172
6	University of Wollongong	8	167
7	University of Arizona	7	293
8	University of Manchester	6	34
9	University of Tasmania	6	293
10	Royal Melbourne Institute of Technology University	6	123
11	Anglia Ruskin University	6	—
12	University of Greenwich	6	691-700
13	Southern Cross University	6	576
14	University of British Columbia	6	38
15	Charles Sturt University	6	851-900
16	The University of New South Wales	5	19
17	University of Canberra	5	403
18	Curtin University	5	174
19	Victoria University, Melbourne, Australia	5	741-750
20	University of Bolton	5	—

4.4. Imbalanced geographical distribution

According to National Bureau of Statistics, China is divided into four economic regions: the Northeast, Eastern, Central and Western regions. Figure 2 details the four regions and the Provinces/Autonomous Regions/Municipalities that each region comprises. During the rapid development of CFCRS, the imbalance in regional development has become a predominant issue, which is mainly reflected in the scale of education, the level of education, and the quality of participation and cooperation of universities.

Figure 2

The Economic Regions and Provinces



Region	Provinces/Autonomous Regions/Municipalities
Northeast	Liaoning, Jilin, Heilongjiang
Eastern	Beijing, Tianjin, Hebei, Shanghai, Jiangsu, Zhejiang, Fujian, Shandong, Guangdong, Hainan, Taiwan, Hong Kong, Macao
Central	Shanxi, Anhui, Jiangxi, Henan, Hubei, Hunan
Western	Inner Mongolia, Guangxi, Chongqing, Sichuan, Guizhou, Yunnan, Tibet, Shaanxi, Gansu, Qinghai, Ningxia, Xinjiang

Source: Zhang, G., Guo, X., Li, D., & Jiang, B. (2019). Evaluating the potential of LJ1-01 nighttime light data for modelling socio-economic parameters. Sensors, 19(6), 1465.

4.4.1. Scale of Provision

From the perspective of the regional distribution of CFCRS, the Eastern region has the largest number of institutions and programs, accounting for 51.36% of the national total. The Central region (20.65%) ranked second, but there was still a considerable gap compared with the Eastern region. The Northeast region and the Western region have similar numbers, accounting for 13.34% and 14.66% of the national total respectively. Overall, in terms of the scale of provision, there is an unbalanced situation where there is more in the Eastern region but less in the Central, Western and Northeast regions.

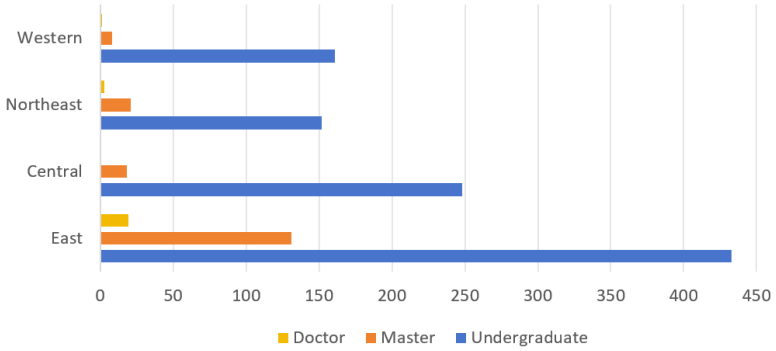
4.4.2. Education levels

As shown in Figure 4, a significant regional disparity exists in the educational levels of programs. The Eastern region leads in the number of undergraduate, master's, and doctoral programs,

hosting the vast majority of the nation's scarce PhD programs. In contrast, the Central, Northeastern, and Western regions exhibit a severe shortage of postgraduate provisions. This issue reflects the obvious weakness of these three regions in high-level educational cooperation. The eastern region has basically acquired the capacity to cultivate students at the undergraduate, postgraduate and doctoral levels in Sino-foreign cooperative education, while the Central, Northeastern, and Western regions are still confined to the undergraduate-level cooperation.

Figure 3.

Distribution of Educational Levels



4.4.3. University participation

In terms of the participation of universities in CFCRS, there is a regional pattern where the Eastern region leads and the Central and Western regions lag behind. Table 2 illustrates the number of universities offering CFCRS programs or institutions in different regions of China and their proportion relative to the total number of universities in the corresponding regions.

Table 2

Number and Proportion of Universities with CFCRS Programs/Instructions by Region

Region	No. of universities	No. of universities with CFCRS programs or institutions	Proportion
Eastern	551	282	51.18%
Central	321	125	38.94%
Northeastern	144	77	53.47%
Western	349	102	29.23%
Total	1,365	586	42.93%

Our data shows that not only are there a large number of universities in the Eastern region, but also a high number of universities offering CFCRS programs and institutions. The overall participation rate is significantly higher than that in the central and western regions. Moreover, the Eastern region also contains a large number of key universities. These universities often manage to attract higher-level partner universities when cooperating with foreign parties, and thus develop higher-quality cooperation programs.

The overall participation rate of universities in the Central region is relatively low. However, in certain provinces, such as Henan, 37 out of 62 universities participated, with a participation rate of approximately 60%, while in Shanxi Province, only 2 out of 36 universities participated, with a participation rate of less than 6%. It is evident that there are significant internal differences in terms of university participation in the Central region. The overall participation rate in the western region is the lowest, but similar to that in the Central region, there are obvious internal differences. The Northeast region is special, since only three provinces in this area (see Figure 3) and the number of colleges and universities here is small. Although there are 77 universities in these three provinces that offer CFCRS programs or institutions, which is not a large number, the participation rate of 53.47% is still slightly higher than that in the Eastern region.

5. Discussions

In this section, we provide an in-depth analysis of the reasons for the problems and challenges identified previously in the findings through the lens of RDT.

5.1. Imbalanced distribution of program levels

An excessive proportion of undergraduate-level CFCRS programs profoundly reflects the differences in the resource dependence patterns between China and foreign countries. For Chinese universities, undergraduate-level CFCRS can directly bring many resources that universities rely on, such as tuition fees, student enrollment scale and domestic and international reputation. In terms of cost, such undergraduate programs have lower requirements for resources and a faster return of funds. On the part of foreign universities, expanding the undergraduate education market in China means obtaining a stable stream of tuition income and student sources. This is an important strategy for Western universities, which are facing the pressure of shrinking domestic higher education markets, to reduce the uncertainty of resources and the environment.

In contrast, master's and doctoral education has much higher requirements for resources compared to undergraduate education. It not only needs high-level faculty and advanced research equipment, but also a wealth of research projects and academic resources. Although domestic universities are eager to develop master's and doctoral education, most of them lack resources and intend to rely on cooperative education to introduce resources from foreign partners. However, foreign universities tend to concentrate their high-quality resources in the domestic market in order to maintain their position in international academic competition. Therefore, their intention to hold master's and doctoral level cooperative programs is weak. From the perspective of resource dependence, Chinese and foreign universities have formed an asymmetric dependence relationship here (Sun, 2016).

5.2. Imbalanced disciplinary distribution

Slaughter and Leslie (1997) pointed out that the funders of higher education have a huge influence on universities because they provide the funds and resources needed for the operation of universities. From the perspective of Chinese universities, undergraduate education carries the largest student source scale and constitutes the main source of key financial resources such as tuition income and fiscal appropriation. As universities increasingly rely on tuition fees as a source of income, according to resource dependence, they will have to cater to students' preferences for survival and development (Fowles, 2014), that is, tilt towards the preferences of "resource providers". Graduates with backgrounds in engineering, management, art, etc. have bright employment prospects and considerable salary, which can bring a continuous and stable source of students and tuition income. This is precisely the key financial resource for maintaining the operation of CFCRS programs and institutions. In terms of knowledge characteristics, the knowledge systems of these disciplines have strong features of standardization and portability, and they face relatively low costs in the cross-border transfer of information and knowledge resources. Organizational dependency not only includes resource dependencies such as technology and knowledge, but also dependencies in aspects such as organizational structure, culture, and networks (Jiang et al., 2024). The humanities and social sciences are highly dependent on cultural customs, values and academic traditions. The cross-border transfer of their teaching content faces cultural adaptation costs and ideological risks. This reliance on local culture and relationship networks makes it difficult to directly transplant educational content from other countries into domestic cooperative education, and the cooperation between China and foreign countries in the field of humanities and social sciences also faces higher coordination costs.

According to RDT, if an organization particularly needs a certain type of resource but it is difficult to obtain such resources from outside, it will attempt not to rely on external institutions. In the field of humanities and social sciences in China's higher education, due to the particular sensitivity to ideological security, regulatory authorities and universities are particularly cautious in their international cooperation. They are more willing to invest resources in disciplines such as engineering and management, which are less likely to cause political disputes and can also yield economic returns. As a result, these disciplines are getting stronger and stronger, while the development of other disciplines is restricted. The overall disciplinary layout is thus becoming increasingly unbalanced.

5.3. Dual imbalance in partner countries and foreign university levels

The fact that most TNHE relationships are concentrated in Europe and America, and that Chinese universities often cooperate with foreign universities of average instead of high level, reflects the power structure under asymmetric dependence. In the global higher education system, developed countries in Europe and America exert dominant influence over key areas such as the degree system, quality certification and scientific research evaluation standards. Their universities represent high-quality academic resources certified by international ranking systems. For Chinese universities, the higher education resources in Europe and America have high symbolic value and legitimacy. They not only have instrumental functions (improving teaching quality), but also symbolic value, which can significantly enhance the reputation of institutions, attract high-quality students and obtain policy support. In contrast, although cooperation with countries along the Belt and Road Initiative or developing countries holds strategic significance in a geopolitical sense, due to the relatively low symbolic value and market recognition of their educational resources, it is difficult to meet the reliance of Chinese universities on key resources, resulting in insufficient cooperation motivation among Chinese universities.

RDT holds that dependence can be mutual, but when one party is more dependent on the other,

inequality of power occurs (Pfeffer and Salancik, 1978). High-level universities abroad (such as those ranked within the top 500 in the QS University Rankings) possess abundant and scarce tangible and intangible resources, including outstanding academic reputation, brand value, knowledge production capacity, advanced instruments and equipment, teaching and research achievements, etc. Chinese universities have a high demand for these resources, while top foreign universities have a relatively low demand for resources in the Chinese market, forming a typical asymmetric dependence relationship. According to RDT, this power structure grants leading foreign universities greater bargaining power. Consequently, they are thus inclined to form equitable partnerships with top-tier Chinese institutions, while showing little incentive to respond to collaboration proposals from ordinary universities. However, the reality is that these top-tier foreign universities have very few cooperative institutions, programs or branch campuses in various countries around the world (not limited to China). Perhaps, for the sake of reputation and quality, they are more willing to develop their own universities well and attract outstanding students from all over the world to study there, rather than developing cooperative programs or institutions in other places of the world and "diluting" their academic reputation and educational quality. On the other hand, many mid- to lower-tier foreign universities are under survival pressure due to the decline in local students and fiscal austerity. They are highly dependent on China's vast higher education market. This inequality of power has led to a lack of cooperation motivation among high-level foreign universities, while medium and low-level universities have shown high enthusiasm. In order to meet the internationalization targets as legitimacy, Chinese universities may have to accept the reality of cooperating with mid- to lower-tier foreign universities, which has led to the current situation where the overall level of foreign collaborative universities is not high.

5.4. Imbalanced geographical distribution

The imbalanced geographical distribution is a direct manifestation of the significant differences in development levels and resource possession among various regions in China. It profoundly reflects the decisive impact of the different resource endowments among regions on local organizations. The eastern region has a developed economy and abundant educational resources, with more high-level universities and research institutions. Universities, with their abundant financial resources, dense international relations networks, superior geographical locations and open policy environments, have significant advantages when establishing resource exchange relations with foreign parties. Regarding the four typical resources of the relationship between universities and the environment emphasized by Sun (2016), universities in the eastern region have stronger resource supply capabilities in the four dimensions of finance, human resources, information and knowledge, as well as products and services. They can provide foreign partners with better educational conditions, broader market prospects and more abundant supporting resources. This will reduce the risk of resource input for the foreign side and make the interdependence between the two sides more balanced. This resource advantage forms a cumulative Matthew effect. To a certain extent, Chinese and foreign universities have formed a joint dependence relationship. They all obtain irreplaceable resources from cooperation, and the degree of dependence is relatively close (Emerson, 1962).

Unlike the eastern regions, the central and western regions as well as the northeastern regions of China are at a disadvantage in terms of existing resources and find it difficult to provide the key resources needed by foreign universities. Universities in the central and western regions and the northeastern region are more dependent on external international resources. However, their local student economic capacity, urban attractiveness, internationalization of teaching staff and relatively underdeveloped industries put them in a disadvantageous position of high dependence and low attractiveness in the collaborative relationship with foreign universities. In the long term, the eastern region may transform its original resource advantages into the continuous aggregation of CFCRS programs and institutions by constantly strengthening its hub position in the global higher education network, while the central and western regions and the northeastern region will be trapped in a vicious circle where both resources and cooperation opportunities are scarce.

6. Conclusions

Based on a systematic analysis of the official statistics released by the Information Platform for Supervision of CFCRS, we believe that the current landscape of TNHE in China is characterized by several structural imbalances as challenges or problems. These include an imbalanced distribution of program levels, a skewed distribution of academic disciplines, asymmetry in the selection of partner countries and institutional quality, and significant

regional disparities in their geographical layout. Drawing on RDT, we provide an in-depth analysis of the underlying reasons for these challenges and problems. These imbalances are essentially the result of rational choices made by the cooperating parties under specific institutional and environmental constraints in order to obtain key resources for survival and development, and are the product of the combined action of the logic of resource exchange and the power structure.

Albeit the context of this research is confined to the Chinese context, it has certain implications for TNHE worldwide. First, when developing TNHE, all countries should shift from merely pursuing scale expansion to concentrating more on structural optimization and quality improvement. Second, resource dependence and power asymmetry should be appropriately handled and both parties of the cooperation should avoid turning TNHE into a tool for "student recruitment and revenue generation". Third, the subjects and partner universities can and should be diversified rather than solely focusing on certain "popular majors" and a few English-speaking countries. Fourth, TNHE policy needs to be designed in a coordinated manner with national and regional development strategies to prevent the aggravation of the imbalance in higher education among regions. Finally, while teaching and learning should be valued, TNHE should also pursue high-level cooperation model that emphasizes scientific research collaboration and knowledge co-construction.

This research mainly relies on macro quantitative data for analysis. Although it can clearly reveal the overall structural problems, it is difficult to explore the complex dynamics and specific challenges at the micro level (such as classroom teaching, student experience, and teacher development). Future research can adopt qualitative methods, supplementing and verifying the macroscopic findings of this study through qualitative methods such as in-depth interviews and observations.

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