

Location Choice of the Five Mekong Countries' Ability to Undertake China's Industrial Transfer

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Abstract. The core of "building a community of destiny of the Mekong countries" is to promote sustainable economic development in the Mekong basin, and a comprehensive understanding of the ability of the five Mekong countries to take over Chinese industries is of great significance to promote Mekong cooperation. The study analyzes the overall take-up capacity of the five Mekong countries by constructing an index system for evaluating the take-up capacity of industries. The study shows that the industrial transfer capacity of the five Lan Mekong countries from 2011 to 2017 shows a stable trend, with Vietnam declining slowly and Laos growing faster, and the industrial transfer capacity of the five countries shows obvious spatial differentiation characteristics.

1 Introduction

The Lancang-Mekong River basin countries are geographically coextensive, and the Lancang River flows out of China through Laos, Myanmar, Thailand, Cambodia, and Vietnam, constituting an important lifeline for the economic and social development of the southwestern region of China and the countries along the Mekong River [1,2]. The Lancang-Mekong Cooperation is a new sub-regional cooperation mechanism jointly led and promoted by six countries: China, Cambodia, Laos, Myanmar, Thailand, and Vietnam [3]. With the rapid development of China, more and more countries have started to strengthen exchanges and cooperation with China, and the Mekong countries want to ride on the China Express in the new century to achieve rapid economic development through production capacity cooperation and other means. At present, the depth and breadth of cooperation between China and the five Mekong countries are far from sufficient, and China faces many practical difficulties in further promoting industrial transfer to the five Mekong countries. It is important to enhance the cooperation and sharing between China and the five Mekong countries and promote the sustainable industrial development.

The first classical research on international industrial transfer in academia originated from the "goose industry transfer theory" by Japanese scholar Akamatsu [4], followed by the "product life cycle theory" by Harvard professor Vernon [5], the "product life cycle theory" by Japanese Economist Kojima [6] proposed the "marginal industrial expansion theory", Professor Dunning [7] proposed the "international production trade-off theory", and the new economic geography proposed after the

1990s further enriched the theoretical research on industrial transfer. These rich theories have systematically elaborated on the motives, modes and paths of industrial transfer [8]. In China, the research on industrial transfer is mainly after the reform and opening up, because the implementation of reform and development, China's economy began to develop rapidly after the 1980s, especially in the eastern coastal provinces. After the 1990s, the country successively put forward the plans of western development, the rise of central China, and the revitalization of northeast China, etc. Based on this current situation, a large number of research scholars have investigated the motives and location selection of domestic industrial transfer [9]. The ability to take over After the 21st century, with the rapid development of China's economy and a large number of Chinese enterprises going global, domestic research scholars have focused on international industrial transfer, especially after the implementation of China's "One Belt, One Road" strategy, many scholars have started to focus on China's industrial transfer to countries along the Belt and Road and other economies, mainly considering the level of infrastructure, national stability, economic development, business environment, technological innovation capability and labor force.

Throughout the existing research on international industrial transfer capacity, the research objects mainly take the countries along the Belt and Road as the research objects [10]. There are fewer studies on the five Lan-Mei countries. Therefore, this paper constructs the index system of industrial transfer taking up power based on industrial transfer taking up power, and adopts the entropy value method to measure the level of industrial transfer taking up power of the five Mekong countries.

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2 Research Methodology and Data Sources

2.1 Industry transfer acceptance assessment model

Indicator selection: Given q years, n countries, and m indicators, $X_{t_{ij}}$ denotes the jth indicator of country i in year t. Using the extreme difference standardization method, the standardized value is $X'_{t_{ij}}$. After normalization, the values of some indicators will appear as zeros, so the normalized values can be panned:

$$Y_{t_{ij}} = X'_{t_{ij}} + C \quad (1)$$

Where: $Y_{t_{ij}}$ is the value of the indicator after the leveling process; C is the panning amplitude, which usually takes the value of 0.1.

Determining the weight of indicators:

$$y'_{t_{ij}} = \frac{Y_{t_{ij}}}{\sum_t \sum_i Y_{t_{ij}}} \quad (2)$$

Calculate the entropy value of indicator j as:

$$S_j = -h \sum_r \sum_t y'_{t_{ij}} \ln y'_{t_{ij}}; h = \ln q_n, h > 0 \quad (3)$$

Calculate the credit utility value of indicator j:

$$K_j = 1 - S_j \quad (4)$$

Calculate the weights of each indicator:

$$W_j = \frac{K_j}{\sum_j K_j} \quad (5)$$

Calculating the comprehensive score of industrial transferability of countries along the "Belt and Road":

$$Z = \sum_j (W_j * Y_{t_{ij}}) \quad (6)$$

2.2 Indicator selection

In order to reasonably evaluate the ability of the five Mekong countries to undertake industrial transfer, this study divides the indicator system into four secondary indicators of attractiveness, support, development, and governance, as well as 12 tertiary indicators (Table 1).

Table 1. Index Evaluation System for Acceptance of Industrial Transfer.

Level 1 Indicators	Secondary Indicators	Tertiary Indicators
Industrial transfer capacity	Attractiveness	Total number of labor force aged 15-60
		GDP per capita
	Support	Total natural resource rents (% of GDP)
		Electricity access rate (% of population)
		Secure Internet servers (per million people)

Development Power	Air traffic, registered carrier global departures
	GDP growth rate (annual percent)
	Human Development Index Manufacturing, Value Added (% of GDP)
Governance	Government Efficiency Indicators in WGI Indicators
	Policy Stability Indicators in WGI Indicators
	Indicators of Regulatory Quality in WGI Indicators

2.3 Data source

The relevant data for the study were mainly obtained from the World Bank database, the International Statistical Yearbook, and the United Nations Development Programme. Among them, total population aged 15-64, GDP per capita, total natural resource rent (% of GDP), electricity access rate (% of population), electricity access rate, secure Internet servers (per million people), air transport passenger traffic, GDP growth rate (annual %), manufacturing value added (% of GDP), government efficiency, policy stability, and quality of government regulation related. The data are mainly from the World Bank database and the Human Development Index is mainly from the United Nations Development Programme.

3 Spatial and temporal divergence characteristics of industrial transfer taking capacity in the five Mekong countries

3.1 Analysis of the overall index of industrial carrying capacity

Based on the aforementioned methods, indicators and data, this paper measures the industrial take-up index of the five Mekong countries from 2011-2017, and the results are detailed in Table 2. Based on the industrial transfer take-up index, this paper analyzes the take-up capacity of the five Mekong countries to China's industrial transfer from two scales: time and space.

Table 2. The Lancang-Mekong Five Countries' Industrial Transfer Acceptability Index (2011-2017).

	2011	2013	2015	2017	Average
Cambodia	0.248	0.235	0.234	0.232	0.240
Laos	0.258	0.320	0.349	0.315	0.311
Myanmar	0.158	0.142	0.170	0.155	0.150
Thailand	0.811	0.840	0.837	0.859	0.835
Vietnam	0.641	0.638	0.637	0.578	0.623

3.2 Time evolutionary characteristics

On the whole, from 2011 to 2017, the ability of the five Mekong countries to undertake Chinese industrial transfer has shown a stable trend. The average undertaking capacity of the five Mekong countries for

industrial transfer is 0.432, indicating that the five Mekong countries generally have good undertaking capacity for Chinese industrial transfer and are suitable for undertaking Chinese industrial transfer. Among them, Thailand and Vietnam have a higher capacity to undertake industrial transfer, with an average capacity of 0.835 and 0.623 respectively, among which Thailand's capacity does not change much and fluctuates slightly every year, while Vietnam's capacity decreases slightly in general, but the decrease is small. The overall change in Cambodia's capacity is not significant; Myanmar has the lowest capacity, with an average capacity of 0.15 and little change in capacity. As one of the "Four Asian Tigers", Thailand is the most industrialized of the five Mekong countries and one of the world's emerging industrial countries and emerging market economies; Vietnam is second only to Thailand in terms of capacity, and it is one of the world's five prospective countries with a large development potential. The other three countries have weaker capacity to undertake, especially Myanmar, where domestic political turmoil has a huge impact on economic development.

3.3 Spatial distribution characteristics

From the results, it can be seen that the industrial transfer taking capacity of the five Mekong countries shows obvious regional spatial differentiation. 2011-2017, there are variations in the industrial transfer taking capacity of the five Mekong countries, and for the convenience of analysis, the industrial transfer taking capacity of seven years is averaged and the taking level of each country is divided into three categories of high, medium and low according to the average taking capacity, with 0-0.2 is defined as a low carrying capacity area, 0.2-0.5 is a medium carrying capacity area, and more than 0.5 is a high carrying capacity area. The results of each category are as follows: Myanmar as the region with low industry transfer capacity; Laos and Cambodia as the region with medium capacity; and Thailand and Vietnam as the region with high capacity.

4 Conclusion

This paper constructs a comprehensive evaluation index of industrial take-up based on statistical data of the five Mekong countries, and evaluates the ability of the five Mekong countries to take up China's industrial transfer on the basis of time-scale and spatial-scale analysis. From 2011 to 2017, the overall industrial capacity of the five Mekong countries to undertake China's industrial transfer has a stable trend, with Vietnam showing a slow decline and Laos showing the fastest growth; from the spatial distribution, the industrial capacity shows an obvious spatial differentiation, with the countries with better economic development having a relatively high industrial capacity and the The industry acceptance capacity of countries with better economic development is relatively high, while that of countries with backward economy is relatively low.

In order to promote the five Mekong countries to better undertake China's industrial transfer, this paper makes the following suggestions. First, China should strengthen the connectivity with the five Lan-Me countries, promote the integration of different modes of transportation among the Lan-Me countries, and build a more complete modern transportation system. Strengthen the construction of highways, railroads, waterways, airlines and other infrastructures between China and the five Mekong countries. Laos is the most backward among the five Lan Mekong countries in terms of railroad traffic, with the only section of the railroad in Laos having only 3.5 km. In order to drive the economic development of both sides, China and Laos held a signing ceremony for a railroad project in Beijing in 2015. The Sino-Lao railroad will be more than 1,000 km long when completed, with a total length of 414 km in Laos, and is expected to be opened to traffic by the end of 2021, and will also connect other countries in Southeast Asia in the future. The completion of China-Laos Railway and other planned railroads will carry the beautiful vision of "Mekong Community of Destiny" for the benefit of the people along the route and the rapid development of the industries and economy of both sides. It is important for the rapid development of industries and economies on both sides, and is also conducive to the transfer of Chinese industries.

Secondly, the selection of industrial transfer areas is based on the actual situation of the Mekong countries. Thailand and Vietnam are the better developed countries among the five Mekong basin countries and have a certain industrial foundation, especially the economic radiation circle with the three cities of Bangkok, Hanoi and Ho Chi Minh as the core, which has better infrastructure and higher labor quality and can transfer some technology-intensive industries. The three countries of Laos, Myanmar and Cambodia are less developed, but with lower labor prices and other costs, they can transfer labor-intensive and resource-intensive industries.

Finally, China should actively participate in the construction of development zones in the Mekong countries, creating a large amount of local tax revenue and employment for the zones; continuously deepen border trade, vigorously develop border trade, promote the continuous and steady development of border trade, and promote the development of bilateral economic and trade relations; cooperate with the five Mekong countries to build industrial parks in the Mekong basin, create an economic development belt in the Mekong basin, and achieve common development

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