

# Research on Innovation and Performance Enhancement of Third-Party Market Cooperation Models between Chinese and Foreign Enterprises under the Belt and Road Initiative

Dai Yingqi  
Jiangsu University

I. RESEARCH BACKGROUND OF THE PROJECT (THE RESEARCH STATUS AND RESEARCH SIGNIFICANCE AT HOME AND ABROAD, THE EXISTING FOUNDATION OF THE PROJECT, THE RESEARCH ACCUMULATION AND ACHIEVEMENTS RELATED TO THE PROJECT, THE EXISTING CONDITIONS, THE MISSING CONDITIONS AND METHODS, ETC.)“

Belt and Road As a global development strategy put forward by China, the " initiative aims to promote the process of globalization by strengthening economic cooperation among Asian, European and African countries, and especially plays an important role in promoting infrastructure construction, trade circulation and capital flow. Since 2013, more than 140 countries signed a cooperation agreement with China, this figure reflects the appeal of the initiative of the global trade statistics, from 2013 to 2020, China and the "Belt and Road" countries along the bilateral trade annual growth rate reached 19.2%, shows significant trade dependence and deep cooperation potential in third market cooperation provides a broad space, especially in the field of infrastructure construction and energy cooperation.

However, in addition to the cooperation between Chinese and foreign enterprises, the Belt and Road " initiative also plays a key role in enhancing trade facilitation and reducing barriers to transnational cooperation. For example, the free trade agreement between China and GCC countries (FTA) significantly improved the trade benefits of the Middle East and neighboring countries, by strengthening infrastructure and energy cooperation, promote the regional economic integration mode, especially China and Japan and other economies in the third market cooperation case, can find "Belt and Road" not only deepened the bilateral economic ties with countries along the line, also in a larger scope to promote the deepening of regional economic cooperation. This cooperation mode by optimizing the allocation of resources, enhance the market competitiveness of partner countries, further promote the development of economic quality goals in the analysis of the "Belt and Road" initiative, especially in China and other countries in the third party market cooperation mode, explore *how to improve cooperation through innovative cooperation performance, and realize the win-win economic benefit.*

## 1.1 Research status at home and abroad

### (1) Academic combing and research trends of relevant studies at home and abroad

With the in-depth implementation of the "Belt and Road" initiative, third-party market cooperation has gradually become a key area of international cooperation, and has attracted wide attention from scholars at home and abroad. Third-party market cooperation refers to the realization of mutual benefit and win-win cooperation mode by the state or enterprise while promoting their own economic interests, and carrying out joint development and investment in third-party countries. This cooperation model has achieved remarkable results in many fields, but due to the complexity and variability of the cooperation model, the related research is still in the stage of continuous development.

In China, scholars' research on third-party market cooperation mainly focuses on cooperation mechanism, risk management and economic effects. Zhang Fei and Li Hongtao (2020) pointed out that the cooperation in third-party markets is faced with the problems of imperfect coordination mechanism and unequal distribution of benefits, and stressed the establishment of an effective cooperation platform as soon as possible to solve these problems. Bi Shihong (2018) made an in-depth analysis of the cooperation between China and Japan in the third party of the market in the ASEAN region, and believed that the competition game caused by the overlap of key interests in the cooperation between the two countries is the main obstacle to the current cooperation, and it is urgent to break the deadlock by optimizing the cooperation mechanism. Zhang Fei and Wu Bochong (2020) further discussed the synergistic role of China and Japan in the cooperation in the third-party market, and proposed that the difficulties and challenges encountered by the long-term cooperation mechanism in the Vietnamese market. Other scholars analyzed the cases of third-party market cooperation in China, China and Germany, and discussed the advantages of combining middle and high-end manufacturing industry with advanced technology, but also faced with game problems such as prisoner's dilemma in the cooperation of small and medium-sized enterprises.

Internationally, the research on the third-party market cooperation mostly focuses on the quantitative analysis of the cooperation mode and economic effects. Robert Keohane And Joseph Nye (2020) proposed that countries should establish

international institutions to reduce uncertainty and form consensus to achieve common interests. Dunford (2020) made a comparison of Chinese and Western cooperation models, pointing out that although there are many similarities on the surface, China pays more attention to the principle of equality, reciprocity and common values, while the Western model originates from the experience of colonialism, so there are great differences in practice. Hedley Bull Emphasize that cooperation originates from common interests and common values. Barry J. Nalebuff and Adam M. Brandenburger believe that enterprises and the government will form industrial alliances due to the common goal of market development and promote the in-depth development of cooperation.

Under the framework of "Belt and Road", domestic and foreign scholars have also conducted a lot of research on the cooperation effect of Chinese and foreign enterprises in the third-party market. Dongkun Li, Xiaohong Chen and Paul Wohlfarth (2022), "area" initiative China's foreign direct investment provides momentum for global economic growth, multinational cooperation promotes the regional connectivity, but enterprises in overseas investment in addition to capital and technology considerations, also need to pay attention to the differences of national laws and standards, this constitutes the obstacle of investment rules.

#### *(2) Review of domestic and foreign research status and existing problems*

At present, the research on the third-party market cooperation under the "Belt and Road" initiative has achieved relatively rich results, especially in the discussion of the cooperation mode and the economic effect. However, the existing research still has the following shortcomings: First, most of the literature lacks specialized research on different cooperation modes, and fails to make an in-depth analysis of the mechanism of Chinese and foreign enterprises in the third-party market cooperation from the perspective of game, leading to the unclear specific path of the cooperation mode. Secondly, although existing studies have proposed the importance of cooperation mechanism, the lack of a systematic analysis framework of cooperation promotion mechanism, which makes the current research unable to deeply analyze the specific operation process and driving force of Chinese and foreign enterprises in the third-party market cooperation. Finally, although there are many cases of third-party market cooperation between Chinese and foreign enterprises in the existing studies, they fail to classify and systematically summarize these cases due to the differences in cooperation modes, so it is difficult to draw universally applicable cooperation models or successful experiences.

Therefore, it is still an urgent topic in the current research to deeply study the path of performance improvement of Chinese and foreign enterprises in the cooperation of third-party markets, explore appropriate cooperation mechanisms, and build a perfect cooperation model framework through quantitative analysis methods.

### *1.2 Research significance of the project*

#### *(1) Promote the realization of the strategic objectives of the Belt and Road Initiative*

Since its inception in 2013, the Belt and Road initiative has become an important platform for promoting global economic cooperation. By studying the cooperation mode of Chinese and foreign enterprises in the third-party market, this project can reveal how the cooperation mode innovation contributes to the strategic objectives of the "Belt and Road" initiative. In particular, in terms of improving regional economic integration, promoting infrastructure construction and promoting trade circulation, innovative cooperation models can provide effective economic growth drivers for China and countries along the "Belt and Road" belt and Road, so as to provide theoretical support and practical basis for economic cooperation and regional development in the "Belt and Road" initiative.

#### *(2) Enrich the theory of international economic cooperation*

At present, there is still a lack of research on cooperation between Chinese and foreign enterprises in the third market, especially under the framework of "Belt and Road" initiative, there are few theoretical studies on how to improve cooperation performance through cooperation mode innovation. Through the in-depth analysis of the cooperation mode of Chinese and foreign enterprises, this study will expand the theory of international economic cooperation, explore the innovative mechanism of multilateral cooperation and regional economic cooperation, and provide a new perspective and theoretical support for the subsequent research. Especially in the context of globalization and regional economic integration, the study of how Chinese and foreign enterprises can improve their performance through cooperation can not only enrich the theoretical system, but also provide valuable reference for policy makers.

#### *(3) Improve the competitiveness and cooperation efficiency of Chinese and foreign enterprises*

In the context of globalization, how to enhance the competitiveness and cooperation efficiency in the international market through innovative cooperation mode is an important topic. This study will explore how to effectively enhance the global competitiveness of Chinese and foreign enterprises through case analysis and the innovation of cooperation mode. The research not only focuses on the cooperation model itself, but also focuses on performance improvement, providing practical guidance for enterprises in the face of international competition pressure. By optimizing resource allocation and strengthening cooperation, this study can help to improve the market share and global development capacity of enterprises, and then promote the economic benefits of countries along the "Belt and Road" routes.

#### *(4) Promote regional economic integration and sustainable development*

The Belt and Road " initiative is not only a strategy to promote global trade and investment, but also an important means of promoting regional economic integration. By studying the cooperation between Chinese and foreign enterprises in the third-party markets, this study can discuss how to promote the development of regional economic integration through innovative cooperation mode, and then realize the sustainability of transnational economic cooperation. With the joint focus on environmental protection, social responsibility, this study will explore how to integrate the

concept of sustainable development into the cooperation model to help the cooperative countries achieve a higher level of sustainable economic and social development.

### 1.3 Existing conditions and relevant accumulation

Under the initiative of "Belt and Road", this project has accumulated certain conditions and accumulation in the cooperation mode innovation and performance improvement of Chinese and foreign enterprises in the third-party market, which can provide a solid foundation for the smooth development of the project. It is specifically divided into the following two parts:

#### 1.3.1 Conditions already met

##### (1) Resource conditions

This study was supported by sufficient resources, including data resources, literature data and research platform. First, the research team has obtained a lot of domestic and international data on the Belt and Road initiative, including bilateral trade volume, investment flows, cooperation projects and economic growth data between China and the countries along the Belt and Road Initiative between 2013 and 2020. According to the UN Commodity Trade Statistics, since the Belt and Road initiative was put forward, China's investment in countries along the Belt and Road route has grown at an average annual rate of 25.2%, and the flow of outbound direct investment in 2020 reached 57 times that of 2002. In addition, the team also used economic statistics released by various governments, such as the annual reports of the World Bank and the International Monetary Fund, to further support the data analysis and provide detailed economic development background information for the research. The team also obtained specific case data of enterprise cooperation through domestic and foreign databases and surveys, including investment and project implementation in infrastructure construction, energy cooperation and other fields. The above data provide a basis for analyzing the cooperation effect and performance improvement of Chinese and foreign enterprises in the third-party market.

##### (2) Team conditions

The project team is composed of interdisciplinary scholars, covering many fields of economics, international trade, business management and data analysis, and has rich experience in theoretical research and empirical analysis. Team members have participated in the "Belt and Road" related research for many times, especially in the multinational enterprise cooperation, regional economic cooperation and other aspects of the accumulated solid theoretical knowledge and research experience. Members have published many relevant papers in domestic and foreign academic journals, and exchanged and discussed in many academic conferences at home and abroad. These academic accumulation has provided solid support for the theoretical framework and analytical method of this project. At the same time, the team has strong data processing and analysis capabilities, and can efficiently collect, organize and analyze large amounts of economic data to ensure the scientificity and accuracy of the research results.

##### (3) Related cases

domain	domain	domain
successful case	successful case	successful case
Failure cases	Failure cases	Failure cases
infrastructure construction	infrastructure construction	infrastructure construction
CCB cooperates with the Kazakh government to build large-scale infrastructure projects in Kazakhstan to promote regional economic cooperation and development	CCB cooperates with the Kazakh government to build large-scale infrastructure projects in Kazakhstan to promote regional economic cooperation and development	CCB cooperates with the Kazakh government to build large-scale infrastructure projects in Kazakhstan to promote regional economic cooperation and development
CSCC's infrastructure project in Nepal has been delayed due to local political instability	CSCC's infrastructure project in Nepal has been delayed due to local political instability	CSCC's infrastructure project in Nepal has been delayed due to local political instability

#### 1.3.2 Accumulation of research related to this project

##### (1) Accumulation of theoretical research

The team has accumulated rich theoretical research in the "Belt and Road" initiative and the cooperation mode between Chinese and foreign enterprises. In recent years, the team has achieved some academic research results in the theory of "third-party market cooperation", international economic cooperation mode, transnational investment performance and other aspects. According to the team's research results, China's investment and cooperation along the Belt and Road route has created economic benefits of more than US \$1 trillion for countries along the routes between 2013 and 2019. In addition, the team also published a number of papers on enterprise cooperation under the "Belt and Road" initiative in domestic and foreign academic journals, put forward a variety of theoretical models on the cooperation mode of Chinese and foreign enterprises, and analyzed the economic benefits of enterprise cooperation mode innovation through empirical data.

##### (2) Accumulation of empirical research

The team has also made some progress in the empirical research, especially in the evaluation and performance analysis of the benefits of enterprise cooperation under the "Belt and Road" initiative. The team has analyzed the cooperation cases of Chinese enterprises in the regions along the "Belt and Road" route from 2013 to 2018, and discussed the actual benefits of Chinese and foreign enterprises in the cooperation. According to the Ministry of Finance and the China Development Bank, Chinese companies' returns on Belt and Road projects reached 11.5 percent in 2019, higher than the global average. These empirical findings provide data support and theoretical basis for the performance evaluation and cooperation model innovation of this project.

##### (3) Accumulation of policy research

The team also conducted policy research on the "Belt and Road" initiative, particularly in policy development and collaborative model innovation. Through the policy analysis of the implementation effect of the "Belt and Road" initiative, the team provided governments and enterprises with strategic suggestions to implement investment and cooperation in countries along the "Belt and Road". According to the Development Research Center of The State Council, China and its partner countries along the Belt and Road routes have

significantly improved in policy alignment, especially in policy support in areas such as infrastructure construction and energy development, which has greatly enhanced the feasibility and economic benefits of cooperation. These studies provide policy-level support for this project and help us better understand the policy environment and impact of implementing Chinese-foreign enterprise cooperation in different countries and regions.

#### *1.4 Still missing conditions and methods*

##### (1) Timeliness and completeness of the data

Despite some data support, the data of some cooperative projects under the Belt and Road initiative still lack timeliness and integrity. Further refinement of the collection of long-term follow-up data is needed to ensure a comprehensive assessment of the cooperation model.

##### (2) Insufficient cooperation cases of multinational enterprises

At present, the relevant multinational enterprise cooperation cases are still limited, especially in the field of third-party market cooperation along the "Belt and Road", the richness and diversity of actual cases need to be further strengthened.

##### (3) Refinement of the quantitative analysis methods

Existing analysis methods are more general, and more refined quantitative analysis tools, such as structural equation model and multi-level regression analysis, are needed to better reveal the relationship between cooperation patterns and performance.

##### (4) In-depth analysis of the policy environment

It is necessary to further strengthen the in-depth analysis of the policy environment of different countries along the Belt and Road route, especially the research on how to deal with the differences in political risks and legal environment.

#### *2.1 Main research objectives of the project*

This project aims to deeply explore the innovation of cooperation mode and performance improvement of Chinese and foreign enterprises in the third-party market under the "Belt and Road" initiative. The specific research objectives include the following four aspects:

##### (1) Analyze the cooperation mode innovation of Chinese and foreign enterprises in the third-party market

Through the analysis of cooperation cases in different countries and regions, how Chinese and foreign enterprises can enhance their market competitiveness through innovative cooperation mode under the framework of the "Belt and Road" initiative is studied. This objective will focus on exploring the diversity of enterprise cooperation methods, including transnational investment, technical cooperation, market expansion, etc., and propose cooperation models to meet the needs of different regions and industries.

##### (2) Evaluation the role of cooperation mode in improving enterprise performance

This objective aims to evaluate the specific impact of different cooperation modes on the economic benefits and competitiveness of Chinese and foreign enterprises in the third-party market through empirical analysis. By collecting and analyzing relevant data, especially the return on investment, market share and enterprise growth and other indicators, the

actual effects of different cooperation models are quantitatively evaluated.

##### (3) Explore the impact of the policy environment on the cooperation model

To study how the policy environment of the countries along the "Belt and Road" belt and Road affects the cooperation mode of Chinese and foreign enterprises. Through the comparative analysis of policies, laws and economic environment, we will explore how factors such as government support policies, market access conditions and risk management mechanism can play a role in different countries.

##### (4) Put forward policy suggestions on optimizing the cooperation mode and improving the performance

Based on the research results, the policy suggestions are put forward to optimize the cooperation mode between Chinese and foreign enterprises under the "Belt and Road" initiative, especially in the aspects of promoting enterprise cooperation, reducing the risk of transnational investment and improving the efficiency of cooperation, so as to help enterprises and the government to make better the cooperation strategies.

#### *2.2 Main research contents of the project*

The project aims to study the cooperation model innovation and performance improvement of Chinese and foreign enterprises in the third-party market under the "Belt and Road" initiative, and to analyze and optimize the cooperation model. The tripartite evolutionary game model can deeply analyze the interaction between the participants (government, enterprises and partners) in the multi-party game, and discuss how to achieve a mutually beneficial and win-win cooperation mode under the coexistence of cooperation and competition. The specific research content includes the following four aspects:

##### *Content 1: Construct a three-party evolutionary game model*

This content will focus on building a cooperation model framework based on the tripartite evolutionary game. The model includes three main participants: Chinese and foreign enterprises, governments and third-party market partners. In this model, the strategy selection, game process and its evolutionary trend of different participants are analyzed. Specifically, it includes how Chinese and foreign enterprises find the optimal cooperation strategy in competition and cooperation; how the government influences the cooperation decision of enterprises through policy incentives or restrictions; and how the behavior of the third-party market partners affects the whole cooperation situation and the game results of all parties. Through the game model, we will be able to reveal the decision-making mechanism of each participant in the tripartite game and its long-term evolutionary impact on the cooperation mode.

##### *Content 2: Analyze the stability and evolution of the cooperation mode*

Using the tripartite evolutionary game model, we analyze the stability of Chinese and foreign enterprise cooperation mode in the dynamic game, especially the long-term evolution trend of cooperation strategy and competitive strategy. By simulating the strategy selection under different game

conditions, evaluate the durability and sustainability of the cooperation mode, and discuss the following issues: whether the enterprise tends to long-term cooperation under different policy environments, or chooses the mode of cooperation and competition under competitive pressure; the influence of different economic conditions, market size, technical requirements and other factors on the stability of the cooperation mode; how to maintain the long-term effectiveness of the cooperation mode by adjusting the game process through policy regulation.

*Content 3: Explore the impact of the policy on the three-party game*

The study will further explore how the government plays a key role in the tripartite game and influences the game process through policy incentives, market access, legal framework and other means. The behavior and policy guidance of the government will directly affect the decision-making of enterprises, so the role of policy in the innovation of cooperation mode is crucial. The specific contents include: how the government guides enterprise cooperation through tax incentives, investment protection, technology transfer, etc.; how the differences in policies of different countries or regions affect the equilibrium of the tripartite game; and how the government balances market demand and policy regulation to ensure the sustainability of cooperation modes in different countries. In this part, the game model will be used to simulate the policy effect to evaluate the impact of the policy on the enterprise behavior and the overall cooperation model. Figure 1.

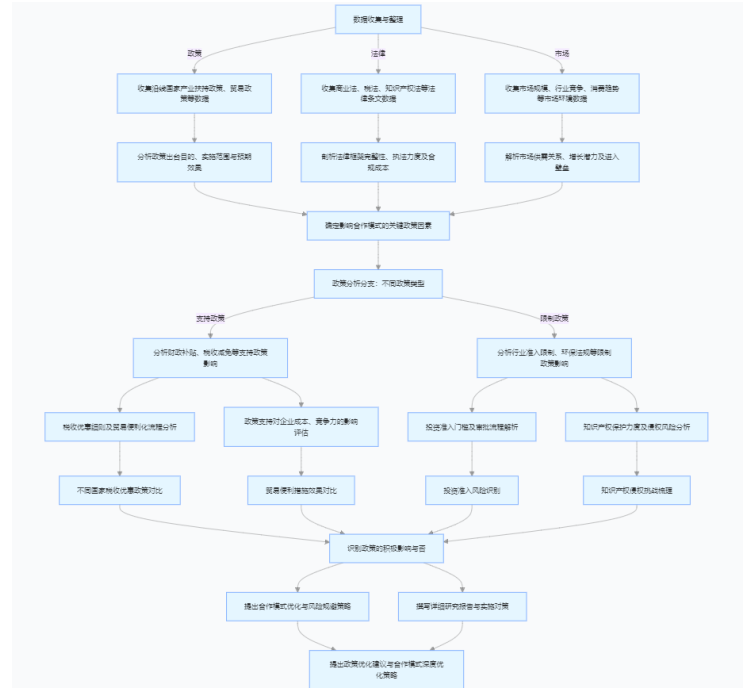
*Content 4: Strategies and suggestions to optimize the cooperation mode*

Based on the results of the three-party evolutionary game model, the paper are put forward to optimize the cooperation mode between Chinese and foreign enterprises under the framework of "Belt and Road". Focus on how to help enterprises, partners and the government to achieve the optimal cooperation benefits in the tripartite game through the game strategy selection. The specific contents include: proposing the cooperation mode adapted to different market demands and optimizing the strategy through the game model; based on the analysis results of evolutionary game, proposing policy adjustment and innovation suggestions to help the government create a better cooperation environment for enterprises; optimizing the resource allocation and risk sharing mechanism in cooperation to ensure the balance of interests of all parties.

### 3. Overview of the project innovation features

This project mainly studies the innovation of cooperation mode and performance improvement of Chinese and foreign enterprises in the third-party market under the initiative of "Belt and Road", especially through the three-party evolution game model, analyzes and proposes the innovation path to promote the cooperation between Chinese and foreign enterprises, and explores the optimization mode of cooperation mode in theory and practice. Through the three-party evolutionary game model, the project can deeply analyze the interaction between different participants (Chinese and foreign enterprises, governments, and partners), reveal the key factors in the evolution process of the

cooperation mode, and provide feasible theoretical support and practical operation plan for the smooth implementation of the "Belt and Road" initiative. The innovation characteristics and innovations of this project are mainly reflected in the following aspects:



### 3.1 Project features

#### (1) Cooperation mode focusing on the third-party market

One of the features of this project is to focus on the cooperation mode innovation of Chinese and foreign enterprises in the third-party market, rather than the traditional bilateral cooperation mode. With the promotion of the "Belt and Road" initiative, more and more Chinese and foreign enterprises are looking for cooperation opportunities in the third-party markets. Through the tripartite evolutionary game model, studying how to innovate cooperation methods in these markets becomes the core of this project. The game model can reveal the complex interaction between enterprises, governments and third-party market partners, and help us to better understand how to promote the cooperation results and maximize the benefits of cooperation under the multi-party game.

#### (2) Multi-dimensional analysis of comprehensive policy, law and market environment

This project will analyze the far-reaching impact of the policy environment, legal framework and market conditions of different countries along the Belt and Road " route on the cooperation mode of Chinese and foreign enterprises through the three-way evolutionary game model. The policy and legal environment of different countries may play an important role in regulating the cooperative game, so analyzing how these factors affect the outcome of the game is one of the important features of this project. By incorporating multi-dimensional factors such as policy, law and market environment into the

game model, more targeted optimization strategies can be put forward to provide a more scientific cooperation path for Chinese and foreign enterprises. .

### 3.2 Innovation

#### (1) Innovative cooperation mode is proposed

This project summarizes and compares the existing cooperation mode of Chinese and foreign enterprises in the third-party market, and puts forward an innovative cooperation mode. Using the three-way evolutionary game model, the project will analyze the game behavior of different participants (Chinese and foreign enterprises, governments, and third-party partners) in the cooperation and competition environment. The game model will help reveal how Chinese and foreign enterprises share resources, risk and benefit in the third-party market, and then form a new cooperation mode. These innovative models not only take into account the traditional cooperation methods such as technology transfer, resource integration and risk sharing, but also pay special attention to how to achieve the best cooperation strategy in the case of multi-party game.

#### (2) Application of the three-way evolutionary game model

Another innovation of this project is to introduce the three-party evolutionary game model into the analysis of the

cooperation mode between Chinese and foreign enterprises. Through the analysis of game theory, the project can systematically study how Chinese and foreign enterprises, governments and third-party market partners make strategic choice and game in the process of cooperation. The model can reveal how the parties influence each other and adjust their strategies in the long-term game, so as to promote the innovation and optimization of the cooperation mode. The introduction of the tripartite game model makes the research of this project have stronger theoretical depth and practice, and provides a scientific decision-making basis for the actual cooperation of multinational enterprises. Through the application of the tripartite evolutionary game model, this project has a unique innovation in the cooperative mode innovation. The model can not only help analyze and optimize the cooperation mode, but also provide more effective policy suggestions through in-depth game analysis, so as to promote Chinese and foreign enterprises to achieve long-term, stable and mutually beneficial cooperative relationship under the "Belt and Road" initiative.

#### 4. Technical route of the project research (see Figure 2)

