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Key success factors of strategic transformation for Sino-French cooperation in the development of third-party markets in Africa

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KEY SUCCESS FACTORS OF STRATEGIC TRANSFORMATION FOR SINO-FRENCH COOPERATIONN IN THE DEVELOPMENT OF THIRD-PARTY MARKETS IN AFRICA

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SINGAPORE MANAGEMENT UNIVERSITY

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Key Success Factors of Strategic Transformation for Sino-French Cooperation in the Development of Third-party Markets in Africa

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2024

I hereby declare that this dissertation is my original work and it has been written by me in its entirety.
I have duly acknowledged all the sources of information which have been used in this dissertation.

This dissertation has also not been submitted for any degree in any university previously.

Wang, Bin

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Abstract

The most popular form of third-party market cooperation is an innovative international economic and trade cooperation model initiated by China under the context of the “Belt and Road” initiative nowadays. Although China and France, as non-state actors, have actively promoted trilateral cooperation and improved various agreements, the trilateral countries have not achieved effective resource complementarity due to differences in political and economic systems and goals, resulting in high complexity in the cooperation process.

Therefore, the research topic of this study is dedicated to addressing this pain point and assisting Chinese enterprises in leveraging third-party markets to expand overseas business under the context of the “Belt and Road” initiative. This article conducts an in-depth study of the case of the Gwadar Port, starting from the perspectives of resource view and resource dependence. It analyzes the investment model, project risks, and solutions of trilateral cooperation based on a single case. In response to the pain points such as talent shortage, insufficient market demand, and geopolitical conflicts, detailed strategies are proposed with the aim of promoting effective cooperation in the trilateral market from its root causes.

Finally, this study summarizes the challenges and solutions for the sustainable development of trilateral cooperation. When facing the high complexity of

multi-party cooperation, it is necessary to establish and improve institutional mechanisms based on resource dependence as the foundation of third-party market cooperation. Feasibility studies should be strengthened, and based on complementary advantages, joint development of the African market should be pursued.

Keywords: Trilateral Public-Private Partnership, Resource Dependence Theory, Resource-based View, Overseas Trilateral Cooperation

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First, I would like to express my gratitude to the profesors and mates at Shanghai Jiao Tong University and Singapore Management University for their guidance, assistance, and care during my doctoral study and research.

Then, I want to thank my parents, wife, children, and friends for their selfless love, care, and support. I am deeply grateful for their presence in my life.

Having returned from numerous battles, I now return to my studies. I dedicate this doctoral thesis to the unforgettable experience of my doctoral education. I believe such experience will benefit me for life-long and bring endless possibilities.

May I always remember the path I have walked in my doctoral studies—the path adorned with sweat and brilliance, the path full of hardships and challenges. The path I have walked is my most precious treasure. Only by remembering these paths can I navigate the future and pave new roads.

I believe that the more paths a person walks and the higher their aspirations, the faster their talents will develop and the greater their contribution to society.

As the saying goes, “Read ten thousand books, travel ten thousand miles”. Let us encourage each other among the journey!

Chapter 1 Introduction

Although international trade is facing severe challenges such as protectionism, the spread of pandemics, and port congestion, China and African countries have stood together in unity, cooperating and overcoming difficulties. Overall, Sino-African economic and trade cooperation has remained stable, showcasing its strong resilience and tremendous potential. According to data from the Chinese Ministry of Commerce, bilateral trade between China and Africa reached $254.2 billion in 2021, an increase of 35% compared to the previous year. China has maintained its position as Africa's largest trading partner for 13 consecutive years. Meanwhile, despite the pandemic situation, Chinese investment in Africa has also grown against the trend. According to data from the Chinese Ministry of Commerce, China's direct investment in Africa across all sectors reached $2.59 billion from January to September 2021, a year-on-year increase of 9.9%, surpassing China's overall foreign investment growth rate by 3 percentage points and exceeding the level of the same period in 2019. China has become Africa's largest trading partner, the fourth largest source of investment, and an important development cooperation partner.

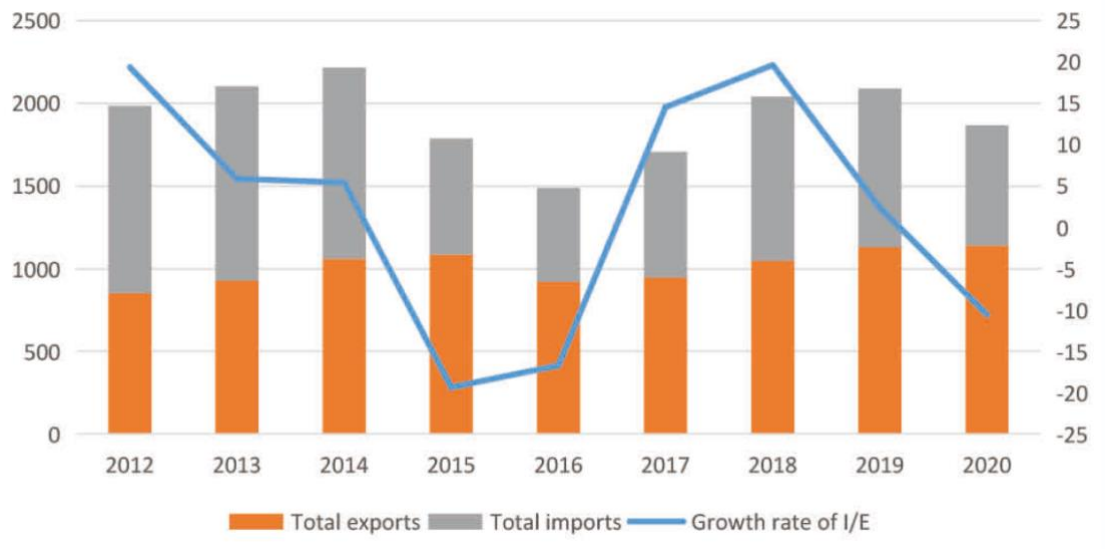


Figure 1-1 China-Africa Trade during 2012-2020 (Unit: USD100 million, %)[1]

[1] Source: China Customs statistics by year

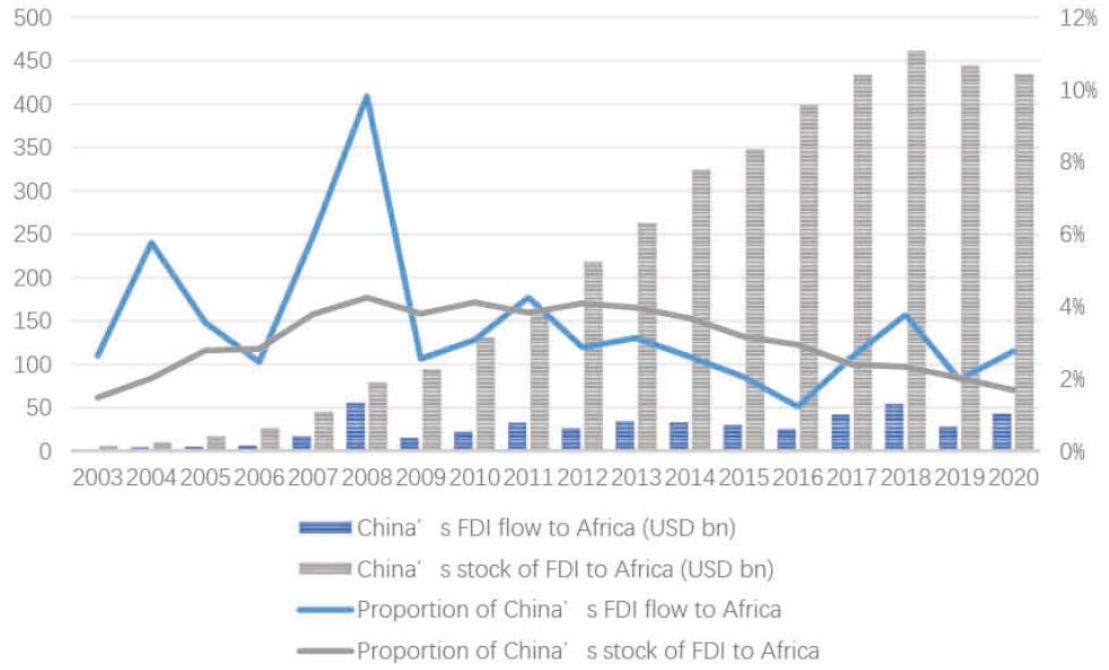


Figure 1-2 China's Direct Investment in Africa 2003-2020[2]

The gradual progress of the "Belt and Road" initiative and the increasing trend of Chinese companies actively going global have also contributed to the growth of overseas contracting business. The value of newly signed construction contracts by Chinese companies in Africa reached $53.5 billion, with a turnover of $26.9 billion, representing a year-on-year increase of 22.2% and 11.6% respectively. This demonstrates the confidence of Chinese companies in the prospects of the African market. Despite facing various challenges, the continuous growth of trade and investment relations between China and Africa reflects the strong momentum of economic cooperation between the two.

[2] Source: National Bureau of Statisics. Statistical Bulletin of China's Outward Foreign Direct Investment (by year)

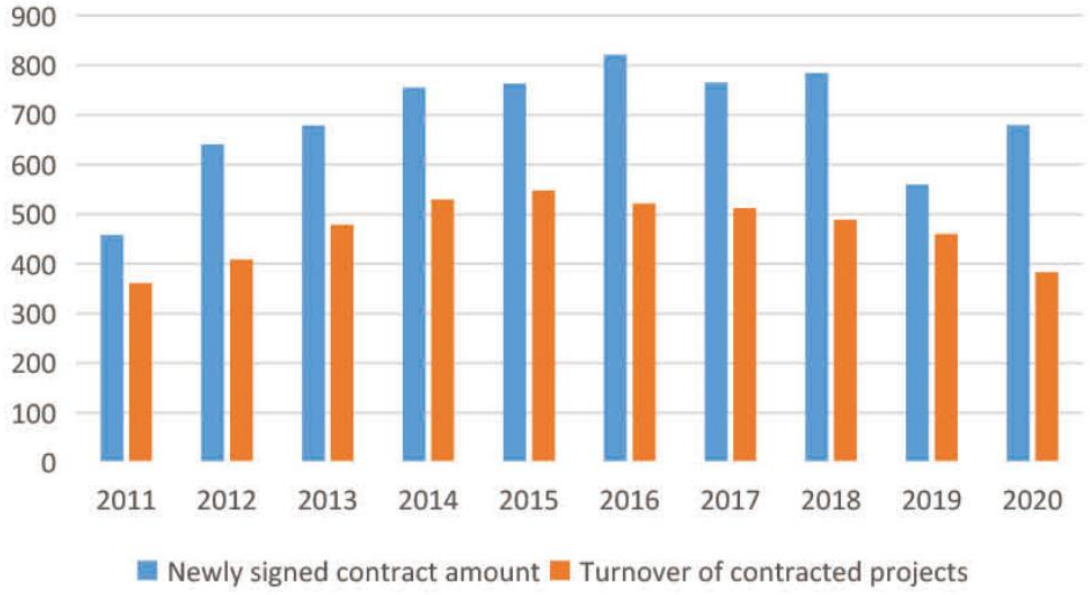


Figure 1-3 China's Project Contracting in Africa 2011-2020 (Unit: USD100 million)[3]

In fact, bilateral cooperation between China and Africa began shortly after the founding of the People's Republic of China. However, due to restrictions imposed by Western capitalist countries, led by the United States, China faced limitations in expanding its diplomatic relations. It was not until the convening of the Asian-African Conference in 1955 that China made a breakthrough in its official diplomatic engagement with African countries. Among them, the establishment of diplomatic relations between China and Egypt was the most significant event during this period. It marked the shift in China-Africa relations from informal channels to official and formal exchanges between sovereign states. During the 1960s and 1970s, China's bilateral policy towards Africa was primarily focused on political support. China established diplomatic relations with 25 African countries and provided unconditional economic assistance to many of them. The iconic project during this period was the construction of the TAZARA Railway connecting Tanzania and Zambia.

[3] Source: Data of MOFCOM and CEInet Statistics Database

Starting from the 1970s, with the implementation of China's reform and opening-up policy and a shift in its priorities, China gradually shifted its policy towards Africa to emphasize economic and trade cooperation. China's assistance policy towards Africa also transitioned from unconditional aid and construction projects to strengthening cooperation in trade and infrastructure development. In the 1980s, China's labor cooperation and contracting projects in Africa exceeded $2.5 billion in turnover. The establishment of the Forum on China-Africa Cooperation (FOCAC) in 2000 marked a new stage in China-Africa relations, characterized by institutionalized cooperation. The triennial FOCAC mechanism effectively promotes and ensures the comprehensive development of China-Africa relations. Unlike the past focus on political exchanges or economic and trade cooperation, in the new era, China-Africa exchanges have become more extensive, covering various aspects such as the economy, culture, society, and education. Bilateral relations between China and Africa have expanded from a single cooperation area to multi-sectoral collaboration, further promoting mutually beneficial cooperation between the two sides.

In summary, China-Africa relations have gone through four stages: initial diplomatic engagement, unconditional assistance to Africa, bilateral economic and trade cooperation, and institutionalized cooperation. These stages have gradually formed a strong and stable international strategic partnership. Especially with the promotion of the Forum on China-Africa Cooperation (FOCAC), China has become the fourth largest source of investment in Africa. According to "The Investment of Chinese Enterprises in Africa" released by the China-Africa Industrial and Commercial Council, since 2000, the annual average growth rate of Chinese enterprises' direct investment in Africa has exceeded 25%, making it an important force driving inclusive economic development in Africa. As the scale of China-Africa economic cooperation continues to expand, the investment cooperation model between China and Africa has undergone profound changes, which can be summarized into three stages: resource-credit-project stage,

government-led “EPC+F” project stage, and the current mainstream PPP model. These models have promoted the continuous development of China-Africa cooperation from a focus on trade and contracting projects to areas such as capacity-building, investment, technology, finance, and services. The following analysis will provide a detailed examination of the formation, impact, and challenges faced by these cooperation models in each of the three stages.

In the “resource-credit-project” cooperation model, the focus is on collaborating in large-scale infrastructure and resource exploration projects. China aims to ensure diversified imports of raw materials and promote Chinese enterprises’ entry into foreign contracting markets through the implementation of the “Going Global” strategy. Meanwhile, economically disadvantaged African countries need funds to develop their own natural resources and create domestic wealth. Therefore, a model has emerged in which China provides financing and technological development, while the cooperating party provides certain resources and investment interests as collateral or directly uses part of the resources or project’s revenue to repay the loan. This model is primarily applied in resource-rich countries and has achieved good results in Angola, earning it the nickname “Angola Model”.

The formal adoption of the “Angola Model” began in 2003, facilitating mutually beneficial and win-win economic and trade cooperation between China and Angola while reducing investment risks. During the ten-year period from 2003, the total trade volume between China and Angola expanded 15 times, and China’s direct investment in Angola increased from $300,000 in 2003 to $400 million in 2011. Furthermore, driven by cooperation in the oil sector, China made significant progress in engineering and construction contracts in Angola. Angola also became China’s second-largest supplier of crude oil, following only Saudi Arabia. From 2004 to 2008, Angola achieved an average annual economic growth rate of 17.8%, making it the fastest-

growing economy in Africa and one of the fastest in the world. The Angolan government highly praised the "Angola Model" and considered the favorable loan conditions provided by China as unique and unmatched.

However, the "Angola Model" faced severe challenges in 2014. Firstly, the international economic situation had a significant impact on commodity prices. In 2014, global commodity prices experienced a shock, with oil prices dropping from an initial $115 per barrel to $35 per barrel. This had a tremendous economic impact on many countries, including Angola, which heavily relied on oil as its main resource export, reducing their debt repayment capacity. Secondly, the lack of transparency in commodity trading provided opportunities for rent-seeking behavior. The sale price of oil in barter agreements was often settled on a spot basis, and the contracting process had irregularities, resulting in billions of dollars in losses for Chinese companies like Sinopec.

The "EPC+F" model refers to the Engineering, Procurement, and Construction (EPC) contractor providing financing services simultaneously. This model is a comprehensive service offered by engineering companies to consolidate and enhance their competitive advantage in EPC projects and ensure the availability of project funding. Essentially, large Chinese engineering companies still operate as EPC contractors. The Chinese government provides loans to African countries, with collateral initially being contributed natural resources (e.g., in Ghana) and expanding to sovereign guarantees (e.g., in Cameroon).

Currently, Chinese enterprises' overseas engineering markets, under the "Going Global" strategy, mainly focus on regions such as Africa, where infrastructure is relatively underdeveloped, development is relatively backward, and resources are abundant. The application of the "EPC+F" model not only allows Chinese large-scale engineering

companies to leverage their advanced technology, craftsmanship, and management capabilities, solving the problem of overcapacity in the domestic market, but also, with the support of national strategic policies, jointly addresses the challenge of insufficient funds for infrastructure projects in Africa through coordination with financial and insurance institutions.

However, this model, where projects are funded by the Chinese government and contracted by large Chinese engineering companies, hinders the sustainable development of the business. Firstly, there is a lack of open bidding in the contract signing process, and Chinese large-scale engineering companies often choose schemes with higher profits and lower risks, leading to a decrease in overall competitiveness. Secondly, as the funding comes from the Chinese government, Chinese engineering companies only focus on the economic feasibility of the construction phase. To ensure construction quality and brand influence, they often increase construction costs and lack opportunities for participating in high-value-added aspects. Lastly, due to strict policies from African countries, such as those related to funding, technical standards, safety, health and environment, and equipment usage, the "EPC+F" model is challenging to comply with and is difficult to apply in mature markets.

To address these issues, the China-Africa investment cooperation model has transitioned from the traditional "EPC+F" model to an "investment, construction, and operation integration" approach, also known as Public-Private Partnership (PPP). Overseas PPP projects refer to cases where foreign governments grant investment and the rights to construct or operate public facilities to Chinese multinational enterprises through contracts over a certain period. The enterprises independently undertake the full lifecycle of the projects, including project selection and bidding, investment and financing, risk control, construction, and long-term operation, while the Chinese government focuses more on cultural and educational fields.

This model represents the market-oriented manifestation of the “EPC+F” model, with the entire bidding process being transparent to ensure social oversight. Chinese large-scale engineering companies need to continuously improve their capabilities, cost estimation, and efficiency to maximize profits and independently control project risks. In suitable circumstances, the PPP model can mobilize more funds and financing sources for infrastructure projects. Throughout the project’s lifecycle, the interests of Chinese multinational enterprises can align with those of foreign governments. To achieve such alignment, the revenue of private operators can be linked to a series of pre-defined performance indicators, ensuring long-term and effective development.

However, many Chinese multinational enterprises are still hesitant to adopt the new PPP model. Firstly, under the PPP model, risks are transferred from the government to the contractor-investor. Contractors (Chinese multinational enterprises) must bear the risks themselves, needing to consider not only profitability during the construction phase but also future operating income over 20-30 years. However, many Chinese multinational enterprises currently lack the risk management capabilities required for such an approach. Additionally, higher demands for risk control arise due to political, policy, security, and currency issues overseas. Furthermore, Chinese multinational enterprises face a shortage of talent. They lack personnel proficient in international business negotiations, as well as expertise in international finance and project management, making it difficult for them to adapt to the requirements of investment transformation.

Table 1-1 Investment Cooperation Model between China and Africa (since 2000)

Mode	Stage	Participant	Pros (Compared with the previous)	Cons
Angola Model	Ⅰ: 2002-	Chinese government African government	Address financing challenges of Africa Ensure a stable oil channel of China	Investment trap Unsustainable investment
EPC+F	Ⅱ: 2006-	Chinese government African government Chinese companies	Strengthen infrastructure development of Africa Tackle overcapacity of China	Closed bidding, no competitiveness High operation cost
PPP	Ⅲ: 2013-	Chinese companies, Chinese government African government Multiple investment institution	Broaden financing channels Market bidding Consistent interests	Enterprises bear high risks

Over the years, the investment cooperation between China and Africa has developed various cooperation models that consider the actual needs of African countries, fully leverage China's advantages, and plan accordingly for different stages. However, it is important to note that these common cooperation models are not without flaws, especially in terms of sustained future development. They face challenges from multiple aspects, including Africa, China, and the international community, and the risks of investment and cooperation cannot be ignored.

Firstly, Western countries, especially led by France, have criticized and raised concerns about the China-Africa investment cooperation model. They believe that China's expansion in Africa's infrastructure construction and energy cooperation encroaches upon the energy interests of Western countries in Africa. Such accusations and criticism have put pressure on China-Africa cooperation. Secondly, the resources of all parties

have not been fully coordinated and aligned. The prices of African countries' primary commodities, such as oil, are greatly influenced by the international economic situation. If these commodities are used as collateral, the risks become significant. France has accumulated years of technology and project experience in African countries and is familiar with their policies, finances, and economic lifelines. China, on the other hand, has abundant funds, excess production capacity, and commodity supplies. However, under the common investment cooperation models mentioned above, these resources have not been effectively integrated, leading to intense competition between China and France.

In summary, China-Africa investment cooperation faces challenges from various parties. In order to address the resource dilemma, France, as Africa's traditional partner, has viewed China's rise in Africa as an opportunity to develop the local market and engage in "trilateral cooperation". However, this cooperation model faces a series of challenges, including pressure from Western countries and differences between China and France.

Particularly during François Hollande's term, France actively promoted triangular cooperation and proposed the cooperation model of "African needs, French supervision, and Chinese financing" in an attempt to regulate and guide China-Africa relations at the EU level through trilateral cooperation. However, this model put pressure on China, leading to a lower willingness for cooperation. In 2014, Premier Li Keqiang proposed exploring trilateral and multipartite cooperation based on the principles of "African needs, African consent, and African participation". However, due to France's emphasis on stability in the African region, corporate social responsibility, and environmental protection, while China focuses more on economic and trade cooperation, progress in trilateral cooperation has been slow.

In 2015, China and France signed a joint statement on third-party market cooperation, taking many measures to promote trilateral cooperation. Under the promotion of the "Belt and Road" initiative, China-France exchanges gradually became normalized. The non-triangular cooperation mechanism between China, France, and African countries has been continuously improved, forming a cooperation model based on African needs, French technology and business networks, Chinese financing, production capacity, and commodity supply. Third-party market cooperation is an open and inclusive international cooperation model that helps Chinese enterprises complement the strengths of other countries' enterprises, jointly promote the development of industries in third countries, improve infrastructure levels, and enhance people's livelihoods, achieving a synergy effect where 1+1+1>3.

However, due to a lack of trust, trilateral cooperation faces some obstacles. Firstly, Africa consists of 54 countries, while France is constrained by Europe and the OECD, with very little influence of the government over French private companies. This lack of trustworthiness is reflected in trilateral cooperation agreements signed between governments. Secondly, Chinese companies have a lower willingness to participate. Western countries hope that Chinese companies fulfill social responsibilities, comply with technical and environmental standards, and achieve financial sustainability, while China focuses more on gaining technology and management skills. Additionally, France faces challenges in providing sufficient financial support and is restricted by the Treaty of Maastricht of the European Union. The French savings bank branch, CDC IC, finds it difficult to jointly establish third-country investment funds with China's sovereign wealth fund, CIC Capital.

Therefore, to overcome these challenges, it is necessary to strengthen trust and understanding in China-France non-triangular cooperation, further address differences, and seek mechanisms for win-win cooperation. Meanwhile, Chinese companies can pay

more attention to social responsibility, technical standards, and environmental protection to enhance their willingness to cooperate with France and other Western countries. Furthermore, France can further study solutions to the limitations of financial support in order to better support the implementation of trilateral cooperation. With the joint efforts of all parties, China-France non-trilateral cooperation is expected to achieve better development.

Thus, this top-down cooperation model is difficult to implement. However, the Chinese government remains committed to promoting trilateral cooperation and encouraging Chinese companies to go global. The Chinese government first advocated expanding third-party market cooperation and incorporated it into the action agenda in the 2019 Government Work Report. Additionally, with the driving force of China's proposed "Belt and Road" initiative, China-Africa economic and trade relations have entered a new stage of capacity cooperation and the construction of a community of shared future. There have been five major changes: first, a more reasonable order of industrial investment, with priority given to developmental investments and large enterprises; second, the establishment of mechanisms to secure funding, including the Asian Infrastructure Investment Bank and the China-Africa Industrial Capacity Cooperation Fund; third, the integration of various domestic enterprises and resources, including state-owned enterprises leading in infrastructure, private enterprises following up with investments as infrastructure improves, and financial services supporting the construction of "Belt and Road"; fourth, a shift from individual companies going abroad to forming consortiums, primarily demonstrated in the construction of overseas economic and trade parks.

With the support of both governments, Chinese and French companies have attempted a bottom-up cooperation model. Cooperation projects have been redefined from a contractual perspective, focusing on economic cooperation projects in the third-party

market. The contract targets include cooperation between Chinese companies (including those in the financial sector) and relevant foreign companies in development, financing, investment, design, general contracting, and direct subcontracting. It excludes regular procurement of goods and services that occur only during project construction and logistics services, emphasizing the coordination between companies of the two countries. This top-down cooperation model operates according to the market logic of the local scale and encourages companies to go beyond traditional direct subcontracting, making way for new models of joint contracting, joint production, risk sharing, and joint financing. This new model has already been implemented in projects such as the Kribi Deepwater Port and the Congo-Brazzaville National Road No. 1.

From this, it can be seen that although China, France, and non-national parties have actively promoted trilateral cooperation and improved multiple agreements, due to differences in political and economic systems and objectives, the three countries have not achieved effective resource complementarity, and the implementation of actual projects has been few. Therefore, the research topic of this study aims to address this pain point and help Chinese enterprises leverage third-party markets to expand overseas business under the context of the Belt and Road Initiative. The study focuses on large Chinese engineering companies, French companies, and African countries as research subjects.

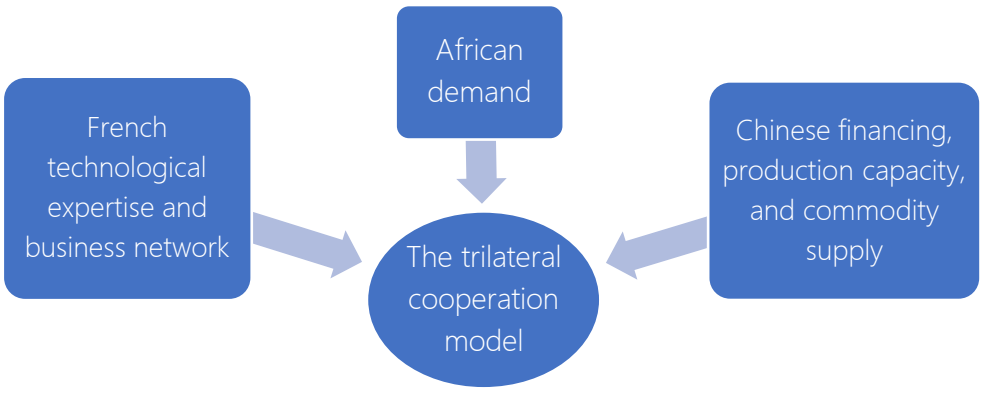


Figure 1-4 Trilateral PPP Model Based on RBV and RDT in Third-party Markets in Africa

Based on the based on the Resource-based View (RBV) and Resource Dependency Theory (RDT), this paper considers the technology and talent resources of French companies as integrable external resources, combined with the equipment, funds, and materials of Chinese multinational enterprises, to form a mutually beneficial and strong alliance for third-party market cooperation. Together, they can promote the development of industries in third countries, improve infrastructure levels, and enhance people's livelihoods, achieving a synergistic effect where 1+1+1>3. For Chinese engineering companies, the strategic transformation to an investment model has become a consensus in the overseas contracting market. To address the challenges involved, we choose to cooperate with foreign companies, including leading domestic companies in developed countries, using the Public-Private Partnership (PPP) scheme. Considering geopolitical and macroeconomic factors, we choose France as the target partner for cooperation.

This article adopts a case study approach to address the research question. We have conducted a study on the current China-France-Nigeria trilateral cooperation in the form of a PPP project - the Kribi Deepwater Port. Based on our findings, we provide recommendations for the strategic and managerial aspects of the China-France-Nigeria project.

Chapter 2 Literature Review

The literature review will begin by examining the characteristics of China's aid to Africa, followed by an exploration of the financing-included contracting model and the resource-based theory.

2.1 The Characteristics of China's Aid to Africa

According to the summary provided in the 2011 White Paper on China's Foreign Aid, the characteristics of China's foreign aid can be summarized as follows: adherence to equality and mutual benefit, emphasis on effectiveness, keeping pace with the times, and not attaching any political conditions. This has led to the formation of a unique model. Since the establishment of the People's Republic of China, China's aid to Africa has gradually adopted the concept of "aid + development". The aim is to achieve the common development goals of both the providing and recipient countries through development-oriented aid (Mlambo et al., 2016). The characteristics of China's foreign aid can be summarized as follows,

- Adherence to equality and mutual benefit: China's foreign aid emphasizes the principles of equality, mutual benefit, effectiveness, and keeping pace with the times. It does not attach any political conditions. China believes that African countries can independently choose development paths suitable for their own national conditions and avoids interfering in the internal affairs of recipient countries.
- Aid, investment, and trade packaged together: China's aid to Africa is often packaged together with investment and trade. It is difficult to distinguish between aid projects and commercial projects. This packaged approach has led to the rapid growth of China's trade and investment with Africa (Adisu et al., 2010).
- Placed within the framework of South-South cooperation: China places its aid to Africa within the framework of South-South cooperation, aiming to demonstrate an equal relationship between the two parties and emphasizing that this

relationship is mutually beneficial. This cooperative nature of aid provides recipient countries with greater autonomy and the ability to have more choices in addressing domestic development issues.

These characteristics highlight the differences between China's aid to Africa and traditional aid from Western countries (X. Wang et al., 2014). China's aid policy to Africa emphasizes equality, mutual benefit, and effectiveness, without attaching political conditions. It is packaged with investment and trade. Additionally, China places its aid within the framework of South-South cooperation, emphasizing the equal relationship and spirit of cooperation between China and African countries (Sautman & Hairong, 2007). This unique model of development-oriented aid provides new choices and opportunities for cooperation between China and African countries(Adisu et al., 2010; Ajakaiye, 2006; Kaplinsky et al., 2010; Mawdsley, 2007).

In terms of specific aid modalities, China's aid to Africa includes the "Angola model", economic and trade cooperation zones, aid cooperation models, engineering assistance combined with investment and development models, and agricultural investment cooperation models. For the purpose of this study focusing on engineering enterprises, the "Angola model" will be the main focus.

2.2 The "Angola model"

The "Angola Model" is a comprehensive cooperation model that combines resources, credit, and projects (Yao, 2013). It refers to the approach where China provides financial support for large-scale infrastructure projects, and the recipient country guarantees the loan with certain resources or investment rights, or uses a portion of the resources or project profits to repay the loan. This innovative financing model not only addresses the financing difficulties faced by the recipient country but also alleviates concerns about loan security for the aid-providing country. Additionally, it closely

aligns with China's national strategy and the "Going Global" strategy (Kragelund, 2009). The successful implementation of the "Angola Model" in resource-rich countries like Angola has gained widespread attention within Africa and the international community, making it a new highlight in China-Africa economic cooperation, thus earning its name as the "Angola Model".

2.2.1 Background of the "Angola Model"

Funding is a major challenge for African countries' development. Angola experienced a 27-year-long civil war that severely damaged its domestic infrastructure, resulting in a significant economic setback. According to World Bank data, Angola's GDP was only 6.804 billion US dollars, with exports of only 2.4 billion US dollars and a per capita GDP of 750 US dollars in 1985. By 2001, Angola's GDP had only increased to 8.936 billion US dollars, with a per capita GDP decrease to 621 US dollars, experiencing years of severe negative growth. While most countries achieved rapid economic growth under the backdrop of globalization in the early 21st century, Angola and other African countries were unable to participate in the global division of labor due to factors such as civil wars, resulting in significant economic lag.

In such an economic situation, Angola was in urgent need of funds for post-war reconstruction. However, international institutions such as the World Bank and Western countries often attached stringent conditions to loans provided to Angola, such as the requirement to adopt a democratic political system, which was impractical for Angola at the time. Therefore, like many other Third World countries, Angola was unable to obtain loans due to its inability to meet or accept the assistance conditions imposed by Western countries. It was at this time that China extended its helping hand and actively responded to Angola's request for assistance (Mensah, 2010). China not only provided substantial funds for Angola's post-war reconstruction but also initiated a foreign aid

model of “infrastructure in exchange for resources”, which became known as the “Angola Model”.

On the other hand, China’s rapid economic development had accumulated a significant amount of foreign exchange reserves. According to data from the People’s Bank of China, before the start of economic reforms in 1978, China’s foreign exchange reserves were only 167 million US dollars, and it did not exceed 5 billion US dollars until 1988. With the development of the Chinese economy in the 1990s, China’s foreign exchange reserves exceeded 100 billion US dollars for the first time in 1996 and began to grow rapidly. By 2006, China’s foreign exchange reserves surpassed Japan, reaching 1 trillion US dollars, and exceeded 2 trillion US dollars in 2009, accounting for about one-third of the world’s total foreign exchange reserves. By the end of 2013, China’s foreign exchange reserves had reached nearly 4 trillion US dollars, totaling 3.82 trillion US dollars. As foreign exchange reserves continued to grow, issues related to management and other aspects became increasingly prominent, making it necessary to invest a substantial amount of foreign exchange reserves in overseas markets to pursue higher returns. Therefore, considering China’s own development perspective and Angola’s abundant energy reserves, the foundation was laid for China’s massive assistance to Angola.

Clearly, the formation of this model was premised on Angola’s oil production. China’s rapidly developing economy urgently required natural resources such as oil and minerals, while domestic resources were relatively scarce, and energy security issues became increasingly severe for China. The instability in the Middle East and competition among major powers also increased the risks (Breslin, 2011). With continuously increasing proven oil reserves, Africa has become one of the globally significant oil-producing regions outside the Middle East. In recent years, an increasing number of emerging and traditional powers have turned their attention to Africa. For

China, seeking energy and resources to support its rapid domestic economic development was an inevitable choice in Africa (Taylor, 2006).

In 2004, the Export-Import Bank of China and the Angolan Ministry of Finance signed a loan framework agreement and a large-scale infrastructure cooperation agreement totaling 2 billion US dollars. These loans were entirely used for Chinese companies to export products or undertake engineering projects in Angola. At the same time, the Angolan government signed a long-term oil supply agreement with Chinese oil companies, using the income from crude oil exports to China as a guarantee for the loans. This aid model of "infrastructure in exchange for resources" not only addressed the financing difficulties faced by developing countries like Angola but also resolved the loan security concerns for China as an aid-providing country, propelling China-Angola cooperation into a rapid development stage.

2.2.2 The Connotation and Characteristics of the "Angola Model"

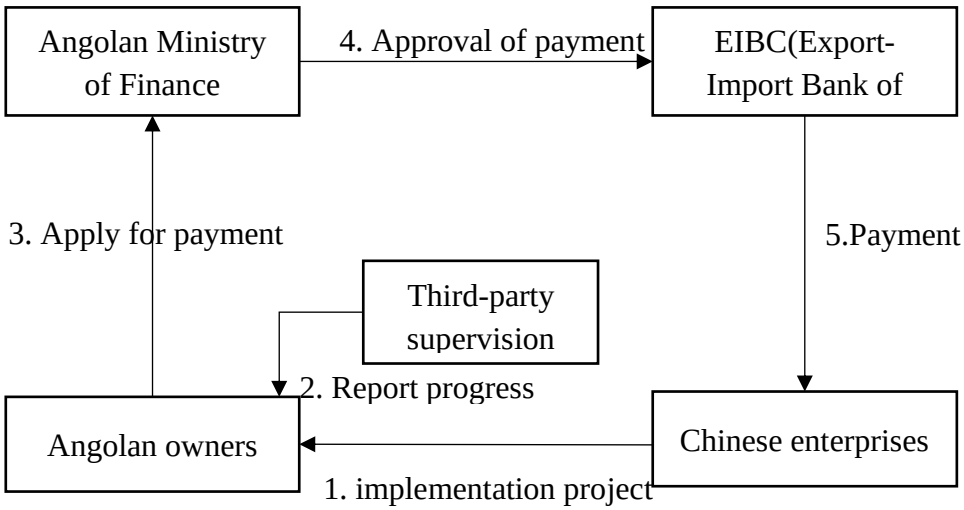


Figure 2-1 Capital Flow and Business Flow of "Angola Model"

During the funding agreement stage, the Angolan government submits a loan application to the Export-Import Bank of China (China Exim Bank). The Ministry of Commerce evaluates the application and, upon approval, signs a framework agreement with the Angolan government. Based on this framework agreement, the Angolan government and China Exim Bank sign project loan agreements. Subsequently, the Chinese contractors' association for foreign trade and economic cooperation selects a portion of contractors to participate in the bidding process in Angola. Finally, the Angolan government selects Chinese contractors through the bidding process to implement infrastructure construction and signs commercial contracts with them.

During the project implementation stage, the awarded Chinese contractors are responsible for executing the project. When a certain level of project progress is achieved, a third-party supervision institution reports on the progress of the construction. The progress report is submitted to the Angolan government, who then submits payment requests. Once the payment is approved by the Angolan government, they make a payment application to China Exim Bank, which then directly disburses the funds to the Chinese contractors.

During the repayment stage, the Angolan government provides Chinese petroleum companies with the market price for 10,000 barrels of crude oil per day and grants priority extraction rights to Chinese petroleum companies. Chinese petroleum companies use these resources to repay the loans from China Exim Bank.

In Chinese assistance to Angola, Chinese companies participate in project construction through competitive bidding. For example, China Road and Bridge Corporation and other enterprises have undertaken many significant infrastructure projects in Angola. Among them, the Luanda International Airport is the largest inland airport in Angola, designed and built by Chinese companies, covering an area of 1.51 million square

meters with a runway length of 2,600 meters. Additionally, there are projects such as the Benguela Railway, Lobito Station, and Kwanza River Bridge. China National Machinery Import and Export Corporation provided a large number of equipment for these projects, such as fishing boats and coast guard vessels.

As of 2010, China had provided over $4.5 billion in loan assistance to Angola, supporting post-war reconstruction and economic development. Over 50 large state-owned enterprises and nearly 500 private enterprises from China participated in Angola's reconstruction process, covering infrastructure construction such as railways, highways, ports, airports, schools, large-scale housing projects, water and power supply, telecommunications, and energy. They have made contributions to Angola's post-war reconstruction and economic revitalization.

Through the "Angola Model", not only does it solve Angola's financing difficulties but also addresses the security concerns of Chinese loans while ensuring China's stable channels for oil imports. It enhances Angola's foreign exchange earnings capacity from oil exports, aligns with Angola's development needs, and achieves a win-win outcome (Shelton & Paruk, 2008).

2.2.3 The Challenges Faced by "Angola Model"

However, the "Angola Model" (i.e., infrastructure-for-resources) has faced criticism from Western countries (Liu & Tang, 2018). These countries accuse China of having certain issues in its cooperation with African nations. Firstly, they argue that China engages in transactions with corrupt Angolan government without making political reforms a prerequisite, which may breed corruption. Secondly, they believe that the China-Angola cooperation and transaction process lack transparency, and China may obtain unfair conditions. Thirdly, they assert that China has expanded its energy cooperation in African countries through the "Angola Model", seizing oil interests in

the region that were previously held by Western countries. Lastly, they are concerned that China's assistance to African countries has increased their external debt burden, potentially hindering their efforts to alleviate international debt (Brookes & Shin, 2006).

These accusations have posed certain obstacles to China's aid and cooperation with Africa. Additionally, traditional aid countries and emerging aid countries have also joined the competition to assist African nations, especially in the field of infrastructure construction. This puts pressure on China in terms of bidding for projects against other aid countries. Although the demand for infrastructure construction in African countries remains high, with the growth of African resource production and consumer markets, the competition among aid countries will become more intense (Blair et al., 2022).

Furthermore, China also faces challenges in terms of institutions and standards in its aid and investment in Africa. In the past, traditional aid countries emphasized institutional development in their aid to Africa, while China's institutions are relatively incomplete, which creates difficulties for Chinese companies investing and operating locally. Irresponsible behavior by some Chinese companies in their investments in Africa has also been criticized, undermining the positive image that China has established in African aid (Yi-Chong, 2014).

Moreover, African countries face the issue of an "investment trap", where foreign companies initially face relatively smooth investment and operations but encounter difficulties in long-term profitability, making it more challenging to withdraw from the African market. Additionally, the economic growth of African countries is primarily dependent on exports of energy and mineral resources, and resource-poor countries struggle to benefit from this. Although China cooperates with these countries in areas such as infrastructure construction, there is a significant trade imbalance that presents challenges to China-Africa economic relations.

In summary, China faces criticism from Western countries, competition from other aid countries, and challenges in terms of institutions and the economy in its aid and cooperation with Africa (Holslag, 2009). China needs to adjust and improve its aid model for Africa, considering cooperation with other aid countries to address these challenges.

2.3 Financing-Integrated Contracting Models

The "Belt and Road" Initiative has brought enormous market opportunities for contracting enterprises. The initiative has received positive responses from international organizations and other countries, and China has increased its investments and achieved win-win outcomes with countries along the Belt and Road (De Graaff, 2020). Currently, popular contracting models include the Engineering, Procurement, and Construction (EPC) model, "EPC+F" model, and Public-Private Partnership (PPP) model.

2.3.1 EPC Contracting Model

For engineering projects, the Engineering, Procurement, and Construction (EPC) model is a widely recognized and commonly used implementation approach. A complete EPC project usually involves a contract signed between the construction entity and the general contractor based on the needs of the enterprise. Subsequently, the general contractor manages the entire process of design, construction, procurement, acceptance, and production according to the contract requirements and takes overall responsibility for the project's indicators until handing over the complete project to the construction entity. Therefore, "Turnkey" projects have become synonymous with EPC projects.

Several researchers have proposed different methods and theories to manage and evaluate EPC projects. For example, Wong et al. (2007) proposed three methods: design

quantification assessment, constructability review, and constructability scheme implementation. Anderson et al. (2000) extended design-related research to the entire implementation process of engineering projects. Heagney (2016) analyzed fundamental theories of international engineering design management and summarized the development of engineering design management approaches. Pehlivan & Öztemir (2018) conducted in-depth research on cost, schedule, and quality control methods in engineering projects. Steinberg (2016) studied and analyzed the management approach of the EPC contracting model and summarized the project characteristics and key points of project design management in EPC projects. Habibi et al. (2018) found that EPC projects rarely meet their estimated costs and schedules, with more than 50% of projects experiencing delays and losses. They focused on cost and schedule performance indicators in EPC projects and provided valuable insights. Nguyen & Hadikusumo (2017) studied the impact of project factors on the successful implementation of EPC projects, including both internal and external factors. Their results indicated that the department responsible for human resources in EPC projects played a significant role in project success. Toutounchian et al. (2018) proposed a preliminary conceptual model to determine the contractual status of safety management systems in EPC projects, and through field research and interviews, they determined the safety management costs and related weighting factors in different stages of the project.

2.3.2 "EPC+F" Contracting Model

The EPC+F (Engineering, Procurement, Construction + Finance) model refers to the "Engineering, Procurement, and Construction + Finance" model, which adds financing responsibilities to the EPC model. The EPC model involves a general contractor taking over the responsibilities of design, procurement of materials and equipment, construction, and trial operation of the project on behalf of the owner. Financing typically refers to the general contractor providing financing services to the owner, assisting in fundraising, or directly providing financing funds to the owner. In the

EPC+F model, the project's general contractor is the core of the entire project, responsible not only for assisting or coordinating the owner in solving financing issues but also for the implementation, coordination, and supervision of project design, procurement, and construction stages. The project's general contractor is crucial for the successful operation of the project. This model fully utilizes the advantages of general contracting enterprises in engineering and technical management in overseas projects, facilitating the smooth completion of project construction.

Currently, China's "Going Global" enterprises mainly operate in regions with underdeveloped infrastructure, relatively lagging development, and abundant resources such as Africa, Central Asia, Southeast Asia, and South America. The application of the "EPC+F" model not only leverages the advanced technology and management capabilities of Chinese large-scale engineering enterprises but also addresses the funding challenges faced by overseas project owners with the support of national strategic policies, coordinating and collaborating with financial and insurance institutions.

According to M. Wang et al. (2013), to enter the high-end engineering contracting market, Chinese contracting enterprises need to possess first-class design and construction technologies, as well as strong financing capabilities, talent management abilities, organizational optimization capabilities, and social resource integration capabilities to provide comprehensive contracting management services. By exploring the steps and techniques of operating "EPC+F" projects, construction enterprises can enhance their overall contracting management capabilities, which is an important way to cultivate new competitive advantages and achieve growth benefits. Sheng et al. (2015) believe that the "EPC+F" model is a new project management model derived from the needs of owners and the market. In the management of overseas "EPC+F" engineering contracting projects, various risks are faced, including external environmental risks and

internal project management risks. However, as long as the risks are identified correctly, anticipated in advance, and effective mitigation measures are taken, these risks can be controlled. Liao (2016) suggests that in the new economic normal, the use of the "EPC+F" model by the government to solve the financing issue of public infrastructure construction is an effective new approach. Although this model has advantages and disadvantages, the overall benefits outweigh the drawbacks. Through joint exploration and practice by governments, enterprises, and banks, clarifying process steps and operational techniques, it is expected that the "EPC+F" model will become a new approach to achieving win-win outcomes. He & Jiang (2015) studied the "EPC+F" contracting model adopted by China Petroleum Pipeline Bureau and explained the operational process of this model from the perspective of project financing. They also proposed six key elements that need attention during the preparation and operation of the "EPC+F" contracting model. Tang & Lei (2019) analyzed the risks that local governments, platform companies, contractors, and financial institutions may assume during the financing process of the "EPC+F" contracting model.

2.3.3 PPP Contracting Model

The PPP model originated in the United Kingdom and is a cooperative model that facilitates communication between the government and private capital. In order to promote cooperation between the two parties, the UK government established a dedicated communication platform. Overseas PPP projects refer to public-private cooperation models conducted overseas, involving private sector participation in the construction and operation management of public infrastructure. Relevant enterprises need to continuously improve their capabilities to meet society's demand for public facilities, especially in the face of inadequate government funding.

In this cooperative model, African governments grant social and economic organizations the authority to invest in construction or operate public facilities through

contracts for a certain period of time. This process needs to be transparent throughout to ensure social oversight. At the same time, social investors should enhance pre-communication to minimize risks and adverse effects on enterprises due to economic disputes.

Based on case studies, Jefferies (2006) identified key success factors for PPP projects, including clear understanding of project characteristics, a well-structured bidding process, and risk management. Bing et al. (2005) analyzed UK PPP projects and summarized factors for project success, including government guarantees, economic feasibility, fair risk sharing, and a sound financing market. Li et al. (2005) conducted a questionnaire survey to analyze PPP projects in the UK construction industry and identified 18 key success factors. Zhang (2005) considered factors such as fair risk sharing, project economic feasibility, a strong private sector, a reasonable financing plan, and a favorable investment environment in identifying PPP project success factors. Babatunde et al. (2014) studied the PPP mode in developing countries and found that clear and detailed contracts, clear economic policies, reliable service provision, fair risk sharing, sound legal frameworks, experienced private sector involvement, project profitability, and tariff levels have significant impacts on the PPP mode. Durdyev & Ismail (2017) conducted a SWOT analysis of the BOT mode and discussed factors for successful implementation of BOT projects. Chan et al. (2011) conducted a research study on PPP projects in China through a questionnaire survey, identifying 34 key factors and summarizing implementation strategies for PPP projects.

China's exploration of the PPP model began in the early 1980s. With the progress of reform and opening up, project financing methods gradually became more flexible. In particular, with the introduction of the "Belt and Road" initiative in 2013, there has been an increase in cross-border PPP financing projects. The concept of "investment, construction, and operation integration" has certain Chinese characteristics, and

Chinese contracting enterprises are still in the early stages of developing this business. Enterprises mainly provide insights, summarize relevant experiences, analyze existing problems, and make recommendations based on their own business practices (Lv, 2018).

Zhou & Meng (2016) elaborated on the importance of central enterprises engaging in overseas "investment, construction, and operation integration" and provided suggestions in terms of business synergy, establishing a "Going Global" platform, leveraging funds, expanding financing channels, and strengthening risk management. M. Zhou (2017) proposed that "construction and operation integration" is an important choice for construction enterprises to transform their development models and explore sustainable development paths. It is also an important part of the "Belt and Road" and international capacity cooperation. Suggestions were provided from five aspects: strategic adjustment, market development, fully utilizing intermediary organizations, resource integration, and optimizing knowledge structure.

In terms of experience summary, Bian (2016) emphasized that attention should be given to local economic and financing development in the implementation of "investment, construction, and operation integration" to ensure the long-term implementation of projects. Chen (2016) through studying the business structure of the international engineering enterprise Wanxi Group, proposed that investment, construction, and operation integration is the proven correct development path for large-scale contracting engineering companies. Achieving "investment, construction, and operation integration" requires starting from investment and construction and gradually expanding into operation. The key lies in cooperation with financial institutions. Suggestions were made to establish specialized operational companies, enhance professional capabilities, improve decision-making efficiency, and strengthen business aggregation. Zhou & Wu (2017), based on their own company's practical cases, summarized the experience of adopting the integrated development model of "four-in-one" (investment development,

overseas financing, engineering construction, and operation management) and the integration of the "investment, construction, and operation" industrial chain. They emphasized the importance of value-added, comprehensive lifecycle risk management, resource integration, building an integrated industrial chain platform, establishing a strong project operations team, and upholding the concept of harmonious development. They also provided suggestions in terms of innovative project development models, emphasis on basic theoretical research, strengthening cooperation and resource integration among enterprises (Zhou, 2017). Zhu et al. (2019) through analyzing the problems faced by Chinese engineering enterprises in the overseas "investment, construction, and operation integration" business, such as unbalanced layout of the entire industry chain, insufficient capacity for later-stage operation and maintenance, and backward concept of social responsibility, proposed corresponding strategies including professional accumulation, deep market cultivation, and enhanced cooperation. Ding (2017) suggested that to ensure the smooth implementation of "investment, construction, and operation integration" projects, enterprises must achieve specialization in their business areas, establish international talent teams, conduct localized management, and fulfill social responsibilities.

2.3.4 Comparison of Three Contracting Models

"EPC+F" can be seen as an extension or upgrade of the EPC model. It is a contracting model where the project financing work is handed over to the general contractor based on the original turnkey model. It reflects the trend of engineering contracting model shifting from discrete to integrated. It not only provides new economic sources for the smooth operation of projects but also leverages the rich experience of large construction companies in management, construction technology, capital operation, financing, and construction to support projects. By properly coordinating and interacting with investment and financing, design, procurement, construction, operation, and

maintenance stages, the aim is to better meet or exceed the requirements or expectations of stakeholders.

For “EPC+F” with integrated financing and BOT/PPP models, more and more foreign governments are considering attracting social capital investment in infrastructure construction through PPP models. In PPP projects, the investors directly interface with the project initiators and owners, rather than the EPC contractors. If an engineering company only serves as an EPC contractor or an EPC+F service provider, it needs to establish contact with the owner through the investor, and may even have difficulty in effective communication with the owner. Consequently, the engineering company may have relatively poor completeness and timeliness of information acquisition. When owners and investors directly negotiate project business models and contractual terms, it may make it difficult for engineering companies to participate in project planning and put them in a passive state. For engineering companies, maintaining smooth communication channels with potential project owners such as local governments and large enterprises is crucial. This enables them to understand local planning ideas and project opportunities in a timely manner, ensuring the long-term development of their business in the local area. From this perspective, it is more advantageous for engineering companies to engage with owners as investors rather than just providing EPC or EPC+F services. At the same time, it is essential for engineering companies to actively participate in PPP project planning as investors, maintaining their initiative and safeguarding their interests, which is also crucial for the subsequent project implementation.

Table 2-1 Comparison of Contracting models

Category	Project phase	Risk	Capital
EPC	Engineering/ Procurement/Construction	Low risk, over-reliance on construction units	Unfunded/partially funded
EPC+F	Engineering/ Procurement/Construction/ Finance	High risk of financing model and the negotiation result Low risk of cooperation	Finance
BOT/PPP	Engineering/ Procurement/Construction/ Finance/ Operation	Certain risks, the actual operating income of the project and the pre-financing model have a decisive impact on the project, and the requirements for capital operation and operation technology are high	Finance

2.3.5 Risk Analysis of Contracting Projects

Overseas engineering projects have characteristics such as long duration, large investment, and high technical requirements. They are also influenced by factors such as diversified layout, diverse market shares, and various types, which may lead to various risks such as international competition, economic risks, political crises, legal issues, social culture, religion, and natural environment. These risk factors may result in losses, delays, or suspensions of overseas engineering projects. Compared to other engineering projects, overseas engineering projects also exhibit national characteristics typical of international projects.

Currently, the number of Chinese investments in Africa continues to increase, covering 53 countries and 6 regions in Africa. As the second-largest market for China's foreign contracting projects, energy, electricity, and transportation are the main sectors in the market, and Chinese companies are involved in a wide range of fields in Africa. With more and more Chinese companies entering the African market, there is an increasing

demand for funds, technology, experience, employment opportunities, partners, and market channels.

The challenges faced by Chinese companies in investing in Africa mainly stem from investment risks, including political risks, economic risks, and operational risks. When investing in Africa, Chinese companies need to pay attention to the soft environment of the target country, including the stability of the political and legal environment, the continuity of policies, the soundness of laws and regulations, and the impartial enforcement by judicial authorities. They also need to consider the social and cultural environment, such as the level of civic education, religious beliefs, and customs. When investing in Africa, especially in mining and factory construction, issues related to the nature, acquisition, use, and transfer of land also require high attention.

While most African countries have relatively high market openness, labor rights protection is often inadequate. Some African countries implement foreign exchange controls, making it difficult to repatriate profits even if they are earned. There are also risks such as currency instability and severe inflation in some countries, which pose significant challenges to investment and trade. In addition, there is a risk of nationalization in some countries.

Therefore, during the project bidding and execution process, enterprises should fully identify, analyze, and mitigate risks. They should adopt targeted risk response and management strategies, enhance risk prevention awareness, improve risk response and handling capabilities, and achieve more project economic benefits.

He & Wang (2017) pointed out that “Belt and Road” PPP projects not only bear the risks of domestic PPP projects but are also influenced by factors such as the political situation, religious beliefs, and legal regulations of countries along the route. Therefore,

effective communication between governments should be strengthened, background investigations of the investment environment of the host country should be conducted in advance, and corresponding measures should be taken to address these influencing factors. Fan & Qiu (2019) analyzed and summarized the tax risks of "Belt and Road" PPP projects, stating that differences in tax systems between different countries, the imperfection of international tax agreements, and lower tax incentives have brought tax risks to PPP projects. To reduce tax risks, tax management should be strengthened, and measures such as reasonable tax planning and tax avoidance activities should be implemented. Dou et al. (2019) believe that the credit risk of governments in countries along the route has a significant impact on the success of projects. Therefore, it is possible to establish a fair and just mindset for all parties through the construction of a PPP industry vitality platform, information technology intervention platform, and ethical finance, among other methods. S. Liao et al. (2019) conducted a risk analysis of the Bangladesh Payra Coal-fired Power Plant PPP project and the Jamaica H2K Highway Project, identifying the main risks faced by China's cross-border PPP projects, including economic risks, legal risks, political risks, and religious risks, and proposed corresponding countermeasures. Yang et al. (2016) analyzed how the Silk Road Fund can attract investors to participate in the "Belt and Road" projects from the perspective of game theory and obtained the Nash equilibrium solution. The study suggests that the Silk Road Fund can attract investors' participation by changing capital structure, reducing transaction costs, and increasing the fund pool.

2.4 Trilateral Cooperation between China and France in Africa

2.4.1 Background of Trilateral Cooperation

Since the 2008 global financial crisis, the world economy has entered a period of profound adjustment and faces various challenges. It is urgent to strengthen cooperation between countries and support inclusive economic growth through innovative multilateral cooperation models. Since the introduction of the Belt and Road Initiative

in 2013, with the principles of policy coordination, infrastructure connectivity, unimpeded trade, financial integration, and people-to-people bonds, new space for global economic growth has been opened up, providing a new platform for international cooperation. Since the inauguration of President Donald Trump in the United States in 2017, a series of uncertainties and risks have been implemented under the "America First" concept. In contrast, China adheres to multilateralism and win-win cooperation in international affairs. With the further advancement of the "Belt and Road" Initiative, economic and trade cooperation between China and countries along the route has deepened, and international capacity cooperation projects have gradually taken effect, creating new opportunities for cooperation between Chinese and foreign companies in developing third-party markets. In April 2019, during his keynote speech at the opening ceremony of the second Belt and Road Forum for International Cooperation, President Xi Jinping emphasized the principles of extensive consultation, joint contribution, and shared benefits, and called for fully leveraging the strengths and potentials of all countries. President Xi Jinping also welcomed the participation of multilateral and national financial institutions in the construction of the Belt and Road Initiative and encouraged third-party market cooperation to achieve common benefits through multi-party involvement.

Third-party market cooperation is a new model of international economic and trade cooperation pioneered by China under the Belt and Road Initiative. It upholds the Silk Road spirit of peace, cooperation, openness, inclusiveness, mutual learning, and mutual benefit. Based on the characteristics and needs of projects, Chinese enterprises, guided by market orientation, collaborate with foreign enterprises to provide comprehensive solutions for project implementation in third-party countries, realizing complementary advantages and promoting more efficient and smooth project operations. In terms of manifestation, it mainly involves cooperation between China and developed countries in developing markets in developing countries. The cooperation methods between

Chinese and foreign companies are flexible and innovative, prioritizing quality and efficiency. Each party's role varies depending on the project. It effectively connects China's advantageous production capacity, advanced technology from developed countries, and the development needs of developing countries, synergistically leveraging the advantages of each enterprise, achieving mutual benefit and win-win outcomes, and jointly promoting the practical measures of the development of industries, improvement of infrastructure, and enhancement of people's livelihood in third countries.

Currently, China has signed third-party market cooperation agreements with more than ten countries, including Australia, Austria, Belgium, Canada, France, Italy, Japan, the Netherlands, Portugal, and South Korea. It has also established a series of cooperation platforms, such as strategic economic dialogues, cooperation forums, and cooperation funds, to achieve extensive third-party market cooperation in transportation, infrastructure, energy, finance, health, agriculture, and other fields.

2.4.2 Progress and Cooperation Models of Trilateral Market Cooperation between China and France

In 2019, the National Development and Reform Commission of China released the "Guidelines and Cases for Third-Party Market Cooperation", categorizing common types of third-party market cooperation into five categories: product and service cooperation, engineering cooperation, investment cooperation, production-financing integration, and strategic cooperation. Product and service cooperation typically refers to collaboration between Chinese and foreign companies in areas such as equipment procurement, certification and licensing, and legal and business consulting. Together, they provide integrated solutions for clients in the third-party market. Engineering cooperation usually involves Chinese and foreign companies jointly undertaking

projects in the third-party market through methods like general contracting and joint bidding.

Table 2-2 Real Cooperation Projects between China and France in Third-party Markets (Products & Services, Engineering)

No.	Type	Project	Year	Country	City	Enterprises structure
1	Products & Services	Bui hydroelectric plant	2013	Ghana	Bui	Synohydro (contractor) Alstom in China (subcontractor)
2	Products & Services	Soubré hydroelectric plant	2014	Ivory Coast	Soubré	Synohydro (contractor) Alstom in China (subcontractor)
3	Products & Services	Karuma hydroelectric plant	2015	Uganda	Karuma	Synohydro (contractor) Alstom in China (subcontractor)
4	Products & Services	Water plant	2017	Cameroon	Yaoundé	Sinomach (contractor) Suez Asia (subcontractor)
5	Engineering	High speed railway	2015	Morocco		Half of the funding from France China Railway Group (civil engineering) with Chinapower as subcontractor
6	Engineering	Unicem, cement production plant	2017	Nigeria		Unicem Nigeria (A joint venture between Lafarge Africa PLC,Holcim, Dangote and Flour Mills) CBMI Construction (EPC contractor)
7	Engineering	* Tibar bay port (Not in Africa, but related)	2018	Timor-leste	Dili	Bollore Ports (contractor, major investor and concesisonnaire) China Harbour Engineering Company CHEC (EPC contractor)

Investment cooperation typically refers to Chinese enterprises engaging in investments in the third-party market in collaboration with foreign companies through methods such as mergers and acquisitions, joint ventures, and equity participation. This form of cooperation establishes a pattern of shared risks and shared benefits.

Table 2-3 Real Cooperation Projects between China and France in Third-party Markets (Investment cooperation)

No.	Type	Project	Year	Country	City	Enterprises structure
1	Consortium of concession	Tincan Island ContainerTerminal SPV: Tincan lsland ContainerTerminal Ltd (TICT)	2010	Nigeria	Lagos	1) Bolloré Transport & Logistic Group major 2) Strong Best Investment 47.5% (China Merchants Holding International 28.5%+China Africa Development Fund 19%)
2	Share participation	10 port terminals SPV: Terminal Link	2013	-	-	1)CMA CGM 51% 2)China Merchants Port 49%
3	Share participation	Nigeria OML (Usan filed)	2012	Nigeria		Total 20% Chevron Petroleum Nigeria Ltd. 30% Esso E&P Nigeria (Offshore East) Ltd.30% Nexen Petroleum Nigeria Ltd. 20%(Sinopec)

Production-financing integration usually involves financial institutions from China and abroad collaborating in the third-party market through various means, including syndicated loans, joint financing, loan conversions, and equity participation. This

cooperation aims to broaden the financing channels for enterprises, diversify the financing risks of financial institutions, and achieve mutual prosperity and symbiosis between enterprises and financial institutions.

Table 2-4 Real Cooperation Projects between China and France in Third-party Markets (Industry and Finance Combination)

No.	Type	Project	Year	Country	City	Enterprises structure
1	Industry and finance combination	Extention of Tema seaport	2016	Ghana	Tema	1) IFC $195 million 2) Three Chinese commercial banks (Bank of China, Industrial and Commercial Bank of China, Standard Bank) and Dutch Development Bank $472 million 3) MPS issued $333 million in new shares 4) CHEC as the contractor

Strategic cooperation generally refers to Chinese enterprises and foreign companies engaging in comprehensive, multi-domain, and multi-level cooperation in the third-party market through the signing of strategic cooperation agreements, establishing strategic alliances, and other forms. This cooperation encompasses research and development, manufacturing, engineering, logistics, capital, talent, and other areas, facilitating resource sharing and complementary advantages. It also brings more development opportunities to the third-party market.

2.4.3 Challenges Faced in Trilateral Market Cooperation

Uncertainty in the business environment of third-party markets. Countries along the Belt and Road route are mostly transitioning economies or developing countries with room for improvement in their business environments. Their economic development levels lag behind, and they lack stable and sound legal systems. The political environments are complex, with some countries experiencing political instability. This not only gives rise to public security risks but also has adverse effects on investment environments and industrial policies. Additionally, the low efficiency of public sector administration and occurrences of corruption further increase the costs of project construction and operation, adding more uncertainty to the specific implementation and return on investment for Chinese and foreign companies in third-party market cooperation.

Differences in management approaches between China and France. French companies involved in third-party market cooperation are privately-owned enterprises, with project representatives or relevant personnel being granted more authority. Their organizational structures are flatter, decision-making cycles are shorter, and decisions are made quickly. Chinese enterprises, on the other hand, are primarily state-owned enterprises or central enterprises that need to conduct investment activities in accordance with the regulations and procedures of the State-owned Assets Supervision and Administration Commission and Chinese headquarters. Decision-making on various matters requires multiple layers of approval, resulting in slower decision-making compared to their partners. Furthermore, in the process of project implementation and operation, the efficiency of third-party countries' governments is low, and supporting work progress is relatively delayed. In some cases, supporting facilities related to the project may be inadequate.

Risks associated with the application of multiple countries' laws. Since third-party market cooperation involves at least three countries' market entities, cooperative activities cannot avoid the legal constraints of China, the host country of the partner, and the target country of the project. For example, if Chinese companies engage in third-party market cooperation with Japanese companies, both Chinese and Japanese companies need to reach consensus on issues such as investment methods, equity ratios, liability, and profit distribution, ensuring compliance with the laws of China, Japan, and the target country. If conflicting laws exist among the relevant countries in areas such as economic investment, tax collection, intellectual property protection, environmental protection, and labor employment, and enterprises fail to identify the "common denominator" in advance, the presence of illegal or non-compliant situations in third-party market cooperation may have adverse effects on the project.

Gap between top-level design and actual implementation. Different from traditional bilateral and multilateral cooperation agreements, third-party market cooperation is guided by the governments of the two countries involved. It has clear regional objectives and industrial orientations, combining government intentions with corporate aspirations. It represents another "China's Wisdom" and "China's Solution" in building a community with a shared future for mankind. Although the Chinese government has signed memorandums of understanding on third-party market cooperation with more than ten countries and established a series of cooperation platforms, the specific substantive support policies issued by the government at present are still relatively limited. There is a lack of related supporting rules, public service products such as a shared database of third-party market cooperation information, which results in insufficient understanding and participation efficiency on the part of enterprises. While top-level designs and strategic alignments are being carried out, policy coordination needs to be strengthened, long-term mechanisms need to be established, and the promotion of various media outlets and content interpretation needs to be advanced to

enable enterprises to better understand and utilize memorandums of understanding on third-party market cooperation. This ensures the smooth implementation of cooperation consensus between governments, ensuring the realization of the concept of "the government sets the stage, and enterprises perform".

Lack of experience and capabilities in Chinese engineering enterprises. In recent years, Chinese enterprises have actively responded to the Belt and Road Initiative and achieved remarkable results in "Going Global". However, the focus of cooperation has mainly been on countries along the Belt and Road route, and their experience in deep cooperation with enterprises from developed countries remains relatively limited. There are differences and shortcomings, particularly in areas such as financing planning, business concepts, governance structures, cross-cultural communication, and standard selection compared to multinational enterprises from developed countries. In addition, when Chinese enterprises overlap with developed country enterprises in terms of industrial structure and face competition in the same market, how to strive for dominant cooperation and achieve the smooth realization of cooperative benefits in terms of interest distribution remains a common challenge for Chinese engineering contracting enterprises.

Chapter 3 Theoretical Framework

Based on the integrated theory of Resource-Based View (RBV) and RDT, this article considers the technological expertise and talent of French companies as external resources that can be integrated. Combined with the equipment, capital, and materials of Chinese multinational enterprises, it forms a complementary and strong alliance for third-party market cooperation. This cooperation aims to promote the development of industries, improve infrastructure, and enhance the livelihoods in third countries. The goal is to achieve a synergistic effect where 1+1+1>3.

3.1 Theory

Based on the literature review above, Chinese companies currently face internal challenges such as inadequate technology, funding, and talent, as well as external criticism and competition from Western countries in political and economic aspects when going global. This study intends to explore the strategic strategies for Chinese companies' internationalization using the Resource-Based View (RBV) theory.

3.1.1 Origins of Resource-Based View Theory

In recent years, the Resource-Based View (RBV) has become one of the most influential analytical frameworks in the field of strategic management. This framework focuses on studying the causal relationship between the heterogeneous resources, specific organizational capabilities, and organizational competitive advantage that an organization possesses. The concept of RBV can be traced back to the concept of organizational distinctive capabilities proposed by Selznick in 1957. In 1959, Penrose provided the economic theoretical basis for RBV, making her a pioneer in this theory (Penrose, 1959). Penrose argued that for a company to obtain profits, it not only needs to have superior resources but also needs to effectively utilize these resources through unique capabilities. She first attributed firm growth to the utilization of internal

resources. In 1984, Wernerfelt published a milestone paper titled “A Resource-based View of the Firm”, formally proposing RBV and gaining recognition from the academic community (Wernerfelt, 1984). Wernerfelt pointed out that resources and products are like two sides of a coin, with most products relying on resource inputs and services, and most resources being used in product manufacturing. In other words, the main task of a company is to create and exploit advantageous situations for resources, making its resources unavailable to other companies directly or indirectly. In 1991, Grant introduced the Resource-Based Theory (RBT), triggering interest and discussions among subsequent scholars and gradually developing RBV into a theoretical framework (Grant, 1991). The above theories focus on the importance and differentiation of internal resources within organizations, while resource dependence theory emphasizes the interdependence between organizations and their external environments. The main origins of this theory can be traced back to the 1970s when renowned American scholars Jeffrey Pfeffer and Gerald Salancik co-authored and published a book titled “The External Control of Organizations: A Resource Dependence Perspective”. In this book, resource dependence theory was first applied to the study of interorganizational relationships.

3.1.2 Resource-Based View

The RBV proposes two assumptions as its analytical premises: first, the strategic resources possessed by organizations are heterogeneous, which means that certain organizations gain competitive advantages due to resources that other organizations do not possess; second, these resources cannot flow completely between organizations, thereby sustaining the heterogeneity and maintaining a sustained competitive advantage.

Scholars have proposed various classification methods for resources. Barney (2001)believes that resources are things that companies possess and can be used to formulate and implement strategies to improve efficiency and effectiveness. They

include all assets, capabilities, organizational processes, corporate attributes, information, knowledge, and more. He divides resources into three categories: physical capital resources (including machines and production facilities used by the company), human capital resources (including all experiences, knowledge, judgments, risk-taking tendencies, and personal wisdom relevant to the company), and organizational capital resources (including history, relationships, reputation, and organizational culture). Srivastava et al. (1998) classify market-based resources into two categories: relationship assets (such as relationships with customers, distributors, suppliers, and other stakeholders) and intellectual assets (knowledge of market conditions). Miller & Shamsie (1996) believe that all resources can be divided into two categories: ownership-based resources (such as financial resources, material resources, human resources, etc., where only the owner has ownership and others cannot take them away) and knowledge-based resources or knowledge resources (difficult to imitate due to knowledge and information barriers, including tacit know-how, skills, and non-patented technologies and management systems).

The resource-based view emphasizes that the establishment of an organization's competitive advantage is rooted in its internal resources and their characteristics. This viewpoint originated from the early contributions of Penrose (1959). The resource-based view takes an internal perspective of the firm, viewing the firm as a collection of heterogeneous resources. These heterogeneous resources can provide economic rent (Conner, 1991; Rumelt, 1984; Wernerfelt, 1984) and are a source of competitive advantage for the firm. Barney (2001) also considers resources as the fundamental elements that constitute an organization and the source of its growth and competitive advantage.

The research on RBV focuses on the internal aspects of the firm, treating the firm as a collection of resources and capabilities, and examines the sources and sustainability of

resources within the firm. This is in stark contrast to Porter's (1980) and Porter & Millar (1985) theory of competitive advantage, which argues that a firm's competitive advantage depends on the industry structure and the firm's competitive position within that industry. Therefore, the core research theme of RBV is to explore the existence of differences among firms and how to acquire and maintain competitive advantages. The resource-based view suggests that the heterogeneity of internal resources within a firm leads to differences in its profitability, and the cultivation, status, and deployment of internal resources are closely related to the firm's profitability. Thus, firms can rely on isolation mechanisms or resource position barriers to obtain economic rent.

Therefore, a key proposition of the resource-based view is that differentiated resources can be a possible source of competitive advantage and sustained competitive advantage, which are the strategic factors serving the product market strategy as referred to by Barney (2001). These differentiated resources are likely to be one of the sources of competitive advantage for Chinese companies when they enter overseas markets (Kay, 2005).

3.1.3 Capability-Based View

The capability-based view is an inheritance and development of the resource-based view, emphasizing a deeper exploration of the sources of resource advantage and overcoming the static analytical tendency of the resource-based view. In the capability-based view, a firm is defined as a collection of capabilities, and the firm's growth depends on the adaptive development process of the firm's capability set in relation to the dynamic environment. Core capabilities and dynamic capabilities are the main branches of the capability-based view.

The core capability view proposed by Prahalad & Hamel (1994) assumes that core capabilities are static and fixed, overlooking the dynamic evolution of core capabilities.

Although core capabilities explain a firm’s past success, the resulting path dependency often prevents firms from developing the ability to adapt to new environments, leading to what is known as "core rigidity." The core capabilities of a firm become a hindrance to its development, directly leading to the emergence of the dynamic capabilities theory.

The dynamic capabilities theory, introduced by Teece et al. (1997), is a further development of the resource-based view. It argues that firms must continuously acquire and integrate internal and external resources in order to adapt to changes in the external environment. The attainment of sustained competitive advantage by a firm is the result of the reallocation and utilization of internal and external resources in response to environmental changes. Once a firm has gained a competitive advantage, due to the dynamic nature of the environment and resources, this competitive advantage can only be a dynamic competitive advantage. The dynamic capabilities theory suggests that strategic choices are context-specific at a static point in time, and the reasons for competitive success also stem from the consequences of earlier competitive strategies, while future competitive advantages are nurtured by present activities.

Therefore, firm capability is the comprehensive utilization of a set of resources in completing specific tasks or activities. Its formation and manifestation are achieved through long-term and complex interactions among resources, particularly the interpretive, development, transmission, and exchange of information by a firm’s human capital, as well as the organizational resource allocation processes and method systems that form and develop. Resources serve as the carriers and targets of capabilities, and capabilities are formed and manifested through the interaction with resources.

Empirical literature on multinational technology management also explicitly supports the concept of dynamic capabilities. Studies by Malnight (1995, 1996), Penner-Hahn

(1998), and Taggart (1998) reported evidence of organizations undergoing transformational processes and adopting a series of initiatives that constitute a shared corporate strategy. Particularly interesting are studies by Birkinshaw et al. (1998), Coughlan & Brady (1996) and Taggart (1998), which demonstrate the process of initiatives from subsidiary units outside the home country and the corporate headquarters. They indicate that multinational technology networks are in a constant state of flux as units dispersed globally often vie for positions within their company by enhancing their technological resource status. The multinational technology network is a dynamic entity that continuously changes due to initiatives from both the center and the periphery.

3.1.4 Resource Dependence Theory

While resource-based theory and the theory of firm capabilities focus on the contribution of internal resources and capabilities to competitive advantage, resource dependence theory emphasizes the acquisition and management of external resources.

Resource dependence theory is built upon four key theoretical foundations: First, the primary concern of any organization is its survival. Second, organizations require resources for their survival, but they generally cannot produce these resources independently. Third, in order to obtain the necessary resources for survival, organizations must interact with their environment, including other organizations. Fourth, the survival of an organization is based on its ability to control itself and its relationships with other organizations. Based on these assumptions, resource dependence theory argues that organizations become highly embedded in their environment and depend on the environment to obtain and secure key resources necessary for success. Pfeffer & Salancik (2003)proposed five actions that organizations can take to minimize their dependence on the environment: mergers/vertical integration, joint ventures, boards of directors, political action, and

executive succession. Among them, RDT provides a primary theoretical perspective for understanding joint ventures and other interorganizational relationships, such as strategic alliances, research agreements, research consortia, joint marketing agreements, and buyer-supplier relationships. It is important to note that interorganizational relationships can only partially absorb interdependence.

Pfeffer & Nowak (1976) supported the application of RDT to joint ventures and found that joint ventures typically form between interdependent firms. Empirical evidence also supports the use of interorganizational relationships to reduce complexity in domestic and international environments and gain access to resources (Elg, 2000; Goes & Park, 1997; Pfeffer, 1987). Provan et al. (1980) found that organizations gain power over resource providers (e.g., United Way) through alliances with other institutions. Das et al. (1998) found that small firms benefit more from these cooperative relationships than their larger partners. Yan & Gray (1994, 2001) studied the power balance among international partners and found that alliances occur when organizations are interdependent, but the partner controlling more critical resources retains strategic control. Piskorski & Casciaro (2006)decomposed the concept of interdependence into power imbalance and mutual dependence and found that mutual dependence was a key driver of inter-industry mergers among U.S. companies from 1985 to 2000. These studies provide rich insights into the entry of multinational corporations into new markets through joint ventures.

In summary, resource-based view, the theory of firm capabilities, and resource dependence theory all play important roles in the study of organizational management and competitive strategy. While they have different emphases, there are also points of intersection and complementarity: resource-based theory and the theory of firm capabilities both focus on internal resources and capabilities, with resource-based theory emphasizing the uniqueness and scarcity of resources, while the theory of firm

capabilities focuses more on organizational adaptability, innovation capability, and learning ability. Both resource-based theory and resource dependence theory emphasize the importance of resources for organizations, but resource-based theory emphasizes the role of internal resources and capabilities, while resource dependence theory emphasizes the interdependence between organizations and their external environment. Both the theory of firm capabilities and resource dependence theory highlight the adaptability of organizations in a changing environment, with the theory of firm capabilities paying more attention to dynamic strategic adjustments and innovation, while resource dependence theory focuses more on resource acquisition and external cooperation. This study focuses on how Chinese engineering firms' control over key resources provides them with a competitive advantage and how the interdependence with France regarding these key resources affects the advantages gained from them. Therefore, this study will analyze within the framework of the integrated theories of resource-based theory and resource dependence theory.

3.2 Framework for Trilateral Cooperation between China, France, and Africa Based on RBV+RDT

RDT emphasizes that organizations need to establish and maintain relationships with external resource providers to acquire and utilize external resources, including funds, information, technology, and more. The performance and behavior of an organization are constrained by its ability to obtain and control resources in the external environment. Building upon this foundation, RBV supports the idea that organizations can achieve sustainable competitive advantage in the market by possessing and effectively utilizing unique, scarce, and difficult-to-imitate resources and capabilities.

This study has developed a conceptual framework for analyzing Sino-French cooperation based on the concept of resource complementarity and strong alliances. Unlike the knowledge transfer-based theoretical framework proposed by Ordonez de

Pablos (2006), we have subdivided the aforementioned cooperation models and determined different types of cooperation corresponding to complementarity and cooperation levels.

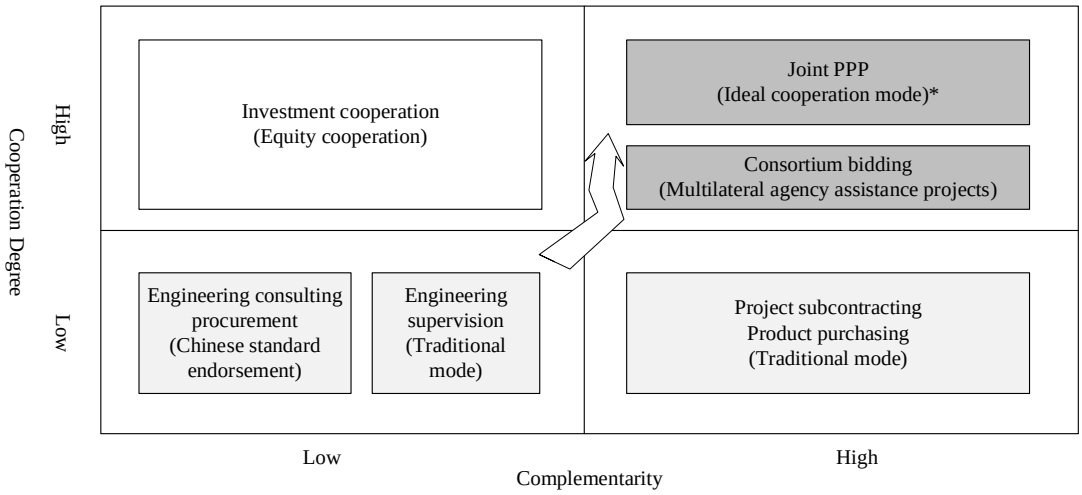


Figure 3-1 Cooperation Framework Based on RBV

The specific explanations of each scheme are as follows,

Table 3-1 Explanation of Each Option

No.	Option	Description	Example
1	Engineering consulting procurement	Experiments are widely used in marine engineering and can be used to demonstrate the effectiveness of Chinese standards.	Subcontracting Artelio for research and experiments in Kribi Port. Inviting Western firms to provide internal consulting and supervision for the Maputo Bridge project.
2	Engineering supervision	A consulting service provided by Western engineering consulting firms to the owners during project implementation. It is widely used in international project management.	Various large-scale infrastructure projects
3	Investment cooperation	Chinese companies and their international counterparts jointly	China Merchants Group invests in

		invest in third-party markets through mergers and acquisitions, establishing joint ventures, and equity participation, sharing risks and benefits.	Tincan Port, and Sinopec, through its acquisition of Canadian company Nexen, invests in the Nyalia Oil and Gas Field.
4	Project subcontracting Product purchasing	The traditional subcontracting mentioned in the joint statement. It is primarily used by Chinese contractors for local material and equipment procurement. It can also be used by French contractors, such as subcontracting civil engineering projects to Chinese companies. Specific services that involve validating design models through experimental models.	China Water and China Machinery, among others, procure equipment manufactured by the Chinese branches of French companies. They also procure construction materials produced by French companies
5	Consortium bidding	Both governments encourage the formation of consortium bids for international tenders.	Ibom Port in Nigeria, China Power Construction and Bollore consortium have been selected as the preferred bidders.
6	Joint PPP *	The preferred approach emphasized in the joint statement is "joint contracting, joint production, and joint financing." The actual implementation can vary greatly, but it is relatively rare. The common characteristic is that it involves investment from Chinese construction contractors.	The Kribi Port in Cameroon and the Route Nationale 1 (National Highway 1) in the Republic of Congo.

3.3 Ideal PPP Cooperative Model Based on RBV+RDT

In light of this, the most ideal cooperative model is characterized by a high degree of cooperation and complementarity. Sino-French cooperation in non-triadic markets can form a stable Public-Private Partnership (PPP) model. The PPP model essentially

represents a contractual strategic alliance between the public sector (government) and businesses. PPP exhibits three typical characteristics of a contractual strategic alliance,

Cooperation. Since the starting point of the PPP model is to improve infrastructure construction or provide public services through government-business cooperation, cooperation is the essential element of this model. The basis of PPP cooperation lies in the sharing of complementary advantages of resources or capabilities among the participants to achieve the overall objectives of PPP projects. However, resource sharing often leads to mutual dependence and opportunistic behaviors, making it crucial for the participants in PPP to carefully select their partners. Additionally, information is often a critical factor in various cooperative models, including the PPP model. Therefore, establishing effective communication mechanisms in PPP projects contributes to the stability and continuity of cooperation among the participants.

Contracting. Formal contracts are another typical characteristic of the PPP strategic alliance. Throughout the lifecycle of PPP, the continuity, regulation, and adjustment of the relationships among the participants rely on formal contracts. Formal contracts are a prerequisite for ensuring the mutual benefits of the PPP model. Through enforceable contracts, PPP participants can integrate their respective advantageous resources, share information, and allocate risks, thereby achieving the overall objectives of PPP.

Competition. Competition is the third major characteristic of the PPP strategic alliance. Although cooperation is the basis of the PPP strategic alliance, competition exists both internally and externally. Internally, PPP participants maintain independent rights and decision-making authority. In the event of major issues during the lifecycle of PPP projects, such as significant risks that are not clearly allocated, leading to project difficulties, each participant will exercise their independent decision-making authority and compete for the remaining benefits of the PPP project. Externally, the “value for

money" aspect built into the PPP model's process requires comparing the present value of PPP projects with the net present value generated by other construction models (such as government self-construction) to determine the project's construction and operation methods. Consequently, the PPP strategic alliance faces intense competition from other external models.

It is evident that in the Sino-French-African cooperation in the PPP model, there is a high degree of interdependence between Chinese and French companies and African governments. Firstly, Africa is the primary choice for Sino-French triadic market cooperation. Africa has close historical and cultural ties with France, and China has a long history of cooperation and exchanges with Africa. Africa serves as an important direction and focal point for China's international capacity cooperation and the realization of the "Belt and Road" Initiative in the economic interconnection of Asia, Europe, and Africa. Africa is a significant source of energy resources for China and France and an important market for the export of goods and services for both countries. The African factor in Sino-French relations will become increasingly important. Effectively managing the economic cooperation and competition between China and France in Africa is of great significance for maintaining and developing the Sino-French partnership. Within the framework of the "Belt and Road" Initiative, China and France can shift their cooperative focus from their respective domestic markets to the African continent, maximizing complementarity. Secondly, China and France can leverage their respective advantages for cooperation in the African market. French companies have unique technological advantages in advanced manufacturing, environmental protection, and engineering operations. France has successfully transformed its strong cultural advantages and traditional interests in Africa into commercial advantages. Many French companies hold the economic lifeline of their host countries in Africa and possess numerous social resources. These advantages are areas where China is relatively weak in Africa. There is no historical entanglement or

cultural connection between China and Africa, and there are significant language barriers in communication. However, Chinese companies have accumulated rich experience in infrastructure construction, energy, equipment manufacturing, and the internet in Africa and have strong financial and labor support.

Therefore, African governments hope to reduce financial and debt burdens by utilizing the more advanced technology, richer project management experience, stronger financial capabilities, and more efficient operational capabilities of both Chinese and French companies to carry out infrastructure construction or provide public services at lower costs. Meanwhile, the companies from both countries hope to obtain PPP project resources, support in terms of policies and regulations, financing guarantees, information, taxation, and regulatory assistance from the government, in order to seek long-term and stable returns for their survival and development.

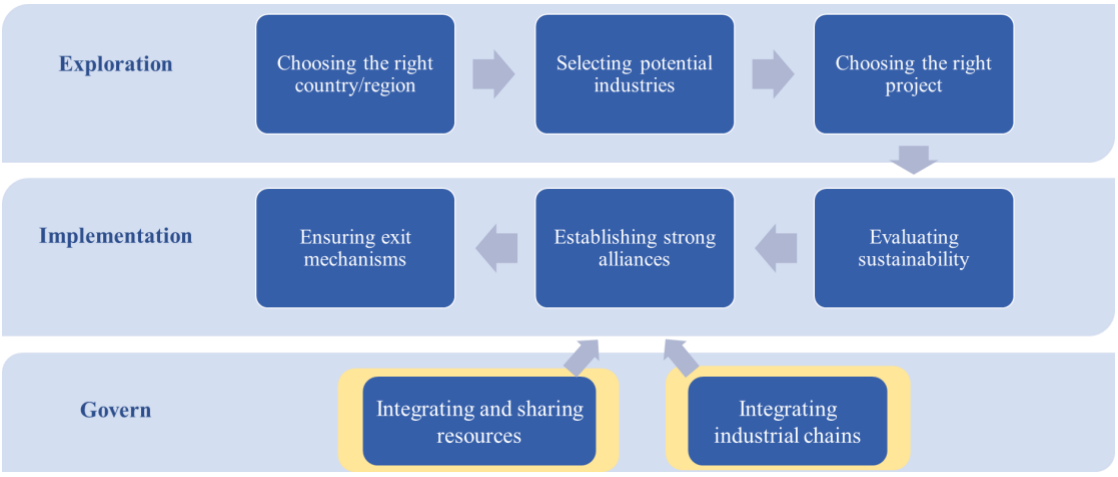


Figure 3-2 The Ideal Trilateral PPP Collaboration Model

According to (Gulati, 1995), research indicates that organizations with a high degree of resource dependence are much more likely to form alliances compared to organizations lacking mutual dependence. Therefore, interorganizational resource interdependence is the primary driving force behind the formation and sustainability of alliances. The joint

declaration on trilateral cooperation in third-party markets between China and France, signed by the two prime ministers in 2015, also provides political support for Sino-French-African cooperation. Currently, there have been several successful PPP projects in Sino-French-African cooperation, such as the Kribi Deepwater Port in Cameroon and National Highway 1 in the Republic of Congo. Despite previous difficulties, collaboration with third-party countries, especially France, will be the “rising tide" that ultimately leads to success, surpassing the “pioneer” in the traditional Sino-African cooperation model. In order to strengthen the alliance and establish contracts, this article will focus on integrating shared resources and integrating the industrial chain.

Table 3-2 Real Cooperation Projects between China and France in Third-party Markets (PPP)

No.	Type	Project	Year	Country	City	Enterprises structure
1	Consortium of concession + construction	Kribi deepwater port SPV: KTC Kribi Containers Terminal	2017	Cameroon	Kribi	1)Kribi Terminal Holding(Bollor Africa Logistics 51% + CMA-CGM 49%)60.45% 2) Wide ressources (held by CHEC in Hong Kong) 20% 3) Local shareholders 19,55%
2	Consortium of concession + construction	Highway No 1 of Congo-Brazzaville SPV: La Congolaise des Routes	2018	Congo-B	-	1) China State Construction Engineering CorporationCSCEC 70% 2) Egis Projets 15% 3)I'Etat Congolais 15%
3	Investment + Consortium of concession + construction	Lekki deepwater port SPV: LPLE	2019	Nigeria	Lagos	1) LPIHI (Tolaram Group + CHEC) 2)Nigeria Ports Authority 3)State of Lagos 4)CMA-CGM would be the concessionaire

3.4 SWOT Analysis of PPP Model

SWOT analysis is a common strategic analysis tool that can be used to assess a project's strengths, weaknesses, opportunities, and threats. In view of the background and future development trend of the PPP model in the third-party market, it is necessary to carry out the corresponding SWOT analysis of its project development (Shown in Table 3-3).

Table 3-3 SWOT analysis of PPP for Chinese companies

Strengths	Weaknesses
✧ Obtain engineering contractor business cooperation; ✧ Acquire high-quality infrastructure investments; ✧ Ensure the preservation of state-owned assets; generate stable cash flows in the future; ✧ Promote local employment and enhance international image	✧ Lower profit margin of engineering contracting; ✧ Higher upfront operational costs; ✧ Higher requirement for transparency in projects; ✧ Higher the communication cost between China and France; ✧ Different financial systems of the two countries; ✧ Different political, economic, and cultural systems of the two countries; ✧ Lack of corresponding international and diversified talents
Opportunities	**Threats**
✧ Improve internationalization level; ✧ Enhance planning capabilities and cultivate a group of talents; ✧ Increase the efficiency of state-owned asset utilization; ✧ Further develop the advantageous position of port and inland areas; ✧ Ensure that assets make future project financing easier; ✧ Learn operational experience from Western companies	✧ Political subservience in African countries; economic instability in African countries; ✧ Dominant partners (such as Bollore) may exploit their monopoly position to oust collaborators; ✧ Intervention by the International Monetary Fund (IMF) regarding debt issues; ✧ Financial situation of partners; poor initial planning and low operating income; ✧ Uncertain prospects of currency reforms in Francophone Africa; ✧ Wastefulness caused by presidential prestige projects

Specifically, the advantages are, 1) Obtain engineering contractor business cooperation: Ability to collaborate with engineering contractors, which can lead to expanded services and business opportunities; 2) Acquire high-quality infrastructure investments: Capability to secure investments in high-quality infrastructure, contributing to asset portfolio growth and stable cash flows; 3) Ensure the preservation of state-owned assets,

generate stable cash flows in the future, commitment to preserving state-owned assets and generating consistent future cash flows, instilling investor confidence, and 4) Promote local employment and enhance international image: Efforts to boost local employment and improve international reputation, fostering positive relationships with local communities and governments while enhancing competitiveness in the international market.

The weaknesses are, 1) Lower profit margin of engineering contracting: Engineering contracting may have lower profit margins, affecting overall profitability; 2) Higher upfront operational costs: Dealing with higher initial operational costs, which can impact financial performance; 3) Higher requirement for transparency in projects: Need to meet stringent transparency standards in projects, which may increase administrative burdens and costs; 4) Higher communication costs between China and France: Communication challenges and associated costs between China and France, potentially affecting project coordination and efficiency; 5) Different financial systems of the two countries: Differences in financial systems between China and France may pose challenges for financial operations and coordination; 6) Different political, economic, and cultural systems of the two countries: Variations in political, economic, and cultural systems between China and France may require adaptation and pose potential risks, and 7) Lack of corresponding international and diversified talents: Limited access to international and diverse talent pools may affect the company's ability to effectively operate in different markets.

The opportunities are, 1) Improve internationalization level - opportunity to enhance internationalization efforts, expanding business reach and diversifying revenue sources. Enhance planning capabilities and cultivate a group of talents: Focus on developing planning capabilities and nurturing a pool of talented professionals to support sustainable growth; 2) Increase the efficiency of state-owned asset utilization -

potential to optimize the utilization of state-owned assets, improving operational efficiency and returns on investment; 3) Further develop the advantageous position of ports and inland areas - capitalize on the strategic advantages of ports and inland areas, maximizing their potential for business growth; 4) Ensure that assets make future project financing easier - position assets to facilitate future project financing, providing a competitive edge in securing funding; and 5) Learn operational experience from Western companies - opportunity to gain insights and learn from the operational experiences of Western companies, enhancing best practices and efficiency.

The threats are, 1) Political subservience and economic instability in African countries: Political instability and economic uncertainties in African countries where operations are conducted may pose risks to business stability; 2) Dominant partners exploiting monopoly position: Possibility of dominant partners leveraging their monopoly position to disadvantage collaborators, impacting business relationships and profitability; 3) ntervention by the International Monetary Fund (IMF) regarding debt issues: IMF intervention on debt-related matters may introduce additional constraints and challenges; 4) Financial situation of partners; poor initial planning and low operating income: Financial difficulties faced by partners, inadequate initial planning, and low operating income may impact project outcomes and financial performance.
Uncertain prospects of currency reforms in Francophone Africa: Uncertainty surrounding currency reforms in Francophone Africa may disrupt financial operations and planning; and 5) Wastefulness caused by presidential prestige projects: Risk of wastefulness associated with presidential prestige projects, potentially affecting overall project efficiency and financial performance.

Chapter 4 Case Study

Due to the collaboration between China and France in PPP projects being a relatively new topic, there is a limited number of projects currently being implemented, and there is a lack of quantitative data necessary for conducting an analysis. Therefore, this study will employ a case study approach to analyze the research subject. Case study is an important research method for building and improving management theories. It can be used to analyze complex phenomena influenced by multiple factors and meet the needs of pioneering research, especially those aimed at constructing new theories or refining specific concepts within existing theories.

4.1 Case Selection

The selection of cases is often based on the replication principle. According to the purpose of this study and previous research, the selected cases must meet the following criteria,

- Representativeness and applicability: The projects should be limited to typical PPP projects announced by the National Development and Reform Commission (NDRC) and ongoing PPP demonstration projects involving Sino-French collaboration in non-French-speaking countries;
- Coverage of different types of PPP models: Select 1-2 projects that are representative according to the analysis conducted earlier;
- Availability of data: I have been involved in the entire process of the relevant projects and have collaborated with the personnel involved, establishing mutual trust. In this case, they are more willing to participate in interviews and provide the data required for this study.

For the selected projects based on the above criteria, secondary data will be collected. The sources mainly include: 1) Searching for relevant literature with the topic "Sino-

French third-party market PPP project" on the China National Knowledge Infrastructure (CNKI) database and extracting relevant content related to the key points mentioned above. 2) Conducting online searches to find government reports and documents, project-related websites, reports, and media comments on the project's performance, structure, and functions over the years. 3) Conducting interviews and obtaining data from relevant project managers in the projects I have actively participated in. After screening, representative projects for this study are identified, and related meeting minutes, contract texts, etc., are also collected as materials for case analysis. All collected data will be classified, organized into electronic documents, and backed up for further examination and analysis.

4.2 Case Introduction - Kribi Deepwater Port Container Terminal

Through online data collection and the selection of projects in which I have actively participated, the Kribi Deepwater Port in Cameroon stands out as a case with abundant information.

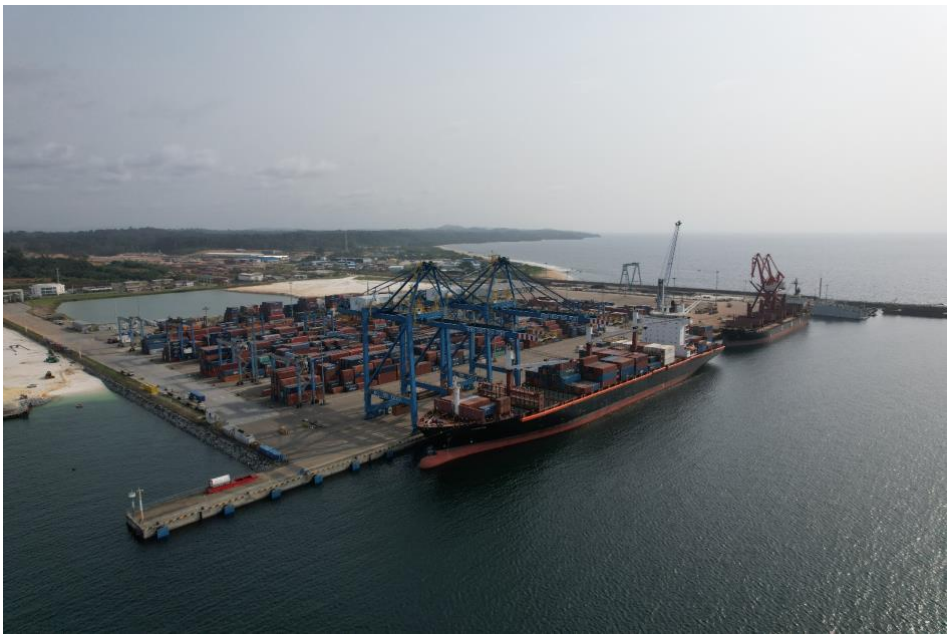


Figure 4-1Kribby Deepwater Port Container Terminal

4.2.1 Overview of the Kribi Deepwater Port Container Terminal Project

Since its official operation on March 20, 2018, the Kribi Deepwater Port Container Terminal has experienced a gradual increase in container volume during its operation in 2019. It generated a total operating revenue of 13.2 million euros, representing a year-on-year growth of 12.9%. Despite the COVID-19 pandemic in 2020, the monthly average container volume showed a contrary increase of 28%, showcasing the regional influence of the international container hub port. The successful operation of the Kribi Deepwater Port Container Terminal has become a model of successful Sino-French cooperation in developing third countries, attracting attention and analysis from scholars and experts in both China and France. With the establishment of wood processing factories, cocoa processing factories, and other enterprises in the logistics park, the operation of the Kribi Deepwater Port Container Terminal has begun to provide strong impetus for the economic development of the Kribi region and Cameroon as a whole.

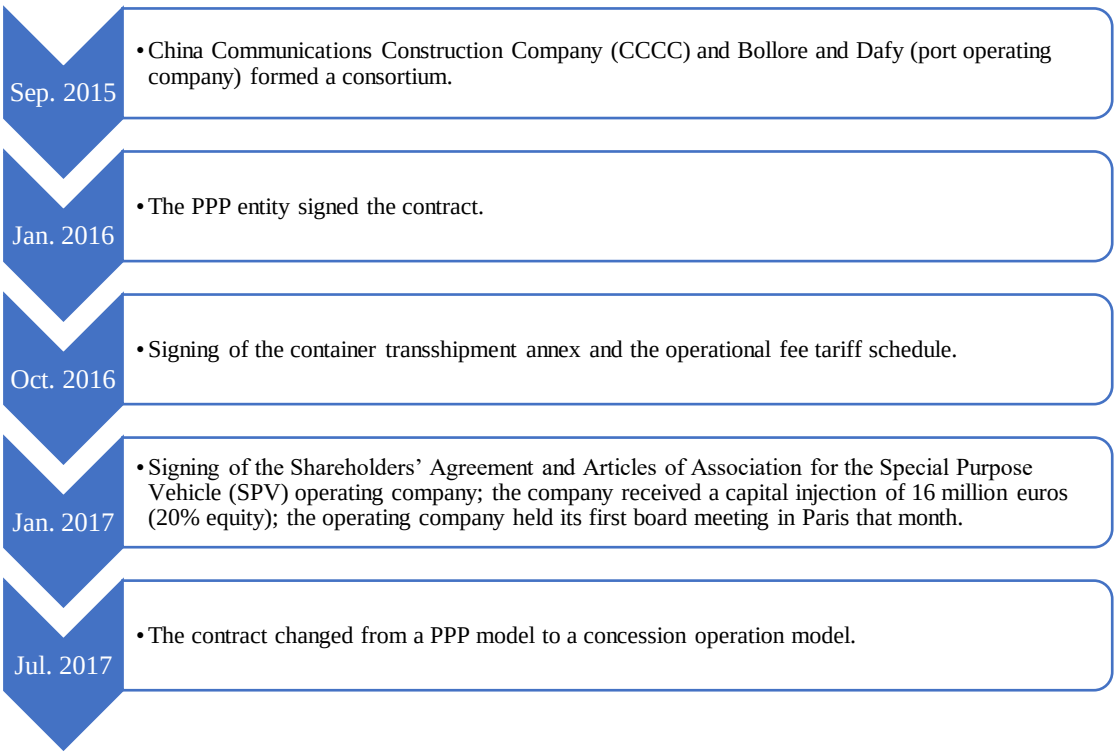


Figure 4-2 Company History

4.2.2 Current Operation Status of the Kribi Deepwater Port Container Terminal

The Kribi Deepwater Port PPP project is a government framework project, financed by "two perfect" loans provided by China Exim Bank and constructed by China Harbour Engineering Company (CHEC). The project is divided into two phases. The first phase of the deepwater port includes two productive berths: one is a multipurpose berth with a capacity of 40,000 tons, and the other is a container berth with a capacity of 50,000 tons. It officially commenced operation in March 2018. The second phase plans to construct a 70,000-ton container berth (designed according to a 100,000-ton container berth standard) and a 100,000-ton container berth, with construction starting at the end of 2019.

The main components of the Kribi Deepwater Port operation include the operation of the 350m container terminal in the first phase, including the terminal front and rear storage yards. The operating rights of the 350m container terminal in the first phase will be re-determined by the Kribi Port Authority after the operation of the second phase container terminal begins, with a maximum operating period of 5 years. The financing, construction, and operation of a portion of the 715m container terminal in the second phase, with a concession period of 20 years for the second phase container terminal.

During the operational period in 2019, the container volume steadily increased, generating a total operating revenue of 13.2 million euros, representing a year-on-year growth of 12.9%. As of the end of June 2020, a total of 491 container vessels were handled, averaging 19 vessels per month, with a cumulative handling volume of nearly 400,000 TEUs (Twenty-foot Equivalent Units). Please refer to the table below for specific details.

Table 4-1 Loading and Unloading Ship of Kribi Deepwater Port Container Terminal: vessel[4]

Year	2018	2019	2020 (June)	Total	Proportion
CMA	138	127	52	317	65%
NDS	35	37	25	97	20%
MARGUISA	3	8	2	13	3%
MAERSK	9	22	23	54	11%
Other	5	3	2	10	2%
Total	**190**	**197**	**104**	**491**	**100%**

The volume and growth rate of all export and import containers are shown in Figure 4-3 to Figure 4-6 below.

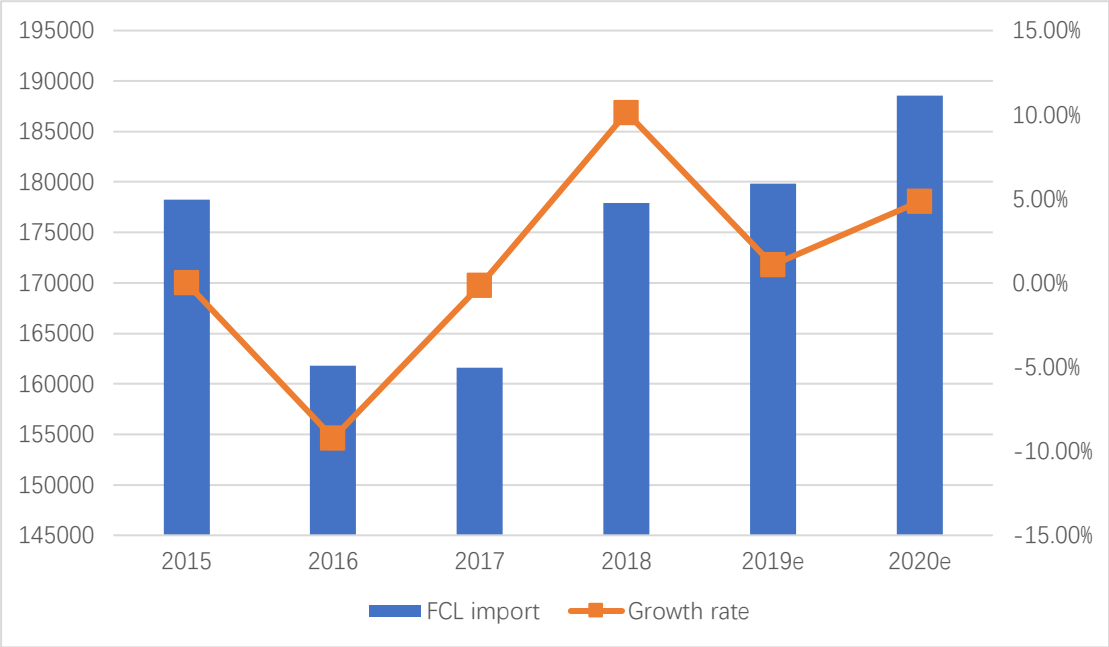


Figure 4-3 2015-2020 Annual FCL Import Volume

[4] Source: The data in Table 4-1, Figure 4-3-Figure 4-12 are derived from internal sources.

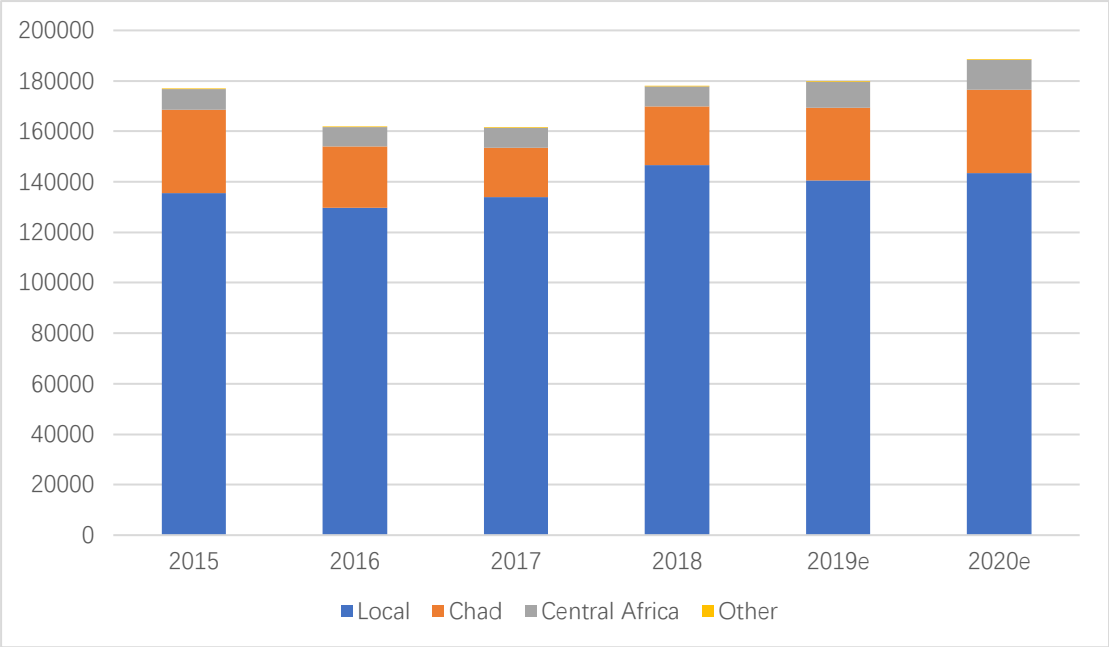


Figure 4-4 2015-2020 Annual Destination of Imported Containers

Figure 4-5 2015-2020 Annual FCL Export Volume

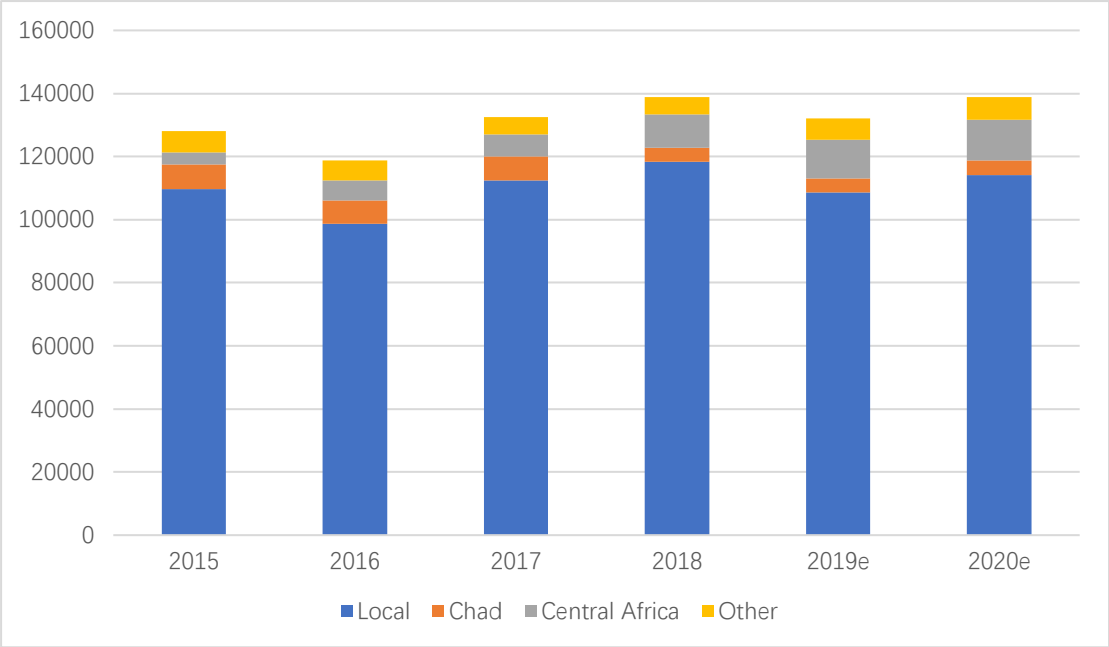


Figure 4-6 2015-2020 Annual Destination of Exported Containers

Meeting the requirements of the national initiative for enterprises' overseas investment to "build and operate", which helps facilitate the approval of loans for the Kribi Port Phase II EPC project through the Export-Import Bank of China. In addition, the operation of the Kribi Deepwater Port Terminal partially solves the funding needs for the Phase II port EPC contract for the Cameroonian government, effectively driving the main business of China Harbour Engineering Company (CHEC) by approximately $800 million. It also contributes to the expansion of CHEC's overseas business from construction to operation. The fact that the construction of Kribi Port Phase II could proceed smoothly at the end of 2019, even amid the Cameroonian government's debt restructuring crisis, serves as evidence of the correctness of the operational decision.

Participating in the operation of the Kribi Port is also advantageous for CHEC to obtain linked development benefits from related projects in the region, enhance CHEC's regional influence, deeply engage in the overall planning and construction of the port's regional economy, and successfully operate a series of large-scale supporting projects around the port and coastal industrial development. For example, the Phase I investment,

construction, and integrated operation of the Kribi-Edea Port Highway have been contracted under a PPP agreement, and it is expected that after the project's completion in 2021, CHEC will provide low-risk operational services. CHEC has also signed a business contract for the Kribi Deepwater Port Logistics Park project, promoting the comprehensive development of the Kribi region's "Port-Logistics-City" (PLC) integrated regional development.

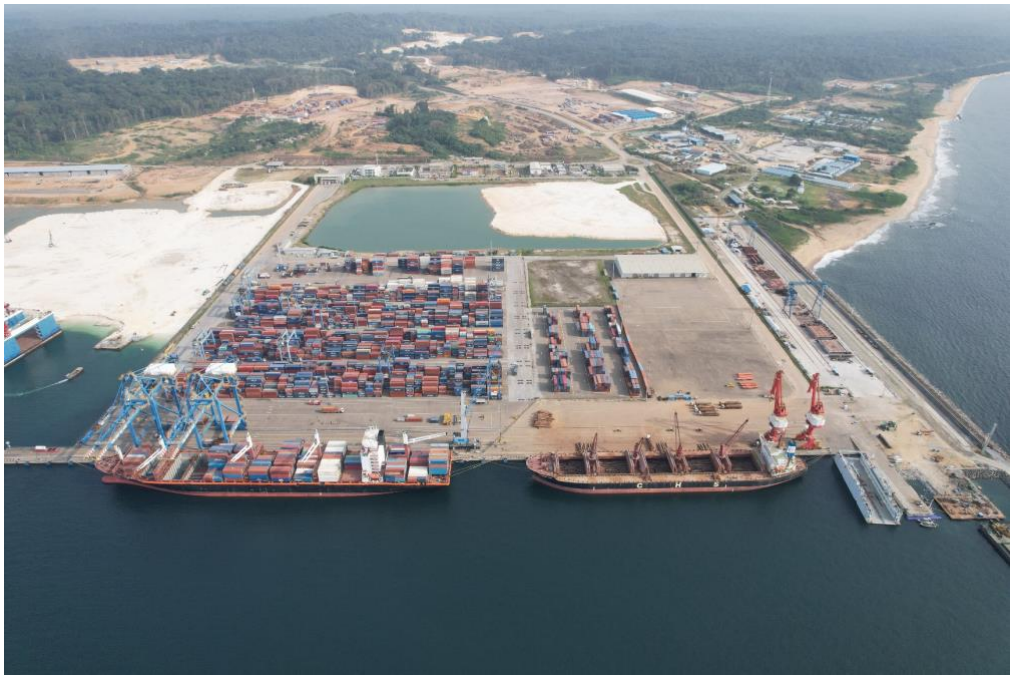


Figure 4-7 Kribi Deepwater Port Container Terminal

4.2.3 Investment Model of the Kribi Deepwater Port Container Terminal

Although China Harbour Engineering Company (CHEC) has business operations in over 100 countries and regions across five continents, with extensive overseas regional development resources and advantages in business development, its previous business mainly focused on port, highway, and airport construction, as well as the supply and installation of related complete equipment in the field of infrastructure. There was a lack of experience and talents in international port operations. With the operation of the Kribi Deepwater Port Container Terminal in 2018 and the signing of the financing

agreement for the La Goulette Port in 2019, the shortage of port operation talents at CHEC has become increasingly severe.

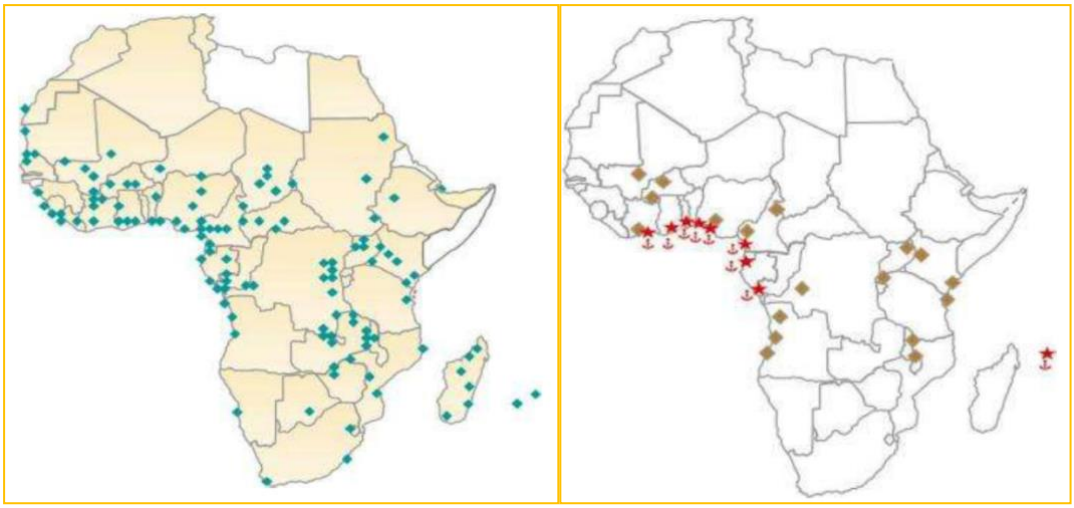


Figure 4-8 Bollore Africa Logistics Operates Primarily through Its Network of Business Locations and Port Terminals in Africa

Bollore is a French company and the current operator of the container terminal at the Port of Abidjan. “Bollore Africa Logistics” is the first integrated logistics network on the African continent and is also the preferred operator for ports and railway public-private institutions. Among the 55 countries where it operates, 45 are African countries, mainly concentrated in Central and West Africa. Bollore currently has over 25,000 partners in these African countries, making it the leading logistics provider in Africa. Its services are utilized by clients across Africa and around the world.

The French company CMA CGM Group was established in 1978 and is the leading container shipping company in France and the third largest globally. With a fleet of 536 young and diversified vessels, it operates over 200 shipping routes worldwide, providing logistics services to more than 400 commercial ports. Its annual container business throughput exceeds 18 million TEUs. With over 29,000 employees, its operations span over 150 countries and 420 commercial ports globally. The company has a long history of development, accumulated customer relationships, government

relations, and grassroots relationships, as well as the construction of comprehensive soft and hard infrastructure and advanced CRM management across more than 600 locations. CMA CGM also has a well-established route network in the African region.

Since its operation in March 2018, the joint operation of China Harbour Engineering Company (CHEC), Bollore, and CMA CGM has been striving to develop Kribi into the most important hub port in Central Africa, meeting the demand for mutually beneficial interests.

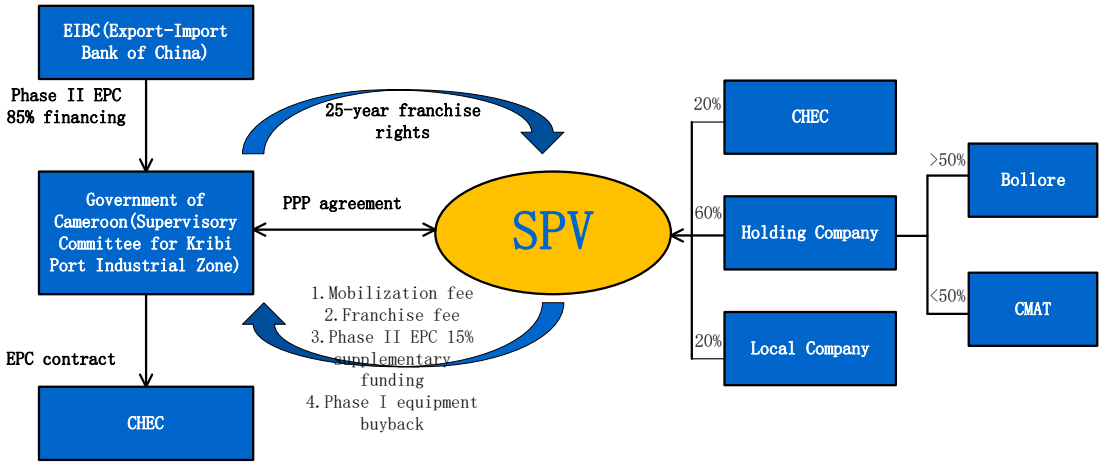


Figure 4-9 Kribi Deepwater Port Container Terminal Operation Model

Bollore Africa Logistics is a major shareholder and operating company. With the largest logistics transportation service provider and an integrated logistics network on the African continent, the company has successfully operated the Port of Douala, the main port in Cameroon, for many years. It has matured capabilities and experience in port operations in Cameroon. Through training of local staff, it has developed comprehensive operational plans including maintenance, human resources, operational assessment, marketing, security, container handling, and other port operational activities to enhance the quality and efficiency of port operations. This ensures a steady increase in international container transshipment volume at the Kribi port.

As one of the project shareholders, CMA CGM, as well as being one of the major port customers (65% of vessels calling at the port belong to CMA CGM), has continuously developed international transshipment business in European and West African coastal ports. It has improved port operational efficiency through adjustments and extensions of international shipping routes. In 2020, a Far East route was opened, extending container liner services to markets in China and other East Asian countries, significantly enhancing the port's transshipment business.

China Harbour Engineering Company (CHEC) is not only the EPC contractor for the Phase I and II of the Kribi project but also the designated equipment supplier and maintenance provider. In 2018, CHEC, together with ZPMC, conducted emergency repairs and maintenance of port machinery and equipment to ensure the timely and safe operation of the terminal. In 2019, during the debt restructuring crisis in Cameroon, CHEC facilitated the acceleration of the financing process by the Cameroonian government, ensuring the start of construction for Phase II of the container terminal. This laid the foundation for the smooth operation of a higher-level Phase II container terminal. During this period, CHEC also promoted the "inland dry port" strategy for countries such as Central African Republic and Chad, extending the maritime logistics chain to inland African countries.

Due to the global economic slowdown caused by the COVID-19 pandemic, the expected growth rate of container business has decreased, with shipping companies predicting a global container volume growth rate of 1%-3%, lower than the 4% growth rate in 2018. The growth rate in Africa may be lower than the global average. China Harbour Engineering Company, Bollore, and CMA CGM utilize their business capabilities to seek not only tax incentives but also recently requested a reduction in port taxes and fees to attract more container volume for transshipment.

Since its operation in 2018, it has been proven that the container terminal, which is in its development stage, has shown initial regional advantages as an international container transshipment hub. Container volume has steadily increased, and despite the pandemic in 2020, it even experienced a counter-trend increase with a monthly average growth rate of 28% compared to the previous year.

4.2.4 Risks and Solutions for the Kribi Deepwater Port Container Terminal Project

Based on the above analysis, it is concluded that the joint operation of the Kribi Deepwater Port Terminal project in Cameroon by China and France is an innovative model of cooperation between the two countries. It is a successful example of their joint development in a third country and an important successful initiative for Chinese companies to lead industries and engage in high-end operations. The project has brought new opportunities for the development of the Kribi region in Cameroon and the national economy, and it will also serve as a model for the implementation of the "Five Businesses, Interconnected" strategy during the "13th Five-Year Plan" period, helping the company cultivate and provide more talents in port operations.

However, it is important to recognize that with the construction of the Abidjan Port in Côte d'Ivoire, the Tema Port in Ghana, the Lekki Port in Nigeria, and the already operational Port of Djibouti, the advantages of the Kribi Deepwater Port in terms of water depth, number of berths, berth grades, and other aspects will no longer exist. In addition, In the process of promoting resource integration and sharing, as well as industrial chain integration, the cooperation among multiple participants is complex. Therefore, the operation of the Kribi Deepwater Port Container Terminal faces new risks and challenges.

Table 4-2 New Risks and Solution Based on RBV and RDT

Risk	Detail	Solution	Participant
Economic	Fund shortage	Joint financing by International financial institutions	Chinese and African governments Chinese and France companies
Political	Institutional culture conflict	Signing Memorandum of Understanding	**Trilateral** governments
Engineering & Operational	Inconsistent construction standards Language communication barrier Lack of elite talents	Talent Development - SRVE International Standard Certification	**Trilateral** governments **Trilateral** companies **Trilateral** vocational schools
Marketing	Single client base, small port scale, fierce competition Inadequate supporting facilities	Cooperative Creation of the Kribi Free Trade Zone	Chinese and African governments **Trilateral** companies

(I) Economic Risks

The Kribi Deepwater Port Container Terminal project in Cameroon has a long duration, large scale, wide scope, and high risk. General financial institutions are unable to bear large loans, and the Cameroonian government, due to its high debt in recent years, is also unable to bear the entire cost. Therefore, funding is a major challenge. According to the internal feasibility report, the investment in the construction of the second phase of the project in Cameroon amounts to $716,225,057. In this loan application, in addition to the investment of $716,225,057 in the construction of the second phase of the Kribi project, it also includes the changed construction investment of $77,398,462

for the first phase of the Kribi project, making a total of $793,623,519. Considering the construction period interest of $24.62 million and working capital of $4.06 million, without considering loan fees, loan commitment fees, and credit insurance costs, the total investment of the project is $822.3 million. The project will ultimately adopt a financing approach, with a total loan amount of $674.58 million from Chinese financial institutions for construction investment, and the remaining 15% of construction investment, construction period interest, and working capital totaling $142.12 million will be self-financed by the Cameroonian side. The project intends to apply for preferential buyer's credit from Chinese financial institutions, with an annual interest rate of 2%. The repayment plan considers a 7+13-year period, meaning that only interest will be paid in the first 7 years, and starting from the 8th year, repayment will be made in equal installments of principal and interest over 13 years. The only policy-oriented credit insurance financial institution in China, China Export & Credit Insurance Corporation (Sinosure), will provide insurance coverage after evaluating the risks, and China Export-Import Bank will provide preferential export buyer's credit, thereby sharing the risk while solving the funding issue. Currency depreciation and inflation may lead to increased costs for the construction investment and operation of the planned project, which could affect the project's profitability.

To mitigate economic risks, the project proposes the following measures: 1) Whenever possible, project revenues should be settled in universally accepted currencies such as USD or EUR, while local currency can be used to pay local personnel salaries and purchase raw materials, reducing the holding of local currency. 2) Strengthen monitoring of market price fluctuations for construction materials and raw materials required for operations, timely procurement, and maintain appropriate reserves of raw materials. 3) Establish a multi-channel, long-term cooperative system for raw material procurement and strive for pricing power.

(II) Social Risks

There are no anti-government armed organizations in Cameroon, but there have been incidents of pirate activities disturbing the lives of local residents in the western coastal areas. There have been multiple pirate attacks on fishing boats and patrol boats of the military and police, as well as cases of pirates landing and robbing banks and shops. Cameroon has experienced cases of violent crimes and gang-related activities, particularly in the economic capital, Douala, where the murder and theft rates are relatively high. There have been several cases of kidnapping, extortion, and murder targeting overseas Chinese and Chinese-owned institutions in Cameroon. During the preparation phase of Phase I of the project in Cameroon, the project site also experienced incidents of violent robberies. However, the Cameroonian government subsequently deployed national forces and police to the project site to provide 24-hour security monitoring and protection. Violence triggered by poverty, political factors, social conflicts, and tribal protection customs is a social risk that needs to be taken seriously. Incidents such as violent conflicts or kidnapping events occurring in the vicinity of the proposed project site could have adverse effects on the project implementation.

To mitigate social risks, the following measures will be taken: 1) Respect the customs of the local country and tribes, respect the culture of the surrounding residents and tribes, and handle the relationship with the local residents and tribes reasonably. 2) Strengthen employee management to avoid conflicts with local residents and refrain from participating in violent events and conflicts between local tribes. 3) Enhance self-security and protection measures, raise awareness of preventing sudden violent incidents, and request appropriate protection from the local government and military. Actively fulfill corporate social responsibilities, integrate into the local community, and focus on sustained investment in public welfare. 4) At the same time, the owner

commits to deploying the military to protect the contractor's personnel and property on the construction site during the project construction period.

(III) Engineering Risks

From an engineering and technical perspective, the content of this project belongs to general port construction and facilities. The technologies and equipment used in the design and construction are mature. Considering the degree of risk impact and the possibility of risks occurring, the technical risks of this project are relatively low, but communication issues still exist. Firstly, there are inconsistencies in construction standards. The Chinese side emphasizes construction experience, while France and its consulting team emphasize theoretical basis and deductive reasoning. Both sides are unfamiliar with each other's standards. For example, the standards for "berth length" and "anchorage for berthing" were initially questioned by the supervising party, which requested compliance with European standards but did not provide specific specifications. The Kribi construction team conducted a detailed investigation by comparing relevant regulations from China and Europe and conducting on-site investigations, and finally identified the true cause of the differences. After communicating with the supervising party, the construction proceeded smoothly, and Chinese standards were recognized by both French and non-French parties, bringing Chinese standards closer to global recognition.

Secondly, there are language communication barriers, and English translation is learned and used simultaneously. The local languages spoken in Cameroon are English, French, and local dialects. Chinese is not widely understood, so English communication and experimental verification are required when comparing Chinese and European standards. When facing complex processes such as container handling and dock design, although these processes are well-established in China, there is no relevant experience in Cameroon. Even English cannot adequately explain the relevant professional

terminology, so on-site hands-on teaching is necessary. This is a common issue for Chinese companies operating in Africa. Most importantly, the Kribi region may lack skilled workers and technical personnel, which could result in slow progress of the project. The lack of necessary skills and professional knowledge may lead to a decrease in construction quality, delays in project schedules, and increased costs. Moreover, the lack of safety awareness and proper work practices may also lead to accidents and injuries. Therefore, China Harbour Engineering Company Limited, as an experienced engineering contractor, provides strong guarantees for the successful implementation of the project. The company will deploy a management team and professional construction team with rich port construction experience to the site, driving the joint implementation of the project with the local labor force.

In addition, the following measures are proposed, 1) Conduct pre-employment training for local workers and provide regular retraining during the project implementation process; 2) Provide Health, Safety, and Environment (HSE) training for all project personnel, strengthen HSE awareness, and strictly implement on-site HSE management; and 3) Strengthen project quality management, enhance quality control awareness, and ensure the participation of all personnel in quality management.

(IV) Operational Risks

Operational risk refers to the risks posed to the project by factors such as port management, the professional skills and educational levels of operational personnel, and operational management levels. Cameroon is known for its emphasis on education in the Sub-Saharan African region. The country’s education budget accounts for approximately 10% of the government’s total budget. Currently, the national illiteracy rate in Cameroon is 24.1%, and the enrollment rate for school-age children is 83.3%. Therefore, the labor quality in Cameroon is relatively higher compared to other countries in Sub-Saharan Africa.

The construction and operation of this project require a large number of personnel with certain technical and management skills. Therefore, the project will develop relevant talent development plans, carry out personnel training and reserves, and improve management systems to mitigate the risks of potential issues such as varying technical skill levels among employees, insufficient talent pool, and low production and operational efficiency.

(V) Market Risks

Market risk primarily refers to the risks that arise from insufficient import and export container volume, business volume, and handling rates due to changes in supply and demand and adjustments in competitors' strategies. This may impact the project's profitability and repayment capacity.

1) Slow growth in container volume and intense competition in transshipment business: Affected by the global economic slowdown, the expected growth rate of the container business has declined. Shipping companies predict a global container volume growth rate of 1%-3%, lower than the 4% increment in 2018. The growth rate in Africa may be lower than the global average. Shipping companies are experiencing increased costs and heightened price sensitivity. The Kribi Deepwater Port aims to compete with the Port of Douala as its benchmark port for attracting routes from Northern Europe, Southern Europe, and Asia. However, as a newly established port, it is difficult for Kribi to compete with the Port of Douala in terms of recognition, supporting facilities, and promotional efforts in the short term. For example, Maersk, as a partner of CMA CGM in the transshipment business, has ceased its transshipment operations to Kribi due to higher costs compared to the Port of Douala, resulting in an impact on CMA CGM's Asian routes. If CMA CGM only handles Asian routes through its own mother

vessels and feeder vessels, the additional cost compared to the codeshare arrangement with Maersk at the Port of Douala would be 12 million euros.

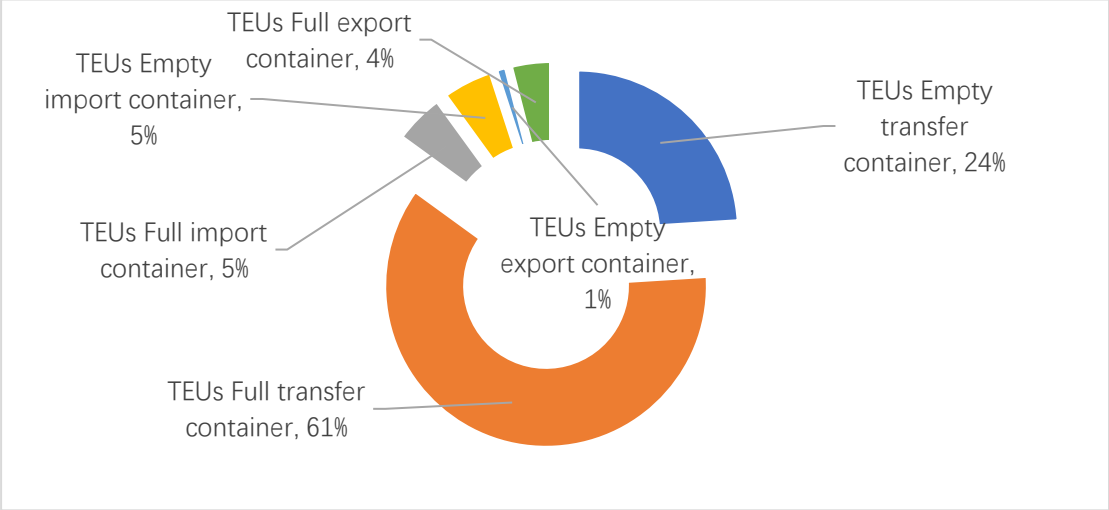


Figure 4-10 Proportion of Container Import, Transit and Export in Kribi Deepwater Port

2) Official inauguration ceremony not yet held, limited influence on neighboring countries. The government plans to organize an official inauguration ceremony with the attendance of the highest national leadership and invitations to neighboring landlocked countries such as Central African Republic and Chad to increase the visibility of the Kribi Deepwater Port in neighboring countries. However, the date has not been determined yet. The land transit agreements between the Cameroonian government and Central African Republic, Chad, and other countries have not been signed, and bilateral agreements such as customs agreements are not yet in place. The road and rail infrastructure from Kribi to Central African Republic and Chad are lacking, while from the Port of Douala to these countries, preliminary road networks are already in place, allowing goods to reach their destinations within 24 hours. Currently, the road conditions from Kribi to Central African Republic and Chad are poor, the distance is long, and the toll fees are high.

3) Single customer and small port scale. Currently, the main customer of the operating company is CMA CGM (64% of arriving vessels are from CMA CGM). Maersk is currently only engaged in transshipment business in Kribi, and there are no industrial and commercial activities in the Kribi area except for a cocoa powder factory under construction. In addition, the cost advantage of port expansion in Kribi is not significant. The fees collected by the operating company are 10% lower than those of the Port of Douala. However, the port authority charges higher scanning, security, and tax fees than the Port of Douala. The overall tariff standards for port operations in Kribi are on par with the Port of Douala. The Kribi Deepwater Port, relying on its natural conditions, has attracted importers of alcohol and tobacco. However, in October 2018, the port authority raised the miscellaneous charges from 626,000 XAF to 1,200,000 XAF (net weight of a 20' container weighing 23 tons).

Simulation importation TC via Douala/Kribi

							Comparaison avec tarifs PAK 2015-2016		Comparaison avec tarifs officiels PAK 2018	
		Poste	Tarif PAD/DIT base 2018	Tarifs PAK/KCT 2015-2016	Tarifs PAK homologués 2016	Tarifs officiels PAK/KCT 2018	Différence PAD-PAK	Surcoût Kribi	Différence PAD-PAK	Surcoût Kribi
1 TC	40'	Acconage	143 000	128 696	128 696	128 696	- 14 304	-10%	- 14 304	-10%
NDCA		Relevage	88 000	79 200	102 960	102 960	- 8 800	-10%	14 960	17%
24	Tonnes	Scanning	85 000	85 000	75 000	75 000	-	0%	- 10 000	-12%
		Redevance sécurité*	1 944		3 840	6 000	- 1 944		4 056	286%
		Taxe débarquement	48 600	32 800	75 000	75 000	- 15 800	-33%	26 400	74%
		TOTAL	**366 544**	**325 696**	**385 496**	**387 656**	**- 40 848**	**-11%**	**21 112**	**6%**
							-			
1 TC	20'	Acconage	117 000	105 297	105 297	105 297	- 11 703	-10%	- 11 703	-10%
NST1 (1ère nécessité)		Relevage	44 000	39 600	51 480	51 480	- 4 400	-10%	7 480	17%
20	Tonnes	Scanning	60 000	60 000	65 000	65 000	-	0%	5 000	8%
		Redevance sécurité	674		3 280	1 600	- 674		926	170%
		Taxe débarquement	16 860	19 680	15 000	20 000	2 820	17%	3 140	23%
		TOTAL	**238 534**	**224 577**	**240 057**	**243 377**	**- 13 957**	**-6%**	**4 843**	**2%**
							-			
1 TC 2	20'	Acconage	117 000	105 297	105 297	105 297	- 11 703	-10%	- 11 703	-10%
NST 2 (Sucre)		Relevage	44 000	39 600	51 480	51 480	- 4 400	-10%	7 480	17%
22	Tonnes	Scanning	60 000	60 000	65 000	65 000	-	0%	5 000	8%
		Redevance sécurité	1 800		3 280	2 400	- 1 800	-100%	600	73%
		Taxe débarquement	45 000	19 680	30 000	30 000	- 25 320	-56%	- 15 000	-73%
		TOTAL	**267 800**	**224 577**	**255 057**	**254 177**	**- 43 223**	**-16%**	**- 13 623**	**-6%**
1 TC	20'	Acconage	117 000	105 297	105 297	105 297	- 11 703	-10%	- 11 703	-10%
NDCA (produits manufacturés)		Relevage	44 000	39 600	51 480	51 480	- 4 400	-10%	7 480	17%
19	Tonnes	Scanning	60 000	60 000	65 000	65 000	-	0%	5 000	8%
		Redevance sécurité	2 429		3 280	4 000	- 2 429		1 571	140%
		Taxe débarquement	60 720	19 680	50 000	50 000	- 41 040	-68%	- 10 720	-38%
		TOTAL	**284 149**	**224 577**	**275 057**	**275 777**	**- 59 572**	**-21%**	**- 8 372**	**-3%**

Figure 4-11 Example of Container Operation Charges

4) Inadequate supporting facilities affecting import and export business. Using import business as an example, the lack of road and rail infrastructure hinders coverage of 60% of the population outside the Littoral, West, Southwest, and Northwest regions. To cover these areas, road projects such as the improvement of the Edea-Kribi road, construction of the ring road in Kribi, construction of the Kribi-Lolabe-Yaoundé road via Ebolowa, and integration of the Kribi-Lolaberoad with the East Cameroon road network need to be completed. Currently, the road from Kribi to Yaoundé is in poor condition, leading to high transportation costs and extended transit times. The lack of supporting facilities such as cold storage and processing plants also affects the development of import and export businesses.

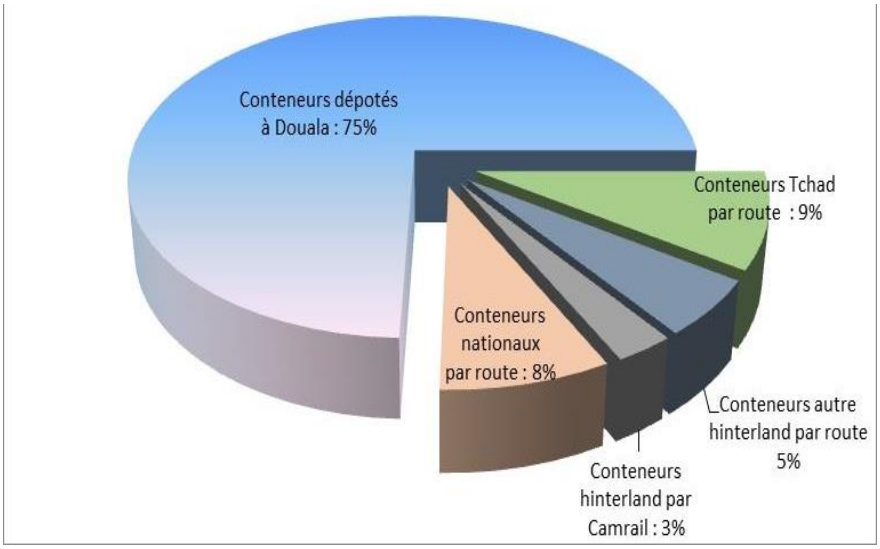


Figure 4-12 Destinations Containers – en TEU (2017)

However, according to the throughput forecast of this project, the market operation of the proposed project will be based on Cameroon, Chad, Central African landlocked countries and international water and water transfer markets. From the current situation and trend of economic and social development in Cameroon and neighboring countries, it is more likely that the container throughput will meet the expectations. Therefore, the demand of this project is more likely to meet the expectations, and the possibility of

market risk is lower. However, from the perspective of improving the project's profitability, repayment ability and anti-risk ability, the project will take the following preventive measures, 1) Market diversification. The project can actively explore new markets and attract additional shipping companies and customers. Efforts can be made to promote the advantages of the Kribi Deepwater Port, such as its natural conditions, modern infrastructure, and potential for growth. Targeting trade routes from Europe, Asia, and other regions, targeted marketing and promotional campaigns can be conducted to increase awareness and attract new customers; 2) Strengthening competitiveness. The project can focus on improving operational efficiency and reducing costs to enhance competitiveness. This can involve optimizing port operations, streamlining logistics processes, and implementing advanced technologies to improve productivity and reduce turnaround times. Collaboration with shipping companies and other stakeholders can also be pursued to develop cost-effective solutions and attract more business; 3) Infrastructure development. Collaboration with the government and relevant stakeholders can be established to prioritize the development of supporting infrastructure, such as road and rail networks, connecting the port to major economic centers and neighboring countries. This will facilitate efficient transportation and improve accessibility for importers and exporters; 4) Diversification of customer base. While CMA CGM is currently the main customer, efforts can be made to attract additional customers from various industries. The project can explore partnerships with companies engaged in different sectors, such as manufacturing, agriculture, and mining, to promote the use of the port for their import and export activities. This will reduce dependence on a single customer and diversify the revenue streams; and 5) Continuous improvement and adaptability. The project should monitor market trends, changes in competitors' strategies, and customer demands. By staying updated on industry developments, the project can proactively adapt its operations, services, and marketing strategies to meet evolving market needs. This may involve introducing new services,

enhancing customer experience, and implementing innovative solutions to differentiate the port and maintain competitiveness.

4.3 Collaboration Enhancement Path Based on RBV and RDT

4.3.1 Talent Development - SRVE International Standard Certification

In recent years, there has been a growing demand for diverse talents in countries along the Belt and Road, coupled with an increasing number of Chinese enterprises venturing abroad to support the Belt and Road Initiative. The demand for technically skilled and versatile talents with an international perspective has been on the rise. However, the local workforce in these countries falls short of the required professional qualifications, highlighting the urgent need for high-quality vocational education and cooperation to provide continuous intellectual support and talent assurance for construction projects. In 2019, the Ministry of Education and the Ministry of Finance issued the "Opinions on Implementing the Plan for China's High-level Vocational Schools and Programs", which proposed exploring channels and models for international vocational education services to assist developing countries, providing education and training for overseas employees of Chinese enterprises, and promoting the localization of technical and skilled talents. In 2020, the Ministry of Education and other nine departments issued the "Action Plan for Enhancing the Quality and Excellence of Vocational Education (2020-2023)", which emphasized implementing actions to provide international capacity cooperation in vocational education and strengthening cooperation between vocational schools and overseas Chinese enterprises, supporting vocational schools in establishing campuses abroad, and cultivating local technical and skilled talents that meet the needs of Chinese enterprises familiar with Chinese traditional culture. These policies have not only provided guidance for Chinese vocational education to "Enterung Africa" but also indicate that China's vocational education entering Africa has become an emerging trend in Sino-African cooperation.

On the one hand, African countries have a demand for cultivating vocational and technical talents. As mentioned earlier, African social development still faces challenges such as high unemployment and high dropout rates. Additionally, vocational education in Africa lags behind, making it difficult to meet the enormous demand for vocational and technical talents in African countries' industrialization process. In this context, as developing countries, African nations hope to benefit from the Chinese vocational education model, learn from China's vocational education concepts and experiences, and improve the effectiveness of skills training. China and Africa share a solid community of common destiny and common interests, and assisting in the development of vocational education in Africa, accelerating the industrialization process of African countries, and promoting China's vocational education "entering Africa" are imperative requirements for closer cooperation between China and Africa in the new era. On the other hand, there is a shortage of local technical talents in Chinese-funded enterprises based in Africa. Since the establishment of the Forum on China-Africa Cooperation in the new era, China-Africa cooperation has been deepening. In addition, with the proposal and continuous advancement of the "Belt and Road" Initiative, Chinese-funded enterprises have seen the vast development prospects of the African market, and many have invested in establishing factories in Africa. The phenomenon of "setting up factories in Africa" is prevalent, and Chinese-funded enterprises based in Africa are growing in scale. According to data from the Ministry of Commerce, McKinsey reports, and the China-Africa Business Council, there are currently over 10,000 Chinese-funded enterprises in Africa, providing 250,000 to 400,000 employment opportunities for local people year-round. Chinese enterprises have gradually become a major force in China-Africa economic and trade investment cooperation and are undergoing a transition from "Entering Africa" to "Rooted in Africa". However, in the process of "Rooted in Africa" for Chinese-funded enterprises, the low skill levels of local African employees and the shortage of human resources for Chinese-funded enterprises have become increasingly prominent issues. In this context,

to serve Sino-African production capacity cooperation and meet the practical needs of Chinese-funded enterprises for local skilled talents, vocational education collaboration with enterprises to "enter Africa" is urgently needed.

Therefore, through visits and active participation in various international vocational education projects, it is believed that enhancing vocational education through international vocational alliance certification is the most effective approach. This approach is referred to as SRVE International Standard Certification - the Silk Road Vocational Education International Standard Certification.

To establish an internationally recognized vocational education standard that connects China, Europe, and Africa, and allows the free flow of the best vocational education resources among European, Chinese, and African countries, it is crucial to help relevant countries and enterprises cultivate a group of outstanding international vocational skilled talents. Simultaneously, it is necessary to develop cross-cultural competencies in vocational professionals, enabling the abundant local vocational skilled talents to become a competitive advantage for attracting foreign investment and promoting sustainable local economic development. In August 2022, more than 120 institutions from China, Europe, and Africa jointly launched the “SRVE International Standard Certification” with the aim of connecting the European vocational education system with the Chinese language and vocational education. This initiative has established the first and only international vocational education standard certification that emphasizes “Chinese language teaching” as an important evaluation dimension. Currently, SRVE International Standard Certification has already attracted the participation of 200 vocational colleges from China, Europe, and Africa.

Figure 4-13 Tian Xuejun, Vice Minister of Education and Director of the State Language Commission, awarded the "Silk Road Business School Online Chinese Classroom" on December 13, 2021

SRVE certification is based on the collaboration between vocational colleges in China and foreign countries, enabling the sharing of vocational education faculty and programs. For example, vocational colleges in China and France can implement joint programs and issue dual diplomas. Students and teachers can freely move between vocational colleges in China and foreign countries. By implementing effective apprenticeship programs, schools and enterprises can jointly cultivate vocational skilled talents based on employment positions. For instance, schools and enterprises can apply for an internationally aligned "SRA Apprenticeship International Education Center". Students can receive tuition-free education and apprenticeship wages, schools can have stable tuition fees, and enterprises can have a stable supply of matched and skilled talents. The government can improve employment rates through apprenticeship promotion, and local areas can enhance their international competitiveness in attracting foreign investment by having a rich pool of vocational skilled talents. By connecting different levels of vocational education, including vocational high schools, vocational colleges, vocational bachelor's degrees, and vocational master's degrees, with continuous certification that aligns and matches the French RNCP vocational qualification system. Training is provided to all vocational college teachers, helping

Chinese vocational college teachers learn and master the European vocational skills module design and assessment methods. Existing teaching programs are improved, ultimately allowing vocational education resources to be shared with vocational colleges in Africa, and cultivating a large number of vocational skilled talents for local African enterprises, Chinese enterprises, or European enterprises.

Figure 4-14 The 2022 Silk Road Education Cooperation and Exchange Conference

Based on the SRVE-International Vocational Education Standards, the SRVE-International Standardization Organization, in collaboration with Campus des Métiers et des Qualifications in France and CFA Academique du Limousin, jointly developed a series of courses on “Teaching Methods for Vocational Education Skills Modules Based on European Standards” in Chinese. Together with representatives from academic institutions and enterprises in China, Europe, and Africa, they discussed, built, and established collaborative projects on “Sino-African Vocational Education Standards and School-Enterprise Cooperation Models”. These projects aim to provide comprehensive services, based on Chinese language instruction, for the systematic development of “Advanced Management Talents” and “Vocational Skilled Talents” at the governmental and social organization levels in countries such as the Democratic

Republic of the Congo, Cameroon, the Central African Republic, Chad, Mali, Ivory Coast, Guinea, Sierra Leone, Senegal, Benin, Gabon, and other African countries.

Deepening the principle of "discussion, construction, and sharing" of SRVE, the goal is to promote the interconnection between SRVE-International Standard Certification and the European RNCP certificate system. This will effectively enhance the international influence and reputation of Chinese vocational colleges and cultivate high-quality international vocational education faculty for Chinese institutions. The key to connecting vocational education between China, Europe, and Africa lies in first achieving alignment of teaching syllabi and teaching methods between teachers from China and Europe. This includes assessing and evaluating students' vocational skills after teaching. There should also be consistency in the coordination between enterprises and schools in student skill development. Secondly, vocational education resources should be shared with Africa to cultivate vocational skilled talents required for local economic development.

Based on the SRVE-International Vocational Education Standards, SRBS and its partners will collaborate with local industries or technology parks, as well as local governments in charge, to jointly establish the "Silk Road Apprenticeship International Education Center" (SRAIEC), also known as the "SRA Apprenticeship International Education Center". This center will serve vocational and technical colleges in the local region and local enterprises, bridging the gap between international apprenticeship talent development systems in vocational education and school-enterprise cooperation. It aims to improve youth employment rates in the local region, enhance the soft power of industrial parks and cities in international investment attraction, serve as a foundation for the construction of China's modern vocational education system, and promote the establishment of a skills-based society.

Figure 4-15 Completion Certificate Recognized by SRVE International Standardization Certification Organization

The Silk Road Vocational Education International Standard Certification, jointly initiated by four educational groups from China, France, and Switzerland, is a milestone in aligning “Chinese Language + Vocational Education” with the European vocational education system. The alliance is based on the starting point of the Silk Road and serves countries and regions along the Silk Road. By establishing an international standard system for vocational education that spans regions, cultures, and industries, it aims to proactively layout in the international vocational education landscape, form vocational education brand projects, cultivate vocational skilled talents that meet the needs of “Belt and Road” enterprises, and strive for international discourse power in the vocational education field. The goal is to jointly cultivate Chinese entrepreneurs and senior managers who understand African culture and have a fondness for Africa, thereby promoting economic and trade cooperation between China and Africa. Simultaneously, it aims to cultivate African entrepreneurs who understand Chinese business culture, business practices, and enterprise management models, and possess cross-cultural communication skills. It also aims to train a group of young Africans who are familiar

with Chinese culture and proficient in Chinese communication skills, providing them with opportunities to collaborate with Chinese enterprises and an international platform for innovation and entrepreneurship, including opportunities to work in Chinese companies. Assistance will be provided to African universities and Chinese vocational colleges in jointly running schools, cultivating a group of senior management talents and vocational skilled talents proficient in the Chinese language to meet the talent demands of international companies in Africa.

In addition, the “Belt and Road” Vocational Education Alliance and the “Chinese Language Alliance” have reached deeper cooperation. With complementary advantages, they have made explorations in promoting the internationalization of vocational colleges and have achieved certain results in resource sharing, modern talent development, and Sino-foreign cooperation and exchanges. The Chinese Language Alliance will continue to uphold the concept of win-win cooperation, continuously strengthen the mechanism for international online Chinese language education market, cooperate with alliance partners, colleges, and enterprises, utilize the cluster effect of the brand, and form a new format of online Chinese language education that is driven by demand, market-oriented, technologically supported, innovation-driven, and diverse. This will support the international development of Chinese language + vocational skills education and empower Chinese vocational colleges to “Going Global”.

Figure 4-16 Forum for Accreditation of International Standards for Vocational Education

The “Belt and Road” Vocational Education Alliance focuses closely on the needs of industrial development in countries participating in the Belt and Road Initiative and serving Chinese enterprises “Going Global” and international production capacity cooperation. It actively cultivates technical and skilled talents with vocational skills required for the economic and industrial development of partner countries. It is a significant innovation in the international development of Chinese vocational education. The Alliance adopts a combination of academic education and vocational training, sharing high-quality vocational education and Chinese product technology with the world. It promotes cooperation, mutual learning, and skill dissemination in the field of vocational education, becoming a technical hub on the Belt and Road and a national showcase for China’s vocational education “Going Global”.

Promoting the development of vocational education in countries along the Belt and Road through industry-education integration is not only an inevitable path for vocational education to participate in global educational competition and enhance international influence, but also an important platform for serving outward-oriented

enterprises and building a good relationship within the Belt and Road. The two coexist, complement each other, and achieve mutual benefits. Led by industries, they are formed by combining industry-leading universities, well-known schools, and vocational colleges that offer similar programs, in collaboration with industry sectors, enterprises, and research institutions. Based on the needs of industry development, the alliance brings together industry experts, enterprises, and vocational education experts within the group to integrate international advanced vocational education concepts, models, and technologies with the actual situation in China. It studies the talent demands of the industry, determines the positioning and training programs for professional talents, and makes dynamic adjustments to cultivate technically skilled talents that meet the needs of industrial development, providing talent and intellectual support for industry transformation and upgrading.

International industry-education integration is oriented towards the construction of the Belt and Road Initiative, cultivating highly skilled talents for international construction and selecting large internationalized enterprises as cooperation partners, introducing international industrial resources. In terms of vocational education, international industry-education integration aims to meet the continuous demand of Chinese “Going Global” enterprises for high-quality technical and skilled talents on one hand, and fully utilize the labor resources in countries along the Belt and Road on the other hand, strengthening the cultivation of local talents and providing skills and technical services at the local level. Universities should focus on the training of applied technical and skilled talents based on local labor forces, ensuring an adequate supply of labor resources for "going global" enterprises.

Enterprises and research institutions participate in vocational education by utilizing capital, technology, knowledge, equipment, management, and other elements. Vocational colleges collaborate with enterprises in talent cultivation, technological

innovation, employment and entrepreneurship, social services, and cultural heritage, achieving deep integration between the industrial chain and the education chain. This integration is mainly manifested in the following five aspects, 1) Integration of corporate culture and educational culture: The corporate culture of the group enterprise is integrated into talent cultivation, making the campus culture more industry-oriented; 2) Integration of talent cultivation and enterprise needs: Based on the changing requirements of job skills, knowledge, and qualities in enterprises, continuously reforming and innovating talent cultivation models helps to cultivate talents that meet market needs; 3) Integration of production and teaching: New processes, equipment, materials, and technologies used in the production of group enterprise products are integrated into the teaching content. Products and projects serve as case studies, while workshops and project sites serve as classrooms, truly achieving the integration of theory and practice; 4) Integration of enterprise management and educational management: Expanding the influence of enterprises in talent cultivation standards, vocational qualification certification, student internships, and employment, effectively reflecting the leading role of enterprises in group-run educational institutions; and 5) Integration of production resources and teaching resources: The soft resources such as brands, reputation, achievements, and management within the group members, as well as the hard resources such as personnel and materials, can be fully shared and complement each other. Among the member units within the group, including enterprises, colleges, and research institutions, there is intercommunication, resource sharing, and mutual complementarity, achieving a win-win situation.

4.3.2 Cooperative Creation of the Kribi Free Trade Zone - Connecting the Market and Back-end Infrastructure

Phase I of the Kribi Deepwater Port project has been completed and put into operation, attracting interest from multiple international shipping companies to use Kribi as their hub port for liner services. Construction of port logistics facilities around the Kribi

Deepwater Port is underway, bringing new opportunities for international capacity cooperation and industrial modernization development in Cameroon. The Cameroonian government plans to establish a free trade zone in Kribi, leveraging the port's advantageous location for shipping, actively engaging in international capacity cooperation, expanding foreign trade, and playing a positive role in cultivating and improving the country's industrial system and enhancing national socio-economic development. In October 2015, China Harbour Engineering Company (CHEC) and the Guiding Committee of the Kribi Port Industrial and Logistics Zone in Cameroon signed an MOU for the Kribi Free Trade Zone project, agreeing to adopt a PPP (Public-Private Partnership) model. The Cameroonian government is responsible for providing land and preferential policies, while CHEC is responsible for park investment and financing, construction, management, and operation.

The free trade zone will be based on the planned layout of the Kribi highway, forming an integrated layout of the front port (Kribi Deepwater Port), middle zone (bonded logistics park), and back zone (industrial park). It will be divided into heavy industry zones, light industry zones, logistics parks, and service centers.

Figure 4-17 Location Map of Kribi Free Trade Zone

The Kribi Free Trade Zone relies on the port conditions of the Kribi Deepwater Port and is positioned as a new gateway for national openness. In the future, it will undertake and expand the international shipping functions of the Douala Port. The planned features of the free trade zone include a port free trade zone, development of bonded warehousing, export processing, trade logistics, and international transit trade. The development of the Kribi Free Trade Zone will promote Kribi to become a trade gateway city in southern Cameroon and a national hub.

In terms of industrial selection, the Kribi Free Trade Zone will leverage Cameroon's abundant natural resources and labor force, considering market demand, resources, and policies. In terms of market demand, it will analyze Cameroon's current export trade structure and industrial demand during the industrialization process at the national level. It will also explore development opportunities based on the location and the demand of neighboring countries and international industrial relocation. Considering the current status of resources in Cameroon, it will extend the industrial chain based on the resources and industrial development foundation of the Kribi Deepwater Port, thereby increasing the value-added of industries. In terms of policies, it will coordinate with Cameroon's government long-term planning and analyze the industrial demand to achieve national development goals. According to the preliminary research on the Kribi Free Trade Zone project proposal, the zone will develop seven major industries, including food processing, textile and light industry, steel processing, building materials processing, petrochemical industry, machinery and equipment assembly, trade logistics, and more.

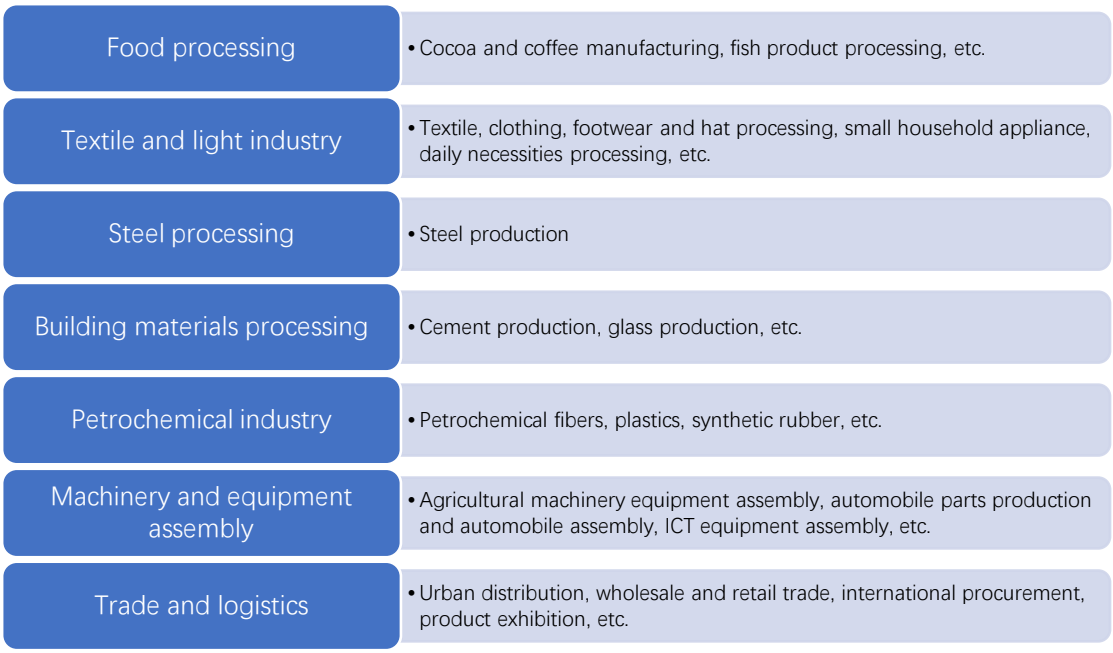


Figure 4-18 Industrial Development Classification of Kribi Free Trade Zone

With the planning and construction of the Kribi Free Trade Zone, the zone will greatly enrich the industrial structure of the Kribi region and enhance its industrial development level. The planned Kribi Logistics Park is located in the southern province of Cameroon (SUD), south of the coastal city of Kribi, adjacent to the rear of the Kribi Deepwater Port. It is a pilot project of the Kribi Free Trade Zone. The total land area is approximately 455.4 hectares, connected by Provincial Road P8. The Kribi Free Trade Zone is approximately 24 kilometers away from Kribi city, providing an appropriate distance for interaction between the port and the city. Currently, the Kribi bypass highway has started construction (38.5 km), which will effectively connect Kribi city and the deep-sea port, further enhancing the accessibility of the port city. The Edea-Kribi-Lolabe standard railway construction project has completed the feasibility study. With the gradual construction of the Kribi port, the southern region will become one of the main areas for the future expansion of Kribi city. The advantageous location near the Kribi port area and abundant land resources provide good development prospects for the Kribi Logistics Park.

Figure 4-19 Location of Kribi Logistics Park

As a pilot project of the free trade zone, the Kribi Logistics Park relies on the logistics demand of the Kribi Deepwater Port and the free trade zone industries. It will become an important node in the central Africa's maritime channel and a significant regional logistics center in Cameroon. The planned logistics park fully utilizes the advantages of transportation and location in the free trade zone, actively develops bonded logistics based on the Kribi Deepwater Port, and actively undertakes the overflow of logistics functions from Douala, contributing to the development of the "Yaoundé-Douala-Kribi" economic pattern. Through unified planning and management, establishing a scientific mechanism for introducing logistics industries, and creating a new engine for modern logistics development. Based on innovative development models, optimized resource integration, and supported by preferential policies of the Cameroonian free trade zone, as well as the advantageous conditions of the Kribi Deepwater Port, this project will become an important node in the central Africa's maritime channel and a significant regional logistics center in Cameroon. The project will be built into an integrated demonstration zone for port, free trade zone, comprehensive bonded zone, commodity

trading and exhibition, multimodal transportation, logistics rapid distribution, trade services, and ecological development in mountains and lakes.

Table 4-3 The Industrial System Served by Kribi Logistics Park

Industrial system			**Recommended industries**
Dominant industries	Food processing industry		Cocoa and coffee manufacturing, fish product processing, etc.
	Machinery and equipment manufacturing industry		Agricultural machinery equipment assembly, automobile parts production and assembly, ICT equipment assembly, etc.
	Steel processing		Manufacturing of profiles, plates, pipes, metal products, etc.
Supplementary industries	Daily light industry manufacturing	Textile&clothing category	Manufacturing of textiles, clothing, footwear, bags, etc.
		Small home appliances category	Small home appliances such as computers, radios, televisions, air conditioners, etc.
		Daily chemical industry category	Production of daily chemical products such as soap, toothpaste, shampoo, etc.
	Home furnishing and building materials industry		Wood processing, furniture manufacturing, cement production, manufacturing of new building materials, etc.
	Petroleum processing industry		Crude oil, refined oil, etc.
Supporting industries	Public service industry		
	Commercial service industry		

As a functional area providing specialized logistics services, the logistics park is complementary to the development of regional industries. Therefore, in the planning process, it must closely integrate with the current status and development direction of local industries. Considering the contribution of industries to regional development goals and their own competitiveness, the future leading industries to be served by this project and the industries suitable for priority development in the near term should be

determined. The development of these industries will be the main driving force for the development of the logistics park.

With the construction and operation of the Kribi Deepwater Port and the planning of the Kribi Free Trade Zone, Kribi will become an important import and export trade gateway in the southern region of Cameroon. The convenient transportation conditions and superior location of the Kribi region will gradually enhance its attractiveness to various industries. The strategic location and development vision of the Kribi Free Trade Zone will attract excellent industries from Cameroon and even the Central African region to develop in the Kribi region. At the same time, the planning of the Kribi Free Trade Zone will directly promote the development level of industries such as steel processing, petrochemicals, and machinery manufacturing, thereby enhancing the industrial agglomeration effect of various industries in the Kribi region. The further development of industries will stimulate the vitality of the port and logistics industry, and the development of the port and logistics industry will also promote and enhance the level of industrial development in the region. From the perspective of logistics flow, the completion of this project will become an important hub for the port logistics industry and regional industrial economy in the Kribi region. The project will attract containerized goods from overseas markets into the Kribi region, and it will also serve as a logistics hub for industries including the Kribi Free Trade Zone, facilitating the movement of goods from the on-site processing industries and serving as an important window or distribution center for the export of goods from the Kribi region.

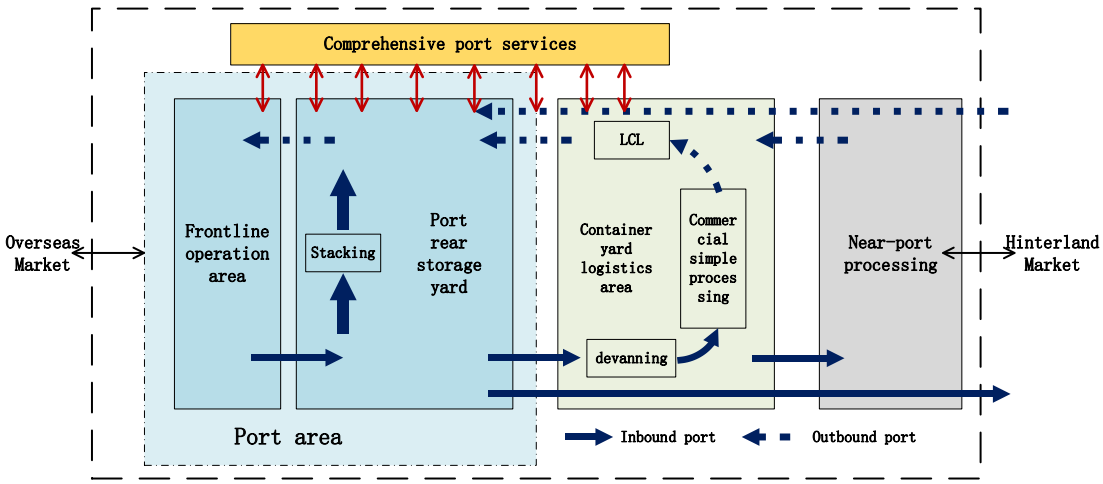
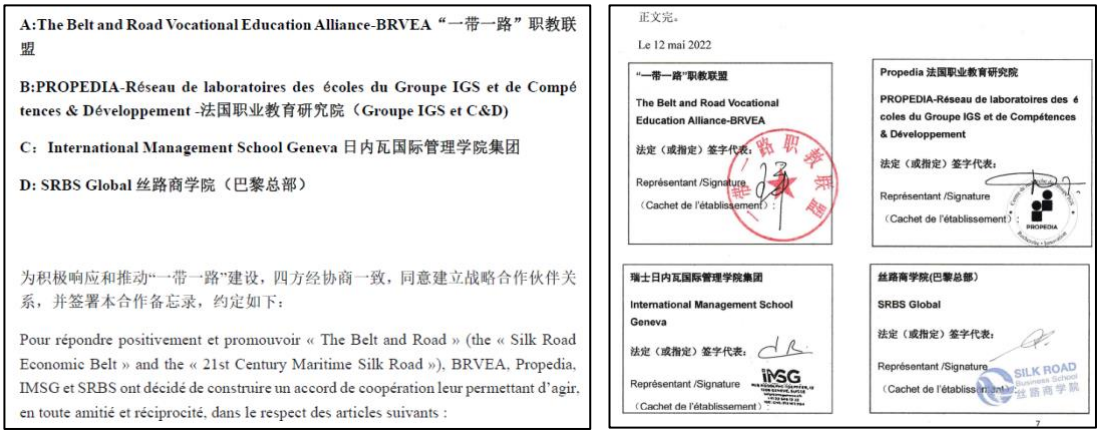


Figure 4-20 Logistics Flow of Kribi Deepwater Port - Logistics Park - Industrial Zone

4.3.3 Signing Memorandum of Understanding - Mitigating Geopolitical Risks

China's infrastructure construction in non-port areas may face geopolitical risks at three levels: international, regional, and host country domestic. Meanwhile, the infrastructure projects themselves may also increase the probability of these risks erupting or intensifying. Firstly, Western countries, based on their "geopolitical imagination", misjudge and question China's non-strategic intentions, and hinder the normal progress of China's infrastructure projects in non-port areas through media reports or non-governmental organizations. Secondly, there is a high risk of spillover conflicts within sub-regions in Africa, as well as challenges posed by the coordination of interests and geopolitical economic competition among regional countries, which present challenges for China's active participation and integration into regional interconnectivity plans. Finally, the overlay of ethnic issues and democratic politics in the host country, coupled with the disruption of local social interest structures and involvement in inherent contradictions by the infrastructure projects themselves, significantly increase the geopolitical risks of infrastructure construction projects. The harm caused by these geopolitical risks has already been reflected in project implementation and market performance (such as the market risk in the case of the Kribi Deepwater Port in Section 4.2).



A:The Belt and Road Vocational Education Alliance-BRVEA "一带一路" 职教联盟

B:PROPEDIA-Réseau de laboratoires des écoles du Groupe IGS et de Compétences & Développement -法国职业教育研究院（Groupe IGS et C&D)

C：International Management School Geneva 日内瓦国际管理学院集团

D: SRBS Global 丝路商学院（巴黎总部）

为积极响应和推动"一带一路"建设，四方经协商一致，同意建立战略合作伙伴关系，并签署本合作备忘录，约定如下：

Pour répondre positivement et promouvoir « The Belt and Road » (the « Silk Road Economic Belt » and the « 21st Century Maritime Silk Road »), BRVEA, Propedia, IMSG et SRBS ont décidé de construire un accord de coopération leur permettant d'agir, en toute amitié et réciprocité, dans le respect des articles suivants :

正文完。

Le 12 mai 2022

"一带一路"职教联盟

The Belt and Road Vocational Education Alliance-BRVEA

法定（或指定）签字代表：

Représentant /Signature

（Cachet de l'établissement）：

Propedia 法国职业教育研究院

PROPEDIA-Réseau de laboratoires des écoles du Groupe IGS et de Compétences & Développement

法定（或指定）签字代表：

Représentant /Signature

（Cachet de l'établissement）：

瑞士日内瓦国际管理学院集团

International Management School Geneva

法定（或指定）签字代表：

Représentant /Signature

（Cachet de l'établissement）

丝路商学院(巴黎总部)

SRBS Global

法定（或指定）签字代表：

Représentant /Signature

（Cachet de l'établissement）

Figure 4-21 Excerpt of Memorandum of Understanding signed by China, France and Switzerland

Based on understanding and analyzing the current geopolitical risks faced by China in African infrastructure construction and the potential risks they may trigger, it is necessary to address the risks at different levels and formulate targeted strategies based on previous project implementation experience, in order to effectively avoid or significantly reduce the losses caused by these risks. It should be noted that the influencing factors at the international, regional, and domestic levels do not exist in isolation but are interconnected and may transform into one another. Africa's significant ethnic issues manifest as negative democratic politics and mutual attacks between different factions under the constraints of the domestic system, as well as highly differentiated local community interests. However, if there is insufficient restraint and minimal consensus, this issue may escalate into direct conflicts between ethnic groups and spread from the center of disputes to other countries in the region. As infrastructure projects that are part of regional integration, setbacks encountered at the regional collaborative level may, in turn, harm the domestic supporters of these seaport projects. Additionally, the vested interests and entanglements of Chinese companies in the host country may be exploited by Western countries to undermine related projects and stigmatize China's economic activities in Africa. Therefore, it is necessary to adopt a more comprehensive response strategy to address the geopolitical risks and challenges arising during the project implementation process.

Firstly, in response to the international pressure from major powers, China can consider cooperating with relevant international or regional organizations and establish cooperation memoranda or other soft law instruments to actively align with its development plans in the African region. While this cooperation may come at the cost of some decision-making autonomy, it can leverage the authority of these organizations in international development or regional affairs to legitimize China's projects in Africa, truly achieving a "well-known presence" and effectively responding to international doubts. At the same time, introducing third-party supervision can enhance project transparency. On the one hand, this can prevent China's infrastructure projects in Africa from being subject to relevant accusations, and on the other hand, it can reduce the high institutional transaction costs faced by Chinese companies in non-port areas.

Secondly, in response to the interests and geopolitical risks arising from the bargaining over navigation routes and standards in sub-regional cooperation, China should play an active role in promoting regional cooperation. By signing bilateral memoranda of understanding or adopting forms such as "China + sub-regional organizations" with participants in cross-regional transportation corridors, China can guide the coordinated participation of regional countries in port construction projects. Through these soft legal and guaranteeing systems, China can confirm its role in regional interconnectivity construction and the key role in port construction planning and design, thus steadily advancing cross-regional port navigation projects.

Third, innovate risk assessment and monitoring mechanisms, and strengthen the weighting of the impact of local host country's susceptibility and long-term risks, while considering a detailed assessment of the local social interest structure. Traditional risk assessment and monitoring mechanisms rely on a standardized scientific evaluation system, which breaks down geopolitical risks into multiple evaluation indicators and

assigns certain weights to them. However, Africa's complex geopolitical structure and diverse social forces mean that this mechanism needs to be continuously adjusted according to local conditions, especially for risk indicators that are highly susceptible or long-term in nature, in order to accurately assess the geopolitical risks in the local context. At the same time, considering the reshaping effect of port construction on the local geopolitical interest structure, it is necessary to incorporate the evaluation of the local social interest structure into this mechanism and anticipate the effects brought about by project implementation in advance.

Fourth, in addition to establishing the above mechanisms for risk prevention and control, considering the particularities of seaport projects, it is advisable to try to mitigate the geopolitical risks faced by seaports through project refinement and segmentation. As large-scale infrastructure projects, the construction of ports has a long duration from the signing of construction agreements to project delivery, and the large-scale equipment and materials used in construction are relatively fixed and difficult to transfer in the short term. This makes port projects more vulnerable to geopolitical risks. Since risk warning and monitoring mechanisms themselves cannot quickly and effectively avoid loss of interests, it is necessary to control the scale of the projects and carry out segmented construction, so that timely damage control can be implemented in the face of major contingencies.

Fifth, a shift is needed from a "government-led" economic cooperation model and mindset to achieve the localization strategy of Chinese enterprises in Africa and actively assume corporate social responsibility. In the early planning and land acquisition stages of port construction, Chinese enterprises often bring their domestic project operation models and rely too much on cooperation with the host country's government, overlooking the important role of non-governmental actors, thereby causing resentment among local people. As some non-governmental actors have close

connections with Western countries, they become tools for stigmatizing Chinese projects by external forces. Chinese enterprises tend to avoid them, but they are not completely isolated. Comparatively, local non-governmental actors such as NGOs or opinion leaders have mostly grown locally or have deep roots in the local area, and they have a deep understanding of the local situation and have extensive influence. Therefore, in order to avoid geopolitical risks faced by port projects at the domestic level, especially at the local level, the seaport construction party can further strengthen communication and cooperation with local civil society and non-governmental organizations, utilizing the long-term engagement of these non-governmental actors in the local context to provide intellectual support for port planning and construction. At the same time, actively assume corporate social responsibility to achieve the redistribution of benefits generated by the seaport, compensating the groups that have been harmed by port construction and eliminating obstacles to project advancement.

Finally, at the operational level, diversifying the supply chain can ensure the smooth progress of the project. Firstly, diversify suppliers to reduce dependence on a single country or region. A diversified supply chain can reduce the risks caused by geopolitical conflicts or tensions. By seeking new suppliers, establishing multiple supply channels, and diversifying risks, companies can better cope with geopolitical uncertainties. Secondly, diversify markets to seek multiple markets to diversify trade risks. Relying on a single market can expose companies to significant losses during geopolitical tensions. Expanding into multiple markets can reduce dependence on specific markets and provide more opportunities and choices.

Chapter 5 **Conclusion**

Based on the RBV and RDT, this paper regards the technological and talent resources of French companies as integrable external resources, combined with the equipment, funds, and materials of Chinese multinational enterprises, forming a mutually complementary and strong alliance for third-party market cooperation. Together, they promote the development of industries, infrastructure, and improvement of people's livelihood in third countries, achieving an effect where 1+1+1>3. For Chinese engineering companies, the shift towards an investment model has become a consensus in the strategic transformation of overseas contracting markets, including Africa. To address the challenges involved, our chosen strategy is to collaborate with foreign companies (local industry leaders in developed countries) through PPP schemes. Based on geopolitical and macroeconomic perspectives, France has been selected as the target partner for cooperation.

We use a case study approach to address the research question. We focus on the current Sino-French-African PPP project, the Kribi Deepwater Port Terminal project, and provide recommendations for its strategic management. The first and second phases of the Kribi Deepwater Port Terminal were constructed by China Harbour Engineering Company (CHEC). Since September 1, 2015, CHEC, together with French companies Bollore and CMA CGM, formed an operating consortium that won the 25-year concession rights for the container berths at the Kribi Deepwater Port. After two years of negotiations, the consortium signed the operating agreement with the Port Authority of Cameroon, benefiting from investment and tax incentives. After completing the necessary preparations, the Kribi Deepwater Port was officially opened for operation on March 2, 2018. Since the official operation of the container terminal on March 20, 2018, the container volume gradually increased. In 2019, the container terminal achieved a revenue of 13.2 million euros, a year-on-year growth of 12.9%. Despite the COVID-19 pandemic in 2020, the monthly average container volume increased by 28%

compared to the previous year, highlighting the regional influence of the international container hub port. The successful operation of the Kribi Deepwater Port Terminal has become a case widely studied and analyzed by Chinese and French scholars and experts as a successful example of Sino-French cooperation in developing third countries. With the establishment of timber processing plants, cocoa processing plants, and other enterprises in the logistics park, the operation of the Kribi Deepwater Port Terminal has begun to provide strong impetus for the economic development of the Kribi region and Cameroon as a whole. The opening and operation of the Kribi Deepwater Port will bring new opportunities for the economic development of the Kribi region and Cameroon, and it will also serve as a model for China Communications Construction Company (CCCC) to implement its "Five Businesses and CCCC" strategy during the 13th Five-Year Plan period, helping CCCC transform and upgrade from a "construction-oriented" company to a more diversified business entity.

This paper conducts an in-depth study of the Kribi Deepwater Port Terminal case. From the perspectives of resource theory and resource dependency theory, it explores the investment model, project risks, and solutions in the trilateral cooperation. It provides detailed strategies to address issues such as talent shortage, insufficient market demand, and geopolitical conflicts, aiming to promote effective cooperation in the trilateral market from the root causes. The Kribi Deepwater Port Terminal container terminal faces challenges such as insufficient import and export container volume, resulting in significant deviations from the financial model’s revenue expectations. As a result, the operating company is currently experiencing losses and cash flow difficulties. In summary, the Kribi Deepwater Port Terminal project in Cameroon faces multiple risks. Firstly, there is a major challenge of project funding shortage. Due to the large scale of the project, it exceeds the loan capacity of general financial institutions, and the Cameroonian government is unable to bear the full cost due to high debt. To address the funding issue, China Export & Credit Insurance Corporation (Sinosure) provides

insurance coverage, and the Export-Import Bank of China provides loans. Secondly, engineering risks mainly involve inconsistent construction standards and language communication barriers. There are differences in construction standards between China and France, but the problem has been resolved through comparison and effective communication. Additionally, communication with Cameroon is difficult due to the predominant use of English and French in the country. Thirdly, operational risks involve port management, skills and education levels of operational personnel, and operational management capabilities. Although Cameroon has a relatively high level of education, it still needs to formulate talent development plans and improve management capabilities to address the risks of poor employee skills and talent shortages. Lastly, market risks include factors such as changes in supply and demand, adjustments in competitors' strategies, and insufficient business volume, which can affect project revenue and repayment capacity. These risks include slow growth in container volume, intense competition, inadequate influence in neighboring countries, a single customer base, and incomplete supporting facilities. By addressing these risks, the project can be better implemented and operated.

In this regard, this article further explores the essence behind the risks, which mainly include talent shortage, insufficient market demand, inadequate infrastructure development, and geopolitical conflicts. To address the issue of substandard talent and labor quality, two approaches are proposed: international vocational alliance education certification and international industry-education integration projects. Among them, the horizontal SRVE international standard certification aims to establish an international standard for vocational education that connects China, Europe, and Africa, facilitating the free flow of excellent vocational education resources in these regions. This certification aims to cultivate international vocational skilled talents, enhance cross-cultural abilities, and leverage the abundant local vocational skilled talents as an advantage for attracting foreign investment, thereby promoting sustainable local

economic development. Additionally, industry-education integration plays a crucial role in cultivating localized technical talents in line with the needs of the Belt and Road Initiative and cooperative countries' industrial development. The International Vocational Education Alliance combines academic education with vocational training, exporting high-quality vocational education and product technologies to the international market. It serves as a technological hub on the Belt and Road, representing Chinese vocational education. By integrating resources from vocational colleges and industry enterprises and promoting win-win cooperation, it serves regional economies and industrial development, nurturing industrial talents that meet the demands of the "Belt and Road" Initiative.

To address the issues of market demand and inadequate infrastructure development, the establishment of a free trade zone can be considered to attract a large population and industrial clusters, promoting the formation of a new port gateway city in southern Cameroon and facilitating balanced regional development. In terms of industrial selection, the Kribi Free Trade Zone will leverage Cameroon's rich natural resources and labor force advantages, considering market demand, resources, and policies. The Kribi Free Trade Zone will develop seven major industries, including food processing, textile and light industry, steel processing, building materials processing, petrochemical industry, machinery and equipment assembly, and trade logistics. The Kribi Logistics Park, as a pioneering project of the free trade zone, will become an important node in the central African maritime corridor and a key regional logistics center in Cameroon, relying on the logistics demands of the Kribi Deepwater Port and the free trade zone industries. By fully utilizing the advantages of transportation and location in the free trade zone, the logistics park will actively develop bonded logistics based on the Kribi Deepwater Port, proactively undertake overflow logistics functions from Douala, and contribute to the development of an economic pattern featuring the coordinated development of the "Yaoundé-Douala-Kribi" axis. Through unified planning and

management, a scientific mechanism for introducing the logistics industry will be established to create a new engine for modern logistics development. It will be developed into a demonstration area for integrated development, combining deepwater ports, free trade zones, comprehensive bonded zones, commodity trading exhibitions, multimodal transportation, logistics rapid distribution, trade services, and mountain-lake ecology.

To address the issue of geopolitical conflicts, cooperation with relevant international organizations and cross-regional transportation corridors can be pursued. Signing cooperation memoranda can enhance the legitimacy and credibility of the project, and the introduction of third-party supervision can enhance project transparency. Additionally, a detailed assessment of geopolitical risks should be conducted based on local conditions, considering the evaluation of local social interests and anticipating the project's impact on the local society. Diversification of suppliers and markets should be emphasized to reduce reliance on a single country or region and mitigate the risks posed by geopolitical conflicts.

Lastly, this study summarizes the challenges and solutions for the sustainable development of the trilateral cooperation.

(I) Challenges for the sustainable development of the trilateral cooperation.

– The complexity of third-party market cooperation has led to the slow establishment of mature cooperation mechanisms. On one hand, China-France third-party market cooperation projects involve a wide range of factors, with many uncertainties, high complexity, and significant risks. The roles, contributions, expectations, and benefit distribution between the two parties vary depending on the specific project, requiring flexible handling and increasing the difficulty of coordination. On the other hand, China-France third-party market cooperation is a new attempt in bilateral cooperation, lacking existing experiences to draw upon. Both parties can

only solve practical problems through on-the-job learning, which inevitably involves a trial-and-error process that requires continuous experimentation to identify effective cooperation mechanisms.

- Differences in management approaches between China and France and the cooperation of third-party countries can impact the progress of cooperation. French companies involved in third-party market cooperation are private enterprises, with project representatives or relevant personnel granted more authority. Their organizational structure is flatter, decision-making cycles are shorter, and decisions are made faster. Chinese companies, on the other hand, mostly consist of state-owned enterprises and need to conduct investment activities in accordance with the regulations and methods of the State-owned Assets Supervision and Administration Commission and Chinese central corporations. Decision-making processes for various matters require multiple layers of approval and are slower compared to their cooperation partners. Additionally, during the implementation and operation of projects, the efficiency of third-party countries' governments in handling affairs is low, and the progress of supporting work is relatively delayed. Insufficient supporting facilities such as water supply, power supply, customs, and logistics facilities related to the project can have a series of adverse effects on project construction and operation.
- The lack of favorable policy and institutional environments for bilateral and trilateral cooperation. In the promotion of China-France third-party market cooperation, there are practical issues such as a lack of effective coordination between the basic policies of the two countries in terms of taxation, trade, financing, customs, and labor. This poses challenges to daily business operations, including increased costs, reduced efficiency, and expanded risks. Specific issues include double taxation, difficulties in visa processing, and insufficient personnel security measures. For example, France currently imposes strict restrictions on the entry of foreign labor, and the construction process of some China-France cooperative

projects requires the introduction of highly skilled Chinese technicians. The types and quantities of skilled workers required may vary at different stages, necessitating flexible visa policies for skilled workers to better implement the projects. Due to the strict restrictions on foreign labor in France, it is difficult for highly skilled Chinese technicians to obtain French visas, which objectively hinders the application of mature construction and management experience from domestic Chinese companies to cooperative projects, affecting the smooth implementation and completion of the projects.

- The limitations of funds and financing are prominent in China-France third-party market cooperation. In the international engineering market, outstanding cost-effectiveness determines the probability of successful bidding. Joint bidding and cooperative construction models ensure that both parties jointly develop third-party markets on a broader basis and enhance their competitiveness. However, joint ventures often face issues regarding funding guarantees during actual operations, primarily due to limited financing channels for French companies. Financing problems are common in engineering project cooperation, leading to project delays.
- The transition from traditional contractors to operators. Operational projects have longer cycles and face more uncertainties than engineering contracting projects. When making investment decisions, a more open, forward-thinking, and systematic approach is required to develop long-term plans and strategies for port operations. As a window and platform for external cooperation, China Merchants Port actively integrates internal and external "resources," explores and creates demand, truly connects the upstream and downstream industries, and establishes a complete and healthy industrial chain centered around port operations. This progression from point to line and then to a network is necessary to fulfill the requirements of the State-owned Assets Supervision and Administration Commission for "management, operation, and withdrawal," ensuring the preservation and appreciation of state-owned assets.

– Poor cooperation from third-party countries. During the implementation and operation of projects, the efficiency of third-party governments in handling affairs is low, resulting in a series of adverse effects on project construction and operation. Taking this project as an example, the third-party government initially promised to provide supporting facilities such as water supply, power supply, customs, and logistics for the project. However, as time passed, the foreign party did not organize the related work according to the agreed-upon timeline, or the progress of supporting work was relatively delayed, causing inconvenience and difficulties during the later stages of the project's operation.

(II) Solutions for the sustainable development of the trilateral cooperation.

Establishing and improving the institutional mechanisms necessary for resource-dependent third-party market cooperation.

– Establish communication platforms and dispute resolution mechanisms to enhance mutual trust among enterprises. Trust issues in strategic cooperation in third-party markets cannot be solved solely at the enterprise level, and government guidance and support are particularly important. It is recommended that the government establish communication and dispute resolution mechanisms at the governmental level to create a favorable international environment for third-party market cooperation, enhance mutual understanding and trust between bilateral enterprises, and build a partnership based on mutual respect and equal cooperation, as well as a fair benefit distribution mechanism and a fair dispute coordination and resolution mechanism. Regarding issues caused by enterprise systems and backgrounds, China Harbor Engineering Company (CHEC) will expedite its own approval processes, actively communicate and coordinate with higher-level units, and enhance its transparency. Within the permitted scope, CHEC will introduce its company management system and approval processes to its partners, have open discussions about the limitations it faces, and enhance mutual understanding.

- Strengthen bilateral institutional consultations to provide convenient and efficient services for project cooperation enterprises. In order to promote enterprise participation in third-party market cooperation, the government should create a favorable institutional environment. It is recommended that relevant departments of China strengthen exchanges and cooperation with France and third-party countries in various aspects such as laws, taxation, diplomacy, and visas, and actively promote the implementation of bilateral investment protection agreements, free trade agreements, double taxation avoidance agreements, labor visa policies, and others. Particularly, the labor visa issue, which currently poses significant obstacles to project implementation and has been prominently raised by enterprises, should be addressed through various channels.
- Strengthen fund and currency cooperation to reduce financial risks in developing third-party markets. Firstly, in the short term, the China-France third-party market cooperation fund has not yet been established, and enterprises urgently need to solve funding and financing issues. The fundamental purpose of joint ventures is to create wealth for shareholders, but conflicts of interest inevitably arise among the parties involved. Based on the information obtained and analyzed by China Harbor Engineering Company regarding its own core interests and the core interests of the operating company, as well as the potential interests of its partners, potential conflicts and corresponding solutions should be promptly planned. It is recommended that the government promote the establishment of a special fund for the development of third-party markets, broaden channels for financing and insurance, and encourage enterprises to actively engage in cooperation. Secondly, in the medium and long term, China should strengthen international currency cooperation and expand the scale of euro swap agreements. Furthermore, China should actively establish a cross-border RMB settlement system, increase the proportion of RMB settlement in economic and trade cooperation, and effectively reduce foreign exchange settlement risks for enterprises with the cooperation of

financial service institutions, thereby enhancing the financial guarantee for third-party market cooperation.

- Establish a government and cooperative enterprise data sharing platform to facilitate efficient project cooperation. Relevant government departments should provide risk points of third countries and corresponding risk strategy analysis, and timely share official and accurate country risk advisory information, thereby effectively reducing risks associated with new countries and new markets. It is also recommended to establish information data collection and sharing platforms for specific cooperative projects to facilitate efficient project investment.
- Establish a joint committee to facilitate dialogue and consultation between bilateral enterprises. On January 9, 2018, during French President Macron's visit to China, the "China-France Entrepreneur Committee" was established under the joint witness of the heads of state of China and France. The China-France Entrepreneur Committee serves as the "second track" for communication between the governments and enterprises of China and France, and it is a long-term institutionalized dialogue mechanism between business leaders of the two countries. It provides an important platform for regular and pragmatic business dialogues between the two countries and is conducive to promoting China-France enterprise cooperation in third-party markets. Currently, some member companies of the China-France Entrepreneur Committee do not have corresponding foreign companies or institutions in their industries to engage in dialogue, making effective communication difficult. For example, Commercial Aircraft Corporation of China (COMAC) does not have appropriate aviation-related counterparts for dialogue within the China-France Entrepreneur Committee, and Safran and Liebherr from France are not members of the French side of the Entrepreneur Committee. It is recommended to include equivalent enterprises into the China-France Entrepreneur Committee based on the needs of member companies.

(III) Complementary Joint Development of the African Market for mutual benefits between China and France.

Africa is the primary choice for China-France cooperation in third-party markets.

- Africa has close historical and cultural ties with France, and China has a long history of exchange and cooperation with Africa. Africa is an important direction and base for China to undertake international production capacity and promote regional economic connectivity among Asia, Europe, and Africa under the Belt and Road Initiative. Africa is also a significant source of energy and resources for both China and France, as well as an important market for goods and services. The African factor in China-France relations will become increasingly important. It is of great significance to handle the economic cooperation and competition between China and France in Africa to maintain and develop the China-France partnership. Within the framework of the Belt and Road Initiative, China and France can shift their cooperative focus from their respective domestic markets to the African continent, maximizing complementary advantages.
- Integrate resources and leverage the situation of operating companies to enhance their own value. France possesses significant cultural advantages and traditional interests in Africa, successfully transforming them into commercial advantages. Firstly, Africa tends to follow France in terms of culture and values. Secondly, many French companies in former French colonies hold the economic lifeline of those countries and possess numerous social resources. The advantages France enjoys in Africa happen to be China's weaknesses. There is no traditional conflict of interests or cultural ties between China and Africa, and even communication in language poses significant obstacles. China can leverage France's long-standing influence in Africa to support and assist China's development in the continent. France can collaborate with China in Africa, taking advantage of the substantial funds and labor force China provides, and offer advanced management experience for their cooperation in Africa. Africa possesses abundant resources and energy, enormous

development potential, and urgent development needs. China Harbor Engineering Company (CHEC), adhering to the concept of "becoming an excellent organizer and leader in infrastructure and related services", truly understands what it has to offer, what the other party needs, and identifies the points of convergence. CHEC integrates its own resources and strategically allocates them based on the problems encountered by the operating companies, achieving targeted and efficient results. Leveraging its good relationship with the government and excellent reputation in local areas, CHEC acts as a bridge between the government and operating companies in its capacity as a shareholder, becoming an indispensable link in the communication process between the two parties. Simultaneously, through the establishment of good relationships with all parties involved, CHEC can promptly obtain first-hand information, thereby timely avoiding potential risks and significantly improving the risk management capabilities of port operations. Through cooperation, the cooperation model between CHEC and French companies has evolved from the initial French companies informing CHEC to gradually "seeking opinions in advance", and CHEC's opinions have gained increasing attention from the board of directors.

Strengthening the Feasibility Study of Third-Party Market Cooperation Projects.

- Focus and prioritize countries for China-France third-party cooperation in Africa. Taking various factors into consideration, countries should be selected as important nodal countries for the expansion of the Belt and Road Initiative and international production capacity cooperation in Africa. These countries should have political stability, strong willingness to cooperate with China, significant economic development potential, advantageous geographical locations, broad market coverage, obvious development space advantages, and complementary resources.
- Clearly define the key areas and industries for third-party cooperation between the two sides and establish a mechanism for complementary advantages. As the main

actors in trade and industrial cooperation in third countries, enterprises from China and France can leverage their respective strengths in technology, resources, and management to establish a practical mechanism of complementarity. They can jointly participate in bidding and construction of infrastructure projects in relevant countries to achieve win-win development. The following areas of cooperation are recommended: first, infrastructure construction, including the construction of highways connecting airports, ports, and major cities, and encouraging Chinese enterprises to create transportation and logistics hubs; second, jointly establishing industrial parks and developing export-oriented processing industries; third, cooperation in energy resource development; fourth, agricultural and fisheries cooperation; fifth, cooperation in health and environmental protection; sixth, cooperation in finance and insurance.

- Pay attention to labor and environmental issues to ensure the smooth progress of projects. When China and France jointly build “Belt and Road” third-party market cooperation, it is necessary to strictly abide by the labor laws of Belt and Road countries and the applicable labor standards in the local areas. Additionally, many projects under the Belt and Road Initiative involve infrastructure investments. While improving the living standards of local people and promoting their right to development, it is essential to avoid environmental protection issues. France and other Western European countries attach great importance to labor rights and environmental protection. By jointly protecting labor rights and the environment, it is possible to prevent NGOs and the media from causing difficulties and criticisms towards China in terms of labor rights and environmental protection, thus ensuring the smooth progress of projects.

However, there are currently some limitations in our research. We have only selected France as the target partner and overseas infrastructure construction as the research object. In the future, the following research directions could be further explored,

- Comparing the differences between France's experience in overseas infrastructure construction and that of other countries/regions: By comparing France's successful cases, project management methods, and technological applications in overseas infrastructure construction with those of other countries/regions, analyzing the differences and evaluating their universality and applicability.
- Exploring the models and mechanisms of cooperation between France and other countries: Studying the cooperation models between France and other countries in overseas infrastructure construction, including intergovernmental cooperation, public-private partnerships, etc., analyzing the characteristics of cooperation mechanisms, benefits distribution, risk sharing, and assessing the suitability and effectiveness of these models and mechanisms in different countries/regions.
- Examining France's technological and management innovations in overseas infrastructure construction: Researching the technologies and management innovations applied by France in overseas infrastructure construction, including sustainable development technologies, digital technologies, project management methods, etc., evaluating their roles in improving project efficiency, reducing costs, and increasing sustainability, and exploring their potential for promotion and application in other countries/regions.
- Analyzing the success factors and challenges in the cooperation between France and other countries: By analyzing the success factors and challenges in the cooperation between France and other countries in overseas infrastructure construction, such as government support, technological advantages, cultural integration, etc., summarizing the key elements for successful cooperation and providing strategies and recommendations for addressing challenges.
- Examining France's experience and practices in sustainability: Studying France's accumulated experience and practices in sustainable development in overseas infrastructure construction, including environmental protection, social responsibility, resource utilization, etc., exploring their roles in promoting

sustainable infrastructure construction, and providing recommendations for promotion and application.

Through these approaches, we can conduct in-depth research on France as a target partner's experience and practices in overseas infrastructure construction and compare and analyze them with other countries/regions, with the aim of obtaining valuable insights into cooperation models, technological innovations, success factors, and sustainable development.

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