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CHINA'S CHOICE OF SECTORS FOR INVESTMENT IN THE "BELT AND ROAD" IN THE POST-EPIDEMIC ERA

In the post-epidemic era, Chinese investment in the "Belt and Road" countries faces significant opportunities and challenges. Firstly, global markets actively seeking recovery have given multinational investors more opportunities. China, with its strict and effective epidemic control, has preceded the rest of the world in the period of epidemic stabilization and Chinese investors have also seized the opportunity of economic reversal and recovery. However, it is worth noting that protectionism and anti-globalization forces around the world have also taken advantage of the COVID-19 epidemic to become more prevalent, and Chinese outbound investment will face a more complex environment and more intense confrontation. In this complex environment, choosing to develop investment sectors that are more compatible with the interests of the host country can effectively reduce the risk of investment. Therefore, this paper analyses the selection of industries for China's investment along the "Belt and Road" from multi-dimensional perspectives. SWOT analysis is used to explore the advantages and disadvantages of industries in the process of "going global" in four dimensions: opportunities, advantages, disadvantages and challenges. Finally, recommendations are given for the selection of industries for China's investments in countries along the "Belt and Road".

Keywords: *Belt and Road, China's investments, post-pandemic*

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1. Introduction

China's investment in countries and regions along the "Belt and Road" continues to grow following the outbreak of the COVID-19. China's outbound investment has grown against the trend, despite sporadic scattered outbreaks of the new epidemic in the country, power outages and production restrictions in some areas and the continued severity of the international epidemic. In 2021, China's outward foreign direct investment (FDI) is US$145.2 billion, up 9.2 % year-on-year. Also, non-financial investments by Chinese enterprises along the "Belt and Road" reached US$20.3 billion, up 14.1 % year-on-year (Ministry of Commerce of the People's Republic of China, 2020). On the other hand, it should also be noted that the outbreak of the epidemic has impacted the political, economic and social environment of various countries while adding further obstacles to the further development of China's "Belt and Road" initiative. The impact of the deteriorating political and economic environment in countries along the "Belt and Road", the disruption of global trade flows, geopolitical conflicts and the uncertainty of Sino-US relations have become more pronounced in the post-epidemic era. Therefore, it is increasingly important for China to encourage outbound investment in sectors that face less investment risk in the "Belt and Road", and to guide enterprises that are better suited to the development of the host country to enter foreign markets. Preferring industries that are well integrated into the development of the host country and avoiding high-risk industries that conflict with the interests of the host country are important for both national policy making and corporate investment.

2. Analysis of the sector selection for outbound investment

Existing studies usually analyze outward investment from the perspective of a single industry and a single country, but there is a lack of studies that explore industry selection from a more multi-dimensional and macro perspective. Moreover, the large scale, significant impact and long investment cycle of outbound investment also make it a more complex environment. Therefore, this paper uses SWOT analysis to investigate the selection of investment sectors in countries along the “Belt and Road” by analyzing the four dimensions of opportunities: strengths, weaknesses and threats. In terms of opportunities, the leading industry clusters and key industries of each country are identified using Chinnery's industrial stage theory and industry correlations. In terms of strengths, China's leading industries for outward investment are analyzed using theories related to international competitiveness. In terms of disadvantages, the CGIT database is used to derive the major losing sectors for Chinese outbound investment. In terms of threats, the foreign investment restrictions and prohibited industries in each country are summarized to identify policy risks.

1) Analysis of outbound investment opportunities

In terms of development opportunities, most countries along the “Belt and Road” have similarities, although there are differences in the development of the host countries and the focus of their industries. Usually, they are at the same or similar stages of industrialization, and most of them share the same "leading industry clusters". Therefore, based on Chinnery's industrial stage theory and related research, the industrialization stages of countries along the "Belt and Road" are classified using GDP per capita as a criterion. Then, through literature analysis, the leading industry groups corresponding to different industrial stages are identified, and the industrial development needs of the host countries are clarified.

As revealed through relevant studies by scholars such as Chinnery (Chenery and Syrquin, 1988), economic development regularly passes through six stages: primary product production, early industrialization, mid-industrialization, late industrialization, primary developed economy and advanced economic development. This theory is the most widely used, convenient and authoritative method of classifying the stages of industrialization in regional economics. With reference to relevant studies, this paper calculates a conversion factor of 5.25 between 1970 and 2020 US dollars based on the US GDP deflator to derive a new GDP per capita evaluation criterion, which is revised as shown in Table 1.

Table 1

Chinnery's criteria for the stages of industrialization

Stage of economic development		**GDP per capita (1964)**	**GDP per capita (1970)**	**GDP per capita (2020)**
Quasi-industrial stage	Primary product production stage	100–200	140–280	734–1469
Industrialization stage	Early industrialization stage	200–400	280–560	1469–2938
	Mid-industrialization stage	400–800	560–1120	2938–5876
	Late industrialization stage	800–1500	1120–2100	5876–11017
Post Industrialization stage	Primary developed economy stage	1500–2400	2100–3360	11017–17627
	Advanced Developed Economy Stage	2400–3600	3360–5040	17627–26441

Based on the criteria in Table 1, this paper analyses the GDP per capita levels of 65 countries along the “Belt and Road” in 2020, and defines their industrialization stages. As shown in the table, 44 countries have not reached the developed economy stage, and two-thirds of them are still in the primary production and industrialization stage.

According to research, the different stages of industrialization have their corresponding industrial development needs. These sectors are socially relevant, have a strong economic impact and are the pillars of the national economy, which can also be called leading sectors. Foreign investors often have better opportunities to invest in the leading sectors. In addition, the leading industries are not a single industry, but rather a group of strongly related industries, also known as a "leading industry cluster".

Table 2

Determination of the stage of industrialization of the countries along the "Belt and Road"

Industrialization stage	Countries along the "Belt and Road" route	Number
Primary product production stage	Afghanistan, Pakistan, Timor-Leste, Kyrgyzstan, Nepal, Tajikistan, Syria, Yemen	8
Early industrialization stage	Cambodia, Laos, Bangladesh, Myanmar, Uzbekistan, India	6
Mid-industrialization stage	Albania, Azerbaijan, Egypt, Palestine, North Macedonia, Bosnia and Herzegovina, Bhutan, Philippines, Georgia, Lebanon, Mongolia, Moldova, Sri Lanka, Ukraine, Armenia, Iraq, Indonesia, Jordan, Vietnam	19
Late industrialization stage	Belarus, Bulgaria, Russia, Kazakhstan, Montenegro, Maldives, Malaysia, Serbia, Thailand, Turkey, Turkmenistan	11
Primary developed economy stage	Oman, Poland, Croatia, Latvia, Romania, Greece, Hungary, Iran	8
Advanced economic development stage	UAE, Estonia, Bahrain, Czech Republic, Qatar, Kuwait, Lithuania, Saudi Arabia, Slovakia, Slovenia, Brunei, Singapore, Israel	13

By analyzing the relevant literature (Congjun and Wenfang, 2008; Wu and Pan, 2004; Dongshui, 2000; Guiqin, 2008). This paper summarizes the correspondence between the stages of industrialization and the dominant industry clusters. The industry classification refers to the National Economic Classification of Industries (GB/T4754–2017), and the overall correspondence is shown in Table 3.

Table 3

Correspondence between industrialization stages and leading industries

Type of industry	Leading industry	Primary product stage	Industrialization stage			Developed stage
			Initial period	Mid-term	Later period	
Primary sector	Agriculture, forestry, animal husbandry and fishery industry	★	★			
Secondary sector	Mining industry		★	★	★	★
	Manufacturing industry	★	★	★	★	★
	Electricity, thermal power, gas and water production and supply		★	★	★	★
	Construction industry		★	★	★	★
Tertiary sector	Wholesale and retail			★	★	★
	Transportation, storage and postal services		★	★	★	★
	Real estate industry			★	★	★
	Accommodation and catering			★	★	★
	Residential services and other services			★	★	★
	Information transmission, software and information technology services				★	★
	Water conservancy, environment and public facilities management				★	★
	Rental and business services				★	★
	Scientific research and technical services				★	★
	Financial services					★
	Education					★
	Culture, sport and entertainment					★
	Health and social Work					★
	Public administration					★
	Social security and social organizations					★

According to Table 3, it can be seen that as the country progresses through the stages of industrialization, the dominant industry clusters evolve with the overall trend following a gradual expansion from the primary sector to the secondary and tertiary sectors. At the primary product stage, the primary sector, which includes forestry, agriculture and fisheries, is dominant. This was followed by the industrialization phase. Due to factors such as strong demand for social development and low labor prices, the secondary sector, with manufacturing at its core, began to become the dominant sector in social development. At the same time the electricity and thermal power industry, the construction industry, the transport industry and other pioneering industries are gradually developing. In the developed stage, the country will be dominated by the secondary and tertiary sectors, with the service industry, the information industry and various high-tech industries becoming a major force in the country's development.

The results of this paper are shown in Figure 1, which analyses the weighting of the industry stages of the "Belt and Road" countries and the leading industries corresponding to their demand.

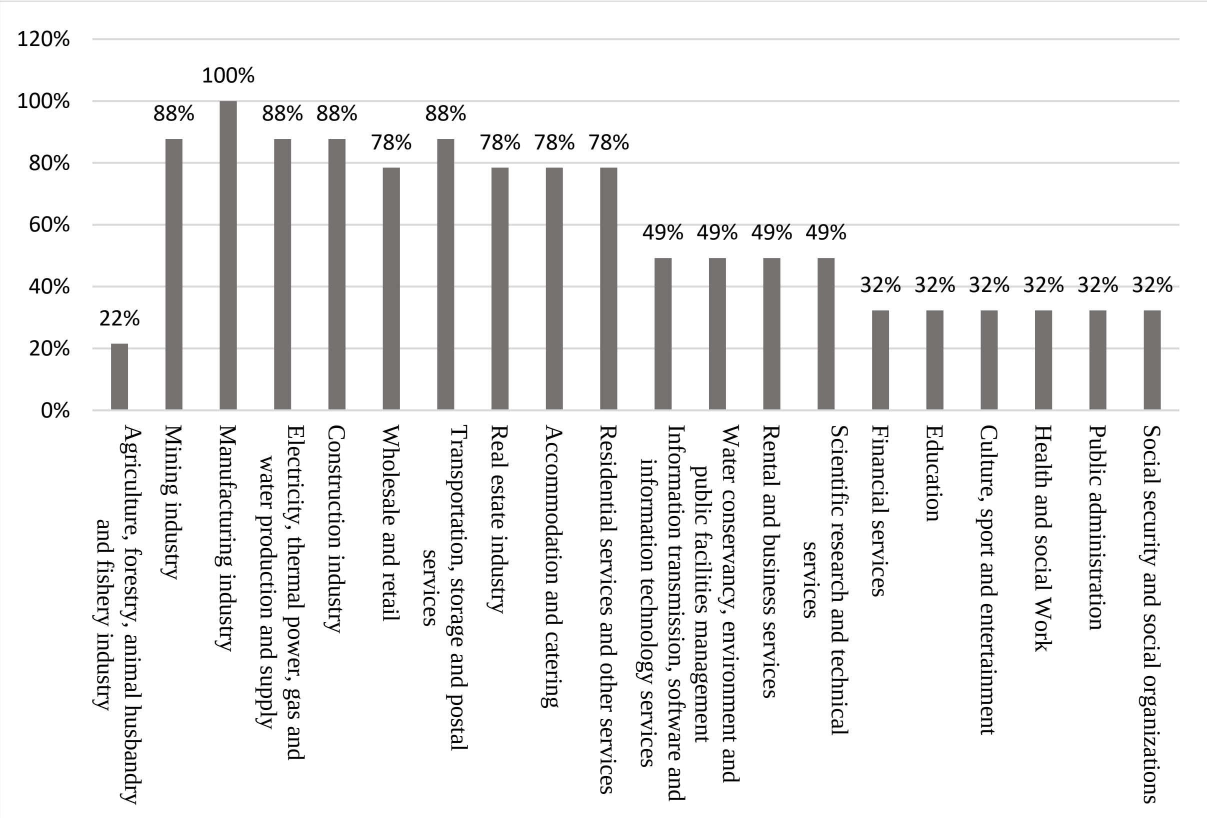

Figure 1. *Demand weights of leading industries in countries along the “Belt and Road”*

As can be seen from the graph, manufacturing, mining, electricity, thermal power, gas and water production and supply, construction, transport, storage and postal services are the leading industries in over 80 % of the countries along the “Belt and Road”. Specifically, the mining, electricity and thermal power, transport and construction industries are the first industries to improve the infrastructure of the host country, which can provide a guarantee for the overall development of the national economy. In addition, the manufacturing industry is a demanded industry for all countries along the “Belt and Road”, and is also an important industry throughout the industrialization stage.

2) Analysis of the advantages of outbound investment

From the point of view of the advantages of outward investment, the difference in production capacity between different industries in the investing country will present different industry advantages and disadvantages. It also allows the industry to have different industry competitiveness in the "Belt and Road" and even worldwide investments. Therefore, this paper identifies the strengths and weaknesses of China's outbound investment based on the data of the China Bureau of Statistics on China's overall outbound investment stock.

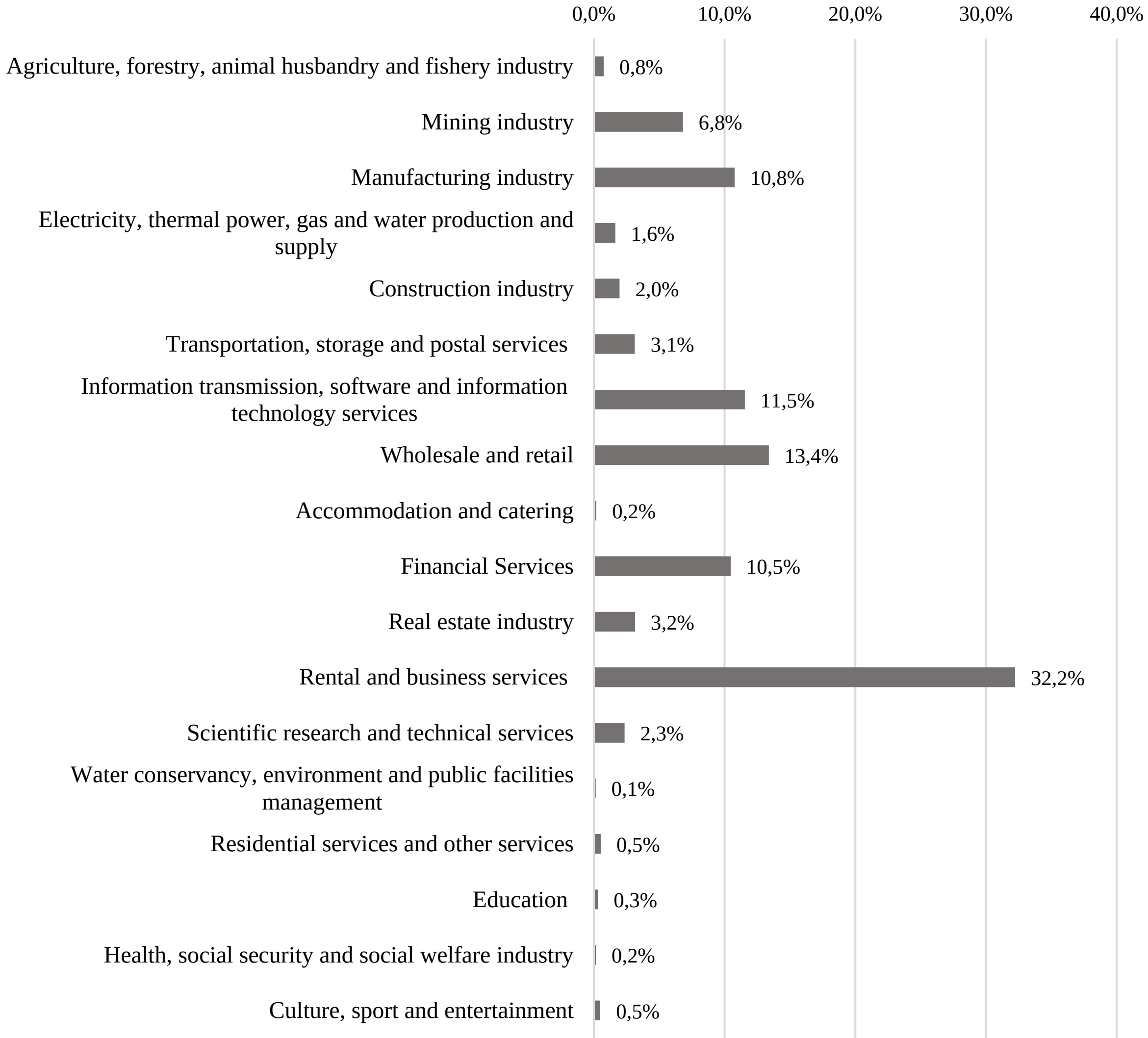

Figure 2. *Distribution of China's outbound investment stock in 2021*

The analysis shows that the largest outbound investment stock in China is in the rental and business services sector, accounting for 32 % of the overall outbound investment stock, followed by wholesale and retail, information transmission, computer services and software, and manufacturing. China has already established a certain investment base in these sectors worldwide, and has certain investment advantages for subsequent investments along the "Belt and Road".

3) Outbound investment disadvantage analysis

From the perspective of outbound investment disadvantages, existing investment failures have an ongoing adverse impact on the industry's outbound development. Therefore, this paper uses the analysis of investment data from the CGIT database to identify high-risk industries with a high frequency of major outbound investment failures in China.

In this paper, investment data from 2005 to June 2021 was selected from the CGIT database, containing a total of 324 investment losses. At the same time, the database divides the industries into 14 industry categories, which are again divided into 18 industry categories in line with the above according to industry relevance, and the frequency distribution of industry losses is shown in the figure.

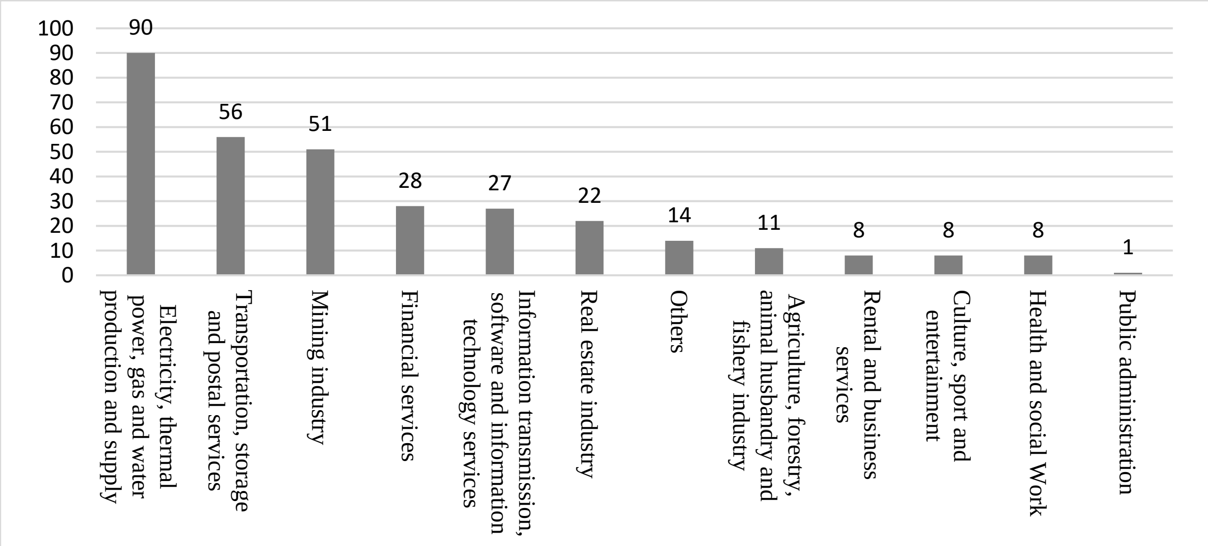

Figure 3. *Industry distribution of the frequency of China's outbound investment failures*

The analysis revealed that electricity, thermal power, gas and water production and supply, transport, storage and postal services, and mining were the three sectors where the largest number of losses occurred. These industries are widespread in the host countries and are resource-intensive. Chinese enterprises are more likely to have conflicts of interest and contradictions with host countries, and competitors in the international environment are also prone to competition. Chinese companies need to complete the process of localization in the process of outbound investment, and to identify the political, economic and social environment of the host country in a timely manner, so as to better control the risks.

4) Analysis of threats to outbound investment

In the past 16 years, important international events such as the successful referendum on the UK's exit from the EU and the failure of Italy's constitutional amendment have reflected a growing trend of "anti-globalization" thinking. Global investment forces have also stalled in the period following the outbreak of the epidemic. During this period, local companies have been active in capturing markets, and host country support policies have been more favorable to local companies, especially trade protection policies in resource-based industries. Host countries tend to restrict international investment through investment prohibition, shareholding restrictions, import licenses, investment approvals and restrictions on the shareholder share of investment. Therefore, from the perspective of foreign threats, this paper summarizes the investment sector restrictions of different countries through the Country (Regional) Guide to Foreign Investment Cooperation issued by the Ministry of Commerce (Ministry of Commerce of China, 2020).

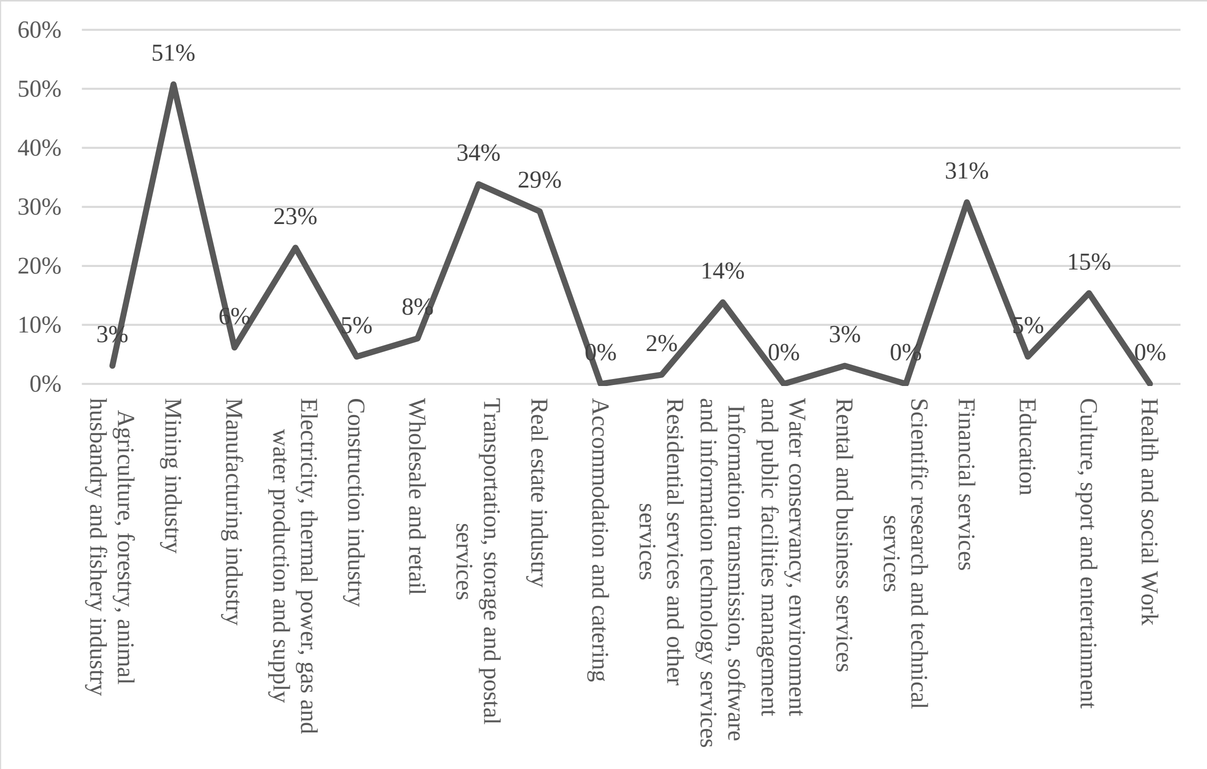

Figure 4. *Restricted industry weights for countries along the "Belt and Road"*

The analysis shows that the most restricted sector along the “Belt and Road” is mining, with more than 51 % of countries along the “Belt and Road” having restrictions on mineral extraction. This is followed by the transportation, storage and retail services, the financial services and the real estate industry. These industries are closely related to the development of the national economy and most of them are key industries in the development of the country, and most countries have corresponding policy restrictions to protect the interests of their citizens. When investing in these sectors, Chinese companies should pay particular attention to the policy risks and should fully understand the local policies and use legal means to avoid risks.

3. Recommendations for China on the choice of investment sectors for the “Belt and Road”

Based on the above research, this paper can derive a SWOT analysis matrix for China's investment sector selection in countries along the “Belt and Road”, as shown in Figure 5.

From the above data and multi-dimensional analysis, this paper finds the following conclusions:

China's investment in the “Belt and Road” should focus on the manufacturing and construction industries. The manufacturing industry is one of the leading industries in the development of countries along the “Belt and Road”, and it is also an advantageous industry for China's outbound investment. Therefore, the risk of the industry is relatively low. Similarly, the construction industry is also an opportunity sector for China's outbound investment and a pioneer industry for the development of the host country. Also, the industry's risks are manageable.

For outbound investments in the mining, electricity, thermal power, gas and water production and supply, and transportation, storage and postal services, China should guide investment companies to eliminate risks, reduce the incidence of failure and gradually eliminate disadvantages. At the same time, the mining industry and the transportation, storage and retail industry also need to pay more attention to policy risks and follow up on policy changes in time.

The industries where China's outbound investment is advantageous, such as rental and business services, wholesale and retail industries and information transmission, computer services and software industries, are mainly suited to countries that are in the late industrialization and developed stages. China should guide regional investment in this part of the industry at this stage, giving a reasonable choice of regions and reducing the risk of investment by enterprises.

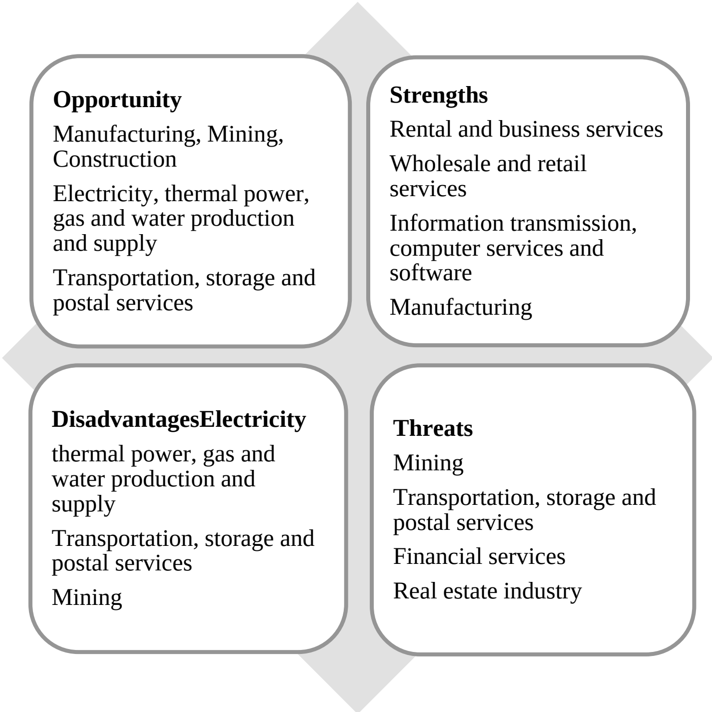

Figure 5. *SWOT analysis of China's industry choices for countries along the "Belt and Road"*

4. Conclusion

In the post-epidemic era and the unstable international environment, China's investment in the "Belt and Road" industry needs to carefully identify industry risks and grasp development opportunities. Thus, the study on the selection of industries for the “Belt and Road” has practical significance and theoretical value, which can provide reference value for the policy makers and the corporate investors. In addition, it will help China to achieve significant growth in "Belt and Road" investments.

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ВИБІР КИТАЄМ ГАЛУЗЕЙ ДЛЯ ІНВЕСТИЦІЙ В «ОДИН ПОЯС, ОДИН ШЛЯХ» В ПОСТЕПІДЕМІЧНИЙ ПЕРІОД

У період після епідемії китайські інвестиції в країни «Одного поясу, одного шляху» створюють значні можливості та виклики. Глобальні ринки активно прагнуть відновлення, надаючи багатонаціональним інвесторам більше можливостей. Суворі та ефективні заходи контролю за епідемією в Китаї призвели до економічної стабілізації, випередивши решту світу, що дозволило китайським інвесторам скористатися можливістю економічного розвороту та відновлення. Проте протекціонізм і антиглобалісти скористалися епідемією COVID-19, створивши складніше середовище та більш інтенсивне протистояння для китайських зовнішніх інвестицій. Щоб знизити ризик інвестування, важливо вибирати інвестиційні сектори, які більш сумісні з інтересами приймаючої країни.

У цій статті аналізується вибір галузей для інвестицій Китаю вздовж «Одного поясу, одного шляху» з багатовимірної точки зору, досліджуючи переваги та недоліки галузей у процесі «глобалізації» в чотирьох вимірах: можливості, переваги, недоліки та виклики. Цей аналіз забезпечує повне розуміння інвестиційного ландшафту та дає змогу визначити сектори, які найкраще підходять для китайських інвестицій. Крім того, у цій статті надано рекомендації щодо вибору галузей промисловості для інвестицій Китаю в країни уздовж «Одного поясу, одного шляху».

Китайські інвестиції в країни «Одного поясу, одного шляху» можуть призвести до позитивних результатів, таких як економічне зростання та розвиток, створення робочих місць та покращення інфраструктури. Інвестуючи в такі сектори, як транспорт, енергетика та телекомунікації, китайські інвестори можуть допомогти створити більш зв'язаний і ефективний світ. Інвестиції в такі сектори, як охорона здоров'я та освіта, можуть покращити якість життя людей у приймаючих країнах, сприяючи більш стабільному та процвітаючому світу.

Підсумовуючи, хоча китайські інвестиції в країни «Одного поясу, одного шляху» справді стикаються зі значними проблемами, такими як протекціонізм і антиглобалістські сили, для інвесторів у цих країнах також є багато можливостей. Ретельно обираючи інвестиційні сектори, які відповідають інтересам приймаючої країни, китайські інвестори можуть ефективно знизити інвестиційний ризик і максимізувати прибутки. Цей процес аналізу та відбору може допомогти інвесторам приймати обґрунтовані рішення та, зрештою, сприяти економічному зростанню та розвитку країн «Одного поясу, одного шляху».

Ключові слова: *«Один пояс, один шлях», китайські інвестиції, період після епідемії.*