

Exploration of the Practicality of 'Belt and Road' Strategy in Facilitating the Relocation of Manufacturing Industry to the Western Regions

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Abstract: *China's manufacturing industry boasts world-leading scale and output. However, the development of China's manufacturing sector currently faces a series of challenges, especially regional development imbalance. The eastern regions of China are relatively developed with an excessive concentration of manufacturing enterprises, while the advantages of the western regions, such as abundant resource reserves and vast land resources, have not been fully utilized, resulting in lagging development. Therefore, how to promote the upgrading of the manufacturing industry and optimize industrial distribution becomes a key issue. In this context, utilizing the "Belt and Road" initiative can optimize the distribution pattern of China's manufacturing industry and promote the economic development and industrial structure upgrading of the western regions. This paper aims to analyze the role of the "Belt and Road" strategy in promoting the development of the manufacturing industry in the western regions and explore the feasibility of the "Belt and Road" strategy in facilitating the westward relocation of the manufacturing industry.*

Keywords: *"Belt and Road"; Industrial Upgrading; Manufacturing Industry; Western Economic Development*

1. Introduction

Since the establishment of the People's Republic of China, the country's manufacturing industry has achieved rapid development, transitioning from initial low-end manufacturing to high-end manufacturing. However, during this transformation, China's manufacturing industry still faces multiple challenges, among which is the uneven regional economic development within the country. As an important part of the "Belt and Road" economic corridor, the western regions of China are set to receive more investment opportunities through this strategy, thereby promoting industrial upgrading and balancing regional economic development.

2. Current Regional Development Status of China's Manufacturing Industry

As a major global manufacturing hub, China has established a vast, highly specialized, and intensive manufacturing industry system. In the decade from 2012 to 2022, China's manufacturing industry saw a significant increase in its added value, growing from 16.98 trillion yuan to 32.61 trillion yuan. Simultaneously, the proportion of China's manufacturing added value in the global manufacturing industry also rose significantly, from 22.3% to 30.3%, maintaining a leading position worldwide. These figures fully demonstrate the foundational role of the manufacturing industry in China's economic development and its important contribution to the global economy.

With the continuous development of China's economy, the cost advantages such as cheap labor that the manufacturing industry relies on are gradually diminishing. This has made China no longer the preferred destination for many developed countries to outsource manufacturing, bringing new challenges to the development of China's manufacturing industry. In response to these challenges, China's manufacturing industry has started to actively adjust its development strategy. Through accelerating technological innovation, promoting technological transformation, and optimizing industrial structure upgrading, it seeks to strengthen its competitiveness and explore new development opportunities. By 2022, the number of high-tech enterprises in China has exceeded 400,000, contributing nearly 70% of the total R&D expenditure of enterprises nationwide. Among them, 762 enterprises rank among the top

2500 in global corporate R&D expenditure. At the industry level, equipment manufacturing and high-tech manufacturing have achieved rapid development, with their added values accounting for 31.8% and 15.5% of the national total, respectively. The output of main manufactured products has also shown an increasing trend year by year[1]. The progress in these two industries represents the overall trend of China's manufacturing industry towards high-end and intelligent development, laying a solid foundation for its sustainable development in the future.

In the process of manufacturing industry transformation and upgrading, China also faces the issue of regional economic development imbalance. Although there is a trend of relocating the manufacturing industry to the western regions, the scale of this relocation is relatively small. Overall, the main activities of the manufacturing industry are still concentrated in the eastern regions. According to data, the industrial added value of the western regions has gradually increased from 14.2% of the national total in 2000 to 19.2% in 2021. Despite this increase, the share is still relatively small in comparison. Conversely, even though the industrial added value of the eastern regions decreased from 57.6% of the national total in 2021 to 53.8%, it still accounts for the majority, reflecting the imbalance in the geographical distribution of the manufacturing industry.

3. Opportunities and Challenges of Manufacturing Industry Relocation to the West under the "Belt and Road" Strategy

3.1 Construction of Six Economic Corridors Provides Policy Support for the Development of an Open Economy in Western Regions

The "Belt and Road" initiative is an important plan for China to expand its degree of openness and build a community with a shared future for humanity. This strategy is of significant importance to the economic openness of the western regions. Since the introduction of the "Belt and Road" initiative, a basic framework of "six corridors, six roads, multiple countries, and multiple ports" for interconnectedness has been formed. The "six corridors" refer to the six major economic corridors that connect the Eurasian continent: the New Eurasian Land Bridge, China-Mongolia-Russia, China-Central Asia-West Asia, China-Indochina Peninsula, China-Pakistan, and Bangladesh-China-India-Myanmar International Economic Cooperation Corridors.

Significant achievements have been made in the construction of these six economic corridors, each showing different development directions based on regional development disparities. The New Eurasian Land Bridge Economic Corridor focuses on the construction of transportation infrastructure. As the primary economic corridor among the six, China has successfully created a railway transportation brand connecting the East and the West—China-Europe freight trains, establishing a complete New Eurasian Land Bridge transportation network. Over the past ten years, China-Europe freight trains have operated 78,000 trips, transporting 7.4 million standard containers worth over 340 billion US dollars, connecting 217 cities in 25 European countries from China's western regions[2]. The China-Indochina Peninsula Economic Corridor is based on the construction of the Pan-Asia Railway Network, with Yunnan, Guangxi, and other regions as development nodes, connecting the Southeast Asian and South Asian economic circles. This corridor, connected to the Bangladesh-China-India-Myanmar Economic Corridor, passes through the world's most densely populated regions, with the countries and regions along the line having a strong demand for economic development. Besides this corridor, the other five economic corridors all exit China through Xinjiang and connect with various countries along the line through land routes. This year, the China-Kyrgyzstan-Uzbekistan railway agreement was officially signed, with the route extending from Kashgar in Xinjiang to the five Central Asian countries. The future operation of this railway will greatly promote trade between China and Central and South Asia, shorten the transportation distance of the China-Europe freight train's southern route, and reduce transportation costs.

The six economic corridors extend westward and southward, passing through various provinces and cities in China's western regions, and connecting with over 20 countries. The countries along these corridors are mostly developing countries and emerging economies, with a total population of about 2.7 billion and an economic total of about 17 trillion US dollars, accounting for 34% of the global population and 17% of the global economy. These countries experience rapid trade development and economic investment growth but have relatively underdeveloped manufacturing industries. The huge potential for economic growth will inevitably drive demand in the manufacturing industry. Relying on the well-established land transport logistics network of the economic corridors, the disadvantage of the western regions' inability to connect with the international economic system through seaports due to location restrictions has been turned into an advantage. Relocating domestic manufacturing to the western regions,

which are geographically closer to the countries along the economic corridors, will effectively shorten the distance for transporting products to these countries and regions, reduce transportation costs, and accelerate the economic opening of the western regions.

3.2 Shifting China's Export Focus to Emerging Economies under the "Belt and Road" Initiative

Over the forty years following the reform and opening-up, China's economic development has been driven mainly by exports to developed countries. In 2008, China's GDP was 4.6 trillion USD, of which the total import and export volume with the United States, Japan, the European Union, and South Korea was 1.22 trillion USD, accounting for 26.5% of the total GDP. Under trade globalization, developed economies such as the USA and the EU moved their manufacturing to China, which then had the advantage of a cheaper labor force. As a result, to facilitate exports, enterprises were highly concentrated in the eastern coastal regions, leading to a high population concentration in these areas. However, with the economic downturn and geopolitical impacts, developed economies like the USA and the EU are striving to keep manufacturing within their borders, and regional trade is replacing global trade. Meanwhile, China's advantage in cheap labor is diminishing, and manufacturing costs are rising, making countries like Vietnam, India, and the Philippines new destinations for manufacturing relocation[3]. To adapt to the new globalization pattern, China must adhere to the "Belt and Road" strategy, shifting the focus of export trade to emerging economies. In the first eight months of 2023, China's exports to ASEAN accounted for 15.5% of the total export volume, while exports to the USA accounted for 14.7%. ASEAN has become China's largest export trade partner, and exports to Africa and Latin America are also increasing year by year. Leveraging the regional location and resource advantages of the western regions, relocating the manufacturing production chain to the west can not only alleviate population pressure in the eastern regions and reduce manufacturing costs but also retain key industrial chains within the country. It also facilitates expanding trade with emerging economies and establishing a mutually beneficial global economy in the new era.

3.3 Resource Advantages of the Western Regions Facilitate Manufacturing Development

The resource advantages of the western regions are a major driver for regional economic development, with abundant natural resources, including mineral, energy, and land resources. Coal is China's main energy resource, and in 2022, the provinces with the most coal reserves were Shanxi, Inner Mongolia, Xinjiang, Shaanxi, and Guizhou, accounting for 80.4% of the national coal reserves. Shaanxi, Gansu, and Xinjiang's oil reserves account for 39.5% of the national total, while the natural gas reserves in Sichuan, Shaanxi, Inner Mongolia, and Xinjiang account for 76.0% of the national total. In terms of mineral resources, Guangxi has the largest manganese reserves in China, accounting for 43.2% of the national total; Xizang's copper reserves account for 41.3% of the national total. These resource advantages provide a stable and sustainable supply of raw materials for the development of manufacturing in the western regions. Thus, relocating manufacturing to the west shortens the distance between raw material supply and manufacturing production, which is beneficial for saving transportation costs and improving production efficiency. In terms of land resources, the eastern region's land area accounts for only 13% of the national total but concentrates 40% of the national population. There is a shortage of commercial and industrial land, and land prices remain high. According to the "National Main City Land Price Monitoring Report for the Third Quarter of 2021," the industrial land price growth rate in the eastern region increased by 3.52% year-over-year, while in the western region, it decreased by 0.11%. Therefore, establishing manufacturing factories in the western regions not only helps reduce production costs and improve corporate competitiveness but also alleviates the high concentration of population in the eastern regions.

4. Challenges of Manufacturing Industry Relocation to the West under the "Belt and Road" Strategy

4.1 The Gap in External Economic Openness Between Eastern and Western Regions Remains Significant

In the past decade, the level of economic globalization in the western regions of China has continuously increased, as evidenced by the significant growth in foreign trade volume. According to data from the General Administration of Customs of China, from 2012 to 2022, the total import and export volume of this region soared from 251.45 billion USD to 6078.55 billion USD, and its share of

the national total import and export volume increased from 6.5% to 9.6%. This demonstrates that the "Belt and Road" initiative has steadily enhanced the level of activity and openness of the western regions in external economic exchanges. Although the eastern region, being the most economically developed in China, saw its foreign trade volume increase from 3271.08 billion USD to 4980.07 billion USD during the same period, its contribution to the national total decreased from 84.6% to 78.9%. However, it still far exceeds that of the western region. Therefore, despite significant growth in openness in the western regions, a substantial gap remains compared to the eastern regions. This indicates the need for further efforts to promote coordinated regional economic development, especially in narrowing the development gap between the eastern and western regions.

4.2 Significant Disparity in High-End Manufacturing Development Between Eastern and Western Regions

In the past decade (2012-2021), the manufacturing industry in China's western regions has shown significant growth, particularly in the production of high-end manufacturing products. Specifically, the production of mobile communication handheld devices as a proportion of the national total rose from 1.8% to 21.3%, the share of microcomputer production increased from 24.1% to 47.2%, and the proportion of integrated circuit production went up from 13% to 25.4%. Despite these achievements in high-end manufacturing in the western regions, the eastern regions still dominate the overall production of high-end manufacturing. While the western regions have entered the industrialization phase and achieved certain development results, their output and capacity in more sophisticated and complex high-end manufacturing are still not comparable to other regions in the country. Additionally, despite rapid growth in infrastructure construction in the western regions, they remain relatively backward compared to the more mature and well-developed infrastructure systems in the eastern regions. This may limit the pace of high-quality development in the manufacturing industry in the western regions and reflects the gap in infrastructure construction between the two areas. In summary, although manufacturing in the western regions is steadily developing, significant gaps remain in high-end manufacturing output, growth patterns, and infrastructure construction compared to the eastern regions.

4.3 Challenges of Resource Utilization Efficiency and Ecological Risks in the Western Regions

In the economic development of the western regions, the vulnerability of the ecological environment and the economic risks it brings are major concerns. While the region boasts abundant energy, land, and mineral resources, providing a rich material foundation for regional economic development, the vulnerability of the ecological environment often limits the full realization of its economic potential. Currently, the utilization of energy and mineral resources in the western regions is mainly focused on extraction and primary processing, with a low value-added rate, making it difficult to enhance the value of products through manufacturing. Furthermore, the efficiency of energy and mineral resource exploitation in the western regions is not optimal. This not only reduces economic benefits but may also exert greater pressure and damage on the fragile ecological environment, exacerbating ecological risks. Therefore, finding a balance between protecting the ecological environment, improving resource utilization efficiency, and promoting economic development will be key to the future development of the western regions.

5. Recommendations for Manufacturing Industry Relocation to the West under the "Belt and Road" Strategy

5.1 Strengthen Economic Cooperation Between Western Regions and Neighboring Countries

Establish and deepen economic cooperation between China's western regions and countries along the "Belt and Road" route, utilizing their advantageous industries to expand the manufacturing demand market. Countries connected to the western regions are mostly developing countries and emerging economies, which have relatively underdeveloped manufacturing industries and a strong demand for both basic and high-end manufactured products for infrastructure, daily life, and transportation[4]. Encouraging the expansion and outreach of the western region's advantageous industries can not only meet the needs of these countries but also open up a vast market for the region's industrial development. For instance, Chongqing has a significant advantage in microcomputer manufacturing. According to the "Statistical Yearbook 2022," in 2021, Chongqing's microcomputer production accounted for 23% of the national total, indicating its capability to supply computers on a larger scale. Therefore, strengthening

economic cooperation with neighboring countries can open a wider market for manufacturing, providing demand support for the westward relocation of the industry in the western region, thereby promoting its economic development. This not only helps improve the local economic environment but also further promotes economic exchanges and cooperation between China and neighboring countries, achieving mutual development.

5.2 Accelerate the Transformation and Upgrading of Traditional Manufacturing in Western China

Transforming and upgrading the traditional manufacturing industry in China's western regions and promoting its development towards high-end manufacturing is an important task. Currently, the manufacturing industry in the western regions is mainly resource-intensive, with issues in resource utilization efficiency, still remaining in the primary production stage[5]. This situation is not in line with the concepts of sustainable and green development and hinders high-quality economic development.

Therefore, firstly, it is necessary to improve resource utilization efficiency in the western regions, extracting more value from each unit of resources while adhering to the path of green development to ensure a positive interaction between economic development and environmental protection. Following the principles of resource conservation and environmental protection, more rational use of resources also helps to enhance the economic efficiency of the entire process. Secondly, the cost advantages of the western regions should be fully utilized to actively undertake the mature and complete industrial and supply chains from the eastern regions. By guiding the gradient transfer of traditional manufacturing, the western regions can gradually acquire higher-level manufacturing configurations, thereby enhancing the technological level of the region's manufacturing industry. This helps optimize the domestic industrial layout, achieving regional economic synergy and mutual benefits. In summary, by improving resource utilization efficiency, adhering to green development, and undertaking mature industrial chains, the manufacturing industry in the western regions can develop towards higher-end directions, thereby gaining a higher status and greater benefits in the global value chain.

5.3 Guide the Transfer of Capital Support and Talent to the West

To achieve substantial development of the manufacturing industry in China's western regions, supportive policies, financial support, and talent cultivation are necessary. In this process, talent exchanges with countries and regions along the "Belt and Road" will positively impact mutual economic development. Through such exchanges, we can learn successful experiences from different regions, acquire new technologies and management methods, and promote cross-regional cultural exchange and understanding. At the same time, guiding capital investment in the western regions is crucial. Encouraging businesses and individuals to invest in the western regions through policy incentives and tax reductions can help drive local manufacturing development. Capital injection can accelerate infrastructure construction, improve production efficiency, and provide the necessary material foundation for attracting and cultivating talent. Additionally, talent is key to the long-term development of the manufacturing industry in the western regions. Utilizing national propaganda, policy support to introduce needed talent, enhancing the region's educational capacity, focusing on local education development and talent cultivation, and improving the comprehensive quality and technical abilities of local talent are essential. This approach not only addresses the talent shortage in the western regions from the source but also enhances the self-development capabilities of the local population, achieving sustainable development of the manufacturing industry in the western regions.

6. Conclusion

In summary, addressing the regional development imbalance in China's manufacturing sector requires strategic initiatives for optimizing industrial distribution and fostering balanced economic growth. This study focuses on the potential of the "Belt and Road" initiative as a crucial driver to overcome these challenges. By leveraging this initiative, there is a significant opportunity to reconfigure the distribution of manufacturing enterprises, promoting economic development and upgrading industrial structures in the underutilized western regions. The analysis emphasizes the role of the "Belt and Road" strategy in facilitating the westward relocation of the manufacturing industry through targeted investments, infrastructure development, and collaborative efforts. Successfully implementing this strategy holds the promise of achieving a more balanced and sustainable growth trajectory, contributing to the overall economic vitality of China and creating a harmonious and robust manufacturing landscape nationwide.

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