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A Review on the Reconstruction of Global Value Chain in China's Manufacturing Industry

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Abstract: *With the continuous promotion of international economic division of labor, the manufacturing value chain is constantly differentiating and integrating globally, and the restructuring of the global value chain is an important issue. After reviewing existing literature, it has been found that the global value chain reconstruction of China's manufacturing industry mainly involves three paradigms: producer driven, buyer driven, and co driven by producers and buyers; In terms of internal mechanisms, the driving factors that affect the reconstruction of China's manufacturing global value chain mainly include new value allocation, the evolution of international division of labor within products, the re decomposition and integration of the value chain, scientific and technological progress, and major risk events. The main obstacles include the loss of cost advantages of factors, conflicts with digital trade rules, low global value chain competitiveness, long-term trapped in the low-end of GVC, and the lack of core technological capabilities Six factors, including internal disharmony in the value chain cycle system; On this basis, this article further sorts out the paths for China's manufacturing industry to break through the "low-end lock-in" trap of the global value chain and achieve global value chain reconstruction, including: coordination at the macro, meso, and micro levels, interaction at the three levels of the industrial chain, supply chain, and value chain, as well as mutual penetration of GVC, RVC, and NVC.*

Keywords: *Manufacturing industry; GVC reconstruction; Mechanism of action; Influencing factors; Path*

1. Introduction

Thanks to the comparative cost advantage of labor, China's manufacturing industry has developed rapidly since the reform and opening up, playing an increasingly important role in the international division of labor pattern. However, since the outbreak of the global financial crisis in 2008, especially since the occurrence of trade frictions between China and the United States, the process of globalization has been constantly hindered. The growth rate of international trade in various countries is significantly lower than the growth rate of gross domestic product, and the proportion of cross-border trade in global commodity output has also been continuously decreasing. China's international trade has started to stagnate, causing the trade intensity between various links in the value chain to decline, and international economic division of labor and cooperation are showing a "backward" trend. In sharp contrast, the deep globalization advocated by China has been steadily promoted. The "the Belt and Road" initiative led by "policy communication, road connectivity, unimpeded trade, currency circulation and people to people connectivity" has been widely recognized. The division of labor and cooperation between China and countries along the "the Belt and Road" have become more frequent and closer, This leads to the in-depth development of the regional international economic division of labor system and even the global international economic division of labor system. Based on the above situation, plus the impact of many adverse factors such as the COVID-19 sweeping the world, the United States deliberately suppressing Chinese high-tech enterprises, and the gradual disappearance of China's comparative advantage of labor factor costs, it is increasingly difficult for China's manufacturing industry to continue to follow the extensive development path of the previous "low-end value chain". The restructuring of the global value chain is the only way for China's manufacturing industry to get out of the tight encirclement and continue to evolve, It has also become an important topic of concern for scholars and has generated a large amount of related research. Although the research on the reconstruction of the global value chain in the manufacturing industry has touched on multiple perspectives, themes, mainlines, and methods, it is still relatively scattered and unsystematic overall, which is not conducive to providing systematic guidance and theoretical reference for the reconstruction of the global value chain in China's manufacturing industry. Therefore, this article takes

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the reconstruction of the global value chain in China's manufacturing industry as the theme, systematically reviews relevant literature, clarifies the mechanism of the reconstruction of the global value chain in the manufacturing industry discussed in relevant research, summarizes the driving and hindering factors of the reconstruction of the global value chain in China's manufacturing industry, and summarizes the main paths for the reconstruction of the global value chain in China's manufacturing industry.

2. The Basic Mechanism of Global Value Chain Reconstruction in China's Manufacturing Industry

The basic idea of restructuring the global value chain (GVC) originates from Gereffi's (1999) discussion on value chain governance[1]. Based on the Gereffi (1999) analysis framework, subsequent research has continuously expanded and deepened it, gradually forming producer driven GVC reconstruction paradigms, buyer driven GVC reconstruction paradigms, and hybrid driven GVC reconstruction paradigms.

2.1. Producer driven global value chain restructuring mechanism

Producer driven GVC restructuring refers to the formation of a global value chain driven by industrial capital driving market demand. Its driving force is industrial capital, with its core being research and development, production capacity, and investment as the main line, forming a vertically integrated organizational structure. Producers mainly refer to multinational corporations with technological advantages and production capabilities, and their core control over other links is mostly achieved through overseas direct investment. The strategy centered on enhancing core technological capabilities is the correct path in line with global competition rules.

Yuan Pinghong (2022) [2] pointed out that before and after the 2008 international financial crisis, due to the shrinking market size, the producer driven global value chain experienced concentration, marking the first large-scale, producer driven GVC restructuring of the global value chain. Internally, producer driven GVC restructuring refers to the restructuring of the global value chain, which is driven by producer investment to drive market demand and form a vertical division of labor system in the global production supply chain. From the perspective of development momentum, the core driving force for producer driven GVC restructuring is mostly multinational companies from developed countries. These companies occupy both ends of the value chain through core technology or brand advantages, control the layout and benefit distribution of the value chain, and become the "chain owners" of the value chain; Most developing country enterprises are located at the mid to low end of the value chain, engaged in assembly and processing processes. When GVC "chain owners" become actual managers, in order to maintain their division of labor position and high monopolistic profits, "chain owners" often develop a "technology lock-in" strategy to curb the progress of key technologies in low GVC countries and block their path to the climb of GVC high value-added links. From the perspective of the types of restructuring entities, Ye Huaguang (2009) [3] pointed out that the entities of producer driven GVC restructuring can be multinational corporations with technological advantages and seeking market expansion, or domestic governments that strive to promote local economic development and establish independent industrial systems. From the perspective of reconstruction path, Dai Xiang et al. (2021) [4] pointed out that producer driven GVC reconstruction mainly relies on external investment as the main means, adopting a vertically integrated organizational model, and its reconstruction industries are mainly concentrated in industries such as durable consumer goods, intermediate goods, and capital goods; In this restructuring process, many countries that were not included in GVC took advantage of the economic recovery after the financial crisis to gain the opportunity to join the GVC division of labor system, and established connections with developed countries through measures such as actively attracting foreign investment and large-scale outsourcing. The entry of these new participants promoted the restructuring of GVC. In the future, China can promote the development of the manufacturing industry, enhance the competitiveness of core technologies of Chinese enterprises, gradually occupy the highlands of the global value chain, and obtain the right to restructure the producer driven global value chain.

2.2. Mechanism of global value chain restructuring based on buyer driven approach

Buyer driven GVC restructuring refers to the formation of a global value chain driven by commercial capital driving market demand. Its driving force is commercial capital, with the core being

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design and marketing, with trade as the main thread, forming a horizontally integrated organizational structure. Buyers mainly refer to multinational corporations with strong brand advantages and sales channels. The production process is mostly subcontracted to developing country contractors through outsourcing networks by retailers, brand owners, and agents located in developed countries, with a greater emphasis on expanding sales channels to gain competitive advantages in terms of scope economy and other aspects.

Min et al. (2015) [5] found that although there is a clear upward trend in the industrial concentration of some representative industries in the buyer driven value chain, the current buyer driven GVC restructuring has not been widespread, and there is no completely consistent trend in similar value chains. In terms of connotation, buyer driven GVC restructuring refers to the global value chain restructuring caused by developed country enterprises with strong brand advantages and domestic sales channels, organized through global procurement and OEM production, forming a strong market demand and driving industrialization in developing regions that pursue export-oriented strategies. From the perspective of development momentum, the core driving force of buyer driven GVC restructuring is mainly the development of local enterprises with commercial capital in China's furniture industry. They obtain economies of scope through marketing and expanding sales channels, separate manufacturing from the industrial chain, and strengthen the construction of information and other soft environments . In the process of restructuring, strategic links often exist in brand management, Marketing channel construction and other links, and the added value will correspondingly flow to the links with monopoly power. Developing countries enter this type of value chain through the low-end outsourcing model. For example, Wang Aihu (2006) [6] studied that from 1992 to 2005, China's cross-border outsourcing volume grew at an average annual rate of 29.37%, an increase of 20.81 times in just 14 years. From the perspective of the types of restructuring entities, Zhan Xiaoqi (2021) [7] pointed out that the main entities of buyer driven GVC restructuring are local enterprises in developing countries. They are based on the comparative advantages of factor endowments in different countries, and are conditional on the complementary international competitiveness of the industry in relevant countries to achieve the transformation of the role of passive embeddings in the global value chain, extending towards both ends of the value chain. From the perspective of reconstruction industry, the buyer driven GVC reconstruction takes trade as the main link and adopts the horizontal integration organization model. Its leading industry is the type of non durable consumer goods . Traditional labor-intensive industries such as agricultural products, textile and Clothing industry industries all belong to this category. From the perspective of reconstruction path, Tu Xinquan (2022) [8] pointed out that in the future, Chinese enterprises can obtain the right to buyer driven global value chain reconstruction based on the huge domestic consumption demand by controlling global production and channels for foreign products to enter the domestic marke .

2.3. A hybrid model driven by both producers and buyers

Some scholars have proposed different views on the two mechanisms mentioned above. Henderson's (1998) [9] study suggests that the majority of the value added in the global value chain driven by buyers does not flow into the production sector, as in the producer driven global value chain, but rather into circulation areas such as market sales and branding. Gereffi (2001) [10] himself later believed that the Dichotomy of dividing the global commodity chain into buyer driven and producer driven could not well match the actual economic situation. This viewpoint has received support from some subsequent scholars. Zhang Hui (2006) [11] pointed out that the classification of global value chain driving types is a changing process. In addition to the two conventional driving modes, there is also a hybrid driving mode, which is between the producer driven mode and the buyer driven mode. He believes that the driving model of the global value chain should not be classified according to industry categories, but should be based on the marginal value appreciation rate of the industrial chain as the classification standard, with more emphasis on the issue of value flow. For example, in the IT industry, its recognized core competitiveness comes from typical production processes such as CPUs and operating systems. However, the outstanding performance of companies such as Dell in the circulation process also indicates that there is a buyer driven characteristic in this industry. The IT industry can be seen as an intermediate type that combines both producer driven and buyer driven characteristics in terms of driving forces .

In addition, the foundation for establishing the advantages of global value chain restructuring under different driving forces is different, and producer driven sources come from the production field; Buyers are driven by the circulation sector ; The mixed type that takes into account both needs to determine its orientation based on the specific situation. In the theory of global value chains, value

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chains with different driving forces have different behavioral rules and competitive concepts. The behavioral rules under each driving mechanism need to be followed during the reconstruction process. Contrary to this, there may be short-term benefits, but long-term competitiveness will eventually be lost.

3. The driving factors for the restructuring of the global value chain in China's manufacturing industry

Based on existing literature, it is found that the factors driving the restructuring of China's manufacturing industry's global value chain mainly include the following aspects:

3.1. New value allocation

In the process of value transmission, the links driving the value chain will undergo new value allocation due to factors such as innovation, thus reconstructing a new value chain and achieving the reconstruction of the global value chain . Leading enterprises in the global value chain rely on their own innovative advantages, such as leading technological innovation capabilities, strong sales networks and brand resources, advanced management capabilities, and sufficient resource advantages, to occupy high value-added strategic links in the global value chain, forming an oligopoly and seizing the maximum benefits from it. As a non leading enterprise in a subordinate position in the global value chain, China's manufacturing industry has an opportunity to understand and enter the market. By obtaining technical assistance from global buyers from developed countries, it can find a fulcrum for policy formulation and innovation, make strategic adjustments, improve production technology capabilities, seize market share, participate in new profit distribution on the value chain, and achieve the integration and reconstruction of GVC .

3.2. Evolution of international division of labor within the product cycle

Although there is an upgrading trend of "anti globalization" in some regions and industries, economic globalization dominated by the evolution of international division of labor within products, especially the international division of labor cycle, is still the mainstream, which is driving the restructuring of the global value chain in the manufacturing industry. The international division of labor within the product integrates into the global production network from the low end of the value chain through industrial transfer effects, relying on traditional production factors with low prices and preferential policies ; Through the industrial agglomeration effect, geographical industrial agglomeration occurs, which brings about technology spillover and diffusion between enterprises through three methods: knowledge spillover, reverse engineering, and personnel flow ; Through technology transfer and spillover effects, passive absorption of technology diffusion brought by knowledge transfer and spillover effects of imported technology promote active participation in the promotion of Total factor productivity ; Through the export push back effect, enterprises facing fierce international competition in the face of "push back" exports actively engage in technological innovation activities, restructure the global value chain, and promote the improvement of the global value chain status of Chinese manufacturing enterprises. The GVC restructuring of manufacturing driven by intra product international division of labor has attracted the attention of scholars.

3.3. Decomposing and Reintegrating the Value Chain

The re decomposition and re integration of the value chain, based on the continuous deepening and refinement of social division of labor, is driving the reconstruction of the global value chain in the manufacturing industry. With the continuous progress of technology, the division of labor in society has become more refined, the value-added links in the value chain have become more numerous, and the structure has become more complex. The value chain process formed by a product can rarely be completed by a single enterprise, so the value chain begins to decompose. The constant decomposition of the value chain makes the value chain split into value-added segments of different degrees. After screening by the market, some segments that can be merged are recombined and given new value, resulting in changes in the Morphogenesis of the whole chain . Li Wuwei and Wang Yumei (2001) [12] believe that the restructuring of the value chain will shift the focus of the enterprise from the previous comprehensive and balanced development to the current specialization, targeted attention to a specific segment, link, use their own comparative advantage in a specific link, transform comparative advantage

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into competitive advantage, re-establish a value chain suitable for their own, and make corresponding strategic adjustments.

3.4. Scientific and technological progress

The digital era has brought about scientific and technological progress, the evolution of division of labor has changed, the social division of labor has become more refined, the market scope has continued to expand, the pattern of interest distribution has changed, and the value chain has been restructured and shows the characteristics of spatial reconstruction . In addition to the reconstruction of spatial dimensions, research by Lv Yanfang (2020) [13] suggests that value chain reconstruction also includes technological reconstruction, division of labor reconstruction, and benefit distribution reconstruction of the value chain. In the reconstruction of these four dimensions, technological progress is the most core factor driving the reconstruction of the value chain, and it is also a key factor in the reconstruction of the value chain in China's manufacturing industry. Technological progress achieves high-end development of the manufacturing industry by increasing investment in technological research and development, improving technological innovation performance, and enhancing the embedding depth of its global value chain ; Technological progress promotes the enhancement of the division of labor in the global value chain of manufacturing services through the "value-added effect" and "multiplier effect" .

3.5. Major risk events

The impact of major risk events has provided new impetus for the reconstruction of the global value chain of China's manufacturing industry, and the reconstruction of GVC has assisted China's new development and economic globalization. For example, the severe impact of the epidemic on the global value chain has increased the risk of value chain breakage, and the fragility of the value chain has become apparent. The global value chain is accelerating its reconstruction, showing a trend of shortening cross-border chains and concentrating towards the region and local areas. But China can fully utilize the new opportunities provided by RCEP, in the context of global value chain reconstruction, and comply with the new trend of global "multipolar geese" development, accelerate the transformation and upgrading of economic structure and high-quality development through innovation driven, gradually transforming China from a "big goose" in the manufacturing industry model to a true "head goose" in the value chain.

4. The main obstacles faced by the reconstruction of the global value chain in China's manufacturing industry

Based on existing literature, the main obstacles faced by China's manufacturing industry in restructuring the global value chain are mainly reflected in the following aspects:

4.1. The cost advantage of elements no longer exists

The elements, through infrastructure construction, act on economic development and indirectly affect the reconstruction of China's manufacturing global value chain. The international competitiveness of China's manufacturing industry has demonstrated its cost advantage by virtue of cheap labor and resource endowment advantages for a long time in the past, but now with the disappearance of Demographic dividend and trade friction becoming the norm, the factor dividend, as the main driving force of China's manufacturing industry's rapid growth, has basically disappeared, and the manufacturing industry's cost advantage is difficult to sustain. In addition, facing rigid financial constraints, it is highly likely to fall into a vicious cycle of "economic backwardness - inability to invest in infrastructure construction - weak infrastructure - economic backwardness". Infrastructure construction can drive the economic development of a country (or region), directly increase Physical capital as a productive factor, and drive the transformation and upgrading of enterprises; Alternatively, as a quasi public good, it can have a positive impact on economic development through indirect spillover effects. Economic development is a key factor in the reconstruction of the global value chain, and infrastructure construction, by promoting economic development, will further encourage countries or economies that have been able to develop their economies to participate and lead the reconstruction of the global value chain.

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4.2. Conflicts with digital trade rules

The rapid development of digital trade not only drives the development of global digital trade rules, but also affects the reconstruction of global value chains in multiple fields such as product, service, and cooperation. The biggest challenge brought to China by the accelerated restructuring of global digital trade rules is the lack of Chinese templates in digital trade rules, which have been reflected in multiple regional trade agreements and have played a significant role. At present, the overall level of digital trade in China is not high, and the research and formulation of digital trade rules are relatively lagging behind. On the one hand, domestic law lacks support for the formulation of digital trade rules; On the other hand, digital trade and digital industry policies are not sound, lack a scientific statistical system, and the actual matching between policies and industry development is not high, which is not conducive to China's clear proposals in regional free trade agreements and other negotiations. It is not conducive to the development of digital trade rules, but also to the role of digital trade rules in value chain reconstruction.

4.3. Low competitiveness of global value chain

The low competitiveness of the global value chain hinders enterprises from participating in the reconstruction process of the global value chain, which affects the reconstruction of the global value chain. The overall global value chain competitiveness index of China's manufacturing industry is relatively low. According to Guo Huijun (2020) [14], out of the 14 manufacturing industries in the Asian Development Bank industry classification standards, only 5 industries in China have a certain level of global value chain competitiveness, and the competitiveness of high-tech industries is relatively weak. As a driving force, global value chain competitiveness can promote the dynamic flow of capital, technology, and products in the global market, optimize the reasonable allocation of these factors on the global value chain, change the original production, consumption, and management models, and accelerate the reconstruction of the global value chain. The low competitiveness of the global value chain not only affects business opportunities for enterprises, but also limits their development and competitiveness in the global value chain due to the lack of access to necessary resources and technology, making them unable to fully utilize international resources and affecting the restructuring of the global value chain.

4.4. Long term trapped in the low end of GVC

China's manufacturing industry has long been in the low-end position of the global value chain and there is a phenomenon of "low-end lock-in", which makes it difficult to achieve industrial structure optimization and upgrading, climb to the high-end of the value chain, and hinder the reconstruction of the global value chain. According to the research of Yang Binjing (2022) [15], China is engaged in some assembly and manufacturing processes in the global manufacturing industry by virtue of the advantages of labor factor endowment, and it is difficult to obtain the corresponding added value, and it is in the middle and low of the Smiling curve for a long time . This has made China increasingly passive in the process of restructuring the global manufacturing value chain. The specific mechanism is shown in Yin Xiaowen's (2021) [16] literature, which shows that developed countries exert economic pressure on developing countries through strong economic strength in the global value chain and industrial chain, limiting their industrial chain development, and causing developing countries to fall into a "low-end lock-in" in the new round of value chain restructuring, unable to make progress. Even due to the fact that Chinese manufacturing has been firmly captured by the low-end of multinational corporations such as GVCs, most Chinese manufacturing enterprises have become low-end "chess pieces" of GVCs that can be replaced by multinational corporations at any time.

4.5. Lack of core technical capabilities

In the global economic system, enterprises need to rely on core technology to gain competitive advantages, and the lack of core technology capabilities will have a serious impact on the position of enterprises in the global value chain, affecting the reconstruction of China's manufacturing industry's global value chain. Core technological capabilities can not only promote global value chain reconstruction through factor restructuring effects, industrial chain empowerment effects, and rule guidance effects, but also influence global value chain reconstruction by fundamentally changing the paradigm of industrial organization, changing the relative importance of different factors, and promoting the development of high standards of international economic and trade rules. At present, the

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lack of core technology has become the main bottleneck restricting the development of China's manufacturing industry. Some key areas of high-end manufacturing equipment are basically monopolized by foreign countries, such as in the field of high-end intelligent manufacturing. The problem of "low-end high-end industries" caused by the lack of core technology is particularly prominent . Enterprises will not be able to access advanced technologies provided by other countries, resulting in insufficient competitive advantages. The general decline in profit margins of manufacturing enterprises will inevitably hinder the reconstruction of China's manufacturing global value chain [17] .

5. The Main Path of Reconstructing the Global Value Chain of China's Manufacturing Industry

Humphrey and Schmitz (2000) explicitly proposed a four level upgrade classification method for the upgrading and reconstruction of global value chains, with enterprises as the center and from low-level to high-level: process upgrading, product upgrading, functional upgrading, and inter sector upgrading [18] . It is generally believed that the upgrading of the global value chain follows the process of upgrading, product upgrading, functional upgrading, and finally cross industry upgrading. This upgrading pattern can basically be supported by the industrialization process of many countries in East Asia. As far as China is concerned, restructuring the value chain is not just about achieving sustainable economic development. The most important thing is to obtain the opportunity to reshuffle the value chain, continuously improve its relative position in the value chain, and achieve the goal of transitioning from low-end lock-in to high-end. Liu Mingyu et al. (2012) proposed that value chain restructuring is a process for Chinese enterprises to reconfigure the original value chain, as well as an adaptive process for external interference. Under the increasingly fierce international competition environment, value chain restructuring is an inevitable choice for China at present.

5.1. Coordinated GVC reconstruction path at macro, meso, and micro levels

At the macro level, at the national level, there is a lack of corresponding measures in terms of talent, policies, and other aspects, especially the lack of human capital, which restricts the climb of China's manufacturing global value chain. Zhou Jinzhu (2017) [19] believes that the country should strengthen the governance of value chain reconstruction, formulate corresponding policies and regulations, create a good institutional environment, and build convenient and efficient trading platforms, in order to reduce transaction costs, break free from low-end lock-in, and move towards the high-end position of the value chain.In terms of meso level industrial transformation, the manufacturing industry has transformed and upgraded to the service industry, and repositioned itself in the value chain (brand manufacturers have transformed into OEM manufacturers), thus forming a value chain reconstruction where all links in the value chain can be made into service products for "sale" . Liu Jingjiang (2003) [20] particularly emphasized that enterprises should not only improve product quality but also provide good services, thereby promoting the transformation and upgrading of enterprises from a single manufacturing industry to an emerging service manufacturing industry .At the micro level, as for enterprises themselves, the first issue to be solved with the continuous expansion of China's reform and opening up is how to maintain their competitive advantage in the reconstruction of the value chain. Azmeh and Nadvi (2014) [21] studied the behavior of multinational corporations, mainly represented by emerging economies in Southeast Asia, as examples. They believed that such multinational corporations play a strategic role in shaping the geographical location and organizational structure of the global value chain while maintaining a high degree of global location flexibility.

5.2. GVC reconstruction path of the interaction between industry chain, supply chain, value chain, and other three chains

The different types of activities in the value chain, supply chain, and industrial chain form an organic whole, known as the value network, and transmit the final value to customers through the value chain as a carrier.Guowang (2013) [22] specifically explained that value chain restructuring is a process in which enterprises become more specialized in a certain link and fully leverage their comparative advantages; Supply chain restructuring aims to achieve economies of scale in the service industry, reduce transaction costs, and expand market demand; The industrial chain reconstruction is to integrate some manufacturers, adjust production through the buyer's demand, realize the increase of Returns to scale, and create more value. Through the restructuring of the value chain, supply chain, and industrial chain, promote a positive feedback cycle of deepening division of labor, increasing returns, and deepening division of labor. Among them, the purpose of value chain restructuring is to encourage

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enterprises to focus on core competencies, outsource businesses that they are not good at, and share the benefits of specialization while deepening division of labor. The purpose of supply chain restructuring is to achieve economies of scale in supply chain services, reduce unit transportation costs, and expand market radius. The purpose of industrial chain restructuring is to cultivate system integrators of the industrial chain, enabling them to have the ability to integrate the industrial chain and coordinate production activities according to customer needs, thereby better creating value for customers and achieving increasing returns. The ultimate value creation relies on the value network composed of industrial chain, supply chain, and value chain. Only through the coordinated restructuring of the three chains can a self-developed value network be formed, with endogenous division of labor evolving and achieving a higher level of division of labor balance.

5.3. GVC reconstruction path with mutual infiltration of GVC, RVC, and NVC

Gaulier et al. [23] argue that China's rise has intensified the international division of production processes within Asia, but has not created an automatic engine for trade in the region. Asia still relies on external markets to complete final product exports. The restructuring of the manufacturing industry has weakened the position of developed economies in Asian trade, but so far, it has not seriously affected the position of emerging economies in Asia. Therefore, it is necessary to accelerate the cultivation of Chinese multinational corporations, create a fair competition market atmosphere, improve corresponding incentive and supporting policies, rely on market demand, develop large companies with independent brands and innovation capabilities, accelerate the construction of industry leaders and leading enterprises under NVC conditions, and encourage large Chinese manufacturing enterprises to go out, acquire foreign advantageous industrial resources, and promote large-scale asset restructuring within and across industries. Liu Zhibiao's (2009) [24] study shows that there are two models for building NVCs (National Value Chain), namely bilateral trading platforms and leadership enterprise networks. There are three ways to restructure domestic value chains: upstream one-way expansion, downstream one-way expansion, and two-way expansion.

6. Research Review and Suggestions

6.1. Shortcomings in Research on the Reconstruction of Global Value Chain in China's Manufacturing Industry

(1) Lack of systematic and complete construction of theoretical framework. There is a majority of empirical research in existing literature, with relatively few theoretical studies, mainly measuring the degree of participation and division of labor in the global value chain of China's manufacturing industry. There is no answer to why and how to restructure the value chain.

(2) Most of the literature focuses on the reconstruction of the global value chain in China's manufacturing industry, with little research on NVC and RVC, and a complete theoretical system has not yet been formed on the internal connections and transformation effects between the three. Most studies are limited to conceptual models and explorations, and there are not many in-depth quantitative studies.

(3) There is more static research and less dynamic research. It is impossible to summarize the dynamic evolution and upgrading path of the global value chain reconstruction of China's manufacturing industry. It is only limited to static research and measurement of the existing status quo, and cannot make predictions about future reconstruction results.

6.2. Suggestions for the Reconstruction of the Global Value Chain in China's Manufacturing Industry

(1) Continuously enriching the theoretical system of global value chain reconstruction in China's manufacturing industry. The theoretical system of value chain reconstruction should have certain Completeness, including both theoretical research and model construction; Not only should we build a theoretical system, but we should also combine it with evolutionary mechanisms and path upgrades.

(2) The research on the combination of NVC and RVC with GVC will continue to deepen. With the continuous deepening and development of a country's integration into GVC's industrial upgrading, the importance of regional construction is increasingly highlighted. NVC can rely on RVC for GVC embedding and docking.

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(3) Quantitative research on the optimization and management of the value chain, controlling key value-added links, and enhancing competitive advantages is a key focus of in-depth research on value chain theory. Applying the value chain method to evaluate the competitiveness of enterprises, considering the interactivity of the value chain, establishing a network based evaluation model with the function of transmitting feedback information, as well as a dynamic evaluation model.

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