

Research on the "B&R" industrial structure adjustment planning with the application perspective of B2B

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Abstract

The economy of "B&R" is a network system intertwined with macro-, meso- and micro- levels. The structure reflects the rationality of the allocation of resources in the whole economic system. In addition to the short-term self-correction by the economic system through the market price mechanism, the government's top-level design and policy planning are needed to improve the institutional mechanism of the economic operation and to support the emerging industries. The implementation of planning management for "B&R" industrial structure adjustment must study the background, target state, core power and system guarantee of its industrial structure. Business-to-Business (B2B) refers to the business mode of exchanging and transmitting data and information between enterprises and enterprises through private networks or Internet. The application and development of B2B is an important content that must be taken into consideration in the planning management of industrial structure adjustment. It provides an important promotion and guarantee for the realization of the planning target and the completion of the planning task.

Keywords: planning; "B&R" industrial structure adjustment; B2B; transaction efficiency

Introduction

The Silk Road Economic Belt and the 21st-Century Maritime Silk Road ("B&R") including Eurasia countries with the help of existing and effective regional cooperation platforms, which is relying on the existing dual multilateral mechanisms between China and the relevant countries aims to establish a community of interests, a community of destiny and a community of responsibilities with political mutual trust, economic integration and cultural inclusion by borrowing the historical symbols of the ancient Silk Road. The economy of "B&R" is a network system intertwined with macro, meso and micro levels. Industry is the collection of various types of enterprises according to certain division of labor standards in economic activities, and their relations are industrial structures. The structure reflects the rationality of the allocation of resources in the whole economic system. The industrial structure is not static. It is restricted by the stage of economic development in a certain region. Structural transformation, namely, by eliminating or reducing inefficient industries, creating new industries or increasing the input of high efficiency industries, causes enormously potential economic growth. Whether the industrial structure is reasonable or not determines the speed and quality of economic growth, fundamentally restricts the long-term and stable development of the economy in a certain region and is the core pattern of economic activities. But it does not mean that in every period of economic development, the adjustment process and results are all optimized. When the industrial structure is out of balance or the structural evolution deviates from its growth pattern, it needs to be adjusted. In addition to the short-term self-correction by the economic system through the market price mechanism, the government's top-level design and policy—planning—is also needed to improve the institutional mechanism of the economic operation and to support the emerging industries. As an important top-level design for the development of real industry, a high quality industrial structure adjustment planning must answer two fundamental questions: what is the optimal state of industrial structure adjustment and how to realize the optimal state of adjustment. Therefore, the implementation of planning management for "B&R" industrial structure adjustment must study the background, target state, core power and system guarantee of its industrial structure.

Business-to-Business (B2B) refers to the business mode of exchanging and transmitting data and information between enterprises and enterprises through private networks or Internet. It presents the product and service of the enterprise on the website or the mobile client, and provides better service to the customers through the rapid reaction of the network, thus promoting the business development of the enterprise. With the development of modern IT, especially AI technology, the application of B2B is becoming more and more wide, the content innovation is becoming more and more rapid, and it has become a commercial mode of general application in various industries. The application and development of B2B is an important content that must be taken into consideration in the planning management of industrial structure adjustment. It provides an important promotion and guarantee for the realization of the planning target and the completion of the planning task.

Background analysis of “B&R” industrial structure adjustment planning

The foundation of modern economic operation-developed commodity economy is the unification of specialized scale production and diversified demands. The development of commodity economy depends not only on the improvement of the level and scale of commodity production, but also on the smooth exchange of commodities. Once there is a larger imbalance between supply and demand, it means that the economic operation is out of order, or even the end of an economic era. The outbreak of the global financial crisis in 2008 brought great impact on the world economy. Both developed and developing economies, the economic growth rate cannot return to the original level after the financial crisis. The recession characteristics of developed economies are more obvious. The annual average economic growth rate is only 0.6 percentage points lower than that of the emerging and developing economies in the same period before 2000, but after 2008, it is lower than the 4.5 percentage points of the emerging and developing economies in the same period. Other economic indicators also have obvious characteristics of recession, including: the proportion of debt to GDP has risen sharply, the credit crisis is even the crisis of sovereign credit, and the speed of economic decline, the rise of unemployment rate and the fluctuation of currency value have not been solved for a long time. At the same time, the financial crisis has caused the governments of the main developed countries in the west to find that there are huge drawbacks in the laissez faire policy of the government to reduce the market intervention under the liberalism which dominated by the neoclassical economic school, monetarist school and supply school after "stagflation" in the 70s of last century. The governments of all countries have begun to change the thinking of economic operation, to understand the emergence and solution of the crisis from the aspects of the disadvantages and optimization of the system and structure, and to increase the intervention to the market¹. “B&R” is a loose framework. There is a big gap between the political economy and the market structure of the countries and regions along the line. It is difficult to realize the optimization of the overall layout of the industrial structure only by the spontaneous power of the market. We must give full play to the advantages of the top-level design, so that we can achieve the vision of the “B&R” within a reasonable framework.

It seems that the way of optimizing the industrial structure is clear, but only the transformation of production mode, the upgrading of technology content, the reduction in the investment scale of the production process and the control of pollution cannot fully explain the economic efficiency of its adjustment. On the one hand, the efficiency of industrial structure adjustment lacks the standard of inspection; on the other hand, the technical level, input level and pollution level of the production process are still some external characteristics of the economic production activities. The focus of economics on economic activities is always the interest relationship between people in the process of economic production. The “B&R” industrial structure adjustment is bound to be

¹ As Paul Krugman, an American economist, thinks that the policy of laissez faire brought by the "conservative movement" has many effects on economy, society and politics, and the government should play a good role in maintaining social stability and social justice. Joseph Stiglitz pointed out that the crisis exposed the serious flaws of market fundamentalism. In his view, "an unrestrained market can bring efficiency and stability, and the market can regulate itself", which is contradictory in essence.

the readjustment and redistribution of interests among the various economic entities. How to make adjustment to achieve Pareto efficiency is the fundamental goal. Faced with such a goal, the problems or risks of adjustment will be exposed. For example, relying solely on the means of direct economic operation, such as tax increase and reduction, subsidy adjustment, and so on, can produce changes in the certain stage and local phenomenon of the economic operation - the reduction of traditional industries and departments, the emergence of new economic departments and models, but whether the structure of the whole industrial system can be optimized is not sure. At the same time, in recent years, the cross-border e-commerce of the countries along the "B&R" shows a blowout development trend, and at present, the main features are in the following aspects. The proportion of cross-border e-commerce in China's exports continues to expand. The volume of cross-border e-commerce transactions was 4 trillion and 200 billion in 2014 and 5 trillion and 200 billion yuan in 2015, and the average annual growth rate was over 30%; the proportion of total import and export trade in the same period increased from 11.9% to 17.6%. The acceleration is continuing. On the other, the structure of import and export is continuously optimized. Although the total amount of labor intensive products is still over half of the total, the export of high-tech mechanical and electrical products has been increasing rapidly, in which the export of automatic data processing equipment and components, mobile phones, integrated circuits and other electronic products is increasing rapidly. In addition, in the scale of transactions, B2B business occupies an absolute leading position. The characteristic of this transaction is that the cooperation between the two sides is relatively stable, and the amount of transaction is also large. These are the basis for understanding and analyzing what is the optimal target state of the "B&R" industrial structure adjustment and how to achieve such an optimal target state.

The target state of "B&R" industrial structure adjustment planning

The soul of the planning is the determination of the goal. The specific target of industrial structure adjustment planning is closely related to the period of planning, but it should follow the law of economic operation and development regardless of the short-term, medium or long-term goals. From Adam Smith's <wealth of the nation>, the prelude to modern economics has been opened, and the conceptual differences between "modern" and "ancient" have a certain standard in economics—commodity economy occupies the dominant position in economic activities. The output level and scale of the whole social economic product gradually deviate from the production of the individual producer, and in the increasingly complex production process, it relies more on the state of economic cooperation between people. Therefore, the expansion of labor division and the deepening of cooperation become the key to measure the economic level, and also become the basic trend and state of economic development.

The difference between the modern economic level and the ancient economic level lies in the scale of production. In the history of human economic development, the first fifty years after the first industrial revolution (1800 or early nineteenth Century) were distinctly different between "ancient" and "modern". Before 1800, the scale of human economic output has always remained low, and there is no significant change in the variety of the product. After 1800, the level of human economic production has greatly increased. It explains the technological changes brought about by the industrial revolution, on the one hand, to improve the production and output level of the whole society, and, more importantly, greatly enriches the types of products produced. The diversity of production mode and product category is a basic phenomenon of industrial structure optimization.

The great revolution brought by the industrial revolution is not accidental. It is the result of mutual influence and mutual promotion between the expansion of commodity exchange and the deepening of division of labor. On the one hand, division of labor promotes the development of commodity economy exchange activities. Production and labor products belonged to different owners, which led to exchange activities. On the other hand, the exchange activities of commodity economy also promote the constant evolution and complexity of the division of labor. The development of commodity economy will inevitably bring about the expansion of commodity exchange, promote the specialization of production activities, and confirm the division of labor.

As a result, the dual variations of the exchange of commodity economy and specialization of labor promote the rising of the level of commodity economy and the specialization of labor division in the whole economy and society, and the exchange and division of labor of the whole economy and society are increasingly complex. As the core of modern economic operation, the adjustment of industrial structure must also coincide with this law and trend. That is, the target state of "B&R" industrial structure adjustment planning is the increasing refinement of the industry and the deepening of the exchange complexity. This should be shown from a horizontal angle as: the level of division of labor in the industrial structure is increasing, the degree of specialization and refinement in the economic production and exchange activities is deepened, and the new sectors, new products and new economic forms in the economy and society are constantly emerging, and the atmosphere of innovation is strong. From a vertical perspective, the length of industrial chain is getting longer and longer, and the roundabout degree of economic production is higher and higher. "B&R" fine division of labor promotes the closer ties and cooperation among different sectors of the economy. The presentation of social final products depends on the close cooperation and collaboration between the countless production departments. From the perspective of process, the relevance and interaction of industrial structure in the different regions of B&R have reached an enhanced stage. The overall industrial structure of "B&R" has developed into a large system, which transcends the original simple economic components. The industrial structure of all the countries along the border has become an integral part of the "B&R" economic overall industrial structure, and they are interrelated and grow and run in the interactive influence. The allocation of economic resources has also entered the stage of optimal allocation in industries in different countries and regions.

In the history of economy, this trend can be proved, whether from the single structure of the first industry to the third industry with a higher degree of variety and roundabout, or to the comparison of the increase in the per capita income of the trade industry vs the non-trade industry. For example, the rapid economic development experienced by Germany in the 70-80 century of the last century prompted the change of domestic industrial structure. In 1980, the proportion of the third industry in Germany reached 53%, which surpassed the proportion of the primary industry and the second industry. In the 90s of last century, the adjustment of the industrial structure with the core of new economic development in Germany made the proportion of Germany's third industry more than 70% in twenty-first Century. From the 60 to 70s of last century, the information industry in the United States dominated. 80, in 90s, based on the leading edge of the high-tech industry, the United States also used traditional technologies and technologies to transform traditional industries. Industrial innovation, represented by networked and service-oriented economy, has directly promoted the continuous enrichment of the third industries in the United States, rising from about 60% in the 80s of last century to 77.4% in 2009. At the same time, according to Michael Spencer, the Nobel prize winner in the United States, 1990-2008 years, the average per capita income in the US non-trade sector increased from \$72 thousand to about \$80 thousand, with an increase of less than \$10 thousand. In the same period, the average income in the trade sector increased from \$79 thousand to 120 thousand in the same period. The added value of yuan is 4-5 times higher than that of non-trade sectors.

Core motive force to the target state of "B&R" industrial structure adjustment planning

The core content for planning are the key areas and initiatives to achieve goals. How to achieve the expansion of division of labor in economic production and exchange activities is the core driving force for achieving the goal of planning.

It is generally believed that the main driving force for promoting the continuous division of labor in all sectors of the economy is technological progress and socialization of production. It is determined by the means of production and the level of technological development of laborers, especially the nature and level of production tools. As Marx said, "the organization and division of labor are different from the tools they possess. The division of labor determined by hand grinding is different from that determined by the steam mill." "The accumulation of tools has developed and the division of labor has developed", "Every major development in machinery has

intensified division of labor". But just as the emergence of division of labor depends on whether the cooperation mechanism among different subjects can be guaranteed. In the modern commercial economic environment, the promotion of specialized division of labor depends on the speed and convenience of the transaction between the economic sectors, that is, the transaction efficiency of the whole "B&R" region. Only exchange activities are smooth, efficient and sustainable, so the expanding of the division of labor in the industrial structure has its significance and value.

The first question about the efficiency of commercial transaction was Adam Smith. In <wealth of nation>, he believed that the transport efficiency of water transport was higher than that of land transport. If there was no development of water transport, the development of the market and the development of labor division would be affected. In <Das Kapital>, Marx discussed the effect of transport efficiency on capital turnover. He pointed out: "the improvement of transportation tools will definitely shorten the time of the movement of goods." "With the development of transport tools, not only the speed of space movement has accelerated, but also the space distance has shortened in time." But the earliest concept of the transaction efficiency was noted by Yang Xiaokai, an Australian Chinese economist. The basic elements of the transaction efficiency were three: the quality and quantity of goods or services traded within a unit time; the utility of such goods or services; The benefit obtained by the easy person in the transaction. It is directly represented as the reciprocal of the transaction cost.

The reason why transaction efficiency is the core of the optimization of industrial structure is that in modern economic activities, only the center of higher transaction efficiency can bring together and allocate resources. If the transaction is inefficient, the speed of the flow of resources will slow; if the transaction efficiency is lost, the central position will be lost, and a new center is formed where the efficiency of the transaction is higher. The main way to enhance the "B&R" transaction efficiency is to speed up the flow of all kinds of factors of production. We should improve the transportation conditions by strengthening the construction of traffic infrastructure. We should pay attention to the situation that speed of information flow may directly or indirectly affect the speed of flow of people, logistics and capital flow. Efforts should also be made to promote financial modernization, expand the scale of finance, reduce financial costs, speed up the flow of capital. The typical case for innovation in trading systems is the United States. In the planning management of backwardness and the elimination of polluting industries and the upgrading of green emerging industries, the United States adopts a policy of creating a trading system to improve transaction efficiency on transactions that cannot be traded. For example, in 1990, the United States introduced the amendment to the clean air act, which adjusted the control policy, which had previously completely ignored the transaction, into a tradable permit system. Through the amendment of the bill, the tradable content of the environmental protection industry has been opened. The areas that continue to expand the emissions trading plans continue to include sewage discharge permit transactions, lead emissions trading, sulfur dioxide emissions trading, and chlorofluorocarbon emissions trading. These methods of reducing the institutional impediment and cost of the trade have promoted the efficiency of the new and environmental protection industry in the market, and promoted the emergence, development and benefit of the new industry. Lead emissions can save \$250 million a year, and water rights permits can save \$1 million a year. The total cost of saving in the United States may have exceeded \$12 billion since the emission permit trading system operates. B2B is an important tool to improve the efficiency of the "B&R" economic activity transaction. B2B is a new mode of business operation based on the development of computer and network technology. Its development level reflects the new development level of computer and network technology in essence. The development of this new IT technology will bring strong support to the construction of transportation infrastructure, information channel construction, financial trading platform and transaction tools, and promote their great progress. The development of B2B itself will bring more efficiency in economic transaction at a more micro level. First of all, B2B promotes the security level of network funds settlement. B2B's capital settlement is a large amount of network payment and settlement by enterprises. There are many transaction risks in the network capital settlement itself, but the

continuous development of B2B will bring about the innovation of the B2B business credit rating mode and promote the diffusion of enterprise credit information. The construction of the third-party platforms needed for payment will also accelerate. In the new trading environment, it is necessary to increase the credibility of these third-party platforms to meet the needs of fast payment between enterprises. Secondly, B2B accelerates the turnover of electronic payment. The basic mode of B2B's payment and settlement is that the buyer first transfers the money to the account of the third party. After the seller receives the information that has been paid by the buyer, the seller will deliver the goods according to the address provided by the buyer. After the buyer receives the goods and confirms it, the third-party payment institution transfers the buyer's payment to the seller. According to the traditional mode, there will be a longer waiting time when the seller delivers goods to the buyer and checks the goods. The development of B2B will promote the renewal of transaction verification and the innovation of electronic money, greatly reduce the time of the buyer's payment in the third-party payment institutions, making it easier for small and medium sized enterprises with weak strength and limited liquidity to participate in the transaction activities and improve the transaction scale and type of transaction. Finally, B2B promotes the "three flow" coordination level of electronic payment. A complete e-business activity is inseparable from logistics, capital flow and information flow. A large number of orders will be generated in B2B e-commerce activities. By improving the level of electronic payment, improving the level of capital flow and the uniformity of order information flow, it is beneficial to the enterprise to achieve the degree of the realization of the single delivery, and improve the coordination level of logistics, inventory and information flow.

Fundamental system guarantee of "B&R" industrial adjustment planning

The key areas and initiatives of planning are inseparable from the guarantee of a well ordered economic operation system. Commodity economy is the external characteristic of modern economic activities, and the market is the space of its occurrence. When commodity exchange relations occupy the mainstream of social economic operation, the institutional arrangement - market economy will emerge. As a concept noun, market economy first appeared as a concept equivalent to the capitalist system. Lenin first wrote the two concepts of market economy and planned economy in his <struggle for land and freedom> in 1906. Compared with the planned economy, the market economy is considered to be a capitalist exploitation system and is opposed to the planned economy of the socialist system. In 1920, in <the economic calculation under the socialist system>, the Austria economist pointed out: "the market is the core of the capitalist system, the essence of capitalism, only under the conditions of capitalism it is feasible; under socialist conditions, it is impossible to be copied by 'human'. -----It is either socialism or market economy. It can be seen that the market economy, even referring to capitalism, is also a concept at the institutional level. Now, it is considered as a kind of system, organization mode, adjustment mode, configuration mode and transportation mode that can automatically adjust social resources in various production departments (industries) in proportion. Therefore, the activity of optimizing the industrial structure takes place and develops in the commodity economy, and the system that restricts its contents and objectives is the market economy.

The principle of market economy is the market mechanism, that is, the allocation of economic resources through changes in prices, supply and demand. " The content of B&R" industrial adjustment is actually the allocation of resources and interests among different regions. It mainly includes: the power source of flow of resources (flow volume), the direction of flow, and the attribution of mobility. In the commodity economy environment, competition and supply and demand between market players determine the power and direction of resource flow, and the intermediary is price. Therefore, in the allocation of resources, from the operational process, the core of the market mechanism is price. Market competition can only stimulate the flow of economic resources among different market players through price, and indicate the attribution of economic resources through the final price. Microeconomic theory proves that in a perfectly competitive market, a completely thorough price signal can be produced. This is: within the supply side, within the demand side, between the supply and demand sides, there is an equal

bargaining power to form a complete price signal reflecting the allocation of resources. In such a price formation process, it embodies the fairness in the process of industrial exchange and the result of interest allocation. Therefore, the optimization plan of "B&R" industrial structure should follow the conditions of the perfect operation of the market economy system as much as possible: different market entities have the reciprocal bargaining power in the process of exchange. Only in this way can we form the most effective price signal so as to achieve the best allocation of resources and results. To give up the role of the market economy and adjust the industrial structure by manipulating and distorting the market mechanism, it is impossible to realize the healthy and developed division of labor and the goal of planning management of the "B&R" industry.

In short, the industrial structure adjustment planning is an important management tool to achieve efficient and coordinated development of all sectors in the B&R economy. Under the influence of the complex and changeable environment of the economic development of all countries in the world, from the overall thinking of the industrial structure adjustment of the "B&R" economy, it is necessary to realize the increasingly complex and advanced state of its industrial structure relying on its goal design based on its foundation in the environment of commodity economy and relying on the basis of commodity exchange activities. The convenience degree of commodity exchange -- transaction efficiency is the core power that restricts the adjustment, optimization and upgrading of industrial structure. B2B is an effective mode to improve the efficiency of the transaction. The satisfaction of the core rules of market economy is an important institutional guarantee for the smooth adjustment of industrial structure. Only by paying attention to the design principles of these important contents and links in the adjustment and planning of industrial structure can we promote the coordinated development between the various sectors of the "B&R" economy, make the adjustment and development of the industrial structure adapt to the whole regional economic development, and promote the adjustment of the industrial structure to the rationalization and the advanced development.

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