

Beijing-Tianjin-Hebei Technological Innovation under the Backgrund of International Industrial Transfer Trend¹

BEIJING-TIANJIN-HEBEI TECHNOLOGIQUE L'INNOVATION DE TRANSFERT INDUSTRIEL INTERNATIONAL TENDANCE

WANG Dianhua²

Abstract: The ability of technological innovation is constraining economic growth and enhance international competitiveness of enterprises a key factor and the basic driving force. To enhance the ability of independent innovation as the key link, comprehensively enhance the scientific and technological resources concentrated, lead and radiation innovation driven functions, improve the overall technological level and overall competitiveness, and build a highly efficient innovation system and an open, international-based, innovative research and development into base, As Beijing, Tianjin and Hebei undertake international industrial transfer of the main objectives. For Beijing, Tianjin and Hebei in the high standards and high levels of expanding opening up under the conditions of building a high level of modern manufacturing and research and development into base, we should take technology innovation to improve regional economic level, then take the lead in promoting regional economic development.

Key words: International industrial transfer, core technology, innovation system

Résumé: La capacité de l'innovation technologique est limitant la croissance économique et renforcer la compétitivité internationale des entreprises un facteur clé et le moteur de base. Pour renforcer la capacité indépendante de l'innovation comme le lien essentiel, d'améliorer globalement les ressources scientifiques et technologiques concentré, de plomb et de rayonnement axée sur l'innovation, amélioration de l'ensemble du niveau technologique et la compétitivité globale, et de construire un très efficace système d'innovation et l'ouverture internationale fondée sur les activités de recherche et de développement en base, Beijing, Tianjin et du Hebei entreprendre le transfert industriel international des principaux objectifs. Pour

¹ This research was sponsored by Tianjin philosophy and social science project:TJGL07-076;TUST:20070412.

² Female,born in 1965 in Changchun city of province Jilin,professor,doctor. Tianjin University of Science & Technology,College of Economic and Management,Tianjin, China, 300222.

Add: 1038 Daguanlu,Hexi District,Tianjin,P.R.China, Tianjin University of Science & Technology, College of Economic and Management.

P.C: 300222

E-mail:wangdianhua@tust.edu.cn

* Received 20 April 2008; accepted 26 July 2008

Beijing, Tianjin et du Hebei dans le haut des normes et des niveaux élevés d'élargir l'ouverture dans les conditions de la construction d'un haut niveau de fabrication modernes et de la recherche et le développement en base, nous devrions prendre l'innovation technologique pour améliorer le niveau économique régionale, puis prendre l'initiative de promouvoir le développement économique régional.

Mots-Clés: Industrielle internationale, de transfert de technologie, de système d'innovation

Along with development of economic globalization, technological advances in international production factors and industries to speed up the transfer of technology competition become more intense. Beijing-Tianjin-Hebei region not only has its own vast markets and more comprehensive support system, but also has broad hinterland certain effect of radiation such as north, northeast, northwest and central regions. In the context of international industrial transfer, the significance of technological innovation is becoming increasingly prominent.

1. THE INTERNATIONAL INDUSTRIAL TRANSFER TREND OF BEIJING, TIANJIN AND HEBEI ON THE IMPACT OF TECHNOLOGICAL INNOVATION

International industrial transfer of the nature of transnational corporations based on national or regional factor endowments of the value chain in all aspects of a global re-configuration. With the international industrial transfer could form the core competitiveness, and ultimately form of high-end, high-quality, high-tech industrial. In the high-tech fields through exchanges and cooperation will promote regional high-tech industries for further development, enhance ability of independent research and development, strengthen scientific research potential, to fully use his State of the advantages of the revitalization of the regional high-tech industries, the industrial optimization and upgrading its development multinational companies to be included in the global division of labor system.

With the transfer of manufacturing to China, China became the world's rapidly growing manufacturing base. Beijing, Tianjin and Hebei in China as the main focus areas of the manufacturing sectors, as Japan and South Korea, Taiwan, Europe and the United States investment in China's central region and one of the major investment and activity areas, effectively undertake the industrial shift. Make full use of international industrial transfer of the opportunity and actively participate in national and technological exchanges and cooperation in order to achieve the level of enhancing regional cooperation can be enhanced under the conditions of Beijing, Tianjin and Hebei, opening up the original innovation, integrated innovation and the introduction of a new digestive capacity, the formation of the overall scientific and technological innovation Together. Focus on the introduction of the use of technology, digestion and absorption, improve the ability of independent research and development, according to the regional distribution of functional areas and industrial development direction, relying on competitive industries, and actively undertake international advanced technology and industrial transfer, the original region can enhance innovation capacity, enhance Beijing, Tianjin and Hebei Build a high-level industrial structure.

Beijing-Tianjin-Hebei region with economic development and technical upgrading of the need to undertake full use of international technology transfer opportunity to upgrade their technological level of industries. Focus on the introduction of the use of technology, digestion and absorption, improve the ability of independent research and development, according to the regional distribution of functional areas and industrial development direction, relying on competitive industries, and actively undertake international advanced technology and industrial transfer, the original region can enhance innovation

capacity. Speed up the existing industrial structure adjustment and upgrading, and relying on technological innovation to seize the high ground of industrial technology, improve the industry's international competitiveness.

Make full use of international industrial transfer of the opportunity and actively participate in national and technological exchanges and cooperation in order to achieve the level of enhancing regional cooperation can be enhanced under the conditions of Beijing, Tianjin and Hebei, opening up the original innovation, integrated innovation and the introduction of a new digestive capacity, the formation of the overall scientific and technological innovation Together. Focus on the introduction of the use of technology, digestion and absorption, improve the ability of independent research and development, according to the regional distribution of functional areas and industrial development direction, relying on competitive industries, and actively undertake international advanced technology and industrial transfer, the original region can enhance innovation capacity, enhance Beijing, Tianjin and Hebei Build a high-level industrial structure.

Beijing-Tianjin-Hebei region industry as a whole higher level, based on scientific research, and research and development capabilities relatively strong. In the manufacturing sector, for the performance of high-intensive industry will grow faster, increase the proportion of the tertiary industry rose faster, a diversified, super grade trends. Tianjin Binhai New Area as the invading industries, electronic information, marine oil and chemical industry, vehicles and equipment manufacturing, oil pipe and high-quality steel products, biological technology and modern medicine, new energy and new materials such as the rapid development of competitive industries, to enhance growth of advanced manufacturing and modern logistics industry, with the focus on accelerating the transformation of the mode of economic growth and constantly improve the overall level of economic development. However, compared to a growth of two areas as the Yangtze River Delta and Pearl River Delta, there are some gaps. The main performance in the resource-based, primary-contradiction highlights, poor adaptability to the market, decreased efficiency, environmental pollution is serious. At present, as the Binhai New Area development and opening up of the implementation of the strategy, the use of international technology, promoting the old regional technological transformation of traditional industries and strengthen technological innovation and accelerate their industrial restructuring and optimization, eventually formed the core competitiveness, and ultimately form of high-end , high quality, high-tech and industrial structure, a fundamental change to the international division of labor in the unfavorable position.

Binhai New Area in the development and opening-up strategy, clear as soon as possible to strengthen scientific and technological strength, the formation of industry-led, technology-led development structure, developing high-tech industry building a high level of modern manufacturing and research and development into base, as the original and new and high-tech industry Base, the high-tech industries as promoting regional sustainable economic development-led industrialization. And in the field of high-tech exchanges and cooperation will promote the further development of high-tech industries and enhance regional competitiveness, and enhance the ability of independent research and development, strengthen scientific research potential, and thus make full use of his advantage for the revitalization of the high-tech industries in the service. The number of technical achievements to the successful transformation, will further promote the industrialization of technological transformation of traditional industries, increase the value-added products, improve the technological content of products to enhance the competitiveness of domestic and foreign markets, thus entering the track of healthy development, regional economic sustainable development. Accompanied by a high-tech and the increase in the number of production factors, can improve the production division of labour, and professional collaboration, organizational management, the introduction of technology to the production scale with greater efficiency.

2. THE DIFFICULTIES OF TECHNICAL INNOVATION IN BEIJING, TIANJIN AND HEBEI UNDER THE BACKGROUND OF INTERNATIONAL INDUSTRIAL TRANSFER TREND

From the enterprise point of view, China's enterprises generally weak technological strength, the market mainly concentrated in the domestic and international level in general is not high, and the face of strong technical force of multinational corporations of the tremendous research and development of international pressure, Beijing-Tianjin-Hebei region as well. Compared with multinational companies, most businesses within the technological innovation capability strong enough, tend to choose innovative model to imitate. From the technical characteristics of view, the current level of technological innovation generally not high, mainly in supporting technology and technical transformation, with suitable imitation is the innovative model of innovation and cooperation. As the technology of protection is limited, access to technology enterprises little difficulty, to imitate a certain market innovation. The impact of China's economic growth factors, technological progress of weaker economic growth still in the stage of capital accumulation rather than pulling technology. Weak industrial innovation capability, key technology issues such as strong ties have become increasingly prominent, competitiveness have been seriously affected.

2.1 The technology-dependent on multinational companies increase

China's industry has become part of multinational corporations lock the key targets of technology, from automobiles, household appliances to computers, communications equipment and so on can be found "technology lock in" the traces. China's key technological dependence on foreign technology in more than 50 percent, while developed countries dependence on foreign key technologies are below 30 percent, the United States and Japan in around 5 percent. China's aviation equipment, precision instruments, medical equipment, engineering machinery, and so is of strategic significance in the high-tech products, key technology, low self-sufficiency rate, more than 80 percent dependent on imports. In addition, major equipment manufacturing industry, 70 percent of the NC machine tools, 76 percent of petrochemical equipment, and more than 80 percent of the integrated circuit chip manufacturing equipment and 100 percent of the optical manufacturing equipment for foreign products are of many manufacturing enterprises and The product does not have the core technology and standards.

2.2 Lack of core technology of the original and systematic

Because of the lack of originality of core technologies, "market for technology," the majority of Chinese enterprises face because of the high patent fees and costs of products, Boli dilemma. Many foreign-funded enterprises under the banner of "intellectual property" under the banner stepped up licensing companies export products to China patent for the investigation, and make the worsening trade environment, lack of technological innovation and industrialization of the overall concept of regional development and the overall sense, there is no Innovative technology chain and industrial chain.

2.3 Inadequate investment in research and development

Over the past 10 years, China's R & D investment increased rapidly. According to UNESCO's global R & D expenditure statistics, China's R & D investment to GDP by 1996 the proportion of the 0.60 percent rise to 1.44 percent in 2004.

2.4 Single working and lack of union

In general, enterprises must obtain the comparative advantages of competition, you must seek the continued expansion: first, not through the use of force alone to expand the second is mergers or

acquisitions; Third, the establishment of strategic alliances, the essence of competition and cooperation for. The majority of our enterprises is the first choice of a way, in such a highly competitive environment, enterprises single work, only to waste too much money, redundant construction, delayed the best time to market products and lead the country to vicious competition among enterprises In this regard, particularly in Beijing-Tianjin-Hebei region.

2.5 With the phenomenon of serious industrial structure

The main problems: the past only in Tianjin's auto industry is relatively developed industrial base, but three different provinces and cities have formed the scale of the vehicle manufacturing capacity, and will focus on the future development of the automobile industry as one of the industry, Tianjin, Hebei will The petrochemical industry as a pillar industry of local economies; electronic information industry there are three provinces and cities similar to the layout of the project.

3. THE INTERNATIONAL INDUSTRIAL TRANSFER TREND OF BEIJING, TIANJIN AND HEBEI TECHNOLOGY FOR INNOVATIVE STRATEGIES

Beijing-Tianjin-Hebei region should make use of international industrial transfer of the historic opportunity to play a resource endowment and industrial advantages, promote multinational companies in the region's technology diffusion and spillover effects, mainly to independent innovation, innovation and cooperation to imitate the model of innovation, supplemented by structure, Technological innovation to achieve sustainable development.

3.1 Improve the innovation system, and increase government investment in science and technology

To foster the ability of independent innovation on the basis of sound innovation system and create an environment to encourage independent innovation. Should gradually increase the intensity of research and development, and plans for projects or objectives, content and the different changes in direct funding and reduce the proportion of grants to expand government procurement, tax credits, financial guarantees, loans and discount on the proportion of fiscal policy.

3.2 The formulation and implementation of R & D to encourage foreign investment policy

Since the 1990s, China formulated a series of policies to encourage foreign investment and promote foreign investment in China's research and development. However, the content and policy implementation, still need to improve it. At present, we should grasp the implementation of existing policies, increase the intensity of the new policy incentives. For example, deregulation of the multinational companies R & D investment, equity ratio and business scope of control, encourage multinational corporations and local enterprises, universities, research institutions to develop Union, the guide R & D institutions in China engaged in the research and development of core technologies, select the appropriate conditions R & D institutions in accordance with the locations of the features of transnational corporations set up research and development park.

3.3 To build an open, international-based, innovative research and development base for the purpose of transforming

After several decades of development, the Beijing-Tianjin-Hebei region has been completed with the

First Automobile Group as the core of the large automobile production base, power and automation equipment manufacturing, technology and equipment inventory and equipment types among the best in the country, and also focused on the equipment Manufacturing association of the larger light industrial, petrochemical, metallurgical and other industrial sectors, formed a relatively complete industrial group, with the development of the manufacturing sector "world factory" exceptional conditions. At the same time, to develop high-tech industries and industrial restructuring with as soon as possible, a high-tech industries and traditional industries combination of new technological structure, speed up the process of industrialization, we must with the international industrial structure, technological structure of the convergence of technologies to enhance industry , R & D capabilities and advantages of industry into the core of technological innovation capacity of the basic principles. Strengthen capital and technology-intensive industries of the cooperative production, such as electronics, telecommunications, machinery, aviation, automobile parts production, to promote the upgrading of the industrial structure and speed up the integration of production, learning the pace of technological innovation, the strategy of developing high-tech products , Seize the high ground of high-tech. At present, could be breakthrough on the basis of existing automobile manufacturing industry, equipment manufacturing comparative advantages, from the "world factory" to enhance the construction of "the world's Office," the building, so that all areas of the original innovation capacity of the world's most advanced domestic or Leading level. Beijing Zhongguancun science and technology through research and development into the Tianjin Binhai New Area of the modern manufacturing base and research and development into bases, Hebei Caofeidian Industrial Zone to promote the development and construction of industrial upgrading and development, enhancing industrial competitiveness.

3.4 Strengthen the building of high-tech industrial park

To Beijing, Tianjin, Tangshan, Qinhuangdao, Langfang, and other central city consisting mainly of high-tech industrial park's construction and development, the international technical exchanges and cooperation provides a platform to attract international high-tech enterprises settled, we guarantee that the foreign investment The internal business of the technical advantages and attract foreign investment, the inflow of talent. Relying on competitive industries, and actively undertake international advanced technology and industrial shift and expand the new district and the city's economic and joint collaboration. High-tech Industrial Development Zone as a growth pole, through radiation, a number of growth points, bring into full play the supporting role of high technology, the Beijing-Tianjin-Hebei region as soon as possible so as to build a new type of industrialization in China's economic base and new and important growth region.

CONCLUSION

At present, the technical level as a "soft power" status and decisions of the new elements, resulting in "technical competition" more intense. To undertake international industrial transfer, the Beijing-Tianjin-Hebei region into a national advanced technology and the proliferation of the undertaking, it is Beijing-Tianjin-Hebei region and the Bohai region of opening up the important task of the future. Beijing-Tianjin-Hebei economic development has entered a transition period. How to change the economic development, improve the international competitiveness of industries to regional integration into the industrial advantages of globalization industrial chain and eventually be attributed to the transformation and upgrading of technology. Contemporary International experience shows that sustained economic development and long-term growth potential is the driving force comes from technological innovation, digestion and absorption of foreign advanced technology is the core objective of the policy, promoting economic restructuring, the implementation of regional economic development by leaps and bounds can be difficult to play Irreplaceable important role. In the international industrial transfer as the trend of the times when, Beijing-Tianjin-Hebei region only on the basis of their factor endowments and industry positioning, strengthening technological innovation, can the new round of

global competition in a place.

REFERENCES

- Zhou Liqun. (2007). Innovation, integration and coordination - Beijing, *Tianjin and Hebei forefront of regional economic development report* [M]. Beijing: Economic Science Press.
- Pan Wenqing, etc..(2006). *Bohai regional development report* [M]. Beijing: Enterprise Management Press.
- Xu Guanhua. Independent innovation on several important issues [J]. *China's Soft Science*. 2006,4.
- Junshan. Multinationals international research and development of the "spillover effect" on China's policy analysis and [J]. *The world economy*. 2005,8.