

## **The Belt and Road Initiative from Three Theoretical Perspectives**

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**Abstract:** Efforts have generally been made from policy considerations to interpret reasons for the proposition of the Belt and Road Initiative and its global layout. Though they are of some significance, such a grand initiative certainly has its own internal theoretical basis. This paper is in the opinion that the spillover effect of oversized economy, the extension of the value chain and its climbing effect, as well as channel suitability and location orientation constitute the endogenous driving forces of the Belt and Road Initiative. Each of the three theoretical perspectives has its own internal realistic basis, all of which may offer some reference that is conducive to understanding the practice and future development of the Belt and Road Initiative.

**Keywords:** the Belt and Road Initiative, endogenous driving force, theoretical basis, interconnection and interworking

The Belt and Road, an important project for China's further opening up to the world in the new era, has been unfolding on a global scale. From the perspective of interconnection and cooperation, it is the grandest infrastructure project to be built in the world. The proposition of any grand initiative and its practice naturally has its profound social, economic, and political reasons, as does the Belt and Road Initiative. This paper has proposed three theoretical perspectives for discussing the endogenous

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motivation of the Belt and Road Initiative.

## **The Spillover Effect of Oversized Economy**

Since ancient times, China has been a populous nation. As a result, a huge population is bound to produce an economy of corresponding scale. In the context of industrialization, especially under the conditions of reform and opening up, the demand created on the basis of such a huge population tends to be more diversified, thus resulting in an even larger economic scale, while surplus output inevitably produces a spillover effect, which provides an important condition for the Belt and Road Initiative.

### **I. China has formed an oversized economy**

Larger economies produce more benefits. According to classical economics, whether large scale production is to replace small scale production depends, first of all, on the size of the market,<sup>1</sup> while the size of the population determines the scale of market. China has always been a nation with a huge population. A big national demographic scale inevitably produces a huge market to meet the basic economic, social, livelihood and defense needs of society, naturally leading to the expansion of productivity. In the late 19th century, China became a semi-colonial and semi-feudal society, with its industrial development almost marginalized in the world. Since the founding of new China in 1949, China has pursued a socialist planned economy, and established a relatively independent industrial system through toilsome effort. Since the Third Plenary Session of the 11th CPC National Congress, China has followed a policy of reform and opening up, initiating a historical process of transforming its planned economy to a planned market economy and later on to a market economy, in which the contradiction between rapid economic growth and underproduction persisted for quite some time. During this period, demographic scale did not produce corresponding volume of production and market size due to low productivity in China. In the 1990s, China's economy entered a period of fast and sustained growth to embrace the end of the Cold War and

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<sup>1</sup>John Stuart Mill, *Principles of Political Economy: With Some of Their Applications to Social Philosophy*, first volume, trans. Zhao Rongqian et al (Commercial Press, 2009), 167.

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profound development of globalization. Only in this period did China's large demographic scale continuously expand the demand of its population for the building of infrastructure, housing and transportation, leading to the expansion of its production capacity. Great economic development potential and the gush of domestic demand in China have attracted foreign direct investment (FDI) and the transnational enterprises of the world to China. In this period, the Chinese government made every effort to build hyper-class or aircraft carrier-class state-owned enterprises through policy guidance that encouraged the enterprises and industries to merge and restructure, which also provided opportunities for some private enterprises to grow and expand, thus achieving the initial formation of China's huge production capacity.

Since China joined the World Trade Organization (WTO) in 2001, Chinese enterprises have stepped up to their challenges and have demonstrated great growth capability in the face of fierce global competition. When the Fortune 500 list first came into being in 1996, only China Bank and China Oil & Foodstuffs Corporation (COFCO) made it onto the list, while 151 American enterprises were listed. In 2001, there were 12 Chinese enterprises listed on the Fortune 500, while 197 American enterprises were listed, making a historical record, with their total income accounting for 42 percent of the gross income among Fortune 500 companies. Later on, Chinese enterprises continued to grow rapidly, standing up to the great test of international competition. As a result, the number of Chinese enterprises listed on the Fortune 500 has grown rapidly. In 2010, there were about 61 enterprises from mainland China listed on the Fortune 500. If the listed enterprises from China's Taiwan region were included, the number would come to 69. On the Fortune 500 list issued on July 20 of 2016 for the year, a total of 110 Chinese enterprises (103 from Chinese mainland and Hong Kong, and 7 from Taiwan region) were listed, second only to the United States.<sup>1</sup> As of 2017, the number of Fortune 500 enterprises from the greater China region was continually growing for 14 consecutive years, reaching 115 (109 from Chinese mainland and Hong

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<sup>1</sup> "Ranked within Countries," *Fortune*, Asia Pacific Edition, No. 10, August 1, 2016, 16-18.

Kong, and 6 from Taiwan region).<sup>1</sup>

Table 1: The number of Fortune 500 enterprises from the greater China

	Chinese mainland and Hong Kong	Taiwan, China	Total Number
2010	61	8	69
2016	103	7	110
2017	109	6	115

Source: US *Fortune* magazine

In recent years, China South Railway (CSR) has merged and been restructured with China North Railway (CNR), Baosteel has merged with Wuhan Iron and Steel Company to form China Baowu Steel Group Corporation Limited, and Shougang Group has merged with HBIS Group to form Northern Iron and Steel Group, all of which have stepped up the creation of jumbos for China's manufacturing and steel industries. Since then, China has not only said farewell to the era of commodity shortages, but also demonstrated its oversized production capacity worldwide. In 2010, China became No. 1 manufacturer of the world, with its manufacturing output accounting for 19.8 percent globally, overtaking that of the United States (19.4 percent).<sup>2</sup>

As China is vast in size and huge in population with exuberant demand, its voluminous productivity has boosted the construction of its infrastructure, with the building of roads, railways, ports, airports, energy networks, housing, new rural communities, and municipal infrastructure projects at an unprecedented pace on a national scale. This high-speed development has persisted for several years, likewise giving boost to the growth of relevant industries to form their oversized production capacity.

## **II. The Belt and Road Initiative agrees with the spillover effect of oversized economy**

The oversized production capacity of Chinese enterprises is bound to spill over, while the Belt and Road Initiative meets such objective needs by

<sup>1</sup> "The Fortune 500, The Lists 500," *Fortune*, Asia Pacific Edition, No. 10, August 1, 2017, accessed October 29, 2018, [http://www.fortunechina.com/fortune500/c/2017-07/20/content\\_286785.htm](http://www.fortunechina.com/fortune500/c/2017-07/20/content_286785.htm).

<sup>2</sup> "China Became World's Top Manufacturing Nation, Ending 110 Year US Leadership," *Mercopress*, March 15, 2011, accessed November 3, 2018, <http://en.mercopress.com/2011/03/15/china-became-world-s-top-manufacturing-nation-ending-110-year-us-leadership>.

undertaking the historical responsibility to facilitate the spillover of production capacity. As in the case of railway construction, since the State Council approved the Medium- and Long-Term Railway Network Plan in 2004, China has made splendid achievements in railway construction. By the end of 2015, operating railway mileage in China reached 121,000 kilometers, of which 19,000 kilometers were high-speed rail that reached 20,000 kilometers at the end of 2016, making China's high-speed rail mileage account for 65 percent of the world's total;<sup>1</sup> by the end of 2017, China's operating railway mileage reached 127,000 kilometers, of which 25,000 kilometers were high-speed rail, accounting for 66.3 percent of the world's total and second to none in the world.<sup>2</sup>

On this basis, the National Development and Reform Commission (NDRC) has made a comprehensive plan for China's domestic railway development from 2016 to 2025 to reach the goal of expanding effective supply of railways, strengthening the role of railways as the basis and leader for social and economic development, giving full play to the green backbone advantage of railways, raising the emergency support capacity of railways, and building a basic network of modernized railways. On July 20 of 2016, NDRC issued a revised Medium-and Long-Term Railway Network Plan, according to which RMB 3.5 trillion would be invested during the 13th Five-Year Plan to boost railway construction. By 2020, China's railway network mileage will reach 150,000 kilometers, of which 30,000 kilometers are to be high-speed rail, connecting more than 80 percent of China's major cities. By 2025, China's railway network mileage will reach 175,000 kilometers, of which about 38,000 are to be high-speed rail, with its coverage further expanded, its structure and organization better optimized, and its backbone role becoming more outstanding, so that its supportive role for social and economic development will be better

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<sup>1</sup> Su Zhou and Luo Wangshu, "\$500B to Boost High-speed Rail Plan," *China Daily*, December 30, 2016.

<sup>2</sup> "Zhongguo gaotie licheng zhan shijie baifenzhi 66.3, sizong siheng jiben xingcheng [China's high-speed railway mileage accounts for 66.3 percent of the World's total, with the pattern of four vertical and four horizontal lines initially taking shape]," *China Economic Net*, February 14, 2018, accessed December 1, 2018, [http://www.ce.cn/cysc/newmain/yc/jsxw/201802/14/t20180214\\_28185376.shtml](http://www.ce.cn/cysc/newmain/yc/jsxw/201802/14/t20180214_28185376.shtml).

played. By 2030, China's railway network will basically realize "interconnection and inter-working both at home and abroad, inter-regional multi-route connection, high-speed railway connection among provincial capital cities, rapid access by railways among prefecture-level cities, and basic coverage of all counties."<sup>1</sup> Meanwhile, China's railway has become the leader in international capacity cooperation and trailblazer for going global among Chinese enterprises. Promotion by Chinese national leaders and implementation of the Belt and Road Initiative have made it possible for China's railway construction overseas to make great progress, becoming one of China's leading export industries.<sup>2</sup> The major reason for such a great achievement lies in the fact that China's railway industry itself is huge in size, with advantages in development, innovation and construction. Taking high-speed railway construction as an example, the per-unit cost of China's high-speed railway network is much lower than that of any other country in the world. The planning of oversized railway network has produced economies of scale, standardizing every architectural element, conducive to improving innovation and competition capacities in equipment manufacturing and project construction, and amortizing capital cost of equipment construction in a series of projects.<sup>3</sup> Scale effects have obviously made China's high-speed railway enterprises more competitive in their overseas operations.

An oversized economy is bound to have global effects. As China has

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<sup>1</sup> "Woguo tielu dao 2030 nian jiang shixian neiwai hulianhutong [China's railway will achieve interconnection and interworking both at home and abroad by 2030]," *China Economic Net*, July 21, 2016, accessed December 5, 2018, [http://www.ce.cn/cysc/jtys/tielu/201607/21/t20160721\\_14003380.shtml](http://www.ce.cn/cysc/jtys/tielu/201607/21/t20160721_14003380.shtml).

<sup>2</sup> The basic fact of China's railway fixed assets investment from 2004 to 2015: RMB 90.1 billion in 2004, RMB 136.4 billion in 2005, RMB 208.8 billion in 2006, RMB 252.1 billion in 2007, RMB 416.8 billion in 2008, RMB 704.6 billion in 2009, RMB 842.7 billion in 2010, RMB 590.6 billion in 2011, RMB 631 billion in 2012, RMB 663.8 billion in 2013, RMB 808.8 billion in 2014, and RMB 832.8 billion in 2015. See Wang Ziyue, "Lianxu sannian touzi yu 8000 yi meiyuan, tielu shiru 'huangjin shidai' [China's railway has entered a 'golden age' with investment exceeding US\$800 billion for three consecutive years]," *China Business News*, A2, January 18, 2016.

<sup>3</sup> Lin Yifu and Wang Yan, *Going Beyond Aid: New Ideas of Development Cooperation in a Multipolar World*, trans. Song Chen (Beijing: Peking University Press, 2016), 128-129.

such a huge production capacity, its products will exceed the demand of the domestic market and naturally make their way to the global market. Great demand for infrastructure construction all over the world will inevitably consume a huge quantity of products, thus giving rise to parts of China's surplus high-quality production capacity going global on a certain scale, which is the objective demand of the Belt and Road construction.

According to statistics from the British Corporation of Market Research on Foreign Direct Investment, Chinese investors claimed invested a total amount of US\$75.9 billion in 315 new projects in countries involved in the Belt and Road Initiative during the 18 months leading up to June of 2016, doubling their investment made in the prior 18 months; since the Belt and Road Initiative was proposed in 2013, 56 percent of China's foreign direct investment has ended up in those related countries. The British Financial Times website put it that the Belt and Road Initiative guided China's capital flow. For construction, energy and heavy industries, this is "a major opportunity to consume the huge domestic surplus production capacity accumulated over the past 20 years" and "has created conditions for exporting surplus production capacity."<sup>1</sup> In addition to major Chinese traditional overseas investors, China's rapidly rising large enterprises, such as the e-commerce group Alibaba and the consumer electronics company Haier, are also determined to go global, thus becoming major overseas investors. They are shifting their production overseas, and stepping up their layout in the global consumer market with great potentials.

### **III. The spillover of production capacity has met certain significant constraints**

China's oversized production capacity is also characterized by high energy consumption and high pollution. For instance, the cement industry is deemed as one of the most polluting industries in the world, emitting 5 percent of man-made carbon dioxide. Globally 4300 million tons of cement is consumed each year, with China consuming half, while India and the

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<sup>1</sup> Jacopo Dettoni, "Silk Road Revival Drives Chinese Investment Push: 'One Belt, One Road' Policy Increasingly Guides Capital Projects," *Financial Times*, August 8, 2016, accessed November 30, 2018, <http://ft.com/cms/s/c2f9f388-5b38-11e6-8d05-4ea66292c32>.

United States follow as major consumers.<sup>1</sup> Such a huge production capacity cannot be transferred overseas as Japan did in the 1970s mainly to East Asia through a flying geese paradigm, because there is hardly any country or region in the world that can undertake such a huge production capacity transfer from China. At the same time, the transfer of highly polluting and energy consuming industries today is bound to meet with resistance, as environmental protection awareness is rising globally. Despite Say's Law ("everything produced can be sold at reasonable price, therefore there is never going to be a general surplus"), the situation in China is different. Even if the transfer is made globally rather than limited to a country or region, such a huge production capacity cannot be absorbed completely. For China, large scale production has, in fact, led to excessive production capacity. In traditional industries, the policy of "reducing some and transferring some" is meant not only to meet the needs of industrial structural adjustment, but also to address the issue of air pollution and improve the ecological environment. Oversized production capacity is bound to produce spillover effects, which has laid the basic conditions for the construction of the Belt and Road. However, as transfer is not the only way to eliminate excessive production capacity, the criticism that China is transferring its excessive domestic production capacity through the construction of the Belt and Road is almost groundless. The actual measures taken by the Chinese government over the past years have indicated that China has made great efforts to eliminate its excessive production capacity not by transferring it overseas, but by self compression. President Xi Jinping pointed out at the G20 Hangzhou Summit, China had made maximum efforts and taken the most practical measures to eliminate its excessive production capacity, and we would act on what we said.<sup>2</sup> In terms of actual development, China's coal and steel industries accomplished their year-round capacity reduction targets in 2017, achieving remarkable

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<sup>1</sup> "Cement Manufactures: Cracks in the Surface," *Economist*, August 27, 2016, 56.

<sup>2</sup> Xi Jinping, "Zhongguo fazhan xinqidian, quanqiu zengzhang xinlantu--zai ershiguo jituan gongshang fenghui kaimushi shang de zhuzhi yanjiang [A new starting point for China's development and a new blueprint for global growth: Keynote speech delivered to the Opening Ceremony of the G20 Business Summit]," *Guangming Daily*, September 4, 2016.



results in “de-capacity, de-stocking, de-leveraging, cost reduction, and mending deficiencies”.<sup>1</sup> Although the Belt and Road Initiative has created conditions for China to transfer parts of its excessive production capacity, that is not all, as China will surely reduce much of its production capacity by itself.

### **The Extension of the Value Chain and Its Climbing Effect**

The industrial division formed under globalization has been in a constant state of flux, mainly reflected in the value chain including the supply chain, the production chain and the logistics chain. Participating in international competition, Chinese enterprises, profiting from innovation drive, have been continuously climbing from the low end toward the high end along the global value chain, and expanding overseas. This extension of the value chain and its climbing effect has made the proposition of the Belt and Road Initiative inevitable.

#### **I. China has been embedded in the global value chain**

Under globalization, especially promoted by such factors as development of transnational corporations and international direct investment, enterprise industrial chains assume global significance. Focusing on optimal allocation of resources and maximized profits, the international division of labor tends to be more connected and more professional, making industrial division more meticulous, with inter-industrial division further shifting to intra-industrial division. The international division of labor in theory has evolved from division of labor among nations to intra-industrial and intra-corporation division of labor on a global scale, thus promoting the development of globalization on a higher level.

China started to become embedded in global industrial chain during the late 1970s when it began to pursue the policy of reform and opening up. The major decision made then has provided necessary policy basis and market conditions for China to participate in global division of labor. Since the end of the Cold War, globalization has developed rapidly, accelerating

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<sup>1</sup> Zhang Yi and Liu Kun, “Jingji jianshe: tizhi zhuanxing, quanxin qixiang [A new phase for economic construction: upgrading and transformation],” *Guangming Daily*, March 4, 2018.

the process to better allocate resources, labor and technology in the global context. China has enjoyed latecomer advantages in production factors, such as labor forces, which have become more impressive with the promotion of globalization in the wake of the Cold War. Driven by trade and international investment, the participation of Chinese enterprises in international division of labor has become more and more compact. The marriage of China's industrial upgrading and the global industrial transformation has enabled Chinese enterprises to get into the global industrial chain in a deeper way. In such an industrial chain, some products are not so much made in China, and rather, made in the world, to put it more precisely. A close global linkage or interworking has occurred not only among nations and enterprises, but also products and even components or parts. The formation and flux of the industrial chain and the supply chain, in addition to the upward movement in the value chain, have driven the quality change of China's industries and products. In the form of exports, Chinese enterprises have taken a path moving up the industrial value chain from textile-based labor-intensive products to light industry labor-intensive products, to capital-intensive products, and finally to the higher level of knowledge- and technology-intensive products.

Large scale production under international division of labor is bound to give birth to large scale logistics, making the supply chain a major link of logistics. Since the beginning of reform and opening up, China has grown up as the largest manufacturing country in the world through decades of rapid economic development, and basically formed a global pattern of import and export, which has made China an important link in the global supply chain featuring two-way benefits, pluralism and cyber-orientation.

The global value chain has undergone little or no change, and is difficult to change fundamentally within a short period of time. In research & development, design and marketing, developed nations still occupy the high value-added end of the value chain, while the developing countries are engaged in manufacturing, which is at the low end in the value chain. Although China's manufacturing industry has changed greatly, it is still at the low end of the global value chain as seen in international division of

labor.<sup>1</sup> To enhance China's position in global division of labor is a self-demanding process, only by which can China change its destiny of being always locked to the low and middle ends of the value chain. This endeavor calls for innovation, as only by engaging in innovation can China keep abreast with the times and grasp the initiative of development. On May 19 of 2016, the Central Committee of the CPC and the State Council issued the Outline of National Innovation-Driven Development Strategy, proposing a three-phase goal—namely striving to become an innovative country by 2020, a leading innovative country by 2030, and a scientific and technological innovation power of the world by 2050—with the vision to push innovation among Chinese enterprises to a higher stage, so as to provide strong support for Chinese enterprises to get into the middle and high ends of the global value chain. According to the National Science and Technology Innovation Plan for the 13th Five-Year Plan, China's national scientific and technological strength as well as its innovation capability will increase greatly. This Plan has reflected a global vision, which presupposes building a community of collaborative innovation along the Belt and Road, merging into and laying out a global innovation network in a comprehensive way, and getting deeply involved in global innovation governance.<sup>2</sup>

## **II. China's rise in the international value chain has produced a global impact**

With economic development over the past 40 years, China's innovation capability has been on a consistent rise. As the National Innovation Index: 2016-2017 published in English by China Academy of Science and Technology Development Strategy showed, China's capability in innovation has advanced beyond its economic development stage and far ahead of other developing countries, as a result of increasingly committing

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<sup>1</sup> Hu Zhaoling and Song Jia, "Jiyu chukou chanpin de guoji fengong diwei yanjiu—jiyu chanpin nei fengong de shijiao [A study of international labor division status based on export products from a prospect based on labor division within products]," *Shijie jingji yanjiu* [World economy study], No. 3 (2013): 15-25.

<sup>2</sup> "Shisanwu' guojia keji chuangxin guihua fabu [The release of national science and technology innovation plan for the 13th Five-year Plan]," *Guangming Daily*, August 9, 2016.

resources to innovation.<sup>1</sup> An article published by *The Economist* believed, as China was transforming from a manufacturing economy to an innovative economy, its status as a driver for technical innovation was being recognized by the world.<sup>2</sup> As the report published by the US National Science Foundation indicated, China had undoubtedly become the second largest country in R&D globally, whose R&D expenditure was close to the sum of the European Union. China's new Four Great Inventions, namely Alipay, online shopping, high-speed rail, and shared bikes, as well as its advancements in high-speed rail transportation technology and nuclear power technology have all become well-known technical innovations worldwide. International technical experts have fully affirmed the level of innovation in China. Although China used to be labeled as the replication base of the world, it is now a fountainhead of innovation.<sup>3</sup>

The rapid development of information technology and its fast combination with advanced manufacturing technology will surely show a better prospect for China's ascension in the global value chain. In addition to changing the production mode among enterprises, information technology has also shortened and simplified transactions along the value chain and altered the value creation process.<sup>4</sup> As this happened, the global value chain has shifted from industrial capital-driven to multivariate factor-driven by industry, logistics, supply, information penetration and service, and even buyers. Apart from serving the enterprise infrastructure, all ancillary activities are directly related to every basic activity, and support the whole value chain. As far as the buyer-driven global value chain is

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<sup>1</sup> Xu Huiyun and Wang Yufeng, "Zhongguo xingcheng sanda kechuang gaodi, chuangxin fazhan dongli qiangjin [China has formed three science and technology innovation high grounds, and achieved strong innovation power for development]," *China Business News*, October 10, 2017.

<sup>2</sup> "The Changing Nature of Chinese Competitiveness," *Economist*, May 19, 2018, 5.

<sup>3</sup> "Innovation in China: Out of the Master Shadow," *Economist*, July 9, 2016, 70; George S. Yip and Bruce Mckern, *China's Next Strategic Advantage: From Imitation to Innovation*, (Cambridge, MA: The MIT Press, 2016).

<sup>4</sup> Qiu Xingjie, "'Gongye 4.0' dui zhongguo zhizaoye qiye dairu quanqiu jiazhilian de yingxiang fenxi [An analysis on the influence of 'Industry 4.0' in bringing Chinese manufacturing enterprises into the global value chain]," *Zhongguo jingmao* [China's economy and trade], No. 5 (2016): 44.

concerned, it is a global value chain driven by commercial capital as well as managed and coordinated by buyers in circulation, where large international buyers outsource the manufacturing link to developing countries with cheaper labor and devote their core resources to sales promotion and brand management so as to achieve economies of scale.<sup>1</sup> Shaping such a value chain is also a process focused on global industrial reconfiguration. International observers believed that the Belt and Road Initiative was also conducive to China's rebuilding and managing the supply chain among countries involved in the Belt and Road Initiative, as those countries would produce low-end and semi-finished goods, while China would provide the finished goods.

The formation of a value chain also depends on natural combination of the logistics chain and the industrial chain. According to the logistics cost theory,<sup>2</sup> when no direct route exists between the producer and the consumer, there is a need to build a logistics hub. Currently, although many direct routes do exist between producers and consumers, the two are no longer unitary in today's world, but more diversified and finer in labor division, thus making the construction of modern logistics hubs an indispensable link in building a value chain.

### **III. The Belt and Road Initiative is promoting a natural transfer of the logistics chain, the industrial chain and the value chain**

In view of the economic conditions of the economic zones involved in the Belt and Road Initiative, the space extending from east to west, and the low value-added product structure, efforts could be made to select a number of spatial nodes with strong competitiveness and wide coverage as logistics hubs in accordance with their cargo handling capacities and types of products, and to build several focal points that could link logistics by sea, land and air, and ties between land economy and marine economy so as to reduce the cost of product circulation and transfer with scale effect.<sup>3</sup>

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<sup>1</sup> Ibid., 45.

<sup>2</sup> Edgar M. Hoover and Frank Giarratani, *An Introduction to Regional Economics*, trans. Wang Yilong (Commercial Press, 1990), 57.

<sup>3</sup> Wang Juanjuan, "'Yidaiyilu' jingjiqu xiandai wuliu tixi goujian [Construction of a modern logistics system for the Belt and Road economic zone]," *Wuliu guanli* [Logistics management], No. 6 (2016): 6.

This objective demand is bound to boost the construction of the Belt and Road logistics chain.

In the Belt and Road economic zone, logistics strength and economic cooperation are closely related to “material objects”. From their natural attribution, material objects include products and industries. From the subject of material objects, they involve all items that could be traded among countries and regions along the logistics route. So far as industries are concerned, division of labor based on specialization has spread various links of every industry to different regions, while different industries call for closer cooperation. As a result, effective production and sustainable development of industries depend on the integration of supply chains boosted by efficient logistics. Some studies have observed that the Belt and Road economic zone is located in a backward region between the Asian-Pacific economic circle and the European economic circle. Under the law of industrial gradient transfer, it is natural that this economic zone will undertake industrial transfers from other regions with some industrial links finding their home in the zone. To develop the regional economy by undertaking industrial transfers, the economic zone should optimize its software and hardware environment and build modern logistics systems, while demands such as inclusiveness, specialization, efficiency, and low costs are the basis for the economic zone.<sup>1</sup>

The Belt and Road bears the natural transfer of the supply chain, the industrial chain and the value chain. Taking oil and gas for example, jointly tackling key technology and core equipment, strengthening advanced standards and engineering service cooperation, and developing regional and global energy supplies that combine the growth of support capacity with coordination among industries has led to a gradual shift in traditional oil and gas cooperation from concentration on upstream resource development toward more comprehensive cooperation throughout the industrial chain between China and countries involved in the Belt and Road Initiative. Particularly, China’s cooperation with countries involved in the Belt and Road Initiative in oil and gas is evolving from its traditional focus

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<sup>1</sup> Ibid., 4.

on exploitation to a complete industrial chain including refinery, piping, and technical service, and expanding into areas of scientific research, talent exchange and training, thus forming new industrial and value chains. This objective reality is conducive to “forging an economic community or a community with common interests focusing on oil and gas”.<sup>1</sup>

As further studies of trade in relevant industries show, on the one hand, the industrial chain competitiveness of such big oil and gas importers as China and India is mainly reflected in downstream links like synthetic fiber, while major oil and gas exporters are competitive in crude oil and natural gas trade but weak in competitiveness or comparative advantage in downstream links such as synthetic fiber; on the other hand, countries involved in the Belt and Road Initiative are all weak in competitiveness at various links of the oil and gas industrial chain, while the mid-sized oil and gas countries are not so strong in either competitiveness or comparative advantage in the oil and gas industrial chain. Given the fact that China imports much of its synthetic fiber and plastic from countries involved in the Belt and Road Initiative, while many of those countries have weak potential for competition and cooperation, it is an inevitable trend that every country engaged in the oil and gas industrial chain cooperation will achieve synergy among their respective comparative advantages.<sup>2</sup> It is obvious that from the perspective of channel construction and capacity cooperation as well as the value chain, the Belt and Road Initiative has been well grounded theoretically.

Construction of the industrial chain has gone beyond national boundaries and regions, extending to every part of the world, and forming a complicated and diversified network. As a result, industrial transfer, whether it involves channel construction or capacity transfer and cooperation, has become a natural occurrence in economic development. In view of

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<sup>1</sup> Zhang Yi, “‘Yidaiyilu’ nengyuan hezuo julebu huzhiyuchu [The energy cooperation club of the Belt and Road is forthcoming],” *Guangming Daily*, June 5, 2017.

<sup>2</sup> Wang Yaoqing and Tun Fenghua, “‘Yidaiyilu’ youqi maoyi jingzhengli cedu yu hezuo weishi pinggu: yige quanchanyelian shijiao [A review of the competitiveness measure and cooperative potential in oil and gas trade along the Belt and Road: From a whole industrial chain perspective],” *Taipingyang xuebao* [Pacific journal], No. 5 (2017): 68.

industrial transfers taking place in every developed nation, countries at the high end of the value chain were not so at the beginning and will not remain so forever, while countries at the low end of the value chain will never be pleased with a fixed position, and their progress will enhance the global value chain.

The advance of China's innovation capability will surely lead to its upward movement in the value chain. According to investigations done by international enterprise consulting companies, China is no longer the destination for cheap outsourcing businesses, but has become a center of the global industrial chain, and the only center in the global supply chain, while China's manufacturing industry is also moving quickly upward in the global value chain. China's upward movement in the global value chain resulted from its innovation is bound to promote the economic development of other countries. Such a change brought about by technical advancement and innovation will surely give rise to the spillover layout of industries. Objectively speaking, countries involved in the Belt and Road Initiative have varied demands. As China's technical and innovation advancement cannot reach their summit in one stride, China's upward movement in the global value chain will not stop even if it has reached a certain height. Therefore, China's industrial transfer overseas will not be done at one kick, while remaining at the high end of the global value chain calls for constant innovation and effort, which has provided a sustainable driving force for the construction of the Belt and Road.

The development of the global value chain has opened a new path for the less developed countries to realize industrialization. With overall technical advancement and diffusion, coupled with the development of reverse innovation and technological improvement, developing countries may specialize and find niches in the global value chain rather than producing every product needed, thus lowering the investment threshold and cost for their exports. At the same time, developed nations with core technologies may decentralize and transfer their production overseas based on labor cost considerations. Taking automobiles for example, although the brands are still in the hands of the wealthy nations and final assembly is done where these brands are headquartered, some parts like ignition lines



are now made in dozens of developing countries such as Nicaragua, Tunisia, Vietnam and Sri Lanka.<sup>1</sup>

As in the case of airliners, although it remains a highly industrialized sector with very mature technologies, globalization, internationalization and subsystem bidding have become common practice in the sector. Airbus planes are jointly developed and built by several EU countries, while more than 50 percent of Boeing parts including the navigators and engines are made globally, with China making parts including wings. Along with rising technical development capacity, China is also becoming an airliner manufacturer.

According to the modern industrial system division, China possesses 39 industrial categories, 191 industrial classes and 525 industrial subcategories, and is the only country in the world that has all the industrial categories listed in the UN industrial division. This large and complete industrial advantage is conducive to efficient and convenient matching. China has the industrial basis for moving up to the high end in the global value chain, with several industries already approaching the standard prerequisites for the high end in the global value chain.<sup>2</sup> As a rapidly rising developing power, China has been moving its position up the global value chain in manufacturing, as China is not only able to undertake low and middle end technology manufacturing from the developed nations, but also lead the low end technology development of the developing countries forward. From a geographical perspective, although China has not taken a leading position in the global value chain, it has the conditions to lead the regional value chain along the Belt and Road, as determined by China's external investment and export of management and standards to the Belt and Road. Given China's increasingly close economic ties with neighboring countries, if China "is able to form a regional value chain with

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<sup>1</sup> Celestin Menga (Cameroon), "Tongwang heping yu fanrong zhilu—feizhou gongyehua de quanqiu hongli [A road to peace and prosperity: the global dividend of African industrialization]," *Guoji shehui kexue zazhi* [International journal of social sciences], December 2016, 41.

<sup>2</sup> Huang Hanquan, "Woguo jubei maixiang quanqiu jiazhilian zhonggaoduan de chanye jichu [China has the industrial basis to march toward the middle and high ends of the global value chain]," *Ershiyi shiji jingji baodao* [21st century economic report], November 6, 2017.

the emerging countries in the neighborhood, it will have the opportunity to change from a technically backward country in the global value chain to a country with relatively advanced technologies in the regional value chain, thus able to reach and manage the middle and high end links of the value chain, and realize its goal of moving China's economy up toward the middle and high ends of the global value chain by leading the development of the regional value chain."<sup>1</sup>

In this sense, China as a global manufacturing power is in a unique position with a major influence in the global division of labor, particularly with the ability to connect the low and high ends in both global and regional value chains. China, as a pole with growing importance in the new global innovation landscape, is leading its domestic industries toward the middle and high ends, and striving to promote industrial chain reconstruction and improvements to the value chain. President Xi Jinping pointed out that we should build the Belt and Road into a road of innovation, and work with countries involved in the Belt and Road Initiative to build a scientific and technological alliance as well as a scientific and technological innovation base so as to create opportunities and provide a platform for common development.<sup>2</sup> The Belt and Road Initiative is in fact an outcome of this strong realistic demand.

### **Channel Suitability and Location Orientation**

Channel construction reflects the objective demand of geo-economic development, while channels completed or under construction have produced or will produce economic driving effect, as smooth transportation is conducive to promoting capacity cooperation. Capacity cooperation

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<sup>1</sup> Wei Long and Wang Lei, "Cong qianru quanqiu jiazhilian dao zhudao quyue jiazhilian-- 'yidaiyilu' zhanlue de jingji kexingxing fenxi [From embedding in the global value chain to leading the regional value chain: An economic feasibility analysis of the Belt and Road strategy]," *Guoji maoyi wenti* [International trade issues], No. 5 (2016): 105 and 113.

<sup>2</sup> Xi Jinping, "Zai zhongguo kexueyuan dishijiuci yuanshi dahui, zhongguo gongchengyuan dishisici yuanshi dahui shang de jianghua [A speech delivered to the 19th Academician Assembly of Chinese Academy of Sciences and the 14th Academician Assembly of Chinese Academy of Engineering]," *Guangming Daily*, May 29, 2018.

among countries along the channel boosted by this location orientation will surely support operation of the channel in a reciprocal way, thus promoting global and regional interconnection and interworking.

**I. The Belt and Road Initiative is based on geo-economic demand**

The design of the Belt and Road, focusing on the economic corridors as the skeleton, is subjective to market demand, based not only on geographic conditions of the world, but also on geo-economic demand.

First, scale potential limits of the developed world market have currently shown up. In the case of foreign trade, the developed market is the focus of China's imports and exports, as China's trade with developed American markets as well as those in Europe and Japan accounts for more than 60 percent of its total foreign trade. China has become the second largest economy in the world, second only to the US, with its GDP exceeding US\$12 trillion, and is the world's largest trading country in goods with total import and export volume exceeding US\$5 trillion. Limited by the economic slowdown of the developed market, coupled with the fact that China's bilateral trade with the developed market is already huge, it is difficult for China to step up its trade growth with developed countries. For instance, as the economic positive correlation between China and the US is no longer as outstanding as it was in the past, there has emerged in academia a theory of economic decoupling between the two countries. Although this theory undoubtedly lacks long-term arguments, it is a fact that the driving force for China-US trade growth is less powerful than it was in the past, even if the US economy is in relatively good shape. This may indirectly indicate, when a relatively large market scale is reached, that it will be difficult to further expand the market share. The rising competitiveness of China's exports is accompanied with growing constraints and bias from the developed market, which is so not only in trade, but also in investment. Investment restrictions have been imposed by some countries on China's state-owned enterprises. Even private enterprises like Huawei, ZTE and Sany that have grown up since China began its policy of reform and opening up have often met restraints in the developed market under the pretext of national security. As the trade war between the US and China staged by the Trump administration will damage the China-US relationship, it appears

more pressing for China to consider its enterprise and industrial layout from a geo-economic security perspective so as to keep from relying on the market of a single power.

Second, the emerging and developing market is further expanding its area, with prospects depending on economic growth potential. Many countries in China's neighborhood in East Asia, Southeast Asia and West Asia enjoy faster development than the world average. India boasted 7.5 percent economic growth in 2015, which is faster than China's 6.9 percent. Even in Africa, economic latecomer effect is persistently showing up. Although overall economic growth is slow in Central Asia, Kazakhstan has maintained relatively fast growth. Depending on resource exports, Mongolia's economy has enjoyed even faster growth at over 10 percent.

Third, the Silk Road on land and sea, pillared by the construction of corridors, demonstrates a brand new geo-layout in the international division of labor, which necessitates the building of a grand economic channel that connects producers, resources and consumers as well as support facilities. The six economic corridors designed along the Belt and Road are closely related to China's overall foreign trade and investment layout, offering a new path for China to participate in the international division of labor. China has become the largest manufacturer in the world, while Central Asia, West Asia as well as Central and Eastern Europe are resource export areas of the world. In natural resources, the countries involved in the Belt and Road Initiative account for 53 percent of the global gas reserves, 17 percent of oil, 25 percent of coal, and 20 percent of iron ore. Discovered oil and gas reserves in regions involved in the Belt and Road Initiative amount to 133.8 billion tons and 155 trillion cubic meters, respectively accounting for 57 percent and 78 percent of the world's total. In addition, along this regional belt are such important oil and gas rich countries of global significance as Russia, as well as many countries in Central Asia and the Middle East.<sup>1</sup> As claimed by a report titled *Navigating the New Normal: China and Global Resource Governance*, jointly issued by Development Research Center of

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<sup>1</sup> Zhang Yi, "'Yidaiyilu' nengyuan hezuo julebu huzhiyuchu [The energy cooperation club of the Belt and Road is forthcoming]," *Guangming Daily*, June 5, 2017.

the State Council of China and Chatham House, UK, over the past 10 years, China's trade with the Central Asian countries along the Silk Road Economic Belt grew by 680 percent.<sup>1</sup>

The Belt and Road Initiative is not simply a resource strategy, but a cooperation agenda with rich contents. From a global perspective, several of the strategic shipping routes are closely relevant to China's interests. The shipping routes, especially those fit for super oil tankers, going through places such as the Strait of Hormuz, the Strait of Malacca and the Strait of Mandeb, are extremely busy. The Strait of Malacca is the most important resource channel in Asia with about 11 million barrels of oil passing through each day. In 2014, close to 70 percent of China's imported crude oil, 28 percent of iron ore and 21 percent of copper ore were shipped through the Strait of Malacca; 42 percent of crude oil, 2 percent of iron ore and 1 percent of copper ore through the Strait of Hormuz; and about 10 percent of copper ore through the Suez Canal and the Strait of Mandeb.<sup>2</sup> The EU at the furthest end of the Belt and Road is the largest consumption region in the world. The Belt and Road Initiative has built an economic channel led by China and connecting producers, resources and consumers in East Asia, Central Asia, South Asia, Central and Eastern Europe and the EU, which indicates that a new structure of labor division has been formed in Eurasia. Therefore, the construction of this channel has great potential for sustainable development.

## **II. Channel suitability is the chief consideration of the Belt and Road layout**

Construction of economic corridors calls for a country to strengthen its geo-economic connections and other relevant connections. Marked by the establishment of transportation functions, they will boost capacity cooperation and infrastructure building in countries involved in the Belt and Road Initiative. Ocean shipping, pipelines and railways are major

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<sup>1</sup> "Navigating the New Normal: China and Global Resource Governance," January 28, 2016, accessed December 3, 2018, <https://www.chathamhouse.org/publication/navigating-new-normal-china-and-global-resource-governance>.

<sup>2</sup> "'Yidaiyilu' de ziyuan jiyu yu fengxian [Resource opportunity and risk of the Belt and Road]," *China Business News*, February 18, 2016.

forms of global cargo transportation. In the case of railways, this transportation mode is very important and irreplaceable on land as well as in regions that join land with sea. In the planning of the Belt and Road, the six corridors have formed the skeleton, which are not designed out of thin air, but based on historical routes, extension of China's domestic transportation projects, expanded transportation at China's borders, and possibilities of transportation and communication synergy with neighboring countries and countries beyond. China's achievements in domestic construction for smooth transportation have laid the basic foundation for greater interconnection and interworking with the world. Over the past 20 years, especially during the 12th Five-Year Plan, China has made a tremendous progress in developing its transportation capacity, marked by achievements in building modern and comprehensive transportation systems. In addition to railways, big progress has been made in developing highways, aviation, and ocean shipping, all of which have greatly raised China's comprehensive transportation capacity and international competitiveness, thus paving the way for China to grow from a big transportation country to a transportation power in the global sense. According to the transportation infrastructure quality index issued by the World Economic Forum, China's ranking moved steadily up from 4.44 in 2010 / 2011 to 4.63 in 2011 / 2012,<sup>1</sup> advancing among upper-middle-ranking countries.

During the 13th Five-Year Plan, the layout of China's overall transportation infrastructure network will be further optimized. Over the coming 10 to 15 years, China will complete traffic circles within agglomerations of its major and medium cities that will enable them to reach each other in one to four hours, and traffic circles within its cities that facilitate inner city travel in 30-120 minutes, as well as railways that offer basic coverage to every administrative region above the county level. In addition to improving the traffic layout among the major and medium cities, the Poverty Alleviation Program through Transportation for the 13th

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<sup>1</sup> This index indicates the quality of transport infrastructure, 1 equals underdeveloped, and 7 equals the most developed. The US is 5.68, Japan is 5.69, and Germany is 6.35. ADB. See *ASEAN, PRC, and INDIA, The Great Transformation* (Tokyo: ADB Institute, 2014), 140.

Five-Year also focuses on supporting the poverty-stricken regions. By 2020, transportation networks will have been completed in the poverty-stricken regions that will “provide smooth internal and external traffic connections as well as scheduled and convenient bus services to the grassroots localities”, so as to “make them better connected in traffic with other parts of the country”.<sup>1</sup> In that case, China’s traffic quality index will be further raised.

To comply with the overall demand of establishing a market economy system, China is more rapidly integrating into globalization and regionalization. In such a process, the great achievements made in domestic transport infrastructure construction have provided major conditions and support for China to promote interconnection and interworking with neighboring regions. In 2016, China approved the Convention on International Road Transport, becoming the 70th signatory country. Presently, less than 10 percent of China’s exports to the EU are shipped by land, while most is delivered by sea and air. However, it takes about 8 to 12 days for cargo trucks to get to Europe from the western region of China. Though costs are higher than by sea, land freight may save a lot of time. Additionally, the waiting time at borders is shortened to only an hour rather than three to four days as in the past.<sup>2</sup>

By 2014, China signed bilateral motor vehicle transport agreements with 11 neighboring countries and three multilateral motor vehicle transport treaties. Under these agreements and treaties, China has opened 304 international passenger and cargo transport lines to neighboring countries, of which 146 are passenger transport lines and 158 are cargo transport lines, with the total mileage of passenger and cargo transportation exceeding 50,000 kilometers. Thus, an international road transportation network has been built, which starts from the major cities along the Chinese borders, goes through China’s border ports to almost every part of

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<sup>1</sup> “‘Shisanwu’ jiaotong fupin lantu huijiu, zhongyang touzi yiyuan tisu pinkun diqu gongluwang [The poverty alleviation program through transportation for the 13th Five-year Plan is drawn and the central government is investing over 100 million RMB to speed up road network construction in poverty-stricken regions],” *Guangming Daily*, August 12, 2016.

<sup>2</sup> “Zhongguo jiaru lianheguo huoyun gongyue [China has signed the United Nations Freight Convention],” *Globe and Mail* website, July 27, 2016.

the neighboring region, and extends to countries beyond the neighboring region. Myanmar, Mongolia, Russia and Kazakhstan, among others, have become major destinations of China’s passenger and cargo transportation.<sup>1</sup> Currently, China has 53 road border crossings perennially open to neighboring countries, with an annual customs clearance capacity of 50 million human border crossings and 83 million tons of cargo, thus initially forming a road traffic port system that joins China with Central Asia, South Asia and Northeast Asia with most of the road border crossings connected with highways and expressways of Grade II and above. Neighboring regions are critical for China to establish interconnection and interworking networks with Asia, Europe and Africa. As indicated by the construction of the China-Pakistan economic corridor and the China-Russia-Mongolia economic corridor, important early achievements have been made in infrastructure construction, finance and humanitarian work. The China-Europe scheduled freight train going through Eurasia provides great logistics convenience for countries along the line. There are currently 4 operational models of the China-Europe scheduled freight train: first, the Chongqing model, which focuses on basic freight, while supporting industrial development and capacity cooperation; second, the Zhengzhou model, which gives full play to its advantages as a center and hub in China’s transport networks; third, the Yiwu model, which emphasizes buying and selling globally; and fourth, the Lianyungang model, which connects the ocean shipping with the land transportation, and the land bridges. In the future, if the Hungary-Serbia railway is to be connected with the Port of Piraeus, it will further connect China with Central and Eastern European countries via sea routes.

Table 2: China’s passenger and cargo traffic with its neighbors (2014)

Country	Passengers (10,000)	Cargo (10,000 tons)
Myanmar	223.8	307.6
Mongolia	184.5	2500.1
Russia	153.9	185.7

<sup>1</sup> “‘Zouchuqu’ zhongzai ‘datongguan’ [“Going global” depends on ‘breaking through the passes’],” *China Business News*, March 14, 2016.



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Kazakhstan	46.2	122.3
North Korea	19.6	186.5
Laos	16.1	117.1
Vietnam	13.6	419.5
Kirgizstan	1.6	74
Pakistan	1.1	3.9

Source: *China Business News*, March 14, 2016.

In Asia, the Jakarta-Bandung high-speed railway is already under construction, while construction on such pan-Asia railway networks as the China-Laos and China-Thailand railways has made a major progress. Although the construction of the Malaysia-Singapore railway is delayed, its resumption is still possible. Once the traffic lines are built, operation along the China-Indochina Peninsula corridor will no longer be a dream. Along with route construction, China has made great efforts to promote institutionalized capacity cooperation with more than 20 countries, as in the case of the new China-Kazakhstan cooperation model, with a host of major projects taking root in those countries.<sup>1</sup> The Bengal-China-India-Myanmar corridor, though progressing somewhat slowly, is critical for China to get its southwestern region connected with Asia, Africa and Europe, which can be called the southern line of the Eurasia land bridge, providing an important traffic route for China's Yunnan and Guangxi provinces among others to be directly connected with South Asia, West Asia and even the Mediterranean, and boosting economies, trade and humanitarian cooperation among countries in the region covered. The China-Central Asia-West Asia corridor will link China closely with Central Asia and extend China's connection to the Persian Gulf. In addition to lowering transportation costs, it is also an important route that will enable China to obtain strategic resources from the Persian Gulf via its western region. In April of 2015, President Xi Jinping visited Pakistan, and China and Pakistan signed a contract worth US\$30 billion under the China-

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<sup>1</sup> "Waijiaobuzhang Wang Yi jiu zhongguo waijiao zhengce he duiwai guanxi huida zhongwai jizhe tiwen [Chinese foreign minister Wang Yi answered questions raised by Chinese and foreign journalists over China's foreign policy and foreign relations]," *Guangming Daily*, March 9, 2016.

Pakistan economic corridor project, which has provided good conditions for the construction of this corridor.

In sum, design and construction of the six corridors will extend and expand a new pattern of opening to the outside world in China's frontier regions, which will also enable China to more effectively promote coordinated regional economic development. As expected by the Vision and Plan, the successful construction of the new Eurasia land bridge, the China-Central Asia-West Asia corridor, and the China-Pakistan economic corridor will be a game-changer for the currently isolated northwestern region of China, opening it to the outside world, and stepping up development among China's northwestern provinces. The construction of the China-Indochina Peninsula economic corridor and the Bengal-China-India-Myanmar economic corridor will positively promote the opening of China's southwestern region to the outside world, while boosting the development of Yunnan and Guangxi. The China-Mongolia-Russia economic corridor will help open China's northeastern region to the outside world, providing new momentum to China's northeast revitalization.

So to speak, the design of the six corridors is not only intended to support China's domestic infrastructure construction and facilitate transport via China's major border crossings, but also in a long-term consideration of opening up a channel that connects Asia with Europe and Africa in a comprehensive way. This is a geo-economic line concerning China's future sustainable development, which has extended China's activities in all directions to the world from its northeastern, northwestern, southeastern and southwestern regions, not only addressing disadvantageous locations some regions have in opening to the outside world, but also diversifying the drivers for their development. It will also connect a larger number of China's inland cities to its major border crossings, expand its economic layout, and better coordinate China's domestic regional development. At the same time, the design of the six corridors will strengthen the extent and multiply the model of China's interconnection, interworking and interaction with the neighboring countries and the world, and expand the regional space for China's activities and influence, thus putting a brand new mark of the times on the promotion of regional economic integration

and globalization.

### **III. Channel construction has a location-orientation function**

Accompanying the construction of the Belt and Road is capacity cooperation, without which channel construction is just a show. At the end of the last century, Chinese enterprises began to go overseas to invest and set up new companies. However, China was not completely merged into the global value chain then, with its marketing system and logistics support system not yet established correspondingly, thus unable to compete with the global multinational enterprises at the same level. Therefore, it is not hard to imagine how difficult it was for Chinese enterprises to start businesses overseas in those days. More than ten years since China got into the World Trade Organization (WTO), Chinese enterprises have grown rapidly. Since the beginning of the 21st century, conditions have gradually become mature for Chinese enterprises to go overseas, with unprecedented advantages of reinforced financial and technical strength after the proposition of the Belt and Road Initiative.

Capacity cooperation overseas promoted by the Belt and Road Initiative has its own endogenous and special motivation. Where the money goes has its own particularity, which is directly related to the choice of location. To facilitate analysis, a concept is created here, namely “location-orientation on channel radiation”. Channel construction is the basic task of the Belt and Road Initiative, while overseas investment resulting from capacity cooperation of various kinds including infrastructural construction determines the focus of funding and the choice of location. Investment should directly serve the channel construction, and make best use of the channel. The nearer to the channel, the lower the transportation cost; and the farther from the channel, the higher the transportation cost. Construction of the channel should take into consideration such factors as population size, resources, levels of consumption, market layout, and geographical conditions. Nevertheless, from a cost perspective, channel construction should be considered comprehensively rather than focusing only on certain constraints or difficulties. Only based on the “channel- and location-orientation” can the Belt and Road have persisting efficiency.

The Belt and Road intends to open up a channel that goes through Asia, Europe and Africa, which is in fact meant to link production areas with resource rich areas and consumer market areas. This is the basic layout determined by “location-orientation on channel radiation” in the construction of the Belt and Road, which is also the major motivation of the going global endeavor among Chinese enterprises participating in the construction of the Belt and Road.

Channel construction will lead to industrial location follow-up, which is also a choice conducive to cost minimization for various actors, while such a choice will generally bring about overall cost minimization. As some suggest, location selection by enterprises is meant for maximizing the benefits and minimizing the friction costs.<sup>1</sup> Although industrial transfer to consuming regions had been prevalent in the past, direct investment of the world in the 20th century witnessed many cases of transferring production to non-consuming regions, especially from the developed countries to the developing countries, which was done either through direct investment or outsourcing.

In the construction of the Belt and Road as well as in the process of going global by Chinese enterprises, production transfer to resource rich areas is an important policy option, which also determines location selection for foreign investment. Capacity cooperation between China and Kazakhstan is just a case. Although rich in natural resources, Kazakhstan was only a part of the huge Soviet industrial system before its independence. As a result, it lacks a complete production system of its own in the wake of independence. As an important country along the Silk Road Economic Belt, Kazakhstan is a hub of the China-Europe scheduled freight train. Capacity cooperation between China and Kazakhstan is conducive to establishing a relatively complete industrial system in Kazakhstan, or putting Kazakhstan in a better position in the regional and global value chain, which will give a full play to its channel advantages. An effective coordination of channel cooperation with capacity cooperation will produce the same results. The Baku Newport of Azerbaijan on the Caspian

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<sup>1</sup> William Alonso, *Location and Land Use: Toward a General Theory of Land Rent*, trans. Liang Jinshe et al. (Commercial Press, 2010), 122.

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Sea used to be thought of as a region that could hardly inspire any grand fantasy of international trade or cultural and economic integration. However, as Baku is at a very important junction in the Belt and Road that joins China with Europe, the Baku Newport has suddenly become pivotal with its unique geographical conditions. As a link city that enjoys great channel advantages, the Baku Newport has gradually become an international region with rapid economic growth and diversified industries, as well as broad prospects for logistics and industrial development, which will also provide unprecedented conditions for the economic rise of Azerbaijan. The same is true with the Port of Piraeus in Greece. After a year of operation by COSCO Group through shareholding management in 2016, the turnover of its container terminal alone grew by 53.1 percent over the same period of previous year, while container traffic grew by 70.6 percent.<sup>1</sup> As China's major maritime portal to Europe, this port is connected with other ports under the Chinese management in the Middle East, East Africa, North Africa, South Asia and Southeast Asia, which is becoming a global network composed of land and sea transportation as well as industrial hubs, thus providing the framework for the New Silk Road in the future that covers even larger areas.

Countries with natural channel advantages also need to construct their domestic pipelines and call for capacity cooperation. China's oil and gas cooperation with Nigeria can be taken as an example. Though rich in oil reserves, Nigeria's outdated refineries are unable to process crude oil at home. As a result, it has to import almost all its energy. In June of 2016, the Nigerian government declared that it had signed a preliminary agreement worth US\$80 billion with a Chinese company to upgrade and transform its oil and gas infrastructure. The agreement covered all aspects of Nigeria's energy sector, from transforming outdated refineries and constructing new pipelines to developing natural gas and power industries that had been much neglected.

The shift of capacity cooperation also involves developed countries.

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<sup>1</sup> Wade Shepard, "FORBES: 5 New Silk Road Projects to Alter Your View of How the World Works," March 16, 2018, accessed November 5, 2018, <http://www.1news.az/mobile/news/forbes-5>.

The C nuclear power station at the Hinkley Point in western England has been financed and constructed jointly by CGNPC, CNNC and France, indicating that Chinese enterprises are competitive internationally in cooperation in high-end technical fields.

Developing industries need to be linked with the construction of transport channels, which is more so in the extremely backward countries. Bengal announced a railway plan worth US\$30 billion in 2016, intended to comprehensively upgrade its domestic railway system, including renovating railway stations, purchasing new trains and laying new rails. China has provided a US\$9 billion loan at a very low interest rate. Bangladeshi government wished to spend the money on at least six railway construction projects to connect Dhaka, the capital city, with major industrial areas and extend the railway to its border with India.<sup>1</sup>

Theoretically speaking, trade and transport cost belong to different branches of economics, with the former included in the category of trade theory and the later resting with economic geography. Convenient transport channels can both drive the economy along the route and create brand new conditions by accessing the biggest possible market, while lowering transport costs and boosting the development of trade.

Although most of the countries involved in the Belt and Road Initiative are poor, weak and small, with some even on the periphery of the world and regional economy, they all have development potential and latecomer advantages. When engaging in investment and capacity cooperation complying with channel construction, people need to consider factor costs of investment. As noted in the theory of industrial location, if the cost saved in transferring industries to where the labor costs are lowest is bigger than the transport cost added by such a transfer, the location of labor force is reasonable, and it is unreasonable vice versa.<sup>2</sup> Although different from the general theory of international direct investment, the theory of industrial location has provided some theoretical grounds for

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<sup>1</sup>“Rail Boom in Bangladesh Brings Trains to Asia’s Longest Beach,” Bloomberg News, July 1, 2016.

<sup>2</sup> Alfred Weber, *Theory of Industrial Location*, trans. Li Gangjian et al. (Commercial Press, 2010), Forward, 7.

Chinese enterprises to make ventures to build the Belt and Road. Transport costs have to be considered when making investments, which has already been reflected in the construction of the Belt and Road.

There is a correlation existing between channel and location selection, as convenience offered by the channel is conducive to attracting foreign investors to make location selection. Chongqing and Chengdu are located in remote areas of China, which used to be short of external land accesses, as described by the ancient Chinese as “it is easier to climb to heaven than take the roads in Sichuan.” However, the opening of the Chongqing-Xinjiang-Europe international railway<sup>1</sup> has made it easy for them to export to Europe. Coupled with market and other advantages, the two cities have already attracted much foreign investment. Although Guangxi used to be a relatively isolated and remote province of China, it enjoys abundant location advantages such with its ocean coastline, international border, major river, and proximity to Southeast Asia while backed by the vast southwestern region of China. Through China’s strengthened regional cooperation with ASEAN, and more than a decade building the China-ASEAN Free Trade Area, Guangxi has quickly integrated itself into the international economy and become a geo-economic center, soon to be a major channel linking China’s inland areas with ASEAN and a new frontier for China to open to the outside world.<sup>2</sup> The construction of the Belt and Road is not only part of Guangxi’s close economic ties developing with the Southeast Asian economy, but also a historical opportunity for Guangxi to realize interconnection and interworking with ASEAN.

Since the 18th National Congress of the CPC, China has pursued three grand regional economic development strategies, namely the Belt and Road, the Coordinated Development Strategy for the Beijing-Tianjin-Hebei Region, and the Yangtze Economic Belt, prominently featuring China’s

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<sup>1</sup> From June of 2016 on, the scheduled freight train from China to Europe is generally called the China-Europe scheduled freight train.

<sup>2</sup> Liang Ying, “Duoquyu hezuo de xinshiye: Guangxi jiaqiang dui dongmeng zhongdian quyu kaifang hezuo de ruogan sikao [A new horizon for multi-regional cooperation: Some reflections on Guangxi strengthening opening to and cooperation with major regions of ASEAN],” Qin Hongzeng ed., *China from Multiple Perspectives: ASEAN Studies* (Nationality Publishing House, 2012), 2.

brave endeavor to break the fetters of the administrative boundaries at the provincial level, and strive for better coordination and integration. One of the chief reasons is that the three grand regional economic development strategies concentrate on regions where interconnection and interworking is the most developed, thus able to play their part as strategic starting points and support bases. Domestically, the Belt and Road involves 18 provinces, while the Yangtze Economic Belt covers 11, and the Coordinated Development Strategy for the Beijing-Tianjin-Hebei Region concerns two municipalities directly under the Central Government and one province. At the key junctions of the three grand regional development strategies of China, new national administrative districts have been established to serve as strategic support bases and starting points.

The Belt and Road Initiative is a strategic plan focusing on China and looking beyond to the neighboring region and the world. When considering China's cross-border economic zones, industrial parks, transport border crossings, major open experimental zones at the border or along ocean coastlines, and countries involved in the Belt and Road extending from the existing channels within China, one may discover that channel advantages within China and their extensions (completed or to be completed) have attracted countless industrial clusters.<sup>1</sup> With the opening of the Shanghai-Kunming high-speed railway line, the Chengdu-Guiyang line, and the Guiyang-Naning-Tibet line,<sup>2</sup> railway lines will further connect economic zones in China's southern and southwestern regions with the ASEAN

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<sup>1</sup> The major areas along the Chinese border listed by Some Policy Measures of the State Council on Supporting the Development and Opening of the Major Areas along the Border (Appendix No. 72, 2015) include 5 major experimental zones for development and opening, including Pingxiang, Guangxi; 72 border crossings at the national level including Hekou, Yunnan and Dongxing, Guangxi, of which 11 are railway crossings and 61 are road crossings; 28 border cities, including Dongxing, Guangxi; 17 border economic cooperation zones, including Dongxing, Guangxi; and 1 cross-border economic cooperation zone, namely China-Kazakhstan Khorgos International Border Cooperation Center.

<sup>2</sup> The Shanghai-Kunming line runs 2633 km long, and is known as the most beautiful high-speed railway in China, and has been open since December, 2016; the Sichuan-Tibet line runs 1838 km long, with a total length of bridges and tunnels running 1413 km, and has shortened travel time from some 40 hours to about 13 hours from end to end.



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countries, and will play an important role in promoting the Belt and Road Initiative.<sup>1</sup> Furthermore, they will also boost further integration of China's southwestern regional economy that enjoys latecomer effect with the ASEAN economy.

The Belt and Road is a grand global project to be built over a long period, calling for large capital investment, while the situation of countries and regions involved in the Belt and Road Initiative remains complicated. Moreover, theoretical exploration for the construction of the Belt and Road cannot be done once and for all. The development of the Belt and Road calls for theoretical exploration and academic innovation that keeps up with the times, so that we can provide necessary theoretical support for this grand global endeavor.

*(edited by Li Xin)*

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<sup>1</sup>“\$500B to Boost High-speed Rail Plan,” *China Daily*, December 30, 2016.