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**Chongqing-Xinjiang-Europe International Railway: problems and challenges of the first direct rail connection between China and Europe**

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## 前言

自 1978 年邓小平主席改革开放以来，中国开始了现代化以及改变了国家政治经济格局的改革进程。中国打开了面向世界的大门，成为全球化进程中的一个重要角色，并且开始建立与其他国家的经济合作伙伴关系。事实上，上个世纪九十年代末中国和欧洲的经济合作就已开始发展。使他们的合作伙伴关系更加紧密的阶段有多个，2001 年中国加入了世界贸易组织，2003 年中国和欧盟签署了“中-欧”战略合作伙伴关系，并且在 2013 年采纳并签署了批准双方全方位合作的“欧-中 2020 年战略合作议程”。今天，欧洲成为中国的第一大贸易伙伴，而中国成为欧洲的第二大贸易伙伴。因此自 1978 年以来，中国经济经历了指数性增长并且中国在国际事务中的参与度也得到提升。这项长久进程在 2013 年习近平主席提出一带一路倡议时达到高峰，一个宏伟的项目被计划出来以建立亚洲，欧洲以及非洲国家之间的政治经济网络。这个项目又两部分构成：陆地部分被称为丝绸之路经济带，海上部分被称为 21 世纪海上丝绸之路。所以，连接中国和世界的基础设施的建设代表着一个最重要的可以引领这个战略取得成功的要素。由于这个原因，沿这条路上的国家之间的沿海和陆地走廊的发展受到了很大的重视。欧洲国家在一带一路倡议的构架中扮演着重要的角色，并且在这些国家中项目的数量以及投资都很多，德国代表着那些在中国最重要的合作伙伴。的确，德国是中国与欧盟国家最大的贸易伙伴，并且中国也代表着德国的第二大出口市场。因此，德国在一带一路倡议中也具有重要地位并且中国与德国诸多城市之间建立的铁路联接也是其重要角色的证明。这篇文章的目的是分析建立在中国与欧洲之间的第一条直线铁路连接，评估其竞争力，尤其是与其他交通方式做比较。

这条铁路线的名称是重庆-新疆-欧洲国际铁路或渝新欧国际铁路，它以重庆作为起始站到达德国的杜伊斯堡，途径哈萨克斯坦，俄罗斯，白俄罗斯以及波兰。在第一章中，我将聚焦于重庆市并且描述使得中国政府建立这座直辖市的经济背景。自上世纪九十年代末起，中国开始集中于国内的发展，尤其是对于一直以来落后于沿海省份的内部地区的发展。由于这个原因，中央以引导这些地区的经济扩展为目标指出了一些增长极点。直辖市重庆便是这些增长极点中的一个，自1999年西部大开发战略开始以来，重庆扮演了中国经济政策的一个重要角色。我将会称述西部大开发战略背后的动机以及中央政府出于发展内部地区所采取的政策。重庆作为西部省份发展的必不可少的角色，将被在西部大开发以及一带一路倡议中进行研究。因此，本文将表述重庆转型为一个重要经济中心的过程。在第二章中，我将考察一带一路倡议前后中国和欧洲建立的沿海和内陆联系。本文将介绍改革开放以来中国与欧洲诸港口之间发展起来的海上道路以及并购与同盟。中国在全世界范围内的影响力也源于它海上力量。2016年中国航运公司中远集团并购比雷埃夫斯港或中国人民解放军在吉布提建立的军事基地都是这种影响力的例证。自从世界上大部分国家用这种运输方式运输他们的货物以来，有一个活跃的角色是重要的，并且中国也在阐释着它的力量。除了描述海运的若干个优势，我也将分析其几点不足。例如，船舶对环境的影响迫使船舶减慢航速，增加了运送货物的运输时间。这一方面和其他的诸如海盗或者运输拥堵等因素都在逐渐削弱海运的竞争力。关于与欧洲的路上联系，我将追溯使得中国与欧洲建立铁路连接的(比如 TRACECA 或 EATL)国际倡议的参与的过程，直到2011年中国与德国建立了第一条直线铁路连接。的确，即使在1992年中国建立了新亚欧大陆桥以连接欧洲，在2011年以前中国与欧洲之间的铁

铁路运输连接也几乎不存在。几年之后，这种情况情况发生了改变，2016年中-欧铁路快线(CR快线)建成。CR快线从属于中国铁路公司并且运营着若干中国与欧洲之间的铁路运输业务。其中一些最有名的国际铁路连接了重庆和杜伊斯堡，义乌和马德里，以及成都和Lodz。这些连接非常重要，因为它们联结了远离海洋的中国内陆省份，使得它们与该线路上个各个国家建立了直接的贸易关系。此外，铁路运输的其中一大优势是它的运输时间较之海运更短。然而，铁路运输也存在着许多问题。因此我会将其优势与劣势进行比较。在最后一章中，我将集中讨论渝新欧铁路。我们将探索使得一些大公司(比如惠普集团)选择重庆作为它们的生产基地的原因以及建立渝新欧铁路背后的动机。我将研究这条铁路的特点以及潜在实力，这有可能彻底改变传统的方式，重庆与欧洲之间的贸易被构建起来。事实上，短时间运输使得重庆出口至德国的时间只要12天，这增强了重庆-新疆-欧洲国际铁路的竞争力。在建立这条直线连接之前，必须先把货物运送到上海或者深圳然后再通过海运抵达欧洲。转运运输的运输时间明显更长但是运费较低，这让许多公司选择这种运输方式。为了检查一个公司将货物从重庆运输到欧洲的所有替代方案，我将比较所有不同的运输路线，根据它们的距离，运输时间，以及运费分析它们的不同。在首先分析渝新欧铁路连接似乎是最佳选择以及最佳海运与空运之间的折中后，我会强调存在的若干的问题和挑战是怎样继续逐渐削弱渝新欧铁路的竞争力的。与哈萨克斯坦等国家之间的边境问题和双边共同政策协议的缺失造成了一些运输时间以及海关许可的问题。并且沿线各个国家的运费也不同。这就产生了高昂的成本，由于地方政府提供的补贴，这些成本目前得到了控制。然而，这些补贴将持续多久的不确定性是另一个关键因素。此外，与海运相比，铁路运输的货物价

值仍然占很小的比例，海运仍然是大多数公司首选的运输方式。因此这条铁路对于中国-欧洲贸易的发展有多大贡献？铁路运输是否真的可以取代海运或者至少是一个可行的替代方案。

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## INTRODUCTION

Since the launch of the Open-Door Policy by president Deng Xiaoping in 1978, China began a process of modernization and reform that changed the economic and political shape of the country. China began to open to the outside world, it became an important actor in the globalization process, and it started to establish an economic relationship with the other countries. Actually, at the end of the nineties, the economic cooperation between China and Europe began to increase. The steps that make their partnership closer are several. In 2001 China entered into the World Trade Organization (WTO), in 2003 China and the European Union signed the China-EU strategic partnership and in 2013 they adopted the EU-China 2020 Strategic Agenda for Cooperation in which their collaboration is sanctioned at all levels. Today, the EU is China's largest trade partner and China is the EU's second largest trade partner.

Therefore since 1978 until now, China's economy experienced exponential growth and its involvement in international affairs has increased as well. The peak of this long process of growth arrived in 2013 when President Xi Jinping launched the Belt and Road Initiative, a majestic project designed to establish an economic and political network with the countries of Asia, Africa and Europe. The project is structured in two parts: an overland part called the Silk Road Economic Belt and a maritime part called the XXI Century Maritime Silk Road. Hence, the constructions of infrastructures that connects China with the rest of the world represents one of the most important elements that could lead the Initiative to gain success. For this reason, great relevance has been given to the development of maritime and land corridors between the many countries along the routes. The European countries play an important role in the framework of the OBOR Initiative, and the number of projects and investments in those nations are numerous. Germany represents the most important partners in China. Indeed, Germany is China's largest trade partner in the European Union and China represents Germany's second largest market for export. Hence, Germany occupies an important position also in the Belt and Road Initiative and the several rail connections that China has established with German cities are evidence of its significant role.

The purpose of this work is to analyse the first direct rail connection established between China and Europe, evaluating its competitiveness especially compared with other means

of transportation. The name of this rail connection is Chongqing-Xinjiang-Europe International Railway or YuXinOu and it starts from Chongqing and arrives in Duisburg, Germany, passing through Kazakhstan, Russia, Belarus and Poland.

In the first chapter, I will focus on the city of Chongqing and I will describe the economic background that led the Chinese government to create this municipality. Starting from the end of the nineties, China began to focus on domestic development, especially on the growth of the interior regions that have always lagged behind the coastal provinces. For this reason, Beijing identified some growth poles with the aim at driving the economic expansion of those areas. One of these growth poles is the municipality of Chongqing that since 1999 when the Western Development Strategy was launched, played an important role in the economic policy of China. I will present the motivations behind the Western Development Strategy and the policies the central government adopted with the intention of developing the interior regions. The role of Chongqing, essential for the growth of western provinces, will be investigated both in the Go West Policy and in the Belt and Road Initiative. Therefore, the process that converted Chongqing in an important economic hub will be described.

In the second chapter, I will examine the maritime and land connections that China established with Europe before and after the Belt and Road Initiative. The maritime routes as well as the acquisitions and alliances that China developed with European ports since the Open-Door policy was launched, will be described. The influence that China is gaining all over the world arises also from its maritime power. The acquisition of Piraeus port by the Chinese shipping company COSCO in 2016 or the construction of Chinese People's Liberation Army Support Base in Djibouti, are an example of this influence. The maritime shipping covers the 90% of the total shipping. Since most of the countries in the world use this kind of transportation to ship their goods, it is important to have an active role and China is construing its power. Despite the several advantages that characterized maritime transportation, I will also analyse its weak points. For example, the impact of the ships on the environment obliges the use of the slow steaming, increasing the transit time needed to transport the merchandise. This aspect, together with other factors such as piracy or congestion at ports, undermine the sea shipping competitiveness.

Concerning the land connections with Europe, I will retrace the process that allowed China to establish railway links with Europe thanks to the participation at international

initiatives, such as the TRACECA (TRANsport Corridor Europe-Caucasus-Asia) or the EATL (Euro-Asian Transport Links) project, until 2011 when China creates its first direct link with Germany. Indeed, although in 1992 China created the New Eurasian Land Bridge to connect with Europe, before 2011 the rail freight connections between Europe and China was almost non-existent. In a few years this situation changed and in 2016 the China-Europe Railway Express Line (CR Express) has been created. The CR express is subordinated to the China Railway Corporation and operates several rails freights between China and Europe. Some of the most famous international railways connect Chongqing to Duisburg, Yiwu to Madrid and Chengdu to Lodtz. These connections are important since they link the interior provinces of China, far from the sea, with Europe, allowing them to establish direct trade relation with the countries along the routes. Furthermore, one of the biggest advantages of rail transport is its short transit time compared to the maritime one. However, a lot of issues still characterize rail transportation. A comparison between its advantages and disadvantages will be therefore presented.

In the last chapter, I will focus on the YuXinOu railway. The reason that led some big companies, such as HP, to choose Chongqing as their manufacturing base will be explored as well as the motivations behind the creation of the YuXinOu. I will investigate its features and the potential strength of this railway that could revolutionise the traditional way the trade between Chongqing and Europe is structured. Actually, the short transit time that allows Chongqing to export to Germany in just 14-15 days, increase the competitiveness of the Chongqing-Xinjiang-Europe International railway. Before the creation of this direct link, it was necessary to ship the goods to Shanghai or Shenzhen first and then, from here, ship them to Europe through the maritime route. With intermodal transportation, the transit time is obviously longer but the freight cost is lower, and this makes companies choose this transport option. In order to examine all the alternatives a company has in order to ship goods to Europe from Chongqing, I will compare all the various routes, analysing their differences in term of distance, transit time and freight rate. While from a first analysis the YuXinOu connection seems the best choice and the best compromise between the sea transportation and the air one, in the last paragraph, I will highlight how several problems and challenges still undermine the YuXinOu competitiveness. The problems at the border crossing between some countries

such as Kazakhstan and the lack of a unified policy create several complications in terms of transit time and customs clearance. Also, the freight rates are not the same along the route, but they change depending on the country. This aspect generates high costs that for the moment are contained thanks to the subsidies granted from the local government. However, the uncertainty of how long these subsidies will last is another critical element. Furthermore, the value of goods transported by rail still stands for a little percentage compared to the sea shipping one, which remains the preferred means of transport of most companies.

So, how much is this railway contributing to the development of Sino-European trade relations? Can rail transport really replace maritime transport or at least be a viable alternative?

## CHAPTER ONE. The municipality of Chongqing

### 1.1 *An overview on the Municipality of Chongqing and the origin of the Western Development Strategy*

On 1997 Chongqing was merged with Fuling, Wanxian and Qianjiang prefectures and on 14 March of the same year, it officially became one of the four municipalities of China. Chongqing as a municipality is directly under the control of the Chinese government as the other three municipalities of Tianjin, Shanghai, and Beijing and it is the only one that is positioned in the interior of China. The reason why the Chinese government decided to create this municipality has to be found in the economic background of those years.

Since 1978, the policies promoted by Deng Xiaoping led to a great development of China that started to achieve significant economic growth goals. However, the strategy fostered by Deng led to a remarkable interior disequilibrium since the development's plan consisted on focusing on the eastern regions first and then, once these regions on the coast would have achieved their economic goals, to concentrate on the interior and on the west.<sup>1</sup> The logic behind this policy was that once the coastal area would have reached the development, the modernization and the prosperity awaited, it would have had positive effects all over the country.<sup>2</sup>

The consequence of this plan during the eighties and the nineties was a huge development and modernization of the eastern regions which enjoyed preferential policies such as structural reforms and investments. The economic gap between the eastern provinces and the interior ones was bigger and bigger, and this situation led to discontent and conflicts.<sup>3</sup> This situation gets to its apogees in 1988 with the Coastal Development Strategy launched by General Secretary Zhao Ziyang. This project led to a further development of the coastal area through the creation of labour-intensive processing industries whose purpose was to

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<sup>1</sup> LAI Hongyi Harry. "China's western development program: Its rationale, implementation, and prospects", *Modern China*, 28, 4, 2002, pp. 432-466.

<sup>2</sup> TIAN Qunjian. "China develops its west: motivation, strategy and prospect", *Journal of Contemporary China*, 13, 41, 2004, pp. 611-636.

<sup>3</sup> LAI, *China's western...*, cit. pp. 438.

import raw materials from abroad, export the finished product and, this way, participate in the international market circuit and realize the economic development.<sup>4</sup>

“[...] The idea was that China should join the big international circle and make full use of its inexpensive rural labour resources to produce labour-intensive products for export, and that export earnings be used to obtain the needed foreign equipment and technology for industry. Finally, it was hoped, funds accumulated from industrial development would become available for agricultural development. [...]”<sup>5</sup>

These actions in favour of the coast left the interior underdeveloped and, although during the nineties the political circle began to give importance to the rising problem of the interregional inequality, the measures that disadvantaged these areas were still implemented.

The tax reform launched in 1994 is an example of these damaging policies. With the tax reform, it was launched the tax assignment system which provided for the division of taxes in three categories: central, local and shared between central and local governments.<sup>6</sup> This tax reform not only changed the way the revenues were shared between the central and the provincial governments, but it also modified the tax-sharing rules in favour of the central government.<sup>7</sup>

An important step in the perspective of the growth of the western zones was taken in 1996 when in the Ninth Five-Year Plan the problem of the interregional disparity as well as the desire to solve the inequality, emerged:

“[...] Disparate development of different regions is a basic condition in China. It is also a common phenomenon in the course of the economic development of a big country. Since the implementation of reform and opening, all regions in the country have achieved much development of their economies. But as the speed of development has varied, the disparities among the regions have been widened to a certain extent. During the Ninth Five-Year Plan period, we shall pay more attention to the development of the

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<sup>4</sup> YANG Dali L. “China adjusts to the world economy: the political economy of China's coastal development strategy”, *Pacific Affairs*, 64, 1, 1991, 42-64.

<sup>5</sup> *ibidem*.

<sup>6</sup> SHU-KI Tsang, YUK-SHING Cheng. “China's tax reforms of 1994: breakthrough or compromise?”, *Asian Survey*, 34, 9, 1994, pp. 769-788.

<sup>7</sup> CHEN An. “The 1994 tax reform and its impact on China's rural fiscal structure”, *Modern China*, 34, 3, 2008, pp. 303-343.

central and western parts of the country, introduce policies conducive to slowing down the widening of regional disparities and strive to narrow them [...]”<sup>8</sup>

In the same Five-Year Plan, the problem of poverty and the necessity to raise the living standard’s level in the rural and urban areas also arises. It is evident that the will to deal with China’s internal disparity was starting to come to light.

However, the very turning point in the perspective of the western’s development arrived in 1997 with the designation of Chongqing as a municipality.

Chongqing was part of the western region of Sichuan and the designation as municipality places Chongqing at the same level as the modern and developed municipalities of Shanghai, Tianjin, and Beijing. The aim behind this decision was to reallocate the population after the construction of the Three Gorges Dam and to guide the growth process of the western regions through the creation of this driving-city.<sup>9</sup>

The designation of Chongqing as a municipality is a focal point that precedes the Western Development Program officially launched by Jiang Zemin in 1999. Since the policies implemented by Deng Xiaoping let the western and the interior provinces lag behind the regions on the coast, it was necessary to launch measures in support of the underdeveloped areas.

So, at the end of the nineties, when the overall economic condition of China was increasing and after the many preferences policies in behalf of the coastal regions, China’s leaders begin to focus on the development of the interior, as Deng Xiaoping announced in the early eighties.

## 1.2 *The Western Development Strategy: motivation and policies*

In March 1999 during the Ninth National People’s Congress, the President of People’s Republic of China, as well as the General Secretary of the Party Jiang Zemin, proposed the Western Development Strategy and in June of the same year, he used for the first time the definition “Great Western Development” at the Conference on the Reform and

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<sup>8</sup> LI Peng, *Report on the Outline of the Ninth Five-Year Plan (1996-2000) for National Economic and Social Development and the Long-range Objectives to the Year 2010 (Excerpts) 1996*. China.org.cn. <http://www.china.org.cn/95e/95-english1/2.htm>, 12 October 2018.

<sup>9</sup> John FITZGERALD. *Rethinking China's provinces*. Routledge, 2003.

Development of State-Owned Enterprises (SOEs) in the Five North-western Provinces in Xi'an.<sup>10</sup>

Jiang Zemin had already focused on the regional disparity and his attitude emerged in the Ninth Five Year Plan (1996-2001) where there is a section dedicated to the promotion of a “coordinated development of regional economies”.<sup>11</sup>

In January 2000 the State Council created the Leading Group for Western Region Development led by the president of the State Council Zhu Rongji and a General Office involved in day-to-day business was created.<sup>12</sup> The purpose of the Leading Group was to control and organize the entire process of the implementation of the strategy and the General Office had to deal with several tasks such as the development of plans, policies or legislation, proposals of infrastructure's construction, plans for the ecological protection and resources development, proposal of reforms for the opening up of the region, plans for the introduction of human resources, of technology, of domestic and foreign capital and it had to handle administrative matters.<sup>13</sup>

Furthermore, in the Tenth Five Year Plan (2001-2006), the Western Development Strategy was officially presented; in the fifth section, called “Implementing the Strategy for Developing the Western Region to Promote Coordinated Progress of Different Areas”, it is underlined that it was necessary to continue with the development program to promote the modernization of the western regions and to encourage foreign investors to come in this area. In this paragraph, the Chinese government decided to commit itself to support this program through the implementation of policies and measures, such as infrastructure projects and investments and through transfer payments from the national budget to the local ones. The main content concentrate on the construction of infrastructures, key projects, and the protection of the environment as well as on the development of science, technology, and education. Furthermore, it is underlined that the

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<sup>10</sup> LAI, *China's western...*, cit., pp.436.

<sup>11</sup> Li, *Report on the Outline...*, cit.

<sup>12</sup> SASAKI Norihiro. “Political analysis of the strategy for developing the western region”, *China's Western Development Strategy: Issues and Prospects*, Chiba, Japan: Institute of Developing Economies, pp. 17-30, 2001.

<sup>13</sup> *ibidem*.

coastal regions had to commit themselves strengthening their cooperation with the western ones.<sup>14</sup>

The western regions involved in this plan are the province of Shaanxi, Gansu, Qinghai, Sichuan, Yunnan and Guizhou, the autonomous regions of Ningxia, Xinjiang, Guansi, Tibet and Inner Mongolia and the municipality of Chongqing.

Despite the main reason behind this policy was the regional development disparity, there are other reasons worth investigating.

First of all, the Asian financial crisis that broke out in Thailand in 1997, had some consequences also for the Chinese economy. Actually, even though the crisis had no direct repercussion for China, indirectly it had a great influence on Chinese export.<sup>15</sup>

The Asian countries affected by the crisis decreased their import and consequently those countries which imported goods from China influenced negatively the Chinese export market. A possible solution for the Chinese government was to try to stimulate the domestic demand and, since the western and the interior area was a large potential market, the Western Development Strategy became a necessary policy also for the growth of the national economy.<sup>16</sup>

Another crucial point of this analysis is the reform of the State-Owned Enterprises (SOEs). The SOEs which predominated the Chinese market until the end of the nineties became inefficient, unproductive and most of them could not repair their bank loans. The government could do anything but intervene.<sup>17</sup> Furthermore, the development in the coastal regions was mainly stimulated by the promotion of the private sector so, the reform of SOEs in the west was a crucial step to achieve the growth goals.

During the 15<sup>th</sup> Party Congress in 1997 the Chinese government already discussed the importance of the private sector, and in 1999 the private ownership was integrated into the constitution. However, it was already in 1995 that the government start to privatize

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<sup>14</sup> ZHU Rongji. *Report on the outline of the Tenth Five-Year Plan for national economic and social development*. Gov.cn., 2001, [http://www.gov.cn/english/official/2005-07/29/content\\_18334.htm](http://www.gov.cn/english/official/2005-07/29/content_18334.htm), 13 October 2018.

<sup>15</sup> WANG, Hongying. "The Asian financial crisis and financial reforms in China", *The Pacific Review*, 12, 4, 1999, pp. 537-556.

<sup>16</sup> LAI, *China's western...*, cit., pp. 442

<sup>17</sup> *ibidem*.

the SOEs just in a few provinces first, with the slogan “grasping the large and letting go of the small”, and then widening the privatization to other provinces.<sup>18</sup>

However, reforming the State-Owned Enterprises in the western and interior areas was complicated since their presence was much more widespread than in the coast.

The leader Jiang Zemin brought this problem to light and in 1999 at Conference on the Reform and Development of State-Owned Enterprises (SOEs) in the Five North-western Provinces in Xi’an, declared the need to improve the SOEs and to promote the nonstate sector especially in the western area.<sup>19</sup>

The Western Development Strategy was not just an essential step for the reform of the SOEs but, still, it was important for the national economic growth as well.

Furthermore, the environmental problems, such as soil erosion, desertification and water shortage that damaged many areas needed to find a concrete solution and the western regions, rich of water and resources, could help to improve the overall Chinese environment.<sup>20</sup>

Finally, the problem of national security and minorities also was taken into account. Through the development of the west and the increasing of the economic performance of those areas, it was considered possible to reduce social instability and conflicts.<sup>21</sup>

Therefore, as already mentioned, the main points on which the Western Development Strategy focused to promote the modernization of the interior area and solve the above-mentioned problems, includes construction of infrastructures, investment in key projects and in scientific and technological fields, the protection of the environment, the improvement of education and the promotion of tourism.

In the fifth section of the Tenth Five Year Plan it is specified:

“Carrying out the strategy for western-region development to accelerate the development of the central and western regions is a major step taken to achieve the strategic goals of the third stage of the country's modernization drive. During the Tenth Five-Year Plan period, we need to place emphasis on key projects for a good beginning of the program. Construction of infrastructure and protection of the ecological

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<sup>18</sup> QIAN Yingyi. “The institutional foundations of China’s market transition”, *World Bank’s Annual Conference on Development Economics*, Washington, DC, 1999, pp. 28-30.

<sup>19</sup> LAI, *China’s western...*, cit., pp. 443.

<sup>20</sup> LAI, *China’s western...*, cit., pp. 444-449.

<sup>21</sup> TIAN, *China develops...*, cit., pp. 620-621.

environment should take priority, and we should strive for major breakthroughs within five to ten years. At the same time, we hope to develop science, technology, and education considerably. [...]"<sup>22</sup>

Furthermore, since one of the aims of this policy was to attract investors in the western and central parts of China, the government started encouraging foreign investment projects reducing restrictions and requirements and it identified some key industries in order to attract foreign investments. The National Development and Reform Commission (NDRC) and the Ministry of Commerce, jointly created the Catalogue of Priority Industries for Foreign Investment in the Central and Western Regions in June 2000 (subjected to many revisions in the following years). The foreign-invested projects included in the Catalogue, organized by provinces, enjoyed preferential policies for foreign-funded projects under the Rules on the Guidance of Foreign Investment Industries and other preferential policies listed in the Circular of the General Office of the State Council on the Views on Further Promoting Foreign Investment.<sup>23</sup>

The main sectors consisted of mineral resources, cultivated land, processing of special animals and plants resources, processing of auto parts and components, liberalization of public utilities, such as the construction and operation of pipeline network for gas supply, heat supply, and drainage in urban areas and development of tourist scenic spots.<sup>24</sup>

Other measures taken by the Chinese government included an increase in fiscal transfer from the central government to the local western ones as well as tax reduction, exemption, and industrial policy concessions.<sup>25</sup>

"[...]. In order to coordinate with the western development strategy, the county, since last year, has issued or will issue some preferential policies to encourage foreign investors to invest in China's mid and western areas. The policies are: 1. As for the category of encouragement and category B foreign invested projects in western areas classified by the "Catalogue of Foreign Investment Industry Guidance", after the existing 3-year period for favourable taxation expired, the State Council has decided that those projects can enjoy a reduction of 15% on income tax. And for the export-oriented enterprises with the percentage on export

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<sup>22</sup> ZHU Rongji. *Report on the outline of the Tenth Five-Year Plan for national economic and social development*. Gov.cn., 2001, [http://www.gov.cn/english/official/2005-07/29/content\\_18334.htm](http://www.gov.cn/english/official/2005-07/29/content_18334.htm), 13 October 2018.

<sup>23</sup> Hong Kong Trade Development Council *Catalogue of Priority Industries for Foreign Investment in Central & Western Regions Revised*, 10 September 2004, <http://info.hktdc.com/alert/cba-e0409.htm>, 14 October 2018.

<sup>24</sup> *ibidem*.

<sup>25</sup> LU Zheng, DENG Xiang. "China's western development strategy: policies, effects and prospects", 2011.

products beyond 70% yearly, 10% income tax reduction can be granted. 2. The State Council has decided to upgrade 7 development zones from local level to the national level, namely, Xi'an, Chengdu, Kunming, and Guiyang in western regions and Hefei, Zhengzhou, and Changsha in the middle of China. [...]”<sup>26</sup>

In addition to these policies, other supporting measures to encourage export were implemented, for example, it was created an assistance service to let the export-oriented enterprises in western China obtain management and product quality certifications. Financial incentives were adopted as well:

- The State Development Bank issued 30-year Treasury-guaranteed western region development bonds.
- The State Development Bank provided technical assistance loans to the western regions.
- Project supervision and insurance systems were created.
- The economic benefits generated in the east were used to give support to the west.
- A system of joint working sessions was established between the State Development Bank and the provincial governments in western China.<sup>27</sup>

Regarding the technological and scientific development, the Ministry of Science and Technology launched some programs to create funds in support of the technological and scientific modernization in western China. The programs not only provided for the creation of high-tech enterprises, e-commerce sector, solar and wind power generation sector, new materials and biomedicine fields, eco-treatment technologies and water-saving agricultural technologies, but also provided for scientific and technological cooperation projects with Europe, promoted ecologically and personnel cooperation with the World Bank, the United Nations Industrial Development Organization and other international organizations in western China and it continued the cooperation with Korea and Japan. Technological personnel training programs were launched, and the development of university science parks and national engineering technology research centres were promoted.<sup>28</sup>

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<sup>26</sup> State Development Planning Commission People's Republic of China. *Information on Development of the West*, China.org.cn, 18 May 2000, <http://www.china.org.cn/e-fabuhui/download/news/English/PressConferences/200518/01.htm>, 15 October 2018.

<sup>27</sup> Hong Kong Trade Development Council, *Incentives Encouraging Investment in Western China*, 15 July 2000, <http://info.hktdc.com/alert/cba-e0007sp.htm>, 15 October 2018.

<sup>28</sup> *ibidem*.

However, one of the biggest efforts made in order to encourage the western development was made on the construction of infrastructures.

The Western China Development Office and the State Development Planning Commission identified "Ten Key Projects" that had to be implemented by the year 2000. A major focus was address to the transportation, and below are shown some of the projects:

- Xi'an to Hefei railway (part of Xi'an to Nanjing railway) and Chongqing to Huaihua railway.
- Western China highway projects.
- Airport projects in western China, such as the Xianyang International Airport in Xi'an and a regional air network with Shuangliu Airport in Chengdu, Xianyang Airport in Xi'an, Wujiaba Airport in Kunming, Zhongchuan Airport in Lanzhou and Wulumuqi Airport.
- Elevated light railway in Chongqing.
- Natural gas pipeline from Sebei of the Chaidamu Basin -Xining-Lanzhou.

In 2001 the Qinghai- Tibet railway project was completed.

Other important infrastructure projects were implemented in order to promote the protection of the environment:

- Water conservancy hubs of Sichuan Zipingpu and Ningxia Shapotou of the Yellow River.
- Convert arable land to forestry (pasture), ecological construction and seeding projects.<sup>29</sup>

Finally, some investments were addressed to the education; universities and educational project were realized.

Therefore, the Western Development Strategy aimed to raise the economic condition and the living standard of the people in western and interior regions and in order to achieve this goal the government promoted several projects. The Chinese leaders identified some key cities which had to function as a hub for the growth of such areas. One of these

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<sup>29</sup> The State Development Planning Commission People's Republic of China. *Information on Development of the West*, China.org.cn, 18 May 2000, <http://www.china.org.cn/e-fabuhui/download/news/English/PressConferences/200518/01.htm>, 15 October 2018.

important cities is the municipality of Chongqing, which had a key role on the development of the west.

### 1.3 *The importance of Chongqing in the Go west Policy*

On 14th March 1997, the Eight National People Congress declared the separation of Chongqing from the region of Sichuan and the designation of Chongqing as a municipality.

There are two main reasons behind this decision. The first one is the creation of the Three Gorges Dam that implied the need to relocate a big number of people who would have found a new place to live in the new-born municipality. The second reason is part of the new strategy of developing the west launched two years later by the Chinese government in order to promote an economic improvement of the west and the central regions of China.<sup>30</sup> Chongqing plays an important role in the western development strategy since the central government identifies this city as a potential growth pole for the west area.

In the Tenth Five-Year Plan it is specified that the western regions had to “foster new loci of economic growth”, and Chongqing was designed to be an economic driver.

In this pattern, the government started to implement preferential policies for Chongqing in order to increase the economic performance of this city.

After the designation as a municipality, the Chongqing Municipal Government started to establish some municipal level development zone to promote the industrial and technological development of the city.

In 2000 it was created the New North Zone which include the state level development zone called Chongqing Economic and Technological Development Zone, established in 1993 and the state level development zone called Chongqing High-Tech Industrial Development Zone, established in 1991. Furthermore, it includes the Chongqing Export Processing Trade Zone as well and the Chongqing Cuntan Port Zone.<sup>31</sup>

In 2001 it was set up the Chongqing Changshou Chemical Industrial Park which has industrial bases for petrochemicals, natural gas chemicals, chloralkali chemicals,

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<sup>30</sup> FITZGERALD, *Rethinking...cit.*, pp. 41.

<sup>31</sup> Hong Kong Trade Development Council, *Chongqing New North Zone*, 11 December 2012, <https://hkmb.hktdc.com/en/1x09rj78/hktdc-research/chongqing-new-north-zone>, 16 October 2018.

biological chemicals, fine chemicals, and new materials<sup>32</sup>; in 2002 it was created the Chongqing Gangcheng Industrial Park, which has four zones: the A zone functions as the mechanical and industrial park, the B and C zones function as storage and logistic parks and the D zone is used as a park for the small and medium enterprise.<sup>33</sup>

In 2003 it was set up the Chongqing Jianqiao Industrial Park which is used mainly for advanced manufacturing, new materials, medicine, food processing, information technology, and modern logistics<sup>34</sup>.

Through the construction of these municipal level development zones the industrial and technological base of Chongqing has improved and since a lot of enterprises decide to place their business in these zones, the economic performance of the city has improved as well.

Another important moment for the municipality arrived in 2011 with the creation of the first national-level new area in inland China, created after Shanghai's Pudong New Area and Tianjin's Binhai New Area. It is called the Chongqing Liangjiang New Area and it is located on the north of the Yangtze River and on the east of the Jialing River. Thanks to its position, it is possible for this zone to develop a multi-modal transportation system which combines water, air, and land. Some of the aims of this economic zone are to develop infrastructure, high-tech industries such as smart manufactories and information technology and to attract financial institutes. This area plays a key role in the development and opening up of Chongqing.<sup>35</sup>

In addition to the creation of these development zones, there are other two relevant steps taken by the government in the perspective of the Western Development Strategy and which concern the city of Chongqing: the creation of the Chengdu-Chongqing Economic Zone and the establishment of the West Triangle Economic Zone.

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<sup>32</sup> Hong Kong Trade Development Council, *Chongqing Changshou Chemical Industrial Park*, 25 March 2015, <https://hkmb.hktdc.com/en/1x09wr4n/hktdc-research/chongqing-changshou-chemical-industrial-park>, 16 October 2018.

<sup>33</sup> Hong Kong Trade Development Council, *Chongqing Gangcheng Industrial Park*, 9 April 2015, <https://hkmb.hktdc.com/en/1x09wtf6/hktdc-research/chongqing-gangcheng-industrial-park>, 16 October 2018.

<sup>34</sup> Hong Kong Trade Development Council, *Chongqing Jianqiao Industrial Park*, 11 December 2012, <https://hkmb.hktdc.com/en/1x09rq5/hktdc-research/chongqing-jianqiao-industrial-park>, 16 October 2018.

<sup>35</sup> WANG Yifei, *Chongqing Liangjiang New Area*, Chongqing Liangjiang New Area, A National, Strategic Platform for sustainable development, 17 February 2017, <http://english.liangjiang.gov.cn/about.html>, 17 October 2018.

### 1.3.1 Chengdu-Chongqing Economic Zone

On April 2007 the Sichuan and Chongqing governments signed a cooperation agreement to establish the Chengdu-Chongqing Economic Zone and in May 2011, the State Council officially approved the Chengdu-Chongqing Economic Zone Regional Planning identifying these two cities as the driving-cities of the western area's development.<sup>36</sup>

The Chengdu-Chongqing Economic Zone, also known as Cheng-Yu Economic Zone, covers 15 cities of Sichuan Province and 31 counties and districts around Chongqing.

The aims of this policy are numerous and based on what was published by the National Development and Reform Commission of People's Republic of China we can identify the underlying goals:

- The Chengdu-Chongqing Economic Zone will represent the fourth growth pole of China. Through the adherence to the urbanization development strategy, through the investments on infrastructures and scientific and technological fields, it will become an important economic growth pole opened up to the outside world.
- The Chengdu-Chongqing Economic Area will be a modern industrial base in China. It will actively undertake domestic and international industrial transfer, it will improve and upgrade the industrial structure, it will increase the competitiveness of the industrial market, it will build a modern agricultural base and form an advanced manufacturing sector as well as an important high technology sector and it will create industrial clusters.
- Through the Chengdu-Chongqing Economic Zone, an open platform will be built. The region will be open to foreign exchange channels, the economic and technological exchanges, as well as the cooperation with neighbouring countries and regions, will increase and new ways for opening up will be explored.
- The Chengdu-Chongqing Economic Zone will promote a coordinated development of rural and urban areas as well as social development.
- The Chengdu- Chongqing Economic Zone will create a sustainable environment in the upper reaches of the Yangtze River. This Zone will increase the environmental protection, promote resource utilization and the economic and

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<sup>36</sup> "An interview with Chengdu-Chongqing Economic Zone architect", *China Daily*. 7 July 2011, [http://www.chinadaily.com.cn/china/2011-07/07/content\\_12857137.htm](http://www.chinadaily.com.cn/china/2011-07/07/content_12857137.htm), 17 October 2018.

social development; it will increase the construction of ecological networks, it will strengthen the comprehensive improvement of key river basins and regional environments, it will improve the level of resource conservation, it will promote green development and build ecological barriers and it will safeguard the ecological security of the upper reaches of the Yangtze River.<sup>37</sup>

The general layout of the Chengdu-Chongqing Economic Zone consists of two cores and five belts. The two cores are the cities of Chongqing and Chengdu which lead the regional development of the area, promote the construction of innovative cities and the development of a modern service industry, high-tech industry, advanced manufacturing and, agriculture. The formation of urban agglomeration is promoted in these two cities as well as the construction of efficient and convenient transportation network based on rail transit. The five belts include the Yangtze River development belt, the Chengdu-Mianyang-Leshan development belt, the Chengdu-Neijiang-Chongqing development belt, the Chengdu-Nansui-Chongqing development belt, and the Chongqing-Guang'an-Dazhou development belt.<sup>38</sup> Along these belts, the urbanization and the creation of competitive industries as well as the environmental protection and quality is promoted. Through the coordination of rural and urban development, the construction of a modern industrial and agriculture system, the strengthen of leading industries, through the construction of all kinds of infrastructures, the development of social undertakings, the improvement of the employment and social security system, the strengthening of ecological environment protection and resource utilization, the deepening of reform and opening up and through the strengthening of regional cooperation, the Chinese government aimed to increase the level of economic and social development and to create a modern industrial base; it was also predicted that the region would have become one of the strongest one in China. The government expectations were that by 2015 the regional GDP would have accounted for 7% of the national total one, the per capita GDP would have reached 39,000 yuan, the urbanization rate would have reached 52%, and the income gap between urban and rural residents would have narrowed from 3.3:1 to 2.8:1 and that

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<sup>37</sup> National Development and Reform Commission 国家发展和改革委员会, "Chenyu jingji qu quyue guihua" 成渝经济区区域规划 (Chengdu-Chongqing Economic Zone Regional Planning), May 2011, <http://www.ndrc.gov.cn/zcfb/zcfbghwb/201106/W020160613338544956669.pdf>, 18 October 2018.

<sup>38</sup> "An interview with Chengdu-Chongqing Economic Zone architect", *China Daily*, 7 July 2011, [http://www.chinadaily.com.cn/china/2011-07/07/content\\_12857137.htm](http://www.chinadaily.com.cn/china/2011-07/07/content_12857137.htm), 17 October 2018.

by 2020 the per capita GDP will reach 65,000 yuan, and the urbanization rate will reach 60%.<sup>39</sup>

This policy is one of the most important measures taken to improve the Western Development Strategy. Beyond the Chengdu-Chongqing Economic Zone, there is another important economic zone whose role in the Go West Policy is essential.

This economic zone is called West Triangle Economic Zone and it includes the cities of Chengdu, Chongqing, and Xi'an.

### *1.3.2 West Triangle Economic Zone and Chongqing free trade zone*

The West Triangle Economic Zone was launched during the two sessions of the Eleventh National People Congress held in 2009 where the executive deputy mayor of Chongqing, Huang Qifan proposed the creation of this triangle zone to promote the further development of this area.<sup>40</sup> The project was then drafted jointly by the Shaanxi, Chongqing and Sichuan provinces and their Municipal Development and Reform Commissions. Furthermore, it was presented in the 12<sup>th</sup> Five Year Plan where the government presented the importance of promoting the Chongqing-Chengdu-Xi'an regional strategic cooperation.<sup>41</sup> The main content of this proposal is that, after the creation of the three growth poles of the Yangtze River Delta in the east, the Pearl River Delta in the south, and the Bohai Sea in the north, the Chongqing Economic Circle, the Chengdu Economic Circle and the Guanzhong City Group, with Xi'an as the centre, jointly work together to build China's fourth growth pole in the west.<sup>42</sup>

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<sup>39</sup> National Development and Reform Commission 国家发展和改革委员会 “Chenyu jingji qu quyue guihua” 成渝经济区区域规划 (Chengdu-Chongqing Economic Zone Regional Planning). May 2011, <http://www.ndrc.gov.cn/zcfb/zcfbghwb/201106/W020160613338544956669.pdf>, 18 October 2018.

<sup>40</sup> YU Hong. “The rationale, prospects, and challenges of China's Western Economic Triangle in light of global economic crisis”, *Asian Politics & Policy*, 2010, 2.3: 437-461.

<sup>41</sup> The Central People's Government 中华人民共和国中央人民政府 “Zhonghua renmin gongheguo guomin jingji he shehui fazhan di shier ge wu nian guihua gangyao” 中华人民共和国国民经济和社会发展第十二个五年规划纲要 (Outline of the Twelfth Five-Year Plan for National Economic and Social Development), Xinhuanet. 新华网, 17 March 2016, [http://www.xinhuanet.com/politics/2016lh/2016-03/17/c\\_1118366322.htm](http://www.xinhuanet.com/politics/2016lh/2016-03/17/c_1118366322.htm), 19 October 2018.

<sup>42</sup> WU Fanglan 吴芳兰, “Dazao di si ji xi sanjiao jingji guan lantu fuxian” 打造第四极 西三角经济圈蓝图浮现 (Create the fourth pole. The plan for the Western Triangle Economic Circle emerges), *Zhongguo jingji wang 中国经济网* 18 March 2009, [http://finance.ce.cn/macro/gdxw/200903/18/t20090318\\_14347925.shtml](http://finance.ce.cn/macro/gdxw/200903/18/t20090318_14347925.shtml), 19 October 2018.

In this framework, the Chengdu-Chongqing Economic Zone is supposed to play a leading role since, according to the Deputy Director of the Research Group on the Development of Chengdu-Chongqing Economic Zone as well as Director of the Regional Economic Research Institute of Sichuan Academy of Social Sciences Liu Shiqing, the Cheng-Yu Economic Zone has the best natural conditions and the most probable rate of economic development growth in the western region.<sup>43</sup>

This zone covers a total area of area of 220,000 square kilometres and a population of 118 million, including 61 cities. Since the industrial development and the modernization were mostly concentrated in the eastern regions, this situation led to a disequilibrium between the east and the west and to an unbalanced development. The aim of this policy is to further promote the development of the western regions and a more balanced regional economy. Due to the unequal economic situation, the creation of a western growth pole was seen as the step needed to achieve the development goals.<sup>44</sup>

There are several aspects through which this policy was implemented:

- The construction of an efficient and convenient transportation network with Chongqing, Chengdu, and Xi'an as the main network with several secondary channels.
- The building of an industrial pole in the western area. Taking advantage of Xi'an's scientific research, aviation, aerospace and machinery manufacturing, Chengdu's information software, major equipment manufacturing, and clean energy advantages, Chongqing's solid manufacturing base, strong supporting capabilities, and comprehensive industrial systems, jointly build important equipment manufacturing, energy, and chemical industries.
- Fostering more open inland areas. Take advantage of Xi'an International Port Area, of Chongqing Two-way Cuntan Bonded Port Area and other parks and promoting

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<sup>43</sup> WU Fanglan 吴芳兰, "Dazao di si ji xi sanjiao jingji guan lantu fuxian" 打造第四极 西三角经济圈蓝图浮现 (Create the fourth pole. The plan for the Western Triangle Economic Circle emerges), *Zhongguo jingji wang 中国经济网* 18 March 2009,

[http://finance.ce.cn/macro/gdxw/200903/18/t20090318\\_14347925.shtml](http://finance.ce.cn/macro/gdxw/200903/18/t20090318_14347925.shtml), 19 October 2018.

<sup>44</sup> LUO Qiang 罗强 "Xin xi sanjiao neng fou chengwei xibu zengzhang ji" 新西三角"能否成为西部增长极 (Can the New West Triangle become the growth pole of the west?), *Zhongguo Jingji Wang 中国经济网*, 28 September 2012, [http://district.ce.cn/zt/99587/xbdkf/yw/201001/13/t20100113\\_20792724.shtml](http://district.ce.cn/zt/99587/xbdkf/yw/201001/13/t20100113_20792724.shtml), 19 October 2018.

the creation of international channels with important exhibition activities such as the Eurasian Economic Forum.

- Opening up to the international market through the promotion of a tourism cooperation zone between the three cities.<sup>45</sup>

Another key point in the creation of the West Triangle Economic Zone concerns the enterprises. After the constitution of the agreement between the three cities, Chongqing, Sichuan, and Shaanxi Federation of Industry and Commerce decided to hold regular meetings every year to evaluate financing channels for private enterprises, small and medium-sized enterprises, and promote small-scale financial institutions such as three-way credit guarantee companies, microfinance companies, private equity firms, and village banks. They also planned to promote the cooperation of the three parties in some major projects and to provide business information to each other.<sup>46</sup>

As we can see from the several policies that the Chinese government decided to implement in order to encourage the economic and social growth of the western regions, the municipality of Chongqing plays always a key role and it has been identified by the Chinese leaders as an essential pole for the western development.

The relevance of Chongqing is confirmed again in 2010 when it was designed as a National Central City. The definition of National Central City was created in 2005 referring to some cities that had to function as the core of a new urbanization plan in China. These cities had to promote international economic development and cultural exchanges as well as drive political and economic activities, supporting the national strategy. On 2010 the Ministry of Housing and Urban-Rural Development of the People's Republic of China designed Beijing, Tianjin, Shanghai, Guangzhou, and Chongqing as the five National Central Cities.<sup>47</sup>

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<sup>45</sup> “Chuan shan yu guojia xi sanjiao jingji qu jiben silu chulu” 川陕渝《构建“西三角”经济区基本思路》出炉 (Sichuan, Shaanxi, and Chongqing establish the basic scheme for the West Triangle Economic zone), Renmin Wang 人民网, 2 December 2009, <http://politics.people.com.cn/GB/14562/10495388.html>, 19 October 2018.

<sup>46</sup> CHEN Yu 陈旒, “Yu chuan shan qian xieyi xi sanjiao jingji guan zai zengjia 13 chengshi” 渝川陕签协议 西三角经济圈再增加 13 城市 (Chongqing, Sichuan, and Shaanxi signed an agreement to add 13 the cities in the Western Triangle Economic Circle). *IFENG.COM*, 10 July 2009, <http://finance.ifeng.com/city/csjs/20090710/916865.shtml>, 20 October 2018.

<sup>47</sup> XU Hao, WANG Hong, RU Yin. 徐豪, 王红, 茹银昕, “Guojia zhongxin chengshi shuliang huo wei 12 ge ruxuan biao zhun you na xie?” 国家中心城市数量或为 12 个 入选标准有哪些? Follow footnote:

In addition to the role in the Western Development Strategy, Chongqing is nowadays considered as an important economic hub for the entire country and the policies released by the government focus often in this city which is becoming more and more opened to the outside thanks to the investments and numerous infrastructures that link the municipality to the world.

Chongqing is an important hub also in the pattern of the grandiose project launched in 2013 by President Xi Jinping: the Belt and Road Initiative.

The reason why the Chinese government launched the Belt and Road Initiative is to establish connections with Africa, Asia, and Europe through the construction of infrastructures and projects that link China with the rest of the world.

With the realization of this strategy, the economic performance of China will certainly improve, China's participation in the international economic circuit will be richer and it will obtain an essential role in the phenomenon of globalization.

The Belt and Road initiative is structured in two parts: the Silk Road Economic Belt and the 21st-Century Maritime Silk Road.

“[...] The Silk Road Economic Belt focuses on bringing together China, Central Asia, Russia and Europe (the Baltic); linking China with the Persian Gulf and the Mediterranean Sea through Central Asia and West Asia; and connecting China with Southeast Asia, South Asia and the Indian Ocean. The 21st-Century Maritime Silk Road is designed to go from China's coast to Europe through the South China Sea and the Indian Ocean in one route, and from China's coast through the South China Sea to the South Pacific in the other. On land, the Initiative will focus on jointly building a new Eurasian Land Bridge and developing China-Mongolia-Russia, China-Central Asia-West Asia and China-Indochina Peninsula economic corridors [...]”<sup>48</sup>

From the document released by the National Development and Reform Commission emerges that one of the key elements in the Belt and Road Initiative is transport infrastructures construction that allows China to connect with other countries. A major

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(There are approximately 12 National Central Cities, which are the selection criteria?) *中国新闻网*. 21 February 2017.

<sup>48</sup> National Development and Reform Commission, *Vision and actions on jointly building silk road economic belt and 21st-century maritime silk road*. ndrc.gov.cn, 28 March 2015, [http://en.ndrc.gov.cn/newsrelease/201503/t20150330\\_669367.html](http://en.ndrc.gov.cn/newsrelease/201503/t20150330_669367.html), 17 October 2018.

focus is addressed to the rail freight transit, considered as the right compromise between the expensive air freight transport and the slow maritime transport.<sup>49</sup>

Chongqing, thanks to its position between the Belt and Road Initiative (BRI) and the Yangtze Economic Belt,<sup>50</sup> it is considered an important pivot that could link the Silk Road Economic Belt to the 21st Century Maritime Silk Road. Furthermore, the role of Chongqing in the Belt and Road Initiative is not disconnected from its role in the Western Development Strategy, which is thought to benefit from the majestic project launched by the government.<sup>51</sup> In the 13<sup>th</sup> Five-Year Plan for the Great Western Development, it is in fact specified that the Belt and Road Initiative as well as the development of the Yangtze River Economic Belt, will help the western regions to realize the development goals, to achieve the opening-up objectives and to accelerate the process of its integration in the international economy.<sup>52</sup>

Therefore, the Belt and Road Initiative and the Western Development Strategy are closely related since they need to help each other to reach their purposes.

It is in this pattern that the Chongqing Municipal People's Government decide to take an active role and on 28 December 2016, it published its 13th Five-Year Plan which is addressed to convert Chongqing in a competitive, attractive and open area with a core position in the New Silk Road project.<sup>53</sup>

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<sup>49</sup> Jakub JAKÓBOWSKI, Konrad POPLAWSKI, Marcin KACZMARSKI, "The Silk Railroad. The EU-China rail connections: background, actors, interests", OSW Studies Number 72, February 2018.

<sup>50</sup> In September 2014, the State Council issued the "Guiding Opinions on Promoting the Development of the Yangtze River Economic Belt Based on the Golden Waterway". The Yangtze River Economic Belt covers eleven regions including Shanghai, Jiangsu, Zhejiang, Anhui, Jiangxi, Hubei, Hunan, Sichuan, Chongqing, Yunnan and Guizhou so, it links the east coast with the western regions. It was created in the perspective of the regional development strategy, to foster the overall Chinese economy, to narrow the gap between the regions, to promote urbanization and to foster the potential domestic demand. See: *Yangtze River economic belt to underpin China's sustained growth*, Hong Kong Trade Development Council, 26 May 2014, <https://hkmb.hktdc.com/en/1X09XKNP/hktdc-research/Yangtze-River-economic-belt-to-underpin-Chinas-sustained-growth>, 21 October 2018.

<sup>51</sup> TAN Yingzi, LUO Wangshu. "Chongqing proposed as start of Silk Road", *China Daily*. 14 March 2014, [http://www.chinadaily.com.cn/china/2014-03/14/content\\_17347855.htm](http://www.chinadaily.com.cn/china/2014-03/14/content_17347855.htm), 20 October 2018.

<sup>52</sup> National Development and Reform Commission 国家发展和改革委员会, "Xibu da kaifa shisan, wu guihua" 西部大开发 "十三五" 规划 (The 13th Five-Year Plan for the Development of the Western Region), 2017, <https://www.gov.cn/xinwen/201701/23/5162468/files/56301370765d4fe8975541a2bf221281.pdf>, 20 October 2018.

<sup>53</sup> Hong Kong Trade Development Council, *Chongqing's 13th Five-Year Plan for Turning Itself into Inland Open Highland*, 28 December 2016, <http://china-trade-research.hktdc.com/business-news/article/The-Belt-and-Road-Initiative/Chongqing-s-13th-Five-Year-Plan-for-Turning-Itself-into-Inland-Open-Highland/obor/en/1/1X000000/1X0A8YJN.htm>, 25 October 2018.

Confirming the importance of the Municipality, on April 2017 the Party Central Committee and the State Council created the Chongqing Pilot Free Trade Zone, an area considered as a pivot for the Belt and Road Initiative, for the Yangtze River Economic Belt and for the Western Development Strategy.

The zone covers an area of 119.98 sq. km and it is structured in three sub-zones: the already mentioned Liangjiang Area, the Xiyong Area, and the Guoyuangang Area.<sup>54</sup>

The Liangjiang Area is addressed to the creation of high-end industries and high-end factor clusters with a focus on high-end equipment, electronic core components, cloud computing sector, biomedical sector, service trade, e-commerce and other emerging industries such as financial leasing, R&D and design. The Xiyong Area focuses on the development of manufacturing services such as electronic information, intelligent equipment manufacturing, and bonded logistics transfer.

The Guoyuangang Area is committed in the construction of a multi-modal logistics transshipment centre and it provides other services such as international transshipment and distribution services.<sup>55</sup>

The Chongqing Free Trade Zone aim to achieve development goals through the standardization of the rule of law, the expansion of the investment field, the promotion of trade transformation and upgrading as well as through the deepening of the open innovation in the financial sector, the construction of high-level free trade park, logistic hubs and industrial agglomeration.<sup>56</sup>

Finally, a section of the Overall Plan for the China (Chongqing) Pilot FTZ is dedicated to the promotion of a joint development of the Belt and Road Initiative and of the Yangtze River Economic Belt. It is underlined the importance of the construction of a multi-modal transport system with a special focus on the Sino-European intermodal transport railway and on the construction of Sino-German international trade and partnership.<sup>57</sup>

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<sup>54</sup> Hong Kong Trade Development Council, *China (Chongqing) Pilot Free Trade Zone*, 10 May 2017, <http://china-trade-research.hktdc.com/business-news/article/Facts-and-Figures/China-Chongqing-PilotFree-Trade-Zone/ff/en/1/1X000000/1X0A9NGN.htm>, 25 October 2018.

<sup>55</sup> The Central People's Government 中华人民共和国中央人民政府, "Guowuyuan guanyu yinfa Zhongguo (Chongqing) ziyou maoyi shiyan qu zongti fang'an de tongzhi" 国务院关于印发中国(重庆)自由贸易试验区总体方案的通知. (Notice of the State Council on printing and distributing the Overall Plan of the China (Chongqing) Pilot Free Trade Zone), 31 March 2017, [http://www.gov.cn/zhengce/content/201703/31/content\\_5182300.htm](http://www.gov.cn/zhengce/content/201703/31/content_5182300.htm), 25 October 2018.

<sup>56</sup> *ibidem*.

<sup>57</sup> *ibidem*.

So, as we can notice from the official documents, Chongqing occupies a core position also from the perspective of China-Europe relations and in the next chapters, I will try to investigate how it was possible to create this cooperation.

## **CHAPTER TWO. China connects to Europe**

### *2.1 Maritime connections between China and Europe*

The Chinese shipping sector starts its development process in 1961 when the China Ocean Shipping Company (COSCO) was established. With COSCO, which is the first international ocean shipping company of China, also some of its branches (Guangzhou, Shanghai, Tianjin, Dalian) were created and China started its global sea shipping trade.<sup>58</sup> Although the creation of COSCO improved China's sea shipping transport, the growth of China's maritime connectivity and the development of its ports are more recent. As a matter of fact, until the seventies, China's transport system was practically based only on road and rail connections. The Chinese economy was focused mainly on domestic markets and international trade was secondary.<sup>59</sup> With Deng Xiaoping and his Open-Door Policy, China started considering concretely to participate in the international economy and, in order to establish connections with other countries, it started to develop its transportation system and its coastal ports.<sup>60</sup> In 1980 China opened the first container terminal in Tianjin.<sup>61</sup>

With the Sixth Five Year Plan (1981-1985), the development of transportation means became the main task for the Chinese government which committed itself to build roads and railways, to increase the capacity of the national coastal ports as well as built inland navigation projects.<sup>62</sup>

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<sup>58</sup> China COSCO Shipping Corporation Limited, *China COSCO Shipping*, 2016, <http://en.cosco.com/col/col6922/index.html>, 3 January 2019.

<sup>59</sup> LI Zhen, María DEL MAR CERBÁN, Francisco PINIELLA. "The Development of China's Coastal Ports in the Era of Globalization", *Journal of Maritime Research*, 10, 2, 2013, pp. 27-34.

<sup>60</sup> *ibidem*.

<sup>61</sup> Howard J DOOLEY, "The Great Leap Outward: China's Maritime Renaissance", *The Journal of East Asian Affairs*, 26, 1, 2012, pp. 53-76.

<sup>62</sup> The Central People's Government of the People's Republic of China, "Guānyú dì liù gè wǔ nián jìhuà de bàogào" 关于第六个五年计划的报告 (Report on the Sixth Five-Year Plan), 11 March 2008, [http://www.gov.cn/test/2008-03/11/content\\_916744.htm](http://www.gov.cn/test/2008-03/11/content_916744.htm), 4 January 2019.

Therefore, from the end of the seventies, the development of coastal ports registered a strong increase. The Chinese government started to build and expand ports in the eastern provinces and, in order “to avoid fierce competition, overcapacity in Chinese port system, to reduce the duplicated infrastructure investment and to achieve the profit maximization”<sup>63</sup>, decided to promote port cooperation.

The port groups created were divided as follow:

Table 1. Chinese Port Groups

Province	Date of establishment	Name of the port group	Ports included
Guanxi	14 <sup>th</sup> February 2007	Guanxi Beibu Gulf International Port Group Co., Ltd.	Qinzhou port, Beihai port and Fangchenggang port
Hebei	8 <sup>th</sup> July 2009	Hebei Port Group., Ltd.	Qinhuangdao port, Caofeidian port and Huanghua port
Zhejiang	28 <sup>th</sup> August 2015	Zhejiang Province Seaport Investment & Operation Group Co., Ltd	Ningbo Zhoushan port, Wenzhou port, Taizhou port, Jiaxing port, Yiwu International dry port
Jiangsu	22 <sup>nd</sup> May 2017	Jiangsu Port Group Co., Ltd	Nanjing port, Lianyungang port, Suzhou port, Zhejiang port, Chanzhou port, Taizhou port Yangzhou port

Source: Huo Weiwei, Zhang Wei, Chen Peggy Shu-Ling, “Recent development of Chinese port cooperation strategies Recent development of Chinese port cooperation strategy”.

Furthermore, on 16 August 2006 the State Council issued the National Plan for Coastal Port which established five port clusters including Bohai Sea Area, Changjiang River Delta, Southeast Coastal Area, Pearl River Delta, and Southwest Coastal Area, and it developed eight transportation systems: coal, oil, iron ore, container, food, commercial cars, mainland-island rolling, and passenger transportation systems.<sup>64</sup>

<sup>63</sup> HUO Weiwei, ZHANG Wei, CHEN Peggy Shu-Ling, “Recent development of Chinese port cooperation strategies”, *Research in Transportation Business & Management*, 26, 2018, pp. 67-75.

<sup>64</sup> Hong Kong Trade Development Council (HKTDC), *National plan for coastal ports*, [http://info.hktdc.com/shippers/vol29\\_6/vol29\\_6\\_trade03.htm](http://info.hktdc.com/shippers/vol29_6/vol29_6_trade03.htm), 8 January 2019.

Nowadays, international trade is based mainly on sea shipping and China is one of its most important protagonists.<sup>65</sup> Since the past years until now, the amount of investments in ports and related infrastructures has considerably increased and now 14 Chinese ports form part of the top 50 world container ports, with Shanghai port at the first place in the ranking.<sup>66</sup>

Not only the investments of the central government have contributed to the development of the ports, but also the agreements that China signed with foreign companies allowing them to enter in Chinese's port market, contributed to the growth of Chinese international network.<sup>67</sup> Concerning the China-Europe trade, an important step made is the agreement on maritime transport between the European Community and its member states and the government of the People's Republic of China signed in 2002 and entered into force in 2008. The agreement regulates the maritime cargo transport and logistics services between China and the Member States as well as the maritime cargo transport between the ports of the Member States of the Community. It also regulates the cross trades and the movement of equipment ports of China or between ports of a Member State of the Community.<sup>68</sup> The agreement sanctions the maritime cooperation between the European Union and China and it opens the Chinese shipping market to the foreign companies; indeed, with this agreement it is possible "to establish 10 wholly-owned or jointly-invested subsidiaries, branch or representative offices and, as regards subsidiaries and branch offices to engage in economic activities, in accordance with its laws and regulations" in China or in a Member State of the Community.<sup>69</sup>

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<sup>65</sup> Frans-Paul VAN DER PUTTEN, Minke MEIJNDERS, "China, Europe and the Maritime Silk Road", *Clingendael, Netherlands Institute of International Relations*, 2015.

<sup>66</sup> World Shipping Council, *Top 50 World Container Ports*, <http://www.worldshipping.org/about-the-industry/global-trade/top-50-world-container-ports>, 10 January 2019.

<sup>67</sup> GAO Minghui, "Maritime Clusters in China", *Electronic Publications of Pan-European Institute*, March 2014.

<sup>68</sup> Official Journal of the European Union, *Agreement on maritime transport between the European Community and its Member States, of the one part, and the government of the People's Republic of China, of the other part*, 21 February 2008, <http://ec.europa.eu/world/agreements/downloadFile.do?fullText=yes&treatyTransId=12968>, 11 January 2019.

<sup>69</sup> Official Journal of the European Union, *Agreement on maritime transport between the European Community and its Member States, of the one part, and the government of the People's Republic of China, of the other part*, 21 February 2008, <http://ec.europa.eu/world/agreements/downloadFile.do?fullText=yes&treatyTransId=12968>, 11 January 2019.

The maritime routes that China has always followed to transport its goods to Europe are the Atlantic route and the Indian route. Through the Indian Ocean route, China can reach Africa, Western Europe, the Persian Gulf or North America by way of the Cape of Good Hope. While, through the Atlantic Ocean route, it can reach the east coast of the United States, the Gulf, the Suez Canal, Western Europe or the Mediterranean by way of the Cape of Good Hope and the Indian Ocean.<sup>70</sup>

Figure 1. Maritime shipping routes from China to Europe



Source: Sino Shipping <https://sino-shipping.com/shipping-routes/>

The most used route passes through the Suez Canal, which provides the shortest maritime connection between Asia and Europe. In 2015, the Egyptian government decided to expand the canal, adding 72 kilometres of new waterways,<sup>71</sup> allowing greater affluence of ships, facilitating the traffic in two directions and increase the functionality of the transit.<sup>72</sup>

The maritime connections from China to Europe has obtained increased importance thanks to the Maritime Silk Road Initiative launched in October 2013 by President Xi

<sup>70</sup> Sino Shipping, *China Offers Different Shipping Routes*, <https://sino-shipping.com/shipping-routes/>, 11 January 2019.

<sup>71</sup> Mesrop NAJARIAN, “Egypt inaugurates Suez Canal expansion”, CNN, 7 August 2015.

<sup>72</sup> Suez Canal Authority, *New Suez Canal*, <https://www.suezcanal.gov.eg/English/About/SuezCanal/Pages/NewSuezCanal.aspx>, 3 January 2019.

Jinping during a speech in the Indonesian parliament. The Maritime Silk Road initiative aims at building:

[...] the China-Indian Ocean-Africa- Mediterranean Sea Blue Economic Passage, by linking the China-Indochina Peninsula Economic Corridor, running westward from the South China Sea to the Indian Ocean, and connecting the China-Pakistan Economic Corridor (CPEC) and the Bangladesh-China-India-Myanmar Economic Corridor (BCIM-EC). Efforts will also be made to jointly build the blue economic passage of China-Oceania-South Pacific, traveling southward from the South China Sea into the Pacific Ocean. Another blue economic passage is also envisioned leading up to Europe via the Arctic Ocean [...]<sup>73</sup>

With this initiative, the Chinese government is building a great number of maritime infrastructures and it is promoting maritime connectivity and cooperation between all the participating countries. Beyond the Indian and the Pacific routes, another important maritime passage has been identified: the Northern sea route (NSR). In the framework of the Belt and Road Initiative, the Chinese government is trying to create the Polar Silk Road through the development of the three major Arctic shipping routes: the Northwest Passage, the Northeast Passage, and the Transpolar Sea Route.<sup>74</sup> On 26 January 2018, the government issued China's Arctic Policy with which China declares its intention and its future goals in the region. The first time a Chinese commercial vessel sailed from this route was in 2013, when the cargo ship Yong Shen, operated by COSCO Group, arrived in Rotterdam from Dalian using the North-East passage.<sup>75</sup>

The opportunity to use this passage is important since it reduces the transit time of 40% compared to the Suez Canal<sup>76</sup> and makes the maritime shipping even more competitive compared to other means of transport. Therefore, the Maritime Silk Road is a huge project that could, even more, improve the connections with Europe. Since the initiative was launched, the investments, the acquisitions, and the agreements made between China and European countries have increased a lot.

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<sup>73</sup> Zhongguo Yidaiyilu Wang 中国一带一路网, "Yīdài yīlù" jiànshè hǎishàng hézuò shèxiǎng "一带一路"建设海上合作设想 (Vision for Maritime Cooperation under the Belt and Road Initiative), 20 June 2017, <https://eng.yidaiyilu.gov.cn/zchj/qwfb/16639.htm>, 20 October 2018.

<sup>74</sup> Jane NAKANO, "China Launches the Polar Silk Road", *Centre for Strategic and International Studies (CSIS)*, 2 February 2018.

<sup>75</sup> Gisela GRIEGER, "China's Arctic policy How China aligns rights and interests", *European Parliamentary Research Service*, May 2018.

<sup>76</sup> Halvor SCHØYEN, Svein BRÅTHEN, "The Northern Sea Route versus the Suez Canal: cases from bulk shipping", *Journal of Transport Geography*, 19, 4, 2011, pp. 977-983.

Some of the important agreements and acquisitions that involve European countries are shown below.

Acquisition:

- In 2015 the port of Qingdao signed a Memorandum of Understanding (MOU) for the APM Terminals Vado, Italy port project;
- in 2010 the port of Shanghai acquired 25% stake of APM Terminals Zeebrugge NV (APMTZ) in Belgium;
- in 2017 COSCO Shipping Port (Spain) company acquires 51% shares in Noatum Ports, which also operates in Bilbao and Valencia and includes two inland terminals in Zaragoza and Madrid; in 2016 COSCO Shipping Port acquired 51% stake of Greece's Piraeus and another 88million euro will be paid within five years for the remaining 16% stake; in 2016 COSCO Shipping Port acquired 35% stake of Euromax Terminal Rotterdam; in 2004 COSCO Shipping Port acquired 25% stake of Antwerp port in Belgium from P&O Ports (acquired by A.P. Moller-Maersk Group) and obtained the port operation rights.<sup>77</sup>

Alliance:

- Qingdao port: 1984–2017 signed sister port agreements with several ports such as the Antwerp port in Belgium and the Barcelona port in Spain.
- Shenzhen Port: 2007–2015 Signed sister port agreements with 18 ports around the world, such as the Rotterdam port and the Hamburg port.
- Shanghai Port: 1992–2015 Signed sister port agreements with 23 ports, such as the port of Marseille, Le Havre and Dunkirk in France. 2014 Signed MoU with Antwerp port in Belgium.<sup>78</sup>

Italy, also, could play an important role in the Maritime Silk Road. The “five-port alliance” project managed by the Northern Adriatic Port Association (NAPA) involves the ports of Venice, Trieste, Ravenna, Capodistria and Fiume and it is financed both by the Italian government and the Chinese one. The objective is to create a docking system in the city port of Malamocco, near Venice, that allows Chinese cargo ships to dock. It is expected

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<sup>77</sup> HUO, ZHANG, CHEN, *Recent development of Chinese port...*, cit., pp. 72-73.

<sup>78</sup> *ibidem*.

to handle between 1.8 and 3 million TEU per year.<sup>79</sup> Furthermore, three terminals in Italy (Marghera, Ravenna and Trieste), one in Slovenia (Capodistria) and one in Croatia (Fiume) will be building. The rail connections between the Italian ports and the Central and Northern Europe markets will be improved as well. In 2016 the San Gotthard tunnel between Italy and Switzerland was indeed inaugurated.<sup>80</sup>

However, many problems still influence the operative potential of Italian ports and their cooperation seems to be in an initial stage. The NAPA ports follow the national legislation, which is different from country to country. The investments projects are not coordinated as well. The lack of a unified policy and a port governance model makes the cooperation difficult to actualize. In Italy the situation gets worse since also the differences in provincial administrations cause problems and obstacles.<sup>81</sup> These issues, together with the lack of proper infrastructures, make the competitiveness of Italian ports still much lower than the North European or Central European ports.<sup>82</sup>

Not only the acquisitions in Europe contribute to increase the Chinese sea power but also the investments that China has made in ports of Asia, North Africa and the Indian Ocean's region. The alliance with the ports of Gwadar in Pakistan, Sihanouk in Cambodia, Kuantan in Malaysia, Incheon and Pusan in South Korea, Said in Egypt, Shimizu port, Shimotsu port, Kochi port in Japan<sup>83</sup> and the creation in 2017 of Chinese People's Liberation Army Support Base in Djibouti<sup>84</sup> are a perfect example. The Chinese presence all over the world causes concern in many countries that see it as the willingness of China of exercise power and influence. In 2004 for the first time the expression "String of Pearl's Strategy" was used, referring to Chinese investments in infrastructure and ports all over the region of the Indian Ocean. In 2001 China and Pakistan signed an agreement for the development of the Pakistani deep-sea port at Gwadar, in 2008 the Chinese Export-Import Bank funded the construction of the Hambantota port in Sri Lanka, in Bangladesh

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<sup>79</sup> VAN DER PUTTEN; SEAMAN John, HUOTARI Mikko, EKMAN Alice, OTERO-IGLESIAS Miguel, "Europe and China's New Silk Roads", *Netherlands Institute of International Relations' Clingendael*, 2016.

<sup>80</sup> *ibidem*.

<sup>81</sup> STAMATOVIĆ Kristijan; DE LANGEN Peter; GROZNIK Aleš, "Port cooperation in the North Adriatic ports. Research in Transportation Business & Management", 26, 2018, pp.109-121.

<sup>82</sup> COSTA Paolo; MARESCA Maurizio, *Il futuro europeo della portualità italiana*, "Le Rotte Del Leone", Marsilio Editori, 2014.

<sup>83</sup> HUO Weiwei, ZHANG Wei, CHEN Peggy Shu-Ling, *Recent development of Chinese port...*, cit., pp. 72-73.

<sup>84</sup> HEADLEY Tyler, "China's Djibouti Base: A One Year Update", *The Diplomat*, 4 December 2018.

China invested in deep-sea port in Chittagong and in Myanmar invested in the Kyaukphyu port. The active participation of China in the overseas port together with the OBOR initiative and its several projects, such as the China-Pakistan Corridor, made some scholars believe that China wants to control the entire area and “develop overseas naval bases in South Asia to support extended naval deployments”.<sup>85</sup> This theory has not been demonstrated, and the need of China of importing oil could be the real reason behind the acquisition of ports in the Indian Ocean line, since the most imports of energy resources pass through the Indian Ocean, the Malacca Strait, the South China Sea and finally arrive in China.<sup>86</sup>

At this point, it is evident that China is a maritime power and its strength is increasing. Thanks to the efforts made by the Chinese government, China’s influence in the international trade and in the sea shipping industry is likely to continue to grow. However, China is also developing its rail freight transportation system which is becoming more and more competitive. In the next paragraph, I will analyse the factors that make the sea shipping the most used means of transport and the factors that could undermine its strong position.

### *2.1.1 Maritime transportation: advantages and weak points*

Since it covers more than the 80% of the international trade<sup>87</sup>, maritime transport is the most used means of shipping. China is one of the countries that most utilizes the maritime shipping to import and export goods and, as a matter of the fact, among the top 10 container ports, 7 are Chinese with Shanghai as the busiest.<sup>88</sup>

According to the Review of Maritime Transport 2018, the ocean shipping’s global volume is increasing, and it has reached 10.7 billion tons, indicating a 4% annual

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<sup>85</sup> HEADLEY Tyler, “China’s Djibouti Base: A One Year Update”, *The Diplomat*, 4 December 2018.

<sup>86</sup> *ibidem*.

<sup>87</sup> Cargo from China Limited (CFC), *Cargo Types by Sea, Air, and Rail*, <https://cargofromchina.com/sea-air-rail/>, 9 January 2019.

<sup>88</sup> World Shipping Council, *Top 50 World Container Ports*, <http://www.worldshipping.org/about-the-industry/global-trade/top-50-world-container-ports>, 10 January 2019.

growth.<sup>89</sup> It also foresees a growth of 3.8% in the volume in the period of time between 2018 and 2023.<sup>90</sup>

According to Vessels Value, China is the third-largest ship-owning country, after Greece and Japan<sup>91</sup>, and it is the largest shipbuilding country in the world<sup>92</sup>. Indeed, Chinese main ports handle a total volume of 40.2 million TEUs, recording an increase of 8.3% over 2016.<sup>93</sup>

The reasons why the sea shipping gains success are numerous. The main reason is that shipping by sea is the cheapest means. Indeed, although shipping by sea provides a transit time of 20-45 days<sup>94</sup>, the maritime transportation could save \$2,000 per container over the railway transportation<sup>95</sup>. Furthermore, as already mentioned, if the Arctic routes will become operative, the sea shipping transit time will decrease, making the sea shipping competitive also from the point of view of transit time.

Another important element is the capacity of container ships over the capacity of trains. The size of container ships continues to grow and the volume of TEUs has increased by 10% between 2017 and 2018.<sup>96</sup> The world largest container ship is the Hong Kong-based Orient Overseas Container Line (OOCL) that can carry more than 21,000 twenty-foot equivalent containers<sup>97</sup>. Whereas a train in China can carry just 41 containers<sup>98</sup>, the largest vessel has a capacity of 21,400 TEUs, the smallest vessel has a capacity of 4,100 TEUs

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<sup>89</sup> United Nations Conference On Trade And Development (UNCTAD), *Review on Maritime Transport 2018*, 2018, [https://unctad.org/en/PublicationsLibrary/rmt2018\\_en.pdf](https://unctad.org/en/PublicationsLibrary/rmt2018_en.pdf), 10 January 2019.

<sup>90</sup> *ibidem*.

<sup>91</sup> Vessels Value, *Top 10 Global Fleets worth 516 billion USD*, 31 January 2018, <https://www.blog.vesselsvalue.com/single-post/2018/01/31/Top-10-Global-Fleets-worth-516-billion-USD>, 10 January 2019.

<sup>92</sup> Statista, *Largest shipbuilding nations in 2017, based on completions in gross tonnage (in 1,000s)*, <https://www.statista.com/statistics/263895/shipbuilding-nations-worldwide-by-cgt/>, 10 January 2019.

<sup>93</sup> United Nations Conference On Trade And Development (UNCTAD), *Review on Maritime Transport 2018*, 2018, [https://unctad.org/en/PublicationsLibrary/rmt2018\\_en.pdf](https://unctad.org/en/PublicationsLibrary/rmt2018_en.pdf), 10 January 2019.

<sup>94</sup> Cargo from China Limited (CFC), *China Sea Freight Shipping*, <https://cargofromchina.com/sea-air-rail/>, 9 January 2019.

<sup>95</sup> Harry VALENTINE, "Comparing Maritime Versus Railway Transportation Costs", *the Maritime Executive*, 25 December 2017

<sup>96</sup> United Nations Conference On Trade And Development (UNCTAD), *Review on Maritime Transport 2018*, 2018, [https://unctad.org/en/PublicationsLibrary/rmt2018\\_en.pdf](https://unctad.org/en/PublicationsLibrary/rmt2018_en.pdf), 10 January 2019.

<sup>97</sup> DSV Transport and Logistic, *Container transport by rail between China and Europe. Faster than a ship - less costly than a plane*, <http://www.dsv.com/downloads-and-services/white-papers/rail-freight-between-europe-and-china>, 11 January 2019.

<sup>98</sup> David BRIGINSHAW, *Can China – Europe rail freight continue to prosper without Chinese subsidies?* International Railway Journal (IRJ), 16 August 2018, [https://www.railjournal.com/in\\_depth/can-china-europe-rail-freight-continue-to-prosper-without-chinese-subsidies](https://www.railjournal.com/in_depth/can-china-europe-rail-freight-continue-to-prosper-without-chinese-subsidies), 11 January 2019.

and the average capacity of all ships, used on the Far East–Northern Europe route is 15,000 TEUs.<sup>99</sup>

Another factor in favour of this kind of shipping is the reliability of sea transportation. The reliability in international trade is essential and, although a decrease in ocean carriers' reliability is recorded, the schedule reliability in Asia to North Europe route and in Asia to Mediterranean route has increased, with Evergreen reaching 82.6% of reliability and COSCO reaching the 82.5% of reliability.<sup>100</sup>

As we can see from all the data collected, the ocean transportation is the most used means of shipping and it is unlikely that other shipping means will take its place.<sup>101</sup>

However, although the several strong points, also some disadvantageous factors characterized the sea shipping.

The first of these weak points is the transit time, which is the slowest one. This is also due to the practice of the slow steaming, adopted in order to reduce the fuel consumption and carbon emission. A container ship usually travels at 20-24 knots, while with the slow steaming, it travels at 12-19 knots.<sup>102</sup> A shorter transit time ensures less stock in the supply chain and, consequently, fewer interest payments on stocks are required.<sup>103</sup> This factor makes the maritime shipping less competitive than the railway ones.

Another challenge is the congestion in ports. Since trade volumes are growing, the port infrastructures should adjust in order to have the capacity to receive the increasing number of ships. This obstruction leads to delay and reduction in the performance and in the productivity of the transport chain.<sup>104</sup>

An important issue concerning this type of transport is the environmental problem. The container ships have a negative impact on the environment due to their gas emission.

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<sup>99</sup> United Nations Conference On Trade And Development (UNCTAD), *Review on Maritime Transport 2018*, 2018, [https://unctad.org/en/PublicationsLibrary/rmt2018\\_en.pdf](https://unctad.org/en/PublicationsLibrary/rmt2018_en.pdf), 10 January 2019.

<sup>100</sup> World Maritime News, *SeaIntel: Global Schedule Reliability Drops in 2017*, 6 February 2018, <https://worldmaritimeneews.com/archives/243240/seaintel-global-schedule-reliability-drops-in-2017/>, 11 January 2019.

<sup>101</sup> United Nations Conference On Trade And Development (UNCTAD), *Review on Maritime Transport 2018*, 2018, [https://unctad.org/en/PublicationsLibrary/rmt2018\\_en.pdf](https://unctad.org/en/PublicationsLibrary/rmt2018_en.pdf), 10 January 2019.

<sup>102</sup> Mohit SANGURI, "The guide to slow steaming on ships", *Marine Insight*, 12, 2012, pp.1-34.

<sup>103</sup> DSV Transport and Logistic, *Container transport by rail between China and Europe. Faster than a ship - less costly than a plane*, <http://www.dsv.com/downloads-and-services/white-papers/rail-freight-between-europe-and-china>, 11 January 2019.

<sup>104</sup> United Nations Economic Commission for Europe (UNECE), *Euro-Asia Transport Linkages. Paving the way for a more efficient Euro-Asian Transport. Phase II*, 2012, [http://www.unece.org/fileadmin/DAM/trans/main/eatl/docs/EATL\\_Report\\_Phase\\_II.pdf](http://www.unece.org/fileadmin/DAM/trans/main/eatl/docs/EATL_Report_Phase_II.pdf), 12 January 2019.

However, some progress has been already achieved by the International Maritime Organization (IMO). In April 2018 at the seventy-second session of the Marine Environment Protection Committee, IMO has adopted a strategy that identifies measures to decarbonize the shipping sector and to reduce the greenhouse gas emission by at least 50% by 2050, compared with 2008.<sup>105</sup>

Finally, delays caused by climate and natural conditions make the sea shipping less accurate.<sup>106</sup>

## 2.2 *China's rail freight connections with Europe*

Thanks to the Western Development Strategy, the Chinese government started to consider improving the economic performance of the Western regions and, it addressed particular attention to the construction of infrastructures which could contribute to the wealth of the entire nation. The creation of rail freight connections between China and the rest of the world is an essential step that the government took in order to achieve the development goals, both from a political and an economic point of view. The Western Development Strategy is a crucial point from this perspective but, the need to improve the rail connections with other countries already emerged during the sixties and it arrived at its peak in 2013 when the president Xi Jinping launched the Belt and Road Initiative. Nowadays, nearly 48 Chinese cities are connected to 42 European cities<sup>107</sup>, and this is the result of the efforts made by the government since the Chinese leaders started to create an important railway network.

The rail connections between China and Europe have always passed through the Eurasian Land Bridge, which consists of several corridors that connect the European continent with Asia. There are three main corridors: the northern, the central and the southern corridor and all of them have several branches. The central corridor or trans-Caspian corridor links Europe and China, passing through the countries of Central Asia and reaching the Caspian

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<sup>105</sup> United Nations Conference On Trade And Development (UNCTAD), *Review on Maritime Transport 2018*, 2018, [https://unctad.org/en/PublicationsLibrary/rmt2018\\_en.pdf](https://unctad.org/en/PublicationsLibrary/rmt2018_en.pdf), 10 January 2019.

<sup>106</sup> Cargo from China Limited (CFC), *Cargo Types by Sea, Air, and Rail*, <https://cargofromchina.com/sea-air-rail/>, 9 January 2019.

<sup>107</sup> The State Council the People's Republic of China. *New China-Europe freight train route from Qinghai to Russia launched*, 9 October 2018, [http://english.gov.cn/news/international\\_exchanges/2018/10/09/content\\_281476338018862.htm](http://english.gov.cn/news/international_exchanges/2018/10/09/content_281476338018862.htm) 27 November 2018.

seaports. Then, it reaches the ports of Azerbaijan, and it arrived in Georgia by land. From here, it arrives in the European Black Sea ports by sea, and finally in the Central and Eastern Europe by land.<sup>108</sup> However, issues regarding border clearances, the absence of unified regulations and technical standard<sup>109</sup>, make this route little effective.<sup>110</sup> The southern corridor links China to Europe through Southeast Asia's countries such as India, Pakistan and Bangladesh<sup>111</sup> This corridor, due to several problems such as the difference in gauges, missing links and other technical and bureaucracy complications, is the less utilized.<sup>112</sup> The northern corridor, which is the better-established corridor and the most operative one, connects China to Europe in two ways: through the Trans-Siberian Railway, which is connected to China's north-east regions and to Mongolia, and through the New Eurasian Landbridge, identified by Chinese government in 1992 and that connects China to Kazakhstan, arriving then in Rotterdam, Holland and other European cities.<sup>113</sup> Although the creation of the New Eurasian Land Bridge was an important step in the development of transport linkages between China and Europe, it was not so much used for many years. Its operative potential was low because of several problems such as poor infrastructures and complicated bureaucracy that made the transport process slow down. The result was that the line carried very few containers and the eastbound freight was almost non-existent.<sup>114</sup> This Land Bridge will not have regular use until 2011 when the transport links between China and Europe began to come to light and the OBOR Initiative will confirm the importance of this corridor.

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<sup>108</sup> Jakub JAKÓBOWSKI, Konrad POPLAWSKI, Marcin KACZMARSKI, "The Silk Railroad. The EU-China rail connections: background, actors, interests", *Centre for Eastern Studies (OSW Studies)*, 72, 2018, pp. 48-53.

<sup>109</sup> *ibidem*.

<sup>110</sup> Economic and Social Commission for Asia and the Pacific (ESCAP). *Comprehensive planning of Eurasian transport corridors to strengthen the intra- and inter-regional transport connectivity*, 27 December 2017.

<https://www.unescap.org/sites/default/files/Study%20Report%20Eurasian%20Corridors-Final.pdf> 27 November 2018.

<sup>111</sup> Economic and Social Commission for Asia and the Pacific (ESCAP). *Comprehensive planning of Eurasian transport corridors to strengthen the intra- and inter-regional transport connectivity*, 27 December 2017.

<https://www.unescap.org/sites/default/files/Study%20Report%20Eurasian%20Corridors-Final.pdf> 27 November 2018.

<sup>112</sup> *ibidem*.

<sup>113</sup> SHU Xu. "The new Asia-Europe land bridge—current situation and future prospects", *Japan Railway and Transport Review*, 14, 1997, pp. 30-33.

<sup>114</sup> SHU, *The new Asia-Europe...*, cit., pp. 31-32.

Apart from the creation of the New Eurasian Land Bridge, which is the first concrete step taken by Beijing government in order to improve China's rail connections, the Chinese leaders started to take part into international initiatives which helped China developing infrastructures and transport links with other countries.

Two of the important initiatives joined by China were the TRANsport Corridor Europe-Caucasus-Asia (TRACECA), established in 1993 with the aim at creating a rail connection from Europe, through the Black Sea, Caucasus, the Caspian Sea and arriving at the Central Asian countries<sup>115</sup>, and the Central Asia Regional Economic Cooperation (CAREC) Program, launched in 1997<sup>116</sup>. However, the TRACECA line was little used, and the rail connections remained secondary for many years.<sup>117</sup>

These two initiatives are preceded by the earliest relevant action in the framework of rail freight connections. In fact, already in the sixties, the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) made the first attempt to establish a uniform railway network, launching the Trans-Asian Railway project with the aim at creating a 14,000-km rail link between Singapore and Istanbul. However, due to the political situation of those years, the project remained arrested until April 1992 when, during the 48th ESCAP Commission Session in Beijing, it was expanded and integrated to a new project, the Asian Land Transport Infrastructure Development (ALTID).<sup>118</sup> The aim of this project was to help Asian countries to develop national and international transport networks and participate in the global trade. The ALTID project consists of three components: the Trans-Asian railway, the Asian Highway Network and the facilitation of land transport project.

Both the Trans-Asian railway and the Asian Highway were meant to create infrastructures in Asia as well as transport connections between Asian and European countries.

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<sup>115</sup> Transport Corridor Europe-Caucasus-Asia (TRACECA), *Strategy of the Intergovernmental Commission TRACECA for the development of the international transport corridor "Europe-Caucasus-Asia" (TRACECA) up to 2015*, 2006, [http://www.traceca-org.org/fileadmin/fm-dam/pdfs/IGC\\_Strategy.pdf](http://www.traceca-org.org/fileadmin/fm-dam/pdfs/IGC_Strategy.pdf), 28 November 2018.

<sup>116</sup> Central Asia Regional Economic Cooperation (CAREC), *CAREC Program*, [https://www.carecprogram.org/?page\\_id=31](https://www.carecprogram.org/?page_id=31), 28 November 2018.

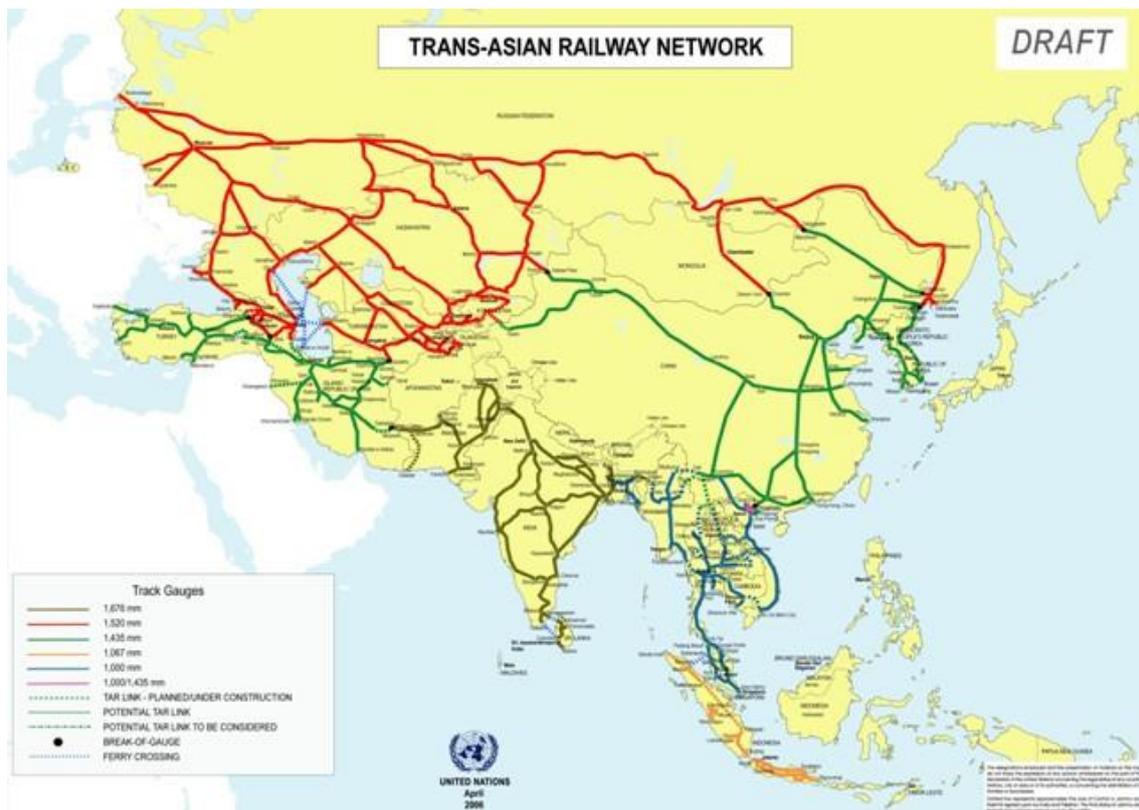
<sup>117</sup> Richard POMFRET, "The Eurasian Land Bridge: The Role of Service Providers in Linking the Regional Value Chains in East Asia and the European Union", *Economic Research Institute for ASEAN and East Asia*, 2018, pp- 2-3.

<sup>118</sup> United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), *Trans-Asian Railway*, <https://www.unescap.org/our-work/transport/trans-asian-railway/about>, 28 November 2018.

Concerning the Trans-Asian Railway, the ESCAP identified several corridors in order to create this international rail network and it approved some international conventions to improve and facilitate the transport at the border crossing.<sup>119</sup>

From 1994 to 2001 the ESCAP, with the collaboration of the Member States<sup>120</sup>, had identified four main corridors: the Northern corridor, detected in 1996 and connecting China, Kazakhstan, Mongolia, the Korean Peninsula, and the Russian Federation; the Indo-China and ASEAN subregion corridor identified in 1996; the Southern corridor detected in 1999 and involving Bangladesh, China, India, Islamic Republic of Iran, Myanmar, Pakistan, Sri Lanka, Thailand, and Turkey; the North-South corridor, detected in 2001 and connecting Northern Europe to the Persian Gulf.<sup>121</sup>

Figure 2. Trans-Asian Railway Network



Source: UNESCAP

<sup>119</sup> Pierre CHARTIER, “The Trans-Asian railway”, *Transport and Communications Bulletin for Asia and the Far East*, 77, 2007, pp. 1-24.

<sup>120</sup> Afghanistan, Armenia, Azerbaijan, Bangladesh, Belarus, Bhutan, Brunei, Cambodia, China, India, Indonesia, Iran, Kazakhstan, Laos, Mongolia, Nepal, Pakistan, South Korea, Russia, Sri Lanka, Tajikistan, Thailand, Turkey, Turkmenistan, Uzbekistan, Vietnam.

<sup>121</sup> CHARTIER, *The Trans-Asian...*, cit., pp. 6-11.

During the 62nd Commission session held in Jakarta, Indonesia, in April 2006 it was adopted the Trans-Asian Railway Network Agreement, and it was signed by the member countries on 10 November 2006 during the Ministerial Conference on Transport held in Busan, Republic of Korea. The agreement came into force on 11 June 2009, and it established a Working Group that should meet every 2 years, should implement projects and programs, identify possible investments and dialogue with financial institutions.<sup>122</sup> From 2001 to 2004, several demonstration runs of container blocks were implemented along the Northern Corridor: in November 2001, between the Chinese port of Tianjin and Ulaanbaatar in Mongolia, in April 2004, between the Chinese port of Lianyungang and Almaty in Kazakhstan, in June 2004, between Ulaanbaatar (Mongolia) and Brest (Belarus), and in July 2004, between Vostochny in the Far East of Russia and Malaszewicze in Poland.<sup>123</sup>

Despite these demonstrations revealed the importance and efficiency of the international freight trade, a lot of problems characterized the linkages among the different countries. There were two main problems: different track gauges and missing links.

The TAR network consisted of five different track gauges and this caused discontinuity and irregularity. The different track gauges that characterize the TAR were as follow:

- China (1,435 mm) and Viet Nam (1,000 mm)
- China (1,435 mm) and the Russian Federation (1,520 mm)
- China (1,435 mm) and Mongolia (1,520 mm)
- China (1,435 mm) and Kazakhstan (1,520 mm)
- Democratic People's Republic of Korea (1,435 mm) and the Russian Federation (1,520 mm)
- Islamic Republic of Iran (1,435 mm) and Turkmenistan (1,520 mm)
- Islamic Republic of Iran (1,435 mm) and Azerbaijan (1,520 mm)
- Turkey (1,435 mm) and Armenia (1,520 mm)<sup>124</sup>

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<sup>122</sup> United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), “Fàn yǎ tiělù wǎng zhèngfǔ jiān xiédìng” 泛亚铁路网政府间协定 (Intergovernmental Agreement on the Trans-Asian Railway Network), 29 November 2018, <https://www.unescap.org/sites/default/files/TAR-Agreement-Consolidated-C.pdf>.

<sup>123</sup> Asian Institute of Transport Development, *TAR: Its Genesis, Contours, Infirmities and Prospects*, 27 September 2016, <http://www.aitd.net.in/ppt/20/4.1%20TAR-%20Its%20Genesis%20Contours%20Infirmities%20and%20Prospects.pdf>, 29 November 2018.

<sup>124</sup> CHARTIER, *The Trans-Asian...*, cit., pp. 7-8.

Regarding the missing links, despite in recent years, many countries signed agreements to solve this problem, a lot of issues, especially regarding the Southern Corridor and the Indochina and ASEAN subregions, remain.<sup>125</sup>

The difficulties and challenges in the transport linkages make the development of an international railway complicated and uncertain.

Between 2002 and 2007 the project on “Capacity-building in developing interregional land and land-cum-sea transport linkages” was implemented by the United Nations Economic Commission for Europe (UNECE), the Economic and Social Commission for Asia and the Pacific (UNESCAP), the Economic Commission for Latin America and the Caribbean (ECLAC), the Economic Commission for Africa (ECA) and the Economic and Social Commission for Western Asia (ESCWA).

Concerning the transport linkages between Asia and Europe the project jointly conducted by UNECE and UNESCAP and 18 participating countries<sup>126</sup>, it's the Euro-Asia Transport Links (EATL).

Already in 2000, during the second International Euro-Asian Conference on Transport held in St. Petersburg, UNECE and UNESCAP proposed the “Common UNECE-UNESCAP Strategic Vision for Euro-Asian transport links” (submitted to reviews in the following years). Through this Strategic Vision, four main Euro-Asia corridors were identified:

- Trans-Siberian: Europe – Russian Federation – Japan (with three branches: Kazakhstan-China; Korean Peninsula; Mongolia-China)
- TRACECA: Eastern Europe – across the Black Sea – Caucasus – across Caspian Sea – Central Asia
- Southern route: South-Eastern Europe – Turkey – the Islamic Republic of Iran (with two branches: Central Asia – China; South Asia – South-East Asia Southern China)
- North-South: North Europe – Russian Federation (with three branches: Caucasus – Persian Gulf; Central Asia – Persian Gulf; Across Caspian Sea – Islamic Republic of Iran – Persian Gulf)

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<sup>125</sup> CHARTIER, *The Trans-Asian...*, cit., pp. 7-8.

<sup>126</sup> Afghanistan, Armenia, Azerbaijan, Belarus, Bulgaria, China, Georgia, Iran, Kazakhstan, Kyrgyzstan, Republic of Moldova, Romania, Russian Federation, Tajikistan, Turkey, Turkmenistan, Ukraine and Uzbekistan

In 2002, this action was expanded with the Euro-Asia Transport Link (EATL) project. Thanks to the effort of the ESCAP and the UNECE, several rail links were identified. The rail links connecting Europe to China are the following:

- EATL rail route 1: from eastern Europe to the Russian port of Nakhodka and the Russian-Chinese border.
- EATL rail route 2: from eastern Europe EU passing through the Russian Federation, Kazakhstan, and Eastern China to the ports of Lianyungang and Shanghai.
- EATL rail route 3: from South-Eastern Europe to the Lianyungang and Shanghai ports, passing through Romania, Georgia, Caspian Sea, and Kazakhstan.
- EATL rail route 4: from South-Eastern Europe and the Lianyungang and Shanghai ports, passing through Bulgaria, Turkey, Iran, Uzbekistan, and Kazakhstan.
- The EATL Rail Route 7: from the EU and the Lianyungang and Shanghai ports, passing through the territory of Ukraine, the Russian Federation, Kazakhstan, Uzbekistan, and China.

Most sections of these routes are also part of the TAR.

The EATL project consists of three phases: the first one covers the period from 2002 to 2007, the second one is from 2008 to 2013 and the third one covers the arc of time from 2013 to 2017.

In the first phase the creation of a cooperation platform to develop a well-established Euro-Asia link it's established. In the second phase, nine rail routes and nine road routes, as well as issues and challenges, are identified. With the third phase, the project is put in action and should become operative.

Although the EATL project still presents some problems such as poor infrastructures and lack of coherent policies and legislation<sup>127</sup>, it shows the many attempts taken to create a unified international rail network.

Joining international initiatives such as EATL or TRACECA, China was able to improve its transport infrastructure and connects with Europe. However, regular direct freight services between China and Europe were almost non-existent before 2011 when we can

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<sup>127</sup> United Nations Economic Commission for Europe (UNECE), *Euro-Asian Transport Linkages Paving the way for a more efficient Euro-Asian transport*, 2012, [https://www.unece.org/fileadmin/DAM/trans/main/eatl/docs/EATL\\_Report\\_Phase\\_II.pdf](https://www.unece.org/fileadmin/DAM/trans/main/eatl/docs/EATL_Report_Phase_II.pdf), 30 November 2018.

start to talk about operational connections between the two countries<sup>128</sup>. The very turning point in the Sino European rail connections arrived in 2011 when a train from Chongqing reached Duisburg creating the first direct rail connection between China and Europe. The direct freight services between the two countries began when, due to the increase on labour cost in the regions on the coast, the private companies decided to move in the interior of China, mostly in the municipality of Chongqing and in the region of Sichuan. However, the interior regions were too far from the ports and the creation of a direct rail link with Europe was considered a possible solution for the import-export activity. In 2008 it was created a joint venture between the German railway (DB) and the Russian Railway (RZD) called Tran Eurasia Logistic with the aim at creating rail freight connections between Germany and China via Russia. In the meantime, a Polish company, the Hatrans Logistics, started a collaboration with the Chengdu International Railway to create a rail link between Lodz and Chengdu. Therefore, from 2011 to 2013 the direct rail connections between Chengdu-Łódź, Chongqing-Duisburg, and Zhengzhou-Hamburg were opened.<sup>129</sup>

2013 marks a decisive moment in the development of rail connections between China and Europe. On 7 September 2013 President Xi Jinping hold a speech in Astana, Kazakhstan, titled “Promote Friendship Between Our People and Work Together to Build a Bright Future”. During the speech, the Chinese president propose the initiative of jointly building an "economic belt along the Silk Road"<sup>130</sup>. The Initiative consisted of two elements: the Silk Road Economic Belt and the 21st Century Maritime Silk Road. From 2013 to 2015, the Chinese Government further elaborated this strategy and on 28 March 2015 during the Boao Forum for Asia, it was launched the action plan called “Vision and Actions on Jointly Building Silk Road Economic Belt and 21st Century Maritime Silk Road”.<sup>131</sup>

The Silk Road Economic Belt and the 21st Century Maritime Silk Road are structured as follows:

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<sup>128</sup> POMFRET, *The Eurasian Land Bridge...*, cit..., pp. 4-5-6.

<sup>129</sup> JAKÓBOWSKI, POPLAWSKI, KACZMARSKI, *The Silk Railroad...*, cit., pp. 20-21.

<sup>130</sup> Ministry of foreign affairs of the People’s Republic of China, *Promote Friendship Between Our People and Work Together to Build a Bright Future*, 8 September 2013, [https://www.fmprc.gov.cn/mfa\\_eng/wjdt\\_665385/zyjh\\_665391/t1078088.shtml](https://www.fmprc.gov.cn/mfa_eng/wjdt_665385/zyjh_665391/t1078088.shtml), 30 November 2018.

<sup>131</sup> CHIN Helen, LAU Fong, HE Winnie, CHEUNG Timothy, “The Silk Road Economic Belt and the 21st Century Maritime Silk Road”, *Fung Business Intelligence Centre, Appendix I*, 2015, pp. 1-15.

[...] The Silk Road Economic Belt has three routes: one from one from Northwest China and Northeast China to Europe and the Baltic Sea via Central Asia and Russia; one from Northwest China to the Persian Gulf and the Mediterranean Sea, passing through Central Asia and West Asia; and one from Southwest China through the Indochina Peninsula to the Indian Ocean. The 21st-Century Maritime Silk Road has two major routes: one starts from coastal ports of China, crosses the South China Sea, passes through the Malacca Strait, and reaches the Indian Ocean, extending to Europe; the other starts from coastal ports of China, crosses the South China Sea and extends to the South Pacific [...]<sup>132</sup>

Six corridors connecting the several countries were identified as well: the New Eurasian Land Bridge Economic Corridor, the China-Mongolia-Russia Economic Corridor, the China-Central Asia-West Asia Economic Corridor, the China-Indochina Peninsula Economic Corridor, the China-Pakistan Economic Corridor, and the Bangladesh-China-India-Myanmar Economic Corridor.<sup>133</sup>

Concerning the rail connection with Europe, the Chinese government focuses on the New Eurasian Land Bridge Economic Corridor which is the one already identified in 1992 that, passing through Kazakhstan, connects the two continents. Since the trans-Siberian corridors are the most well-established corridors and they offer the most competitive route to Europe, the Chinese government is relying on them. Furthermore, using routes that cross Russia has a political impact. Russia with its Eurasian Economic Union project could take a position against the One Belt One Road Initiative instead, using those routes, a way for cooperation could be opened.<sup>134</sup>

Since 2011, many direct rail trains have been put into operation and, with the launch of the Belt and Road Initiative, the volume of these freight train has increased. The Chongqing-Xingjian-Europe railway is the pioneer in the China-Europe Railway Express Line (CR Express) which is a specialized transport company subordinated to the China Railway Corporation and which operates rail freight transport between China and Europe and countries along the Belt and Road. On 8 October 2016, the Office of the Leading

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<sup>132</sup> Office of the Leading Group for the Belt and Road Initiative. *Building the Belt and Road: Concept, practice and China's contribution*, May 2017, <https://eng.yidaiyilu.gov.cn/wcm.files/upload/CMSydylyw/201705/201705110537027.pdf>, 30 November 2018.

<sup>133</sup> Office of the Leading Group for the Belt and Road Initiative. *Building the Belt and Road: Concept, practice and China's contribution*, May 2017, <https://eng.yidaiyilu.gov.cn/wcm.files/upload/CMSydylyw/201705/201705110537027.pdf>, 30 November 2018.

<sup>134</sup> JAKÓBOWSKI, POPLAWSKI, KACZMARSKI, *The Silk Railroad...*, cit., pp. 39-47.

Group for Promoting the Construction of the “Belt and Road” issued the “China-Europe Train Construction and Development Plan (2016-2020)”. The aim of this plan is to deepen the economic and trade cooperation with Europe and with the countries along the Belt and Road. These international trains will represent an important starting point for the construction of the Belt and Road Initiative. The Development Plan explains the spatial layout of China-Europe railway transport passages, hub nodes, and transport routes and it describes the three international transport corridors used by the China-Europe Railway:

- The west corridor: the first passage is from Alashankou Pass (Horgos) in Xinjiang, through Kazakhstan and Siberian railway in Russia, through Belarus, Poland, Germany and other countries in Europe. The second starts from the port of Horgos (Alashan Pass) and reaches the European countries through Kazakhstan, Turkmenistan, Iran, Turkey, and other countries or through Kazakhstan across the Caspian Sea and enter the countries of Azerbaijani, Georgia, Bulgaria, and other European countries. Thirdly, it is coordinated by China-Kyrgyzstan-Uzbekistan Railway and it is connected from the Torugart Pass (Irkeshtam) to Kyrgyzstan, Uzbekistan, Turkmenistan, Iran, Turkey, and other European countries.
- The middle corridor: it departs from the Erlianhaote Port in Inner Mongolia and connects to the Siberian Railway in Russia via Mongolia. It reaches European countries.
- The East Passage: from the port of Manzhouli (Heilongjiang Suifenhe) in Inner Mongolia, it is connected to the Russian Siberian Railway and reaches European countries.

Figure 3. CR Express transport corridors

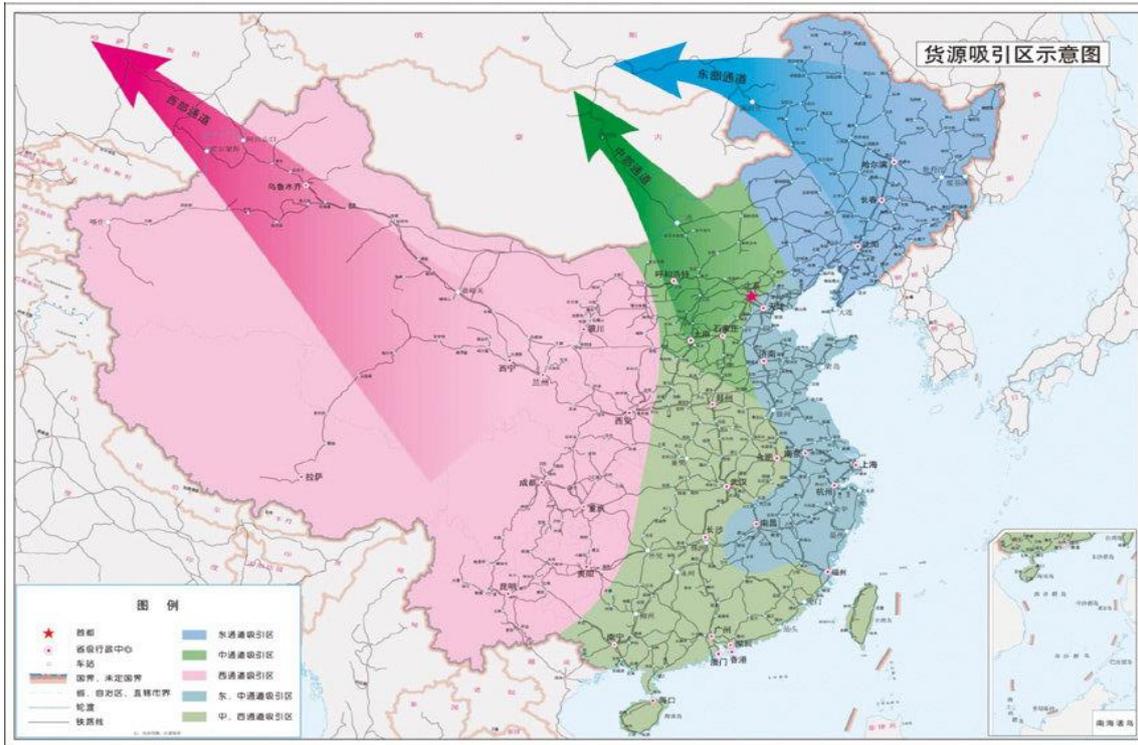


图2 三大通道货源吸引区示意图

Source: KENDERDINE Tristan, “Kazakh Land, China Capital: Exporting China’s Project System to External Geographies”. *Central Asian Affairs*, 2018.

The main tasks reported in the Development Plan are:

- Promote the construction of domestic and international channel networks.
- Strengthen the construction of logistics hub facilities; a large-scale integrated logistics base with multimodal transport functions will be built.
- Strengthen the integration of resources: optimize transport organization between China and Europe, strengthen supply support, strengthen brand building and accelerate the construction of overseas business centres.
- Innovate the transport service model: provide the whole logistics service, expanding international transportation, promote a list of electronic goods, promoting value-added logistics services and promote the establishment of a unified rule system.
- Establish a perfect price mechanism.

- Building an information service platform: promote the development of a public information platform of logistic and strengthen intelligent monitoring and supervision.
- Promote the facilitation of customs clearance: strengthen international customs cooperation between countries along the route, promote the integration of inspection and quarantine and further expand port opening.<sup>135</sup>

On 8 June 2016 the unified China-Europe Express Railway brand was launched.

Thanks to the China Railway Express, more and more connections between China and Europe are established. Since the first train connecting Chongqing to Duisburg was launched, many new routes have been opened and in 2018 the China Railway Express trains reach the number of 10.000. The growth rate of these trains has been exponential: the trains operated in the arc of time from 2011 to 2016 were 17, 42, 80, 308, 815 and 1702.<sup>136</sup>

Thanks to the creation of CR Express and the One Belt One Road initiative, which allows China to establish agreements and cooperation with other countries, many other direct rail connections with Europe apart from Yuxinou railway have been established. Some of them are listed below:

- Wuhan - Melnik/ Minsk / Kunzevo / Hamburg/ Pardubice / Duisburg/ Moscow (2015)/ Lyon (2016)/Lodz (2014)
- Chongqing- Cherkessk
- Suzhou-Warsaw (2012)/ Lodtz (2013)/ Nuremberg/ Tilburg /Moscow
- Zhengzhou-Hamburg/Munich (2013)
- Hefei-Hamburg (2015)
- Changsha-Duisburg (2014)
- Yiwu-Madrid (2014)/ Minsk/ Istanbul/ Chelyabinsk/ Riga/ Prague
- Xi'an—Hamburg/Kouvola/ Budapest
- Yingkou—Hamburg

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<sup>135</sup> National Development and Reform Commission, “Zhōng'ōu bān liè jiànshè fāzhǎn guīhuà (2016—2020 nián)” 中欧班列建设发展规划（2016—2020年）(Construction and Development Plan of China Railway express), 8 October 2016,

<http://www.ndrc.gov.cn/zcfb/zcfbghwb/201610/P020161017547345656182.pdf>, 1 December 2018.

<sup>136</sup> China Railway, *Over 10,000 CHINA RAILWAY Express Trains Operated*, 25 September 2018, [http://www.china-railway.com.cn/en/newscenter/Corporation/201809/t20180925\\_72673.html](http://www.china-railway.com.cn/en/newscenter/Corporation/201809/t20180925_72673.html), 1 December 2018.

- Shenyang—Hamburg
- Harbin--Moscow/Warsaw/Hamburg (2015)
- Yiwu-London (2017)
- Kunming-Rotterdam
- Changchun—Schwarzheide
- Tianjin-Moscow
- Lianyungang—Istanbul
- Wulanchabu-Moscow
- Guangzhou – Moscow
- Xiamen-Moscow<sup>137</sup>

As we can see, the Chinese government is making many efforts in order to establish transport links with other countries and the investments in infrastructures, essential for the development of those connections, are growing at an ever-increasing rate.

In 2015, the National Development and Reform Commission of the People's Republic of China and the European Commission signed the ‘‘Memorandum of understanding on establishing a Connectivity Platform between the EU and China’’. The aim of this agreement was to strengthen the cooperation between the two countries as well as to promote the transport connections and facilitation. It established deeper coordination between the Belt and Road Initiative and the EU's Trans-European Transport Network's<sup>138</sup> policy and it specified the importance of ‘‘jointly conduct an EU-China Railway Corridor Study to define the most appropriate railway corridors’’. Furthermore, it promoted multimodal transport connections, the improvement of infrastructures and the identification of key multimodal hubs along the EU-China corridors as well as the development of green transportation.<sup>139</sup>

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<sup>137</sup> Silk Road News 新华 丝路, ‘‘Zhōng'ōu bān liè xiànlù’’ 中欧班列线路 (Train Line CR Express), <http://silkroad.news.cn/tags/silubanlie.shtml>, 2 December 2018.

<sup>138</sup> The Ten-t project was launched in 1990 by the European Commission and it establishes a unified system of road, air, rail and water transport connections between the 28 Member States of the European Union.

see: European Commission, *Trans-European transport network*, <http://ec.europa.eu/transport/infrastructure/tentec/tentec-portal/site/en/abouttent.htm>, 2 December 2018.

<sup>139</sup> European Commission, *EU-China Connectivity Platform Short-Term Action Plan*, 13 July 2018, <https://ec.europa.eu/transport/sites/transport/files/2018-07-13-eu-china-connectivity-platform-action-plan.pdf>, December 2018.

As we can see, the trade between China and Europe could be even more improved thanks to the rail freight connections. However, although the great development of this kind of transport, the room of improvement is still remarkable. In the next paragraph, I will try to identify the advantages and disadvantages of rail transport.

### *2.2.1 Rail freight transportation in China: advantages and disadvantages*

Since the Chinese president Xi Jinping launched the One Belt One Road Initiative in 2013, the rail freight transport in China has recorded a remarkable development. The value of rail's cargo is growing as well: in the first half of 2017, it increased by 144% compared to 2016.<sup>140</sup> The employment of freight transportation has experienced a notable increase due to several factors. The most relevant elements are the railway speed and cost. A rail freight train is a compromise between the cheap and slow maritime transport and the fast and expensive air transport.<sup>141</sup> Its average time to arrive in Europe is just of 12-16 days<sup>142</sup> and this makes the rail freight shipping suitable for high-value goods and capital-intensive goods, such as laptops, cell phones, chemicals, and auto parts and for all that goods that need to be delivered quickly. With the maritime transport, the companies must freeze capital for weeks and this generates high costs.<sup>143</sup>

Another element that makes rail freight transportation competitive is the reliability. Indeed, currently, the reliability of rail freight exceeds the maritime one.<sup>144</sup> Furthermore, the congestion risk, the bad weather risk and the risk for the goods to be damaged, are low, and the safety percentage is higher than in the maritime routes, subject to piracy.<sup>145</sup>

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<sup>140</sup> Jonathan E. HILLMAN, "The Rise of China-Europe Railways", *Centre for Strategic & International Studies (CSIS)*, 6 March 2018.

<sup>141</sup> JAKÓBOWSKI, POPLAWSKI, KACZMARSKI, *The Silk Railroad...*, cit., pp. 6-18.

<sup>142</sup> ZHANG Zhao, *China-Europe Rail Transport*, "International Federation of Freight Forwarders Associations", 2015,

[https://fiata.com/fileadmin/user\\_upload/documents/recent\\_views/Working\\_Group\\_UIC\\_FIATA/2\\_UIC-FIATA\\_Vienna\\_23-24\\_April\\_2015\\_Presentation\\_Zhang\\_Zhao.pdf](https://fiata.com/fileadmin/user_upload/documents/recent_views/Working_Group_UIC_FIATA/2_UIC-FIATA_Vienna_23-24_April_2015_Presentation_Zhang_Zhao.pdf), 3 December 2018.

<sup>143</sup> JAKÓBOWSKI, POPLAWSKI, KACZMARSKI, *The Silk Railroad...*, cit., pp. 6-18.

<sup>144</sup> International Union of Railways (UIC), *Study Eurasian rail corridors, What opportunities for freight stakeholders?*, September 2017, file:///C:/Users/irene/Desktop/tesi/train/freight%20silk%20road.pdf, 3 December 2018.

<sup>145</sup> ZHANG Zhao, *China-Europe Rail Transport*, "International Federation of Freight Forwarders Associations", 2015,

[https://fiata.com/fileadmin/user\\_upload/documents/recent\\_views/Working\\_Group\\_UIC\\_FIATA/2\\_UIC-FIATA\\_Vienna\\_23-24\\_April\\_2015\\_Presentation\\_Zhang\\_Zhao.pdf](https://fiata.com/fileadmin/user_upload/documents/recent_views/Working_Group_UIC_FIATA/2_UIC-FIATA_Vienna_23-24_April_2015_Presentation_Zhang_Zhao.pdf), 3 December 2018.

Moreover, technical improvement, simplification of customs processes as well as infrastructures construction have made the rail freight connections a concrete reality.<sup>146</sup>

Since transport goods inside China is expensive, rail freight transport is an advantageous solution also for the inland regions, far from the sea.<sup>147</sup>

Finally, thanks to its low level of CO<sup>2</sup> emissions, the environmental impact of a train is much lower than the other means of transport, especially compared to the air one<sup>148</sup>.

Although the considerable achievements in the railway transport, the maritime shipping remain the preferred one, accounting for 94% of trade by weight and 64% by value in 2016 against the 0.9% by weight and the 2,1% by value of the railway shipping.<sup>149</sup>

The cost of shipping by train is high, and this factor makes it a not competitive means of transport. As already mentioned, the rail freight is suitable for transporting high-value goods and compared to air transport, rail freight is cheaper. However, the amount of goods by weight a cargo train can carry is very low and the value of the merchandise is 13 times less valuable than the merchandise transported by air. Therefore, freight trains are less competitive compared to air shipping for high-value goods and, since their price is about twice the sea shipping's one, they are less competitive than the maritime transport for low-value goods (raw materials, unprocessed metals, and industrial products).<sup>150</sup>

Another issue regarding rail freight transport between China and Europe is the trade imbalance. Indeed, as reported by Eurostat, the European Union recorded a trade deficit with China in the arc of time between 2008 and 2017<sup>151</sup>. This situation leads to a

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<sup>146</sup> Jonathan E. HILLMAN, "The Rise of China-Europe Railways", *Center for Strategic & International Studies (CSIS)*, 6 March 2018

<sup>147</sup> ZHANG Zhao, *China-Europe Rail Transport*, International Federation of Freight Forwarders Associations, 2015, [https://fiata.com/fileadmin/user\\_upload/documents/recent\\_views/Working\\_Group\\_UIC\\_FIATA/2\\_UIC-FIATA\\_Vienna\\_23-24\\_April\\_2015\\_Presentation\\_Zhang\\_Zhao.pdf](https://fiata.com/fileadmin/user_upload/documents/recent_views/Working_Group_UIC_FIATA/2_UIC-FIATA_Vienna_23-24_April_2015_Presentation_Zhang_Zhao.pdf), 3 December 2018.

<sup>148</sup> *ibidem*

<sup>149</sup> Kosoy VLADIMIR, *HSR "eurasia" a future of eu-eaeu-china cooperation in trade and railway transport*, "UNECE", [https://www.unece.org/fileadmin/DAM/trans/doc/2017/wp5/WP5\\_30th\\_session\\_Mr\\_Kosoy.pdf](https://www.unece.org/fileadmin/DAM/trans/doc/2017/wp5/WP5_30th_session_Mr_Kosoy.pdf), 3 December 2018.

<sup>150</sup> Jonathan E. HILLMAN, "The Rise of China-Europe Railways", *Center for Strategic & International Studies (CSIS)*, 6 March 2018

<sup>151</sup> Eurostat, *China-EU - international trade in goods statistics*, 21 August 2018, [https://ec.europa.eu/eurostat/statistics-explained/index.php?title=China-EU\\_-\\_international\\_trade\\_in\\_goods\\_statistics#EU\\_and\\_China\\_in\\_world\\_trade\\_in\\_goods](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=China-EU_-_international_trade_in_goods_statistics#EU_and_China_in_world_trade_in_goods), 6 December 2018.

disproportion between the westbound trips, which record the greatest number of shipments, and the eastbound trips where the containers transported are often empty.<sup>152</sup> Although the trade imbalance generates a high cost for the Chinese provinces, the numerous subsidies conceded by the central government have allowed the development of the rail freight routes. However, it is likely that those subsidies will end around 2020-2022.<sup>153</sup>

The difference between the gauges is an additional critical factor. Whereas Europe and China have the 1,435 gauges, Russia, Kazakhstan, and other former Soviet states have the 1,524-mm gauge. Since the containers need to be transferred to another train, the rail freight trip becomes irregular and discontinuous.<sup>154</sup>

Moreover, to ship goods by train is a challenge also from a political point of view. The trains pass through several countries and in order to do so it is necessary that all the states involved in that route cooperate with each other. All the procedures, the clearances and the technical improvement needed, originate from the collaboration among the parties involved.<sup>155</sup> Also the diplomatic incidents, such as the sanctions of the EU and United States towards Russia for the Ukrainian crisis, could undermine this kind of transportation. Indeed, in 2014 Russia in response to the sanctions imposed, started sanctions against the European Union and the biggest problem is that the European products are not allowed to go across Russia to be shipped in a third country. Many of these banned products are the ones that are shipped with the international trains that connect China and Europe.<sup>156</sup>

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<sup>152</sup> Jonathan E. HILLMAN, "The Rise of China-Europe Railways", *Center for Strategic & International Studies (CSIS)*, 6 March 2018.

<sup>153</sup> *Ibidem*.

<sup>154</sup> United Nations Economic Commission for Europe (UNECE), *Euro-Asia Transport Linkages. Paving the way for a more efficient Euro-Asia Transport*, 2012  
[http://www.unece.org/fileadmin/DAM/trans/main/eatl/docs/EATL\\_Report\\_Phase\\_II.pdf](http://www.unece.org/fileadmin/DAM/trans/main/eatl/docs/EATL_Report_Phase_II.pdf), 5 December 2018.

<sup>155</sup> JAKÓBOWSKI, POPLAWSKI, KACZMARSKI, *The Silk Railroad...*, cit., pp. 32-34.

<sup>156</sup> Wade SHEPARD, "Multiple Routes Between China and Europe Is Why the New Silk Road Is A Real Game Changer", *The Forbes*, 17 April 2017.

## CHAPTER 3. The YuXinOu Railway: features and challenges

### 3.2 The background of Chongqing-Xinjiang-Europe International Railway

With the designation of Chongqing as a municipality, the economic development and the modernization of this city began their rapid process. Chongqing has always played a key role in China's history, first as China's capital during the wartime and later as one of the 13 cities in inland China involved in the Third Front Program.<sup>157</sup> Due to its history, many military industries had been placed in Chongqing, contributing to the industrial development of the city. When in 1997 Chongqing officially became one of the four municipalities of China, an economic reconstruction of the city began, and it also involved the conversion of military industries into civil ones.<sup>158</sup>

This situation led to a great development of Chongqing's manufacturing sector, with its automobile industry and its motorcycle industry as two of the biggest one of China. At the same time, the municipality began to develop its information and electronic sectors as well as its chemical industry, food industry, metallurgical industry and tourism.<sup>159</sup>

Confirming its growing importance, in 1998 the Central Government approved the Chongqing's Master Plan 1996-2020 in which the goals the municipality of Chongqing will achieve within 2020, are described. The objective of this plan is to convert the municipality into a modern city with a developed economy and a developed society.<sup>160</sup>

Although thanks to the Western Development Strategy Chongqing registered an important economic growth, its wealth could not be comparable to that of the regions in the coast. The labour cost in the coastal area is, indeed, much higher than in Chongqing.

This situation, together with a shortage of resources on the coast and the fact that Chongqing has always had a strong industrial base, led some big manufacturing companies to consider moving their business in Chongqing. Moreover, the municipality

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<sup>157</sup> The Third Front Program was launched in 1964 and it established a huge investment's plan in national defence, technology, industries and infrastructures for inland regions with the aim at creating a strong and self-sufficient industrial base ready to face a possible war.

See: Barry NAUGHTON, "The Third Front: defence industrialization in the Chinese interior", *The China Quarterly*, 115, 1988, pp. 351-386.

<sup>158</sup> HAN Sun Sheng; WANG, Yong, "City Profile. Chongqing", *Cities*, 18, 2, 2001, pp. 115-125.

<sup>159</sup> *ibidem*.

<sup>160</sup> Sina Blog 新浪博客, "Chóngqìng shì 1996—2020 nián chéngshì zǒngtǐ guīhuà" 重庆市 1996—2020 年城市总体规划 (Chongqing City Master Plan from 1996 to 2020), 17 July 2016,

[http://blog.sina.com.cn/s/blog\\_4abd37cd0102w6mu.html](http://blog.sina.com.cn/s/blog_4abd37cd0102w6mu.html), 30 January 2018.

began to implement preferential policies, such as lower business tax,<sup>161</sup> in order to attract companies and investments.<sup>162</sup> In 2008 Hewlett Packard (HP), the only company of its kind to be already present in the municipality since 2003 when it established a Global Software Service Centre in the city, decided to increase its notebook production in China. The Mayor of Chongqing, Huang Qifan decided to grant preferential policies, low labour cost, utilities and tax concessions to HP in order to create an IT cluster in Chongqing. In 2008, HP placed a Global Testing Service Centre in the city and later it also established a call centre.<sup>163</sup> Then, since 2009, big companies such as Acer, Asus and Foxconn placed their manufacture bases in Chongqing, followed progressively by other important companies, such as TOSHIBA, and by many Original Equipment Manufacturers (OEMs)/Original Design Manufacturers (ODMs)/Electronics Manufacturing Service companies (EMS).<sup>164</sup> Since 2011 Chongqing, having introduced three major computer brands (Hewlett-Packard, Acer, and ASUS), six major companies including Foxconn and Quanta, and more than 300 notebook computer parts manufacturers, formed a “3+6+300” notebook computer cluster.<sup>165</sup>

Consequently, Chongqing’s computer production started to increase until it became one of the most important in the world. In 2014 “a total of 49 million notebooks, worth \$19.8 billion, were exported – almost two-thirds of them to the European Union and North America (Ministry of Industry and Information Technology, 2014 interview data). With an annual value of 157 billion yuan (USD 26 billion), the notebook industry accounted for 10% of the municipality’s industrial output and 56% of its export”.<sup>166</sup>

In 2017 the total value of computers production in Chongqing reached almost 662 billion-yuan, accounting for 21.6% of the national total one.<sup>167</sup>

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<sup>161</sup> Hong Kong Trade Development Council, *Chongqing Offers Preferential Policies to Lure Investment*, 15 November 2011, <http://info.hktdc.com/alert/cba-e0111e.htm>, 31 January 2018.

<sup>162</sup> *Chongqing: land of laptops*, China.org.cn, 16 June 2014, [http://www.china.org.cn/business/2014-06/16/content\\_32674371.htm](http://www.china.org.cn/business/2014-06/16/content_32674371.htm), 1 February 2019.

<sup>163</sup> GAO Boyang; Michael DUNFORD; Glen NORCLIFFE; LIU Zhigao, “Capturing gains by relocating global production networks: the rise of Chongqing’s notebook computer industry, 2008–2014”, *Eurasian Geography and Economics*, 58,2, 2017, pp. 231-257.

<sup>164</sup> *ibidem*.

<sup>165</sup> LU Min; GUO Ya-fei. “The Effect, Problems and Strategies Analysis of YUXINOU International Railway and Chongqing’s Foreign Trade Development”, *DEStech Transactions on Social Science, Education and Human Science*, 2016.

<sup>166</sup> LU; GUO, *The Effect, Problems...cit.*

<sup>167</sup> Chongqing Municipal Bureau of Statistics, *Chongqing statistical yearbook 2018*, <http://www.cqtj.gov.cn/tjnj/2018/indexeh.htm>, 2 February 2019.

The always bigger industry of computer in Chongqing made the production exceed the domestic demand and it was necessary to export abroad. However, Chongqing is located in the interior of China and unlike the coastal provinces, it has no direct access to sea and ports. Traditionally, the products were shipped from Chongqing to Shanghai or Shenzhen and, from here, they were shipped to Europe, with the implication of long transit time.<sup>168</sup> The big corporations such as HP promoted the idea of creating a direct channel to Europe passing via the Eurasian Land Bridge by rail. Some trial runs had been already launched in 2008 when the joint venture Trans Eurasian Logistic, established between the German Railways (DB) and the Russian Railways (RZD), with the cooperation of Chinese Railways, started to create rail connections with Europe.<sup>169</sup> In 2008, Foxconn sent a trial train from Shenzhen to Europe and in 2009, DB Schenker began a weekly service between Shanghai and Duisburg.<sup>170</sup> At the same time, the Polish company Hatrans and the Chengdu International Railways started to create connections between Łódź and Chengdu.<sup>171</sup>

Since direct rail connections with Europe could have brought investments and companies to Chongqing, also the mayor of the municipality Huang Qifan supported the possibility of the creation of an alternative freight road to Europe. In August 2010, Huang Qifan and the Vice President of HP succeeded to obtain the support of the national authorities of the General Administration of Customs and the Ministry of Railways. Since the rail connection passes through many countries, different customs rules, procedures and bureaucracy made the implementation of the project complicated. In November of the same year, the premier Wen Jiabao visited Russia to find a solution to the different customs procedures and reaching an agreement with Russia and Kazakhstan.<sup>172</sup> Moreover, in 2011, the announce of the creation of a Eurasian Economic Union within 2015, contributed to facilitate the process from the point of view of customs procedures.<sup>173</sup>

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<sup>168</sup> Mario ESTEBAN; LI Yuan, “Demystifying the belt and road initiative: Scope, actors and repercussion for Europe”, *Duisburger Arbeitspapiere Ostasienwissenschaften*, 2017.

<sup>169</sup> JAKÓBOWSKI; POPLAWSKI; KACZMARSKI, *The Silk Railroad...*, cit., pp. 48-53.

<sup>170</sup> Jonathan E. HILLMAN, “The Rise of China-Europe Railways”, *Center for Strategic & International Studies (CSIS)*, 6 March 2018.

<sup>171</sup> JAKÓBOWSKI; POPLAWSKI; KACZMARSKI, *The Silk Railroad...*, cit., pp. 19-20.

<sup>172</sup> ESTEBAN, LI, *Demystifying the...*, cit., pp. 11-12.

<sup>173</sup> Jonathan E. HILLMAN, “The Rise of China-Europe Railways”, *Center for Strategic & International Studies (CSIS)*, 6 March 2018.

After some trial runs in 2010, finally on 19 March 2011 the first direct rail connection between China and Europe came into operation.<sup>174</sup> On 18 March 2013 the Chongqing-Xinjiang-Europe (YuXinOu 渝新欧) International Railway became a concrete reality thanks to its official opening.<sup>175</sup>

### 3.3 *The development of Chongqing-Xinjiang-Europe International Railway*

On 19 March 2011 a train from Chongqing, South-West China, reached Duisburg, Germany. The name of that train is Chongqing-Xinjiang-Europe International Railway or YuXinOu International Railway, where Yu 渝 stands for Chongqing, Xin 新 stands for Xinjiang and Ou 欧 stands for Europe. The first YuXinOu service train was a block train (or unit train), which means that it carried just one kind of merchandise and it had just one destination, without intermediate stops. This kind of service allows companies to save time and cost.<sup>176</sup> In the case of YuXinOu, it was the HP company that used the entire train to ship its electronic goods.<sup>177</sup>

The YuXinOu railway covers a total distance of 11,179 kilometres passing through the Alashankou Pass in Xinjiang and then through Kazakhstan, Russia, Belarus, Poland, reaching Duisburg in Germany.

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<sup>174</sup> ESTEBAN, LI, Demystifying the..., cit., pp. 11-12.

<sup>175</sup> Hong Kong Trade Development Council, *One Belt One Road: Yuxinou Railway Development*, 23 July 2015, <http://economists-pick-research.hktdc.com/business-news/article/Research-Articles/One-Belt-One-Road-Yuxinou-Railway-Development/rp/en/1/1X000000/1X0A2XUF.htm>, 6 February 2019.

<sup>176</sup> Encyclopaedia Britannica, *Unit Train. Freight Transportation*, <https://www.britannica.com/technology/unit-train>

<sup>177</sup> Jonathan E. HILLMAN, "The Rise of China-Europe Railways", *Center for Strategic & International Studies (CSIS)*, 6 March 2018.

Figure 4. YuXinOu railway's route



Source: Yuxinou logistics

The creation of this railway, the first CR Express railway, was the result of a joint agreement between the customs departments of six countries: China, Russia, Kazakhstan, Belarus, Poland and Germany. Indeed, on 12 April 2012, after many negotiations and thanks to the support of the former Ministry of Railways and the General Administration of Customs, China Railway, Harbin Railway, Russia Railway, Germany Railway and Chongqing Transportation Group established the Yuxinou (Chongqing) Logistics Co., Ltd., mainly engaged in two-way railway freight transportation between Chongqing and Europe.<sup>178</sup> Thanks to this agreement the customs clearance along this route is more rapid since it introduces “one-stop declaration, inspection and release”.<sup>179</sup>

On 29 May 2014, Xi Jinping made a visit to the Port of Duisburg and he waited for a cargo train arriving in Duisburg from Chongqing. During this occasion, the importance

<sup>178</sup> Yuxinou logistics, Gōngsī jiǎnjiè, 公司简介(Company profile),

<http://www.yuxinoulogistics.com/website/h-Chinese/leader.html>, 4 February 2019

<sup>179</sup> Hong Kong Trade Development Council, *One Belt One Road: Yuxinou Railway Development*, 23 July 2015, <http://economists-pick-research.hktdc.com/business-news/article/Research-Articles/One-Belt-One-Road-Yuxinou-Railway-Development/rp/en/1/1X000000/1X0A2XUF.htm>, 6 February 2019.

of the YuXinOu railway, the cooperation between China and Germany, and the promotion of the Belt and Road Initiative were highlighted.<sup>180</sup>

In recent years, this line has been further expanded, and it has developed more entry and exit ports. Currently, there are three passage channels: the western one, which is composed by the Alashankou Pass and Khorgas, the eastern channel, which passes through Inner Mongolia's Manzhouli and the middle channel which reaches Europe through Erenhot.<sup>181</sup> Now, the distribution points cover more than 30 countries.<sup>182</sup> The destination cities to which the cargos are shipped expanded as well, thanks to the establishment of the 1+N system, where 1 stand for the main line and N to the other chosen cities.<sup>183</sup> This lead to an increase of the distribution points including Rotterdam in the Netherlands, Antwerp in Belgium, Moscow and Cherkessk in Russia, Kutno in Poland, Pardubice in the Czech Republic, and Almaty and Kostanay in Kazakhstan. Furthermore, the Yuxinou railway operates with fixed stations (fixed loading and unloading place), fixed lines (fixed operation line), fixed train order (fixed shift and train number), fixed timetables (fixed arrival and departure time), and fixed prices (fixed transportation price), therefore it belongs to the point-to-point transportation without the unloading of the goods in middle stations.<sup>184</sup>

Compared to the very first train arrived in Europe from Chongqing, a lot of improvements have been made. In the beginning, the transit time was about 16 days. Since the Lanzhou-Chongqing line was not operative yet, it was necessary to pass around Xi'an. When in September 2017 the Chongqing-Lanzhou line became operative, the transit time was reduced to 12 days.<sup>185</sup> Some improvements have been made also in terms of shipped

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<sup>180</sup> Embassy of the People's Republic of China in the Kingdom of Denmark, *President Xi Jinping Visits the Port of Duisburg, Germany*, 30 March 2014, <http://dk.china-embassy.org/eng/ztbd/xjpfo/t1164914.htm>, 7 February 2019.

<sup>181</sup> Hong Kong Trade Development Council, "Yīdài yīlù" chāngyì xià de zhōng'ōu bān liè: Wèntí yǔ qiánjǐng, "一带一路"倡议下的中欧班列: 问题与前景 (CR Express trains under the Belt and Road Initiative: Problems and Prospects), 12 July 2018, <https://bit.ly/2Eb9ioo>, 8 February 2019.

<sup>182</sup> Hong Kong Trade Development Council, *Chongqing: On Track for Europe via the Yuxinou Rail Route*, 21 May 2018, <https://hkmb.hktdc.com/en/1X0ADYAW/hktdc-research/Chongqing-On-Track-for-Europe-via-the-Yuxinou-Rail-Route>, 8 February 2019.

<sup>183</sup> Yuxinou logistics, Gōngsī jiǎnjiè, 公司简介(Company profile), <http://www.yuxinoulogistics.com/website/h-Chinese/leader.html>, 4 February 2019

<sup>184</sup> Hong Kong Trade Development Council, "Yīdài yīlù" chāngyì xià de zhōng'ōu bān liè: Wèntí yǔ qiánjǐng, "一带一路"倡议下的中欧班列: 问题与前景 (CR Express trains under the Belt and Road Initiative: Problems and Prospects), 12 July 2018 <https://bit.ly/2Eb9ioo>, 8 February 2019.

<sup>185</sup> Hong Kong Trade Development Council, *Chongqing: On Track for Europe via the Yuxinou Rail Route*, 21 May 2018, <https://hkmb.hktdc.com/en/1X0ADYAW/hktdc-research/Chongqing-On-Track-for-Europe-via-the-Yuxinou-Rail-Route>, 8 February 2019.

cargo. If at the initial phases of this rail transportation the goods were composed mainly of laptops,<sup>186</sup> today the merchandise is much more differentiated. Now, the goods exported from China via YuXinOu to Europe include machinery and equipment, automobiles and parts, and coffee beans, whereas the exported goods from Europe include automobiles and parts, machinery and equipment, cosmetics, milk powder and other maternity and baby products.<sup>187</sup> Furthermore, in July 2015 a revision of the Agreement on International Goods Transport by Rail, made possible for the international freight trains to transport postal transit items. The reason why this kind of service was not possible before 2015 was that the transport of international postal and cargo freight belong to different transportation and customs systems. Railway freight transport usually operates in accordance with the rules of international associations or international contracts, whereas international mail operates as personal goods according to the Universal Postal Union (UPU) rules. However, with the development of cross-border e-commerce and international business, the demand for transnational transportation of personal goods is increasing.<sup>188</sup> Therefore, currently, the YuXinOu railway operates also in the transportation of international parcels, becoming in 2016 the first CR Express train offering this kind of service.<sup>189</sup>

Today, five eastbound trains and four westbound trains per week are operative.<sup>190</sup>

Since the launch of the YuXinOu railway, the cooperation between German and China has strengthened. Actually, German is China's largest trade partner in Europe, representing the mayor exporter to China and the major importer from China.<sup>191</sup>

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<sup>186</sup> LI Yuan; Kierstin BOLTON; Theo WESTPHAL. "The effect of the New Silk Road railways on aggregate trade volumes between China and Europe", *Journal of Chinese Economic and Business Studies*, 2018.

<sup>187</sup> Hong Kong Trade Development Council, *Chongqing: On Track for Europe via the Yuxinou Rail Route*, 21 May 2018, <https://hkmb.hktdc.com/en/1X0ADYAW/hktdc-research/Chongqing-On-Track-for-Europe-via-the-Yuxinou-Rail-Route>, 8 February 2019.

<sup>188</sup> Hong Kong Trade Development Council, "Yīdài yīlù" chāngyì xià de zhōng'ōu bān liè: Wèntí yǔ qiánjǐng, "一带一路"倡议下的中欧班列: 问题与前景 (CR Express trains under the Belt and Road Initiative: Problems and Prospects), 12 July 2018, <https://bit.ly/2Eb9ioo>, 8 February 2019.

<sup>189</sup> Hong Kong Trade Development Council, *Chongqing: On Track for Europe via the Yuxinou Rail Route*, 21 May 2018, <https://hkmb.hktdc.com/en/1X0ADYAW/hktdc-research/Chongqing-On-Track-for-Europe-via-the-Yuxinou-Rail-Route>, 8 February 2019.

<sup>190</sup> ESTEBAN, LI, *Demystifying the...*, cit., pp. 11-12.

<sup>191</sup> VINOKUROV Evgeny; TSUKAREV Taras, "The Belt and Road Initiative and the transit countries: an economic assessment of land transport corridors", *Area Development and Policy*, 3, 1, 2018, pp. 93-113.

Table 2. China-German railway connections

<b>Railway link</b>	<b>Inception date</b>	<b>Operator(s)</b>	<b>'Belt and Road' (re-)branding</b>
<b>Leipzig–Shenyang</b>	September 2011	DB Schenker	Initiated in 2011 without a 'Silk Road' label; since 2012, presented by the media as an example of Silk Road transport links
<b>'Yuxinou Railway' (Duisburg–Chongqing)</b>	January 2012	YuXinOu Logistics Company (Chinese–German–Russian–Kazakh joint venture); Trans Eurasia Logistics	One regular train per week from 2012 onwards; increased frequency to three trains per week in 2014; presented by the operators as a 'Silk Road project' since Chinese President Xi's visit to Duisburg in March 2014
<b>'Trans Eurasia Express' (Hamburg–Zhengzhou)</b>	Regular traffic since July 2013, further extended July 2015	Joint project by DB Schenker and Zhengzhou city, operated by Trans Eurasia Logistics; DHL Freight operation since July 2016	First 'pilot train' was operational in October 2008 (Xiangtang–Hamburg); actively promoted as a 'Silk Road project' by new operator DHL Freight since 2015
<b>Hamburg–Harbin</b>	June 2015	Trans Eurasia Logistics Promoted	Promoted under 'New Silk Road' label from its conception
<b>Nurnberg–Chengdu</b>	October 2015	Hellmann Rail Eurasia	Promoted by Hellmann and German media as part of a 'New Iron Silk Road'

Source: Europe and China's new silk road (think tank)

As we can see from table n. 2, German is actively involved in the Belt and Road Initiative. As a matter of fact, on 18 March 2016, Germany's state-owned railway company Deutsche Bahn (DB) and China Railways (CR) signed a Memorandum of Understanding (MoU) to further cooperate and establish rail connections between the two countries. The

areas of cooperation are: “rail freight transport between China and Germany, DB's consulting services for CR relating to high-speed train maintenance, and support for CR's infrastructure projects in other countries”.<sup>192</sup>

In June of the same year, Premier Li Keqiang and the German Chancellor Angela Merkel co-chaired the fourth round of Sino-German Inter-Governmental consultations in Beijing, in which the bilateral partnership has strengthened at all levels. Paragraph 13 and 14 are dedicated to cooperation in the field of rail connections. It is underlined that the two sides welcomed the cooperation between China and the EU in the field of “Belt and Road Initiative” and in the construction of transport corridors between Asia and Europe. Both parties explored ways to promote better participation of German companies and expand investment in industry, finance, etc. Furthermore, the two sides supported the promotion of the technical and legal coordination of the Asia-Europe transport corridor under the multilateral framework, so as to achieve the expansion and efficiency of the China-Europe team. The Customs of the two countries focused on cooperation with China-European customs clearance to facilitate transportation between China and Europe. The two countries showed their support to China Railway Corporation and Deutsche Bahn AG to strengthened strategic cooperation in the operation of the Central European trains, high-speed rail operations and the development of third-party markets.<sup>193</sup>

Finally, since they could be a good alternative to the traditional sea shipping, the creation of all these direct links with Europe has a great impact on future shipping's methods. However, when deciding to ship goods in a country, it is necessary to choose the better route, the most advantageous one in term of cost and transit time. Concerning the YuXinOu railway, although it is becoming more and more competitive, its main enemy remains the sea freight, since it still represents the preferred means of freight transportation. In the next paragraphs, we will see which are the other routes that make possible the import-export trade between Chongqing and Europe, and which are the weak

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<sup>192</sup> Deutsche Bahn, *Deutsche Bahn intensifies its involvement in China*, 2016 [https://www.deutschebahn.com/resource/blob/1172544/8c8d95e4f05215d93ba55ae285ffced9/TD-MoU\\_DB-China\\_eng--data.pdf](https://www.deutschebahn.com/resource/blob/1172544/8c8d95e4f05215d93ba55ae285ffced9/TD-MoU_DB-China_eng--data.pdf), 10 February 2019.

<sup>193</sup> Xinhua Agency 新华社, *Dì sì lún zhōng dé zhèngfǔ cuōshāng liánhé shēngmíng* 第四轮中德政府磋商联合声明 (Joint Statement on the Fourth Round of the China-Germany Intergovernmental Consultation), 13 June 2016, [http://www.xinhuanet.com/world/2016-06/13/c\\_1119035292.htm](http://www.xinhuanet.com/world/2016-06/13/c_1119035292.htm), 9 February 2019.

points that, still today, characterised the Chongqing-Xinjiang-Europe International Railway.

### 3.4 *The traditional routes from Chongqing to Europe*

Before the creation of railway connections between the inland regions of China and Europe, the interior provinces had to resort to intermodal transportation in order to import and export goods. Intermodal transportation refers to a method of transporting goods that uses at least two different means of transport.<sup>194</sup>

Concerning the interior regions of China, they are located so far from the sea and, consequently, they did not have direct access to the import and export activity with the rest of the world. The method that allows them to connect to other countries consist of combining different kind of transportations in order to reach China's coast first, and then to go abroad. These different modes of transportation include the employment of roads, railways or inland waterways to reach the coastal regions and then the use of sea transportation for the final shipping of goods.

In the case of the municipality of Chongqing, the ways to ship goods in and from Europe are several. Indeed, there are six traditional routes that still today represent an alternative to the direct rail freight connection.

Three of these six routes reach the port of Shanghai from where the goods are exported to Europe by sea. There are three different way to reach Shanghai: by Yangtze River, by road or by train. Other two routes, instead of reaching Shanghai, reach the port of Shenzhen and from here the goods are shipped to Europe. Still, to reach Shenzhen there are two possible ways: by road or by train. The last route is directly from Chongqing to Europe by air.<sup>195</sup> Since Chongqing is the largest inland port city in western China and it is positioned at upper reaches of the Yangtze River, the first route is the most traditional one. Furthermore, the Yangtze River Basin has always been important for the Chinese government that has focused on its upgrade. In “Guiding Opinions on Promoting the Development of the Yangtze River Economic Belt by Relying on Golden Waterways”

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<sup>194</sup> Jean-Paul RODRIGUE; Claude COMTOIS; Brian SLACK. *The geography of transport systems*. Routledge, 2013.

<sup>195</sup> SEO Young Joon; CHEN Feilong; ROH Sae Yeon. “Multimodal Transportation: The Case of Laptop from Chongqing in China to Rotterdam in Europe”, *The Asian Journal of Shipping and Logistics*, 33, 3. 2017, pp. 155-165.

issued on 2014, it is underlined that the Yangtze River is the golden waterway with the largest freight volume in the world, that it is the most important east-west axis of China's territorial space development and it plays an important strategic role in the overall pattern of regional development. In the Planning, the attention is focused on the upgrade of the transportation system, including the improvement of the transport capacity, the promotion of low cost and low energy consumption, the speed up of the regulation of the Yangtze River trunk waterway system, the rectification of the deep and lower reaches of the waterway, the improvement of navigation conditions, the optimization of the layout of port functions, the development of river-sea intermodal transport and trunk-branch direct transport, and the creation of a smooth, efficient, safe and green golden waterway. The construction of fast and high-capacity railway corridors and highway networks, such as the high-speed railway between Chongqing and Shanghai as well as building a comprehensive transportation hub and accelerate the development of multimodal transport, are some of the objectives. Another important issue is the construction of a comprehensive three-dimensional traffic corridor that includes the construction of railways, highways, aviation pipelines and transportation hubs. The aim is to strengthen the connection of various modes of transport, to speed up the development of multimodal transportation, to build a safe, convenient, green and low-carbon comprehensive three-dimensional transport corridor, and enhance the strategic support for the development of the Yangtze River economic belt.<sup>196</sup> Concerning this last point, the Chinese government issued the Planning of Comprehensive Three-dimensional Transportation Corridor in Yangtze River Economic Belt for the period 2014-2020, in which all the goals that the government would like to reach within 2020, such as the creation of efficient railway, highway, aviation and oil and gas pipeline networks, and the improvement of the Yangtze River's main waterways, are described.<sup>197</sup>

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<sup>196</sup> The State Council 中华人民共和国中央人民政府, Guówùyuàn guānyú yītuō huángjīn shuǐdào tuīdòng chángjiāng jīngjì dài fāzhǎn de zhǐdǎo yìjiàn, 国务院关于依托黄金水道推动长江经济带发展的指导意见 (Guiding Opinions of the State Council on Promoting the Development of the Yangtze River Economic Belt by Relying on Golden Waterways), 2014, [http://www.gov.cn/zhengce/content/2014-09/25/content\\_9092.htm](http://www.gov.cn/zhengce/content/2014-09/25/content_9092.htm), 7 February 2019.

<sup>197</sup> The State Council 中华人民共和国中央人民政府, Chángjiāng jīngjì dài zònghé lǐ jīāotōng zǒuláng guīhuà (2014—2020 nián) 长江经济带综合立体交通走廊规划 2014—2020 年 (Planning of comprehensive three-dimensional traffic corridor in the Yangtze River Economic Belt 2014-2020), 2014, [http://www.gov.cn/zhengce/content/2014-09/25/content\\_9092.htm](http://www.gov.cn/zhengce/content/2014-09/25/content_9092.htm), 8 February 2019.

As we can see, the Yangtze River plays a key role in the development of China and in its interior regions and it is important also from the point of view of the connections between the coastal provinces and the western ones. Indeed, as already mentioned, transportation along the Yangtze river represent the common way for Chongqing to ship goods to Europe, passing through Shanghai. However, despite all the improvements implemented by the government, the shipping by the Yangtze river is slow. Supposing shipping 40' High Cube (HC) FEU<sup>198</sup> (forty-foot equivalent unit) containers from Chongqing to Rotterdam, the transit time through the Yangtze River is quite long. Indeed, it takes 47/48 days to reach the Netherlands city. However, the total cost is low as it corresponds only to 2,354.1 USD per container. Analysing the second possible route that reaches Shanghai by road, we know that its transit time is shorter compared to the Yangtze river transport, as it takes 36/37 days to reach Europe. However, the cost per container is higher than the first route as it corresponds to 3,637.5 USD per container. Furthermore, possible traffic congestion makes this route unreliable. The third route uses the railways to arrive until Shanghai. For example, the Yuli railway (Chongqing- Lichuan) starts at Chongqing and goes through Fulin, Enshi, Yichang, Wuhan, Macheng, Hefei, Nanjing, and Wuxi, and finally Shanghai (Yangpu), for a total distance of approximately 1,900 km. It takes 37/38 days for a cost of 3,162.1 USD per container. The fourth route reaches Shenzhen by road. Compared to Shanghai the transport distance is shorter as it is 1,587 kilometres whereas the distance between Chongqing and Shanghai is 1,728 kilometres. Hence, the transit time is 34/35 days for a cost of 3,387 USD per container. The fifth route uses the railway to arrive in Shenzhen. The route starts at Tuanjiecun marshalling station, goes through cities such as Wuhan, Changsha, Hengyang, and Guangzhou, and arrives at the Port of Yantian, for a total transport distance of 2,002 km. It takes 31/32 days and its cost is 3,066.2 per container. Air transport is the most expensive one, but it is the one with the shorter transit time. It takes 3/4 days to ship the goods for a cost of 8930.5 USD per container.<sup>199</sup>

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<sup>198</sup> There are several types of container for freight shipping. Some of these are: the 20 TEU (twenty-foot equivalent unit) that has an internal length of 5.860 mm and an internal height of 2.310 mm; the 40 FEU (forty-foot equivalent unit) that has an internal length of 12.010 mm and an internal height of 2.360 mm and the 40 HC FEU whose length is 12.020 mm and whose height reaches 2680 mm. See: Logimar, Shipping and Forwarding, *Dimensioni dei container*, <https://www.logimar.it/tools/containers/dimensioni-container/>, 7 February 2019.

<sup>199</sup> SEO, CHEN, *Multimodal Transportation...*, cit., pp. 158-163.

Moreover, in 2018 the rail connections between Chongqing and Ningbo, one of the most important harbours of China, has opened. The transit time of the train until Ningbo is just 57 hours, almost 12 days shorter than the transport through the Yangtze River.<sup>200</sup> Its total transit time is 36 days, and its cost is approximately 3385 USD per container.<sup>201</sup>

Table 3. Chongqing-Rotterdam traditional routes: cost and transit time

	<b>Transit time</b>	<b>Total cost</b>
<b>Chongqing-Yangtze-Shanghai-Rotterdam</b>	47/48 days	2,354.1/40'HQ
<b>Chongqing-Road-Shanghai- Rotterdam</b>	36/37 days	3,637.5/40'HC
<b>Chongqing-Railway-Shanghai- Rotterdam</b>	37/38 days	3,162.1/40'HC
<b>Chongqing-Road-Shenzhen- Rotterdam</b>	34/35 days	3,387/40'HC
<b>Chongqing-Railway-Shenzhen- Rotterdam</b>	31/32 days	3,066.2/40'HC
<b>Chongqing-Air-Rotterdam</b>	3/4 days	8930.5/40'HC

Source: Multimodal Transportation: The Case of Laptop from Chongqing in China to Rotterdam in Europe

From the table n. 3, we can notice that shipping by Yangtze river is the slowest kind of shipping, but it is also the cheapest one, whereas shipping by air is the most expensive but also the faster one. The other alternatives could be a compromise; however, since their transit time remain quite long, their cost is high.

With the creation of the YuXinOu railway in 2011, the situation changed. With the YuXinOu railway the transit time to arrive in Europe is just 12 days and its cost is

<sup>200</sup> China Org., "Chongqing-Ningbo sea-rail international freight service starts", 23 January 2018, [http://www.china.org.cn/business/2018-01/23/content\\_50283156.htm](http://www.china.org.cn/business/2018-01/23/content_50283156.htm), 10 February 2019.

<sup>201</sup> Searates, <https://www.searates.com/>, 10 February 2019.

approximately 4000 USD per container with the subsidies granted by the government.<sup>202</sup> Although it is expensive, the very short transit time makes this means of freight transportation very competitive, above all for all that merchandise, such as electronic goods, that needs to be delivered quickly.

Nevertheless, despite the advantages that characterize this railway, weak points and problematic issues regarding it, are still present. In the next paragraph, I will try to analyse all YuXinOu features in order to evaluate if this rail connection is as competitive as it seems.

### *3.5 Challenges and weak points of YuXinOu Railway*

Since the launch of the Western Development Strategy, the economic upgrade and modernization of Chongqing began. The several measures taken by the governments made the municipality grow in term of GDP and foreign trade and the industrial structure of the city was undergo a continued expansion. The Chongqing-Xinjiang-Europe International Railway is one of the elements that contributed to the development of the municipality. From 2009 to 2014, Chongqing's total growth rate of its import and export trade grew from US\$7.709 billion to US\$95.45 billion. Especially, the export growth passed from US\$ 4.28 billion in 2009 to US\$ 63.409 billion in 2014.<sup>203</sup> Therefore, the creation of this direct link with Europe affected in a positive way the Chongqing's foreign trade.<sup>204</sup>

However, a lot of issues characterize YuXinOu freight transportation, that still stands for a very little percentage in international trade compared to the sea shipping.

One critical element is the lack of a unified coordination mechanism between the country along the route. The lack of coordination among the China-EU corridor, lead to disparity and inequality concerning freight rates, traffic volume, security issues, customs supervision, information sharing, law enforcement, mutual assistance, inspection and quarantine, environmental protection, etc.<sup>205</sup> Actually, one of the major disadvantages of

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<sup>202</sup> SEO, CHEN, *Multimodal Transportation...*, cit., pp. 158-163.

<sup>203</sup> MIN, GUO, *The Effect, Problems...*, cit.

<sup>204</sup> *ibidem*.

<sup>205</sup> REN Qiliang; WU Lixia; HUANG Chengfeng, REN Xiaohong, *Yú xīn ōu dà tōngdào miànlín de wèntí yǔ yìngduì cèlüè 渝新欧大通道面临的问题与应对策略 (Problems and Strategies Faced by Yuxinou railway)*, Sichuan Academy of Social Sciences.

this kind of transportation is the high cost, especially if compared to sea shipping. The YuXinOu railway covers a distance of more than 11.000 kilometres and its cost is 8.900 USD per container, while shipping by sea costs between 2000 USD and 2500 USD per container. Therefore, the YuXinOu freight rate is 3-4 times higher than the sea one.<sup>206</sup>

One of the main reasons that cause high costs for the rail freight transportation is that the freight rates along the route from China to Europe are not the same, but they vary depending on the country they are crossing. In particular, there are four different sections: Kazakhstan's freight rate is the lowest one as it is about 0.6 USD per container per kilometre; China's freight rate corresponds to 0.7 USD per container per kilometre; Europe and Russia's freight rates are the highest as they exceed the 0.7 USD per container per kilometres.<sup>207</sup> Russia, in order to increase the freight volume along the Eurasian Continental Bridge on the northern route (the Siberian route), decided to increase of 0.2 USD per kilometre the cost of each containers passing through the New Eurasian Land Bridge. This way, Russia increased the competitiveness of the Siberian route.<sup>208</sup> As the freight rates in Europe and Russia are more than twice compared to the Commonwealth of Independent States<sup>209</sup> and since a reduction and a unification of this rates is not possible in the short run, the total cost of the rail freight transportation is still expensive.

Another element that influences the freight rate is the low total freight volume. Indeed, in 2017 the number of eastbound trains exporting goods from Europe to China, was still one half of the westbound trains and this is due both to the trade imbalance between China and Europe (in 2016 the value of goods imported to EU from China was approximately \$190 billion more respect to the merchandise exported to China<sup>210</sup>), and to the current commodity structure in their trade. The goods that China import from Europe are mainly

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<sup>206</sup> Hong Kong Trade Development Council, "Yīdài yīlù" chāngyì xià de zhōng'ōu bān liè: Wèntí yǔ qiánjǐng, "一带一路"倡议下的中欧班列: 问题与前景 (CR Express trains under the Belt and Road Initiative: Problems and Prospects), 12 July 2018, <https://bit.ly/2Eb9ioo>, 8 February 2019.

<sup>207</sup> REN Qiliang; WU Lixia; HUANG Chengfeng, REN Xiaohong, Yú xīn ōu dà tōngdào miànlín de wèntí yǔ yìngduì cèlüè 渝新欧大通道面临的问题与应对策略 (Problems and Strategies Faced by Yuxinou railway), Sichuan Academy of Social Sciences.

<sup>208</sup> *ibidem*.

<sup>209</sup> The Commonwealth of Independent States is a regional intergovernmental organization formed in December 1991, after the dissolution of the Soviet Union. The member states are Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan.

see: The Nuclear Threat Initiative, *Commonwealth of Independent States*, <https://www.nti.org/learn/treaties-and-regimes/commonwealth-independent-states-cis/>

<sup>210</sup> Jonathan E. HILLMAN, "The Rise of China-Europe Railways", *Center for Strategic & International Studies (CSIS)*, 6 March 2018.

precision instruments, machinery, high-end clothing, etc. and the enterprises selling this kind of merchandise still prefer sea transportation. For example, in 2015 Chongqing's import and export trade amounted to about US\$75 billion, but less than 5% was transported by YuXinOu railway. Hence, achieving a profit-loss balance is difficult since the freight volume is insufficient and since it has been calculated that in order to obtain profit, it is necessary that the return trains would reach at least a 60% of the transit.<sup>211</sup> The discontinuity between the countries regarding, for example, the customs clearance is still threatening the good function of the rail connection. This problem continues to exist although some measures designed to create a uniform railway connection already existed. On 1 September 2006 the CIM/SMGS consignment note for international rail transport entered into force. CIM stands for Contract of International Carriage of Goods by Rail and it governs the contract of international carriage of freight in Western and Central Europe, Middle East and North Africa, whereas SMGS stands for Agreement on International Goods Transport by Rail and it governed the international carriage of freight in Eastern Europe and Asia.<sup>212</sup> With the creation of the CIM/SMGS consignment note, the different transportation laws were brought together.<sup>213</sup> This is particularly important for the YuXinOu line that has to cross many countries. With this note the transportation process is simplified, the border crossing is facilitated, and legal certainty is provided.<sup>214</sup> Another project launched in order to solve the problematic of international shipping was the Smart and Secure Trade Lanes (SSTL) project between Asia and Europe, adopted in 2006 with the aim at “applying security measures to containers, facilitating ‘customs-to-customs’ data exchange, risk management cooperation, mutual recognition of customs controls and trade partnership programmes”.<sup>215</sup> The second phase started in 2010 and the

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<sup>211</sup> Hong Kong Trade Development Council, "Yīdài yīlù" chāngyì xià de zhōng'ōu bān liè: Wèntí yǔ qiánjǐng, "一带一路"倡议下的中欧班列：问题与前景 (CR Express trains under the Belt and Road Initiative: Problems and Prospects), 12 July 2018, <https://bit.ly/2Eb9ioo>, 8 February 2019.

<sup>212</sup> International Rail Freight Committee (CUT), *Legislation*, <https://www.cit-rail.org/en/freight-traffic/legislation/>, 11 February 2019.

<sup>213</sup> TRACECA, *Organization of rapid transit container trains hard nets schedule (Chongqing – Duisburg)*, [http://www.traceca-org.org/uploads/media/14-26.06.13\\_Chongqing\\_Duisburg\\_eng.pdf](http://www.traceca-org.org/uploads/media/14-26.06.13_Chongqing_Duisburg_eng.pdf) 10 February 2019.

<sup>214</sup> International Rail Freight Committee, *CIM-SMGS consignment note*, [https://www.cit-rail.org/media/files/public/Publications/Common\\_CIM-SMGS\\_consignment\\_note\\_2013.pdf?cid=69486](https://www.cit-rail.org/media/files/public/Publications/Common_CIM-SMGS_consignment_note_2013.pdf?cid=69486), 20 February 2019.

<sup>215</sup> European Commission, *Smart and Secure Trade Lanes Pilot (SSTL)*, [https://ec.europa.eu/taxation\\_customs/general-information-customs/customs-security/smart-secure-trade-lanes-pilot-sstl\\_en](https://ec.europa.eu/taxation_customs/general-information-customs/customs-security/smart-secure-trade-lanes-pilot-sstl_en), 10 February 2019.

third one in 2016. The participating countries are the Netherlands, the UK, China, Belgium, France, Germany, Italy, Poland, Spain and Hong Kong.<sup>216</sup>

Although the creation of the CIM/SMGS consignment note and the SSTL project and although in 2017 Russia, China, Mongolia, Kazakhstan, Belarus, Germany and Poland signed an agreement with the aim at deepening their cooperation in the railway field and improve infrastructure facilities,<sup>217</sup> the rules of international railway transportation in Eurasia have not yet formed a unique system of law and documentation. Consequently, many problems, such as the lack of a single inspection or a unified waybill, continue to increase the cost and the transit time of the transportation.<sup>218</sup>

This is also reflected on the different standards and rules regarding the inspection and quarantine of living animals, scrap metals and agricultural products along the countries involved. This situation leads to repetitive controls and supervision of goods that have been already checked when they passed through other countries' customs. Consequently, transportation time become longer.<sup>219</sup>

Jointly with the inspection and quarantine processes that make the transit time longer, the efficiency of the ports along the corridor is low. In 2015, the average detention time of goods at the ports of the middle line (via Erlianhot) accounted for about 30% of the total transportation time, of which 18% was caused by documents bureaucracy and customs inspection. Several elements influence the efficiency of transportation and its transit time. One of these factors is the transshipment at the border ports. Still, the lack of a uniform mechanism makes this process difficult. Actually, the gauges along the route are different: the railways of China and Europe are standard gauges (1435mm), whereas the railways of Russia, Kazakhstan, Belarus, Ukraine and other CIS countries and Mongolia are bigger, 1520mm. Hence, between China and the CIS countries and between Europe and the CIS

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<sup>216</sup> European Commission, *Smart and Secure Trade Lanes Pilot (SSTL)*, [https://ec.europa.eu/taxation\\_customs/general-information-customs/customs-security/smart-secure-trade-lanes-pilot-sstl\\_en](https://ec.europa.eu/taxation_customs/general-information-customs/customs-security/smart-secure-trade-lanes-pilot-sstl_en), 10 February 2019.

<sup>217</sup> Railway Pro, *Seven countries sign agreement on China – Europe rail container organization*, 2 May 2017, <https://www.railwaypro.com/wp/seven-countries-sign-agreement-china-europe-rail-container-organisation/>, 11 February 2019.

<sup>218</sup> Hong Kong Trade Development Council, "Yīdài yīlù" chāngyì xià de zhōng'ōu bān liè: Wèntí yǔ qiánjǐng, "一带一路"倡议下的中欧班列: 问题与前景 (CR Express trains under the Belt and Road Initiative: Problems and Prospects), 12 July 2018, <https://bit.ly/2Eb9ioo>, 8 February 2019.

<sup>219</sup> REN Qiliang; WU Lixia; HUANG Chengfeng, REN Xiaohong, *Yú xīn ōu dà tōngdào miànlín de wèntí yǔ yìngduì cèlüè 渝新欧大通道面临的问题与应对策略 (Problems and Strategies Faced by Yuxinou railway)*, Sichuan Academy of Social Sciences.

countries, the transshipment is indispensable. In addition, ports such as the Kazakhstan ones or the Russia ones have not a sufficient number of flatbed cars for container transportation and this often prolong the waiting time.<sup>220</sup> Furthermore, the Kazakhstan domestic railway is a single truck, so its transport capacity is low. The cost of transportation is subjected to an increase since the lack of uniform documents brings extra costs. The problems that characterize the YuXinOu railway, characterize also the other CR express train. The lack of a unified policy affects all kind of rail freight transportation between China and Europe. Indeed, the provinces and the municipalities are the ones that decide the price, organize supply and subsidies, tax and fee and this leads to great competition between the several actors and to a reduction in transport efficiency.<sup>221</sup> The lack of a top-level structure, of central government coordination and of overall planning affects the operational potential of this route.<sup>222</sup>

The shortage of qualified personnel is another issue affecting the operative potential of the YuXinOu rail connection. Indeed, it is difficult to find people who not only speak German and Russia but also have a knowledge of manufacturing, international trade, international investments and so on.<sup>223</sup> The low global visibility form part of the weak points of the railway connections. The enterprises that choose to ship their goods through the YuXinOu route are all small or medium-sized enterprises whereas the bigger companies, especially in Europe, still prefer the traditional sea shipping.<sup>224</sup> Furthermore, Chinese enterprises still need to improve and upgrade to compete with other existing companies in the world. The Chinese companies still lack innovation and their management level is often low. This increases operational risks. Some of the Chinese companies are still in the stage of imitating advanced foreign enterprises, with which the gap is still big. Also, from the point of view of internationalisation, many Chinese

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<sup>220</sup> Hong Kong Trade Development Council, "Yīdài yīlù" chāngyì xià de zhōng'ōu bān liè: Wèntí yǔ qiánjǐng, "一带一路"倡议下的中欧班列：问题与前景 (CR Express trains under the Belt and Road Initiative: Problems and Prospects), 12 July 2018, <https://bit.ly/2Eb9ioo>, 8 February 2019.

<sup>221</sup> *ibidem*.

<sup>222</sup> WANG Jiaoe; JIAO Jingjuan; MA Li. "An organizational model and border port hinterlands for the China-Europe Railway Express", *Journal of Geographical Sciences*, 28, 9, 2018, pp. 1275-1287.

<sup>223</sup> REN Qiliang; WU Lixia; HUANG Chengfeng, REN Xiaohong, Yú xīn ōu dà tōngdào miàn lín de wèntí yǔ yìngduì cèlüè 渝新欧大通道面临的问题与应对策略 (Problems and Strategies Faced by Yuxinou railway), Sichuan Academy of Social Sciences

<sup>224</sup> MIN, GUO, The Effect, Problems..., cit.

enterprises are at an initial phase and,<sup>225</sup> compared to other countries, their transnational operations are fewer.

Most of the issues concerning this kind of shipping are related to the fact that a train crosses a lot of countries before arriving at the destination. This situation not only brings problems in terms of lack of united legislation or customs clearance but also in terms of investment's payback. The large-scale infrastructure projects in the construction of the YuXinOu railway require a big amount of investment. Not only the payback period is long but also the changes in the ruling party of the countries along the route could affect the entire project. For this reason, the risk in the security and profitability of this kind of large-scale investment is still present.<sup>226</sup>

The poor infrastructure is another challenge the YuXinOu railway has to face. Especially in Europe, the railway system is older than the Chinese one<sup>227</sup> and the inefficiency of infrastructures causes delays and reduce competitiveness. The Strategic Procurement Manager of HP David Smrkovsky reported a delay of three days on the line YuXinOu in 2017.<sup>228</sup> Since one of the main advantages of this route is the shorter transit time compared to the shipping one, these kinds of delays further damage the image of YuXinOu. Moreover, the development of the countries along the YuXinOu route, Poland, Germany, Belgium, Belarus, and Kazakhstan, is not the same. Therefore, the involvement of one country in the maintenance, in the technological innovation, and in the operation management of the railway, is different.<sup>229</sup>

The percentage of goods' shipment through the YuXinOu railway is still low compared to the other means of transportation. The reasons are several. From the lack of a unified policy and system between all the countries along the route to the scarcity of infrastructure, the problematics that characterizes it make the rail freight service complex.

Furthermore, since one of the main elements that are taken into consideration when deciding to ship goods is cost, the aspect regarding the subsidies granted from the local

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<sup>225</sup> MIN, GUO, *The Effect, Problems...*, cit.

<sup>226</sup> REN Qiliang; WU Lixia; HUANG Chengfeng, REN Xiaohong, *Yú xīn ōu dà tōngdào miànlín de wèntí yǔ yìngduì cèlüè 渝新欧大通道面临的问题与应对策略 (Problems and Strategies Faced by Yuxinou railway)*, Sichuan Academy of Social Sciences

<sup>227</sup> Jonathan E. HILLMAN, "The Rise of China-Europe Railways", *Center for Strategic & International Studies (CSIS)*, 6 March 2018.

<sup>228</sup> Greg KNOWLER, "Rising Asian volumes choke Europe rail terminals", *JOC.com*, 9 August 2017, [https://www.joc.com/rail-intermodal/international-rail/asia/rising-asian-volumes-choke-europe-rail-terminals\\_20170809.html](https://www.joc.com/rail-intermodal/international-rail/asia/rising-asian-volumes-choke-europe-rail-terminals_20170809.html), 11 February 2019.

<sup>229</sup> MIN, GUO, *The Effect, Problems...*, cit.

governments is worth analysing. All the CR express trains rely on the government's subsidy to operate.

Table 4. Government Subsidies for CR express trains

Route	From-to	Distance	Rate	Subsidies
Yu Xin Ou	Chongqing to Duisburg	11.000	8900	3500-4000
Han Xin Ou	Wuhan to Czech	10.700	12000	4000-5000
Rong Ou	Chengdu to Lodtz	9965	10290	3000-3500
Zheng Ou	Zhengzhou to Hamburg	10245	10500	3000-7000

Source: BESHARATI, et al. "The ways to maintain sustainable China-Europe block train operation" 2017

From the table above we can see some of the subsidies that the governments grant to the several rail connections. Concerning the YuXinOu railway, the number of subsidies reaches 4000 USD per container. This way, the cost of shipping through YuXinOu (4000 USD more or less) although it remains higher than the sea shipping, has a competitive potential. In order to guarantee the operation of the railway freight, the local governments give their financial support and this way the growth of rail freight connections became widespread.<sup>230</sup> However, problems remain. On one hand, we know thanks to a survey that for a 10 days shorter transit time, companies are willing to pay a maximum of 200 USD more per container,<sup>231</sup> on the other hand, the uncertainty on how long these subsidies will last, undermine the YuXinOu competitiveness.<sup>232</sup> Another criticism about subsidies is

<sup>230</sup> Jonathan E. HILLMAN, "The Rise of China-Europe Railways", *Center for Strategic & International Studies (CSIS)*, 6 March 2018.

<sup>231</sup> Babak BESHARATI, Gansakh GANSAXH, LIU Feifei, ZHANG Xiaomin, XU Ming, "The ways to maintain sustainable China-Europe block train operation", *Business and Management Studies*, 3, 3, 2017, pp. 25-33.

<sup>232</sup> Jonathan E. HILLMAN, "The Rise of China-Europe Railways", *Center for Strategic & International Studies (CSIS)*, 6 March 2018.

addressed to the local governments that verse money in subsidies to the detriment of investments in infrastructure and logistic.<sup>233</sup> Since the subsidies could be eliminated within 2022,<sup>234</sup> the possibility that the success of this rail connection will decrease in the future is something to take into account.<sup>235</sup> Moreover, without the subsidies, the cost per container of the YuXinOu will correspond approximately to 8.000 USD, more or less the same price of air transportation. The transit time of the railway is about 12 days whereas the transit time of air transport is 3/4 days. Therefore, once these subsidies will end, the YuXinOu train won't be competitive nor from the point of view of cost neither from the point of view of a shorter time.

Finally, taking into account all these factors, it is possible to affirm that the YuXinOu railway still presents many problems that weaken its potential and that is still not considered a viable alternative to the maritime transportation, chosen from the majority of companies, both in Europe and in China. The international trade and the economic relation between countries are, indeed, still based on sea shipping.

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<sup>233</sup> Mark SZAKONYI, "China's Asia-Europe rail subsidies — a two-edged sword", JOC.com, 5 October 2018, [https://www.joc.com/rail-intermodal/international-rail/china/china%E2%80%99s-asia-europe-rail-subsidies-%E2%80%93-two-edged-sword\\_20181005.html](https://www.joc.com/rail-intermodal/international-rail/china/china%E2%80%99s-asia-europe-rail-subsidies-%E2%80%93-two-edged-sword_20181005.html), 11 February 2019.

<sup>234</sup> JAKÓBOWSKI, POPLAWSKI, KACZMARSKI, *The Silk Railroad...*, cit., pp. 21-26.

<sup>235</sup> Mark SZAKONYI, "China's Asia-Europe rail subsidies — a two-edged sword", JOC.com, 5 October 2018, [https://www.joc.com/rail-intermodal/international-rail/china/china%E2%80%99s-asia-europe-rail-subsidies-%E2%80%93-two-edged-sword\\_20181005.html](https://www.joc.com/rail-intermodal/international-rail/china/china%E2%80%99s-asia-europe-rail-subsidies-%E2%80%93-two-edged-sword_20181005.html), 11 February 2019.

## CONCLUSION

The rail connections that China established with Europe are a concrete reality that could change the way in which the trade relationship has always been established. Thanks to these railways, the interior regions of China can connect directly to Europe avoiding passing through Shanghai or Shenzhen. For this reason, in just a few years their number has increased, and their reputation has grown. In particular, the YuXinOu railway seems to be the best-established railway and the one that offers the largest number of import-export services. However, many issues and problems make this railway much lesser competitive than it looks. To date, the YuXinOu railway does not represent an alternative to the sea shipping and its impact on the trade relations is small. Its function is granted from the subsidies of the local government that halve the cost of the shipping and, even this way, very few companies chose to ship their goods by train. When the subsidies will end, it is unlikely that the rail freight will substitute the air one and the maritime one. Furthermore, with the creation of the Northern Sea Route, the transit time of the maritime transportation will be shortened of 40%, so that using sea transportation will become more profitable both from the point of view of cost and from the point of view of transit time. More than in terms of real trade, these rail link connections are significant from a political and strategic point of view. Create a connection that starts in China and arrives in Europe means cross many countries, realize agreements, bring wealth in several nations that can benefit from the Chinese investments and, therefore, establish alliances and relationships of cooperation and partnership between the multiple parties across the line. The establishment of links means the legitimacy of Chinese presence in the Eurasia continent and the opening of new markets both inside China (the western provinces are becoming richer and modern) and outside China (Kazakhstan is an example).

With the OBOR Initiative, China is ensuring to fulfil an important position both in economic and political terms and Chinese leaders are creating a totally connected country, not only at an international level but also at a domestic one.

The Chinese presence is more and more widespread all over the world, and all projects implemented have a long-term objective. The investment in infrastructures has not an immediate economic return, but this is not the main interest of China. More important is the soft power. China presents its projects as something that bring positive results for

every country that participate in them. The OBOR has been presented as a win-win situation from which everyone could benefit and already 65 countries decided to participate in it.

The purpose of this master thesis is to demonstrate that, despite Chinese propaganda focuses on all the rail connections established in recent years, currently, the YuXinOu railway does not represent an alternative to other means of transportation from the point of view of trade volumes and that very few companies choose it to ship their good. Perhaps, in the future, this situation will change, and the rail freight will emerge as an important transportation's means also from the point of view of commerce and business, but today the geopolitical value of these links is still much higher than their trade value.

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