White Paper Series

How China Is Disrupting Supply Chains in Europe

China is reactivating ancient trading routes to Europe and is starting from Central Eastern Europe.

Contents

Introduction

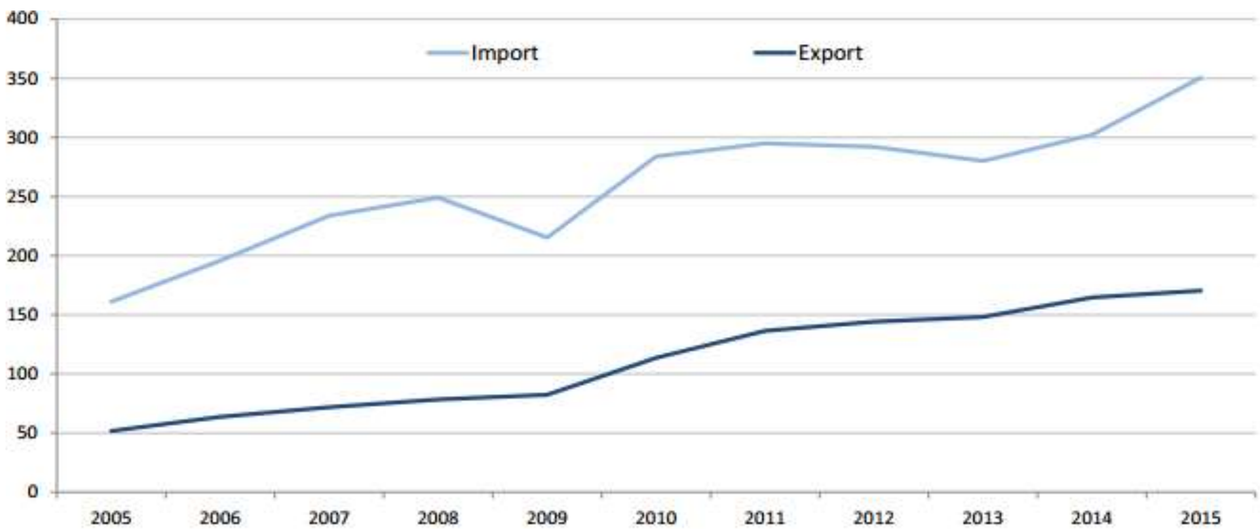
Chinese President Xi Jinping made a series of trips to Eastern Europe in 2016 as part of his advocacy campaign for the **Silk Road Economic Belt and 21st Century Maritime Silk Road (OBOR).** The initiative, launched by Xi Jinping in the autumn of 2013, aims to link Asia with Western Europe, CIS countries, and Africa through a network of interconnected infrastructures, especially rail, road, and maritime transport. OBOR is now the largest and most important geostrategic, economic and financial project being implemented globally. China, who has been systematically and intentionally bypassed by the most important regional trade agreements, is now making history by literally building its own way into the Western markets viewing Central Eastern European Countries (CEE) as the best opportunity for an approach.

Fig.1 Silk Road Economic Belt and 21st Century Maritime Silk Road

Compared with the Marshall Plan, the regeneration plan for Europe after the WWII, OBOR is actually more than 10 times larger in terms of investment. The initiative becomes even more important as the recent US presidential election seems to be putting an end to the Trans Pacific Partnership (TPP), the Transatlantic Trade and Investment Partnership (TTIP), and sheds a shadow of uncertainty on NAFTA.

China was never able to sign a free trade agreement with the EU despite the impressive trading volumes between the two and the increasing year-to-year trend. China is the EU's second largest trading partner behind the US and the EU is China's biggest trading partner.

Fig.2 Development of EU exports and imports of goods with China, 2005-2015 (in billion Euro)



Source: Eurostat

China is hoping it will have more success in approaching the EU through CEE: the Baltic countries, Poland, Czech Republic, Hungary and Romania who have some common features[1]:

- They are newer members of the EU,
- They are positioned towards the European border with Russia and represent a "gateway" to Europe from the East,
- They are all considered less economically developed than their Western brothers,
- As full members of the EU, have a saying in the decision-making process and can serve as influencers in Brussels.

The Beijing government is also putting its money where its policy is with the Asian Infrastructure Investment Bank (AIIB). The AIIB opened for business in January of 2016 and counts 57 founding members, including most of the Western European countries[2]. Considered the financial arm of OBOR, the AIIB is expected to fund infrastructure projects in areas such as energy, transportation, and communication throughout Asia.

[1] There is a false perception that Europe is one unitary space because of the European Union; however, the European countries can be grouped in many more groups base on their belonging to EU or NATO, their geopolitical role dating back to WWII and the Cold War, their position relative to Russia, their common historical past etc. For some of these groups, please refer to Annex 2

[2] To understand better the AIIB membership, please refer to Annex 3

The 16+1 Platform

Under the "16+1" platform China and 16 countries of CEE are linked in an historical attempt to influence European trade policies and infuse cash in the region. It involves countries from the Baltic, Balkans and the Adriatic. Ironically the "16+1" initiative originated in Warsaw in 2012, a year before China announced OBOR but is now an important part of the latter.

The openness of the CEE countries to the East is justified by the post economic crisis efforts to boost economy. Despite mutual disappointment at the pace of the project approval, looking retrospectively, the initiative, in its 5th year of implementation, triggered an increase in both the investments and the number of Chinese led infrastructure projects.

"16+1" was perceived by the EU as an attempt by China to insinuate itself at the gates of Europe and the EU adopted a protective stance fearful of the fate of some strategic industries as well as overall security. That is the case of steel production (e.g. UK, Serbia) and nuclear projects (e.g. in Romania).

Among the projects which have been given a green light or are underway:

The following sectors were identified as areas of priority importance in the framework of 16+1 Initiative:

- Construction and modernization of transport infrastructure, including motorways,
- Development of the network of railways, airports and sea ports,
- Energy, renewables and nuclear energy,
- Companies trading in commodities,
- The food production.

1. **Freight train services between China and Europe,** which now counts about 12,000 km and is constantly expanding. The network now links 12 Chinese and 9 European manufacturing hubs. They include direct rail routes such as:

    - **Chengdu to Lodz, Poland.** Chengdu is home to more than 260 Fortune 500 companies. Intel, IBM, Siemens, Cisco, Canon and Wipro are among those with significant production operations in the city, as well as over 200 core automotive parts makers for German, Japanese and other OEMs.
    - **Suzhou to Warsaw, Poland.** Suzhou is a well-established manufacturing hub for iron and steel, IT and electronic equipment, as well as textile products.

- **Lianyugang to Rotterdam, Netherlands**. Traditionally an agriculture and farming land, Lianyugang is in the process of industrialization. New industrial sectors include pharmaceutics, new materials and, new energy. Lianyungang Port is the major advantage for the city.
- **Chongqing to Duisburg, Germany**. Chongqing is home to the Foxconn production plant which makes iPhones, iPads, and laptops for Apple, as well as computers and servers for HP and Cisco Systems.
- **Zhengzhou to Hamburg, Germany**. The city's largest industry is non-metal product manufacturing followed by coal mining. Other manufactured goods include tractors, locomotives, fertilizer, processed meats, and electrical equipment.
- **Yiwu to Madrid, Spain.** About 300 km from Shanghai, Yiwu is the largest wholesale and agricultural/manufacturing commodities center in China. Spain is its third trade partner after US and UAE.

2. **China-Europe land-sea express passage**, originating in the Greek Port of Piraeus in the South and ending in Hungary in the North, is "an extension and upgraded version" of the planned Hungary-Serbia railway running through Belgrade and Budapest to connect China. The express passage links the Mediterranean with the Danube.

3. A 500 km **high speed rail link** between Belgrade, Serbia and Budapest, Hungary. While the current journey for both passengers and freight takes 8 hours, the high speed rail would cut the time in half.

4. This summer in Serbia, China's second-biggest steel producer (Chinese HeSteel Co., a.k.a. China's Hebei Iron and Steel), bought the **Zelezara Smederevo Steel Plant** part of the **privatization** process initiated by the Serbian government. The Steel Mill employs 5,050 workers and registered a net loss of $113 million in 2015. Like everywhere else, the European steel industry suffers from over-capacity and they point the finger at China for over flooding the global market. China Machinery Engineering Corporation (CMEC) started the construction of a 350 MW unit at the **Kosotolac Thermo Power Plant** despite environmental concerns.

Among the expected projects:

5. Via Carpathia, a Polish proposed transport corridor project originating in Lithuania, passing through Poland, Slovakia, Hungary, Romania, Bulgaria to Greece, would reach both the Black and the Aegean Sea.

6. A Chinese company will build two new nuclear reactors at Cernavoda, Romania. Together with the two existing ones, will supply 20% of Romania's electricity.

7. In Slovenia, China Southern Airlines might buy a stake in Ljubljana airport and Adria Airways.

8. In Croatia, China might invest in the Port of Rijeka and the railway line to Botovo. Rijeka is very close to key cities on the Mediterranean corridor as well as the Rhine-Danube corridor.

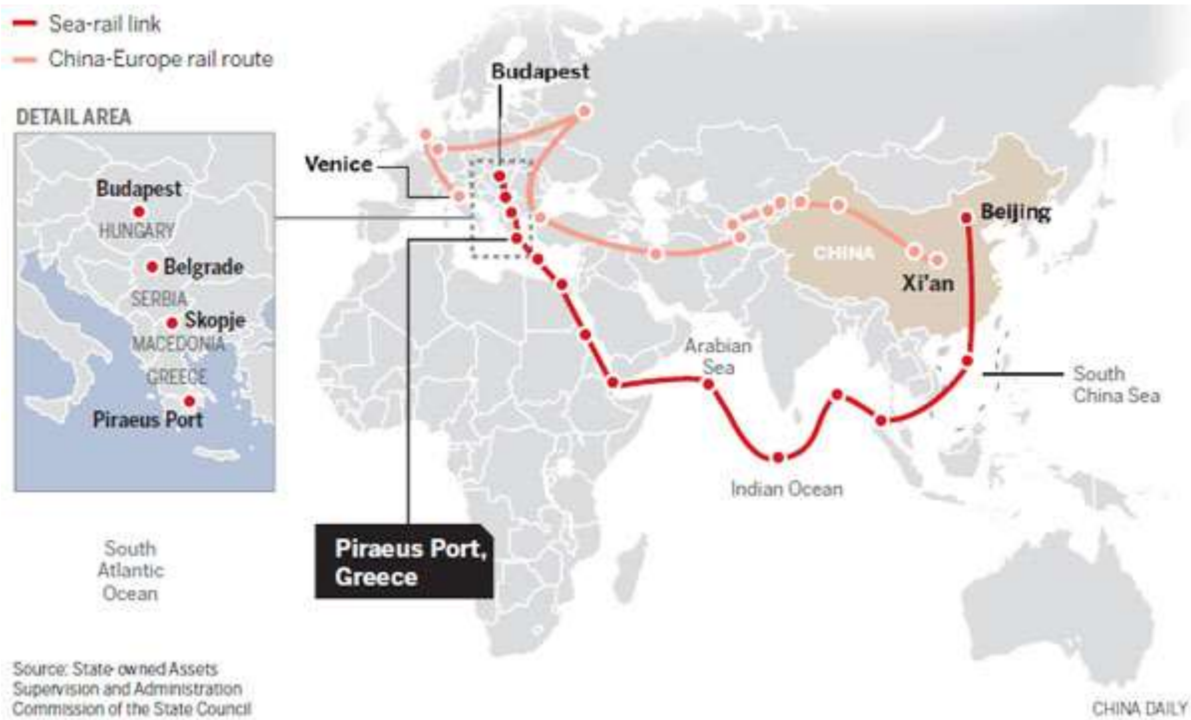
Poland – Greece: Puzzle Pieces Fit In

Poland was among the first countries to respond positively to OBOR. In 2015, 50 trains filled with sweets, alcohol, and dairy products left Lodz for China and the expected traffic for 2016 is of 500 trains in both directions. China sees Lodz as a communication hub with Europe and especially when connected (as planned) to the port of Piraeus in Greece.

Everything clicks into place considering that earlier this year Beijing and Athens signed a €368.5 million deal to sell 51% of the Piraeus Port Authority to Chinese shipping group COSCO. Piraeus is a gateway to Asia, Eastern Europe and North Africa that handled 16.8 million passengers and 3.6 million 20-foot containers in 2014.

The Port of Piraeus is extremely valuable to China in the optics of the continent's economics and security and is a key component of the China-Europe land-sea express passage. It is close enough to the Suez Canal, and yet, in the Euro-zone and Schengen space which implies relative security and stability, minimum bureaucracy and free movement of goods throughout the whole EU. From a connectivity point of view, the Ikonio - Thriasio rail line inaugurated in 2013, but not yet fully functional, links the port to the Thriasio logistics center, one of the most important intermodal transportation hubs. When the rail will be operational, the ships that now have to circumvent the continent to Antwerp, Rotterdam, Amsterdam and Hamburg to reach northern markets will be able to offload their freight at Piraeus and then load up the containers on a freight train.

Fig. 3 Piraeus Port, a key element in the expansion of trade between China and CEE



The Funding

Despite US lobby against the AIIB, many European countries see value and potential benefits for their companies from a stronger relationship with China and a contributing role in developing the modern infrastructure in Asia. The CEE countries are generally regarded as not having the excess capital to invest in an extra-regional bank, yet **Poland** joined as founding member. Its hope is to improve the trade balance with China (Poland exports about EUR 2 billion to China and imports about EUR 19 billion), facilitate access of Polish companies to the Asian markets, as well as gain a first row seat in the decision making process on the infrastructure projects AIIB will support. This line of thinking complements Poland's recently launched "Go China" strategy which encouraged Polish entrepreneurs to cooperate with Chinese business partners and explore the Chinese market. Poland is China's largest trading partner in CEE.

The Commercial and Industrial Bank of China also announced in November that it set up a $11.15 billion investment fund to finance projects in CEE. The fund will be administered by a China – CEE financial holding and aims to raise 50 billion euros more for financing infrastructure, high-tech manufacturing and consumer goods.

Freight Train Services between China and Europe

On October 6, 2008, first freight train from China arrived in Hamburg, Germany, 17 days after departing from Xiangtan in the Hunan province. The event marked the beginning of a new era in trade relationship between China and Europe, but it was too inconsistent and too slow to gain any real market appeal. Heavily depending on volumes, the operator would have to wait days to achieve capacity. The situation changed with the Chengdu-Lodz rail shipments. In 2012, Sichuan – Lodz was one of the first rail lines between China and Europe. The train connected Dell's manufacturing operations in Chengdu with those in Lodz.

Eight years after the first train, in the first week of November (2016), the first trans-Eurasia container train linking China to Latvia arrived in Riga, marking an important success for OBOR. The 84 containers train travelled 11,000 km in 17 days from the city of Yiwu in the Zhejiang province (200 km from the port of Ningbo) following the China - Russia - Latvia route. Latvia is the first Baltic nation to have established a direct rail freight route with China under the unified brand China Railway Express. But other European countries, with Poland at the center, are taking advantage of this opportunity now that shipping cargo through Russia and Caspian Sea countries is as reliable and hassle free as the maritime routes. Other European countries are jumping on the opportunity. Not to flood their markets with Chinese products, but to allow their manufacturers to reach growing markets in Eurasia.

The success of the new railroad routes gave birth to New Silk Way Logistics, a joint venture between three European freight forwarding companies: Essers, Wagenborg, and KLG Europe. A new type of self-supporting shipping container was designed by a Netherlands-based shipping container manufacturing firm called Unit 45, specifically for extreme long distance rail freight in the extreme temperatures of the Russian winters. The 45-foot-long steel containers are equipped with 800-liter diesel tanks that can heat and cool for at least 22 days without refueling. The lead times now between the outmost part of China and a Baltic country are around 17-18 days.

Image: Unit45.com

The Challenges of the Asia – Europe Rail

From a **cost** point of view, the rail option, at $4,000 for a 40-foot container, is significantly cheaper than air fright but compared to the maritime option at roughly $1,700[3], as of now it only makes sense for high-value goods. The rail, even heavily subsidized by the Chinese government, cannot possibly compete with the historical low prices of the ocean freight. Combined with the capacity constraints, it indicates that while it might take away some business from air freight, it will never be a real competitor to ocean freight. The trade-off between expensive air shipments and long lead times ocean freight benefits the perishable industries (although Russia as of now sanctions perishable transports), the electronics manufacturers, fast fashion and high turn around industries.

A second challenge is **filling the returning China bound containers**. According to New Silk Way Logistics, less than 10% of westbound containers are reloaded with cargo for their return trip east. Solving this inefficiency, trade imbalance, and waste, is proving to be problematic, but as more and more European companies start taking advantage, the problem becomes smaller and smaller. It is just a matter of time.

Lastly, a less known hindrance but one responsible for up to 2 days of lead time, is the difference in **railway track gauges**. Half of the railways in the world use the Standard Gauge: 1,435 millimeters (4 ft. 8 ½ in) and it is the case of China and most of the European countries. Russia, Mongolia, Baltic and the CIS countries use 1,520 millimeters (4 ft. 11.8 in) while Spain and

[3] The ocean rates for a 40-foot container originating in Shanghai or Ningbo and headed for either Rotterdam, Antwerp or Hamburg are $1,750 to which destinations fees varying from $700 to $820 are added. Destinations fees include DTHC, ISPS, destination handling, customs clearance and delivery.

Portugal use 1,668 mm (5 ft 5 21⁄32 in). The break of gauge for freight trains is very cost, time and labor intensive and can cause goods to be damaged. The way China – Europe train route is set, the freight train will have to change gauge between 2 and 3 times. For high frequency freight transport this is unsustainable.

Conclusion

Despite the heavy subvention, the China-Europe freight trains are a cost-lead time trade-off. About four times more expensive than the maritime route they reduce lead times by half. Which means that for now, it makes sense only for high value goods and a handful of industry sectors. However, as the route will become more efficient, more and more companies will jump on the opportunity. The same cost-lead time trade-off will most likely hold for the Piraeus-northward route when the various segments will be completed.

China is slowly and steadily entering the heart of Europe through the CEE countries and the EU can do little to stop it. As the puzzle pieces come into place, the European companies are increasingly taking advantage of the alternative routes and the Chinese investments. These companies will pressure their governments for the extension of these routes, making it almost impossible for the EU to take a firm stance against China. As other European countries, including Germany, UK and Ireland, give in to the allure of Chinese investment, it is only a matter of time until the 16+1 platform will become the framework for a EU-China Trade Agreement.

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About MES Inc.:
MES is a global sourcing and supply chain management company which develops custom engineered solutions for clients ranging from finding and auditing suppliers, developing quality systems, consolidating shipments, performing domestic value added operations, warehousing and shipping Just-In-Time. Based in Columbus, OH and with offices in China, India, Mexico and Australia, MES counts over 100 associates, mostly quality engineers, supply chain analysts and sales account managers. The company has been recognized for the fifth year in a row as one of the fastest growing American companies.

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Annexes

Annex 1 - List of Abbreviations

AIIB – The Asian Infrastructure Investment Bank
CEE – Central and Eastern Europe
CIS – Commonwealth of Independent States
EU – European Union
NAFTA - The North American Free Trade Agreement
OBOR – One Belt, One Road - Silk Road Economic Belt and 21st Century Maritime Silk Road
TPP - The Trans-Pacific Partnership Agreement
TTIP - The Trans- Atlantic Trade and Investment Partnership

Annex 2 – Europe is not a unique space

EU Member States[4]

NATO Member States

[4] UK status undefined after Brexit. Even in the EU there are different spaces e.g. Euro-zone, Schengen

Central Eastern European Countries (CEE)

Balkan Countries

South Eastern European Countries (SEE)

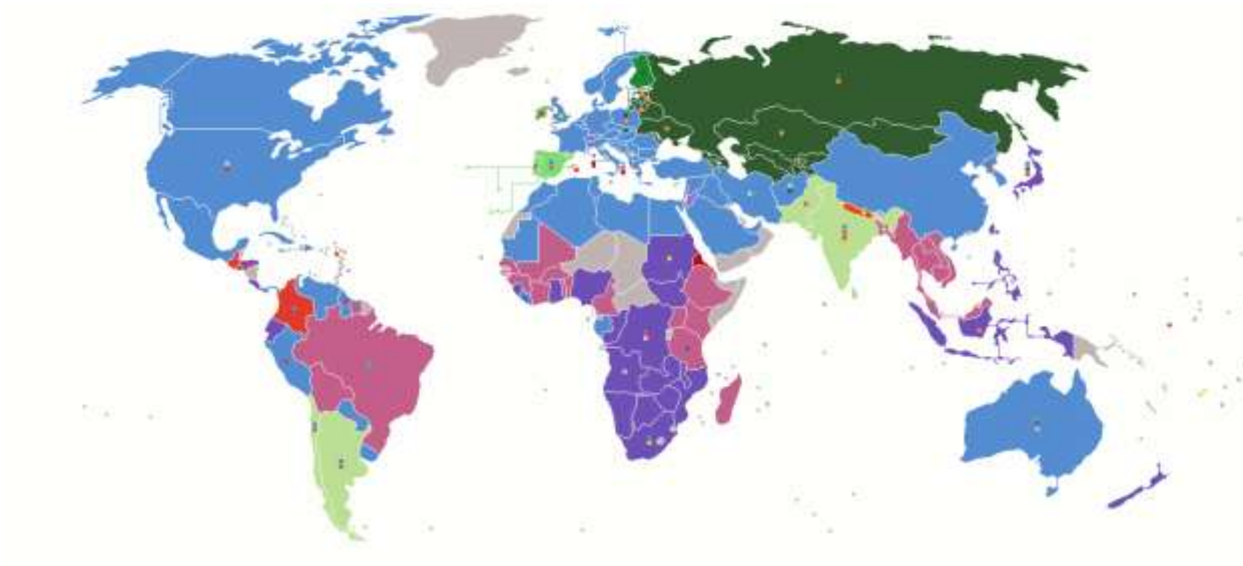
Visegrad Group, also called the Visegrad Four, or V4 (yellow) and Baltic States (purple)

Scandinavian Countries

Adriatic countries

Annex 3 The founding member of the AIIB

Annex 4 The differences in railway gauges across the globe



mm	1676	1668	1600	1524	1520	1435	1372	1067	1050	1000	950	914	762	750	610	600
ft in	5'6"	5'5.67"	5'3"	5'	4'11.8"	4'8.5"	4'6"	3'6"	3'5.3"	3'3.4"	3'1.4"	3'	2'6"	2'5.5"	2'	1'11.6"