



THE EURASIAN LANDBRIDGE: IMPLICATIONS OF LINKING EAST ASIA AND EUROPE BY RAIL

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Since 2011 regular freight rail services have been established between the EU and China.

My background paper analyses the development of these links – the Eurasian Landbridge – and argues that its origins were market-driven in response to demands of lead firms in Eurasian value chains.

The rail services are consistent with EU and Chinese hopes for improved connectivity, reflected in major foreign economic policy announcements by the Chinese president (*the BRI*) and by the EU Commission (*Connecting Europe and Asia*).

The resulting connectivity is likely to survive any bilateral political debacles because the economic foundation is strong.

SILK ROADS were clearly profitable: although often disrupted by nomads; cities on the routes prospered



BUKHARA (Kalyan Minaret – 1127)



VASCO DA GAMA – 1498 – route to India



CONTAINER SHIP 2015

– Capacity >20,000 TEUs



OVERLAND TRADE BETWEEN EAST ASIA AND EUROPE DISAPPEARED BETWEEN 1500 & 2000



By 2000, track for at least four mainlines existed, but none was used as a significant China-EU link

- TransSiberian Railway – 1891-1905 – NE China – Mongolia
 - › limited use by China after Sino-Soviet split in 1960
- Kazakhstan-PRC rail link opened in 1990
 - › mainly bilateral trade (coal, iron & steel from Kazakhstan to PRC)
- TRACECA –route via Turkmenbashi-Baku Caspian Sea crossing
 - › multimodal + costs of crossing Uzbekistan & Turkmenistan
- TransAsian mainline – China-Tehran-Istanbul
 - › a line on UN maps

overland routes could not compete with ships

TRIAL RUNS AND BESPOKE SERVICES



- Hamburg – Shenyang via TransSiberian Railway
 - › block trains in 2008-9 carrying components for German joint venture car assembly operations in China (VW/Audi in Jilin; BMW in Shenyang).
 - German companies' passenger car production in China = 1.8 million units in 2010, & 4.6 million in 2016

- (Korea) – Lianyungang – Andijan (Uzbekistan)
 - › components for Daewoo joint venture car assembly operations in Uzbekistan
 - now GM-Uzbekistan but still using Korean components

These trips showed that overland rail transport was feasible, but:

- not useful for other potential customers because they were not run to a schedule between East Asia and Europe
- overland freight was still believed to be uncompetitive with sea transport

EXPORTING FROM WESTERN CHINA



In 2011 and 2012 individual trains connected Sichuan Province and Chongqing Municipality with Europe
regular rail service between Chongqing and Duisburg was established in 2013 (3 times a week in 2016; daily in 2018),

- faster than sea and lower cost than airfreight,
- products for which time and certainty are most important = global value chain (GVC) products
 - › attractive to electronics firms in Western China (e.g. HP, Acer and Foxconn) supplying EU markets and to EU firms shipping parts to their operations in Western China (e.g. VW, Audi & BMW).

EXPANDING THE NETWORK



Competition between routes → greater choice and competition in service provision:

- refrigerated containers, part-loading, better connectivity from hubs, etc.

China-EU rail service, compared to maritime routes;

- > ↓ time + ↑ price
- > regular scheduled services → ↓ uncertainty

Number of routes and freight traffic increased rapidly

Trade costs = money, time, uncertainty

Cost and time advantage of rail has been growing – and rail is more environmentally friendly than sea or air

CHINA RAILWAY EXPRESS ROUTE MAP, MAY 2017



Volume of Traffic on China-EU-China Container Trains, 2015-20



Year	Number of twenty-foot equivalent containers (TEUs)
2015	46,000
2016	100,500
2017	175,800.
2018	280,500
2019	333,000
2020	331,000 (to August)

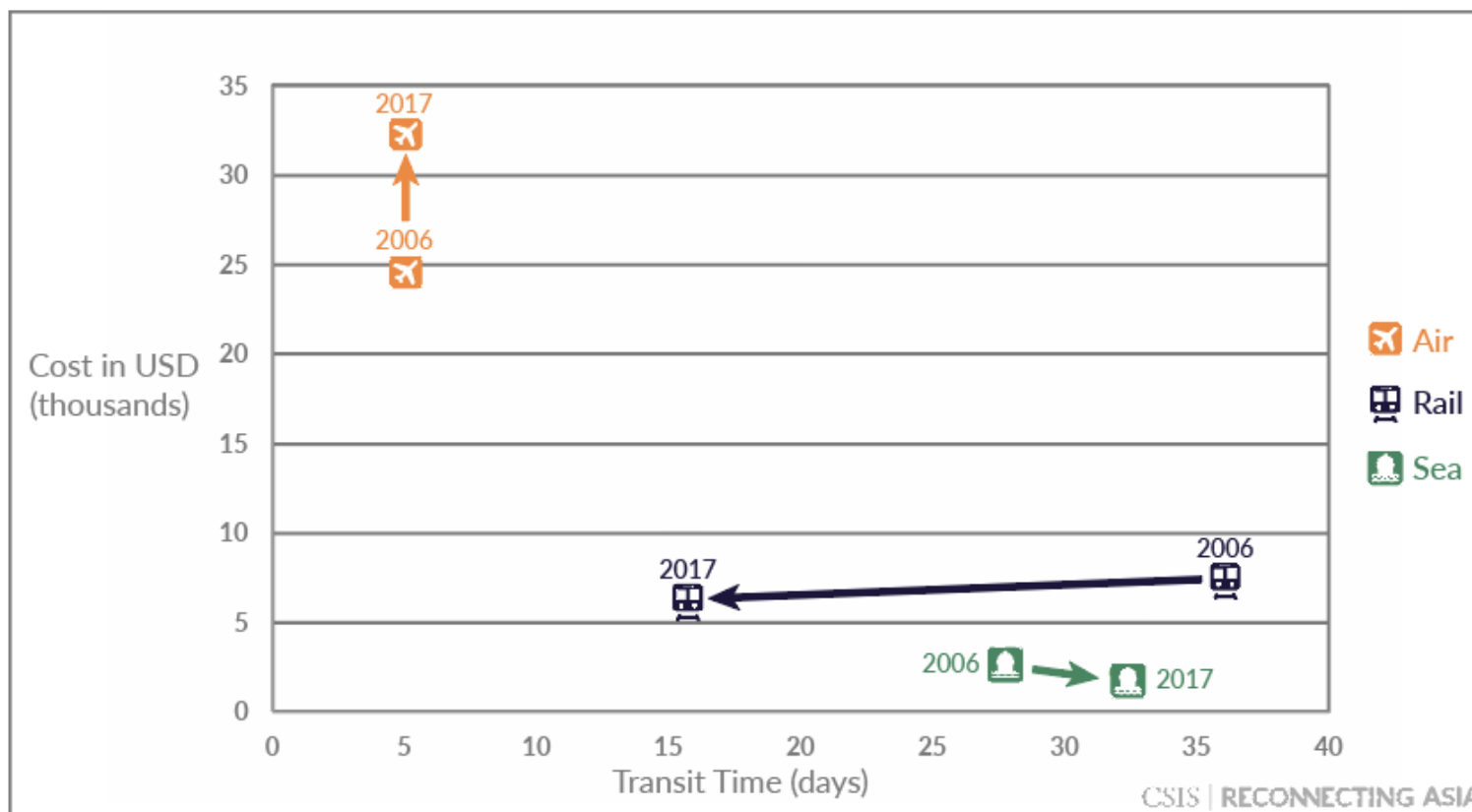
Source: UTLC website at www.utlc.com (accessed 31 August 2020)

Note: Belarus, Kazakhstan and Russia have equal shares in the joint stock company United Transport and Logistics Company (UTLC) that provides services for transportation of containers by regular container block trains on the route China-Europe-China through the three countries.

TIME AND COST OF SHIPPING A FEU (40-FOOT EQUIVALENT UNIT) CONTAINER FROM SHANGHAI TO HAMBURG BY AIR, RAIL AND SEA, 2006 AND 2017.



Source: Hillman (2018), Redrafted from Zhang (2017).



PS ON COVID-19



In 2020, the COVID-19 pandemic seriously disrupted international maritime trade.

- containers and ships were out of location as managers dealt with crew safety issues and dockside biosecurity.
- air freight essentially stopped and transport by road was seriously disrupted by requirements for drivers to be tested for COVID at border crossing points, disinfectant procedures and other regulations.
- Rail transport was less affected, and acceleration of digitalization and paperless trade may even have improved the efficiency of rail transport across multiple borders

Manufacturers, distributors and logistics agents, who had previously relied upon maritime transport between East Asia and Europe, turned to overland freight routes.

Although initially disruptive for many operators, the overland alternatives often turned out to be easier and more profitable than anticipated as users experienced reliable delivery schedules, at a time when the air freight alternatives had become increasingly expensive.

In May 2020, at the height of the crisis in Europe, 52,500 TEUs were shipped on the Landbridge, the highest ever figure for a single month

POLICY DEVELOPMENTS IN CHINA AND THE EU



China's Belt and Road Initiative (BRI) - announced 2013, officially launched 2017.

- › Infrastructure investment is a key component of the BRI and the Belt is overland routes west from China. However,
 - the first trains the rail Landbridge preceded the BRI,
 - much of the activity driven by local governments rather than at the national level.

The Trans-European Transport Network (TEN-T) - an EU top priority in 2020.

- › 2007-12 RETRACK project aimed to induce a modal shift of freight traffic to rail
 - RETRACK's focus was on developing a high-quality commercially sustainable rail freight corridor from the North Sea to the Black Sea (Rotterdam-Constanza), but it also considered prospects for establishing "Eurasian land-bridges" to China. In 2017 Eastern Partnership states included.

The Joint Communication on Connecting Europe and Asia (European Commission, 2018) recognizes the significance of looking east and includes specific proposals.

CONCLUSIONS



- The Eurasian Landbridge a.k.a. the Belt in the BRI
 - › began by connecting regional value chains in East Asia and Europe,
 - › and has expanded into a set of regular train services increasing sustainable connectivity between the EU and China during the decade of the 2010s

- This market-driven development preceded, and complemented, major foreign economic policy announcements by the Chinese President (the *Belt and Road Initiative*) and by the European Commission (*Connecting Europe and Asia*) and reinforces their goal of increased connectivity.

- The resulting connectivity is likely to survive any bilateral political debacles because the economic foundation is strong.
 - › The Landbridge is also more environmentally friendly than alternatives
 - Air freighting a 12,000-kg load from Chengdu to inland Western Europe produces about 54 tonnes of carbon dioxide, shipping by maritime and rail routes produces 3.3 tonnes, and railfreighting across the Landbridge produces 2.8 tonnes



THANK YOU

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