

# The Iron Silk Road: How will Turkey be Involved?

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Onur F. Uysal\*

The Iron Silk Road, the railway corridor connecting China to Europe and Middle East, is one of the fastest growing railway corridors in the world. China's strategic plan for creating strong economic ties with Eurasia, known as 'One Belt, One Road', is the primary source of this growth, though not the only one. Many other countries, including Iran, Russia, Azerbaijan, Kazakhstan, and Ukraine, all have specific political and economic interests in this new corridor. Turkey, located on the ancient Silk Road and at the crossroads between Europe and Asia, has ambitious targets with regard to its involvement in the Iron Silk Road. This article discusses Turkey's current and future position in Iron Silk Road, including its efforts and investments in the initiative, such as the Marmaray tunnel and Baku-Tbilisi-Kars railway projects.



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### *The Iron Silk Road*

In the 19<sup>th</sup> century, Ferdinand von Richthofen named one of the world's oldest and largest trade routes, running from China to Turkey, 'the Silk Road'. At that time, the Silk Road referred to two overland and sea routes from China to the Middle East and Mediterranean Sea, continuing to Europe by sea.

Two hundred years later, China once again has become the main supplier, this time at the global level. Today, China is producing more than 13% of the world's total GDP, the second biggest after US.<sup>1</sup> Its international trade turnover is even more remarkable. In 2014, Chinese ports handled 181,635,245 TEU, far ahead of the second ranking country, the US, with just 46,488,523 TEU.<sup>2</sup>

The modal share of maritime transport is about 90% in the world. The modal split in freight traffic between Europe and China accords an even greater share to maritime transport, with 96% of international trade transported by sea.<sup>3</sup> But while maritime routes may be cheap, simple, and easy, they are not fast. The port-to-port transit time between China and Europe is about 30-40 days, too slow for some industries.

Beyond the very fast but also very expensive option of transport by air, rail transportation has since 2010 become an interesting alternative for European industries interested in reducing transit times. The 15-day delivery times from Chinese industrial regions to Germany via railway offered a solution, leading to a significant boost in container traffic via rail over the last five years. In 2010, container traffic between China and Europe on rail was less than 6,000 TEU; last year, this rose to over 80,000. This route is now known as the 'Iron Silk Road'.

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### *One Belt, One Road: China's ambitious program*

As mentioned above, 13% of global GDP is produced in China - but not, in fact, *only by* China. Foreign investments are playing an important role in China's industry, producing 10.5% of its GDP in 2014<sup>4</sup>. Many global companies have chosen China for

<sup>1</sup>The World Bank (2015) GDP at market prices. Available at <http://data.worldbank.org/indicator/NY.GDP.MKTP.CD> (Accessed: 13 June 2016).

<sup>2</sup>The World Bank (2015) *Container Port Traffic*. Available at: <http://data.worldbank.org/indicator/IS.SHP.GOOD.TU> (Accessed: 17 February 2016).

<sup>3</sup>The Chamber of Commerce of the United States (2006) *Land Transport Options Between Europe and Asia: Commercial Feasibility Study*. U.S. Chamber of Commerce and Rambøll Danmark A/S.

<sup>4</sup>United Nations Conference on Trade and Development (2015) *Foreign direct investment flows and*

investment for now. However, everybody knows how easily and cheaply capital, people, goods and information can move.

Stability requires not only sustainable market appeal, but also the availability of open and effective transport connections to the rest of the world. This is one of the major problems China faces. The country lacks a strong position in two key respects: first, in the containership industry modal (the top three containership operators are from Europe);<sup>5</sup> second, in terms of the route. China has never become an important power in the Middle East, which remains the most critical location on the sea route between China and Europe.

In September 2013, the President of China, Xi Jinping, introduced the One Belt, One Road program with the intention of supporting economic cooperation and bounds across Asia as well as with Europe and Africa. This development strategy is not limited to political and commercial attempts to increase bilateral trade; a new government fund has also been set up to support infrastructural investments involving Chinese companies in other countries. The fund, worth \$40 billion,<sup>6</sup> has been compared by some to the Marshall Plan.

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In March 2015, the Chinese National Development and Reform Commission published a strategy document, which introduced the main routes of the One Belt, One Road program.<sup>7</sup> To the west are the overland routes to Central Asia, Russia, Europe, the Persian Gulf, the Mediterranean Sea, Southeast Asia, South Asia and Indian Ocean, described in the document as ‘The Silk Road Economic Belt’. Running southwards are the maritime routes to Europe, South China Sea and South Pacific, the ‘21<sup>st</sup> Century Maritime Silk Road’.

The framework of the vision is set forth in highly detailed terms, focusing on the development of new economic corridors to the

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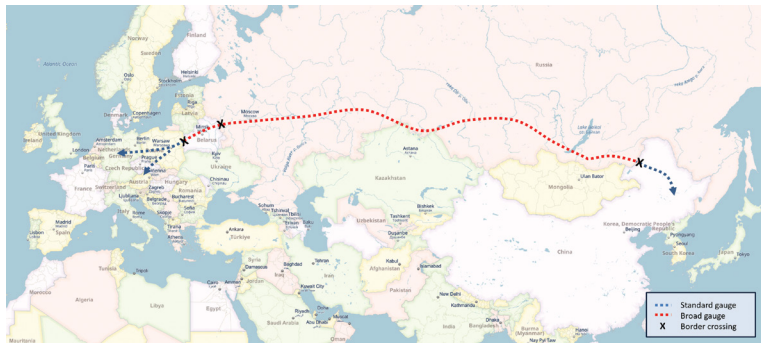
5 International Chamber of Shipping (2014) *Top 20 Containership Operators*. Available at: <http://www.ics-shipping.org/shipping-facts/shipping-and-world-trade/top-20-containership-operators> (Accessed: 17 February 2016).

6 HKTDC Research (2016) *The Belt and Road Initiative*. Available at: <http://china-trade-research.hktdc.com/business-news/article/One-Belt-One-Road/The-Belt-and-Road-Initiative/obor/en/1/1X000000/1X0A36B7.htm> (Accessed: 18 February 2016).

7 National Development and Reform Commission, Ministry of Foreign Affairs, and Ministry of Commerce (2015) *Vision and Actions on Jointly Building Silk Road Economic Belt and 21st-Century Maritime Silk Road*. Available at: <http://tr.china-embassy.org/eng/xwdt/t1251131.htm> (Accessed: 18 February 2016).

regions listed above. In regard to the Iron Silk Road, the Commission is aiming to build a new Eurasian Land Bridge by using international transport routes, investing in critical cities on way and cooperating with key economic players.

There are not many options for developing overland connections. Constructing long-distance railway corridors may be difficult and expensive, but surely the only sustainable choice in terms of speed, operational costs, environmental facts and management of huge volumes. Since China also offers funding for these projects, none of the countries hesitated to be involved in these emerging trade corridors connecting China to Europe. This vision requires the revitalization of existing rail infrastructure and/or construction of new connections, which in turn needs funding. China has not only the money, but also the knowledge and industrial capacity. Thus, the vision for the One Belt, One Road program can be realized through development of rail infrastructure, with the Iron Silk Road as an overland network connecting China, Europe, and the Middle East.

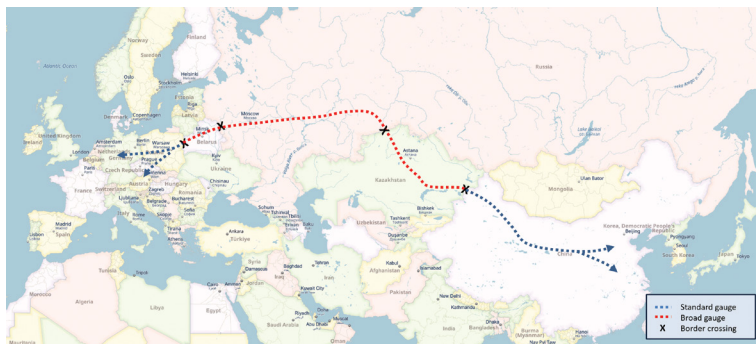


Trans-Siberian route map

### *Trans-Siberian route*

This route starts in Northeast China, crosses Russia via the Trans-Siberian railway, and runs through Belarus to reach Poland. The route has two break-of-gauges (as do all the other options), but has the advantage of fewer border crossings. Russia's dedicated efforts to develop this ambitious project have been successful, and this route currently transports half of the China-Europe overland traffic.<sup>8</sup>

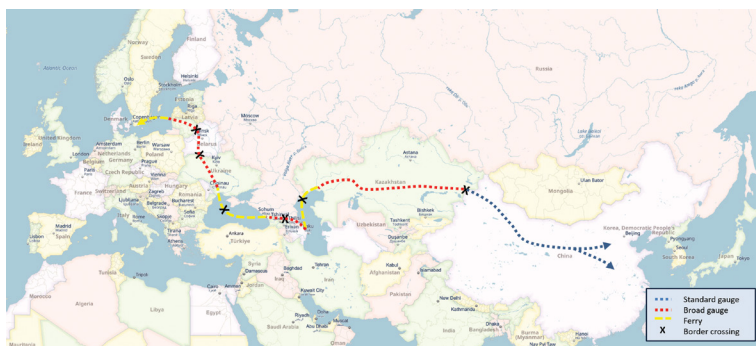
<sup>8</sup> Kaderavek, P. and Tsuji, H. (2014) 'Trans-Siberian In Seven Days – Addressing The Challenge', *Railvolution*, 2/14, pp. 28-31.



Kazakhstan-Russia route map

*Kazakhstan-Russia route*

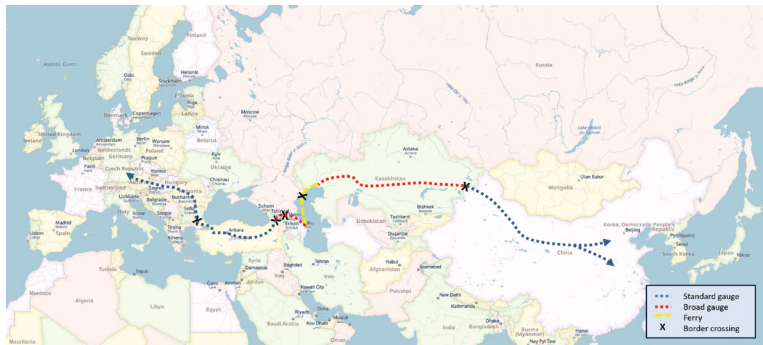
This route has achieved the top growth rate among the various options. Last year, Kazakhstan carried 42,000 TEU via this route, 40 times more than in 2011. The route follows the corridor towards Eastern China, crosses Kazakhstan, Western Russia, and Belarus, ending in Poland. The connection via Kazakhstan not only allows easy access to almost all regions of China, but also provides major benefits for China’s western regions in the context of the Chinese government’s economic development program in that area. Kazakhstan, another regional country keen to create new transport connections, is probably the top in the list with highest (and fastest) investments in rail transport in Central Asia and the Middle East. In addition to new railways constructed in East-West and North-South directions, KTZ Express, a subsidiary of Kazakhstan Railways, has been investing in container terminals in both China and Kazakhstan, together with Chinese companies.



Kazakhstan-Azerbaijan-Georgia-Ukraine route map

### *Kazakhstan-Azerbaijan-Georgia-Ukraine Route*

Only one trial run has been conducted on this route to date. The route, classified as an intermodal route, was created as a result of major efforts by Ukraine, which was seeking new international connections following the crisis with Russia. This route is a candidate for completing the Trans-Caspian route, which currently ends at Poti Port in Georgia. The route follows the East-West railway corridor through China and Kazakhstan to Aktau Port, Kazakhstan's biggest Caspian Sea port. After crossing the Caspian Sea (via container vessels or rail ferries), it reaches Baku Port, crosses Azerbaijan to reach Georgia's Black Sea port at Poti. The route connects to the Viking Train at Ukraine's Ilichevsk Port after crossing the Black Sea via container vessels. The Viking Train connects the route to the Baltic countries, which have strong connections to the rest of Europe. While at present the route may not be a competitive alternative for China-Europe traffic, it may be a good solution for transportation between the Caucasus and Central Europe in the future.



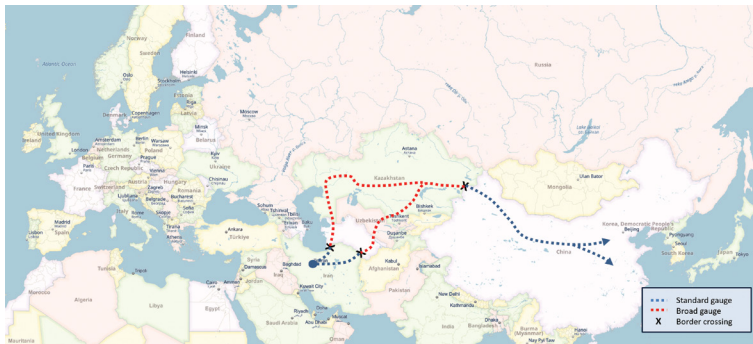
Kazakhstan-Azerbaijan-Turkey route map

### *Kazakhstan-Azerbaijan-Turkey route*

Although not yet complete, this route deserves close examination, given that it is the result of close cooperation of Azerbaijan, Georgia, and Turkey. This route is very similar to the one above: Eastern China-Kazakhstan-Caspian Sea-Azerbaijan-Georgia. However, on reaching Georgia, it will follow the Baku-Tbilisi-Kars railway onto Turkey instead of going to Poti Port.

The Baku-Tbilisi-Kars railway will replace the existing connection between Azerbaijan and Turkey via Armenia, which has

closed since 1993. Azerbaijan and Turkey took on financial responsibility for this project when faced with Europe's unwillingness to support its development. Having been delayed for six years due to financial, logistical, and legal problems, the project is expected to be commissioned in 2017. The opening of this railway will mean that the route crosses Turkey and it goes over the Bosphorus (at first via rail ferry, and then through the Marmaray tunnel once that is completed in two years' time). Then it can be linked to rail container traffic between Turkey and Europe. This line has been partially tested a couple of times, up until Poti, with the remainder of the route handled by truck and sea connections.



Kazakhstan-Turkmenistan-Iran route map

### *Kazakhstan-Turkmenistan-Iran route*

This route has recently been tested with a container train from Yiwu, China to Tehran, Iran. The train crossed Kazakhstan and Turkmenistan via recently completed railway sections, and then continued onto Tehran, taking 14 days. While this time frame is competitive in comparison with sea transport from China to Iran, it may not be sufficiently attractive enough for further connections to Turkey and especially Europe. Turkey has never demonstrated interest in a railway connection to China via Iran, although this is currently the only available rail link between China and Turkey.

### *Russian dominance of the transport market*

The Trans-Siberian and Kazakhstan-Russia routes carry almost 100% of China-Europe traffic. Unsurprisingly, the entire volume of traffic, both ways, is currently controlled by Russian Railways. Russia has put enormous efforts into creating an efficient and competitive transport solution, including reengineering all the processes and operations along the route. It would be difficult

for any other three alternatives bypassing Russia to overcome its market dominance.

On the other hand, this prospect is not impossible. There are a number of political and economic factors that could strengthen the position of the routes bypassing Russia.

#### *Breaking isolation*

For some countries, involvement in international transport corridors is a means of reducing political and economic isolation. Iran's aggressive strategy for attracting transit traffic is a good example of its efforts in this regard; where Ukraine's 60% discount in rail freight tariff for trains between China and Europe is another.<sup>9</sup>

#### *Creating alternatives*

No one would be content to rely on a single route. Although the Kazakhstan-Russia route grows very fast, Kazakhstan also invests in Trans-Caspian route. Azerbaijan has invested in Baku-Tbilisi-Kars railway to be connected to Mediterranean ports of Turkey, but is also working on a rail connection to Iran ports. China, having close relationships with Russia, is still supporting any trial on any of the routes.

#### *Backloads*

China-Europe traffic suffers from back loads to China. There's less good flow from Europe to China, than it's from China to Europe. This ends up with empty trains in eastward direction. However, there is strong freight traffic in the West-East direction, notably Turkey to Kazakhstan. The lifting of the international sanctions against Iran may also improve eastward trade flow.

#### *New political tensions*

Political tensions across the region affect all routes. The escalation of tensions into a crisis in any of these areas could place a sudden limitation of the routes available, leaving the market open to others.

#### *Turkey's big ambitions*

Turkey has on many occasions expressed its interest in becoming a political and economic bridge between East and West. Ankara's strategy includes creating energy, air, sea corridors passing through Turkey, although the best known projects focus on

<sup>9</sup> Uysal, O. (2015) 'Competition for Transit Loads on Rail', *Rail Turkey*, 9 January. Available at: <https://railturkey.org/2015/01/09/countries-compete-transit-load/> (Accessed: 20 February 2016).



development of rail connections.



Turkey's new international rail connections map

The Marmaray rail tunnel, which runs under the Bosphorus, is undoubtedly the most famous of all Turkey's transport initiatives. The Marmaray Project will provide a rail connection between Turkey's European and Asian sides. The project, worth TL10bn (€3bn), aims to become the main rail solution for cargo between Europe and Asia. There is an existing rail connection, via the ferry service between Tekirdag and Derince, however, the tunnel will be cheaper and faster.

The Baku-Tbilisi-Kars Railway is another key project for Turkey. The project entails the replacement of the existing rail connection between Turkey and Azerbaijan via Armenia, which has been closed since the early 1990s due to Armenia's military aggression against Azerbaijan. The route will not only connect Azerbaijan to the Mediterranean Sea, but will also link Turkey with Central Asia and China. Despite a range of technical, political, and economic challenges, both governments remain committed to this project. With this railway and the Marmaray tunnel, Turkey plans to establish a continuous service along the China-Kazakhstan-Azerbaijan-Turkey-Europe rail corridor. Initially, the line will have an annual capacity of 1 million passengers and 6.5 million tonnes of freight, rising to 3 million passengers and 17 million tonnes of freight in long term<sup>10</sup>. Considering that in 2014, Turkey's international rail traffic was 1.7 million in 2014, this would entail a major boost.

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<sup>10</sup> Ministry of Transport, Maritime Affairs and Communications (2014) *Ulaşan ve Erişen Türkiye 2014*. Ankara.

International connections can play a vital role in the development of a specific mode of transport. Georgia is a notable example in this regard; 60% of total volume of rail freight carried by Georgian Railway (JSC) was transit loads, the trade between third countries crossing Georgian territory, in first half of 2015<sup>11</sup>. Given the negligible transit rail traffic (1% of total rail freight), Turkish State Railways (TCDD) has ambitious plans to strengthen international connections. The rail ferry connection to Russia between Samsun and Kavkaz Ports, direct rail connections to Iraq and Nakhchivan, a high speed rail connection to Europe and Iraq, new rail-connected main hub ports, and the revitalization of Hejaz Railway are all important projects that can help TCDD increase transit traffic.<sup>12</sup>

All these projects, together with the need to renew old infrastructure, requires dedicated funding. During the last three years, the railways have received the lion's share of the state transport investment budget, with the aim of bringing about rapid changes in the role of rail transport. The Turkish government's official targets envision an increase in the modal share of railways from 4% to 15% in freight, and from 1% to 10% in passenger transportation by 2023.<sup>13</sup>

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*Turkey's future: A SWOT analysis*

Ankara has repeatedly expressed its desire to attract Silk Road traffic to Turkey, and has made substantial investments to this end. Nonetheless, Turkey's role in this regard is not necessarily easy to envision. The region is one of the fastest changing areas in the world, both economically and politically. It has been faced with a series of critical developments over the last three years: Russia's conflict with Ukraine; the lifting of sanctions against Iran; Turkey's tensions with Russia; the continuously changing power balances in Iraq and Syria. Some of these may help Turkey and strengthen its position, while others may do the opposite.

There are also structural pros and cons within the region that need to be taken into account. Turkey's structural imbalance in trade with Europe and Central Asia is probably its biggest ad-

<sup>11</sup> Georgian Railway (2015) *Company presentation*. Available at: [http://www.railway.ge/cms/site\\_images/gr\\_investor\\_presentation.pdf](http://www.railway.ge/cms/site_images/gr_investor_presentation.pdf) (Accessed: 21 February 2016).

<sup>12</sup> Ministry of Transport, Maritime Affairs and Communications (2010) *Türkiye Ulaşım ve Erişim Stratejisi Hedef 2023*. Ankara.

<sup>13</sup> Ministry of Transport, Maritime Affairs and Communications (2014) *Ulaşan ve Erişen Türkiye 2014*. Ankara.

vantage in regard to Silk Road trade. Since all of the Silk Road routes suffering from insufficient back loads in eastern direction, Turkey can step forward with its surplus in this direction, both from Europe to Turkey, and from Turkey to Central Asia.

Increased interest by European companies in Iran after the lifting of the sanctions may also work to Turkey's advantage. While there are many alternative transportation routes between China and Europe, there is only one rail route connecting Iran to Europe: via Turkey. Together with Iran, Turkey may become a vital transit hub for Silk Road traffic.

Rapid growth of international ports in Turkey could also, if well designed, encourage revitalization of the ancient Silk Road route, which runs overland between China and Mediterranean by rail, with connecting sea services. PSA's Mersin Port, Mediterranean Shipping Company (MSC)'s Asyaport, DP World's Yarimca are a few examples of these hub ports.

On the other hand, there are some disadvantages in regard to railway transportation in Turkey. Even by 2023, after all the investments, Turkish freight trains will continue to run mainly on a single-track rail network, which limits the average speed and capacity. While Silk Road trains are running with an average speed of 900 km/day in Russia and testing over 1000 km/day, trains in Turkey are running at an average speed of less than 400 km/day.

The obligation to use rail ferries is another disadvantage. A ferry across the Caspian Sea required for the Kazakhstan-Azerbaijan-Turkey route, while the Kazakhstan-Turkmenistan-Iran-Turkey route uses the Lake Van ferry.<sup>14</sup> Russia, on the other hand, can provide a ferry-free route, either via the Trans-Siberian Railway or via Kazakhstan. Ferries always mean additional cost, longer transit time, and an element of uncertainty.

The major opportunity in railway transportation in Turkey may be the liberalization of rail transportation; as of June 2016, all the relevant legislation on this matter will be completed. There is no doubt that liberalization will provide additional speed. If this is accompanied by reduced costs, liberalization may give the Turkish route an added boost vis-à-vis the alternatives.

However, instability remains the biggest threat in the region.

<sup>14</sup> Uysal, O. (2015) 'Can Turkey Replace Russia in China-Europe Rail Traffic?', *Rail Turkey*, 8 December. Available at: <https://railturkey.org/2015/12/08/can-turkey-replace-russia-in-china-europe-rail-traffic/> (Accessed: 23 February 2016).

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New sanctions, new wars, and new political alliances are all possible, and could completely change the playing field.

*What needs to be done?*

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Turkey is more focused on the conclusion of its investments than the operational details of this transport corridor. These investments do not come with a guarantee of success, despite what many seem to believe.

Turkey is not a natural transit point for Silk Road traffic. There are alternatives and very strong competitors.

Countries have strategic plans and are expending enormous efforts to maximize their chances of success. Russia's long-term efforts to double the train speed on China-Europe route is a good example.

Turkey needs to have a very clear understanding of current situation (the current players, clients, demand, cost and speed), and solid, detailed operational and commercial targets. Ankara must develop Key Performance Indicators (KPIs) for cost, transit time and capacity, set deadlines for commissions, terminals need to be correctly located and designed, etc.

Thus Turkey needs to mobilize all of its available resources to plan its path to success, sharing information transparently in order to encourage private companies to start investing.

If it succeeds, Iron Silk Road via Turkey may become one of the leading transport corridors in Eurasia which will strengthen Turkey's economical bonds with Europe, Central Asia and China.