

# Key Transportation Corridors in Northeast Asia: Overcoming Physical and Regulatory Impediments

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## 1 What are “corridors”?

“Corridor” means a total transport system to be used for international trade. The concept of “corridor” includes “hard” transportation infrastructure, such as railways, roads and ports, and “soft” infrastructure, such as border crossing procedures and quality of transportation services. The key factors determining the quality of a corridor are secured speed, security and cost in transporting the required volume of cargo.

## 2 Existing corridors and future opportunities

We have selected 8 existing and 2 potential corridors in the continent of Northeast Asia. These are judged to be important for the development of the region.

- (1) BAM Corridor via the BAM railway (TSR~Taishet~Vanino~Sakhalin)
- (2) Trans Siberian Railway (TSR) Corridor (Europe/Central Asia~Primorsky)
- (3) Manzhouli Corridor (TSR~Zabaikalsk~Manzhouli~Harbin)
- (4) Suifenhe Corridor (Harbin~Suifenhe~Grodokovo~Primorsky)
- (5) Tumen River Corridor (Jilin~Yanbien~Khasan/Rajin)
- (6) Dalian Corridor (Harbin~Changchun~Shenyang~Dalian)
- (7) Mongolia Corridor (TSR~UlanUde~Ulaanbaatar~ZamynUud~Erenhot~Beijing~Tianjin)
- (8) China Land Bridge (CLB) Corridor (Kazakhstan~Druzhba~Alashankou~Lianyungang Port)
- (9) Korean Peninsula West Corridor (Shenyang~Dandong~Sinuiju~Pyongyang~Seoul~Busan)
- (10) Korean Peninsula East Corridor (TSR~Primorsky~Khasan~Rajin - Sonbong~Busan)

Five points must be mentioned here.

Firstly, these corridors form an overall “grid” rather than ten independent “lines”. In many cases, alternative routes are available, and multiple corridors may be used in a single trip. For example, a continental shipping route from Changchun to Europe may use corridors 6, 3 and 2.

Secondly, these corridors cover just the land part of the route. The actual corridor will be completed by adding an ocean part in a shipment between the continent of Northeast Asia and Japan, Europe or North America. If maritime access is poor, an excellent land transportation corridor might not be efficiently used. For example, the Tumen River Corridor (5) must ensure a frequent and low cost feeder connection between North Korean or Russian ports and hub ports, like Busan, to give the route a competitive edge over the Dalian Corridor (6), which is known to have good maritime access.

Thirdly, there is competition among alternative routes. Users such as shipping companies and consignors

choose the most convenient and economical route. For example, in a decision on the best shipment route between Changchun and Europe, a choice may have to be made between a combination of corridor 6 to Dalian, followed by an All Water shipment, versus a continental route combining the multiple railway corridors of 6, 3 and 2. At the moment, shipment from Germany to Changchun is made via the Dalian route, taking 40~45 days. The major reason that the continental route is not used is the high rail transport cost. Additionally, transportation time is not much shorter (37~38 days), due to time-consuming (7 days) customs clearance. Similarly, for instance, with a shipment from Yanji to Japanese ports, a choice may have to be made between a combination of corridors 5 and 6 to Dalian, followed by a marine shipment, and an alternative route using corridor 5 to the DPRK or a Russian port, followed by a marine shipment.

Fourthly, each of the above corridors is extendable in the future. A possible one is an extension of the Tumen River Corridor (5) from Jilin to Eastern Mongolia, which is expected to contribute to the development of mineral resources in Eastern Mongolia. Another one may be achieved by extending the Dalian Corridor further north to Russia by connecting Heihe and Blagoveschensk by means of a bridge. These additions will help form a grid as mentioned above and create more alternative routes.

Finally, current and possible cargo volumes differ according to corridors and portions of a single corridor. For example, in the Dalian Corridor (6), the busiest part is between Shenyang and Siping. Therefore investment priorities must be set thoroughly to meet an urgent need, based on a precise cargo volume forecast study, by analyzing economic activity in the catchment areas of each corridor, and the competitiveness of the subject route versus alternative routes.

## 3 Improvement opportunities

The existing problems of corridors can be divided into three categories: unsatisfactory physical infrastructure, outdated soft infrastructure, and uncompetitive prices and services.

### (1) Physical impediments

Major problems relating to railway systems include disconnected rails in the Korean Peninsula, insufficient railway facilities, the existence of different gauges (1520mm in Russia, Mongolia and CIS countries versus 1435mm in China, Korea and European countries) and underdeveloped transshipment facilities. Road-related issues include a lack of trunk roads in Mongolia and poor road conditions in the DPRK. Another issue is a lack of distribution centers in many areas. Specific issues for each corridor are as follows:

– BAM Corridor: mostly single track railway and low

- (35%) rate of electrification
- TSR Corridor: incomplete trunk highway between Amur and Chita
- Manzhouli Corridor: gauge difference at Manzhouli border
- Suifenhe Corridor: gauge difference at Suifenhe border
- Tumen River Corridor: decrepit railway and poor road condition in the DPRK, poor loading facilities at Zarubino Port, and gauge difference at the Hunchun/Makhhalino border
- Dalian Corridor: crowded railway and Dalian Port
- Mongolia Corridor: gauge difference at the Erenhot/ZamynUud border, crowded Chinese railway, incomplete highway running in parallel, and lack of reefer containers
- CLB Corridor: lack of a cargo tracking system, gauge difference at Druzhba and poor railway condition in Kazakhstan
- Korean West Corridor: mostly single track rails in the DPRK
- Korean East Corridor: decrepit railway conditions with single track rails in the DPRK, gauge difference at the Tumangang/Khasan border

#### (2) Regulatory impediments

There are also important soft constraints that should be addressed. Improvements in the soft infrastructure could be made at a relatively low cost.

Firstly, border – crossing in Northeast Asia is still time consuming, suggesting that excessive facilitation is required in some countries. One important issue relates to the overly thorough “multiplex” CIQ (Customs, Immigration, Quarantine) procedure implemented by Russia at many border – crossing points.

Secondly, border opening hours and days are still limited. Many borders are closed in the evening, and on weekends and holidays. Borders in corridors should aim for seven day operation throughout the year and the opening hours should be extended to avoid unnecessary constraints on trade and business trips.

Thirdly, acquiring visas and/or documents for entry into the countries is difficult, costly and time consuming. Fourthly, there are constraints on the operation of vehicles within the territory of partner countries.

#### (3) Competitiveness in price and services

Even if state-of-the-art infrastructure is installed, cargo will not be attracted unless the through cost is competitive and service meets the required level. This means that competitiveness in terms of cost, quality of service and speed are crucial. Also a thorough feasibility study is necessary prior to investment decisions to make the project financially feasible.

One example is the decline of the SLB (Siberian Land Bridge) service between Japan/ROK and Europe/Central Asia, using the Siberian Railway, other rails and vessels. This service to/from Japan used to have 110 thousand TEU in 1983. The SLB route used to be much cheaper than the “All Water” route, and there were huge amounts of shipments to Iran and Afghanistan in the 80’s. However, the SLB cargo has gradually declined during the 90’s and reached four thousand TEU

in 2000. The key reason for the decline was that the “All Water” route has significantly lowered fares by introducing huge modern vessels between Asia and Europe. There is a difference in services, in that the “All Water” route provides empty containers to customers, while the SLB does not. Delays in arrival were often observed and customers gradually deserted the SLB.

There are many examples in Japan where state-of-the-art bridges and tunnels have failed to attract users in sufficient numbers to pay for them. The main reasons for lower-than-expected usage are high tolls and technical advancements in alternative ferry routes.

In general, transportation companies and forwarders have important roles in arranging an efficient and cost effective shipment, using the corridors.

#### 4 Key issues to be tackled

##### (1) Rejoining disconnected routes

It is encouraging that both Koreas are making a joint effort to reconnect the Kyonwi Line and complete the Korean Peninsula West Corridor (9). Upon completion of the Kyonwi Line, first of all, access to Northeast China from the ROK will be facilitated. Secondly, this corridor may become an alternative route to the Tumen River Corridor (5), in connecting the ROK and Yanbien Prefecture. Thirdly, the 9th corridor will further extend toward Europe through corridors 6, 3 and 2. This new railway route to Europe will have to compete with the “All Water” route and the current SLB route, using sea transportation to Primorsky, in terms of cost and services. In the longer term, the Korean Peninsula East Corridor may become another alternative. The key factor for the development of the two Korean Peninsula Corridors will be how both Koreas cooperate and how neighboring countries can help the Koreas’ initiatives. In any case, expanded competition between possible corridors should end up improving services and lowering costs.

##### (2) Managing different railway gauges

There are at least five discontinuous railway connections in Northeast Asia. These different railway gauges must be managed using modern state-of-the-art technologies. Some of the discontinuous points have been modernized by means of foreign aid. One possible way of avoiding the gauge problem is by using road transportation

##### (3) Facilitate border crossing

We should try to standardize the CIQ process according to the world standard at every border in Northeast Asia. We should also ask the Russian government to abolish additional CIQ checks by border guards. The goal will be the process currently used among EU countries.

##### (4) Alternative mode – railways or roads?

Railways used to be the central mode of transportation in the 19th and 20th centuries. However, rail transport is losing its share in cargo transportation in many countries, especially in developed nations, due to the door-to-door accessibility of vehicles at any time. The key weakness of vehicle transportation may be its high cost, especially in

shipping over long distances. Railways have advantages in shipping large amounts of bulky goods like coal, timber and grains over long distances. However, rail loses its advantages if the volume is small, speed is required, or the distance is short. Ideally, both modes should be developed in the major corridors and an appropriate mode will be chosen depending on the type of shipment.

(5) Obtaining financial support for infrastructure development

Northeast Asian countries, especially the DPRK and Mongolia, are keen to assure access to finance for

infrastructure development. The DPRK in particular has no access to international financial institutions at the moment. We should find realistic and effective ways of obtaining finance.

(6) According national and international priorities

International priorities must be consistent with national and provincial policies.

Multilateral governmental talks will be necessary with regard to the priority and targets of infrastructure development.

*Transportation Corridors in Northeast Asia*

