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Frictions on the New Silk Road by Wu Shang-su and Alan Chong

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The first transcontinental railway between China and Europe arrived in London on Jan. 18, 2017, exactly 18 days after it began its journey of 12,000 km from Yiwu in eastern Zhejiang province, with its cargo of garments, bags, and other consumer goods. The train carrying 24 containers pulled by a German Deutsche-Bahn locomotive for its final leg, transited Kazakhstan, Russia, Belarus, Poland, Germany, Belgium, and France before arriving in Britain. A comparable journey by sea would take 30 days or more though carrying a staggering 20,000 containers.

The steel railroad across the Eurasian heartland symbolizing the new overland Silk Road – officially known as the Silk Road Economic Belt – partly realizes the "One Belt, One Road" (OBOR) vision of China, and includes the many high-speed rail projects embraced by much of Asia in the past decade. While the pioneer freight train service was welcomed with much fanfare in Britain and China, in reality, a number of obstacles lie on the less than smooth Silk Road.

Different gauges and operators

Several factors currently limit the effectiveness of the railway's potential in achieving Beijing's goals. The dozens of existing rail links are not actually inter-connected at the moment. The rail systems in Kazakhstan, Russia, and Belarus use a wide gauge of 1.52 meters, a Soviet legacy, while the Chinese and European systems use a standard gauge of 1.435 meters. This means that the cargo has to be physically transferred between trains whenever crossing between the two regions of gauges, which occurs at least twice during the journey. Despite the effort of China or its Swiss contractor in managing travel time, additional costs would be unavoidable, and Chinese products transported through rail would be in an inferior position in the market, in contrast to the volume conveyed through shipping.

Transferring cargo inevitably increases travel time and encourages the use of freight in standard containers, while discouraging transportation of bulky cargo such as agricultural crops and some types of heavy machinery. Those kinds of bulk cargo may be more competitive for landlocked countries to trade rather than manufactured or processed merchandise in containers. Intercontinental freight services have therefore not significantly improved the geoeconomic position of those landlocked countries in the global market.

Currently, rolling stocks of variable gauge axles (VGA) for trains running on different gauges, especially transferring between the standard and wide gauges, are available in several European countries, including freight services. However, such expensive and complicated designs, mainly reserved for passenger trains, remain impractical for numerous freight trains and do not present an economic solution for China. Although China may introduce VGA technology for local manufacture to lower costs, the deployment of VGA would logically multiply refurbishment and transportation costs on the entire overland Silk Road.

Stumbling over Soviet-era gauge system

Technically, the rail lines in the former Soviet republics could be transformed into a dual-gauge system but that would mean higher costs both in initial modifications and in ensuing maintenance. Apart from tracks, different technical criteria, such as signal and electrical systems as well as standards of curves and slopes, make dual-gauge construction more difficult than adding one rail. Beijing may not be willing to shoulder the expense. Furthermore, the wide gauge system was designed by Tsarist Russia to deny any potential foreign invader any logistical convenience. This fact remains a significant strategic concern. Therefore, the governments that use the wide gauge may not want to abandon this arrangement, as the standard gauge tracks connect not only to China but also to Western Europe.

Diplomacy of Connectivity

The dependence upon transferability between different rail systems also means that 'diplomatic grease' must be applied all along the new Silk Road. Sovereign railroad authorities must cooperate in approving licenses, coordinating timetables, arranging adequate engines, and other operational matters for the transfer of cargo and rolling stock. National and privatized rail companies ought to establish reliable and open protocols for communication regarding not only cargo transfer but also safety regulations.

Finally, the political assurance of uninterrupted rail transit must be guaranteed as far as possible if business interest is to be sustained. This may be a great deal to ask considering that Central Asian states still have to consolidate their governance in regard to containing separatist movements, insurgencies, and the rule of law. If the new Silk Road is to live up to its promise, diplomatic grease is the final necessary and sufficient ingredient.

For now, it looks like the other half of OBOR – the Maritime Silk Road – could have a relatively smoother sail. It will have to admit transit by ships of all registrations and ownerships, and on internationally recognized waters through

the South China Sea, the Straits of Malacca through the Indian Ocean, and Mediterranean Sea. It also has to retain a more democratic, flexible, and politically accommodating edge over rail transport through the Eurasian heartland.

For politicians, citizens, businessmen, and rail companies alike, the new Silk Road requires much more work to establish its credentials as a credible alternative to the time-honored efficacy of maritime trade transit. On a slightly more positive note, the new services would suggest tighter and shorter direct rail links between China and its trading partners in the Shanghai Cooperation Organization (SCO), which may prove more crucial for the ultimate feasibility of the One Belt, One Road vision.

PacNet commentaries and responses represent the views of the respective authors. Alternative viewpoints are always welcomed and encouraged.