

*RSIS Commentary is a platform to provide timely and, where appropriate, policy-relevant commentary and analysis of topical issues and contemporary developments. The views of the authors are their own and do not represent the official position of the S. Rajaratnam School of International Studies, NTU. These commentaries may be reproduced electronically or in print with prior permission from RSIS and due recognition to the author(s) and RSIS. Please email: [RSISPublications@ntu.edu.sg](mailto:RSISPublications@ntu.edu.sg) for feedback to the Editor RSIS Commentary, Yang Razali Kassim.*

---

## **The Singapore-KL High Speed Rail: Tracking the Challenges Ahead**

*By Wu Shang-su & Alan Chong*

### **Synopsis**

*The Singapore-Kuala Lumpur High Speed Rail (HSR) will enhance bilateral and economic ties. The project must, however, take into account potential obstacles in 'trackside' politics, operational management, and terrorist threats.*

### **Commentary**

THERE IS much to celebrate over the signing of the Memorandum of Understanding for the Singapore-Kuala Lumpur high speed railway (HSR). It signifies the emergence of another avenue of convenient transportation between the two close neighbours and a sure sign of closer economic integration within the spirit of the ASEAN Economic Community. It would also be the first non-European HSR line connecting capitals, if it is completed earlier than the planned line between Bangkok and Vientiane.

For Singapore, the HSR is not simply about building another mass rapid transit line with either underground or above ground stations and tunnels on state owned or acquired land. It literally requires laying the tracks for a large scale international undertaking that will displace some landscapes and introduce new modes of governing the project through corporate and governmental bodies.

### **Trackside Engineering**

Selecting the HSR line during the engineering study is much more than implementing straightforward technical planning. Due to the high costs of land procurement, construction and maintenance, modern rail transportation usually faces

initial difficulties in achieving a satisfactory financial balance. Some HSR projects struggle for years before turning a profit. The Eurotunnel linking Britain and France turned profitable only after 26 years.

In this regard, most HSR firms including those in Japan and South Korea emphasise urban development – think of factories, airports, restaurants, cinemas and shopping outlets – particularly around new stations, as crucial for profitability. In the Malaysian political context, such land development projects would unavoidably involve managing the interests of both the federal and state governments. Therefore, building HSR lines could require political bargains that may result in detours, or even impasse, in striking an agreement amongst various political forces.

Another complicating scenario could also play out *after* a deal for HSR has been inked. Elections may take place, redrawing the political landscape and along with it, the Cabinet of the ruling government. This may lead to review of high cost items like the HSR. This is understandable since Malaysia and Singapore are both democracies where public opinion is given significant expression during general and local elections.

### **Multiplicity of Operators**

The complex operation of three kinds of trains by two operators for the Singapore-Kuala Lumpur HSR would pose an equally significant and very different challenge. The domestic or local service inside Malaysia, and the international service between Singapore and Iskandar Puteri (formerly Nusajaya), would not affect each other due to their distinct corporate jurisdictions. However, the international and domestic trains may mutually interrupt one another's timetables if not planned consensually and in tandem.

Ideally, a properly arranged timetable could make both operate optimally, but an accidental delay on either service may ruin it in real time since the capacity on tracks is exclusively fixed. It requires building in sufficient buffers in the timetable and proficient crews to ensure precise operation.

Nevertheless, the coordination between two companies may not be ideal on a daily operational basis due to differences in personalities and bureaucratic cultures even if their relations have been sanctioned by their respective governments. If the operator for domestic trains is fully Malaysian, and the one for the international express is a bilateral joint venture, nationality may yet constitute an additional barrier.

### **Finance and Pricing**

A third operational difficulty is finance. With operating deficits common among most HSR operators around the world, the Singapore-Kuala Lumpur HSR may not be an exception. Despite the possibility of bilateral commuting services theoretically becoming profitable, the construction and maintenance costs would surely rely on overall income. Commercial aviation will be the main competitor for the HSR, but redirecting large numbers of aerial passengers to HSR may not be feasible.

Currently, there are about 45 daily flights between the two capitals and this figure represents a benchmark. If the average capacity of each flight is about 200 passengers, the maximum amount of passengers carried in both directions would be 9000 daily. Since one HSR train can seat a maximum of 1000 passengers according to the news reports, the volume of passengers flown daily can only be matched by ten to fifteen uninterrupted train services per day.

This is expecting the HSR to perform at peak capacity every time without fail – a very tall order indeed. The viability of passenger travel options currently offered by cars and buses on Malaysia's North-South highway, and the conventional trains operated by Keretapi Tanah Melayu (KTM) would in turn be determined by the price of HSR tickets. This creates a dilemma.

If the HSR charges too much, passenger traffic would not significantly contribute to its finances. If the HSR tickets are priced too low for recouping its sunk costs, increased passenger volume may not adequately compensate but contribute to overall financial deterioration. So much depends on whether passengers are willing to trade money for time.

The purchasing power disparities between Singaporean and Malaysian passengers would further complicate the issue. Thus, the balance between the number of passengers and sunk costs would be an important issue. When a healthy financial position becomes unattainable, finding solutions could subject Singaporean and Malaysian officials to difficult choices given their different bureaucratic approaches.

### **Terrorist Threat**

As seen over the last six years in locations as diverse as Madrid, the Amsterdam-Paris route, and just days ago in Germany, both HSR and conventional railways are vulnerable to terrorist attacks. Travelling at a high speed of more than 250 km/hr, any engineering malfunction or onboard incidents ultimately triggering engineering mishaps could produce serious consequences.

Although most HSR lines are protected with fences and walls, it may be possible for terrorists to penetrate the system disguised as employees. For them, merely tinkering with some switches would be enough to trigger a crash within seconds. Tighter security checks in employment within HSR would thus be necessary.

Terrorists may masquerade as normal passengers. Security measures used in protecting aviation could be directly applied in this regard, such as baggage scans, body searches and so forth. It is expensive and not easy to protect entire HSR lines extending across open country and difficult terrain.

Bridges and tunnels could always be properly observed and analysed by terrorists to find effective ways to attack. Buffer zones, surveillance systems and patrols may on the other hand help alleviate some of the threats. The co-location of the CIQ facilities at three locations on the Singapore-KL HSR will also have to be upgraded to facilitate joint monitoring of potential terrorist targets either in terms of passengers, company personnel or railway hardware.

All in all, the viability of the Singapore-Kuala Lumpur HSR is contingent upon both governments' sustained commitment to a long term win-win arrangement. It remains to be seen if the will to succeed prevails over the challenges in operationalising this game-changing project.

---

*Wu Shang-su is Research Fellow, and Alan Chong is Associate Professor at the S. Rajaratnam School of International Studies (RSIS), Nanyang Technological University, Singapore.*

---

**Nanyang Technological University**  
Block S4, Level B4, 50 Nanyang Avenue, Singapore 639798  
Tel: +65 6790 6982 | Fax: +65 6794 0617 | [www.rsis.edu.sg](http://www.rsis.edu.sg)