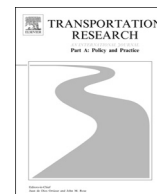


Contents lists available at [ScienceDirect](https://www.sciencedirect.com)

# Transportation Research Part A

journal homepage: [www.elsevier.com/locate/tra](http://www.elsevier.com/locate/tra)

## One Belt one Road, but several routes: A case study of new emerging trade corridors connecting the Far East to Europe<sup>☆</sup>



Dong Yang<sup>a</sup>, Liping Jiang<sup>b,\*</sup>, Adolf K.Y. Ng<sup>c</sup>

<sup>a</sup> Department of Logistics and Maritime Studies, The Hong Kong Polytechnic University, Hong Kong

<sup>b</sup> Department of Operations Management, Copenhagen Business School, Denmark

<sup>c</sup> Asper School of Business, University of Manitoba, Manitoba, Canada

### ARTICLE INFO

#### Keywords:

Belt and Road (B&R) initiative  
Eurasian trade corridor  
Multi-criteria decision analysis  
Scenario analysis

### ABSTRACT

Under the Belt and Road (B&R) initiative, two new emerging trade corridors connecting the Far East to Europe have been built. One is the China-Europe Sea-Land Express Line (CESEL) and the other is the New Eurasian Land Bridge (NELB). This paper aims to understand the attitude of relevant stakeholders towards the performance of the Traditional Sea-Land Line (TSL) alongside the two emerging container routes under the B&R initiative. To achieve this objective, we first of all built a performance evaluation system to understand the relative performance of these trade routes. A questionnaire survey was carried out to reveal the differing views on route performance, and Fuzzy Multi-Criteria Decision Analysis (MCD) was then used to examine and interpret the survey data. Secondly, by dividing the interviewees into two groups, we examined whether the government's development priorities are at variance with the preferences of industry practitioners. Thirdly, we explored the reasons for the variance by conducting an intensive interview with ten key stakeholders and then explain the findings from the perspective of institutional theories. Finally, we addressed the uncertainty and dynamics of route development under three different scenarios. Several managerial implications are proposed on the basis of our findings.

### 1. Introduction

Traditionally, most trade cargoes from East Asia to central Europe are first of all transported by ship to the hub ports in Northwestern Europe, and then transshipped to the end customers in central Europe via either rail or inland waterborne transport.

With the launch of the Belt and Road (B&R) initiative in 2013, China has the ambitious goal of transforming regional political and economic landscapes over the coming decades by building a 'Silk Road Economic Belt' and a '21st Century Maritime Silk Road'. Massive investments into these infrastructure networks have already taken place. For the land-based routes, as of April 2018 eighteen Chinese cities have successively opened direct railway container services to European cities, and most of these services are enjoying subsidies from the local governments. As for the oceangoing routes, in recent years COSCO Pacific Limited has continued to invest heavily in the Port of Piraeus (Greece), transforming it into an important hub port in Southern Europe. At the same time, China has cooperated with Central and Eastern European (CEE) cities to construct railways linking the capitals of Hungary and Serbia, namely, Budapest and Belgrade. Upon their completion in 2018, the travel time by train between Southern Europe and Central Europe will be significantly reduced. With the development of the above railway networks and the rise of the Port of Piraeus, the competitiveness of

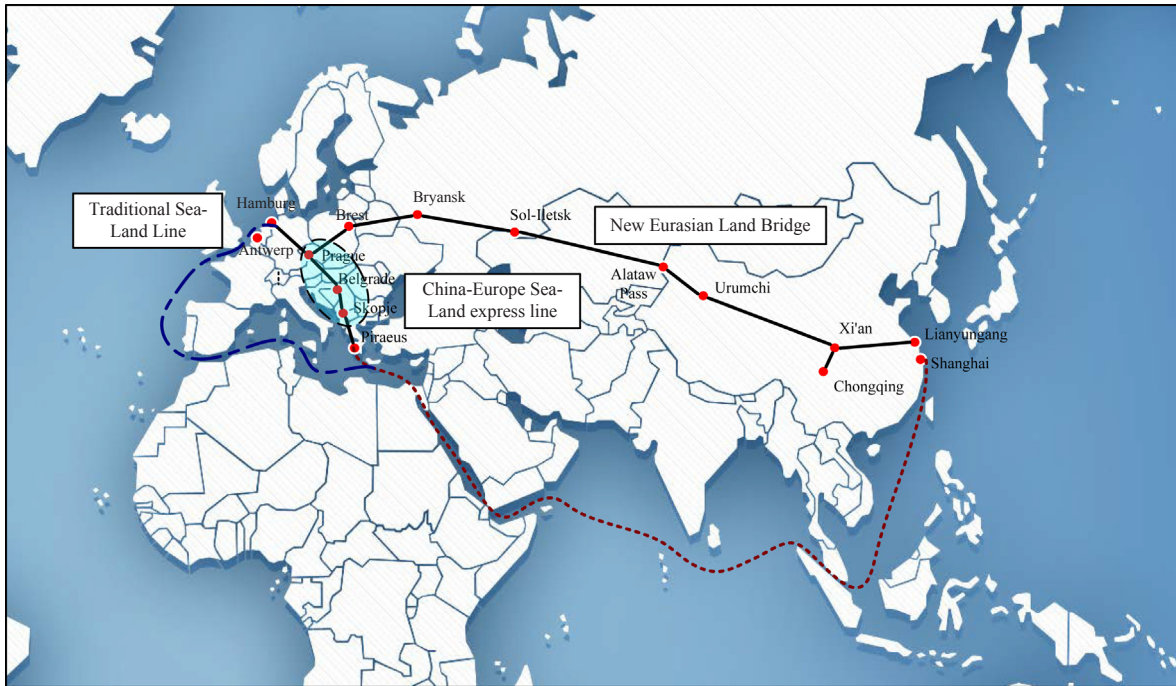
<sup>☆</sup> The official English term is now "Belt and Road (B&R) initiative".

\* Corresponding author.

E-mail addresses: [dong.yang@polyu.edu.hk](mailto:dong.yang@polyu.edu.hk) (D. Yang), [lji.om@cbs.dk](mailto:lji.om@cbs.dk) (L. Jiang), [adolf.ng@umanitoba.ca](mailto:adolf.ng@umanitoba.ca) (A.K.Y. Ng).

<https://doi.org/10.1016/j.tra.2018.08.001>

Received 30 July 2017; Received in revised form 9 July 2018; Accepted 7 August 2018  
0965-8564/ © 2018 Elsevier Ltd. All rights reserved.



**Fig. 1.** Three container trade routes from East Asia to Europe.  
 Source: author's own composition.

the new trading routes between Asia and Central Europe has been dramatically improved. According to the Xinhua News Agency, there were 3637 trains running to Europe via the Eurasian rail line in 2017, which was an increase of 116% over 2016. At the same time, the port of Piraeus broke its own record for container traffic in 2017, showing a 70.6% percent increase at 453,264 TEU in 2017 compared to 265,716 TEU in 2016.

The purpose of this paper is threefold. The first objective is to understand the attitude of relevant stakeholders towards the performance of the Traditional Sea-Land Line (TSLL) compared to the two emerging container routes under the B&R initiative, these being the China-Europe Sea-Land Express Line (CESEL) and the New Eurasian Land Bridge (NELB), by building a comprehensive evaluation method and criteria system. The three routes are shown in Fig. 1. Compared to the TSLL, the CESEL reduces the shipping distance by 5558 km. Needing only half the transport time compared to the TSLL, the NELB is becoming attractive for transporting high value-added products, such as electronic devices, from production centers in China to Europe. However, this advantage is offset by its higher shipping cost and lower frequency. Shippers have to pay a much higher rail freight rate in comparison to the cost of transport by shipping, even though the former has already been substantially subsidized. The pros and cons of all three routes in various aspects, as well as their development potential, make the resulting route competition rather interesting and dynamic. Although this is an issue that has strong implications for policymakers and industry practitioners, the development potential and choice among these three routes have only received very limited attention in the extant literature.

Secondly, it is also worth noting that these two emerging routes are heavily government-driven compared to the Traditional Sea-Land Line that is market-driven. Therefore, it is both interesting and useful to explore the route choice preferences from the points of view of both government and industry practitioners, to see if there is consensus or disagreement among them—in other words, to ascertain whether the various governments' development priorities on these emerging container routes under the B&R initiative are at variance with the preferences of industry practitioners.

Thirdly, if such variance exists, then it would be interesting and useful to understand the reason for such variance between government policy-makers and industry practitioners, so as to create effective communication in order to reduce their differences of opinion.

Finally, the level of criteria exerts great influence over route performance results. This is especially so, given that the two emerging routes are still in the initial phase of development, and that the international shipping industry is fraught with great uncertainties. It is therefore highly relevant to incorporate potential changes of criteria in various scenarios, and to make route evaluation accordingly.

Therefore, this paper focuses on addressing the following research questions: How does the current competitiveness of the NELB and the CESEL compare to that of the TSLL? Do policymakers and industry practitioners share the same views with regard to decision priorities and route choice criteria? Which aspects should be strengthened by the policymakers in order to promote the development of the new routes? How will future uncertainties affect the competitiveness of the three trade routes?

To address the above questions, this paper creates a framework for using the Multi-Criteria Decision Method (MCDA) to ascertain

Download English Version:

<https://daneshyari.com/en/article/9951924>

Download Persian Version:

<https://daneshyari.com/article/9951924>

[Daneshyari.com](https://daneshyari.com)