

Original article

## The Northern Sea Routes and Korea's Trade with Europe: Implications for Korea's Shipping Industry\*

*Yeong-Seok HA<sup>1</sup> and Jung Soo SEO<sup>2†</sup>*

<sup>1</sup> Department of International Commerce, Keimyung University, Korea, [hyso@kmu.ac.kr](mailto:hyso@kmu.ac.kr)

<sup>2†</sup> Department of International Commerce, Keimyung University, Korea, [jsseo07@kmu.ac.kr](mailto:jsseo07@kmu.ac.kr), Corresponding author

### Abstract

Melting Arctic waters have brought about global opportunities and challenges. One distinctive opportunity presented by the increasingly ice-free Arctic Ocean is its availability for shipping cargos between Europe and Asia. In adopting highly simplified assumptions of the Northern Sea Route (NSR) being navigable and economical enough for shipping and NSR completely substituting for the incumbent Suez Canal route, this paper analyzes the maximum number of voyages possible for the transshipment of container cargo throughput for Korea's trade with Europe, particularly with Europe-17 and Europe-7. Our analysis shows the number of voyages range from over 2,900 to as little as 237 for Europe-17, depending on vessel sizes, when NSR is available for the whole year. With NSR opening for three months, the corresponding figures vary between 727 and 60 for Europe-17, and the figures for Europe-7 are between 2,725 and 222 and 682 and 56 voyages, respectively.

*Keywords:* NSR, Korea, Europe, Voyages, Container

## I. Introduction

The formerly ice-covered Arctic is undergoing extraordinary transformations as a result of the ice receding at an unprecedented rate. Increases in near-surface temperature in the Arctic since 1980 have been twice as fast as they have been in the rest of the world, and thus the Arctic is certainly on the frontier of global climate change impacts (Polar Regions Department, UK, 2013). The Arctic Ocean ice has shrunk on average by 2.7% per decade, and during the summer months the diminution has been more severe with an average decrease of 7.4% per decade. According to the National Snow and Ice Data Service of the United States, the 2014 Arctic maximum ice coverage was the fifth lowest since 1978 (NSIDS, 2014). Thus, Arctic sea, once dense with ice floes, has become increasingly navigable by ships. One report even predicted that the Arctic Ocean will become ice free around 2070 – 90 (Jakobson, 2010, p.1).

Undoubtedly, the melting of Arctic ice, its consequence and global impacts will pose economic, military and environmental challenges to the governance of the region, as well as various opportunities. Therefore, many countries including member and observer countries of the Arctic Council are in a rush to join the 'grand polar race' and formulate their own Arctic policies and strategies while trying to orchestrate these efforts at a global scale. One of the most significant opportunities associated with the melting of the Arctic Ocean will be using the northern routes, the Northwest Passage and the Northern Sea Route (NSR, hereafter) for shipping cargo from Europe to Asia and to Canada and the US, in spite of potential risks and the complexity of the issues surrounding the Arctic Ocean navigation. Recently, the traffic via the northern routes has increased significantly. In 2013, for example, a total 71 vessels navigated NSR with over 1.3million tons of cargo, of which liquid, LNG and bulk cargos accounted for over 92% (Table 1). Some estimates predicted that by 2030 more than 64 million tons of cargo would be shipped via NSR (Keil, 2014). Using the northern routes shortens the distance and saves on fuel consumption, thus resulting in an overall reduction in the transportation cost *ceteris paribus*, and savings could be substantial, especially for many Asian countries. Some Asian ports high in latitude may potentially become new centers for international shipping with NSR opening up for shipping. Accordingly, global trade and shipping patterns may change in the favorable way for China, Korea, Taiwan, and Japan.

Korea shows resilient interests in the melting Arctic for the development of untapped energy and other natural resources but more for the possibility of using NSR for shipping cargos linking Europe. Korea's total cargo volume shipped through NSR in 2012 was 564,355 tons with 431,387 tons east bound and 132,968 tons west bound, respectively. In 2013, cargo volume was slightly down with the corresponding figures of 382,945 tons of cargo in total, 182,139 tons east bound and 200,806 tons west bound, respectively. The types of shipped cargo via NSR were predominantly of bulk or bulk liquid such as gas condensate, naphtha, jet fuel and gasoline. However, in 2013 the throughput of 16,651 tons of general cargo was shipped from Busan to Rotterdam in the Netherlands by a Hong Kong flag carrying vessel, called *Yongsheng*. This particular transshipment of general cargos via NSR further enhances the possibility that the

Download English Version:

<https://daneshyari.com/en/article/724842>

Download Persian Version:

<https://daneshyari.com/article/724842>

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