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The Northern Sea Route: Is it Really Ice-Free?

By Joshua Ho

Synopsis

Notwithstanding the recent record warming in the northern polar region and the Russian pronouncement that the Northern Sea Route (NSR) is now ice-free, several challenges have to be addressed before the commercial viability of the NSR can be realised.

Commentary

ON 5 AUGUST 2011, Russia announced a record warming in the northern polar region, as a result of which the Arctic was now ice-free. The Russians also asserted that navigation through the Northern Sea Route (NSR) was now a reality and ships that ply the route would realise cost savings due to the reduced distances from Northern Europe to Northeast Asia. But are the Russian claims credible? One should take a step back to examine the feasibility of exploiting the Northern Sea Route (NSR).

Firstly, despite the Russian claim, estimates still vary as to when the Northern Sea Route would be ice-free in summer, thereby prolonging the sailing season from the current 20 – 30 days to about 120 days. The estimates range from as early as 2013 to as late as 2080 with most estimates falling between 2040 and 2060. Given that this is still some 30 to 50 years away, it will be a long time before we see return on investments in infrastructure and ships to exploit the NSR.

Navigational Challenges

Secondly, even during summer, the notion of ice-free does not mean that the ocean is free of ice; it is just that the ice has broken up enough for ships to transit. As various ice formations are still present, there is a requirement for ice-breaker escorts; vessels which are not ice-class would not be granted permission by the Russian Marine Operations Headquarters (MOHQ) to transit.

The variable weather conditions add to the uncertainty when navigating along the NSR and the lack of satellite support is a problem. For example, the Global Positioning System (GPS) used in the Arctic – GLONASS – is not compatible with all international ships; this reduces its attractiveness as an alternate route since ships rely on GPS for navigation.

Variability in Distances between Ports

Thirdly, not all ports will benefit equally from reduced sailing times. For example, whilst sailing through the NSR will shave about seven days off the sailing time to Yokohama, it will only trim two days to Shanghai, three days

to Busan and sailing time will actually increase by one day to Hong Kong. Hence, the savings to be realised by using the NSR is highly sensitive to changes in the origin-destination pair used for comparison.

Besides this variability in distances, many liners have also to call on a number of ports in their transit on the current West-East route. For example, more than 50 percent of the total Far East-Europe trade has to pass through Singapore; because of the routing, many liners will not be able to realise the benefits of using the NSR. Interviews with Maersk Line officials have revealed that only goods that are directly shipped from point to point such as special project cargoes will benefit from the shorter distances via the NSR.

High Costs

Fourthly, there are direct and indirect costs of using the NSR. All vessels transiting the NSR will need the approval of the Administration of the NSR in Russia before they can proceed for the transit. The request will need to be submitted four months in advance, which is time consuming; in comparison the process of transiting the Suez Canal only requires a 48-hour prior notification. Upon preliminary approval, the ship and its equipment will still have to be inspected for ice worthiness by agents of Murmansk Shipping Company (MSC) or Far Eastern Shipping Company (FESCO). The ship owner will have to bear all the costs of delivering the ship to a port where the MSC or FESCO agent resides.

The Marine Operations Headquarters (MOHQ) also requires that ships engage ice-breaking services and compulsory pilotage which adds to the cost of the transit. In addition, the cost of hiring interpreters will need to be factored in as well since the primary language used by the pilots and onboard the ice-breakers is Russian. A study has shown that the use of the NSR by a liner service operating between Yokohama and Rotterdam is not profitable until there is a 50 percent reduction in ice-breaking fees. The profitability is also sensitive to the price of bunker fuel; the higher the price of bunker fuel, the less profitable is the use of the NSR.

Unfavourable Business Environment in Russia

Lastly there is the questionable business environment in Russia today and in the foreseeable future. Interviewees from the maritime industry have stated that the business environment in Russia is still unfavourable despite its being one of the fastest growing emerging markets today. They pointed that the political instability in Russia makes doing business highly risky. Businesses need a certain level of stability before the place can be considered safe for foreign investment. Another reason for the unfavourable business environment is the level of corruption in Russia. The Corruption Perception Index 2010 ranks Russia 154 out of 178 countries, making it one of the most corrupt places. Other obstacles that businesses face are the language barrier and difficulties in navigating the market. The interviewees were also reserved about the outlook of the business environment in future and cited political history and culture as the main reasons that the status quo will remain.

Some Way to Go

Despite the Russian claim that the NSR has opened up for commercial navigation, there are some issues to consider before one jumps on board. These include the uncertainty in timing when the NSR will be mostly ice-free during the summer; the navigational challenges that need to be overcome; variability in distances between ports; the high costs incurred in ice-breaking fees in using the NSR; and the unfavourable business environment in Russia currently and for the foreseeable future.

These conditions would need to improve before the use of the NSR can be commercially viable.

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