

Reconsidering Northeast Asian container flow to North America

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1. Annual Report 2009: Continuation of the back cover

The back cover of the last year's Annual Report (2009) displayed trends in North America-bound container flow from Northeast Asia as analyzed by the Port and Harbor Department (up to December 2008). This analysis clearly demonstrates how flow to North America dropped rapidly following the Lehman Brothers' collapse in September 2008. Figure 1 shows what happened afterwards. Flow from Japan bottomed out in May of last year, that from China in February of last year, and that from South Korea in January of last year; since then, flow from all three countries has been growing. However, the rebound from Japan is weak compared to the other two countries.

Such trade trends between Northeast Asia—and particularly China—and North America will be an important factor in the future economic growth of not only Japan but the entire globe. Thus, it is important to analyze such trends from a variety of standpoints. For this reason, the Port and Harbor Department is analyzing container cargo flows (such as those shown in Figure 1) as well as actual port calls by containerships. In the research described here, the department newly analyzed the actual sailing of containerships in the seas near Japan. Based on this, the department succeeded in ascertaining actual sailing of containerships through the Tsugaru Strait, for example, and therefore sailing on Japan's Sea of Japan side.

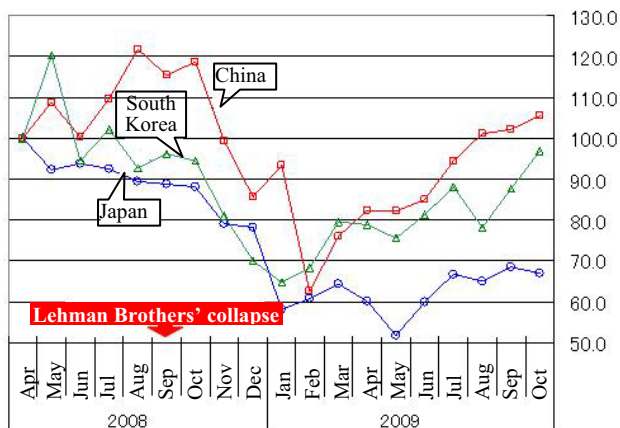


Figure 1: Northeast Asia → North America container flows

2. Ascertaining actual sailing by containerships

Japan Coast Guard steadily established Automatic Identification System (AIS) land stations in response to a new regulation requiring that ships carry AIS. Nationwide development of the AIS network was attained when coverage of the seas south of Kyushu was completed in June 2009. As a result, it has been possible to uniformly ascertain ship sailing in all coastal areas of Japan since July 2009. With AIS data supplied by Japan Coast Guard, the Port and Harbor department analyzed actual sailing of containerships in seas near Japan using an AIS data analysis system (NILIM-AIS) that was developed by the department. Figure 2 shows containership tracks for one week (18 to 24) in July 2009. It should be noted that areas where actual observations were lacking were supplemented in the figure by NILIM-AIS.

(1) Large containerships (Panamax ship or larger)

Figures 3 and 4 show the results of an analysis of four-week periods for both eastbound and westbound sailing by containerships of Panamax size (Pmax) or larger. The results reveal that the share of ships sailing in the Sea of Japan is roughly 40% for both eastbound and westbound directions, and that, of these ships, the percentage of ships that do not stop in South Korea is 20% or more in the eastbound direction and 30% or more in the westbound direction. The results also reveal that the share of ships that do not stop in

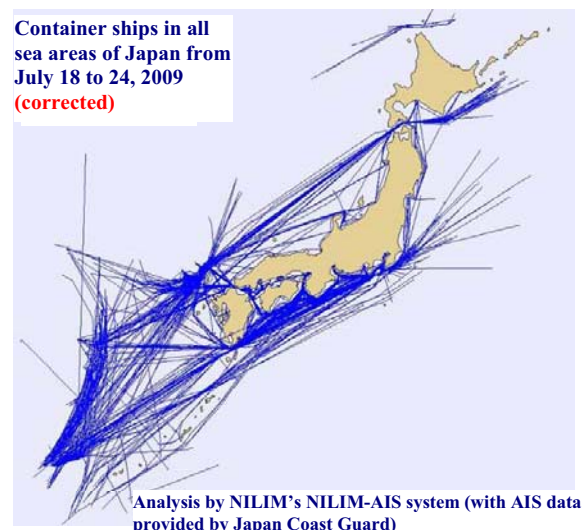


Figure 2: Container ship tracks

Japan is 60% or more for eastbound ships and 40% or more for westbound ships, and that the percentage of ships that do not stop in South Korea is 50% or more for both eastbound and westbound directions.

(2) Oversized containerships (over-Panamax ships)

Figures 5 and 6 show the results of a similar analysis for eastbound and westbound directions for oversized containerships that cannot pass through the Panama Canal (over Panamax: O-Pmax). Here, it is revealed that, of containerships that are Pmax or larger, up to roughly 70% are O-Pmax for both eastbound and westbound directions.

3. Transport of Japan-China cargo on the China-North America route

Looking at the results of 2 above, it is obvious that China occupies the central position of the Northeast Asia-North America route. Containerships plying Northeast Asia-North America route number 10 per day when both eastbound and westbound directions are combined. However, only roughly half of these ships stop in Japan. Nonetheless, it is possible to view these voyages as being on the Japan-China route. In other words, every day 10 containerships bound for/leaving China pass Japan, and only half of them do not stop.

Currently, Japan's largest trading partner is China, and thus it is thought that this route can be used as a means of transport for Japan-China trade. Traditionally, marine container transport to China has been conducted by small- and medium-sized containerships plying coastal routes, and routes that stop at multiple ports have been the norm. However, having large high-speed ships on the North America-China route stop by Japan may serve as a new "idea" here. The key to realizing such a framework will be the question of whether or not the number of China-bound containers that can be gathered will provide sufficient advantage to justify large containerships' stopping in Japan.

The Port and Harbor department intends to conduct further analysis of this topic.

References

- 1) Takahashi, Hironao, "Clarification of State of Ship Navigation on Seas Surrounding Japan to Ensure Safety on the Sea," Japan Policy Workshop, 1st Annual Meeting, December 2009.

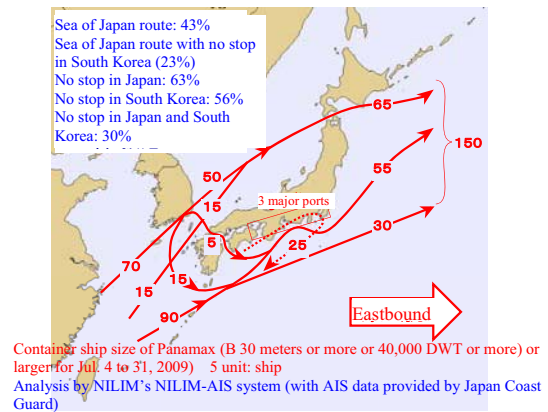


Figure 3: Sailing by container ships (Pmax) (eastbound)

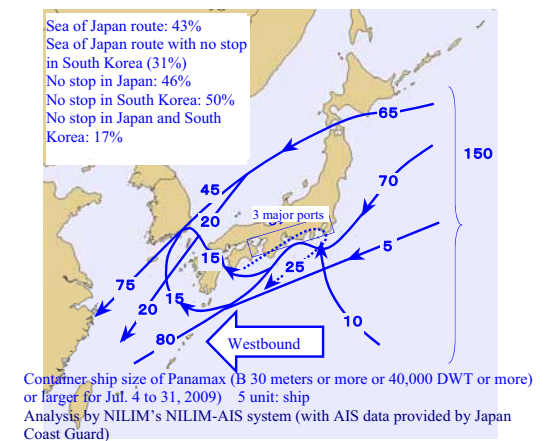


Figure 4: Sailing by container ships (Pmax) (westbound)

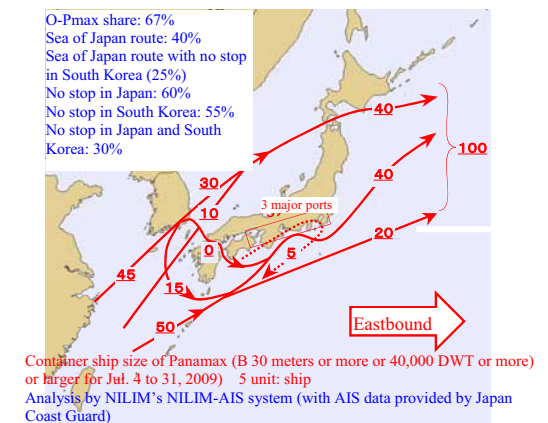


Figure 5: Sailing by container ships (O-Pmax) (eastbound)

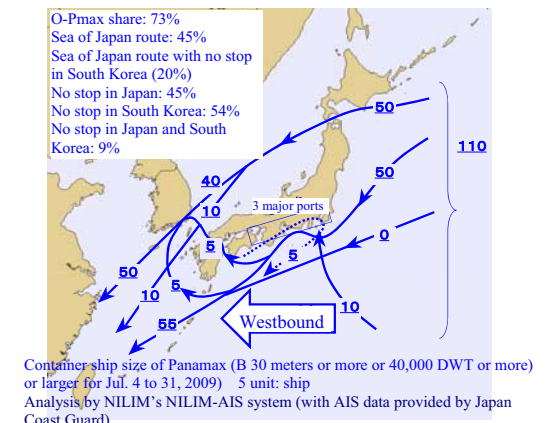


Figure 6: Sailing by container ships (O-Pmax) (westbound)