



Exclusive to Intermodal Insights

Analysis of Intermodal Length of Haul Data Offers Insights on Highway Market Penetration

By Ted Prince

Intermodal length of haul, LOH, has always been an important industry benchmark. Because 80 percent of the truckload market is less than 400 miles, a decrease in intermodal LOH is viewed as proof positive that intermodal is increasing its penetration of the highway market.

The analysis in this article uses the IANA Equipment Type Size and Ownership, or ETSO, data to calculate intermodal LOH. Each region-to-region was assigned an imputed city pair, for which highway miles were applied. Domestic and international traffic frequently used different cities for the same regional pairs.

Chart 1 shows the average LOH for the three classifications of ETSO data. While the marine segment LOH has remained the longest, and least changed, the two domestic LOHs have decreased steadily since 2002.

The Marine ISO segment has the longest LOH. This seems logical given the preponderance of volume off the West Coast; however, there seems to be little impact of shorter hauls from the East Coast. The Domestic ≥ 48-foot segment has the next-longest LOH. This is consistent with the higher volumes off the West Coast — offset by increased eastern volumes. The Domestic ≤ 45-foot segment has the shortest length of haul.

Chart 2 stratifies Marine ISO LOH into statistical quarters — commonly called “quartiles.” (Quartiles use three values: 25th, 50th, and 75th percentiles, to divide the data into four equal parts, each containing a quarter of the population.) The results reveal a fairly steady state for the past 11 years. The lowest quartile most likely represents East Coast volumes. The meeting of the two middle quartiles shows a prevalence of cargo with a 2,000 mile LOH — roughly that between the West Coast and Chicago.

Chart 3 analyzes LOH for the Marine ISO segment by equipment type. The 20- and 40-foot container LOH has remained fairly constant. The steep decline in the length of haul for 45-foot containers is probably reflective of an increase in transloading of trans-continental cargo.

Chart 4 stratifies Domestic ≥ 48-foot LOH into quartiles. The results show a fairly steady state for the past 11 years — despite a 5 percent reduction in average LOH. While this does not demonstrate increased market share of short haul

CHART 1

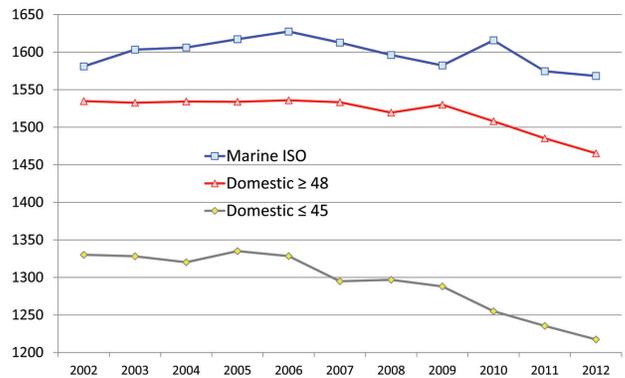


CHART 2

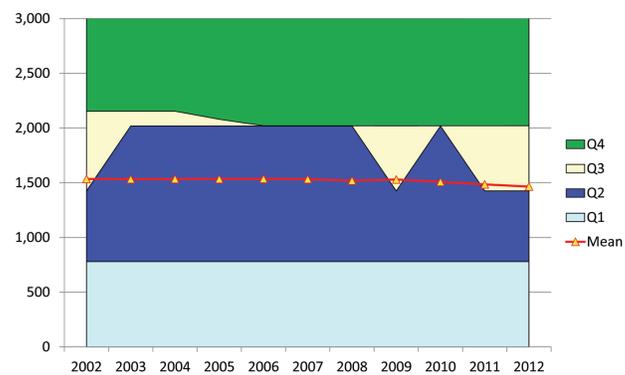
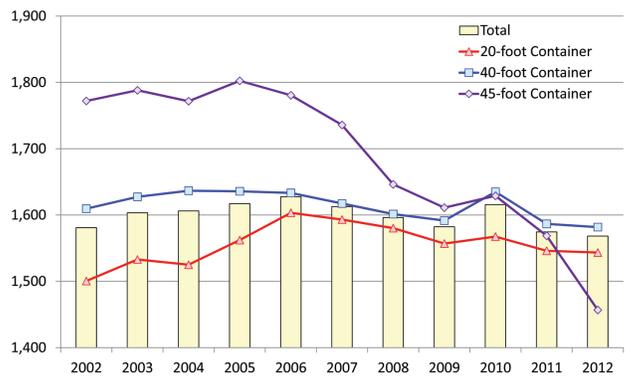


CHART 3



LOH— continued on page 21

LOH — from page 19

intermodal traffic, it indicates that the domestic product is spread uniformly across distances greater than 750 miles.

Chart 5 analyzes the length of haul for the Domestic \geq 48-foot segment by equipment type.

- The 53-foot container has the longest LOH. This reflects the fact that the primary load center, especially for transloading, is in the Southwest. Even so, it also shows the impact of increased eastern loadings by reflecting a 14 percent reduction from 2002.
- The 48-foot container has seen decreasing lengths of haul, probably as the remaining equipment retrenched to the eastern half of the U.S.
- Both 53- and 48-foot trailers have remained fairly constant in length of haul, although there has been a divergence since 2002 that reflects niches where trailers are deployed in intermodal. Surprisingly, these numbers do not indicate a significant long-haul presence.

While aggregate analysis indicates a relatively steady state in LOH by equipment type, further review was conducted to determine whether the same equilibrium existed among geographic origins.

Chart 6 analyzes the length of haul for the Marine ISO segment by origin region.

LOH — continued on page 23

CHART 4

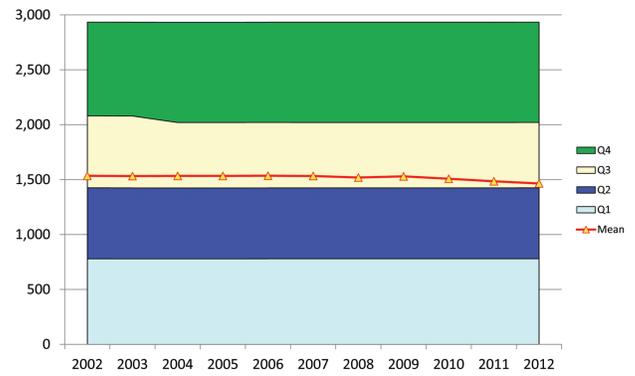
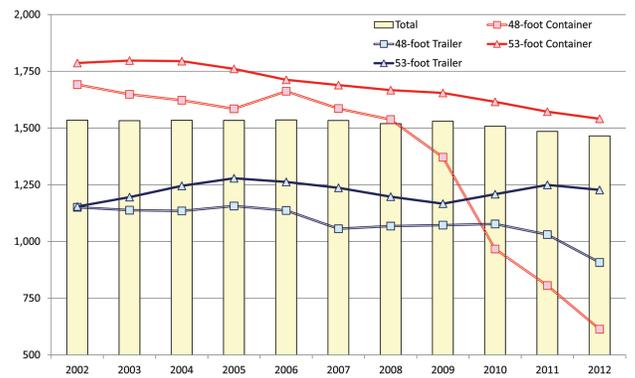


CHART 5



LOH — from page 21

- Cargo originating in western Canada has the longest LOH. This is reflective of Canada’s geography: most cargo is trans-continental to Toronto and Montreal. The slight decrease is probably due to increased traffic to Chicago and Midwest points.
- Traffic from eastern Canada has steadily increased in length.
- Traffic from the Northeast has steadily decreased in length — likely reflective of increases in East Coast vessel discharge traffic handled by rail.

Chart 7 analyzes the length of haul for the Domestic ≥ 48-foot segment by origin region.

- Not surprisingly, cargo originating on the West Coast has the longest LOH, with western Canada having the largest. The LOH from the Northwest has seen an increase in LOH that converges on the same length from the Southwest.
- Cargo from eastern Canada has also seen a LOH increase.
- Cargo from the Northeast and Southeast has seen a decrease, which reinforces that these regions are originating a lower share of trans-continental movement.

While the data is not excessively granular, this analysis supports a theory that there is a growing amount of short haul intermodal traffic. And while other intermodal volume categories continue to grow, the ability for intermodal to participate in shorter LOH would indicate a strong foundation for further penetration of this segment.

CHART 6

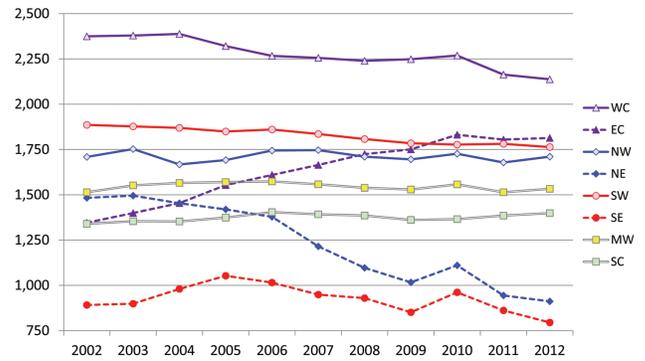


CHART 7

