Project Summary

Texas Department of Transportation

0-5695: Short Sea Shipping Initiatives and the Impacts on the Texas Transportation System

Background

In recent years, there has been much discussion regarding the potential of short sea shipping (SSS), a term which loosely refers to coastwise shipping or shipping that does not cross oceans or connect continents, to improve the nation's transportation capacity. The development of a robust short sea network with Mexico and Central America could, in theory, significantly alter the role of Texas ports in the state and national economy, particularly that of shallow draft or smaller deep-sea ports.

The primary focus of the research was to determine whether there is significant potential for SSS operations in Texas and whether the effects of an increase in SSS on the highway and rail networks in Texas should be included in the Texas Department of Transportation's (TxDOT's) planning process.

What the Researchers Did

Researchers examined the current trade between Texas and Mexico/Central America. They took a bottom-up approach in which existing data on trade flows within the region and the ports that participate in this trade were used to analyze the prospects for SSS in the region. Detailed data were examined concerning the commodities that flow between ports in this region and the ships that carry them. Container traffic was analyzed separately from all other types due to the unique infrastructure and equipment employed in the container trade. The researchers also identified possible triggers that might cause an abrupt increase in SSS activity in the region.

Researchers examined the potential role of the Gulf Intracoastal Waterway (GIWW) in handling coastwise trade and the possibility of developing a viable oceangoing coastwise domestic trade in the Gulf. As part of the analysis, they investigated a new SSS operation that has been announced for Freeport, Texas.

The researchers then analyzed the likely effects of SSS on the Texas transportation system in the short to medium term, focusing specifically on: adequacy of channels and docks, available cranes, vessel dimensions, and required storage space.

Research Performed by:

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What They Found

Rapid growth in SSS is limited by several factors. International trade in the study region is dominated by dry and liquid bulk cargoes, which have not been conducive to the development of new SSS operations. Although the container trade is more promising than the bulk trade, current markets are already captured by existing services and new operators will have trouble competing for small shipments with the larger carriers since the latter can charge low rates just to fill otherwise empty space. Given that SSS trade with Mexico and Central America does not account for a large percentage of Texas port traffic, most Texas ports are not actively pursuing SSS cargo in comparison to Asian, European, or South American traffic.

There are certain triggers that could lead to rapid development in SSS trade. These include:

- completion of the Panama Canal expansion and initiation of associated feeder services;
- disruption in Trans-Pacific trade; and
- changes in cabotage rules, specifically the creation of a North American Flag for Canada, Mexico, and the U.S.

Certain governmental measures were also identified that could have the indirect effect of encouraging more SSS shipments by water. These include:

- tighter enforcement for overweight trucks;
- elimination or restructuring of the Harbor Maintenance Tax; and
- additional restrictions on hazardous materials movements.

What This Means

SSS does not appear to be an important factor that will affect the capacity of the Texas highway system in the short to medium term. This assumes that there are no major shifts in world trading patterns and that fiscal and regulatory regimes remain fairly constant. However, the potential for SSS as a mitigation tool for regional air quality, congestion, hazmat concerns, etc., may be a reason for government to investigate measures to stimulate waterborne commerce rather than waiting on economic factors alone to encourage development of the sector. Changes in U.S. or Texas regulatory or fiscal policy associated with environmental, economic, and social issues, or modification of U.S. trade policy, might increase opportunities for SSS and similar interregional trade and should be investigated in further research as warranted.

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