

Intermodal Marine Container Transportation *Impediments and Opportunities*

Results of TRB Study on Marine Container Shipping

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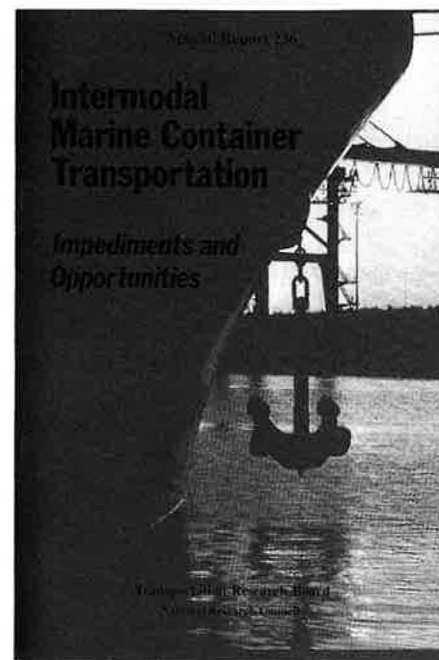
The container revolution, which began in the mid-1950s, has led to major changes in America's foreign and domestic trade. Today, containerized traffic dominates liner (nonbulk goods) trade to and from the United States. The technological revolution of marine containerization—involving newly designed containers, containerships, and container ports—has been accompanied by an equally important institutional revolution, yielding true land-sea-land intermodalism.

Like other industries that have expanded rapidly, however, the international intermodal container transportation industry is experiencing growing pains. Despite the advances made, there are opportunities to improve efficiency at almost every link in the container transportation "chain"—consisting of shippers and consignees, intermediaries, ocean carriers, ports and marine terminals, cargo inspection agencies, drayage and long-haul trucking, and railroads. Governmental regulation affects the different links in this chain, with impacts on the efficiency with which marine con-

tainers are used and U.S. carriers can move containerized cargo.

As part of its technology policy program, the Maritime Administration of the U.S. Department of Transportation asked the Transportation Research Board to conduct a study to help determine where and how government action might assist in overcoming impediments and fostering efficiency in intermodal marine container transportation, especially through technological or institutional innovation.

To conduct the study, the National Research Council convened a nine-member TRB committee including experts in transportation law and economics, maritime policy, and marine engineering, and representatives of major shippers, containership lines, port authorities, motor carriers, and railroads. Under the chairmanship of W. Bruce Allen, Professor of Public Policy and Management and Transportation at the University of Pennsylvania's Wharton School, the committee identified and analyzed 10 key issues on which government in the United States affects or can affect the intermodal marine container transportation industry. Although these are not the only areas in which government can affect the



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industry, they are critical issues today that will have a broad impact on the further development of marine container technology and transportation.

Of the 10 issues studied (see accompanying box; not listed in priority order), the first six are those in which governmental actions are viewed as impediments to technological or organizational innovation and efficiency in intermodal marine container transportation. By contrast, the last four issues offer opportunities for government to improve container transportation by playing a facilitating role.

Impediments to Efficiency and Innovation

Issues Affecting U.S.-Flag Containership Operators

The committee looked at the effects on the international competitiveness of the U.S.-

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flag containership fleet of three interrelated federal maritime policies: ship procurement restrictions under the Operating Differential Subsidy (ODS) program, federally imposed ship-manning requirements, and military cargo bidding policies. Under existing policies,

- U.S. liner operators who receive federal operating subsidies are required by law to buy only containerships built in U.S. shipyards, even though in recent years U.S.-built ships have been priced up to three times as much and have often required more than twice as long for delivery as foreign-built ships;

- U.S. operators have been unable to achieve labor cost parity with their chief foreign competitors, in part because U.S. flagships are required by federal laws and regulations to be manned by American crews, whereas foreign carriers can employ foreign crews at lower costs; and

- U.S. carriers argue that the strict competitive bidding process for military cargoes conducted by the U.S. Navy's Military Sealift Command compels operators to submit very low bids to fill empty container slots on North Atlantic routes, adversely affecting the carriers' profitability.

In analyzing these issues, the committee emphasized that national defense objectives must be considered along with other factors in assessing the value placed on maintaining a U.S.-flag fleet and the economics of operating such a fleet. The committee called for a prompt and thorough reevaluation of government policy toward the U.S. merchant marine and the maritime industry. Such a major reevaluation is urgently needed, it concluded, to provide the basis for resolving the problems of the U.S.-flag containership fleet that stem from current federal maritime policies. (The committee believed that it lacked the necessary representation of defense interests, and the study's scope and resources were too limited, to undertake such a reevaluation itself.) Recently, U.S. Secretary of Transportation Andrew H. Card, Jr., initiated a reexamination of commercial maritime policies and programs, and a Working Group on Maritime Policy, including the heads of

17 departments and agencies, was created to advise the President on what is required to maintain national security sealift capacity while sustaining and enhancing commercial viability.

On the ODS ship procurement issue, the committee suggested an interim measure under which U.S. flag carriers would be given a limited one-year window of opportunity to order foreign-built ships without losing eligibility for ODS. The committee endorsed a recommendation in a 1990 report by the National Research Council's Marine Board that U.S. manning laws

Key Issues Affecting Intermodal Marine Container Transportation

1. Ship procurement restrictions under the Operating Differential Subsidy program,
2. Federally imposed ship-manning requirements,
3. Military cargo bidding policies,
4. Environmental policy conflicts and costs,
5. Overweight container trucks,
6. Customs clearance procedures,
7. Intermodal equipment interchange procedures,
8. Cargo liability and responsibility regulation,
9. Creation of a federal intermodal coordinating office, and
10. Collection and publication of container trade data.

should be updated to remove unwarranted barriers to innovation and to establish a clear federal role in reviewing the safety of ship-manning practices. It also urged the U.S. Coast Guard to move ahead quickly with a planned reevaluation of manning requirements for all merchant vessels.

Issues Reflecting Lack of Consistent National Policy or Its Application

The committee examined three disparate issues—environmental policy conflicts and costs, overweight container trucks, and customs clearance procedures—that are related because they reflect the lack of a consistent national policy or the lack of a pro-

grammatic interpretation and application of such a policy at state or local levels. Although few would disagree with the goals of U.S. environmental policies, problems are created by the complex, sometimes conflicting array of federal, state, local, and regional environmental laws and regulations. The permitting process for dredging, which is required to accommodate the newest generation of deep-draft containerships at some ports, requires approval by multiple agencies—by all accounts a time-consuming process. Federal laws and regulations protecting wetlands and coastal areas also require permits for seaports being considered for expansion. These issues could affect the capacity and thus the long-term competitive balance of U.S. ports and their ability to handle container traffic efficiently. The committee called for further analysis of dredging-related issues and for consistent interpretation and application of national Environmental Protection Agency policy. In addition, a more explicit systems-level view is needed to assess the impacts of environmental laws and regulations and to evaluate on a timely basis the trade-offs between transportation and environmental goals.

The committee also examined the problem of overweight container trucks on the nation's highways—an issue that affects truckers most directly, but that has repercussions throughout the container transportation chain and the potential to significantly disrupt container trade. Comparative evaluation of a mix of possible approaches to resolving this problem was recommended, including education campaigns, enforcement through weighing, state cooperation in enforcement, assigning weight responsibility, modified tariffs, and specialized equipment to make container rigs operate in compliance with truck weight limits.

Delays in clearing imported cargo through the U.S. Customs Service have been a problem at some major container ports, as have wide variations and sudden changes in the application of customs regulations and procedures by districts. These problems have a direct impact on the efficiency of marine container transportation, and "port shopping" to find the least re-

strictive customs district has heightened the already strong competition among U.S. ports. Noting that the U.S. Customs Service has recently made some progress toward resolving these problems, the committee recommended that consideration be given to adding several more trade specialists at some ports and allowing the Customs Service greater flexibility to assign staff where most needed. It also called on Customs Service headquarters and the Regional Commissioners to ensure that Customs Service districts follow uniform procedures and practices in their commercial operations, especially in classification decisions.

Opportunities for Improvement

The committee identified four areas that offer opportunities for government to play a facilitating role: intermodal equipment interchange procedures, cargo liability and responsibility regulation, creation of a federal intermodal coordinating office, and collection and publication of container trade data.

Deregulation of the marine container transportation industry created a vacuum in the area of equipment control. Trailer interchange agreements (TIAs) created by the railroads in the early days of intermodalism have become a major source of concern for truck operators, who argue that existing TIAs are unilateral and unfair because they put the burden of responsibility on the motor carriers for the care and handling of railroad-owned equipment, even when the equipment is in the hands of

shippers. During the past two years, attention has been focused increasingly on the need to improve equipment use and the railroad-motor carrier interchange. The committee found a recent initiative by the American Trucking Associations Intermodal Council and the response by several major railroads to be encouraging. As a general principle, all of the modes involved in marine container transfers should be represented in planning transfer logistics and no single mode should be unfairly burdened. The committee also recommended that a comprehensive examination be made of the problems created by the lack of an established legal structure to govern the flow of intermodal freight.

The lack of uniform cargo liability and responsibility regulation for international intermodal shipments is a barrier to improved efficiency in marine container shipping. Numerous international agreements and national laws have been established or proposed on this topic, and many set forth different rules and limits of liability for loss or damage to cargo in international movements. The U.S. government signed two international treaties that would revise cargo liability but has not taken steps to recommend either treaty to the U.S. Senate for ratification. U.S. shippers and carriers hold sharply differing views on the allocation of risk for the ocean leg and thus on the desirability of changing the existing rules and limitations. The committee recommended that the U.S. government, acting through the DOT, continue its efforts to evaluate the costs and benefits of the various treaties

and, if appropriate, transmit specific proposals to the Senate, including its recommendations for ratification.

It appears that the committee's final two recommendations will be the first to be realized. The committee recommended creation of a federal intermodal coordinating office to collect and disseminate information, facilitate industry cooperation, mediate disputes, coordinate federal policies and intermodal research, and serve as a resource center on intermodal transportation. The committee also recommended improved federal efforts to collect and disseminate container trade data. A data base that includes accurate and current information on freight transportation, including container trade data, would meet the needs of both public and private users and could contribute indirectly to the industry's efficiency over time. The Intermodal Surface Transportation Efficiency Act of 1991 included provisions mandating creation of a federal intermodal coordinating office and directing DOT to develop and maintain an intermodal transportation data base. An Office of Intermodalism was recently created within DOT, and its director, Robert E. Martinez, also serves as Associate Deputy Secretary of Transportation.

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