POINT OF VIEW

America's Seaport Industry: Problems and Prospects

REXFORD B. SHERMAN

Wharfside container-handling activity at the Port of Portland.

Editor's Note: *Beginning with this issue,* TRNews *inaugurates a new series of articles entitled* Point of View. *The series, which will be published on an irregular basis, will present opinions on various topics within the transportation field. These points of view will be provided by contributing authors whom the Editorial Board believes are qualified to do so on the basis of their expertise and experience. It should be emphasized that the opinions expressed in these articles do not necessarily represent the views of the Transportation Research Board or the* TRNews *Editorial Board.*

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In the following article, Rexford Sherman discusses the importance of seaports to the nation's economy and national security, the growth of and economic difficulties facing the seaport industry, and the industry's relations with the Federal Government, and presents his view on both the current and proposed policies of the Administration with respect to the U.S. seaport industry.

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The Port of Portland's modern Terminal 6 container complex on the Columbia River offers 5 container cranes, 3 ship berths, and 83 acres of paved container yard. Built in 1974 and expanded in 1981, this facility is one of the newest and most efficient container operations on the West Coast.

The past three years have been turbulent times for the U.S. seaport industry, marked by declining cargo, curtailed investment in plant and equipment, and a plethora of difficult political issues. Although there have been positive signs of economic improvement in recent months, serious issues remain—issues of importance not merely to the ports and their immediate customers, but also to the economic regions they serve and the national economic and security interest of the United States.

The industry itself is vast, versatile, technologically sophisticated, and highly competitive. Altogether, the United States is served by 192 deepdraft ports located on the Atlantic, Pacific, and Gulf coasts and on the Great Lakes. Also included in this number are the ports of Alaska, Hawaii, Puerto Rico, and the Virgin Islands. In 1982 these ports offered shippers the use of 1,566 marine terminals and 2,869 berths capable of accommodating oceangoing vessels and Great Lakes carriers. In 1981 approximately 1.3 billion tons of cargo passed through these facilities in the U.S. foreign, Great Lakes domestic ocean, intercoastal, and coastwise trades.

A port may be described as the hub of any system that seeks to integrate the inland movement of goods with deepwater transport. U.S. ports play a multitude of roles, the most obvious being that of the transshippers of U.S. foreign commerce.

Foreign trade is as vital to the United States today as it has ever been, and in many ways more so. During the past 20 years, foreign trade's share of the U.S. gross national product has more than doubled. The United States exports about 13 percent of its coal production, 60 percent of its wheat, one-third of its rice, 30 percent of its coarse grains, and from 40 to 50 percent of its cotton. Moreover, in 1980, 8.3 percent by value of U.S. manufactures was shipped to foreign markets.

Most important, foreign trade means jobs—American jobs. Barely 20 years ago, 1 in 14 American manufacturing workers was engaged in making products for export. Today that ratio stands at 1 in 6—an increase of 130 percent. From 1977 to 1980, four out of every five new jobs created in the U.S. manufacturing sector were export-related. The Department of Commerce calculates that in 1982 25,200 jobs were created for each $1 billion worth of American exports.

America's dependence on imports is equally strong. The United States today depends heavily on imported raw materials: iron ore, petroleum, bauxite, natural rubber, tin, tungsten, cobalt, and manganese, for example. Imported goods and services also contribute to the stock of goods and services available to American consumers. The processing and distribution of imported goods also provide jobs and income to American workers. At the same time, selling to the United States enables foreign nations to earn the dollars they need to buy American goods and services.

Trade is important. Even more to the point is the fact that more than 95 percent of U.S. overseas merchandise trade by volume and approximately two-thirds of it by value move in deepdraft, oceangoing vessels, making it vitally dependent on the services and facilities provided by U.S. ports. For many shippers, and particularly those dealing in bulk movements of coal, grain, liquids, and so forth, there is simply no economic alternative to ocean transport.

U.S. national security also very much depends on the U.S. deepdraft ports. Major naval installations are located at many ports. U.S. Marine Corps units are regularly rotated through the ports of San Diego and Morehead City. Two dozen U.S. ports have been designated national defense ports by the Department of Defense—ports that would be used for the deployment and supply of U.S. forces.

From the Spanish-American War on-

Aerial view of the Port of Toledo's overseas cargo center and coal and iron ore facilities located at the mouth of the Maumee River at the western end of Lake Erie. These downriver facilities plus three upriver grain terminals make Toledo one of the most diversified ports on the Great Lakes/St. Lawrence Seaway system. Diked area in bay is being prepared for future port expansion.

ward, America's wars have been fought primarily overseas, with ports being used as staging points for the support for military operations. This pattern is certain to be repeated in any future military emergency. Indeed, the Joint Chiefs of Staff has stated that in such circumstances, particularly the outbreak of a war in Europe involving the Soviet Union, "sealift will bear the brunt of the workload in deployment, reinforcement and resupply efforts." More specific, "in any major overseas deployment, sealift will deliver about 95 percent of all the dry cargo and more than 90 percent of all petroleum products." In virtually every case, those ships will be loaded at commercial port facilities, terminals developed, owned, and in many instances operated by state and local port authorities. Those same vessels will also use the same channels and harbors dredged and maintained for commercial shipping.

The port industry contributes to the national economy in other ways. According to the Maritime Administration, port activity in 1982 generated some $70 billion in direct and indirect benefits for the U.S. economy and provided more than 1 million jobs. Additionally, the port industry contributed over $35 billion to the U.S. gross national product and $6.4 billion in U.S. customs revenues, added $1.5 billion to the U.S. balance of payments, and generated personal income of $23 billion, federal taxes of $10 billion, and state and local taxes totaling $5 billion.

The growth of ocean commerce and revolutionary changes in marine technology have placed enormous demands on U.S. ports. Between 1950 and 1979, U.S. port traffic more than doubled in volume, with port handlings of international cargo multiplying sixfold, reaching a peak of 963 million tons in 1979. Fueling that growth was initially the postwar economic recovery of Europe and Japan, and subsequently the dramatic rise in imported petroleum and exported grain and the expansion of U.S. trade with the countries of the Pacific Rim, the Soviet Union, and the Middle East.

On the shipping side, the relatively small and undifferentiated merchantmen that plied the seas two generations ago—the war-built *Victory* and *Liberty* ships and T-2 tankers—have been almost totally replaced by huge tankers, drybulk carriers, containerships, car carriers, refrigerated ships, and a bewildering variety of other highly specialized vessel types. Ships, on the average, have become larger, more sophisticated, and significantly more expensive, requiring equally sophisticated ports to turn them around quickly and keep them on schedule.

In response, U.S. ports invested more than $5 billion in new and improved cargo-handling facilities between 1946 and 1980—in wharves, transit sheds, grain elevators, coal terminals, cranes, storage areas, and other related infrastructure. As a result of new technology, automation, and the increasing adaptation of computers to all phases of port operations, the ports have been able to accommodate the growth in cargo movements at steadily lower costs. The cash value of marine terminals in the United States in 1982 stood at $59.6 billion and their replacement cost at $78.3 billion, according to Maritime Administration estimates.

Most of the ports are general purpose, catering in varying degrees to cargos of all types, both bulk and nonbulk. Major petroleum import centers include the ports of New York and New Jersey, the Delaware River, the lower Mississippi, the Texas Gulf Coast, and Southern California. Coal is shipped in greatest volume from Philadelphia, Hampton Roads, Baltimore, Mobile, New Orleans, and various ports on the Great Lakes. The Gulf accounts for the largest share of U.S. grain exports. Log and timber ports are a specialty in Oregon and Washington State, iron ore in the Great Lakes, and tobacco in the ports of Virginia and North Carolina.

Most U.S. ports are served by general cargo terminals—facilities where merchandise placed in containers, boxes, barrels and bales is handled. Thousands of imported automobiles are unloaded annually in numerous ports. Although regular transoceanic passenger service is largely a thing of the past, a number of U.S. ports are finding in the rapidly expanding cruise-ship business an extremely lucrative source of revenue.

The onset of the 1980s brought a host of economic difficulties for U.S. ports. For the past three years, U.S. cargo volumes have consistently dropped. Foreign cargo at U.S. ports declined from the 1979 peak of 963.2 million tons to 787.2 million tons in 1982. The sharpest drop was in petroleum imports, reflecting the combined effects of the OPEC price increases, the impact of the recession on U.S. economy, conservation efforts, and the substitution of coal and other domestic fuels for foreign oil. High unemployment and the depressed state of U.S. industry in general lowered overall demand for goods and services, including those purchased abroad. The rising value of the U.S. dollar against foreign currencies has effectively increased the price of U.S. products to foreign purchasers, which, in addition to the prevailing effects of the worldwide recession, particularly the severe credit problems of the developing countries, weakened demand for U.S. exports. Also damaging to U.S. seaborne trade was the Carter embargo on grain sales to the Soviet Union and the revolutionary upheaval in Iran. Although surging coal exports in the 1980-1982 period helped cushion the overall impact on U.S. ports, they were not sufficient to offset the overall pattern of decline.

Fortunately, the picture has begun to brighten in recent months, mainly due to the robust recovery of the American economy. Most of the ports in the country are reporting that cargo activity is picking up—in some cases, significantly. Most of the recovery, however, has been on the import side, reflecting the continuing strength of the U.S. dollar. Exports continue to lag, particularly coal, which this year is likely to be some 40 percent less than the record 110 million tons exported in 1981. Some experts are contending that through 1995 U.S. seaborne commerce will increase something on the order of 4 percent annually, with dry cargo handlings expected to grow at more than double that rate. Moreover, for the first time in many months, port authorities are actively pursuing modernization

and expansion programs, evidently convinced that future prospects are bright.

Nevertheless, the sky is not without clouds. World trade has declined over the past three years. Recession persists abroad, not only in the industrialized countries of Europe and Asia, but also and most severely in those of the Third World. The developing countries, which in 1982 accounted for almost 40 percent of U.S. exports (more than Japan and the European Community combined), are still struggling to overcome the problems of excessive energy costs, weak commodity prices, and staggering debts. Despite the assurances of the Reagan Administration, past U.S. embargos have made foreign buyers wary of committing themselves to American suppliers. Growing protectionist sentiment, both here and abroad—expressed in this country through legislative and attempted regulatory initiatives to curtail the inflow of imported automobiles, steel, and a host of other goods—could, if carried to the extreme, provoke a return to the economic nationalism of the 1930s with severe consequences for future trade and economic growth.

Of more immediate concern to the port industry is its relations with the federal government. America's port system has evolved on the basis of a partnership between local port entities (port authorities and private sector port interests) and the federal government. By the terms of that partnership, the federal government took on the responsibility for maintaining the navigable waters of the United States, including its deepdraft harbors and shipping channels. The nonfederal port entities have been solely responsible for building and operating the complementary shoreside cargo-handling infrastructure: the docks, the warehouses, and associated facilities. This partnership rests on firm statutory and constitutional precedent dating back to the earliest days of the republic.

Port affairs in many other countries are centralized under the direction of a national port authority. In other nations, there may be a combination of national and locally operated or "autonomous" port corporations. In virtually every case, the national government is directly involved in the development, the management, and frequently the financing of marine terminals—either through subsidies or direct administrative and financial controls.

In contrast to these other countries, in the United States public port agencies are created under state or local charters for the purpose of maximizing to public benefit the natural resources inherent in deepwater channels and harbors. In every case, it is these local authorities, not the federal government, that decide where, how, and to what extent port development is to proceed. In addition, the monies raised to pay for these ventures

Below left:
Aerial view of the Port of Sacramento, showing turning basin, warehouses, wheat and rice elevators, and woodchips handling facility. Sacramento has been open to deepdraft navigation since 1963.

Below:
Maryland Port Administration's Dundalk terminal complex at Baltimore.

come from local, state, or private sources—not from the federal government.

There is considerable variety in the type and nature of U.S. port authorities, reflecting the differing statutes, regulations, and political propensities of the individual states. Some are administrative divisions of state government—of state departments of transportation, for example. Others are in effect public corporations created by state legislatures and directed by their enabling charters to develop and manage specific harbor areas in the public interest. Some are state port authorities, independently structured within state government, with responsibility for the several ports in that state, but answerable to the governor and legislature. Still others are constituted as political subdivisions (sometimes called independent navigation districts) that, like other such subdivisions (school districts, for example), are empowered to levy taxes, with commissioners elected by the voting public. In addition, there are county and municipal port departments, and, to further complicate the picture, bi-state port authorities whose jurisdiction extends across state boundaries.

Most port authorities are concerned only with the maritime industry, shipping, and trade. A few, however, are multimodal agencies whose responsibilities encompass not only seaport activity, but airports, bridges, urban office buildings, industrial parks, commuter rail, and rapid transit systems.

Typically, port authorities fall within two broad classifications. The first group, the operating ports, not only develops and maintains port terminals but also operates them using port authority personnel. The second group, the non-operating or landlord ports, leases property to operators, such as steamship lines or stevedoring companies. Some port authorities combine both the operating and landlord functions.

Port authorities have a dual character. On the one hand, like businesses or corporations in the private sector, they must operate efficiently and profitably. They are expected to be competitive and to measure up to the demands of their customers, meaning the shipping public. On the other hand, a port authority is also a public agency and in that sense accountable to the electorate directly or indirectly for its actions. In every instance, therefore, port authorities, however sturctured, are custodians of the public interest.

With respect to the role of the federal government, the origin of national policy concerning navigation can be traced back at least as far as the Northwest Ordinance of 1787 in which it was pledged that "the navigable waters leading into the Mississippi and St. Lawrence, and the carrying places between the same, shall be common highways and forever free, as well as to the inhabitants of the said territory as to the citizens of the United States, and those of any other states that may be admitted into the confederacy without any tax, impost or duty thereof." With the ratification of the Federal Constitution in 1787, the states surrendered to the federal government the power to tax or in any other way regulate commerce "with foreign nations and among the several states."

Beginning with the Survey Act of 1824, the U.S. Army Corps of Engineers was assigned the task of harbor and navigation channel development and improvement. Subsequent legislation, building on these constitutional and statutory precedents and culminating in the Rivers and Harbors Act of 1899, firmly established the principle of federal control over the navigable waters of the United States.

Given this claim to exclusive jurisdiction, it is only logical that the federal government should have also assumed the responsibility for ensuring that these waters are adequate to the navigational purposes and needs of the United States. And in fact this is the way it has worked for nearly 160 years.

However, in recent years, the system has faltered and is now in real danger of collapse. Dredging projects must thread their way through an intricate maze of statutory and regulatory requirements, a process that has been further complicated since 1969 by a plethora of environmental protection enactments and regulations and the increasing number of federal and other public agencies that must review, comment on, and in some cases approve such projects before the Corps can proceed with actual construction.

Still another problem stems from the fact that the civil works budgets of the Corps of Engineers have not kept pace with inflation, meaning the Corps has been able to do increasingly less with the available fiscal resources. Few U.S. ports have been deepened to any appreciable extent since World War II. Not a single new seaport dredging project has been authorized by Congress since 1976, at a time when commerce has been expanding and the average size of vessels increasing. Frequently projects are delayed by legal challenges from well-financed and politically adroit environmentalist groups. Years, even decades, may lapse between the inception and completion of a major port channel improvement project.

Moreover, federal laws and regulations intrude into virtually every area of port management, contributing significantly to the burden of costs the ports must shoulder. From 1970 through 1976, according to the Maritime Administration, $194 million was expended by U.S. local ports to satisfy federal environmental, cargo security, and safety standards. In July 1983 the Occupational Safety and Health Administration issued a final rule applying to marine terminal safety standards, one that the agency itself concludes will cost the industry $45.9 million the first year of compliance and $14.5 million in annualized investment and maintenance over the next 10 years.

New laws and changing regulatory policies create on-going confusion among public port administrators and add to the burden of cost and managing public ports. But the most difficult challenge of all has come from the present Administration, where not merely a question of new laws and regulations but a change in policy is effectively threatening to alter time-honored federal/port relations. This change in policy encompasses both the Administration's insistence on full-cost recovery for deepdraft waterway development and maintenance, and a barrage of proposals calling for user fees on Coast Guard and Customs services, higher taxes on heavy trucks, and increased inland waterway charges.

The Administration's view is that the primary beneficiaries of the navigation system are the commercial waterways users--vessel owners, shippers, and so forth—and thus they, not the general taxpayer, should pay the cost of providing and maintaining these facilities. The same logic is extended to other Administration-backed "cost recovery" schemes.

No one would deny that there is a definite private sector interest in port development, that ocean shipping and its availability are of key importance in commercial transactions. But it is not logical to view this role solely from that narrow perspective.

Nearly one-fourth of the U.S. gross national product is generated by foreign trade, much of which is directly (in many instances, totally) dependent on ocean transportation and, therefore, on ports. Millions of jobs and billions of dollars in income and tax revenues are generated by ocean trade and indeed by the port industry itself. The importance of ports to national security and defense is self-evident.

Much of the Administration's thinking on cost recovery stems from the laudable desire to restrain the growth of the federal budget and especially to curb the huge deficits that burden the national treasury. Overlooked, however, is the fact that our seaports are themselves a considerable source of profit to the federal government. In fiscal year 1982, for example, customs revenues generated from duties collected on imports unloaded at U.S. seaports alone amounted to somewhere between $6.3 and $6.4 billion, a sum at least 10 times as great as total federal expenditures that year for Coast Guard and Corps of Engineers services performed on or for deepdraft ports.

Another point commonly overlooked is that the port industry has for many years been cost-sharing port development with the federal government. Where federal harbor projects are involved, the port authority typically acts as local sponsor or assurer. Approval of those projects has traditionally been conditioned on the local assurer's agreement to provide, at no expense to the federal government, easements, rights-of-way, the removal or relocation of bridges and underwater cables, and the creation of dredge spoil disposal areas—requirements that may add as much as 30 percent or more to total project costs. Moreover, it hardly needs saying that deepdraft channels have no intrinsic value of their own in the absence of complementary shoreside infrastructure, virtually all of which, once again, is financed by non-federal port interests.

The Administration's policy threatens the long tradition of federal even-handedness in port matters, one stemming from the Constitutional stricture that no federal preference "be given by any regulation of commerce or revenue to the ports of one state over those of another." Further support for the principle of even-handedness comes from various federal shipping statutes that forbid any conference, pooling, or related shipping agreements that may discriminate among ports.

Our ports have invested billions of dollars, much of it public money or investments backed by public credit, in marine terminals, all predicated on the good-faith assumption that the federal government would continue in its role as keeper of the waterways. But the Administration's initiatives threaten to disrupt long-standing competitive relations, and in so doing could place in jeopardy the large public investment in harbor infrastructure.

The port industry realizes that change is necessary. The current system is cumbersome, slow, and ineffective. It is recognized that it is imperative for federal permitting regulations and laws to be streamlined, for procedures to be simplified and for some degree of certainty to be introduced in both the permitting and authorizing process. But it is a difficult problem for the port industry, one that has caused sharp divisions within its ranks.

However, that schism has begun to narrow; in fact, at the recent convention of the American Association of Port Authorities in Seattle, a resolution was approved, though not by unanimous consent, agreeing to the principle that some portion of customs revenues should be used for port development. That event in Seattle may make it much easier to find a national consensus on the proper direction for national port development policy. This is indeed a positive development.