The private sector has become increasingly involved in the operation of common-user port facilities during the 1990s, following public sector dominance of the sector since the 1940s. During the past decade the reform of port administration has gained momentum in industrial and developing countries alike. Between 1990 and 1998, 112 port projects with private participation reached financial closure in twenty-eight developing countries, with investment commitments totaling more than US$9 billion (figures 1 and 2; boxes 1 and 2). This trend is set to continue.

Public port agencies have been moving away from the service port model, under which the port authority provides all commercial services as well as regulatory functions, and increasingly adopting the landlord model. Under this approach public port authorities retain their regulatory functions and continue to own the land and basic infrastructure assets such as berths and breakwater facilities. But they divest themselves of the managerial and financial responsibility for commercial facilities such as terminals and equipment in the port area.

Before the 1990s private involvement in managing and financing ports was largely limited to captive facilities. These facilities, typically for bulk cargo, are often vertically integrated into production processes and not actively promoted for use by third parties (figure 3). During this period private involvement in common-user ports was limited to a few projects: Kingston Port, in Jamaica...
Database coverage
- To be included in the database, a project must have reached financial closure and directly or indirectly serve the general public.
- The sectors covered are electricity, natural gas, telecommunications, transport, and water.
- The transport sector includes the following subsectors: airports, seaports, rail, and road. The seaport subsector includes general cargo and container terminals, bulk cargo facilities, and port access channels.
- The database excludes movable assets, incinerators, stand-alone solid waste projects, and small projects such as windmills.
- The period covered is 1984–98.
- The database covers developing countries, as defined and classified by the World Bank, in East Asia and the Pacific, Europe and Central Asia, Latin America and the Caribbean, the Middle East and North Africa, South Asia, and Sub-Saharan Africa.

Definition of private participation. The private company must assume operating risk during the operating period or assume development and operating risk during the contract period. In addition, the operator must consist of one or more corporate entities with significant private equity participation that are separate from any government agency. A foreign state-owned company is considered a private entity.

Definition of a project unit. A corporate entity created to operate infrastructure facilities is considered a project. When two or more physical facilities are operated by the same corporate entity, all are considered as one project.

Project types
- Operations and management contract. A private entity takes over the management of a state-owned enterprise for a given period. This category includes management contracts and leases.
- Operations and management contract with major capital expenditure. A private consortium takes over the management of a state-owned enterprise for a given period during which the private entity also assumes significant investment risk. This category includes build-transfer-operate, build-lease-transfer, and build-rehabilitate-operate-transfer contracts as applied to existing facilities.
- Greenfield project. A private entity or a public-private joint venture builds and operates a new facility. This category includes build-own-transfer and build-own-operate contracts as well as merchant power plants.
- Divestiture. A private consortium buys an equity stake in a state-owned enterprise. The private stake may or may not imply private management of the company.

Definition of financial closure. For greenfield projects, and for operations and management contracts with major capital expenditure, financial closure is defined as the existence of a legally binding commitment of equity holders or debt financiers to provide or mobilize funding for the project. The funding must account for a significant part of the project cost, securing the construction of the facility. For operations and management contracts, a lease agreement or a contract authorizing the commencement of management or lease service must exist. For divestitures, the equity holders must have a legally binding commitment to acquire the assets of the facility.

Sources
- Commercial databases.
- Specialized publications.
- Developers and sponsors.
- Regulatory agencies.

Contact. The database is maintained by the Private Participation in Infrastructure Group of the World Bank. For more information contact Mina Salehi at 202 473 7157 or msalehi@worldbank.org.
The World Bank Group


The shift toward private involvement has been driven by two main factors:

• The strong growth in world trade has led captive port users—unable to switch to other transport modes, such as railways or airports, or to other ports—to put enormous political pressure on authorities to improve handling efficiency, reduce port user fees, and expand facilities to accommodate larger cargo flows. Yet many public port authorities have had only limited success in improving labor and other practices to increase the productivity and efficiency of existing installations.

• Economies of scale in cargo shipment have led to the emergence of a few global players in shipping, able to control the allocation of transshipment business to strategically located, well-equipped, and efficiently managed hub ports. To stay competitive, port authorities have to modernize and upgrade port facilities to meet the needs of the large shipping lines. But with larger ships, the advance of containerization, and the introduction of sophisticated cargo information systems, the investment required has often gone beyond the financial and managerial capacities of public port authorities.

This Note, which draws on the World Bank’s PPI Project Database, provides an overview of the emerging patterns and trends in private involvement in ports in developing countries. The database does not track very small projects and covers only seaports that operate on a common-user basis. The database covers only twenty-one bulk facilities, since most are operated as captive facilities. (Thirteen are dry bulk handling facilities, for grain or coal, transferred to private management, and eight are liquid bulk facilities developed by the private sector.) Among the public port facilities attracting private involvement that have been included in the database, most have been container terminals (sixty-two transactions). The rest have been smaller ports handling general and bulk cargo. There has been only a single case of a concession for channel dredging and maintenance, awarded in the Rio Paraná. Part of the project revenues will come from direct charges to the future channel users by the concessionaire.

The database depicts two distinct patterns:

• Long-term concession contracts involving private operation and management and significant private investment in existing public assets have been the most common arrangements; the ownership of land has in most cases remained with the public port authority. Private investment has fostered the rehabilitation of terminals and the renewal of superstructure, such as cranes and yard equipment.
Reflecting a pattern observed in other infrastructure sectors, most transactions have taken place in Latin America and East Asia. Within regions, the distribution of projects has been uneven, with five countries accounting for roughly half the projects in all developing countries.

Concessions involving major private investments dominate

In most projects the new private port operators have taken on significant investment obligations for expansion and modernization of existing facilities (commonly buildings and equipment), assuming full commercial risks for the facilities. The public port authorities, with few exceptions, have retained obligations for investment in berths and breakwater facilities and maintenance of access channels.

Three-quarters of the 112 projects are operations and management contracts with significant capital expenditure for existing facilities (forty-nine projects) or greenfield development (thirty-five). Most of these projects are in Latin America (eight greenfield projects and twenty-nine concessions) or East Asia (eighteen greenfield projects and thirteen concessions). Rapid growth in trade and insufficient infrastructure in East Asia have meant a larger role for new port facilities (greenfield projects) in that region and also explain the high volume of investment there, as in Malaysia. In Latin America the private sector has more often taken over existing infrastructure assets and invested in refurbishing and modernizing superstructure, focusing on increasing the efficiency and productivity of existing assets.

Twenty of the 112 projects are structured as operations and management contracts without investment commitments. In these projects private operators have leased existing port infrastructure. Lease contracts have reached closure for facilities in Latin America (eight projects) and Sub-Saharan Africa (two). In East Asia, Thailand (Laem Chabang) and the Republic of Korea (Pusan, Kwangyang) have awarded leases to operate new container facilities financed by the public sector.

Divestiture has played a limited role in the port sector. In the Russian Federation ports have been transformed into joint stock companies through voucher privatization. The stevedoring companies, usually former divisions of the port, have been assigned ownership rights to parts of the port infrastructure, such as real estate in the port.
area (St. Petersburg), or to shares in the port company (Vladivostock), with the state retaining a 49 percent ownership. In Brazil captive port facilities have been divested in the context of privatization in oil, steel, and mining and have since been opened to third-party access (Tubarão, San Nicolas).

Private involvement remains regionally concentrated

Latin America and East Asia have clearly led the trend in private involvement in port operations, both in the number of projects reaching financial closure and in investment commitments (table 1). This regional pattern is largely consistent with trends in other infrastructure sectors, such as electricity and water and sewage. Within these regions, projects and investments are unevenly distributed. Five countries accounted for half the projects reaching financial closure in 1990–98, and more than 65 percent of committed investment (figures 4 and 5).

Latin America and the Caribbean

Latin America and the Caribbean, with poor performance by public ports and strong growth in trade, turned to private participation in ports in the early 1990s. By 1998 seven countries—Argentina, the Bahamas, Brazil, Colombia, Jamaica, Mexico, and Panama—had transferred control of port facilities to the private sector.

Colombia led the way in 1993, awarding concessions for the management of its four major general cargo ports to public-private consortia with a majority of votes held by local private companies. These consortia then subconcessional private terminal operators.

Argentina, as part of a broad program of private involvement in public infrastructure services, awarded concessions for the terminals of its main port, Buenos Aires, to four competing private port operators in 1994. The stiff competition within the port and from a greenfield facility in the province of Buenos Aires has brought down handling charges significantly, mostly through improved labor productivity, but has also led to consolidations among the terminals.

Panama and Mexico transferred their major port facilities to the private sector between 1995 and 1998. Panama attracted more than US$380 million in investments for four facilities under private management—Manzanillo International Terminal, Colón Container Terminal, and the ports in Cristóbal and Balboa; all are strong competitors in the container transshipment market. Mexico awarded concessions for its major port facilities in Manzanillo, Ensenada, Altamira, and Veracruz.

Brazil started its port privatization program in 1997 with concessions for the container terminals in Santos and Rio Grande. Following the Argentine model, it awarded concessions for single terminals.

In most of the Latin American projects the private operators have been able to attract significant private capital investment to refurbish infrastructure assets and modernize cargo handling equipment. The private terminals have improved the quality of service and reduced costs (although handling charges remain high by international standards), especially where competition from other terminals in the port or among neighboring ports has been strong.

### Table 1: Port Projects with Private Participation in Developing Countries by Region, 1990–98

<table>
<thead>
<tr>
<th>Region</th>
<th>Number of projects</th>
<th>Total investment (1998 US$ millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Asia and the Pacific</td>
<td>38</td>
<td>5,410.5</td>
</tr>
<tr>
<td>Europe and Central Asia</td>
<td>8</td>
<td>23.4</td>
</tr>
<tr>
<td>Latin America and the Caribbean</td>
<td>48</td>
<td>2,497.7</td>
</tr>
<tr>
<td>Middle East and North Africa</td>
<td>5</td>
<td>376.5</td>
</tr>
<tr>
<td>South Asia</td>
<td>9</td>
<td>942.6</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>4</td>
<td>32.0</td>
</tr>
<tr>
<td>Total</td>
<td>112</td>
<td>9,282.7</td>
</tr>
</tbody>
</table>

Source: PPI Project Database.
Sustaining that competition will depend on a regulatory framework that promotes competition not only among terminals and ports but also among different modes of transport.

**East Asia and the Pacific**

In East Asia and the Pacific the model for private management of port facilities has been the port of Hong Kong, which has been privately managed for many years. The Philippines, too, involved the private sector early, handing over management of its major container facilities at the Port of Manila to International Container Terminal Services in 1988. China, Indonesia, Korea, Malaysia, Myanmar, Thailand, and Vietnam have turned to the private sector since the mid-1980s to manage and invest in port terminals.

Malaysia awarded Kelang Container Terminal (KCT) a twenty-one-year lease contract to manage and develop container facilities at Port Klang in 1986 and awarded a concession for the port’s bulk operations to a private consortium, Klang Port Management (KPM), in 1993. Between 1992 and 1998 Malaysia attracted significant investment commitments for seven other major port projects. The most important is Klang West Port, which reached closure in 1994. This project will compete with the other operators in Port Klang as well as with the region’s dominant transshipment hub, the port of Singapore. In December 1998 KCT and KPM announced a merger of their operations to achieve economies of scale and cost-effectiveness. Whether the resulting loss of competitive pressure will be balanced by the emergence of Klang West Port remains to be seen.

China opened the management of its ports to the private sector beginning in 1991. The Hong Kong Port operator, Hutchison Whampoa, took over the development and management of container facilities in Shanghai in 1993 and in Yantian in 1994. By 1998 thirteen facilities in China were managed by the private sector. Private operations are generally structured as joint ventures with the public port authorities; the competition within ports seen in Latin America is rare in China.

Indonesia introduced private management in 1995, transferring the Koja container terminal at Tanjung Priok Port. The project ran into difficulties amid the political and economic turmoil of the financial crisis, and the state-owned port company, PT Pelabuhan Indonesia II, canceled the concession contract and took over the facility in 1998.7
Elsewhere in the region, Korea (Pusan, Kwangyang) and Thailand (Laem Chabang) granted leases for government-owned port facilities to the private sector. Myanmar, Thailand, and Vietnam have attracted minor private investments for port facilities.

Middle East and North Africa

Countries in the Middle East have only recently opened up their port infrastructure to private involvement. Oman, the United Arab Emirates, and Yemen awarded one facility each to the private sector in 1997. The new container facilities in Oman (Port Raysut) and Yemen (Port Aden) will compete with each other mainly for transshipment cargo. Saudi Arabia awarded a concession for a facility in Jeddah and one for a general cargo terminal in Dammam. And the United Arab Emirates awarded a concession for a liquid bulk terminal in the port of Fujaira. In North Africa in early 1999, Morocco awarded a contract to a private consortium for the development of a new container facility at the port of Tangiers (Tanger-Atlantique) on a build-operate-transfer (BOT) basis.

Sub-Saharan Africa

Mozambique and Kenya have been the only countries in Sub-Saharan Africa to award private contracts for port operations. Mozambique awarded lease contracts for Maputo coal terminals in 1993 and container terminals in 1996.8 Kenya entered into a management contract for a container facility with an international operator in 1996 that was later canceled. But in 1998 a consortium invested in the development of a grain and fertilizer terminal at the port of Mombasa.

Europe and Central Asia

After launching a reorganization of the maritime sector in 1991, Russia used vouchers to privatize its major port facilities (Murmansk, Kaliningrad, St. Petersburg, Vostochny, Vladivostock, Arkhangelsk). The joint stock port companies and stevedoring companies have had difficulties raising financing to expand and modernize the privatized port facilities. Foreign involvement in managing and financing port infrastructure through 1997 was limited to a lease contract in 1995 for one minor container facility in Vostochny Port. Elsewhere in the region, Romania granted a license to construct and operate a grain terminal in the port of Constanta to a private consortium in 1997. And in 1998 Latvia privatized a stevedoring company that leases quays and land from the Riga port authority.

South Asia

Port projects involving the private sector are a very recent phenomenon in South Asia, limited to India and Pakistan.9 In India, despite much private sector interest, only three projects—in the ports of Mundra, Pipavav, and Jawaharlal Nehru—had reached financial closure by 1998. The Nhava Sheva container terminal at the Jawaharlal Nehru Port Trust is the only significant foreign investment. In Pakistan four container terminals and one liquid bulk facility in the ports of Karachi and Qasim reached financial closure between 1995 and 1998.

Conclusion

Private participation in port operation has grown strongly over the past decade, driven by broader trends in the transport sector and a new understanding of the public sector’s role in the provision of infrastructure services. Labor unions, which play an important role in the sector, remain highly critical of private participation, however, mostly because of the changes in labor rules and the workforce reductions introduced by private operators.

The countries leading the way in private participation have been able to attract significant private capital investment to refurbish infrastructure assets and modernize cargo handling equipment. Under private management ports have usually significantly improved their performance, boosting labor productivity and service quality and reducing handling costs. Whether these efficiency achievements can be sustained
will depend in large part on the extent to which competitive pressures can be brought to bear on private operators, through competition among ports or within ports.

Sustaining competition among ports will require coordinating competition policies at a regional level to create a level playing field for ports and avoid dominance by single port operators. A broader approach—aimed at encouraging private participation and competition in the transport sector as a whole—would need to promote competition by ports with other transport sectors, such as railroad and road transport, and provide incentives for service providers to compete across transport networks by combining transport modes.

1 Latin America recorded annual growth rates of 13 percent for merchandise imports and 9 percent for merchandise exports in 1990–97, while in Asia imports grew 9 percent and exports 7.5 percent, according to the World Trade Organization's International Trade Statistics 1998 (Geneva, 1998).

2 Hub ports seek to consolidate regional cargo by connecting regional ports through feeder vessels to a main port, the “hub,” thus allowing shipping companies to exploit economies of scale by deploying larger vessels on long routes, such as in transoceanic transport. The unloading of feeder vessels, temporary storage of freight, and loading of large vessels make up the transshipment business.

3 For example, the database does not fully reflect licenses for the small private stevedoring companies that often operate state-owned port equipment, which is a common arrangement in parts of West Africa (Cameroon, Côte d’Ivoire, Gabon, Guinea, Senegal) and Latin America.


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6 See Antonio Estache and José Carbajo, “Competing Private Ports—Lessons from Argentina” (Viewpoint 100, December 1996).

7 In early 1999 Hong Kong’s Hutchison Whampoa, which operates Java International Terminals at Bojonegoro Port jointly with PT Pelabuhan Indonesia II, announced the acquisition of a 51 percent stake in management of the container terminals in Jakarta jointly with Pelalihan II, the state-owned port authority. It acquired the twenty-year stake against competition from other international port operators.

8 Mozambique also awarded the N4 Maputo Corridor toll road concession and three concessions for railroad lines serving the Maputo port to consortia with private participation.

9 In early 1999 South Asia Gateway Terminal (P&O Australia) took over the Queen Elizabeth Quay of Colombo Port in Sri Lanka under a thirty-year concession.