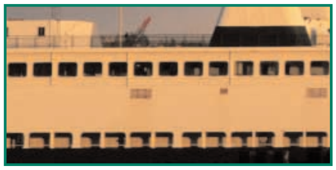
WORLD BANK
PORT REFORM
TOOL KIT

MODULE 1

FRAMEWORK FOR PORT REFORM



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M O D U L E 1

FRAMEWORK FOR PORT REFORM

INTRODUCTION AND OBJECTIVES

The process of institutional reform is complex. Most countries undertake the kinds of fundamental institutional reforms that shift boundaries between the public and private sectors less than once in each generation. Hence, the knowledge necessary to carry the reform process forward needs to be built up in most countries from a near zero base. The Port Reform Toolkit (Toolkit) is designed to shorten the learning curve for institutional review and renewal by providing background information, concrete examples of successful and unsuccessful reforms, and specific tools and methods that policy makers and reformers require to proceed with the confidence that genuine knowledge affords.

The complex reform process through which the Toolkit navigates policy makers is a worthwhile journey. While the reasons for engaging in port reform are many and varied (as discussed in Module 3), the benefits are real and can be quantified as they accrue to exporters, consumers, shippers and entrepreneurs. A successful reform program may free governments of unnecessary expenditures, releasing funds for high priority social programs, ease bottlenecks to trade and economic development, and motivate the adoption of new regulations that protect the environment and improve workman and navigational safety. More broadly, the benefits the main stakeholders can expect from port reform include:

- ***Governments:*** at the macroeconomic level, improvement of external trade competitiveness by reducing transport costs, and in particular the cost of port services, and improving port efficiency at the sea/land interface; at the microeconomic level, easing the financial burden on national budgets by transferring part of port investments and operating costs to the private sector, and incidentally, raising revenues from asset divestitures;

- *Transport and Terminal Operators:* more cost-effective port operations and services, allowing for more efficient use of transport assets and better competitive positions in transport markets, and more business opportunities in growing sectors (e.g., container operations);

- *Shippers, Exporters/Importers:* reduced port costs and, potentially, lower maritime freight rates, allowing lower costs of imported goods and intermediate products and enhanced competitiveness for exports; and

- *Consumers:* lower prices for consumer goods and better access to a wider range of products through improved access and increased competition between suppliers.

In Colombia, for instance, the liberalization of port labor practices along with the transfer of most port services to the private sector has resulted in large and rapid improvements in productivity, lowers fees for port users, and very attractive returns for the concessionaires (see Box 1). Similarly, in Argentina, the improvements following the concessioning of terminal operations in Buenos Aires have been dramatic: port charges and shipping tariffs have declined sharply, labor productivity has nearly quadrupled, and cargo volumes have jumped by more than 50% (see Box 2).

The objective of the Port Reform Toolkit is to provide support for policy makers in undertaking sustainable and well-considered reforms to public institutions that provide, direct and regulate port services in developing countries. In par-

Box 1

COLOMBIA: OPERATING PERFORMANCE BEFORE AND AFTER REFORM

Indicator	Before 1993	1996
Average vessel waiting time (days)	10	No wait or in hours, depending on the port
Working days per year	280	365
Working hours per day	16	24
Tons per vessel per day		
Bulk cargo	500	2,500 minimum
General cargo	750	1,700
Containers per vessel per hour (gross)	16	25

Source: Puertos (Colombia General Port Superintendent; July 1997).

Box 2

ARGENTINA: SELECTED PERFORMANCE INDICATORS FOR THE PORT OF BUENOS AIRES

Indicator	Before 1993	1996
Cargo (thousands of tons)	4,000	6,000
Containers (thousands of TEUs)	300	540
Capacity (thousands of containers per year)	400	1,000
Operational area (hectares)	65	95
Productivity (tons per worker per year)	800	3,000
Average stay for full containers (days)	2.5	1.5
Cost for container imports (US$ per ton)	450	120
Port tariff for exports (US$ per ton)	6.7	3.0
Port tariff for imports (US$ per ton)	2.1	1.5

Source: Puertos (Colombia General Port Superintendent; July 1997).

ticular, the Toolkit offers public officials with support in:

- Understanding the need for and challenges associated with sector reform and institutional redesign in light of the changing business environment affecting port operations;
- Choosing among options for private sector participation and analyzing their implications for redefining interdependent operational, regulatory and legal relationships between public and private parties;
- Preparing legislation, contracts and institutional charters to govern private sector participation; and
- Managing the transition to increased private sector involvement.

Resources that address port institutional reform in a comprehensive and systematic way or that clearly explain the processes involved in re-engineering public port institutions are not readily available. The Toolkit is designed to fill this knowledge gap and to provide port reformers with decision support tools, tested and proven institutional reform tactics, and guidelines that represent "best international practice."

The Toolkit draws together practical institutional designs and alternative approaches for increasing private sector involvement without compromising the public interest. It presents "best international practices" in a manner that is relevant to decision makers, and is designed to be easily understood by non-specialists. It supplements general points with specific examples drawn from recent port reform activities around the world.

While the main audience for the Toolkit is public officials in developing countries who are responsible for port sector reform, the Toolkit should also be of interest to other government officials, to executives with port service companies, shipping companies, port consultants, and companies that use port services.

In addition to this introduction, the Framework Module includes the following sections:

- Context for the Framework Module
- The Port Business Environment
- A Road Map for the Port Reform Process
- Implementing Port Reform: Pulling It All Together

CONTEXT FOR THE FRAMEWORK MODULE

The Toolkit is made up of eight modules. The first of these, the Framework Module, sets the stage for all of the other modules that follow. It provides a unifying "decision framework" that policy makers can use to guide them step-by-step through the processes of reforming and re-inventing port institutions. It also provides a common language and a set of concepts that are used throughout the Toolkit and that represent the common language port reformers use in communicating with their various constituencies. Importantly, the Framework Module also includes a road map for the other modules that follow. It explains the interrelationship of these modules with one another and their relevance to the framework presented here.

The Framework Module lays out an ordered set of decisions that are linked together functionally as well as temporally. For each decision, the Toolkit attempts to articulate the principle options and alternatives available to policy makers and to assess the expected consequences associated with each option based on recent international experience. The framework is presented in the form of a "decision tree" that provides a context for understanding the subsequent modules, which are:

- ***Module 2:*** The Evolution of Ports in a Competitive World: The roles and functions of ports; forces shaping port dynamics in the 21st Century. Readers of this module should be able to place their ports in the context of current and historic port developments and to understand the major trends shaping the ports of the future.
- ***Module 3:*** Alternative Port Management Structures and Ownership Models: Description of different port structures and ownership models and identification of the strengths and weaknesses of each. Readers of this module should be able reach a decision about the most effective, efficient, and feasible structure for their ports, given each country's/community's unique economic, political, and social environment.
- ***Module 4:*** Legal Tools for Port Reform: Description of legal and contractual options and the identification of the strengths and weaknesses of each. Readers of this module should be able to understand and take steps to develop specific port reform measures and legal frameworks based on the port's/government's economic, financial, political, and social goals and objectives.

- *Module 5:* Financial Implications of Port Reform: Risk allocation among port stakeholders; potential sources of funding for the reform process; pricing port services to achieve revenue and public policy objectives. Readers of this module should gain an appreciation for port finance and its relationship to reform as well as how the financial risks and rewards vary from one reform option to another.

- *Module 6:* Overseeing the Economic Public Interest in Ports: Defining the public interest; description of oversight mechanisms and techniques; elements of the public interest. Readers of this module should gain a solid understanding of oversight mechanisms and methods; the role of regulatory bodies, inspections and audits; reporting requirements; and the interplay between competition and regulation.

- *Module 7:* Labor Reform and Related Social Issues: Institutional, legal, and industrial frameworks for port reform; establishing a productive dialogue among port stakeholders; rationalizing the workforce; overcoming roadblocks. Readers of this module should be able to plan for and implement rationalization of port labor in a manner that treats affected parties fairly while achieving essential efficiency and economic improvements.

- *Module 8:* Implementing Port Reform: How to get from concept to effective implementation. Readers of this module will receive practical advice on how to take the many elements of port reform and put them into a procedurally logical and politically feasible sequence of steps that maximize the chances for success.

A wider range of reform models and of public-private partnership formats exists for the delivery of port services than for any other infrastructure intensive service sector. This is because the ensemble of services provided by seaports is vast and requires more diverse and specialized skills and involves more categories of service than other public/ private institutions. Although the Toolkit does not elaborate on all models available to sector reformers, it does define the options on either end of the public-private spectrum as well as the most common risk-sharing arrangements such as concessions and terminal operating leases. Importantly, it also provides tools for assessing hybrid options and for understanding their merits and risks.

In dealing with reform in the port sector, the World Bank has tried to pool knowledge from around the world. This knowledge is abundant. Over the past 10 years more than 100 transactions have been completed that involve increased private sector participation in the sector (see Boxes 3 and 4). The problem confronting public policy makers when they take up the challenge of port reform is not a lack of information, but rather a lack of useful knowledge they can use to support their own process of reform.

The Toolkit uses a diversity of communication media to convey knowledge and insight to its users, including narrative text, mini case studies, graphics and stylized representations of decision processes. The objective of the World Bank in developing this Toolkit is to provide not only a comprehensive but also an easy to use and apply Toolkit for port reform.

Box 3

Port Projects with Private Participation in Developing Countries that Reached Financial Closure, 1990-99

Year	Projects
1990	2
1991	1
1992	7
1993	12
1994	17
1995	24
1996	14
1997	20
1998	16
1999	14

Port Projects with Private Participation in Developing Countries by Type of Project, 1990-99

Type of Project	Number of Projects
Divestiture	8
Greenfield Project	41
Operations and Maintenance Project	22
Operations and Maintenance with Major Private Capital Expenditure	56

THE PORT BUSINESS ENVIRONMENT

Three broad forces are generating momentum for port reform in developing and industrialized countries alike:

- External forces of competition and technology from the shipping industry;

Box 4

Investments in Port Projects with Private Participation In Developing Countries by Project Type 1990-1999

(US$ Nominal Million)

Class	Year	Total
DIVESTITURE	1990	0.00
	1991	0.00
	1992	0.00
	1993	0.00
	1994	0.00
	1995	0.00
	1996	30.00
	1997	83.00
	1998	0.00
	1999	0.00
GREENFIELD PROJECT	1990	0.00
	1991	10.00
	1992	88.00
	1993	141.00
	1994	139.00
	1995	1321.00
	1996	1225.00
	1997	1700.00
	1998	248.00
	1999	275.00
OPERATIONS AND MAINTENANCE WITH MAJOR PRIVATE CAPITAL EXPENDITURE		
	1990	1.00
	1991	0.00
	1992	160.00
	1993	196.00
	1994	850.00
	1995	506.00
	1996	179.00
	1997	2482.00
	1998	540.00
	1999	2251.00

- The acknowledged financial and operational benefits of private participation in infrastructure development and service delivery; and

- The diversification and globalization of investors and operators in the port industry.

These three forces are described below.

First is the need to restructure port operations to deal with the external factors that affect port viability including national competition for global markets, changes in port and transport technology and increased competition among ports. Port institutional models developed in the 19th and early 20th century today significantly constrain ports from competing effectively on a service quality basis, limit their agility and market responsiveness in mobilizing resources and constrain their ability to share risks with private sector partners. In planning how responsibility for future port development and operations will be divided between the private and public sectors and in deciding on desired levels of investment to be funded or guaranteed from public sources, policy makers must increasingly regard the competitiveness of their port(s) vis a vis other ports in their region and vis a vis the supply chain alternatives available to their users. In general, these alternatives are more abundant today than they were ten years ago. Consequently, the port business is more competitive today than it was when most port authorities were originally chartered. New institutional models are needed for this new era of increased competition.

The second force generating momentum for reform is private participation in infrastructure. In recent years, world governments and lending agencies have come to acknowledge that private sector participation can be a powerful force for enhancing the performance of port assets, as with other infrastructure assets. National and regional seaports are realizing that they cannot compete effectively without the efficiencies offered by private operators and, equally importantly, without access to capital provided by private investors. In response, there has been a steady increase in recent years of private participation in port operations around the world. Countries with recent experience of port privatization include Poland, Germany, Lithuania, Estonia, Latvia, Russia, Japan, Malaysia, China, Thailand, the Philippines, Indonesia, Argentina, Chile, Brazil, Mexico, Colombia, Panama, Mozambique, Tanzania, United Kingdom and Canada. The World Bank is currently involved in port reform projects in about twenty countries in various regions worldwide. Moreover, the pace of private investment in the sector is accelerating. As Box 5 below demonstrates, private investment in the sector has increased progressively since 1990. Over this period private sector investment in the ports increased from $10 million in 1991 to

Box 5

INVESTMENTS IN PORT PROJECTS WITH PRIVATE PARTICIPATION BY YEAR
(US$ nominal millions)

Year	Investment
1990	$1
1991	10
1992	248
1993	337
1994	989
1995	1,827
1996	1,435
1997	4,264
1998	788
1999	2,526
Total	**$12,425**

Source: PPI Database, World Bank

$4.3 billion in 1997, and to a cumulative amount of more than $12 billion over the period at the end of 1999.

The private sector, which has driven recent port development, has rapidly matured and has organized itself into distinct specialized sub-sectors. Today, the port services industry is a US$45-60 billion global business that includes several distinct specialized segments, as Box 6 below demonstrates.

Box 6

Estimated Available Market in the Port Sector

(US $billions)

	Estimated Annual Revenues
Container Terminal Operations	$30 to 40
Tug Assist Services	4 to 5
Maintenance Dredging	4 to 5
Information Technology	2 to 3
Environmental and Ship Safety Services	1 to 2
Other Port Services	4 to 5
Total Available Market	$45 to 60

The third force affecting reform is the development of a global market for port development services, with specialized niches each containing a number of international companies that offer specialized service capabilities. The market today broadly includes four groups of operators: 1) the first wave of "global stevedores," the first to have expanded their operations internationally from a strong home base; 2) the second wave, comprising regional operators now entering the international market following the success of their predecessors; 3) the shipping line investors in terminals; and 4) niche investors looking more specifically at small to medium scale facilities. The five first-wave operators today operate about 70 terminals worldwide, mostly container operations, and accounted in 1998 for more than 30% of the total container handling market. The second wave includes ten or so stevedoring groups from the United States, Europe and Asia, and is now challenging the first "global stevedores" on new development opportunities. The major shipping lines, with three main actors so far, are reorganizing their terminal operations as separate corporate entities to better operate in the market. The niche investors, a dozen identified so far, can be expected to continue to carve out specific market segments in the future.

But in this market, as well as in the shipping industry, consolidation may well change the competitive landscape, at least between the different groups above as a starting point, and maybe later within the groups themselves. The consequences of consolidation for regional competitive conditions could be significant, and will require due attention from public authorities. The structure of this global industry should, therefore, be considered by policy makers when adopting specific reform models. Module 2 provides a detailed overview of prevailing trends in the global port and maritime industry.

The range of services ports offer differs widely. So, too, do the service reputation and established commercial relationships with carriers that global service operators can bring when they are selected as investor/operators.

In general, modern ports offer two kinds of services: core and value added services. The core services provided by most ports include but may not be limited to:

- Marine Services
  - Access and Protection
  - Pilotage
  - Towage
  - Vessel Traffic Management
  - Fire Protection Service
  - Chandlering

- Terminal Services
  - Vessel Tie-up Services
  - Container Handling and Transfers
  - Traditional Breakbulk and Neo-bulk Cargo Handling
  - Dry and Liquid Bulk Cargo Handling
  - Container Stuffing and Stripping
  - Bagging and Packaging
  - Cargo Storage

- Repair Services
  - Dredging and Maintaining Channels and Basins
  - Lift Equipment Repair
  - Dry Dock Ship Repairs
  - Container and Chassis Repairs

- Estate Management Services

- Information Management Services

A number of these services can be outsourced to specialized private sector service providers via a number of different methods. In general, the appropriateness of specific methods is determined by two main factors:

- The nature of the service itself (e.g., public responsibility or commercial activity). Public responsibility, for instance in vessel traffic management, means that, regardless of the arrangement adopted to deliver the service, the ultimate operational and legal responsibility for the service remains with the public sector, usually the Port Authority. This is critical when considering how to optimize service delivery while keeping up with the public characteristics of the service. Commercial activities in ports also entail some level of public responsibility, but to various degrees. The minimum is usually the duty for the Port Authority to ascertain the qualifications of service providers operating on the public domain through a licensing process. Equally significant is the requirement for a Port Authority to ensure the availability of basic port services, including commercial ones, to all users on a non-discriminatory basis.

- The nature of the assets required to deliver each category of service. The assets required to deliver many marine services, for example, are mobile and can be moved at relatively low cost from one port to another. Most of the assets required to provide access and protection or to deliver terminal services, however, are immobile and have long economic lives. Moreover, the use of these long-lived assets is indivisible among discrete service units. In other words, a large portion of their costs are fixed regardless of the volume of service units over which it is amortized.

For the purposes of defining asset "rights" of ownership, lease, rental, casual use, etc., it is helpful to differentiate port assets into three categories: 1) long-lived, high cost infrastructure (e.g., breakwaters, channels and turning basins) in which incremental benefit can only arbitrarily be assigned to individual port users; 2) long-lived, high cost infrastructure (e.g., quays and terminals) whose incremental use and benefit can be apportioned in various ways and assigned to discrete service delivery systems; and 3) superstructure and equipment whose use is clearly associated with specific users and specific service delivery systems.

Much of the preparation for port institutional reform therefore involves:

- Identifying the critical basic public functions and public responsibilities that will define the role of the national and local public authorities in charge of the port sector; and

- Identifying the assets needed to support each function and category of service, assessing the adequacy of these assets, and determining which services and related assets to package together and which among these to tender to private investors/operators.

Box 7 presents the most common options for transferring specific categories of "rights" to reposition specific categories of core port services from the public to the private sector. The different port models indicated in the table are defined and discussed in Module 3.

In addition to providing core port services, increasingly ports are delivering non-traditional services to their customers as well. These non-traditional services typically expand the role of port service providers in the supply chains of shippers. These services create value for shippers by expanding the scope of markets they can economically access, by reducing the delivered cost of products they sell, or by reducing the cost to complete buy/sell transactions. These services allow ports to participate in specialized port service niches and to differentiate themselves from competing ports by means other than price and turnaround times.

Improving logistics is now a widely accepted means for companies to improve their competitiveness. Logistics, in short, is a procedure to coordinate all aspects of the manufacturing and distribution process to ensure the delivery of the right products to the right markets at the right time. The key elements to develop an advanced logistics strategy will usually include:

- Understanding the cost and operating behavior of the entire supply chain and using this understanding to inform decisions about where to locate manufacturing, assembly, and distribution centers;

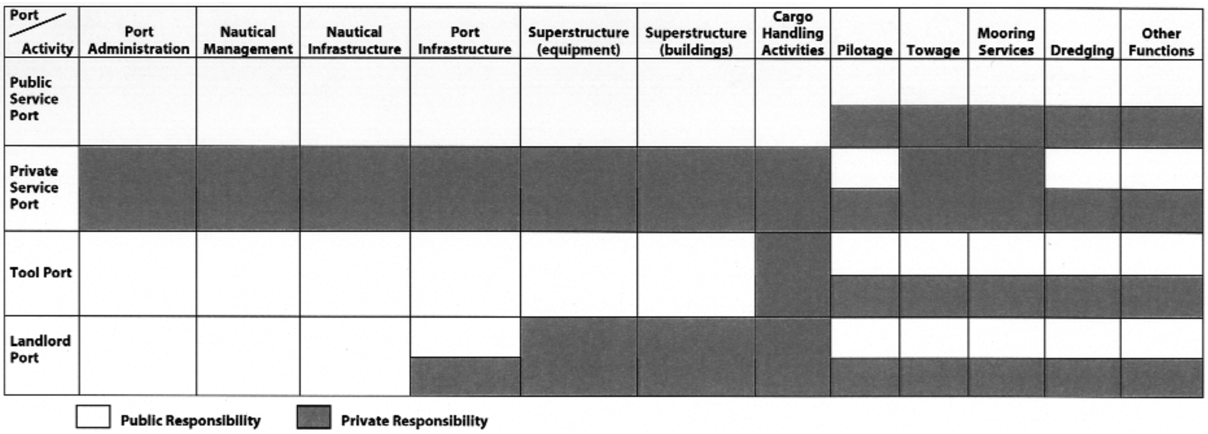
- Promoting strong relationships with carriers and vendors that include quality certification procedures;

- Designing a flexible transportation system that allows for quick routing and mode selection changes; and

- Developing a logistics information system that is effectively integrated

Box 7

Public-Private Roles in Port Management



with manufacturing and purchasing processes.

There is a significant number of activities that can be classified as value added services in the field of logistics. Generally, they fall into two categories:

- General Logistics Services including storage, loading/unloading, stripping/stuffing, groupage, consolidation, and distribution; and
- Value Added Logistics (VAL) includingrepackaging, customizing, assembly, quality control, testing, repair, on-terminal auto-accesorizing, grain storage and fumigating, news print storage and transfer, and in-container garment assembly.

General value added services may include such services as equipment maintenance, equipment renting and leasing, cleaning facilities, tanking, safety, security services, offices, and information and communication services of various kinds.

VAL activities, in particular, are growing in importance as producers concentrate on meeting the demands of customers for high quality specialized products. New players in this field–third-party logistic services providers–have emerged to take over parts of the production chain (assembly, quality control, customizing, packaging, etc.) and of the after-sales (repair, re-use) service.

Ports are in a natural position to participate in this logistics revolution, bringing together all modes of transport, information systems, and land for the construction of facilities. Undoubtedly, containerized and general cargo have the highest VAL potential.

A ROAD MAP FOR THE PORT REFORM PROCESS

Setting Reform Objectives And Planning For The Creation Of Value

Port reform should only be undertaken after a full and complete assessment of the objectives that public officials are trying to achieve. Institutional reform or, indeed, private sector involvement should not be an end in itself, but only a means to achieve specific and well defined public interest objectives. The objectives underlying port reform may be as varied as the need to expand or to modernize container handling capacity, the desire to stimulate the growth of a distribution-based economy centered on a regional hub port, or the need to reduce government expenditures on the sector so that limited public funds can be applied to other more pressing social needs. In any case, the private provision of port services and infrastructure is only one tool among others that are available to officials to solve specific problems and to achieve specific public interest objectives. Thus, the decision process should begin with the consideration of the objectives that port reform is designed to achieve. Module 3 reviews those objectives in greater detail.

The delivery of port services has become an increasingly risky undertaking. Increased competition between or among ports, large capital outlays, more specialized investments, and the expansion of port activities beyond traditional services all increase the possibility of economic losses from port operations. Considerations of risk and return on social capital should figure prominently in deliberations of public policy makers concerning public interest objectives underlying port reform.

All of the reform design issues touched on above need to be assessed in the context of the operating scale of a particular port and the interest and willingness of private companies to invest in the particular set of services offered to them. For example, intra-port competition for services such as stevedoring or terminal operations may be feasible in a large volume port but not feasible in a small volume port.

Modules 3 and 6 describe circumstances under which competition for licenses, rights or franchises may be an effective way to sustain competition and maintain incentives for continuous service enhancement. They also identify circumstances under which competition in the market may not be feasible. Furthermore, Module 3 in particular discusses advantages of designing competition between or among private operators into the tendering process for the delivery of specific categories of service.

Where competition "in the market" for specific categories of port services is not workable, competition "for the market" may still be an option for protecting the public interest. While continuing and robust competition among multiple service providers is the best way to ensure low prices for services rendered, such competition may not be feasible in all port environments due to physical constraints or small cargo flows. In such an environment, it is still essential to maximize the economic benefits of competition and to minimize the risks associated with monopoly service through competitive bidding. For the provision of still other categories of service (e.g., those that have significant consequences for the efficient use of assets for both shipping lines and for terminal operators), retention of these services in the public domain may be the best option. Module 3 addresses this issue of packaging core and non-core services into bundles for private participation.

Port reformers should explicitly assess the objectives they seek to achieve before settling on any specific reform model, since different objectives have important implications for the types of reforms being pursued. Options for private sector involvement, investment and risk-sharing range from open entry to service contracts, management contracts, leases, joint ventures, control of corporate entities and concessions all the way to full divestiture. Differing forms of private sector involvement result in different allocations of risk, different responsibilities for government, and different types of government oversight. Module 5 delves into the issue of risk sharing at greater length.

Reform Policy Decision Context

The port reform decision process must begin with the clear definition of the objectives that the reforms are intended to achieve. The next step is to delineate all of the key institutional design and reform decisions needed to move the process to a successful result. Next, for each decision point along an ordered set of decisions, options and alternatives should be developed and assessed. In particular, all of the possible outcomes resulting from the selection of any specific option need to be explicitly evaluated with respect to the stated objectives of reform.

A useful tool for laying out the port reform process and feasible options is a decision tree. The key "branches" comprising this port reform decision tree include:

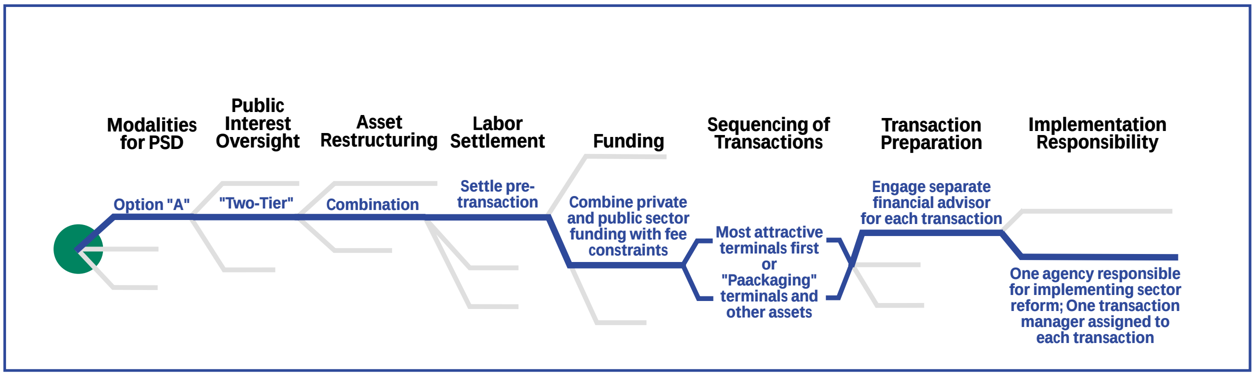
- Methods of private sector involvement;
- Modes of public interest oversight;
- Funding of the port sector;
- Legal framework adaptation;
- Service packaging and asset restructuring;
- Labor adjustment and settlement;
- Implementation responsibility;
- Sequencing transactions; and
- Transaction preparation.

For each of these key decision points several options exist. Box 8 shows a notional decision tree leading port reformers through the many steps involved in the process.

Methods of Private Sector Involvement

The nature of private sector involvement in the port sector will be prescribed by the adoption of a specific institutional model. To assist port reformers in determining which approach might best apply in their circumstances, Module 3

Box 8



describes four port management models that cover the spectrum of private sector involvement in ports. These include: 1) the public service port; 2) the tool port; 3) the landlord port; and 4) the private service port.

Within these models, a broad array of options exists with respect to the specific form public/ private partnerships may take. These can significantly affect the agility and responsiveness of service providers, their market orientation and efficiency, and their decision making autonomy.

The appropriateness of specific models for particular ports needs to be judged, ultimately, by how well they help achieve the objectives of the reform program. However, a number of other factors should also be considered including:

- The strategic fit with the identified needs of the existing and potential market;
- The competitive consequences for other ports in the same range;
- The compatibility with other approaches to public/private partnerships used in other transport infrastructure projects as well as other sectors of the economy; and
- The fit with the investment capacity and interests of potential strategic investors.

Once the main institutional options for sector reform are decided upon, the issue of asset restructuring must then be addressed. The two key issues involving asset restructuring are:

- What degree of competition should be designed into port service markets; and
- What assets (and related services) should be tendered as packages for single source responses?

Port assets can be divided among sets of services and tendered as separate packages in a number of different ways. The consequences of either bundling assets (and corresponding services) or unbundling them has a direct effect both on competition among private service providers and on the efficiency with which a port can operate.

In larger ports, competition among terminal operators is both desirable and practical. In smaller ports, competition is less feasible because the economies of scale required to attract specialized service providers are not sufficient to assure them of a reasonable profit while maintaining charges at reasonable levels. Moreover, effective coordination of cargo handling and marine services can be better assured in smaller ports by integrating them in a single source service. Module 6 reviews the consequences of such options from an economic regulatory perspective.

Public Interest Oversight

The two key issues involving public interest oversight are:

- What powers and authorities should be retained by a public oversight body after reform; and
- How should that body be constituted and at what level of government should it operate?

As noted above, increased private sector participation in the delivery of port services should be viewed as an instrument to achieve well-defined public interest objectives. Thus, a key element in port reform must be the creation of a mechanism to protect the public interest and make certain that the objectives of reform are met. In creating such a mechanism, it is important to keep public statutory and regulatory oversight responsibilities separate from commercial activities.

Government oversight typically takes several forms: strategic planning, technical regulation, and economic regulation. Planning the future development of ports, and sharing those plans with private developers who can help implement them, is a continuing responsibility of governments. As discussed above, every port's vision of its future needs to be realistically set in the context of its commercial environment and its competitive position versus other ports. It must also take into account the likely effects of proposed increases in capacity on regional markets, since one country's efforts to increase its share of regional trade typically evoke competitive responses.

Thus, regardless of which port reform model is selected, strategic transport planning will remain a critical responsibility of governments. Enhancing international competitiveness requires, among other things, implementing and maintaining a cost-effective transport system, with the port interface being a critical link to international markets. A national ministerial body, therefore, should be in charge of developing the long-term strategic vision for national waterfront development plans. The port reform vision should also encompass other land transport reforms to ensure the complementary development of interconnected links in the transport infrastructure. Many examples exist around the world of the inefficiencies and bottlenecks created when road and rail links are not developed at a pace adequate to handle increased port activity. Further, this planning effort will have to take into account various stakeholders' interests in the long-term development of coastal areas within the framework of a national Integrated Coastal Zone Management (ICZM) policy.

Regulatory oversight typically involves both economic and technical issues.

Technical regulation of operations is required to ensure compliance with safety, labor, and environmental protection standards, as well as to set and monitor appropriate minimum performance requirements (especially when competition is weak). Safety is a major concern with ship movements in and around port mooring and berthing areas and with cargo handling operations ashore. Requirements for handling and storage of hazardous cargoes must be clearly spelled out in port regulations, and should be based on international conventions with due allowance for specific local conditions. The need for and forms of technical regulation does not change significantly with port reform; consequently, technical regulation is not dealt with in detail in the Toolkit.

A complex set of mutual obligations typically bind private operators and users to act in concert and in compliance with rules in the provision and use of port services. The development and enforcement of operating rules and regulations represents another oversight responsibility that most public authorities assume or retain as part of their essential functions. Module 4 elaborates on the kinds of mutual obligations among private service providers and between them and public service integrators that are needed to ensure the safe and efficient delivery of services. These technical regulations are typically articulated in a set of Port Rules and Regulations. Module 4 will discuss the content of a model set of rules and corresponding enforcement mechanisms that have been used effectively in various port reform efforts. Finally, this module describes the legal sources such as decrees, laws, contracts, licensing agreements, and sectoral policies used to define and enforce obligations on private operators and port users.

Economic regulation, which usually aims at monitoring market entry and pricing, is necessary when competition is weak or non-existent. Conversely, when significant competition develops, either internally or externally, the need for strong economic regulation decreases. Indeed, when competitive pressure is well-established, there may be little reason to maintain any price regulation other than a requirement to publish tariffs, a continuing prohibition against undue discrimination against similarly situated port users, and retention of a mechanism by which the government can monitor the competitiveness of the market and investigate alleged anti-competitive activity.

The level of competition faced by an individual port, therefore, has important implications for the nature and degree of regulatory oversight of port operators. Ports with abundant intra- and inter-terminal competition require minimal economic regulation.

In general, the difference in public sector responsibilities before and after institutional reform is the difference between "rowing" the boat and "steering" the boat, respectively. Post-reform oversight powers are typically indirect and designed to induce socially beneficial actions on the part of the private sector. Oversight may involve the creation of incentives for private sector investment, the tendering of investment opportunities, compatibility of all private investments with a master plan and co-investment under certain circumstances. Module 6 discusses various aspects of economic public interest oversight in depth.

Once the areas for continuing government oversight have been defined, it is necessary to determine an institutional framework for administering the oversight.

Port administration may be centralized or decentralized. Each approach has its strengths and weaknesses. Centralized administration permits a broader national economic and multi-modal perspective for directing port development policy. Decentralized administration permits a more narrow local perspective that aligns port development with the economic interests and priorities of municipal or regional economies.

In addition to discrete national and local approaches to port oversight responsibility, a two-tiered option also exists. For example, a national port council can be formed, to which local port authorities report. Under the best of circumstances, this two-tiered arrangement allows for the balancing of national and local interests and the reconciliation of both though deliberative processes. In the worst of circumstances, the two-tiered bureaucracy may lead to excessive interference in port operations and management or contradictory policies that interfere with planning and investment decisions.

The degree of decentralization in policy making and regulation should:

- Reflect the objectives of the port reform program;
- Consider the institutional capacity and authority of the relevant levels of government; and
- Provide a balance between national economic goals (such as seamless transport flows and export promotion) and local concerns (such as labor activity, environmental degradation and industrial development).

In addition, whether port regulatory responsibilities should be concentrated at the central level or decentralized to the local level should be looked at with two concerns in mind: 1) consistency of the approach with that generally followed throughout the country; and 2) the need for a transparent and efficient, user-friendly regulatory system. The former would call for some sort of nationwide unit, likely at the ministerial level, although at arm's length from the Ministry of Transport to guarantee independence; the latter could lead governments to consider local (state/province) regulatory units closer to the field and, therefore, better able to tailor decisions to meet local conditions.

To provide for a clear separation of policy and regulatory responsibilities at both the national and local levels, a three-tier institutional framework has also been employed effectively. For example, under the assumption that reforms will result in a landlord port arrangement with commercial activities fully carried out by private operators, the new public oversight framework could be devised along the following lines:

- A central body comprising senior representatives from relevant ministries, municipalities of port cities, and from Port Authorities would work out national port policy and strategic planning objectives, and would establish the main sector regulations to be enforced by the Port Authorities;

- The Port Authorities, autonomous public institutions or public joint-stock companies, would be granted the right to use state-owned land, administer, maintain and develop port infrastructure assets, manage and enforce navigation safety measures, enforce environmental protection regulations, monitor the concessions and leases governing private sector activities in the port area, and market the port to attract new investors; and

- The private operating companies would carry out commercial activities related to cargo traffic management and handling and market their services to attract new port users.

In such a setting, the national body serves three key roles: 1) it establishes the basic rules of participation to be applied by all entities, public and private; 2) it regulates the public Port Authorities, in particular with respect to their infrastructure pricing policies; and 3) it provides an appeal level for dispute resolution in case private commercial operators believe they are unfairly treated by their local Port Authority and regulator.

Financial Implications of Port Reform: Risk Allocation and Funding

The two key issues involving financial risk are:

- Which categories of port assets should private investors be at risk for providing, maintaining and repairing versus those for which the public sector should be responsible; and

- On what basis should user fees or subsidies be used to cover the cost of long-lived port assets?

Module 5 describes the many types of risks involved in port projects and assesses the risks associated with the reform models developed in Module 3. Module 5 also identifies the financial tools that decision makers can use to assess systematically the financial risks and potential rewards associated with specific investment programs. (A financial simulation model to assess the viability of specific investment operations will also be added to the module at a later stage.)

Port reformers should explicitly consider what risks the public sector can afford to bear and on what basis specific risks should be transferred to the private sector. Port planners have available to them a number of risk mediation tactics, which are described in Module 5.

Port operations require several categories of long-lived assets, some of which are inherently more amenable to private investment and user fee recapture than others.

As noted above, port assets include long-lived, high cost infrastructure like breakwaters, channels and turning basins for which charges for incremental use can only be assigned arbitrarily to individual users, since the marginal benefit derived from using this common infrastructure significantly outweighs the marginal cost of replacing it. Consequently, a charge schedule developed by a private developer and based on user benefits could result in monopoly profits and less use than was economically desirable.

Port assets also include long-lived, high cost infrastructure like quays and terminals, whose incremental use can be meaningfully assigned to users and whose marginal cost and marginal benefit can be balanced through a number of price regulation regimes or intra-port competition.

Finally, port assets include long-lived superstructure and equipment whose use is closely associated with specific users and specific service delivery systems. Equipment is a mobile asset and can be competitively provided or easily redeployed. On-dock storage and transshipment facilities can be awarded through competition and assigned to their most productive use through open tender.

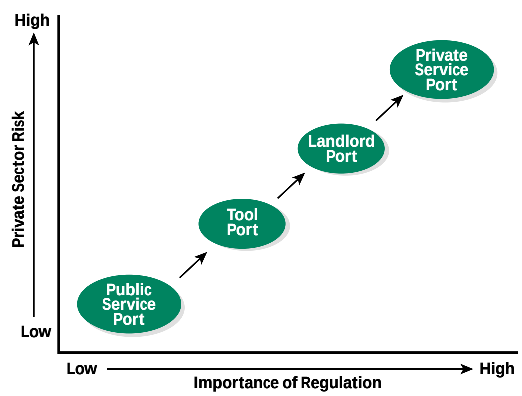
All three categories of assets can be provided or maintained by the private sector. However, from the perspective of private investors, the first category involves the greatest risk, has the longest payback and involves the highest risk tradeoff between their ability to set prices independently without regulatory constraint and the level of investment they are prepared to make. In general, private investors are prepared to make larger investments when they are unconstrained by regulators or when price schedules (including escalation mechanisms) they propose in advance of awards are accepted and locked in for a long term. In other situations, the funding of long-lived, high cost infrastructure remains in the public sector and is charged back to users though a number of different regimes. Modules 3 and 6, respectively, deal with the operational and institutional aspects and the regulatory aspects of charging for port infrastructure.

Most port charges involve some combination of public components for support of publicly financed common use infrastructure and private components for the provision of terminal infrastructure. The combination of these two pricing factors determine the competitiveness of ports compared to other competing ports. In general, the greater the degree of competition the less the need for regulatory intervention. Module 6 discusses the limited set of circumstances under which regulatory intervention into pricing decisions made by private service providers may be appropriate.

Box 9 illustrates how the four port management and operation models array themselves on scales measuring private sector risk and the need for independent government oversight.

Box 9

The Public-Private Balance of Risk and Regulation



Adapting the Legal Framework

To effect wide-ranging reform, the legal framework that underpins the institutional arrangements of the sector may require significant amendment.

To ensure credibility, openness and transparency in the reform process and to attract international participation and long-term financial commitments from potential investors, a sound and precise legal framework for defining private/public partnerships is essential. In particular, prior to any reforms involving Build-Operate-Transfer (BOT) arrangements, governments should enact a concession law spelling out the principles of the process and establishing rules and responsibilities for each party. Further, governments should consider putting in place a complementary set of regulations describing how the concession law will be applied in practice.

Since there are ways other than concessions for securing private participation in port activities, the national legal framework for private/public partnerships must also incorporate these elements, or at least establish which entity will be responsible for monitoring them. The basis of any licensing process, for example, must be made clear in the law, which can specify that Port Authority regulations will articulate more precisely the implementation criteria.

The following legal documentation should be reviewed to assess the potential need for modification or the development of complementary statutes:

- Sector Laws: legislation establishing the national institutional framework governing ports and describing clearly the mandate of all public entities involved;

- Concession Law/Concessions Contracts: since a widely used option for private sector participation in port activities is the use of concessions, the basic legal framework enabling public authorities to enter into such contractual arrangements must be in place, including a clear and transparent process for awarding contracts and standard contractual language providing for appropriate monitoring arrangements;

- Port Regulations: the set of provisions governing the daily operations in the port; some may apply universally within the country (e.g., environmental protection and labor rules) and some may apply only to specific localities (e.g., ship movements, access, traffic safety, tariff structure).

Since amending a law most often requires going through a legislative process, the earlier in the reform process this can be initiated the better. Sector laws and laws governing contract award and management between public and private entities are the most critical elements to be enacted. Port regulations can usually be put in place by a ministerial decree. Module 4 offers guidance and examples in the drafting of sector laws reflecting the sector model to be implemented as well as guidance on the contents of concession contracts and port regulations.

Labor Adjustment

The process of port labor reform often requires governments to eliminate provisions from existing labor regimes that unduly constrain flexibility and productivity. Overstaffing, in particular, has been a pervasive feature of most port organizations in both the developing and developed world. As a result, to achieve more cost-efficient operations will generally require significant reductions in the workforce. To achieve this result in a socially acceptable way must be a prominent concern of public authorities and an integral part of the reform process.

Addressing the overstaffing issue as one of the first steps in the reform process, before involving the private sector in operations, will usually facilitate the overall reform process. Since overstaffing in ports is often the result of government policies that view port organizations as instruments of social policy and natural shelters for the unemployed, governments should take the lead responsibility in helping rationalize the system. Often, this means creating programs to ease the transition of port labor into other sectors. Doing this, in turn, requires the application of significant financial and management resources early in the reform process.

If port services and infrastructure are tendered to the private sector before this issue is resolved, for the process to stand a fair chance to succeed, care should be taken that: 1) the private operators are allowed to adjust their workforce over time to actual operational requirements; and 2) existing social protection programs ensure the labor adjustment process will be smooth and not provoke undue labor unrest. This may sometimes require the establishment of special government-funded programs to accompany staff retrenchment, possibly by complementing general social programs with sector-specific assistance made available over a defined and limited period of time.

In all cases, this means that organizational and budgetary resources must be mobilized early in the reform process to ensure appropriate and socially acceptable treatment of potential labor dislocations. In particular, worldwide experience strongly suggests that port labor should be involved in the port reform process from its earliest conceptual phase. Again, experience indicates that the best way to build confidence in the reform process by all affected parties is to broaden the sphere of participation and responsibility to include port users, port labor and port and maritime employers. Such broad participation will allow all stakeholders to share common concerns about competitiveness of port services and gain a better understanding of how any weakening of this competitiveness would be detrimental to all. This would be particularly true for the workforce, which would be the first to bear the consequences of reduced economic activity, both inside and outside the port. Significantly, the International Transport Workers Federations (ITF), while cautious about the social consequences of port reforms, appreciates the need to improve port efficiency, possibly through increased private sector participation. It insists, however, on the critical need to involve labor unions from the start so that mutually acceptable labor rationalization strategies can be worked out to make the whole process both economically and socially sustainable.

Two key issues arise when considering reductions in the workforce as part of port reform:

- Who will be responsible for "buying out" surplus labor and when in the process will labor separation negotiations be completed; and

- On what basis will post reform labor-management relationships be conducted?

Institutions for allocating available work among members of a qualified labor pool based on seniority or some other rank ordering principle have grown up within most traditional ports. Unions typically control entry into these pools of qualified labor, the result being to close the port labor market to competition and to new entrants.

Opening labor markets to competition is one of the objectives sometimes sought by port reformers. In this context, one of the key issues to be addressed is the role of these dock labor boards or union labor pools and how they affect management discretion over the recruitment, qualification and use of specific employees.

Theoretically, labor contract issues can be resolved either before or after port services and infrastructure have been transferred from the public to the private sector. Either the public sector or the new private sector operator can manage negotiations and can absorb the liability associated with separating surplus employees.

Typically, however, resolving labor separation issues before transactions are completed relieves investors of uncertainty and enhances the perceived value of the investment. In general, it is a good idea to make a clean break in labor contract coverage and the basis for employee selection and work assignments at the same time that the rights to control port assets are conveyed. This may involve not only "buying out" individual laborers under the terms of existing contracts, but also "buying out" the contract itself, thereby giving private operators a clean slate to negotiate new agreements. Module 7 reviews in depth the issues relating to labor adjustment policies in port reform and proposes ways to handle them in a manner that meets the joint objectives of institutional reform and social sustainability.

Responsibility for Implementing Port Reform

The key issues arising in connection with the responsibility for implementing reform are:

- Where within government should responsibility reside for port sector reform; and
- What skills and competencies are required to implement a port sector reform program successfully?

The delegation of responsibility for managing port sector reform typically comes in the form of a special decree, law or other explicit delegation of authority. To what organization of government should this authority be delegated? It is rarely possible for a Port Authority to reform itself, since the inherent conflicts are too great for even a well meaning Port Authority to adopt and implement significant change. Moreover, the work of implementing port reform is diverse and requires special skills. Some of it, for example, involves developing regulatory frameworks; some of it involves labor negotiations; and some of it involves preparing individual transactions.

In deciding which agency of government should manage port reform, many questions arise. Should reform be carried out by a temporary agency of government whose sole purpose is port reform or should it be delegated to a standing agency of government? Should the ministry responsible for ports also be responsible for the process of reform or should this fall to an agency dealing with privatization generally, and over which the ministry responsible for ports has only indirect control? Should the process be managed at a national, regional or local level? Should different reform units be organized for "greenfield" port developments and for the privatization of existing facilities? What powers should the reform unit have? How should the unit be funded? To whom will it answer? How will it obtain information from other organizations? Can part of its responsibilities be subcontracted? And importantly, what access will the unit have to key political decision-makers?

Often, for the reform process to be implemented successfully, the mandate given to the "Reform Unit" must come from the highest levels of government, and the reporting must follow the same route. This avoids frequent inter-ministerial conflicts over competence and jurisdiction. The agencies and individuals comprising membership of the "Reform Unit" also must be defined unequivocally by the political leadership.

Several organizational options are available for implementing port sector reforms. One agency can manage the entire process with individual transaction managers within that agency assigned responsibility for completing discrete transactions. Or, multiple agencies can be assigned responsibility for sector reform and task forces created from these several agencies to accomplish component tasks and to complete individual transactions.

In managing the politics of reform, it is important that there be a means to take account of stakeholder interests and concerns. Stakeholders in ports include labor, existing public agencies, environmental groups, shippers, shipping companies and other users of port services (e.g., fishermen or the navy). Module 8 will examine workable processes for actively including stakeholder interests in policy decisions or for otherwise factoring their interests into key decisions.

The "Reform Unit" will typically require consultant services to assist in the privatization process. Issues relating to the use of consultants include determining what skills are needed, the criteria by which consultants will be chosen, the degree to which consultant services should be bundled together, and how consultants should be compensated (e.g., flat fee, success fee).

Module 8 will provide some insights on these various aspects of implementing the reform process.

Transaction Preparation

At implementation, port reform requires the completion of a number of complex transactions in connection with the tendering of service franchises and asset ownership or use rights. Transactions can be completed only after an elaborate preparation and due diligence process.

Two key issues associated with transaction preparation are whether transaction preparation should be "outsourced" or completed by "in-house" government staff, and what kind of technical assistance the group responsible for transaction preparation within government will require.

In general, three approaches to transaction preparation are possible:

- Engage a separate financial advisor for each transaction;
- Engage one advisor for the entire set of transactions; or
- Engage no outside advisor; instead, learn about transaction preparation by preparing them "in-house."

Financial advisors add credibility to the claims and representations made in marketing a transaction. They are also helpful in assessing the market for port assets without compromising transaction integrity and in "packaging" transactions to be marketable. However, some financial advisors are better than others. Engaging one is itself a significant transaction involving risks. Consequently, financial advisors should be selected with care, using a competitive process as with other transactions.

Sequencing of Transactions

In addition to preparing the variety of transactions associated with port reform for tendering or other actions, those charged with reform also have to consider the order in which the transactions will be undertaken.

When port operations are privatized, the public sector retains only an indirect relationship with the service provision of service. The new relationship entails new tasks to be performed in the public sector. New skills are required to perform these tasks, requiring a period of training and possible assistance from consultants or advisers from other ports. A range of measures can be adopted to help to build the public sector's capacity to perform its new role as contract monitor and regulator. Preparing for this new role should be one of the first steps in the reform transaction process.

From the commercial perspective, several possible strategies should be considered when scheduling and programming port reform programs that include several components and multiple transactions. For example, the most valuable assets might be tendered first to attract investors and to increase their confidence in and familiarity with procedures in which they would be involved in any subsequent transactions. Another strategy is to offer all components at the same time – a "big bang" approach. This has the merit of allowing some transaction preparation costs to be shared among several transactions and allowing a new set of competitive conditions to become effective more or less simultaneously.

IMPLEMENTING PORT REFORM: PULLING IT ALL TOGETHER

Port reform that shifts the boundary between the roles of the public and private sectors entails four broad categories of preparations:

- ***Preparation of a Port Reform Strategy.*** Strategic preparation involves careful analysis of the port's competitive position, strengths, weaknesses, role in the national economy, prospects for growth, etc. It results in the selection of a particular institutional model and the identification of a set of assets and services that are the specific target for reform.
- ***Preparation of Redefined Authorities and Powers.*** Redefinition of authorities and powers results in regulations, rules, tariffs and procedures to ensure that all port activities are adequately coordinated and operate in a manner consistent with the public interest.
- ***Preparation of a Legal Framework.*** The legal framework for the port sector must reflect the principles set out in the strategic analysis and the redefinition of institutional rules.
- ***Preparation of Transactions.*** Transaction preparation results in the development of tendering processes that are transparent, open and competitive.

Module 8 will elaborate on these four stages.

Box 11 illustrates these four sets of preparations and how they interrelate.

Box 11

Shifting the Boundary of a Public-Private Partnership