

CHAPTER 3

Reforms and the Regulatory Framework of African Ports



With the growth in world trade spurred by the reduction in government-imposed transaction costs (e.g. customs levies and tariffs), transport costs have become a much more significant factor in overall trade costs, as outlined in Chapter 1. This change has put pressure on the port subsector, which is a key component in the logistics chain.

Consequently, over the last 50 years, the port subsector has gone through significant changes at the global level. One of the most notable reforms is deregulation, which has led to more competition. Prior to the reforms, competition between ports was almost nonexistent, and featured a few major transport operators who controlled



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the bulk of operations from port-to-port. As a result of the deregulation, competition across ports has increased across several dimensions.

First, a number of new ports have emerged in Africa as part of the decentralization process and this has increased competition between ports at subregional and national levels. Second, competition for the port market has intensified as private operators seek to win concessions. Third, on the shipping side, the explosion of maritime services has led to the dismantlement of the liner conferences¹ that divided up the market with little or no competition across liners. Fourth, greater competition across different modes of transport has put pressure on the port subsector. If these reforms have contributed to improvements in efficiency and a reduction in the cost of maritime services, the results have been uneven, varying across subregions and countries, depending on the institutional environment.

This chapter focuses on institutions and on the role of the regulatory framework in increasing the efficiency of maritime services. Weak institutions have a negative impact on trade through several channels.

¹ A liner conference is an agreement between two or more shipping companies to provide a scheduled cargo and/or passenger service on a particular trade route under uniform rates and common terms. Since October 2008, the EU has banned liner conferences for shipping companies serving EU ports by abolishing the Far East Freight Conference (FEFC), following the example of their American counterparts. This decision implied the banning of certain activities, in particular price fixing and capacity regulation.

First, poor management contributes to delays at the *port level*, as it slows the loading and unloading of cargo. Weak institutions also increase delays at the *border*, when cumbersome customs procedures slow the movement of goods at entry and exit. High taxes and customs fees, sometimes accompanied by extortion along the import–export chain, characterize those countries with a weak regulatory framework.² Third, they can lead to inefficient *regulation and control* of the fleet, leading to substandard safety levels and labor rights which ultimately cause delays and affect trade adversely. All these inefficiencies contribute to high trade costs along the logistics chain. A key issue is whether regulatory reform can be successful in an environment with weak governance at the sectoral level.

Although institutional reforms have taken place in the African port subsector, many countries have not yet adopted global “best-practice” methods, resulting in a great disparity across several measures of port efficiency. To give an example, in North Africa, average port costs on 20-ft containers amount to Euro 370 in Casablanca, Euro 210 in Rades-Tunis, and Euro 70 in Alexandria. On the other hand, average port transit delays total 15 days in Alexandria, but only 9 days in Casablanca and Tunis (Kostianis, 2005).

² Empirical evidence in Kandiero and Wadhawan (2003) shows that trade performance as measured by trade openness (trade to GDP) will yield optimal benefits if the quality of institutions (i.e. less corruption in customs) in developing countries is improved substantially.

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Before designing and carrying out any port reforms, a detailed and complete assessment of the objectives that the public sector is seeking to achieve should be drawn up. The participation of the private sector, even if deemed beneficial or resulting in improvements in port efficiency, should not be considered as an end in itself. Indeed, reforms to increase port privatization should be a means to achieve precise and clear public interest objectives, taking into account economic and social needs. In this context, the objectives of port sector reform could range from expanding/modernizing container-handling capacity, to stimulating economic growth, to reducing government expenditures on the sector, so that limited public funds can be channeled to other more pressing social needs. Private participation in port services, and more generally, in the infrastructure sector, is but one of the many instruments available to solve specific problems and to achieve explicit public interest objectives.

This chapter reviews the reforms in the port subsector in Africa, focusing on the regulatory framework and several efficiency indicators of port services. It also compares trade costs in Africa with those of other regions. The analysis encompasses port management models that range from fully state owned to fully privately owned (the latter being when the private sector owns the hard infrastructure as well as delivering port services). In view of fact that the quality of governance varies across countries and that ports deliver both public goods and private services, there is a need to adopt appropriate ownership and regulatory structures, which are likely to be country-specific.

This chapter then moves on to discuss broad trends in port reforms across African subregions, contextualizing these within the categories of port management models presented previously. We then turn our attention to trends in the reform of the regulatory framework: the institutions, the regulation of the fleet, and port management. The final section of the chapter situates these African reforms within the global framework, using several indicators ranging from perceptions by business to more comparable and standardized measures drawn from aggregate indicators. The comparisons show that progress is being made, although more efforts are required to compete on a global scale.

Institutional Set-up of Port Management in Africa

Globally, 80 percent of container traffic is handled by commercial global operators, such as Dubai Ports, Hutchison, Port of Singapore Authority (PSA), and International Container Terminal Services Inc. (ICTSI), who won concessions to invest and operate the world's major common-user container ports under the "landlord" scheme. In Africa, however, as discussed below, about 50–70 percent of traffic is still handled by public/government operators in tool ports or public service ports. It was observed that in a considerable number of African ports, public sector ownership of the port infrastructure and superstructure, together with direct involvement of the ministry in the provision of port services, has generally been responsible for inefficiency and non-profitable performance. Two major generic reasons were highlighted in the *Bank Review*

of the Maritime Sector in Africa (AfDB, 2001):

- (i) Regulation of tariff structures for ships and other services at levels below the cost of providing such services and some cases, even below the break-even point; and
- (ii) Overstaffing of the Port Authorities (PA), resulting in government subsidy in regard to both recurrent and capital expenditures. This issue will be discussed in the next chapter.

Several factors have contributed to this situation:

- A large number of African ports are too small to be commercially attractive to private investors;
- Commercial and political uncertainties in several African countries, which are linked to the institutional and political environment, further deter private investment;
- Many African ports operate in a monopolistic environment, while complex cross-border procedures effectively limit inter-port competition.³ This makes it difficult for the public sector to privatize the port services, since strong public regulatory institutions are needed to control these natural monopolies;

³ For instance, traders from Tanzania will mostly use Dar es Salaam while those from Kenya use Mombasa only. This differs from the situation in Europe, where a lot of German cargo uses Rotterdam (the Netherlands), the largest port for Norwegian cargo is Gothenburg (Sweden), and Polish cargo transits mostly through Hamburg.

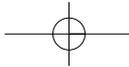
- Ports may face opposition to reforms from trade unions and vested interests, who oppose private sector investments that might reduce direct employment in their ports.

Alternative Forms of Port Administration

Port reform is complicated by several unique characteristics. First, ports provide a combination of public goods (e.g. the coastal protection works necessary to create port basins) and private goods (e.g. cranes, quays, and other “hard” infrastructure). The public goods are indivisible and nonrival, which excludes private sector involvement, thereby justifying public intervention for their provision. This is important since these public goods create positive externalities (increases in trade and trade-related services) and social benefits over and above the market price that would be paid by private commercial operators. Also, ports are increasingly integrated into global logistics chains and the public benefits they provide are taking on regional and global attributes. This complicates the administration of ports, which is in the hands of the port authority (PA⁴) — a governing body, generally public, which plays a coordination role, ensures the proper use of common facilities, and takes care of safety issues as well as the general design of port facilities (see Box 3.1).

Three types of organizational models accommodate this diversity: the *landlord*

⁴ PA is interchangeably referred to as “Port Authority,” “Port Management,” or “Port Administration,” each definition describing the functions carried out by the PA.



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Box 3.1: The role of the Port Authority

The term Port Authority (PA) was defined in 1977 by a commission of the European Union (EU) as a “State, municipal, public, or private body, which is largely responsible for the tasks of construction, administration and sometimes the operation of port facilities and, in certain circumstances, for security.” The PA can be created at different government levels: national, regional, provincial, or local. The most common form is the local port authority. In this case, the PA is an authority administering only one port. However, in some African countries national port authorities still exist, as in Tanzania and Nigeria.

In principle, the role of the PA should be confined to the provision of infrastructure (and superstructure, depending on the PA model) and the coordination of port services. Often though, the PA has broad regulatory powers relating to both shipping and port operations. It is also responsible for applying conventions, laws, rules, and regulations (e.g. relating to public safety and security, the environment, navigation, and healthcare) and it can be assigned police powers (World Bank, 2007). The PA can also publish port bylaws, with rules and regulations concerning the behavior of vessels in port, use of port areas, and other issues. The PA also provides the investment planning and financing, or technical and economic regulation of the private operators.

Statutory powers of a national port authority

As stated in the UNCTAD *Handbook for Port Planners in Developing Countries* (based on the assumption that operational decisions will be taken locally), a national port authority should have the following statutory powers:

- *Investment*: Power to approve proposals for port investments for amounts above a certain level. The criterion for approval would be that the proposal was broadly in accordance with a national plan, which the authority would maintain.
- *Financial policy*: Power to set common financial objectives for ports (for example, required return on investment defined on a common basis), with a common policy on what infrastructure will be funded centrally versus locally, and advising the government on loan applications.
- *Tariff policy*: Power to regulate rates and charges as required and to protect the public interest.
- *Labor policy*: Power to set common recruitment standards, a common wage structure, and common qualifications for promotion; and the power to approve common labor union procedures.
- *Licensing*: When appropriate, power to establish principles for the licensing of port employees or agents.
- *Information and research*: Power to collect, collate, analyze, and disseminate statistical information on port activity for general use, and to sponsor research into port matters as required.
- *Legal*: Power to act as legal advisor to local port authorities.

Source: World Bank (2007)

port; the *tool port*; and the *services port* (public or private) models. As shown in Table 3.1, regardless of the model selected, the physical infrastructure (berths, etc.) is both owned and managed by the PA.

However, depending on the model chosen, the superstructure and equipment (cranes, etc.) may be owned/managed by either the PA or by the private operator, as detailed below.



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In the **services port** model, the infrastructure, superstructure and services are all managed by a PA which could be public (*public services port*) or private (*private services port*). In the **tool port** model, a public PA owns the superstructure and equipment, while the private sector operates the facilities through licenses or management contracts. This tool port model is usually adopted for medium and small ports where, because of the small volume, the private sector lacks incentives to invest in infrastructure.

In the **landlord port** model, the PA owns the facilities to avoid the risk of monopolization of essential assets by private firms. The PA then either rents or awards in concession these facilities to private operators, leaving as many activities as possible in the hands of the private sector (Matto *et al.*, 1999; Trujillo and Nombela, 2000).

Until the 1980s, private sector involvement in ports was negligible owing to the combination of restrictive labor practices, centralized control by the government, and an unwillingness to invest in infrastructure. On occasion, investments in infrastructure were not aligned to the needs of foreign trade and shipping.

A first shift occurred with the recognition that the role of the public sector should be restricted to the provision of public goods. A second occurred with the outsourcing of public services to the private sector. Port governance successively evolved through a nationalization period, when national planification was prevalent and public ownership of economic activities was widespread, to a period where both public and private port operations were involved. The most recent wave of privatizations has seen a shift toward the landlord port model,

Table 3.1: Main types of organizational structures for Port Authorities (PAs)

Organizational type	Infrastructure	Superstructure & Equipment	Services
Landlord port	PA owned PA managed (1)	Privately owned Privately managed	Privately managed
Tool port	PA owned PA managed	PA owned Privately managed	Privately managed
Public Services port	PA owned PA managed	PA owned PA managed	PA managed
Private Services port (2)	PA owned PA managed	PA owned PA managed	PA managed

Source: Estache and Trujillo (2008a).

Notes: (1) In some cases privately managed; (2) In this case the Port Authority is a private organization.

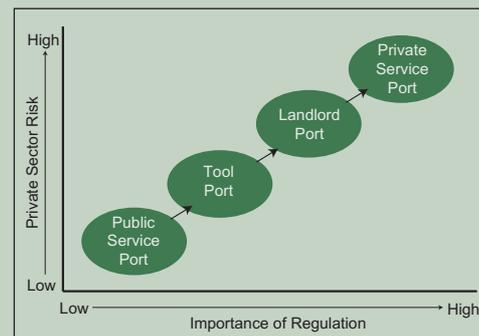
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which is dominant in terms of TEU movement. This has come to be the preferred model at the international level for its efficiency and productivity (especially for large and medium ports).

In Africa the public services port is the dominant port management model. When a government contemplates a shift away from a public services port to a private services port, it needs to determine what risks the public sector can afford to bear and what risks it can shift to the private sector. This is because port operations require several categories of long-lived assets, some of which are more amenable to private investments than others. Charges for infrastructure equipment (on-dock storage and transshipment facilities) can be awarded through competition, whereas charges for breakwaters, channels and turning basins are essentially a public good with a high marginal benefit and a low marginal cost, so that a private operator would make a monopoly profit by charging a price based on user benefits. Should this last category of high-cost infrastructure be placed in the hands of private operators (as it would under the private sector model, as indicated in Figure 3.1), the private sector investors would face a high-risk tradeoff between their ability to set prices independently without regulatory constraint when considering their very long-term investment decision. This explains why countries with weak governance may fail to procure the hoped-for investment from the private sector in a reform that concedes services of long-lived assets to the private sector.

The tradeoff shown in Figure 3.1 may help explain the patterns of public-private

Figure 3.1: The public-private balance of risk and regulation



Source: World Bank (2007), module 2, box 9.

involvement in the port subsector across Africa, which are displayed in Table 3.2. Investing in high-cost and long-term infrastructure carries high risks for the private sector, in the absence of an independent and autonomous regulatory framework (such an institutional framework is considered as “best-practice” for the port subsector). Consequently, in Africa one observes few instances of landlord and private services ports where the superstructure and equipment are privately owned.⁵

Port Reform in Africa

Much progress has been made in the last decade toward institutional reform in the infrastructure sector, with ports achieving the greatest success after telecommunications and

⁵ The World Bank Port Reform Tool Kit (June 2003) discusses choices and options for reforms in the port subsector.

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Table 3.2: Port management models and regulatory agencies in selected African countries

Country	Management Model	Agency responsible for regulation
Djibouti	Management concession	Ministry of Transport
Sudan	Service port	Sudan Sea Ports Corp.
Kenya	Service port	Ministry of Information, Transport, and Communications
Tanzania	Part landlord, part service port	Tanzania Ports Authority
Madagascar	Part landlord, part service port	NA
Namibia	Service port	Namibian Ports Authority
South Africa	Service port	Transnet National Ports Authority
Angola	Part landlord, part service port	Ministry of Transport, Merchant Marine and Ports Division
Democratic Republic of the Congo	Service port	NA
Congo (Brazzaville)	Service port	Port Autonome de Pointe Noire
Cameroon	Part landlord, part service port	National Ports Authority
Nigeria	Landlord model	Nigerian Ports Authority
Benin	Service port	Port Autonome de Cotonou
Ghana	Landlord model	Ghana Ports and Harbor Authority
Côte d'Ivoire	Part landlord, part service port	The Autonomous Port of Abidjan
Senegal	Part landlord, part service port	Direction of Ports and the Interior Maritime Transport
Cape Verde	Service port	NA

Source: Cameron (2008); Ocean Shipping Consultants (2008).

ahead of roads and railroads, where private sector financing has been low. Institutional reform in the infrastructure sector in general, including ports, has placed emphasis on the quality of governance in state-owned enterprises (SOEs) of which many remain, particularly in the port subsector.

Disparities in economic and institutional development across African countries make it difficult to pick out a standard “African” model of reform. Table 3.2 shows that the public–private partnership (PPP) takes many forms which vary from region to region and even within the same country. According to

a 2001 UNCTAD survey,⁶ some 24 of the 34 ports in the sample featured private sector

⁶ In 2001, UNCTAD carried out a survey of 50 African ports across all regions, entitled “Expériences de la participation du secteur privé dans les ports africains” [The experience of African ports with private sector participation]. The objective was to obtain an idea of the involvement of the private sector in port management and development and in privatizing services. The replies (34 relating to 46 ports) came from either the port authorities or the responsible ministry, even for ports that were privately managed. The results of the survey alluded to here were not published.

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participation while seven ports had plans to bring in private operators by 2005 (UNCTAD, 2003). Yet in Africa, where a single port is a natural monopoly, it is tempting for the government to maintain direct ownership control and operation, which allows the port to cross-subsidize other government activities.

Further, transit operations account for quite a large share of total activity. The port of Djibouti, which absorbs 75 percent of shipments currently destined for Ethiopia, is a notable example (UNCTAD, 2003). Regional competition for the lucrative transshipment business provides the impetus for reforms leading to a public-private partnership. According to the 2001 UNCTAD survey, when entering into partnership with the private sector, the main objectives of African port authorities were to: enhance the productivity, efficiency, and quality of their services (45 percent); modernize their infrastructure (17 percent); reduce port costs (20 percent each); and attract private investors (17 percent).

Overall, private participation in ports has been quite successful in 24 countries in SSA, with 26 container terminal concessions investing a total of US\$ 1.3 billion since the mid-1990s. More importantly, before examining the varied regional experience, it is useful to keep in mind one of the findings of the recent Africa Infrastructure Country Diagnostic (AICD) study (World Bank, 2009). This concludes that even though the private concessions approach has not substantially bridged the financial gap in infrastructure needs, it has made a significant contribution to improving operational performance, leading to the recovery of funds lost to various sources of inefficiency.

Subregional Trends

The participation of the private sector has generally been initiated through the award of concessions to operate the port services and terminals, rather than through the sale of public port assets (Trujillo and Tovar, 2007). Concession contracts can take diverse forms, depending on the port size, initial conditions, and the type of service considered. The types of contract include: BOO (Build, Operate, and Own); BOT or ROT (Build/Rehabilitate, Operate, and Transfer); joint-ventures; leasing; licensing and management contract (Trujillo and Nombela, 2000; Guasch, 2007).

The use of concession contracts has emerged as the preferred method for private sector participation, rather than selling seaports' hard infrastructure assets to the private sector. The recent World Bank (2009) AICD report concludes that there is great potential to continue granting concessions. For example, the port of Maputo in Mozambique has been fully privatized on a 15-year renewable concession basis (DP World/Grindrod).

It is now common practice for container terminals to be concessioned out to international operators, such as DP World (Djibouti, Dakar, Algiers, and Maputo), AP Moller (Walvis Bay, Luanda, Lagos, and Tema) and Hitchinson (Dar es Salaam and Mombasa). South African ports are the major exception to this trend, as the government there has decided to keep container terminals under state control (Transnet Port Terminals).

General cargo and special terminals are also often privately operated, particularly the stevedoring and warehousing opera-

tions. Large dedicated bulk terminals are also most often privately operated, particularly when linked to a single customer or consortium. The large iron ore terminal at Saldanha Bay in South Africa, handling more than 40 mtpa, is, however, operated by Transnet Port Terminals, with Transnet also being responsible for the provision and operation of the 800-km dedicated rail line.

The highest rates of private sector participation are recorded in North and East Africa (41.7 percent) and in South Africa (37.5 percent). In East and Southern Africa, this reflects the political commitment by the governments of the Southern African Development Community (SADC), who have dedicated financial and technological resources and expertise to modernize and increase the efficiency of their national and regional transportation systems. SADC also recognized the need to create a liberal environment conducive to the development of a partnership with the private sector for operations and investments in the port subsector (UNCTAD, 2003; Cameron, 2008).

In West Africa, the privatization process is following two divergent paths (Harding *et al.*, 2007). The first has led to the establishment of the statutory port companies, who offer shares. Shares are at present owned only by Treasuries, but equity participation by others is being opened up. The second path follows the continental trend toward the concessioning of specialized terminals. For example, in Senegal stevedoring services have been transferred to the private sector in Dakar port, which has progressively evolved toward a landlord port system (Trujillo and Nombela, 1999).

Implications of Privatization

Notwithstanding growing participation by the private sector, especially in port operations and services, in Africa the public sector still plays a major role in the seaport system (Baird, 2000). In the vast majority of African countries (and elsewhere), the public sector retains a central role in seaport planning, regulation, development and investment through the PA, marine department, or other agencies. In many respects, governments seem unwilling to fully privatize the industry, preferring to retain control over what is deemed to be a strategic national asset. This is despite the fact that private sector participation in port operations in Africa has generally been seen as successful, because it is almost always financially viable, with pricing influenced by a largely captive market.

As a result, the landlord port model has not been widely adopted in Africa and the involvement of international private operators remains very low. So far, only Nigeria and Ghana have moved toward partial or complete adoption of the landlord port model, while several francophone countries have adopted a hybrid model. According to the review conducted by Ocean Shipping Consultants in 2008, this trend is striking. Of the 17 African countries included in their study, nearly half retained the public services port model, while nine countries had begun to privatize certain areas by concessioning out to the private sector key container facilities (Ocean Shipping Consultants, 2008).

One important consequence of privatization is that the government expenditures are lowered as the role of

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public sector involvement is reduced. Consequently, some of the costs are transferred to the private sector, which will, ultimately, boost government revenues through concession agreements and taxes (World Bank, 2007). In general, the private sector also offers greater opportunities in terms of responsiveness and adaptation to the services required from the shipping companies. In addition, privatization favors the transfer of technical know-how for more efficient terminal management (Gillen and Cooper, 1995). On the other hand, the seaport industry has large capital needs, especially in the context of reduced public subsidies. Consequently, private financing has become a very important opportunity for many countries. Indeed, total investments from the private sector for container terminal concessions in SSA has reached US\$ 1.3 billion since the mid-1990s, which has gone some way toward bridging the infrastructure financing gap.

Studies on the impact of privatization on African port efficiency indicate improvements across several measures of productivity (Al-Eraqi *et al.*, 2007; Clark *et al.*, 2004; Valentine, 2000). Enhanced productivity has been achieved mainly at container terminals where private investment has occurred. In container terminals, an increase in traffic and greater efficiency in services as well as enhanced intraregional competition were observed from the very first year of private-sector involvement (UNCTAD, 2003; Foster, 2008). Certain ports, however, are still suffering from the effects of substandard practices and poor performance (delays, missing goods, etc.) of other services such as

customs and security, and from the deficiencies of overland transportation such as railroads and roads. The case of the Apapa Container Terminal in Lagos, Nigeria, described in Box 3.2, illustrates how such problems can impact efficiency.

As we have seen, not only can private sector participation improve productivity, but it can also open the way to the adoption of modern technologies and management practices that have revolutionized the world markets for shipping and cargo handling. The mobilization of private capital and management skills could also improve efficiency and help to develop a logistics system in terminal operations and other areas in the port structure (World Bank, 2009).

In spite of this overall positive assessment of private sector participation, the relationship between ownership structure and performance is complex, as it goes beyond “hard” infrastructure to encompass “soft” institutional reform (Gonzalez and Trujillo, 2009; Brooks and Cullinane, 2006; Estache and Trujillo, 2008). For example, prior to moving toward a more privatized type of management, the culture of performance measurement might be lacking; this may need to be introduced by private operators. Second, the privatization process is predicated on there being a robust regulatory and governance framework in place. Research suggests that deregulation may have a negative impact on efficiency in the short term, as there are costs incurred in moving from a regulated to a deregulated environment. Third, privatization of the port subsector usually generates numerous deregulations and reforms in peripheral

Box 3.2: Obstacles to port efficiency: the case of the Apapa Container Terminal, Lagos

Lagos port has long been notorious for inadequate facilities and congestion. As part of a broader program of port reform in early 2006, the Nigerian PA awarded a concession to APM Terminals to manage, operate, and develop the Apapa Container Terminal, with the remit to increase capacity from 220,000 TEUs per year to 1.6 million TEUs. Within months of awarding this concession, delays for berthing space at the Apapa terminal had reduced significantly. Moreover shipping lines dropped their congestion surcharge from Euro 525 to Euro 75 per TEU, saving the Nigerian economy US\$ 200 million a year. By early 2009, new gantry cranes had been acquired to triple the original capacity of the port.

Nevertheless, while the port's equipment is now able to handle more than 500 containers per day for customs examinations, by the end of each day the majority are returned to stacking. By January 2009 the port was clogged with uncollected containers, and at the end of February 2009 the head of the Nigerian PA announced a temporary suspension of ship entry with immediate effect — to last until some time in mid-April to enable terminals to clear “alarming” backlogs. The controller of the Nigeria Customs Service for Apapa blamed the backlog on the need to physically examine 100 percent of containers because of the high incidence of concealment and false declarations by importers.

However, this was not the only problem, as even cleared containers were not being collected. At the end of January it was reported that 9,741 containers were waiting in the port for delivery to the importers. Yet 851 of these had already been cleared by customs, all charges paid, and with documentation completed, but not picked up by agents. The Nigerian PA consequently proposed introducing demurrage charges of US\$ 4 per TEU in a bid to force owners to move them out of the ports. However, the agents blamed a lack of trucks, arguing that many had been booked to empty containers.

While the moratorium on the entry of new vessels was lifted in early March 2008, some backlogs and delays persisted and significant organizational and regulatory problems remain.

Source: From press reports assembled by Cornelis Kruk. Also see World Bank (2009; Chapter 12).

sectors — in customs, shipping, stevedoring, and handling companies. All these issues need to be factored into the decision to move toward a more privatized form of port management.

The complementarities across reforms make it difficult to isolate and measure the impact of port privatization and performance. However, as shown in the case of the Apapa Container Terminal in Lagos (Box 3.2), privatization alone is not enough to achieve maximum efficiencies — it must be accompanied by regulatory reform.

Regulatory Framework

An appropriate regulatory framework, covering labor management and the regulation of the fleet, is a prerequisite for the maritime sector to function efficiently and competitively as it creates the conditions for a contestable market structure for port and maritime services. This framework should cover various functions: the functioning of markets and the setting of tariffs, revenues, or profits; controlling market entry or exit; and maintaining fair and competitive behavior and practices within the port subsector (World Bank,

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2007). As ports evolve into landlord port authorities, for example, liberalization and deregulation reduce monopoly power for certain port services, allowing free entry by private service providers. On the other hand, in activities where there is a risk that private operators might adopt monopolistic practices, oversight of pricing practices by a regulator will help to scale up efficiency.

Regulatory institutions are also needed to exert some degree of control over the infrastructure assets used by private firms. The task of the regulator is a difficult one as it takes place under asymmetric information conditions, in that firms know their costs and market conditions better than the regulator does.

For contestable activities, services previously provided by the public port authority such as pilotage, tug assistance, vessel stevedoring, cargo handling, storage, and yard services may fall under the responsibility of private operators. Private participation in this regard reduces subsidies and costs, and helps achieve full cost recovery from users directly (Notteboom and Wilkelmans, 2001). However, the profit maximization objectives of private operators need to be checked by regulatory oversight to control the exercise of market power, to ensure that the public goods characteristics of many port sector activities are not undersupplied and, more broadly, to ensure that the public interest is upheld.

Regulatory Institutions

Typically, the Ministry of Transport oversees the development of transport and port policies and the preparation and implementation of transport and port laws,

national regulations, and decrees. Before the ratification of national laws and regulation, the Ministry makes sure that they (i) incorporate relevant elements of international conventions,⁷ and (ii) represent the country in bilateral and multilateral port and shipping forums and during the negotiation of agreements concerning waterborne or intermodal transit privileges. The Ministry also prepares financial and economic analyses to evaluate the socioeconomic and financial feasibility of projects, taking the context of national policies and priorities into account.

As to implementation, in many countries, independent bodies such as the transport directorates are hosted within a ministry to carry out executive functions. A typical list of duties performed by a maritime and ports directorate is long (indicating the power of the regulatory body) and includes: the inspection and registration of ships and shipping companies; the protection of the marine environment; the implementation of traffic safety measures; compliance with the International Ship and Port Facility Security Code; the maritime education and training of merchant officers and seafarers through maritime academies, exams and licenses; the execution of the national port policy; the construction of protective works, sea locks, port entrances, the control of port state (based on the terms of the Paris and Tokyo MoUs); in the case of a maritime incident,

⁷ For example, the International Convention of Safety for Life at Sea (SOLAS), the United Nations Convention on the Law of the Sea, the International Convention for the Prevention of Pollution from Ships (MARPOL). (See World Bank, 2007.)

the investigation and adjudication; the regulatory and licensing functions; and the construction and maintenance of the vessel traffic systems and aids to navigation and the search and rescue functions.

In an environment where competition across ports and across modes of transportation is increasing, it is important for port regulators to be given autonomy to carry out their regulatory functions. In Africa there is no evidence of the independent regulation of ports outside of South Africa⁸ (Cameron, 2008). Nigeria has plans to set up an independent regulator as part of its port reform package, but has not moved beyond the planning stage. The regulatory function is therefore undertaken by other bodies in such cases, typically the Ministry of Transport or other government agency, such as a national or local port-management body, or public port authorities. Of the 13 countries featured in Table 3.2, four are regulated at the Ministry of Transport level and the rest by port authorities or port management bodies that are directly or indirectly under government control.

A sound and transparent legal framework is therefore necessary to ensure

credibility, openness, and transparency in the reform process and to define PPPs. Moreover, to ensure the success of the reform process, it is essential to establish procedures for reducing the workforce in a socially acceptable way. This is important in the context of a shift toward containerization, which involves more capital-intensive techniques and a substitution of capital for labor. In a number of ports in developing and developed countries, overstaffing has been a contentious issue that has to be addressed in port reorganizations (see Nigerian and Tunisian experiences detailed in Box 3.3). In numerous cases, the workforce in ports is bloated and the success of reforms rests on a downsizing of the labor force.

Regulation of the African Shipping Industry

As the world shipping industry has become more capital-intensive and more technically demanding, it has witnessed strong concentration. For example, in 2009 the top 10 service operators controlled 51 percent of the worldwide containership TEU capacity (UNCTAD, 2009; Table 32). The number of active African shipping lines has decreased and they are being marginalized. At the global level in 2009, 35 countries controlled over 95 percent of the world merchant fleet (UNCTAD, 2009; Table 12). This list did not include any African countries.

For container shipping, regulations pertaining to issues such as capacity and quality of shipments have a large impact on maritime transport. Reforms aimed at harmonization would reduce costs and since maritime transportation is international,

⁸ When the National Ports Act came into effect in 2006 in South Africa, a *Ports Regulator* was established, becoming operational in 2008. The Ports Regulator fulfills the following functions: (i) it regulates the port systems in line with the government's strategic objectives, including the annual approval of National Ports Authority tariffs; (ii) it promotes an equitable access to ports and facilitates and services provided by ports; and (iii) it monitors the activities of the National Ports Authority to ensure that it perform its functions in accordance with the Act.

90 African Development Report 2010**Box 3.3: Integrating labor force reforms into port reforms: the cases of Tunisia and Nigeria****Tunisia**

Tunisia has awarded 21 port concessions since 2000. The country has moved very cautiously along the path of labor force reform since the concessioning process was legalized in March 1999, which led to the establishment of the Code for Trade Maritime Ports. The principal objectives of the Code were to introduce new work schedules, allowing the port to operate 24/7, in a drive to increase the efficiency of handling activities, and create an incentive for manufacturing companies to ensure adequate training of the workforce.

Discussions between the *Office de la Marine Marchande et des Ports* and labor unions and delegates of the dockers' corporation lasted several years until the parties finally reached an agreement in 2004. The agreement made provision for the non-replacement of retiring dockers, indemnity by the government, extension of social benefits until 60 years old, and gradual diminution of the powers of the dockers' corporations.

(Source: Discussions with the *Office de la Marine Marchande et des Ports*, Tunisia)

Nigeria

The Nigerian port subsector has witnessed one of the most vigorous concessioning processes in Africa. From 2003 to 2006, 21 concessions were granted to 15 different local and international terminal operators. The government had to reach an agreement with labor unions on severance packages and to secure funding for the retrenchments and pensions, and also had to prevent labor unions from calling widespread strikes. Negotiations with labor unions lasted several months until agreement was finally reached on a severance package in February 2006.

these reforms need to be carried out at a regional or global level. However, obtaining cooperation across different jurisdictions, regions, and countries is no easy task. This is particularly the case in Africa where, in spite of many regional trade agreements, little devolution of national powers to supranational entities has taken place. However, some progress is being made at the international level. Following many years of negotiations, a new set of international rules to increase the security and ease the growing volume of containerized trade has been drawn up and ratified by over 20 countries (see Box 3.4).

Despite the progress made in African shipping from the viewpoint of deregulation, the industry still labors under a number of constraints. One is largely historic and dates back to 1983, to the entry into force of the UN Convention on the Code of Conduct for Liner Conferences, popularly known as the "40-40-20 Rule." This states that 40 percent of freight should be allocated to shipowners established in the country of origin, 40 percent to owners established in the country of destination, and 20 percent to shipowners of any country (cross-traders) (Teravaninthorn and Raballand, 2009). The Rule was established to encourage the

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development of the shipping industry in developing countries, and to counteract the application of cartel-type arrangements by liner conferences. In fact, some have argued that this Rule led to market distortions and increases in maritime costs, which had a negative effect on the development of domestic fleet industries for several countries in Africa (Harding *et al.*, 2007; Teravaninthorn and Raballand, 2009).

In 1992, the European Court ruled that “liner conferences” were illegal monopolies. Despite this, they are still regularly used to

service many ports in Africa. For example, West and Central Africa countries are served by four conferences: COWAC (Continent — West Africa Conference) covering trade between North Europe and West Africa; UKWAL (UK — West Africa Lines) for trade between UK and West Africa; CEWAL (Central — West Africa Lines) for trade between North Europe and Central Africa; and MEWAC (Mediterranean — West Africa Conference) for trade between the Mediterranean region and West Africa (Harding *et al.*, 2007).

Box 3.4: Convention on Contracts for the International Carriage of Goods Wholly or Partly by Sea

After exhaustive negotiations between 2001 and 2008, a new Convention on Contracts for the International Carriage of Goods Wholly or Partly by Sea (“the **Rotterdam Rules**”) was approved by the United Nations Commission on International Trade Law (UNCITRAL) in July 2008 and was adopted by the UN General Assembly on December 12, 2008. On September 23, 2009, 16 countries officially expressed their support for the Convention by becoming signatories during an official signing ceremony in Rotterdam. As at January 6, 2010 the number of signatories had risen to 21, namely: Armenia, Cameroon, Congo, Denmark, France, Gabon, Ghana, Greece, Guinea, Madagascar, Mali, the Netherlands, Niger, Nigeria, Norway, Poland, Senegal, Spain, Switzerland, Togo and the United States of America.

This new international Convention provides a legal framework for a truly global industry across all the applicable jurisdictions in order to provide legal certainty and uniformity for all stakeholders, shippers, and carriers. The new Rotterdam Rules address the challenges of modern shipping trade: namely, the growth in e-commerce; faster and bigger ships; the massive growth in containerization; quicker port turn-arounds; and multimodal transportation whereby the operator undertakes the entire transport of goods from receipt from shipper’s premises to final delivery. The Convention replaces the unimodal maritime liability regimes in the Hague, Hague Visby, and Hamburg Rules.

Although the Convention will lead to increased liability for shipowners, it enshrines many valuable provisions that seek to facilitate and regulate modern shipping practices. In particular it addresses the lacuna that previously existed for maritime transport, where there is also multimodal carriage (both land and sea legs). It clearly demarcates responsibility and liability during the whole transport process. The Rules will apply not only to outgoing maritime transport but also to incoming. Furthermore, the Convention puts in place the infrastructure for the development of e-commerce in maritime transport, to reduce documentation costs and boost efficiency.

Sources: UNCITRAL website; also see Rotterdam Rules website at: <http://www.rotterdamrules2009.com/cms/index.php>

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A further feature of the shipping industry, which acts as a deterrent to any small, nascent shipping line, is the enormous cost of building ships (mega-carriers cost over US\$ 100 million). This is a massive barrier to market entry and is exacerbated by the growth of containerization. This impact was strongly felt after 2004, as the number of line services and companies has decreased in several African countries. In Egypt, the number of international companies providing services to the country's ports fell from 61 in 2004 to 47 in 2009, while in South Africa there are now 30 companies, compared to 38 in 2004 (Viohl and Hoffmann, 2009).

This trend raises concerns about the impact of the continuing process of concentration in liner shipping, especially for countries with a low connectivity. Typically, East Asian ports use vessels in the 8,000–11,000 TEUs range, while most African ports cannot handle efficiently vessels above 2,000 TEUs. Furthermore, the poor connectivity of many African ports, resulting from their small container capacity (see Chapter 2, Map 2.1), means that large international shipping lines are forced to use regional operators for transshipments, which increases shipping costs.⁹ Eritrea, Seychelles, and Somalia, for example, only record services from one single international shipping line. Liberia is served by two providers, while Cape Verde and Sierra Leone are served by three liner companies.

⁹ For example, Maersk uses Salah (Oman) to serve East Africa and Algeciras (Spain) and Tangier (Morocco) to serve West African trade in small vessels.

The experience of the Caribbean reported in Chapter 1 (Figure 1.5c) shows that freight costs for a standard-size container are much higher when a port is served by only one or a limited number of ships. Figure 3.6 shows that delays are another factor contributing to high freight costs in Africa.

Privatization of maritime transport in Africa is one way to improve efficiency and should lower costs. In the case of North Africa, maritime transport between Mediterranean countries is carried out by national shipping lines which are subject to multiple, sometimes conflicting regulatory systems (such as the Code of Conduct rule described above). In this environment, the existence of a major national public shipowning concern was considered to be a precondition for any liberalization of the maritime transport subsector. However, these countries' fleets are very old (see Table 3.3), very expensive to run, and their performance is mediocre. Moreover, new provisions regarding security and safety (deriving from the International Maritime Organization [IMO], the EU, the International Ship and Port Facilities Security Code [ISPS Code], etc.) have significantly raised the cost of renovating the fleets. As a result, North African countries are now considering a regulatory framework which should enable private North African shipping lines to compete on the northern shore of the Mediterranean.

In the current environment of increasing competition in international maritime transport, regulatory efficiency of the African fleet has nonetheless improved. For example, port state control has become increasingly efficient in Africa. This

Table 3.3: Age distribution of merchant fleets as at January 1, 2008

Type	World Total	Developed Economies	Transition Economies	Developing Economies	African Countries including Open Registry*	African Countries excluding Open Registry*
Bulk carriers	12.7	11.9	17.8	12.7	14.0	18.0
Containerships	9.0	8.6	10.6	8.9	6.9	12.3
General cargo	17.1	13.4	20.0	17.6	17.3	22.1
Oil tankers	10.1	7.5	11.2	11.0	11.2	21.4
Other types	14.7	13.1	11.8	15.5	17.2	21.2
All	11.8	9.7	15.5	12.3	11.8	20.5

Source: UNCTAD (2006; 2008).

* Open registry: National ship registry under a national flag, which is open to ships of all nations regardless of nationality.

concerns the control of foreign ships in ports and was originally conceived to back up flag state implementation in order to detect substandard ships. The authorities verify whether the condition of the ship and its equipment comply with international requirements. Port state control has proved to be very effective, as ships usually visit several countries during a single voyage. In this way, ships are regularly controlled without being delayed by unnecessary red-tape (IMO, 2003).

In SSA, three Memoranda of Understanding have been signed in recent years: the Abuja MoU for West and Central Africa; the Mediterranean MoU for Northern Africa and other Mediterranean countries; and the Indian Ocean MoU covering Southern and East Africa (IMO, 2003). The Abuja MOU was signed in 1999 by 16 countries from West, Central, and Southern Africa. However, in their last annual meeting the participants reported weakness in its

implementation, due to the lack of necessary infrastructure and to insufficient political commitment to carry out proper flag state administration and port state control (African Union, 2008).

One may turn to Liberia for an example of a successful fleet regulatory system. The government has set up an open maritime registry, which allows the country of registration to differ from the country of ownership.¹⁰ This is the second largest registry in the world, and includes 3,100 ships of more than 96 million gross tonnes, representing 10 percent of the world's

¹⁰ Traditional reasons for choosing an open register and running a "flag of convenience" vessel include: protection from burdensome income taxes, wage scales, and regulations. Liberia is the second open registry at the global level after Panama, and the national fleet in this registry is virtually nonexistent. In 2009, over 90 per cent of the ships registered in Liberia were foreign-owned, principally by German and Greek companies.

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ocean-going fleet.¹¹ The registry has been administered since 2000 by LISCR (the Liberian International Shipping and Corporate Registry), a US-owned and operated company. The LISCR uses a worldwide network of nautical inspectors to conduct annual safety checks in order to safeguard the quality of the shipping registry. Consequently, the Liberian registry is “white-listed” by international safety organizations, indicating above-average safety performance. The open registry generates approximately US\$ 18 million per year in government revenues.

Assessing Reforms

The standard reform package for the infrastructure sector calls for market restructuring through divestiture and for private sector involvement, to include the establishment of independent regulators. This package applies to the port subsector as well as to the other subsectors (utilities, water, roads, railroads, and airports). The expected results from implementing this package of reforms are enhanced competition and increased efficiency. However, although some progress has been made in Africa, it has been uneven. Consequently, Africa still lags behind other regions in terms of efficiency indicators for the trade logistics chain.

Institutional Reforms

A comparison of the quality of infrastructure across global regions reported from aggregate indicators is provided in *Global Competitiveness Report* (World Economic

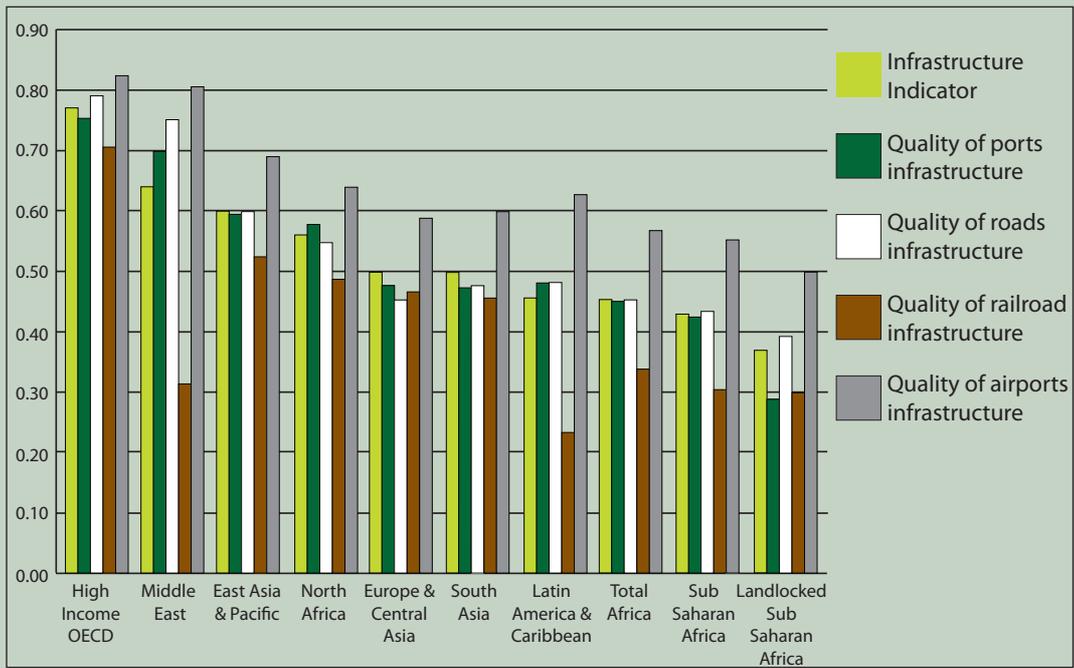
Forum, 2009). These indicators are collected from opinion surveys administered to executives in multinational enterprises and were collected for 101 countries over the period 2004–2007. Figure 3.2 reports the average value over the period for each of the four infrastructure subsectors (ports, roads, railroads, and airports) as well as providing an overall infrastructure indicator.

The regional averages are ranked in descending order. In general, there is a strong correlation across regions for each indicator (exceptions being Latin America and the Caribbean, which have a high value for airport infrastructure partly because of tourism). North Africa ranks fourth, close behind the East Asia and Pacific region. Africa as a region ranks last, particularly for the landlocked countries in SSA. The landlocked countries are further handicapped by the low values for the quality of the ports they use, and also for the quality of the road and airport infrastructures, possibly reflecting their small size. The difficult predicament of landlocked countries is further examined in Chapter 4.

Figure 3.3 is a scatter plot showing the relation between the quality of port infrastructure and income per capita. The strong correlation suggests two-way causality, since high income per capita is as much caused by good port infrastructure (and other factors) as the overall quality of port infrastructure is determined by per capita income (and other factors). The strong correlation is evidenced by the positioning of the low-income SSA countries in the bottom left-hand corner of the figure. This positive association between a composite index of infrastructure quality

¹¹ See the LISCR website: www.liscr.com.

Figure 3.2: Quality of infrastructure across regions



Source: Portugal-Perez and Wilson (2009, table 2). Data are taken from the indicators in the World Economic Forum's *Global Competitiveness Report 2008–2009*. The aggregate infrastructure index is constructed by factor analysis. Notes: Regions ranked by decreasing quality of overall infrastructure. The infrastructure indicator is a simple average of the 4 sub-indicators in the figure. The maximum value taken by the index is unity.

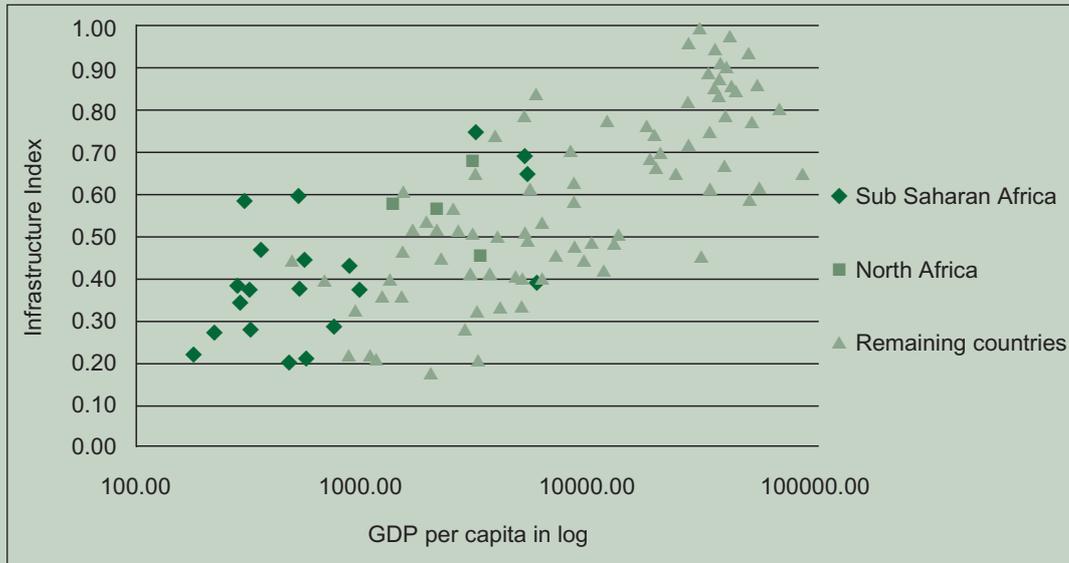
and income per capita will also be analyzed in Chapter 4. The figure also shows that there is quite a lot of variation in infrastructure quality after controlling for differences in income per capita. This spread is particularly evident for the high income per capita countries, but it is also present among the North African countries.

A more complete assessment of factors determining performance can be obtained by comparing objective indicators of

institutional quality across infrastructure categories, and by examining specific institutional reforms.

A first objective indicator of the efficiency of port services that takes into account both “hard” and “soft” infrastructure is the time it takes to handle cargo at port. Table 3.4 decomposes this indicator into four components (pre-arrival documents; port and terminal handling; customs and inspections; inland transport to warehouse). For all components except “inland transport to

Figure 3.3: Port infrastructure quality and income per capita



Source: Portugal-Perez and Wilson (2009, table 2). Data are taken from the indicators in the World Economic Forum's *Global Competitiveness Report, 2009–2010* and the aggregate infrastructure index is constructed by factor analysis. Note: The index is for the sample of countries used in the regional averages reported in Figure 3.3a. Income per capita is expressed in logarithms and maximum value for the index is unity when a score of unity is obtained for each component.

warehouse,” the SSA region evidences the longest delays. If, as a rough indicator, one takes the cost-equivalent of one day lost in transport cited in Chapter 1 (one day saved in shipping being equivalent to a 0.8 percent reduction in tariffs), then if SSA were to improve from its present level of 59 days’ clearance time to East Asia’s average clearance time of 28 days, the cost saving would be equivalent to around 2 percent. (To this, one should add the gains in time if the percentage of cargo inspection were reduced.)

More comprehensive evidence can be gleaned from a recent review of the

infrastructure sectors in 24 countries in SSA, accounting for 85 percent of GDP. This suggests that the relative weakness of African practices and institutions resulting in poor governance could contribute to the low perceived score on overall infrastructure quality shown in Figures 3.2 and 3.3.

To establish any links between institutional factors related to infrastructure performance outcomes across countries, a scorecard was developed to cover the three key institutional dimensions: (i) sectoral policy reforms (legislation, restructuring, policy oversight, and private sector involve-

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Table 3.4: Port cargo-handling times across regions (days)

Region	Pre-arrival Documents	Port and Terminal Handling	Customs and Inspections	Inland Transport to Warehouse	Total Time	% of Cargo Inspected (import)
OECD high income	8	2	2	2	14	5
East Asia & Pacific	18	3	4	3	28	31
Latin America & Caribbean	24	4	5	3	36	51
Middle East & North Africa	25	5	9	4	43	63
Europe & Central Asia	25	4	7	7	43	18
South Asia	24	6	7	10	47	69
Sub-Saharan Africa	33	8	10	9	59	67
World	23	5	6	5	40	43

Source: Hoffmann (2009) adopted from *World Bank Doing Business 2006*

ment); (ii) amount and quality of regulation (autonomy, transparency, accountability, tools); and (iii) enterprise governance (ownership and shareholder quality, managerial and board autonomy, accounting disclosure, labor and capital market discipline, outsourcing). Indicators that were easy to measure and deemed pertinent by infrastructure experts were then selected to cover each element of the corresponding institutional dimension. These are reported in Figure 3.4, where each indicator takes a maximum value of 1 when “best-practice” status is achieved.¹²

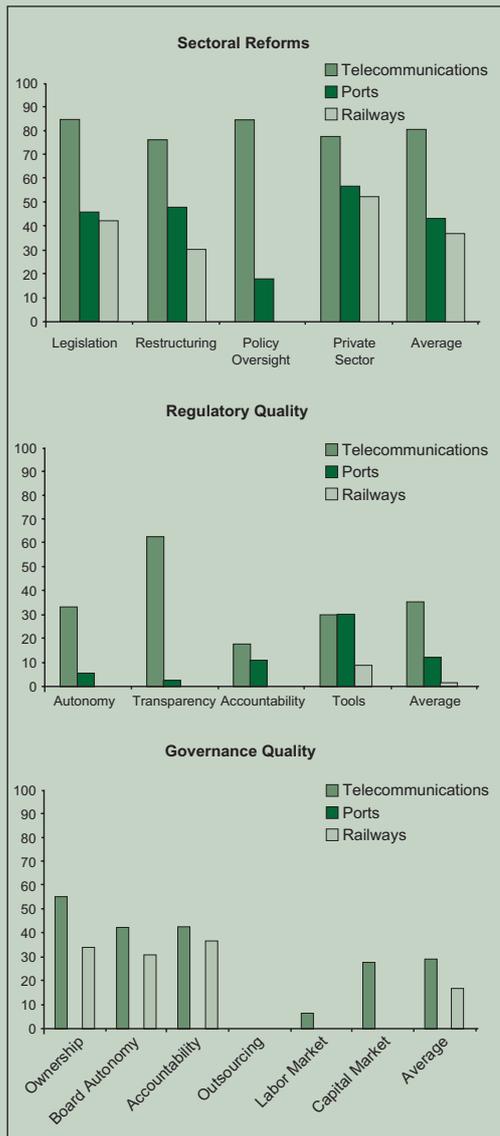
The individual and average scores for each component show most progress in the sectoral reforms, with much less progress on the regulatory and governance fronts.

¹² See World Bank (2009, Box 4.1). The discussion that follows is largely drawn from chapter 4 of that report.

Overall, the telecommunications subsector — which is of great importance in the overall trade logistics chain — has witnessed the most progress. It is notable that little progress has occurred on the quality of governance, particularly for ports where, as noted earlier, the regulatory bodies are still not autonomous from governance interference.

The lack of progress on governance does not necessarily imply a lack of progress on performance, where private sector participation has ushered in greater efficiencies. Figure 3.5 looks at two transport subsectors — ports and railroads — and breaks down average values of performance according to whether or not services have been concessioned out to the private sector. However, the sample is small (20 observations in ports and 13 in railroads). This explains why the differences in mean performance are not always statistically significant. Nonetheless, overall

Figure 3.4: Institutional progress on reforms, regulation and governance



Source: Vagliasindi and Nellis (2009).

one can conclude that private sector participation has been associated with improved performance in both subsectors.

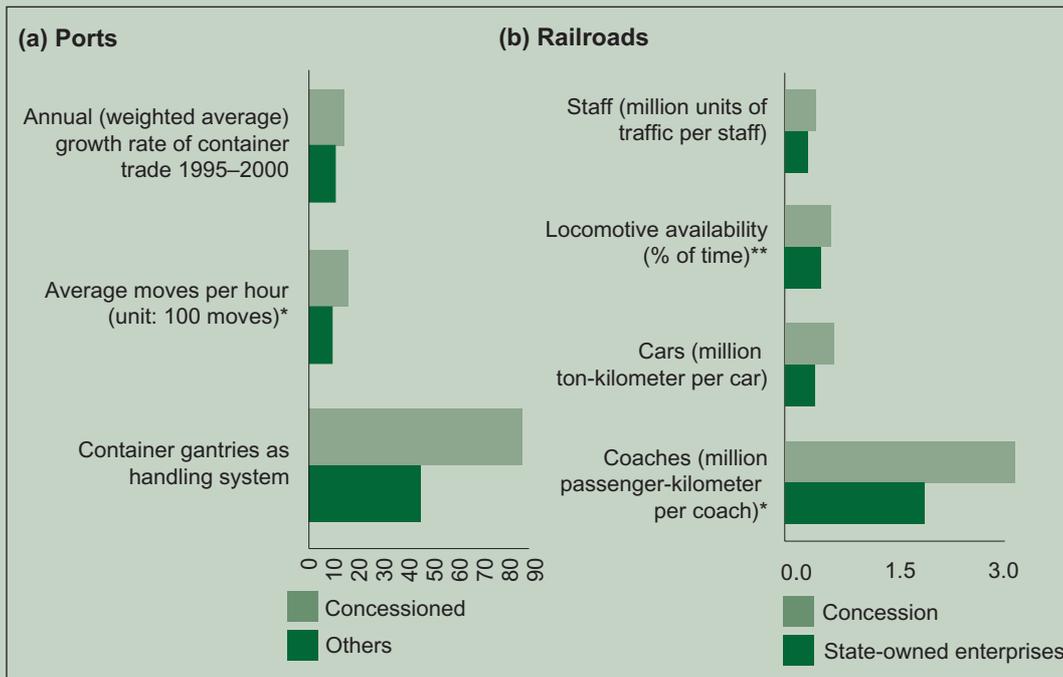
Efficiency of the Transport Logistics Chain

Several examples help to show what progress has been made and what remains to be done to overcome the remaining shortcomings in the “soft” component of infrastructure. Customs procedures in Africa in general, but especially in SSA, are lengthy and cumbersome and act as a bottleneck to port efficiency, thereby raising trade costs. The introduction of modern customs procedures would help to relieve this bottleneck and would contribute to the delivery of efficient port and freight transportation systems (Ocean Shipping Consultants, 2008).

Reforming customs is necessary and the major steps that need to be carried out are indicated in Box 3.5. At the same time, three characteristics of the low-income countries of SSA make this task difficult. First, a large share of government revenue is raised at customs. Because the tax base is small, tax rates are high, which encourages tax evasion. Second, customs is where the rents are to be obtained, so this is where extortion is likely to occur when governance is weak. Third, customs officials must fulfill two objectives that are at times conflicting: to raise revenue and to facilitate trade.

Delays at the customs level contribute to high transaction costs. This is clear from regional averages for the number of documents and the number of days needed to import or export a 20-ft container, reported in Figure 3.6. The difference

Figure 3.5: Performance indicators for port concessions and railroad concessions



Source: Vagliasindi and Nellis (2009).

Note: *Performance differential is statistically significant at the 10 percent level; **significant at the 1 percent level.

between developed countries and Africa is striking. In North America it takes on average 7 days to export and 8 days to import goods, compared to 34 days and 40 days in Africa. These delays heavily constrain the trade of fragile and perishable products, in particular agricultural commodities. The situation is worst in Central Africa and African landlocked countries, where it takes 55 days and 56 days respectively to clear import procedures.

A similar pattern emerges from Figure 3.6, which shows that in 2008, North Africa

was the best performing subregion in the continent for cross-border trade fluidity indicators. For example, in Morocco in 2008 it took about 14 days for exports to clear customs procedures and 19 days for imports, compared to Central African Republic's record of 57 days for exports and 66 days for imports. However, more recent data indicate that in 2008–2009, 14 Sub-Saharan African countries were rated as “most active” in the World Bank’s global *Doing Business* league for cross-border trade policy reforms. This was in part due to

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Box 3.5: Customs regulatory framework — key issues and questions

The following questions indicate what needs to be done to improve the efficiency of customs:

- Have customs laws, regulations, administrative guidelines, and procedures been reviewed, harmonized, and simplified to reduce unnecessary duplication and red tape?
- Has a process of continuous review and improvement of systems and procedures been introduced?
- Have tariff rates been moderated and the number of different rates of duty rationalized?
- Has a formal process for the review and rationalization of exemptions and concessions been introduced?
- Has a program of consultation and cooperation with other government agencies been established to examine a means of rationalizing regulatory requirements?
- Have international conventions, instruments, and accepted standards including the Revised Kyoto Convention, the WCO HS Convention, the WTO Valuation Agreement, the ATA Carnet Convention, and the WTO TRIPS Agreement, been implemented?
- Do regional customs unions and economic groups adopt internationally agreed standards and work toward regional harmonization of systems and procedures?
- Does the administration actively participate in international benchmarking and information-sharing initiatives?

Source: De Wulf and Sokol (2005).

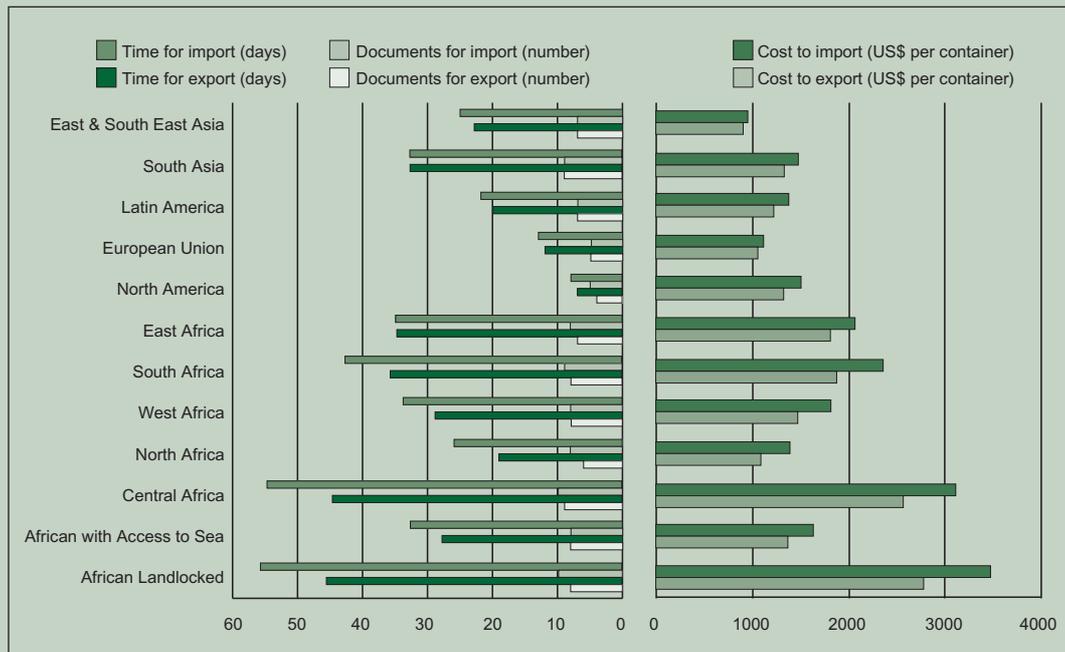
enhanced donor support for aid-for-trade initiatives (World Bank, 2010).

The extensive time required to clear customs is partly due to the cumbersome paperwork involved. Figure 3.6 shows that, on average, 8 documents are needed for exports and 9 documents for imports in Africa, against 4 and 5 documents respectively in North America. The African countries requiring the greatest number of documents to be completed are: Angola and Malawi (12 documents for exports) and the Central African Republic (18 documents for imports).

Nathan Associates (2002) report on the multiplicity of documents needed to export products in Mozambique. Exporters there need to obtain a certificate of origin, a certificate of quality, a sanitary and phytosanitary certificate, and an export license for each transaction. Moreover there is uncertainty in this list of clearing procedures, which vary across transactions (Clarke, 2005).

As further evidence, Clarke (2005) reports the outcomes of a survey which evaluates the impact of trade and customs regulation on private sector operations. The survey reported that 40 percent of the enterprises involved in exporting claimed that customs and trade regulation represented a serious obstacle in the eight African countries surveyed. By comparison, only 28 percent of exporters in Asia claimed that customs and trade regulations were a serious obstacle. As a result, most importers/exporters have to use clearing agents to clear customs procedures in Africa. Clarke notes that 85 percent of the surveyed importers in Africa use the services of a

Figure 3.6: Cross-border trade fluidity indicators, per TEU container



Source: Time, number of documents, and costs computed from World Bank *Doing Business* data (2008).
Note: To ensure comparability across countries, these figures represent the official fees levied on a dry-cargo, 20-ft, full container load expressed in US dollars and associated with completing the procedures to export or import the goods. Costs include the costs of documents, administrative fees for customs clearance and technical control, terminal handling charges, and inland transport, and exclude tariffs as well as other trade-related taxes.

clearing agent. He estimates that in Zambia, the median cost is about 1 percent of the shipment value and that 70 percent of the enterprises reported needing licenses for each imported consignment.

African countries have taken steps to improve other aspects of trade and customs administration and regulation. For example, Ghana, Mozambique, and Uganda reduced average processing times from weeks to only a few days but other links in the logistics chain have not followed this trend.

Similarly, North African countries are making serious efforts to reform their customs systems in conformity with the Kyoto Convention and the agreements on international road transport, precisely in order to diminish these obstacles. Operators in North Africa unanimously agree that the major trade barrier can be found at the borders of the Maghreb countries. These steps will make a positive contribution to the World Trade Organization (WTO) negotiations on Trade

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Facilitation¹³ and Free Trade Area (FTA) agreements. Morocco runs physical spot-checks on goods, using a selective verification approach based on an objective risk analysis technique. In Algeria, physical spot-checks are almost an integral part of the customs procedure. The problem comes when health, phytosanitary and, more recently, security checks are involved. The procedures for these checks are weighty, uncoordinated, and costly. Notwithstanding these inherent difficulties, several success stories have been identified in the customs sector in North Africa. These include the Moroccan customs system reform, which has made remarkable progress (reducing clearance time on average from 1 hour and 45 minutes in December 2001 to 37 minutes by March 2003), and where advance submission of customs declarations is possible for all products.¹⁴ In Tunisia, this procedure is currently being established.

The development of information systems, information technology, and modern customs practices should help to improve the governance of the African ports. Application of this type of “soft” infrastructure reduces clearance and dwell times,¹⁵ while also

improving the quality of checking procedures and also removes discretion in the administration process. Steps to reduce delays and corruption at the customs level also include the minimization of physical inspections and contacts between importers or exporters and the customs administration.

Another example of soft infrastructure is the “Transports Internationaux Routiers” (TIR), which allows goods to travel across one or more international borders with the minimum of customs involvement and delays (see Chapter 4, Box 4.4). Here the use of information technology is key for the system to function. For countries that apply TIR, prompt payment of customs dues by logistics companies on behalf of their clients and paperless transit have increased tax revenues and reduced government corruption. It is harder for a customs official to hold out for a bribe when the system is computerized and tracked by a logistics company’s bar code. However, it is reported that information technology still offers extortion opportunities for corrupt customs officials — with the customs official refusing to press the “enter” key if importers and exporters do not pay up. Nonetheless, TIR does offer substantive improvements; for example, the average processing time in Ghana was reduced from weeks to a few days after its introduction (Clarke, 2005; *The Economist*, 2008).

Another example is the Cameroonian customs administration, which underwent a major reform in 2006 following the World Customs Organization (WCO) Columbus program. The purpose of the reform was to increase transparency and defeat corruption. The heart of the reform was internal control,

¹³ The gains from trade facilitation measures for African countries, particularly landlocked ones, are covered in Chapter 4.

¹⁴ See De Wulf and Sokol (2005) and De Wulf and Finateu (2002) for more detailed information on the customs reform in Morocco.

¹⁵ “Dwell time” is the time cargo remains in a terminal’s in-transit storage areas, while awaiting shipment (for exports) or onward transportation by road/rail (for imports). Dwell time is one indicator of a port’s efficiency: the higher the dwell time, the lower the efficiency.

through the creation of indicators automatically and regularly implemented and disseminated by electronic mail to operations managers and the director general. The objective was to strengthen the chain of command by holding each of its links accountable. Since then, three major results have been achieved: the development of a culture of performance-based personal management; “better practices” notifications; and an increase in the productivity of controls (Libom *et al.*, 2009).

Conclusions

A review of the evolution of port management structures around the world shows a shift toward the landlord port model, where all but the hard infrastructure is placed in private sector hands. With a lag, Africa is joining the trend with an increase in concessioning across ports. At the same time, the extent of private investment in physical port infrastructures has been low, reflecting a variety of factors, ranging primarily from the small size of the market to weak institutional support. As a result, many ports are visited by small regional ships which undertake transshipments for the final ocean leg. Both these factors contribute to higher freight costs in the Africa region.

Evidence suggests that reform packages that include regulatory reform and independence of the regulator from government interference will allow the other ongoing policy reforms a greater chance of success. Such measures will encourage private shipping companies to call on African ports. Furthermore, private operators in the ports will be more inclined to make the

investments in physical infrastructure needed to relieve the bottlenecks identified in Chapter 2.

Overall, the shift to a more privatized environment has not made the same progress in Africa as in the rest of the world. In pursuing reforms, several precautionary steps should be taken by governments. First, before the privatization process is initiated, the government needs to have a clear vision of the objectives that the public sector is trying to achieve. Second, close coordination between the different institutions involved (port institutions, customs, transport ministers, labor unions, etc.) is needed to define how their respective roles and interactions should evolve, for the benefit of all parties involved. Third, other efficiency-enhancing factors need to be promoted, such as pro-competitive policies and arrangements, better coordination of the various agencies that intervene at ports, and a reduction in documentation requirements and single-window processing. Finally, beyond ensuring autonomy for the ports regulator, countries should aim at achieving simplification and harmonization in their procedures, which will lead to better coordination and increased efficiency at regional and international levels.

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