

Maritime and port services in South-America. Where from here?¹

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1. The transition

For the last half a century, Latin American governments operated the public ports of their countries with sociopolitical criteria, ignoring market signals. This forced these governments to subsidize the ports, put up with slow and expensive port operations, reject labor-saving innovations, allow the unions to monopolize cargo handling and stowage and negotiate collective agreements that institutionalized inefficient practices.² The monopolistic control of the port activities on the part of the port administration, customs, labor unions and firms transporting freight to the country interior, made competition to vanish.³ In addition, the lack of appropriate investments in infrastructure and technology, especially in the 80s, resulted in inefficient and obsolete ports across the region.

But things changed. Ports have become more capital-intensive due to the development of containerized transport and bulk cargoes.⁴ New intermodal and integrated transport chains has allowed for new competition from distant ports. The result has been the erosion of market power of dominant firms and labor unions. At present, in most South American countries, commercial principles appear to inspire ports management or, at least, are given lip service, and private firms are in charge of most of the services offered.⁵

Nevertheless, the situation varies considerably along the South American coasts. In general, Port Authorities, which tend to be public entities, are responsible for coordinating the port activities and for the investment in port infrastructure. But the property of the port site and responsibility for land access infrastructure falls on

¹ Thanks are due to Emili Arbòs, Santiago García-Milà, Oscar Medina and Martin Sgut for their comments and references.

² Larry Burkhalter, *Privatización portuaria*, CEPAL 1999.

³ According to Obtsfeld and Rogoff (2000), cargo reservation schemes and monopoly rights granted to providers of port and auxiliary services are one of the main sources of the high costs of maritime transportation.

⁴ According to data of the PPI Project Database, published in Martin Sgut (2000), Brazil, China and Argentina are by far the top three developing countries by number of port projects with private participation. In terms of investment, though, Brazil and Argentina are ranked fourth and fifth.

⁵ Unfortunately anti-competitive practices are not restricted to labor unions or public monopolies. Privatization by itself is no guarantee to the disappearance of trade restrictions.

national, provincial or municipal governments. Services, on the other hand, can be publicly or privately provided with a whole range of different arrangements. Berthing services, including pilotage and towing, are in most cases provided by public employees while in some are licensed to private agents. Yet, restrictions and private and public monopolies are still quite common. It is not unusual that port pilots and towage operators oppose any opening up to competition on safety grounds. Cargo handling is more and more in the hands of private agencies, most particularly in specialized terminals. Ancillary services, like supplying ships with fuel and water can be handled by the public Port Authority or by private firms. Administrative paperwork to obtain clearances or pay custom duties is usually handled by private consignees, but health and custom officers are public officials. Finally, some countries allow for the existence of completely private ports.

Perhaps the main difference among public-owned ports is the role of the Port Authority, which may simply own the infrastructure or, in addition, perform tasks of coordination, regulation and, in some cases, directly providing services. The role of private investment in infrastructure and superstructure as well as in the provision of services varies also a lot, from full privatization when all assets and liabilities are owned privately (as in some integrated terminals or ports), to licenses for the provision of services using the port basic equipment, to management contracts to simply fulfill management services.

Examples of the variety of institutional arrangements are easy to find. Colombia, whose ports handle about 90% of the international trade, led the way to privatization in 1993, awarding concessions for the management of its four major general cargo ports to public-private consortia with a majority of votes held by local private companies. These consortia, then, subconcessed to private terminal operators.⁶ In Ecuador ports tend to be too expensive and antiquated, the installations are obsolete and lack capacity, especially since the increase in the export of oil. Presently, investments are publicly financed and managed, as in the dredging of a canal in Guayaquil or in the new projects in Puerto Bolivar. In Peru the government has given high priority to the privatization of its port installations. In 1990, the Peru government finished with the monopoly of the CCTM (Comisión Coordinadora de Trabajo Marítimo) which controlled the supply of dock workers. This resulted in the flourishing of the commercial activity and the

⁶ See Dirk Sommer (1999).

existence, by 1997, of 15 to 20 private firms offering port services and freely hiring dock workers, paid according to the cargo handled and the number of hours worked. Venezuela has decentralized the management of its ports, and the regional governments have begun to give long-term concessions to private firms. Puerto Cabello, which handles about 60% of all maritime imports, was privatized in 1993 and is expanding its installations. La Guaira, in Caracas, the first port in passenger transportation and the second in cargo is in the process of being privatized. The deregularization of the ports in Argentina started by the transfer of property from the central government to the provinces and these, at about 1996, began to transfer them to private firms. The port of Buenos Aires, for example, which handles around 80% of imports to the country, is totally privatized. At places like Bahia Blanca, 5000 Tm of cereals (sunflower and wheat) are loaded per hour. But at San Nicolás the grain elevator is public property and functions only occasionally. On average only 500 Tm can be loaded per hour. It can be said that all cargos in Argentina's ports are privately handled, either in private ports or through terminals privately operated (in Rosario, Santa Fe, Buenos Aires, Quequén and Bahía Blanca) or through the services of private companies in small ports. Brazil is the country that lacks behind. Brazil begun in 1997 a process of concession of its port services, but the two traditional ones, Santos and Rio, are still behind in the modernization process. Nevertheless, in Tubarao (Brasil) 20,000 T of iron mineral are loaded per hour thanks to a modern system of continuous manipulation. Paraguay and Uruguay need good transportation infrastructures since they are highly dependent on the trade with other Mercosur countries. Recently the private sector has participated in the modernization of the port of Montevideo and there is interest in the privatization of Puerto de la Paloma. In the port of Montevideo, a semipublic company, Terminal Cuenca de Plata, was recently awarded the 30-year lease of the container terminal. But both countries have placed their investment effort in roads and river canals. In Chile, even after a successful process of concession bidding, some charges are still decided by the Administration (like the tariffs for navigation aid systems) and pilotage is still reserved to former navy officers.⁷ One exceptional case, although not directly covered in this paper, is Panama, which has legislation on private concession since 1974 and where, with 1999 data, practically all containers traffic occurs in private ports or, in a much smaller amount, in concessioned terminals. For a more detailed description of the

⁷ Foxley and Mardones (2000).

situation in Argentina, Brazil, Colombia, Ecuador, Paraguay, Peru, Uruguay and Venezuela, turn to the appendix.

In summary, in South America ports are in a transition process, with a growing participation of the private sector. It is fair to say that while port and maritime services are basically managed by private firms, decisions on infrastructure are a private-public mix. Specifically, ports specializing in cargoes in bulk tend to belong to private corporations, while ports for general cargo tend to be public. Most of these ports have complex institutional arrangements involving different ministries and public organisms. In Venezuela, for instance, six ministries and at least six governmental agencies have a say on decisions affecting the country ports. In addition, in some ports there are still two types of workers, registered or non-registered. The first is the unionized group that often subcontracts the non-registered workers to do the worse tasks. The situation makes it very difficult any attempt at reform. In Chile, for instance, while ports were deregulated in 1981, only in 1990 the legislative process was started, but the first act authorizing the private sector to rent the port infrastructures to offer cargo services was not approved until December 1997, with the so-called Ley 19542. It took 16 years to debate whether to implement the privatization decision.

Thus, a lot has been done in South America to make ports more competitive.⁸ But important inefficiencies still prevail. Although we lack proper studies about maritime transportation costs in the region, and large cost dispersion exists among countries and among ports, expert opinion seems to indicate that while in developed countries the cost of logistics may represent from 9.5 to 11 per cent of the total cost, in South America it may reach 30 to 40 per cent. This is due in part to lack of proper infrastructure but, in a larger part, to *institutional shortcomings*: bureaucratic, legal and technical.⁹

2. The prescription

What follows is a prescriptive analysis of what is still to be done in order to improve and strengthen competition among private and public firms in maritime and port services, as the key factor to their modernization and cost-price reduction. By maritime

⁸ Using data from the Port of Buenos Aires (Source: Administración General de Puertos), the number of tons per worker has gone from 800 to 3000 in the years from 1991 to 1995, the average waiting for a container ship has gone from 2.5 days to 1.5, and the cost per imported container has gone from 450 US\$ per ton to 120 US\$.

⁹ See Martin Sgut (2002) and Paul O. Roberts (1999).

and port services we are referring to what in the General Agreement on Trade in Services (GATTS) are called a) *maritime auxiliary services*, i.e., any activities related to cargo manipulation in ports and ships, including cargo handling, storage and warehousing, customs clearance, container station and depot services, maritime agency and freight forwarding systems, and b) *ports services*, i.e., pilotage, towing and tug assistance, provisioning fuel and water, garbage collection and disposal, port captain services, navigation aids, emergency repair facilities, and anchorage berth and berthing services.

The goal should be to promote policies of non-discriminatory access to ports and the participation of the private sector in all aspects of port investment and operation. Lease of public facilities and management contracts may be used as initial steps towards fuller privatization. The private sector should be encouraged to invest in port facilities and heavy port equipment and to share the risk and rewards of these massive investments. A combination of “landlord ports”, where port authorities limit their role to the building and owning of infrastructure, leaving superstructure, pilotage, cargo operations and towage to be conducted by private operators¹⁰, and private “service ports”, where all operations are integrated and conducted by the private port authority itself, should be promoted in order to improve efficiency and to diversify the sources of capital investment.¹¹

But it is our understanding that the main task ahead in South American ports is to break the existing separation between ports and the outside world. Approaching a port one encounters a physical barrier that cannot be crossed without the proper authorization. This barrier is more than a physical barrier; it is also a metaphorical barrier of how a port is an enclosed space, protected from outsiders by rules, paperwork and bureaucracy, and breeding levels of corruption that no society should tolerate. To make ports more efficient and, at the same time, to make ports more accountable to society, the first task is to cope with corruption. True, the corruption in ports is a reflection of the corruption at large in a country. Yet, there are examples that show that there are ways to make corruption practices more difficult. We report below that

¹⁰ In other words, in landlord ports, port authorities divest themselves of the managerial and financial responsibility for commercial facilities. Port operators may take significant investment obligations for expansion and modernization of existing facilities. The public port authorities retain obligations for investment in berths and breakwater facilities and maintenance of access channels.

¹¹ Data from CEPAL (2001) seem to indicate a very high degree of customers’ satisfaction with the Landlord ports of Panama, Argentina and Mexico, and a low degree of satisfaction with *public* Service ports in El Salvador, Honduras Paraguay and Nicaragua.

corruption and paperwork tend to go together, and that replacing paperwork by modern information technology would dramatically reduce the degree of corruption in ports.

In the next pages we have provided recommendations to be implemented in the South American ports.

To compete, special attention has to be placed on the following:

1. Appointments, red tape, bureaucracy and over-regulation.
2. Corruption
3. Building an efficient logistic chain
4. Trade facilitation
5. Labor force
6. Modern equipment
7. Land access infrastructure
8. Regulation to avoid non-competitive practices. Fair bidding and non-discriminatory access
9. Sharing the pain of reform

2.1 Appointments, red tape and over regulation

- Appointments of executive officers in public ports have traditionally been made in return for political favors or on the basis of social or family reasons. Most often, since the appointments were political, the goals of the appointed officer were not commercial but often geared to avoid conflict with the powerful social agents.

Now, these appointments are crucial. Without a top management deeply committed to the goal of modernizing the port rules and procedures, this task will turn out to be impossible. There exist examples of ports that underwent a profound modernization only after the top appointments were made on the basis of good managerial skills.

Recommendation: The practice of political appointments has to be kept in check. Governments should be made to understand that outside investment can only take place in large volumes if the executive officers of the Port Authority are honest managers with the right skills.

- Years of accumulated administrative rules make the handling of the cargo slow and expensive. Administrative paperwork for ships and cargo, sanitary and customs permits and, in general, lengthy consignees' procedures are still common in South American ports. It has been estimated that the port of Buenos Aires handles about 18 million documents a year.¹² An important goal of any port reform will mean a further reduction of paperwork involved in ship and cargo handling. Correspondingly, one should aim to the reduction of administrative staff and the regular auditing of administration procedures and expenditures. One of the main sources of inefficiencies in South American ports lies in current administrative expenses¹³. Often, the privatization of the port administration, through a management contract, is the best way to cut through years of bureaucratic sloth.

Recommendation: Cutting the administrative paperwork, reducing the inflated bureaucracies and auditing the administrative procedures and current expenditures should be the goal of any reform to modernize and improve ports' efficiency. Contracting out the management of the port administration may be the only solution to years of bureaucratic sloth.

- Often, port authorities are the managers and coordinators of port activities and, simultaneously, are an active supplier of port services. This should not give port authorities a privileged advantage over other providers of port services. Whenever a port authority competes with

¹² Comunidad Logística de Buenos Aires (COLOBA), according to *El Cronista Comercial*, 13 de junio de 2001.

¹³ According to Sgut (2000), a South American port with yearly income of 40 million in \$US, would divert 25% of this income to investment in infrastructure and 75% in current administration expenses. Ideally administrative expenses should not exceed 10% of income. This author, using data from AGPSE and ANP, claims that the administration cost per TEU in the port of Buenos Aires is US\$ 70, in Montevideo US\$ 139, while the international benchmark is US\$ 15

other service providers, they must not have the capacity to decide whom to compete with.

Recommendation: If a port authority supplies port services, it should not have more rights than its commercial competitors. In particular they should not decide with whom to compete.

- Port authorities must be subjected to regular auditing. If port authorities, in addition to coordinating port activities, offer commercial services, then auditor's reports have to be careful to precisely describe the financial flows between the different activities. In order to facilitate the auditing, port authorities should have separate accounts for port management activities and the provision of services, and all costs and revenues must be correctly assigned according to justifiable accounting principles. In addition, the accounting system must be sufficiently transparent to provide a clear picture of the financial relation between the port authority and the public authorities, showing, in particular, any public funds made directly or indirectly available and the use to which these public funds are actually put. Specifically the accounting system should operate for the purpose, among others, of observing and following any aid granted from the States, either as grants, subsidies, loans at less than the commercial rate of interest and guarantees, exemption from charges, taxes or social contributions, fiscal advantages or benefits in kind such as free provision of services.

Recommendation: Make auditing of port authorities mandatory and enforce an accounting system accurately describing all the financial flows.

- Sometimes, port rules are deliberately opaque to be used to discriminate particular service providers. Other times safety and environmental concerns are a pretext for favoring some providers over others or, in general, to limit competition. To combat this situation, clear rules and procedures on access have to be established, giving all potential service providers an equal chance. If, on the basis of local safety and

environmental specificities, restrictions have to be imposed on the number and characteristics of service providers, these restrictions must be very well justified, and the procedure for their application must be transparent, non-discriminatory and objective.

Recommendation: Rules have to be clear and procedures must be transparent, giving all potential service providers equal chance.

- Customs tend to be a bottleneck that hampers efficiency. Custom services in many ports continue to follow the same procedures that were established years ago, when the volume of cargo was much smaller. The goal of the custom officers is to treat all cargo from the point of view of its fiscal revenues but hardly from a commercial perspective. There is an urgent need to modernize the electronic exchange of data and to establish information systems compatible with each other, so that customs accept electronic documents, receive information about the cargoes before the boats reach the ports, be capable eventually to inspect the import in the country of origin and to minimize the requirements for transits.

It is also important to reduce the proportion of cargo or containers inspected. In some ports, most of the imported commodities are inspected by custom authorities. This does not make any economic sense. It requires a costly staff, it slows cargo handling and breeds corruption. Modern ports do not use any paper documents to clear customs. All procedures have been simplified and are electronically performed. Only a very small proportion of cargoes and containers are inspected¹⁴ and, to avoid corruption, the containers to be inspected are selected either randomly by computer or by the highest customs authority in the port.

¹⁴ About 3% in the port of Barcelona.

Recommendation: Simplify procedures, replace paper documents by electronic data exchange, have all electronic documents cleared before a ship enters port, and inspect randomly a small proportion of all freight.

2.2 Corruption

Reform and modernization of ports implies that political, or social, criteria of management, as used by the traditional government appointed administration are to be replaced by the commercial criteria of the private operators. But this process requires the supervision and regulation of the government. In countries with an extended history of corruption, the interface between private firms and public supervision and regulation may be prone to graft and favoritism.

A necessary condition to hamper the spread of corruption is the establishment of precise legislation establishing the frame in which the industry must operate. In addition, independent anti-trust institutions must be created with clear mandates. A successful reform also needs the proper design of fair auctions to award concessions and the correct drafting of concession contracts.

Unfortunately, the drafting and supervision of the whole complex process is rarely handed to an independent agency, in which all the interested parties participate, but is left to existing public agencies or port authorities. These institutions in general cannot be models of fair management in countries in which many public institutions and private organizations are prone to corrupt practices.

In addition, there is little transparency in public financial flows. The accounting tools used in port management cannot normally deliver precise information on the use of public monies nor can they retrace satisfactorily the financial flows that have taken place. In many cases, the accounting system used is not designed for a proper managerial control of the activities but simply follow the public accounting principle of non-dedication of expenses and income. Proper accounting methods should be applied not only to uncover corruption and graft but also to show any use of funds for purposes, like subsidies or loans on privileged terms to local providers, which could be discriminatory against other service providers and, obviously, for the adequate supervision of managerial decisions.

The impact of corruption on the whole process of privatization is an element that has to be taken into account and strict measures of fairness must be implemented.

The concession of a containers terminal to the group Maersk in the port of Montevideo is an example in which rumors of graft cancelled the concession and delayed it for more than a year. Rumors of graft are also frequent in many ports, involving the deals of the private operators with the public regulator. Special private arrangements between shipping companies and pilots or refueling agents for a preferential treatment are not unheard of. Corruption perception indexes are published with some frequency and they tend to show South American countries among those with high indexes. This is a subject that should be squarely confronted in every case.

Fortunately, the experience of other ports may be an indication that corruption can be very much contained by applying some reforms that usually are acceptable to all members of the port communities. These reforms are based in the disappearance of all paperwork, to be replaced by electronic data interchange in a vastly simplified network. These reforms are relatively easy to implement because few members of the port community can openly object to the use of electronic data and there is an international know-how that can be tapped.

In addition to the obvious advantages of going electronic (speed, clear rules, ...), one must add the drastic drop in corruption that takes place after the modernization of the information flows. Several things breed corruption:

1. The number of (unnecessary) forms that have to be filled to clear a cargo. When procedures are complex and require many different forms, some of these forms are often impossible to fill in the required detail. But the port rules require this detail. Whether the rule is enforced or not may depend on whether the port customer bribes the port officer.
2. Bribes are easy to hide between paper forms. When no paper forms are exchanged or personal contact is replaced by electronic data exchange, asking for a bribe, or receiving one, becomes more difficult.
3. When most cargos are customs inspected and decisions of how thoroughly a cargo is inspected depend on the whims of the custom officer, customers have ways to influence the officer's attitude. Instead, few inspections, all thoroughly done by a small number of officers, decided by a random device, would put an end to such practice.
4. The electronic handling of data eliminates these situations and, consequently, drastically lowers the level of corruption in freight handling.

Recommendation. It is important for ports to undergo a simplification of all administrative procedures and the replacement of paper documents by electronic data. This will not only reduce the administrative costs of freight handling but will also make present corruption practices much more unlikely.

2.3. Building an efficient logistic community

Ports should be regarded as poles of development in the logistic chain. The development of efficient logistic chains should be a common endeavor of all members of the port community, chambers of commerce and financial institutions. This prospect requires using modern communications technologies, developing of integrated and intermodal transport chains, and investing in labor saving equipment.

Traditionally, the basic feature of ports has been the crisscrossing of connections between the different port agents, requiring an incredible volume of paperwork (see note 13 above). Often, the same information appears in several documents that make the rounds from office to office. An efficient logistic chain would require instead the unification of the information in a single electronic document handled by digital communication. The port of Barcelona, for instance, through PortIC¹⁵ has implemented this organization in the last years, with important efficiency gains. The port of Buenos Aires, through Coloba¹⁶, is working in the same direction. One feature of both projects is the use of the same system of data exchange: The UN sponsored Electronic Data Interchange (EDI). Working within homogeneous electronic protocols is a condition for more efficient handling of freight in the world. Notice that the logistic community has to be efficient in the port sending the freight and in the port receiving the freight. To share a common system and language would make the logistic process more efficient. This is the goal of UN/CEFACT (United Nations Centre for Trade Facilitation and Electronic Business)¹⁷, and any reform in electronic handling of documents in ports

¹⁵ http://www.portic.net/portic_eng/home.htm

¹⁶ Comunidad logística de Buenos Aires. <http://www.coloba.org.ar/Novedades.htm>

¹⁷ See United Nations (2001).

should pay attention to the recommendations of this UN agency for homogenization of codes and standards. Using an electronic certification procedure would be the basis not only for the electronic exchange of information but also for taking care of the many legal problems that electronic trading confronts.

Recommendation: Follow the practice of modern ports where a single electronic document carries all the information needed by port agencies. Follow UN advice for codes and standards.

2.4. Trade facilitation

The technological developments in international transport have standardized maritime transport activities around the world. Consequently, procedures and documentation for international trade should be rationalized and standardized. Unfortunately, the lack of a uniform legal framework governing port operations has resulted in national, regional and municipal bodies taking the initiative of enacting legislation to overcome uncertainties that presently exist.

Recommendation: An effort should be made to harmonize the port laws within the existing trade organizations, MERCOSUR and Pacto Andino, to be expanded to other countries and organizations.

Port enterprises should pay attention to trade facilitation through flexibility of tariffs and fees, simplification and harmonization of paperwork and diversification of services in order to improve from the present situation that still shows:

- Multiplicity of tariff items
- Vagueness of tariff items
- The presence of few charge categories, requiring either consolidation or cancellation
- Multiplicity of cargo-handling categories, with unnecessary detail.
- The existence of one universal fee for port services, which makes it difficult to determine the cost of a given service
- Multiplicity of container fees

The differences that exist among charge and fee structures, in terms of item numbers, types and calculation basis, makes it difficult to make cost comparisons among ports. Tariff items are often vague and difficult to understand, with numerous categories, causing confusion to port users and complicating cost evaluations. Interference by governments in administration, operation, investment and pricing, combined with some degree of public sector control over port activities, causes confusion in port planning and function, thus raising the cost of services.

Recommendation: Within the existing trade organizations, MERCOSUR and Pacto Andino, to be expanded to other countries and organizations, implement a process to harmonize items and fees.

2.5. Labor force

Like controllers of air traffic, dockworkers have a strategic position that gives them a strong political leverage. In most Latin American countries unions have fallen, in the last decades, under the control of political parties that fight with each other to offer better conditions to the workers. This means not only better salaries and fringe benefits but also fewer working hours. Two shifts and holidays on Saturdays, Sundays and local festivities have been standard. In some cases, the working hours of workers in boats are different from the working hours of workers on dock, with the result that cargoes are not moved for hours. It is not unusual that in Latin American ports workers work in two shifts of five hours. A typical boat of 8500 TEU may be unloaded and loaded in 6 days but must remain in port for 8 days, including a weekend. On the other hand, in Northern Europe, workers operate in three shifts of eight hours and the same boat could be ready in two days. The result may be a cost of loading-unloading three times higher in the average Latin American port.¹⁸

Also common in South America has been the existence of a system of Registered Dock workers that limits their supply through rules that force firms to contract only unionized docks workers, and do not allow any worker to join the

¹⁸ See Burkhalter, p. 33

union unless they already have a contract. Registered dockworkers are entitled to health care, vacations and unemployment benefits, but a dockworker can only be registered if he is unionized and has a contract. These registered workers receive unemployment benefits whenever there is no work. In some countries there is even existed a ruling establishing that new workers to be hired had to belong to the families of registered workers. It is clear that with measures like these, workers productivity will suffer.

The result has been a privileged class of workers ready to defend their privileges. Labor disputes have been frequent and long strikes ARE a permanent fixture of the port life. A similar situation exists with respect to pilots, whose associations had the monopoly of their services. In ports where the tide allows two moments a day for boats to enter the port, if a pilot does not show on time, the ship will have to wait for another 12 hours. To have the favor of pilots, maritime companies may have been paying extra fees. It is still not unusual that half the time a container boat takes since it arrives at the port limit, where a pilot takes over, until it goes back to the open sea, is wasted waiting for the pilot or for the new tide.¹⁹

The consequence of this situation has been inefficient supervision and management, a large increase of labor costs per Tm unloaded-loaded and a huge excess of laborers. Not all the efforts to modify this situation have been successful. Reduction of workers has been costly and the process has been submitted to expensive legal demands.

It is not surprising, then, that Governments which are willing to introduce competition in all commercial activities are tempted to exclude from a competitive environment the market for dock workers. This also happened in the UK where, in 1983, private firms began providing services in many UK ports but only after repelling, in 1989, the Registered Dock Labour Scheme, hiring of port workers became competitive. Or take the example of the port of Santos. In 1995 the Grupo Libra obtained the services in terminal 37 and began to modernize the installations, buying modern cranes and expanding the terminal. But productivity did not increase substantially and costs remained high because the labor rules had not been adapted to the needs of a competitive environment. Without labor reform it will be increasingly difficult that a private firm, subject to competition and risking

¹⁹ id p. 40.

bankruptcy, accepts to depend for its labor on a monopoly like the Register of dockers. This was well understood in Chile with the reforms of 1981 and in Panamá with the privatization of the ports of Balboa and Cristobal. But as mentioned in the previous example the register still exists in the oldest ports in Brazil.²⁰ Elimination of the register possibly requires a program of subsidies for the displaced workers, as was done in both Chile and Panama. More difficult, but equally important, it may require a consensus with the unions involved. The direction of ITF in London is well aware of the need to negotiate the reform of the traditional labor rules. Reaching a consensus with the different agents involved would help guarantee a more stable and, consequently, more efficient economic environment.

Recommendation. Labor reform to introduce competition in the hiring of port workers is a necessary condition for privatization. But labor reform should contemplate compensations for displaced workers and genuine negotiations with the workers unions.

A fully competitive port must accept that the suppliers of port services employ personnel of their own choice. In particular, self-handling should be allowed: Port user should be allowed to provide for themselves one or more categories of port services, although, obviously within the clearly stated rules of port safety and social legislation.

Recommendation: Suppliers of port services should be entitled to employ personnel of their own choice.

The monopolistic power of workers organizations is not the only labor problem. The dockworkers' lack of modern skills has also to be addressed. New technologies require new skills. The experience indicates that these skills can be learned by dockworkers. As long as 30 years ago, in Tampico (Mexico), a vast program to teach new skills was a huge success. The CEPAL keeps organizing "Cursos de modernización portuaria" in several Latin American countries, in which the need for

²⁰ The OIT defends the Register, allowing for the exceptional hiring of workers not included in it. A few countries have ratified an agreement prepared by the OIT in favor of the Register. Brazil and Uruguay among them.

teaching new skills is emphasized. Cooperation with the EU can help provide skill training. The Spanish Puertos del Estado, for instance, has offered training courses in port engineering and management for South American trainees²¹. Training programs have been signed as well with the Shipping Transport College of Rotterdam.

To attract private investments, a port whose work force has modern skills will have a favorable edge. On the other hand, when the expertise and know-how of the private firms is used to teach the skills to the local workers, efficiency increases and the social climate improves.

Recommendation: Teach the local work force the appropriate skills in order to attract private investments and agree with the private firms to teach their expertise and know how to the local workers.

2.6. Modern equipment

We have already emphasized the need for using modern communications technologies, developing of integrated and intermodal transport chains and investing in labor-saving equipment. An effort should be made to modernize telecommunication and computer systems and to link them into integrated systems of information, while standardizing the codes and messages among transport partners. With respect to equipment purchases, there is a trade off between buying equipment and machines from a single provider, enhancing the probability of bribes, or buying from different providers which has a higher cost of parts and replacements and requires a more expensive skills training.

Recommendation: Standardize electronic codes and messages. To purchase machinery, look for a single provider if a fair and well designed auctioning mechanism for the purchase contracts is to be expected.

²¹ The Sixth Ibero-American Port Management Course was held in Madrid in October 2001 and the Second Ibero-American Port Engineering Course was held in Santander in October 2000.

2.7. Land access infrastructure

The cost of terrestrial transportation systems and its flexibility to carry cargo to different destinations may very well determine whether a port is competitive. Freight companies are interested in providing a complete multimodal door to door service controlling the whole logistic chain.

Recommendation: Freight companies should be allowed to establish wholly owned branch offices to control all operations necessary for modern door to door shipping service.

In South America, railroads may or may not connect production centers with ports, while these are always connected by road. Even if railroads are present, their infrastructure is in poor shape and its services are usually obsolete. But rail competing with road transportation may be necessary in order to break the market power of teamsters unions. Overall, a good rail connection with the country interior is a crucial factor in reducing the transportation costs.

Recommendation: The modernization of railroads connecting ports to the country interior should be part of any large investment project.

Multimodal systems also create the potential for greater economic integration among regions, increasing the current levels of trade within them. Beyond its effect on merchandise trade, regional integration would boost service flows and interregional investments. This would strengthen regional economic ties.

A network of multimodal port and airport platforms, and their connection to the present and planned land transport networks will be a key factor in strengthening the present trade agreements. Priority should be given to the rehabilitation and modernization of existing infrastructure, the removal of bottlenecks, or filling in missing links

Recommendation: Within MERCOSUR and Pacto Andino, plan the development of integrated and interoperable multimodal transport networks for the countries involved.

2.8. Regulation to avoid non-competitive practices.

- *The political and social set-up.* Some legislation to introduce competition in ports has been approved in South American countries in the last decade. But many such laws are ambiguous. In some cases it is not clear what is being decentralized -whether the property, the management, the operations...- nor who will be responsible for what is being decentralized -the regional governments, the municipalities, private firms or some private-public entity. In many cases ports, being still public entities, cannot go bankrupt and are subsidized by the government whenever in need to cover its losses. Too often the laws are kept in the Parliaments for unending debate and, to compensate for their lack of decisiveness, Parliaments tend to approve costly infrastructure equipments that represent a political, not economic, response to the pressures to modernize ports.

It is not only the delays in Parliaments or the political infighting that has a negative effect on the process of introducing competition in ports services. The very weaknesses of the countries institutions are an important factor in the poor record of competition. The example of the port of Callao comes to mind, with continuous changes in the direction of the port delaying its privatization.

Finally, there still exist restrictions and exceptions favoring carriers with the national flag. For instance, the European Communities Shipowners Association identifies in its 1997-98 Report the following “negative factors”: restricted/regulated access to ports and port services, preferential cargo allocation, restrictions on establishment of owned branch offices, discriminatory measures favoring the use of national carriers, cumbersome procedures and/or personal harassment during port calls, abusive tariffs for services (often not rendered), and unrealistic and unjustifiable liability claims by customs.²²

Recommendation: Enforce the establishment of clear rules and the setting of open and transparent procedures for access to supplying port services

- *Rules favoring competition among ports.* There is a strong pressure on the part of the management of ports to have governments set the same prices in all the ports in the country, so that competition be limited to non-price competition. Maritime conferences have mostly managed to eliminate price competition

²² See Riad al Khouri (1999).

creating enough market power to hamper proper competition. A similar situation in ports services should be avoided. Curtailing price competition means protecting the dominant firms and limiting the cost reduction incentives and innovation that price competition fosters. We all know that privatizing by itself does not bring competition; it merely transfers to the private sector the market power that was previously in the hands of the public organization. Any attempts to limit price competition should be contained.

But to foster competition among ports three other factors have to be contemplated:

- The infrastructure of land transportation. As mentioned above, poor land transportation systems to move cargoes to the interior of the country do not make for competitive ports. Ports will compete among each other provided that their capabilities for land transportation are similar. The improvements in railroads in Brazil and Argentina have given a boost to the countries ports. In addition, when land communications are good, a small change in a port tariffs may have a large effect on the port market share. Ports with a monopoly in their hinterland due to poor land communications do not have to fight for market share.

Recommendation: Investing in good land communications fosters competition.

- The existence of bilateral agreements between countries restricts the access of third-country ships. A complete disappearance of the restrictions to free trade should be implemented beginning within MERCOSUR and Pacto Andino countries, to be extended to all countries.
- In many Latin American countries restrictions exist to the operation of non-national ships in cabotage. Again, a starting point would be to allow ships of country members in trading agreements, MERCOSUR and Pacto Andino, to operate within any of these countries. Cabotage has been liberalized in Argentina with a significant effect on prices.
- The possibility of building new ports and new terminals by private firms, and allowing these new ports, which normally will be built for bulk cargoes, to move general cargo and containers as well.

Recommendation: Starting within MERCOSUR and Pacto Andino first and, eventually, reaching other countries, eliminate bilateral agreements and, in general, all restrictions to third countries ships transporting cargoes between countries or between domestic ports of other countries.

- *Rules favoring competition within ports.* Volume seems to be an important condition for competition within ports. Small ports are difficult to operate efficiently by several competing firms²³. Nevertheless, examples exist of small ports with several firms offering services in competition, since other factors, like the structure of the port or the size and kind of ships using the port, are not irrelevant. An interesting example is Georgetown in Guyana. According to the Faiply Portsguide in moves less than 50,000 TM per year. Yet it is being operated by four different firms and prices fell since the introduction of competition by more than 30%.

But the pressure to rein in competition is strong when some operators are losing money. This is what happened in the Buenos Aires province. The Administración General de Puertos approved “resolución 45” which in fact establishes a single price for containers in all terminals, in order to stop the fierce price competition that was bringing important losses to some operators, and resulted in the bankruptcy of the operator in terminal 6.

There is some debate over whether to favor a single operator that could reap economies of scope or several operators to avoid monopolization. If there could be the possibility of efficient monitoring service quality one could bet on a single operator. While monitoring is a shaky premise in most South American countries, to favor several operators seems to be on the safest side. In particular, when several operators competing in the same port charges do not have to be regulated as when only a single operator exists. Nevertheless, the concession contracts have to be carefully drafted and, most important, their implementation may also require some degree of monitorization in order to avoid collusion and to make sure that other obligations like safety, equipment maintenance or quality of service are fulfilled.

²³ Kent and Hocstein (1988) estimated a volume of 200,000 movements per year in containers for a fully efficient operation.

Recommendation: Allow for the highest possible number of service providers. In cargo handling, the existence of at least two providers should be the rule. The decision to limit the number of providers should not be taken by the port authority if it also provides commercial services in the port.

In particular, the bidding processes leading to the concessioning of terminals or services must be prepared with extreme care. Not only the canon or the commitment of investment have to be important in the process of deciding the winning bid, but also the overall quality of the bid. The example of Chile, where the auction mechanism was carefully drafted, should be analyzed, as well as the important theoretical and empirical literature on bidding mechanisms.²⁴ The length of the periods of concessions and licenses should reconcile the need to keep open the future entrance of service providers with the legitimate right of current providers to recoup their investments. When no significant investments are made, a duration of 5 years may be sufficient. When investments are made in movable assets, the duration may be extended to 10 years, and for investment in immovable assets, periods of 25-30 years should be considered.

Recommendation: Duration of concessions and licenses should be linked to the size and type of investment.

Some countries require that a provider of port services obtain prior authorization. This may be justified on the grounds of ensuring that providers offer services with sufficient professional quality. But the conditions for granting authorization must be transparent, non-discriminatory and objective. They must relate to the provider's professional and commercial qualifications, to the protection of the environment and to safety rules. Since diverse legislations and practices have led to disparities and uncertainties regarding the rights of providers of port services, an effort should be made towards the harmonization of the key aspects of the selection procedure.

²⁴ See Foxley and Mardones (2000).

Recommendation: If providers of services have to be authorized, the procedure must be transparent, non-discriminatory and objective. It would be beneficial to countries in South America if the key aspects of the authorization procedure would be harmonized.

2.9. Sharing the pain of reform

To reform ports in order to increase their productivity and allow for competition results in a burden that falls on agents that had in the past some degree of market power. But reforms can fail if only some agents accept to relinquish their privileges. In El Callao (Peru) workers made many concessions that resulted in lower pay. But maritime agencies never modified their prices. The result was that workers felt used and had no incentives to improve their skills or change their former habits. Also common is the reform of the contracting of dockworkers, resulting in a drastic reduction in longshoreman's employment, while the bloated port administration is maintained.

Parties involved in the modernization of a port should always keep in mind that labor and social tension will result in a costly operation. When the goal is to make ports more competitive, an investment in fairness, even if expensive in the short-run, will be easily recouped.

3. Conclusions

The most urgent reforms in South American ports are:

1. The appointment of skilled and experienced managers as executive officers in the port administrations. The participation of ports users in the port administration.
2. The replacement of the present unwieldy logistic chain by a simpler model based on the electronic exchange of data. The experience of other ports in the world can be used as a benchmark for this purpose.
3. The implementation of commercial accounting practices in the port administration and the regular auditing of its activities. If necessary, the management of the port administration should be contracted to a private firm.

Other changes should also be implemented, proceeding first within present trade agreements, MERCOSUR and Pacto Andino, but extending them in the future beyond the Agreements:

4. Avoid situations in which port administrations both manage the port and its development and provide commercial port services.
5. Whenever the size of the port permits it, lease the port services to more than one private operator, through licenses or concessions. These licenses and concessions should not discriminate against foreign operators.
6. Promote the legal and institutional changes required for the possibility of free ports.
7. Facilitate trade through the harmonization of port laws and regulations.
8. Eliminate the existing barriers to the operation of other countries ships in long haul and cabotage, and deregulate containers traffic.
9. Promote competition by ports with other transport sectors, such as railroad and road transport, and provide incentives for service providers to compete across transport networks by combining transport modes.

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Appendix

Description of the countries' situation

Reform of the port sector began in most of Latin America, during the first years of the 1990s, and implied the concession of services, operations and firms that were originally under State ownership or control to private or mixed firms either forever (privatization) or temporary (concessions).

This process typically went through three stages: deregulation, decentralization and privatization or concession. But not all countries in our paper have achieved this process or followed the same steps. In Venezuela, for instance, private participation in the port services occurs as management leasings, while concessions and privatizations are common in Argentina, Ecuador, Peru and Uruguay. But few countries have taken sufficient steps to motivate private investments (Mexico, not included in this paper, has taken clear steps in this direction). Complete legal security is not always granted to private investors and often the administrative procedures to allow private investments, and most especially foreign private investments, are neither transparent nor simple.

Port Authorities have different institution arrangements in the different countries. A single Port Authority in Ecuador and Uruguay takes responsibility for all ports. In Venezuela, the Dirección General de Puertos is in charge of all ports and depends directly of the corresponding Ministry. Argentina has a variant of this arrangement with a Dirección General de Puertos with jurisdiction over the private ports and an Administración General de Puertos with jurisdiction on concessioned terminals.

Port services responsibilities are differently allocated in each country. Dredging corresponds to the National authority in Ecuador and Venezuela but to the Port Administration in Peru. Pilotage and towing tends to be in the hands of the Port Administration, but in Venezuela corresponds to the National authority. Security tends to correspond to the National authority but the Port authority shares sometimes responsibilities.

The situation of the labor force varies again according to the country. In all countries there exist labor unions that organize port labor. Some countries, like

Ecuador and Venezuela, have gone through programs of labor reconversion, while others, like Peru, have not considered implementing any such program.

Several countries have automatized their systems of invoicing, accounting and wage payments, in particular Ecuador, Perú, Uruguay and Venezuela. Some are beginning to introduce the EDI system of data processing. On the other hand, in few countries the private sector handles the marketing of the port activities.

In summary, Argentina appears as the only country in which all international traffic is open to private operators, both national and foreign. In Ecuador the four largest ports have leased to private operators all cargo handling. Perú has chosen to offer concession in the ports managed by the ENAPU. Venezuela is working towards an integrated system of National ports and investing in infrastructure.

Next is a broad overview of the situation inside each of the two major South American trade agreements.

1. MERCOSUR

An important element that is worth noting is the existence of a satisfactory network of land connections among the different economic centers of the area, from Rio to Buenos Aires, that allow for a degree of competition among ports. This competition has been increased in the last decade with the construction of new ports and terminals, like Exolgán y Zarate, which, although specializing in bulk can also, at least potentially, deal with general cargo. In addition, the main ports have sufficient volume to allow for intraport competition.

But differences exist among the different countries. Comparing the two main economies, Argentina and Brazil, it is clear that Argentina has progressed a good deal more in privatizing and introducing competition in its ports. One result of this process has been the port of Buenos Aires (with Exolgán) advancing beyond Santos as the first port on the Southern Atlantic in 1998, 1999, and 2000, although the data from 2001 indicate that Santos has gone again

on top, possibly due to recent changes in its organization and the economic problems in Argentina²⁵.

In Argentina the administrative decentralization of the public ports (Rosario, Santa Fe, Bahia Blanca and Quequén) began with their transfer to the provinces, while the port of Buenos Aires was divided in two sections, one, Dock Sud that was transferred to the province (where the containers terminal is operated by the private company Exolgán) and Puerto Nuevo. The result is that most of the Argentina ports belong to the State (the site is the property of the province except Puerto Nuevo in Buenos Aires that belong to the central government), while operations are private. Concessions are made for periods of 18 to 30 years. Private operators in public ports have a large foreign component, while specialized terminals belong entirely to private firms, many of them foreign. Finally it is worth mentioning that in Argentina anybody (including foreign companies) is allowed to buy a piece of coast and build a new private port.

Brazil began modernizing its port in 1993, although the public agency Portobras began to be dismantled in 1990. But reforms faced the strong resistance of workers unions. Even today many ports have an excess of workers. The first public port to be given in concessions was Rio Grande. In Santos two Brazilian private companies operate two terminals with important productivity gains and reduction of the ships waiting time. In Rio too, productivity has been multiplied by five since 1997. Yet prices have not fallen as in Argentina. The main reason being the difficulties in reducing manpower, since the Register of dockworkers has not been abolished.

Uruguay has finally awarded the concession of its single container terminal to Terminal Cuenca de Plata, a semipublic company.

2. GRUPO ANDINO

The countries of this group are following a process of privatization and fostering competitiveness similar to the one occurring on the Atlantic side. But their ports

²⁵ See Marimime Profile, ECLAC, URL: <http://www.eclac.cl/transporte/perfil/>

are smaller and the Andes represent a barrier that limits the competition among ports. Consequently there is a natural concern that public monopolies would be replaced by private monopolies, as may have been the case with the Sociedades Portuarias in Colombia. In this country, the public company in charge of port administration (Colpuertos) is being dismantled in order to introduce competition among the main ports of the country. Private ports were authorized to handle any type of cargo after a law to this effect was passed in 1991. In Venezuela, the port reform was also started in 1991 with the dismantling of the public company in charge of port administration, the Instituto Nacional de Puertos. Presently there exist eight different public port authorities in charge of coordinating port activities and to privatize the container terminals through concessions.