

Latin American Ports: Results and Determinants of Private Sector Participation

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The Latin American major ports are no longer inefficient state-run public monopolies. Common user ports tend to be concessioned under a landlord scheme, whereas specialised ports and terminals are more often privately owned or leased. New infrastructure is still being constructed, and regional and international private port companies participate in the port operations. The most renowned successes are Panama, Argentina, Mexico, and Colombia, but not all countries have advanced equally. The demand for private sector participation depends on the desire of the public sector to promote foreign trade and the need to reduce its fiscal burden. The supply of private sector participation by port operating companies appears to depend on the port's hinterland and the perceived country risk. Perceived corruption, illiteracy, and a pending broader structural reform seem to have a negative impact on both demand and on supply. The same socio-economic situation that, up to now, has acted as an obstacle to port reform in the poorest Latin American countries should be considered as motivation to proceed with the necessary reforms in the future. Privatised port operations may help the urgently needed general structural reform of the economy, including better education and more stable public institutions – which in turn will reduce the remaining obstacles for port privatisation. The challenge for policy makers is to initiate this virtuous cycle. International Journal of Maritime Economics (2001) 3, 221-241.

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INTRODUCTION

In the past, Latin American public (ie common user) ports mainly served as examples of how ports should not be run. They were over manned and inefficient,



and their principal function seemed to be that of a non-tariff trade barrier to protect the domestic industries from international competition. Just like in other developing regions, port authorities in Latin America had far reaching powers, and a public monopoly provided the main services. Such ports, where the government owns the land, infra- and superstructure and also provides the stevedoring and all other services, are usually called 'service ports'.¹

Today, in the case of many Latin American common user ports, this description of the role of the public sector is no longer valid. During the 1990s, the public sector has withdrawn from actual port operations in more and more ports. Many common user ports are now of the 'landlord' type, and some are even completely privately owned, although the public sector maintains the regulatory functions. The results concerning cost and time savings are very positive and have been described in many case studies.²

In the following two chapters, this paper attempts to identify and explain common characteristics of private and public sector involvement in Latin American ports after the processes of privatisation in the 1990s.

Thereafter, advances in private sector participation in common user ports are briefly described for all 16 Spanish or Portuguese speaking continental countries of the Western Hemisphere, except Bolivia. The differences are then compared to socio-economic indicators which relate the motivation and difficulties to attract private investors to variables such as the country's openness to foreign trade and the need to reduce foreign debt. In a linear regression, 87% of the variance of perceived advances in the privatisation or port operations can be statistically 'explained' by just four socio-economic variables.

THE ATTEMPT TO IDENTIFY A COMMON TREND: TOWARDS A 'LATIN AMERICAN MODEL'

A Latin American model

The approach taken towards the involvement of the private and the public sector in port ownership and operation varies from country to country and from region to region. Examples are the 'hanseatic ports' in Northern Europe, the largely privatised British ports, or joint ventures between the state and public operators, which are common for instance in China and Indonesia.

The approach taken by most Latin American countries shows several commonalities, which can be summarised as a 'Latin American Model' with five basic characteristics. Although by far not all countries have adopted these five points in full, many of the countries which are still in the process of increasing the private sector participation in their ports are at least moving in this direction. 'Model' in this context is not to be interpreted as an ideal or theoretical coherent



system, but simply a name given to a set of common characteristics.³ None of these characteristics on its own is unique to Latin America, but in their combination they seem to be different from other regions.

First point: landlord type common user ports

Most common user ports in Latin America are (or are to be) of the landlord type. The government concedes individual terminals for periods of between 12 and 30 years. The private operator invests in infrastructure and owns and operates the superstructure.

In Latin America, this landlord scheme tends to be called a ‘mono-operating’ system because the same operator who has the concession is also usually the only company which provides the stevedoring services on a given terminal. The main alternative system, which in several cases has been – or still is – an intermediate previous step, is the ‘tool port’, usually applied as ‘multi-operator’ (open access stevedoring) system, which implies that the public sector provides the infra- and superstructure, and different private stevedoring companies use these under hourly or daily rental schemes. Some ports, such as San Antonio in Chile and several Brazilian ports, combine mono- and multi-operator schemes within the same port by concessioning one or two terminals, but retaining other areas as ‘tool’ terminals to be used by various operators. ‘Mono-operator’ is thus not to be confused with a ‘monopolist’. In Buenos Aires, for example, there are five mono-operators competing within the same port.

Second point: private specialised ports and terminals

A rough estimation of volumes handled by Latin American ports suggests that two thirds of the region’s imports and exports, by tonnage, are handled by privately run and owned or leased specialised ports and industrial terminals. By comparison, in Europe, which mainly imports rather than exports bulk cargo, specialised terminals such as grain facilities in Hamburg or oil terminals in Rotterdam often belong to the main landlord ports.

Third point: establishment of new private ports and terminals

Entirely new privately owned and operated ports and terminals have been and are still being established. These include general cargo and container facilities, such as Zarate’s ongoing investments into a new container terminal in Argentina, and MIT in Panama, as well as specialised terminals, such as Mejillones in Chile (copper), Euro-America in Argentina (fruit), or grain terminals in several countries.

Fourth point: high foreign participation

Compared with Europe and the US, foreign companies have a strong presence in Latin American ports. This is true of common user ports, with the participation of



international port operators such as Hutchison, ICTSI, P&O, and SSA, as well as for specialised terminals where companies like Chiquita, Cargill or Mobil are active. Compared to Africa and Asia, however, there also exists a strong regional competition from companies such as SAAM (Chile), Exolgan (Argentina), or Multiterminais (Brazil), which have gained strength especially during the more recent privatisations in Brazil and Chile.

Fifth point: many, but small and divided common user ports

Latin America does not yet count on hub ports such as Los Angeles/Long Beach in the US, or Rotterdam in Europe. The only exception regarding transshipment is the 'port' of Cristobal Colón in Panama, which comprises several competing terminals. In South America, however, less than 300,000 TEU were transhipped in 1998, most of which in Cartagena and Puerto Cabello in the Caribbean. Hubbing by truck, rail or waterway transport is still the exception in South and Central America. The relatively small size of port projects is reflected in the World Bank port project data base: the average investment per project for the 48 Latin American cases with private participation amounts to US\$52 million, whereas the 64 projects in all other regions of the world reach an average investment volume of more than twice that amount, ie US\$106 million per project (Sommer, 1999). This is partly due to the smaller size of ports, but also to the fact that in Latin America most projects involve the modernisation of existing installations, whereas in Asia there are more greenfield investments.

WHY THIS MODEL FOR LATIN AMERICA?

The fear of private monopolies

In Latin America, fear of private monopolies is stronger than in most other regions. Historically, many countries had negative experiences with the economic power of a few dominant families or foreign multinational companies. A complete privatisation as in the case of British ports is, therefore, not envisaged. Common user ports will continue to remain of the landlord type, except where entirely new ports are being created. Also, common user ports tend to be divided into competing terminals so as to increase intra-port competition.

As an example, in Buenos Aires, the privatisation law has so far not allowed an existing concessionaire to take over an unused terminal because that might give it a dominant position. In Callao, which has a de-facto monopoly for Lima's general cargo, it is planned to divide the port into two or three competing terminals before its concession.

Inter-port competition is also encouraged. In Chile, the container terminal in Valparaiso was concessioned to the second highest bidder only, so as to avoid



dominance of the CSAV group, which had won neighbouring San Antonio. In Central America, it is mainly for political and 'strategic' reasons that comparatively small countries try to maintain at least one port each on the Atlantic and Pacific coast, although this may economically not make sense. By comparison, in Europe, rail-, motor- and waterway connections ensure such an intense competition between the five major ports along the North Atlantic that there are fewer fears of monopoly abuses.⁴

Geography and trade patterns

Long coast lines, a low population density, limited road and rail links, and still relatively (compared to Europe or the US) little foreign trade, has led to a comparatively large number of small ports. Many Latin American countries export large volumes of raw materials in form of bulk cargo, and especially private ports and terminals tend to be located near the production centres of soy beans, grain, iron ore, or copper mines.

By comparison, in Europe, scarcer land resources and the existence of huge well-established ports makes it less likely that new ports are being created, except for pure transshipment hubs in the Mediterranean such as Gioia Tauro or Marsaxlokk. Their development is similar to the one of new transshipment centres in the Caribbean as for example in Panama and the Bahamas.

Historical coincidences

Private, especially foreign, investment is seen as a solution to two problems at the same time: past under-investment has to be made up for, and at the same time the long lasting repercussions of the debt crisis of the 1980s prevent the governments from undertaking these necessary investments themselves. Simultaneously, the desire to attract private investments coincides with the emergence of international major port operators such as ICTSI, Hutchison, P&O Ports, and SSA, which are participating in most of the region's port privatisation activities. Equally, companies from Argentina, Brazil and Chile have started to expand their activities into neighbouring countries' ports. By comparison, in Europe and the US, traditionally strong local companies have made the entrance of new contenders less necessary and more difficult.

Recent structural changes in liner shipping – larger vessels, mergers and alliances, and increased transshipment – also play a role as they increase the need for Latin American ports to adapt to these changes.⁵

The specialised, mainly bulk, ports and terminals in Latin America count on a high private and foreign participation, too. Here, it was mainly the interests of exporters of cereals, coal, ores, oil, and bananas who already in previous decades started to insist on their own terminals because their products were simply not competitive if they had to pass through the inefficient common user ports.



Initially, several of the exporting companies that built their own terminals used to be state owned companies themselves, and some, such as PdVSA in Venezuela still are.⁶

COUNTRY BY COUNTRY – AN OVERVIEW OF THE PROCESS SO FAR

Above, an attempt was made to summarise common trends in Latin American ports. Yet, there are of course also many differences between the various countries. This chapter will now try to describe the recent developments and differences among the 16 countries; Table 1 facilitates a comparative overview. As any grouping of countries or application of models has of course its limits and implies the danger of simplification, additional references are included for readers who are interested in more details about specific countries.

Table 1: Common user port situation overview beginning of 2000

A: Country	B: Main common user general cargo and container port, thousand TEU in 1999	C: Group	D: Port model	E: Perceived success
Panama	Cristobal Colón (three terminals), 1176	1	Landlord	8.4
Argentina	Buenos Aires (includes Exolgán), 1076	1	Landlord	7.5
Mexico	Veracruz (Atlantic), 484 Manzanillo (Pacific), 322	1	Landlord	7.4
Colombia	Cartagena (Atlantic), 281 Buenaventure (Pacific), 250	1	Landlord	6.8
Chile	San Antonio, 374	1	Landlord and tool	6.3
Brazil	Santos, 774	2	Landlord and tool	5.3
Peru	Callao, 385	2	Tool	4.1
Venezuela	Puerto Cabello, 496	2	Tool and service	3.7
Costa Rica	Puerto Limón-Moin (Atlantic), 590 Caldera (Pacific), 18 (1997)	3	Tool and service	3.2
Ecuador	Guayaquil, 378	3	Tool and service	2.7
Uruguay	Montevideo, 250	3	Tool and service	2.7
Guatemala	Santo Tomás (Atlantic), 211 Quetzal (Pacific), 102	3	Tool and service	2.6
Nicaragua	Corinto, 8	4	Service	2.6
Paraguay	Asuncion	4	Service	2.3
Honduras	Puerto Cortés, 273	4	Service	2.1
El Salvador	Acajutla, 14 (1998)	4	Service	1.9

Note: see 'Comparative overview' for explanation of terms used



First group: privatisation of port operations in common user ports completed

Panama

The first concession was awarded to Manzanillo International Terminals (MIT) in 1994. This terminal, starting its operations from zero in April 1995, moved 860,000 TEU in 1999, becoming thus the largest container terminal of Latin America. Other terminals were concessioned to Hutchison and to Evergreen. Together, these terminals can be considered to be a single port in Cristobal Colón on the Caribbean side of the Panama Canal; in 1999 they moved more than 1.1 million TEUs, which made them the largest Latin American container port. Efficiency improvements and the generation of income for Panama thanks to the export of port transshipment services have contributed to the fact that Panama is often used as the most successful example of Latin American port privatisations.

Nevertheless, even in Panama the privatisation process has not been without criticism. Due to the adopted legal framework, the government was left with very little leverage to ensure the installation of waste reception facilities and general environmental protection. Operators do not inform completely about their activities, which makes the charging of volume-based payments to the Maritime Authority difficult. Finally, other companies which provide services to the ships, their crew and their cargo have been complaining about high charges from the port operators to give them access to their clients.

Argentina

The concessions of six terminals to five competing operators within the port of Buenos Aires in 1993 was among the first attempts to increase private sector involvement in common user ports in the region. Above all, investment decisions were decentralised and labour regimes reformed. The concessions have generally been considered a success because they achieved the desired goals of increased throughput, lower costs for port users, and an almost fourfold increase of labour productivity. There is, thus, no doubt about the benefits the reforms have brought to exporters, importers, and finally also the Argentinean consumers.

Criticism has been expressed about a perceived unfairness and 'over competition'. Specifically, soon after the concessions of the port of Buenos Aires in the country's Federal Capital, next door, in the province of Buenos Aires, the regional government, which belonged to a different political party, concessioned the terminal 'Dock Sud' to the company Exolgan. This concessionaire had to make more investments than its competition in the Federal Capital because the terminal was almost a green field site, whereas the previous concessions could count on some basic infra- and superstructure. On the other hand, Exolgan has to pay far less for the concession itself, which is an advantage in the longer term. Above all, Exolgan obtained the concession chronologically after the previous ones in the



Federal Capital, thus being able to make its bids and investment decisions in view of a far more complete set of information.

Soon after the concessions in the Federal Capital, one of the concessionaires went bankrupt, leaving an unused empty space in the port. The prevailing concessionaires in the neighbouring terminals were not allowed to take over that part of the port, and neither were they allowed to merge. At present, a major discussion in Buenos Aires is about whether to allow such mergers. The competition from Exolgan and from other ports would speak in favour of such modification of the rules. However, at the beginning of 2000, all terminals, including Exolgan, have jointly increased their terminal handling charges (these are since recently charged directly to the importer and no longer to the shipping company), and there are complaints that this indicates an undesired collusion, which should not be made even easier by allowing mergers.

In ports other than Buenos Aires, inter-port competition is fierce and private sector participation well established. It is generally considered beneficial for all parties concerned. An exception is Rosario, where ICTSI withdrew from the concession after paying a high price to win the bid and receiving worse than expected results, blaming the latter mainly on labour unrest.

Mexico

The privatisation of port operations was initiated with the Port Law of 1993. The major container terminals are now concessioned under the landlord scheme. In some cases, port tariffs actually increased after privatisation. However, it has to be kept in mind that previously tariffs had partly been subsidised or simply had not been adapted to prior inflation. Also, it has to be taken into account that ship waiting times could be significantly reduced so that the total costs for ship and cargo also declined. In the port of Manzanillo, for example, the average port time for container ships could be reduced from 2.8 days in 1987 to 1.4 days in 1991 and to 0.6 days in 1994.

In recent years, private sector participation, including foreign companies, has significantly increased in specialised bulk terminals. Still pending is more private sector participation in specialised oil terminals, which have so far been dominated by the state owned company PEMEX. Also, it is still legally difficult for foreign companies to own private terminals; as a result, dedicated bulk terminals tend to be on a concession under a landlord regime.

Colombia

The approach taken in Colombia varies slightly from the 'Latin American Model' described above. The concessionaire in each port is not a plain traditional port operator, but a 'Port Society', which includes shares from the public sector. In the case of Buenaventura, for example, the Society has 209 shareholders, 70% of the capital is private, and the remainder lies with the Nation, the Department, and the



Municipality. In the case of Cartagena, the public sector only holds 5% of the capital.

Since the reforms initiated in 1993, in the ports of Barranquilla, Buenaventura, Cartagena, and Santa Marta, the average ship time in port has been reduced by 85%, and cargo movement per ship per day has multiplied by five. In the specific case of Cartagena, productivity during unloading has increased from about 7 containers per hour per ship to 60, with two ship-to-shore gantries. Cargo handling tariffs have fallen from US\$600 per container to around US\$150 at present.

The Port Societies are in charge of the infrastructure and they own the superstructure. This superstructure, such as cranes, is then used by the Port Society itself and by (other) stevedoring companies, which complain about unfair competition. The market share of the port societies in stevedoring operations is increasing, and the number of smaller agencies has decreased. In Cartagena, the situation is further complicated by the existence of two private container terminals within the port who compete with the Port Society and the other stevedoring companies. In Buenaventura, the situation is further complicated by the formation of a joint container terminal operating company with capital from the Port Society and other stevedoring companies.

As the Port Societies act more and more as an operator and less as port authority, there appears to evolve an increasing role for the national port superintendence to assume regulatory and long term port planning functions, and it is attempting to further regulate the port tariffs charged by the Port Societies. Although this may be well intentioned, it has also caused fears that such intervention might jeopardise the achievements made so far.

Second group: in the process of completing private sector participation

Chile

Already in 1981, in all common user ports stevedoring was privatised and labour regimes reformed. At that point in time, Chile was the country that had advanced most in its port modernisation reforms. What was left pending was private sector investment in infrastructure, decentralisation, and the overall concessioning of terminals. This task is now being resolved as well. At the beginning of 2000, the container terminals of four major common user ports were concessioned to private operators, three of which (San Antonio, Talcahuano, Valparaiso) were joint ventures between local and international companies, and one (Iquique) was won by SAAM, which belongs to the Chilean CSAV group. Although it was initially planned that the government would assign the concession to the operator who offered the lowest port tariffs, in the end all bidders offered the same tariffs, and the winner was determined according to the highest payment to the government. The exception was Valparaiso, where the second highest bidder (linked to Ultramar) was chosen so as to avoid that the same group that already



won San Antonio (linked to CSAV) would be able to dominate national containerised traffic.

Still pending is the concessioning of the secondary ports. The attempt to concession Arica failed for lack of interest under the proposed bidding conditions. Mejillones, initially marketed as a future hub port for the South American Pacific coast, has been concessioned under a BOT scheme to a consortia linked to Ultramar, which has started investment into the first terminals to be dedicated to copper.

Brazil

Port modernisation of common user ports was initiated with the port law of 1993. A first step was to introduce inter-port competition and decentralise decisions on port concessions and tariffs, although the presidents of the port authorities and the labour pools are still appointees of the central government. The labour pools – ‘labour management organs’ (OGMOS) – are in charge of administering casual workers. In the major common user ports, one or two container terminals have been concessioned, mainly to national companies which won the international auctions by bidding higher than their foreign competitors. Since private operation started at the beginning of 1998, the results have been positive in that the introduction of intra-port competition has led to additional investments and lower port costs for its users.

The process of privatisation has to be considered as still uncompleted because not all common user ports have concessioned their main terminals, and also in Santos one (the third) concession is still pending. In addition, the labour reforms are not completed either, which is considered one of the reasons why port tariffs have not been reduced as much as expected.

Peru

The concessioning of common user ports forms part of the general national policy to reduce government involvement in public utilities. This process was initiated with a law to promote foreign investments in 1991. However, the ports are one of the last sectors to which this law is being applied. In 1999, the secondary port of Matarani was concessioned. Although there was only one national bidder for that concession, the results are being considered a success. For another secondary port, Ilo, no bidders were found.

The main port of the country, Callao, is still operated by the National Port Company. Concessioning Callao has been difficult, partly because it dominates the country’s foreign trade and the authorities are fearful of handing over a monopoly to the private sector. It is therefore being considered to divide the port into competing units. Another difficulty has been the institutional instabilities and unclear responsibilities among port authority and the main regulatory body in



charge of transport infrastructure. In addition, it appears that the upcoming national election has also been in the way of further progress.

Venezuela

Port modernisation has been decentralised, and advances have accordingly been asymmetric. Puerto Cabello, for example, has advanced faster than La Guaira, the latter still being operated by the state owned company PLCSA. Specialised oil facilities are under the control of PdVSA, also a government owned company. They have a reputation of being modern and efficient. Other specialised terminals, such as for cement, chemical products, or cereals, are private. So far, participation of foreign companies in Venezuela is comparatively low, although international operators have expressed an interest in participating in Puerto Cabello. The main obstacle has so far been unclear laws, regulations, and property rights. There exists a large scale project for new ports 'Puerto América', which is still in the stage of being studied by the government.

Third group: private stevedoring, but public sector investments, tariffs, and bureaucracies

This group of countries has passed through some initial stages of port reforms, which can be summarised as having 'tool' rather than 'service' common user ports (see note¹). It includes Costa Rica, Ecuador, Guatemala (Puerto Quetzal), and Uruguay (break bulk and some containerised cargo in Montevideo), which have modernised labour regimes and increased private sector participation in stevedoring and warehousing. Some also initiated concessioning processes or BOT (build-operate-transfer) projects. Further, where there is investment, it is still mainly undertaken by the government, and therefore little foreign know how or capital can be attracted.

Fourth group: traditional government-run service ports

The countries where practically the complete process of modernisation, labour reform, and private sector participation, at least in the common user ports, is pending, are Costa Rica (Caldera), El Salvador, Guatemala (Santo Tomás), Honduras, Nicaragua, Paraguay and Uruguay (container terminal in Montevideo).

Comparative overview

Table 1 facilitates an overview and comparison of the main characteristics of private and public participation in common-user ports in the 16 Latin American countries which are the subject of this paper.

Column C mentions the group according to which the country has been classified above: group 1 has basically completed the private sector participation in common user ports; group 2 is in the process of doing so; group 3 has private



stevedoring services, but public ownership of the superstructure; group 4 has virtually no private sector participation in the port operations of its common user ports.

Column D mentions the main model under which the major common user ports are being operated (see also note¹). This coincides with the grouping of column C: the first two groups are at different stages of applying the landlord port, group 3 has tool ports, and group 4 service ports.

Column E provides the average result of a poll undertaken in April 2000 among the recipients of an informal email bulletin.⁷ This has been sent to individuals who have a professional interest in ports and shipping in Latin America, and 53 respondents assigned values between 1 ('non-existent') and 10 ('100% complete') for the 'success of port privatisation' so far. Although the basis for each respondent's opinion may be subjective, the average value is the result of far more information than any quantitative indicator which might be derived from columns C or D (which are themselves only based on the subjective opinion of this paper's author). Objective quantitative indicators for advances in port privatisation are not available.⁸

WHY HAVE SOME COUNTRIES ADVANCED MORE THAN OTHERS?

The purpose of this chapter is a cross-country comparison of 16 cases which are at very different stages of private sector participation in port operations.

As shown, not all Latin American countries have advanced equally fast. Between the internationally renowned success of Panama, and the almost complete lack of advances in neighbouring countries in Central America, a wide range of intermediate reforms can be made out. Although no objective quantitative measurements for these advances are available, nobody would deny the fact that there are differences. The best available quantitative indicator for these differences appears to be the result of the poll described above (see explanations above Table 1). According to this poll, Panama, Argentina, Mexico, and Colombia are the countries that have made most progress in their port reforms; Central America, Paraguay, Ecuador and Uruguay have advanced the least; and Chile, Brazil, Peru and Venezuela are at some stages in between.

The present chapter will attempt to explain these differences. First, some possible determinants, ie exogenous variables, for motivations and advances of private sector participation in common user ports are presented. Thereafter, indicators for these determinants are correlated to the indicator for advances, ie the endogenous variable. It is thus assumed that a higher motivation to initiate or increase private sector participation will increase the likelihood of its success, whereas obstacles will have the opposite effect.



Motivations to seek private sector participation

Promotion of foreign trade

Improved port services make national exports more competitive and help to reduce the costs of factor inputs. A high dependency on foreign trade should thus be a motivation to increase private sector participation. A quantitative indicator for this is the total foreign trade as a percentage of GDP.

Reduction of fiscal burden

High interest payments as a result of public foreign debt put a high burden on the national fiscal policies of many Latin American countries. A quantitative indicator for this is the total foreign debt as a percentage of GDP.

Obstacles to private sector participation

Level of general structural reforms

Traditionally, in several cases, ports have assumed social functions which, in more developed countries' are taken care of by other institutions. These included health services, schooling and even housing for port employees and their families. A private company that buys or rents port facilities does not usually assume such functions. Privatisation of port operations thus tends to form part of a general structural reform of the economy and the level of development. Indicators for this are a low GDP per capita and the rate of illiteracy. These variables are indicators for difficulties the government has to confront when trying to privatise port operations.

Historically, the first step in the general transformation of any economy is the reduction of employment in agriculture. The percentage of such employment is thus an indicator for a generally pending structural reform. It does not represent any direct causal relation with port reform, but should nevertheless be correlated.

Pending port labour reform

The need to reform port labour regimes is both a motivation to initiate private sector participation and an obstacle. Unfortunately, no quantitative indicators for market oriented labour regimes are available on a regional level, although anecdotal evidence is strong that successful labour reform is a precondition for the private sector to be willing to assume the responsibility for a port or terminal.

Independent of prevailing labour regimes, 'labour' and trade unions are sometimes in general blamed for difficulties during the process of port privatisation, especially in Brazil. With available unofficial data on ITF (International Transport Workers Federation) affiliated trade union membership of port workers, a coefficient of union affiliation and foreign trade can be computed. If more foreign trade depends on organised labour this could be



interpreted as an obstacle to private sector participation. On the other hand, it could also be true that union membership is positively correlated with a higher general level of a country's social and economic development.

Political stability and indicators of perceived corruption

There are many examples where frequent changes of administrations and unclear legal regimes have led to delays in the privatisation of port operations. Such institutional or political instability is difficult to measure. However, there are indicators available for the perceived incidence of corruption. This is likely to be closely linked to political and institutional instability, and should thus also be negatively correlated to advances in port privatisation.

The attractiveness of the market

Total gross domestic product

The governments need to attract private investors. From the point of view of the latter, a high total GDP could be an indicator of the market potential because most ports in Latin America cater mainly for the national trade. A high GDP could also be beneficial for other reasons: there are scale economies in the privatisation of different industries, the financing of quality civil servants and consultants may be easier, and a large economy is more likely to have bigger ports or more than just one port, thus generating inter- and intra-port competition, which again makes privatisation easier.

Country risk

If private, including foreign, capital can only be attracted at a high cost due to a high country risk premium, privatisation becomes less attractive for the government. On the other hand, the government itself may have to incur high capital costs for public debt and prefer to rely on project finance or even equity backed financing from foreign private investors. A possible indicator for perceived country risk is Standard & Poor's sovereign foreign currency dominated public debt rating.

A brief correlation and interpretation of the data

Table 2 provides data which correlates the different socio-economic variables described above with the previously derived indicator for advances in private sector participation in ports (Column D in Table 1).

It should come as no surprise that advances in port privatisation appear to be closely related to the socio-economic situation of each country. Yet, some specific results of the regressions presented in Table 2 may still be astonishing. For example, in Regression 3, just four exogenous variables



Table 2: Correlations between socio-economic variables and advances in private sector participation in ports

Socio-economic indicator	Partial correlation co-efficient	Regression 1; t-value	Regression 2; t-value	Regression 3; t-value
R ² , adjusted R ²		0.88, 0.74	0.91, 0.77	0.87, 0.82
GDP per capita	+0.60	+0.90	+0.93	
Log of total GDP	+0.61	+4.23**	+3.84**	+6.53**
Foreign debt, % of GDP	-0.23	+1.35	+1.84	+1.95*
Foreign trade, % of GDP	+0.20	+4.68**	+4.49**	+4.99**
Agriculture, % of employment	-0.59	+0.47	+0.42	
Corruption indicator	-0.28	-0.89	+0.12	
Trade union affiliation indicator	+0.13	-1.70	-0.88	
Illiteracy, % of adult population	-0.40	-0.05	+0.38	
Country risk indicator	-0.58		-1.36	-2.74**

*significant at the 90% confidence level. **significant at the 95% confidence level. Intercept not reported. The absolute value of the estimated parameter is not reported because only its sign (positive/negative) is of interest for this analysis. Data for the exogenous variables is from 1995, or the nearest year available, ie at the beginning of the privatisation processes. The endogenous variable is the above-derived indicator of advances in the privatisation of port operations as at the beginning of 2000. Source for statistical data is ECLAC (2000b), except for: the 'corruption indicator', which is derived from Transparency International and refers to 1999; the trade union affiliation indicator, which is derived from informal and unofficial ITF material and refers to 1998; and the country risk premium indicator, which is derived from Standard and Poor's Sovereign Ratings Service

statistically explain 87% of the variance of advances in port privatisations in Latin America.

Several correlations are clear, and signs are as expected. GDP, GDP per capita, and foreign trade per GDP are positively correlated with private sector involvement in common user ports. Correlation with employment in agriculture, perceived corruption, and illiteracy is negative.

More complicated is the case of foreign debt. Looking at individual cases, evidence strongly suggests that high foreign debt is clearly a motivation to initiate port privatisations. In Argentina, for example, port and other privatisations were seen as a contribution to the macro-economic policy goal to reduce inflation and public deficits. In countries with a particularly high public debt, such as Nicaragua and Ecuador, privatisation and the invitation of foreign companies is at present encouraged by the policies of the international financial institutions such as the IMF and the IDB. And yet, the partial correlation coefficient is slightly negative (-0.23). This, however, can be explained by the fact that foreign debt is also closely related to variables which can be considered as obstacles to privatisation. Partial correlation coefficients between the debt indicator and some other indicators are -0.42 (GDP/capita),



+0.34 (employment in agriculture), and +0.40 (country risk indicator). If these other indicators are taken into account simultaneously in a multivariable regression, the variable debt/GDP is freed of the burden to 'represent' their respective partial correlations and the estimated parameter assumes the expected positive sign.

The relation between (ITF-) union membership and port privatisation advances appears to be minimal, although the signs assume the expected values. Partial correlation is positive, albeit negligible (+0.13). A positive relation could be explained by the fact that a higher GDP and GDP per capita are also positively correlated with this indicator. If, however, in a multivariable regression all indicators are taken into account simultaneously, the parameter for port worker union affiliation gets a negative sign, as many would expect. However, the estimated parameters are not significant at the 90% confidence level, and are thus not suitable for any foregone conclusions which could be interpreted as arguments against trade union affiliation. Interestingly, if Regressions 1 and 2 are undertaken without Brazil, the parameter value for trade union affiliation becomes positive (although, again, not significant at the 90% level), with all other parameters keeping the same sign as in the regression with Brazil included. Thus, it can be said that the quantitative analysis does not say anything about the impact of trade union affiliation on port privatisation advances in general; only in the case of Brazil does it appear that advances could possibly have been faster with a lower trade union affiliation.⁹

The relation between sovereign risk ratings and private sector participation in ports is not straightforward. Hoffmann (2000a) argues that high capital costs should motivate the public sector to seek private investors. He writes: *'Usually, capital costs are higher for the private sector than for the public. In Europe and the United States, a public loan is considered as a subsidy because interest rates on it are lower than on the capital market for private companies. In developing countries the situation may be the reverse. Large multinational port operators may obtain capital at lower costs than governments of small high-risk countries'*. However, the regressions presented above do not support this hypothesis. One reason is probably that port investment tends to be financed by project rather than equity secured capital – and the projects still take place in high-risk countries. Even if a large private company may be able to obtain capital at a lower cost than a small high-risk sovereign state, the company will still add a country-risk premium to its own internal calculations of capital costs. Sovereign risk ratings are also highly related to indicators for corruption, illiteracy, and a low GDP per capita, which are all obstacles to privatisation. As a result, in Regressions 2 and 3, the risk premium derived from the sovereign risk ratings is negatively related to advances in port privatisation.



What remains to be explained

If it is true that a large part of initiations and advances of private sector participation in port operations simply depends on the socio-economic situation of a country, is there still a role for policy makers? Indeed there is.

Take Colombia and Venezuela as examples. Socio-economic indicators do not favour one country or the other. Yet, Colombia has advanced far more than could be expected, ie, there is a big positive deviation between the real and the estimated value of the endogenous variable in all three Regressions, whereas for Venezuela the opposite is true. Equivalently, in view of positive indicators for literacy, foreign trade, and GDP per Capita, Uruguay should have advanced far more than what it has in reality. No socio-economic indicator can be blamed for the fiasco of past failures to concession the container terminal in Montevideo – there is still scope for politicians to take the wrong decisions.

Looking at individual cases, there will always be explanations for specific choices which cannot be quantified and compared to other countries. In El Salvador, Guatemala, Honduras, and Nicaragua, structural reform is burdened with a recent civil war, which makes governments very hesitant to do anything which could disrupt a fragile social peace. In Argentina, it has probably helped that the president who initiated the port reforms was opposed less by trade unions than the previous government. In Chile, possibly the concessions were started later because the situation at the beginning of the 1990s was not as bad as in the ports of most other countries.

No cross country comparison will ever be able to take such specific aspects into account and the brief quantitative analysis presented above should in no way be interpreted as conclusive or complete. Nevertheless, it clearly shows that any attempt to explain (*ex-post*) or promote (*ex-ante*) private sector participation in common user ports must take into account the country's socio-economic situation. It also supports the hypothesis that the two major motivations to seek more private sector participation in ports are the promotion of foreign trade and the reduction of fiscal deficits.

CONCLUSIONS AND OUTLOOK

After the privatisations

During the last decade, Latin American ports have changed significantly to the benefit of port users, importers and exporters, and consumers. The region's major ports are no longer state-run public monopolies, but privately operated competitive entities. Common user ports tend to be concessioned under a landlord scheme. Specialised ports and terminals are privately owned or leased,



and new ones are being built. Regional and international port companies participate in the operation of a large number of relatively small ports and in competing terminals within larger ports.

The countries that have advanced most are Panama, Argentina, Mexico, and Colombia. In the process of concessioning their common user ports are Chile, Brazil, Peru, and Venezuela. Costa Rica, Ecuador, Uruguay, and Guatemala have tool ports, with mainly private stevedoring services. Nicaragua, Paraguay, Honduras, and El Salvador have advanced the least in increasing private sector participation.

In Latin America, after the privatisations, there appears to prevail less public involvement in port planning, investment and regulation than in Europe. Aware of its own weaknesses, the public sector sometimes tends to delay privatisations, or, whenever possible, it divides the ports into several units and restricts vertical and horizontal integration. Fearful of private monopolies, the strategy seems to be to 'divide and rule'. In spite of no longer being in charge of port operations, there is still a role for the public sector concerning public goods such as environment protection and safety, the monitoring of anti-competitive behaviour, and the provision of the legal and regulatory framework.

From the perspective of private operators, experiences in Latin America have not been quite as positive as from the point of view of port users, shippers, and consumers. There have been withdrawals (eg Rosario in Argentina), perceived unfair competition (Buenos Aires), delays (Chile), labour unrests (Brazil), and complete failures (Montevideo in Uruguay). In several privatisations, almost all international renowned port operators participated in the bidding process, which is always a costly exercise, and in which there can only be one winner at a time.

Increasingly, the concessions have been won by local interests, which has aroused suspicion abroad regarding their transparency. However, it has to be borne in mind that national operators have to include higher opportunity costs into their calculations: if they lose, they lose the business they had previously when they were still acting as multi-operators in an open access tool port. Also, national companies are likely to have lower overhead costs, and they may not need to add the same country-risk premium to their capital costs. All in all, the emergence and growth of Latin American port operating companies should be considered as one more positive result of privatisations.

Demand and supply

The 'demand' for and the 'supply' of private sector participation in port operations are strongly influenced by the country's socio-economic situation. Although this paper has not analysed demand and supply separately, the following conclusions seem plausible:



- The ‘demand’ for private sector participation comes from the public sector. This can be increased by two main motivations: first, the desire to promote foreign trade (through faster and less expensive port operations), and, second, the need for reductions of the public sector’s fiscal burden (through private financing of port investments). The latter is closely related to foreign debt because in Latin America a high proportion of the public debt tends to be financed externally. At first sight, it appears that highly indebted countries have advanced less in their port privatisations than others: the partial correlation coefficient between foreign debt and advances in private sector participation is actually negative. However, in regressions that include foreign debt as an explanatory variable, together with other variables, the parameter for foreign debt is estimated with the expected positive sign; and
- The ‘supply’ for private sector participation comes from port operating companies. They are more likely to be willing to invest if the port has a larger hinterland and if the perceived country risk is low. High indicators of perceived corruption, a high rate of illiteracy, and a generally pending broader structural reform are likely to have a negative impact on both demand and supply. Except perhaps for the case of Brazil, there is no evidence that would support the hypothesis that the labour union membership rate of dock workers should be an obstacle to increased private sector participation.

Outlook

In the medium term future, privatisations of port operations can be expected in: Callao and smaller Peruvian ports, Ecuador, Venezuela’s Puerto Cabello, Costa Rica, Arica and some other minor ports in Chile, perhaps Guatemala and Honduras, and at its fourth attempt possibly Montevideo in Uruguay. The latter may seek to create a society with shares that can be traded on the stock exchange. The smaller ports may find it difficult to attract foreign investors. The general tendency will probably continue to be towards traditional landlord schemes, with attempts to introduce inter- and intra-port competition wherever possible, and also expectations to continue to attract foreign investment.

The question of the chicken and the egg: the countries that have, so far, advanced least in increasing the private sector participation in port operations should note that they, too, could have achieved lower costs and better port services to the benefit of the country’s exporters, importers, and consumers. The same socio-economic situation that has acted as an obstacle to port reform in the past should be considered a motivation to proceed with the reforms in the future. Privatised port operations may help to reduce the foreign debt and make exports more competitive. This helps to promote the general structural reform of the economy, including better education, more stable public institutions, and a lower perceived country risk on the capital markets – which in turn will reduce the



obstacles to private sector participation in port operations. The challenge for policy makers is to initiate this virtuous cycle.

Note: For additional literature and sources of information about individual country experiences in Latin America, see ECLAC (2000a,b) and Hoffmann (1999), or contact the author on Email: JHoffmann@ECLAC.cl

ENDNOTES

- ¹ See for example Juhel (1997), Nombela *et al.* (1998), Cass (1999), Trujillo *et al.* (1999), and Baird (2000). Ports, where the government provides infrastructure and superstructure, but activities like stevedoring are undertaken by private companies, tend to be called 'tool ports'. When the government owns land and infrastructure, but superstructure and services are provided by the private sector, the term 'landlord port' is applied. For more about the need for structural reform in Latin American ports, see ECLAC (1990), ECLAC (1992), Rezende (1999), and Burkhalter (2000).
- ² See Hoffmann (1999) and ECLAC (2000a) for further literature.
- ³ See also Farrell (2000) for 'key political decisions' which have to be taken before attempting to increase private sector participation in port operations. In some of these decisions – such as how to handle surplus labour, or how to regulate the privatised port – no common Latin American approach appears to exist.
- ⁴ For more about the regulation of privatised ports and the introduction of intra- and inter-port competition, see Nombela *et al.* (1999), de Tovar (1999), Kent and Hochstein (1998), and Sabatino (1999).
- ⁵ For further discussion of the relation between structural changes in liner shipping and port development in Latin America see ECLAC (1990), Hoffmann (1998, 2000b,c), and Urriola (2000).
- ⁶ For more about private ports in MERCOSUR see Sgut (1999).
- ⁷ 'Maritime Transport in LAC', sent out by JHoffmann@ECLAC.cl approximately 10 times per year.
- ⁸ One such indicator could be the percentage of cargo (in volume or value) which is moved by private stevedoring companies, but is only available for very few countries, and it would have to differentiate between different types of cargo. Another objective indicator could be the number of years which have passed since the first ton of cargo has been moved by a private operator, but this would not take into account the volume of this cargo and many other aspects. Some simpler yes/no indicators are available (such as 'concession for main common user port signed/ not signed'), but this indicator is far too rough and does not take into account any other advances. The word 'success' itself depends on the criteria used, but in any case it will always include whether or not there is private sector participation, and whether or not the process of privatisation has been initiated. The partial correlation coefficient between the grouping (1 – 4, Column C) undertaken by the author and the average poll result from 53 respondents (Column E) is + 0.92.
- ⁹ For more detailed discussions of labour reform and the role of trade unions see Harding (1990), ECLAC (1996), ITF (1998), Rezende (1999), and Marges (1999).

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