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The Missing Point in CAFTA

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Abstract[*]

Ports are a crucial element in any Free Trade Agreement because of their role in moving goods. Unfortunately, the port situation in Central America was not considered during Free Trade Agreement negotiations with the United States (CAFTA). Although CAFTA is intended to provide benefits for exporters and importers, these benefits will not be fully realized due to the region's high port costs. These high costs, along with concerns regarding infrastructure, security, efficiency, and productivity, can diminish CAFTA's potential benefits. Central America must therefore enact legal reforms to privatize port operations, as the private sector possesses the resources necessary to invest in those ports and make them competitive.

[*] The views expressed are those of the author and do not necessarily reflect the positions or policies of the Inter-American Development or the Washington College of Law.

1. Introduction

The Central America-Dominican Republic-United States Free Trade Agreement (CAFTA-DR)[1] was signed on August 5, 2004 to eliminate tariffs and trade barriers, expanding regional opportunities for the workers, manufacturers, consumers, farmers, ranchers, and service providers of all these countries.[2] CAFTA-DR will immediately eliminate tariffs on more than 80 percent of U.S. exports goods of consumer and industrial products, phasing out the remaining tariffs over 10 years. Through this agreement several countries have implicitly agreed to eliminate decades of poor performance and inefficient operation by some state enterprises, following governments all over the world in embracing privatization. Since the 1980s, thousands of state-owned enterprises have been turned over to the private sector in Africa, Asia, Latin America and Western Europe, a trend spurred by the well-documented poor performance and failure of state-owned enterprises and sustained by the efficiency improvements of privatized firms around the world.

By the 1990s, the remnants of state-owned enterprises were still an issue in Latin America. The state operated ports, but they performed inefficiently. Since then Latin America has been privatizing ports to improve services, and this decision has attracted foreign investors in the region. Some countries have decided to privatize their ports completely, or at least to introduce the participation of the private sector because ports were no longer profitable. However, privatization is still an issue in Central American countries such as El Salvador, Guatemala, Honduras, Nicaragua, and Costa Rica; either they have no private ports or privatization has not developed.[3] In the meantime, Central American ports provide excellent examples of how ports should not be run.[4]

This study will analyze the provisions established by CAFTA-DR to implement port privatization and bring ports in Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua to the same level as those of Chile, Mexico, and Panama. Section 2 of this paper identifies the roots of current port problems and explains how CAFTA-DR can be a good vehicle to introduce private sector participation to invest in ports and turn monopolies into a competitive business. The section additionally surveys changes in Latin America after privatization and the different

[1] CAFTA-DR (2004).
[2] CAFTA-DR (2004).
[3] See Hoffman (2001).
[4] See IACD/OAS (2003).

levels of privatization in the region. Section 3 summarizes the legal conditions that prevent Central America from privatizing ports, as well as the region's weaknesses in infrastructure policy. Section 4 describes how deficient port administration can influence maritime transportation cost and discusses the importance of port productivity. Finally, Section 5 concludes that Central American ports need to be modernized. Since countries themselves are not able to finance port modernization, privatization is the only instrument available for achieving this goal through attracting private sector investments.

2. Historical Background

In Central America, the fear of private monopolies is stronger than in many other regions.[5] This is due to the fact that, historically, some of the countries suffered from the centralization of economic power among a few dominant families or foreign multinationals.[6] A complete privatization, as in the case of the British ports, is therefore politically unlikely, and "landlord" arrangements in which authorities lease to operators are more likely to prevail. The region's ports are overstaffed and inefficient, and their principal function seems to be that of a non-tariff barrier to protect domestic industries from international competition, as a public monopoly provides the main services. In some countries such Mexico, Colombia, Panama, governments own the land, infrastructure and superstructure and provide the "stevedores" (to load or unload the cargo of a ship or to engage in the process of loading or unloading such a vessel) and all other services, which are called "port services." Such ports are common in Central America, but the way the region's ports are managed is likely to prevent the CAFTA-DR from delivering all of the benefits hoped for by its signatories.

In general, facilities at Central America's state-managed ports have not been updated for many years. In some cases port infrastructure is deteriorating, and in almost all cases modernizing technology has remained a low priority. The transition to private participation in port management will depend on governments' willingness to promote foreign trade and their need to reduce the fiscal burden. The CAFTA-DR may lead to enhanced private sector participation in port services.

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[5] Kikeri and Kolo (2006).
[6] Chong and López-de Silanes (2005).

Private sector involvement, however, is not guaranteed. Whether or not private companies play an active role in port management appears to depend on the nature of the country and its perceived economic and political risk. Common corruption, illiteracy, and pending broader structural reform seem to have a negative impact on both demand for and supply of private investment, and these factors have created obstacles to port reforms in Central American countries. Consequently, these countries should consider the CAFTA-DR an opportunity and a motivation to proceed with the necessary reforms in the future. Port privatization operations may help governments achieve other broad structural economic reforms as well, because funds previously used for ports will be available for improving education and fostering political stability, which will reduce the region's remaining obstacles to privatization.

Major Latin American ports are no longer efficient state-run public monopolies. The approach taken towards private and public sector ownership and operation of ports varies from country to country, although in Central American countries ports are still largely run by public monopolies. In general, the "Latin American Model" of port management has five basic characteristics: landlord type common user ports, specialized ports and terminals, private ports and terminals, foreign participation, and small and divided common user ports. Although not all countries have adopted the model, some countries are in the process of increasing private sector participation in their ports. None of the five characteristics on its own is unique to Latin America, but their combination sets Latin America apart from other regions.

It is necessary to stress five specific points in order to explain port operations in Central America. First, the "landlord model" is most common in Latin America. Governments give concessions to individual companies for 30 years.[7] The private operators invest in infrastructure, and own and operate the superstructure. Usually, this landlord scheme is called a "mono-operating" system because the same operator provides the stevedore services. The exception is Chile, where "mono-operating" is not allowed because it inhibits competition. Second, private specialized ports and industrial terminals, managed by private entities, handle two-thirds of the region's import and export volume.[8] Third, ports can be 100 percent privately owned and operated, and port operators have established new private ports and terminals, including both general cargo and container facilities. Fourth, foreign companies have a strong presence in Latin

[7] Hoffman (2001).
[8] Hoffman (2001). .

American ports, with international port operators including Hutchison, ICTSI, and P&O. Fifth, many common port users in Latin America cannot be considered hub ports such as Los Angeles and Long Beach in the US. [9] Panama and Cartagena are the exception to this rule, because those ports have several competing terminals. These five characteristics of port privatization are most commonly found in South American ports, which are generally well-run and in compliance with the standards of the national and international service sector, but are often lacking in their Central American counterparts.

The service sector deserves particular attention, as it is becoming the most important sector in the global economy, representing around 70 percent of global value added and 18 percent of total global exports.[10] Since laws and service regulations that may discriminate against foreign supplies impact trade in services,[11] the results of negotiations to liberalize services were compiled in the General Agreement on Trade in Services (GATS) under the framework of the World Trade Organization. In addition, South America, Central America, and the Caribbean Community have been integrating trade operations to exchange goods. All of these agreements have contributed to port liberalization in Latin America and led to greater participation of the private sector.

Latin American countries have different levels of port privatization based on the characteristics described above. Four levels of port privatization may be identified. In the first and most common type, port property is owned by the state but the activity is given in concession to private entities. In this arrangement, prevalent in Panama, Argentina, Colombia, and Mexico, governments grant individual terminal concessions to private operators for a period of 12 to 30 years, and those operators invest in infrastructure, as well as owning and operating the superstructure. The landlord model is called a "mono-operator" system because the same operator that has the concession is also usually the only company that provides stevedore services on a given terminal. The second group is "common users" in which ports' stevedore companies have been privatized and labor unions have been reformed. This group is in the process of completing private sector participation, which means that the state has transferred

[9] The external trade of a country is closely linked with its geographical location, with the transport services that cover the distance to markets, and the ports through which that trade passes. Recent advances in maritime transport, growing international economic integration, and the privatization of ports can give rise to expectations that ports could be developed that concentrate both domestic cargo and that of neighboring countries for its subsequent redistribution.

[10] Mattos and Acosta (2003).

[11] Mattos and Acosta (2003).

ports to private entities. The practices of Chile, Brazil, Peru, and Venezuela may be classified within this group. In a third group, made up of Costa Rica, Nicaragua, El Salvador, and Guatemala,[12] initial stages of port reform have occurred in at least some facilities.[13] Finally, in a fourth and overlapping group that includes the Central American countries, some governments directly run port services and operate ports the same way that they did two decades ago.[14] Ports in Latin American countries outside of Central America have made significant reforms in the last two decades in areas including legal arrangements, private sector concessions, infrastructure development, efficiency improvements, increased competition, and privatization,[15] and citizens and foreign investors alike can see the resulting improvements.[16] Central America, however, has a long way to go to improve its ports, and there have been few substantial changes.

Since port privatization has occurred in Latin America, countries like Chile and Mexico have improved their ports in many areas.[17] Structural design was the main issue in both countries, where port structures were poor and inefficient. After reform, the private sector was allowed to play an active role in port management. As a result, private sector participation made city ports increasingly important to the countries' economies.[18] The connection between the countryside and city ports was enhanced as cities became the center of activity in global commerce because ports are the connectors between production and distribution in global economies.[19]

Port privatization has been accompanied by advanced technologies which have improved efficiency and competitiveness.[20] Of particular note in this regard are computerized process control systems, which optimize container movement and storage and provide for electronic conveyance of documents and data.

Efficient ports in developing countries such as Colombia, Chile, Panama, Argentina, and Brazil tend to operate in a private environment,[21] and reforms have turned ports that were previously notorious for their inefficiency into facilities characterized by efficiency, security, high productivity and low cost. Competition among ports has represented a central feature of

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[12] Hoffmann (2001).
[13] Hoffmann (2001).
[14] Hoffman (2001).
[15] Hoffman (2001, p. 229).
[16] Hoffman (2001, p. 224).
[17] Estache (2001).
[18] Granda V. (2005).
[19] Granda V. (2005).
[20] World Bank (2002).
[21] Gallegos (2003).

successful port operations,[22] and private investment and initiatives favoring competitiveness are expected to bring about major improvements in Central American countries' port industries.

3. Port Privatization from the Perspective of CAFTA-DR

Proposals for private-sector participation in public-sector ports usually stem from one or more of the following factors: i) competition from other ports, or among customers; ii) government political platforms; iii) public outcry against high port charges; iv) low productivity; and v) theft and unavailability of merchandise. Given Central America's experience with public sector port monopolies, which have given rise to many of the concerns noted above, any entity providing port facilities and services there should operate in a commercial environment governed by market mechanisms. Governments should consequently adopt a legal regime combining deregulation and decentralization with antimonopoly laws and specific legislation defining private sector participation.

3.1 The CAFTA-DR Perspective

Although port privatization was not addressed during the CAFTA-DR negotiations, the current port situation in Central America could affect CAFTA-DR's performance, as successful implementation of CAFTA-DR requires high productivity, efficiency, security, and low cost in port facilities. Conversely, the absence of these features is likely to cause dissatisfaction among domestic and foreign investors, both actual and potential. Ideally, Central American countries should have emphasized reform of port polices and infrastructures, lowering transportation costs, and improving efficiency, among other issues, in order to satisfy CAFTA-DR's demands.

Governments in Central America have to recognize that improving the competitiveness of their products means giving ports the ability to respond to market forces with the same flexibility as private sector firms. Such flexibility includes freedom to make budgets, invest, avoid tariffs, and hire and fire without going through extensive bureaucratic procedures.[23] Nonetheless, some Central American ports are still operating under monopolistic practices

[22] Foxley and Mardones (2000). licyJournal/223Foxle-10-24.pdf

[23] CAFTA-DR (2004, "Preamble"). In my opinion CAFTA-DR has implied several obligation that may not appear in the text.

imposed by private or public entities.[24] In the absence of competition, carriers have to accept inefficient conditions at these ports.[25]

3.2 Port Reform in Central America

The infrastructure of state-run Central American ports is clearly deficient, and have deficient infrastructures when run by states, and private sector participation (PSP) has only been incorporated in some geographical areas. Port privatization is an issue that Central American countries do not want to face due to the opposition to change common in large bureaucracies. However, now that CAFTA-DR has been signed, Central America will have to realize deeper reforms in this area in order to make the agreement successful.[26] While the agreement benefits Central American countries by giving them access to the world's largest market, CAFTA-DR also requires each nation to undertake legal reforms of local regulations.[27] Customs laws, for instance, must be reformed in order to facilitate port traffic.[28] Since the essential point of the agreement is to bring progress to the region by increasing exports between the parties, the signatories have in effect committed themselves to facilitating the cross-border movement of goods and services.[29] Although Central American countries have no way of aggressively incorporating private sector participation into ports, many deficiencies must be addressed to prepare ports to be more efficient, competitive, and profitable before CAFTA-DR's demands can be met.[30]

CAFTA-DR created several mechanisms to implement the agreement. From a CAFTA-DR perspective countries should focus more on port reform and privatization since ports are the main way to transport goods. Nonetheless, the implementation of port modernization and privatization has not yet been completely successful in Central American countries, even though the process started a decade ago.[31] However, port reform has progressed in some parts of Central America. At the same time, infrastructure and entry points to the maritime corridor remain

[24] Loaiza (2006).
[25] Loaiza (2006).
[26] CAFTA-DR (2004, Chapters 5-8, 11, 15).
[27] CAFTA-DR (2004, Chapter 2).
[28] CAFTA-DR (2004, Chapter 2).
[29] CAFTA-DR (2004, Chapter 2).
[30] CAFTA-DR (2004, Chapter 2).
[31] Sánchez and Wilmsmeier (2003).

problems,[32] and several ports lack efficient terminals and container facilities. Costa Rica, Guatemala, and Nicaragua have been leaders in the region, with at least minimal private sector participation,[33] while El Salvador and Honduras are more conservative on this matter.

Central American countries can learn from successful port reforms in Mexico, Panama, Colombia, and Chile. Mexico's experience is interesting in part because of its extensive maritime territory and the corresponding importance of its ports. Mexico's reform granted a concession of the country's 108 ports to the Integral Port Administration (Administracion Portuaria Integral).[34] In this landlord arrangement the state maintains property rights, while terminal and stevedore services are granted as concessions to private companies.[35] Similarly, in Panama 98 percent of port services are privately administered under landlord arrangements.[36] In Colombia, port reform was carried out because ports were inefficient under public administration;[37] like Mexico and Panama, Colombia adopted the landlord model.[38] Finally, Chilean port reform was carried out in three steps.[39] The first consisted of the decentralization of the most important Chilean port institution at that time, called "Emporchi," which then was divided into 10 autonomous entities.[40] Second, the private sector was incorporated into the port reform.[41] Finally, ports were opened to multi-operators instead of mono-operators.[42] Chilean port reform has emphasized competition between ports to improve its services.[43] In short, the successes of Panama, Colombia, Mexico, and Chile in port reform provide valuable examples for Central American countries to follow.

In Central America, the need for new ports would not arise if port productivity could be increased to the levels achieved elsewhere in Latin America,[44] yet the low trade volume of many ports in Central America presents a challenge for achieving such productivity levels.[45] This, however, could be interpreted as a reason to rationalize port traffic in fewer but more modern and productive ports, improving infrastructure, competition, and efficiency.

[32] Sánchez and Wilmsmeier (2003).
[33] Some private services, such as stevedoring, have been transferred to private entities.
[34] Sánchez (2003).
[35] Sánchez (2003).
[36] Sánchez and Wilmsmeier (2003).
[37] Colombian Law 1 (1991).
[38] Sánchez (2001).
[39] Chilean Law N 19,942 (1997).
[40] Chilean Law N 19,942 (1997).
[41] Chilean Law N 19,942 (1997).
[42] Chilean Law N 19,942 (1997).
[43] Chilean Law N 19,942 (1997).
[44] SIECA (2001).
[45] SIECA (2001).

3.3 Infrastructure Policies

Infrastructure is crucial for generating growth, alleviating poverty, and increasing international competitiveness under CAFTA-DR.[46] For many years, port services in Central America have been under public monopolies because the intention of the governments was to protect the public interest in industries supplying essential services.[47] In addition, governments believed that making large investments with public resources was required to enhance infrastructure. Accordingly, a single public entity usually controlled every aspect of a utility—facilities, operations and administration—and determined which services would be provided to an essentially captive customer.[48] However, this approach resulted in extremely weak services and poor infrastructure in the region's ports.

CAFTA-DR will likely increase imports and exports.[49] Port development in terms of handling volume and services will significantly increase the need for accessibility improvements between ports and the mainland, and regional maritime transportation services can take pressure off the undeveloped and low quality road network.[50] As Central America requires further integration and improvement of the transportation network within and between countries,[51] ports in the region will be required to expand their capacities to keep pace with the estimated growth[52] of CAFTA-DR-related demand throughout the next few years.

CAFTA-DR does not only address the exchange of goods and services,[53] but also creates competition and strengthens economic growth in the region.[54] The growing importance of private operators in the transportation market is a result of new forces from the agreement.[55] These private operators are expected to bring about faster progress in the use of information and communication technology than public or semi-public ownership. Currently, the main problem connecting ports and the countryside is transportation, because there are deficiencies in road maintenance, airports, railways, and even ports themselves.[56] For instance, the deteriorating

[46] CAFTA-DR (2004, "Preamble").
[47] Ioannis and Kessides (2005, p. 82).
[48] Ioannis and Kessides (2005, p. 82).
[49] CAFTA-DR (2004, Chapter 1).
[50] CAFTA-DR (2004, Chapter 1).
[51] Greenhuizen (2000).
[52] Countries are expected to increase their exports by 10 percent annually.
[53] CAFTA-DR (2004, "Preamble").
[54] CAFTA-DR (2004, "Preamble").
[55] CAFTA-DR (2004, "Preamble").
[56] Sánchez and Wilmsmeier (2005).

highway system in Costa Rica is a common problem for exporters.[57] The planned extension of the Pacific and Caribbean corridor includes ceding the routes to private entities to recover construction and maintenance costs, which will add further direct cost to transportation services.

Recently research has shown how transport inefficiencies affect successful development of trade and foreign investment,[58] and the CAFTA-DR countries should prove no exception. Even though the World Bank, the Inter-American Development Bank and other donor countries have developed programs to liberalize trade regimes through economic policy reforms, countries are realizing that persistent weaknesses in infrastructure and institutional frameworks undermine those reforms.[59] Ports present an essential link in intermodal transport, which includes coastal shipping, and distances between ports are such that time in ports requires fast and agile procedures of the port services.[60] Ports in Central America, however, presently offer no special facilities for the region. Central America has to overcome many obstacles such as port infrastructure and legal issues, among other needed reforms, to satisfy CAFTA-DR's demands. The operation of the developing Central American port network requires careful examination in order to optimize services in all situations, as efficiency and liberalization are the main requirements for making Central American ports profitable.

4. Liberalization of Maritime Transportation

The liberalization of maritime transportation implicitly requires Central American governments to suppress many of the pre-existing controls transfer to the private sector the management of previously state-operated transport services.[61] This need is underscored by the fact that importers and exporters have claimed that the prices of transport services had dropped in real terms over this period in South America after port privatization, while in Central America those prices have been increasing.[62]

[57] Sánchez and Wilmsmeier (2005).
[58] Hummels (1999).
[59] Londoño-Kent and Kent (2003).
[60] Londoño-Kent and Kent (2003).
[61] ECLAC (1999).
[62] ECLAC (1999).

4.1 Transportation Sector

CAFTA-DR will help persuade Central American countries to liberalize their maritime transportation sector, which is composed of two elements: 1) international maritime transport (transportation per se) and 2) port services concerned with ships.[63] There is a common important element that will influence the evolution of CAFTA-DR, and this is the cost of transportation. However, this does not take into account the specific elements particular to each country.[64] The importance of transportation costs cannot be ignored, as they are in fact greater that of trade barriers[65] such as import duties, import licenses, export licenses, quotas, tariffs, and subsidies. Liberalization will reduce artificial barriers to trade (taxes, insurance, and others). Port rates and protection provided by the cost of transportation is much higher than tariff barriers in trade.

These needs notwithstanding, direct evidence based on prices and indirect evidence from the amount of cargo indicates that the cost of maritime freight has increased, while that of airfreight has decreased.[66] There is no doubt that transportation cost is strictly related to technological development, and to the restructuring process of the private sector as well as governments.[67] The incremental increases in CAFTA-DR's exports and imports are expected to lead to a reduction of transport cost, and the involvement of the private sector in port investment and operations; otherwise, the agreement will just be a document.

The traditional determinants of transportation costs continue to exercise a strong influence on maritime transport.[68] This could be readily by adapting the conclusions and recommendations of the Organization for Economic Co-operation and Development (OECD) Conference on International Transport Network and Logistics, which provide a thorough explanation of the costs linked to maritime transportation.[69] In that conference, the OECD identified some lessons that could be applied to maritime transport: efficiency gains, critical mass, and quality of services. An efficiency gain will only materialize if appropriate price mechanisms are in place.[70] Critical mass justifies high investment in infrastructure and logistical

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[63] Clark, Dollar and Micco (2004).
[64] Mattos and Acosta (2003).
[65] Mattos and Acosta (2003).
[66] Hummels (1999).
[67] Hummels (1999).
[68] Fink, Mattoo and Neagu (2001).
[69] OECD (1997).
[70] Mattos and Acosta (2003,).

support to assure high efficiency and low-cost transportation.[71] Finally, the quality of services is crucial to the efficient functioning of the transportation chain.[72] All of these elements must be applied in Central American countries to satisfy the needs of port operations and to ensure the necessary infrastructure to achieve the goals of CAFTA-DR in the region.

The biggest costs are in the operational field rather than the investment field. Working capital is an especially important element within overall cost, and these costs must be absorbed by the private sector. Additionally, the need for investment in equipment and operational infrastructure in the port must be borne by the private sector. Financing provides a window for the private sector to undertake international investments, and financial support for the basic infrastructure of intermodal transport could come from traditional sources.

Ports represent an essential link for intermodal transport. Distances between ports and short times in port require speed and agility in procedures and port services.[73] Ports require adequate facilities and equipment with modern and supportive working practices, as well as adequate stevedores' organizations.[74] In addition, international trade tariffs are not appropriate for coastal shipping.

4.2 Transportation Costs

The cost of maritime transport is related to the efficient management of the port, and port efficiency measures have the same relevance for maritime transportation costs as distances. Central American governments have attempted to make their countries increasingly attractive for direct investment, CAFTA-DR provides hope that Central America will welcome the private sector and foreign investment. For this reason, Central America is undertaking reforms to incorporate both domestic and foreign private sectors into industries that were previously controlled by the state. Hopefully, ports will be one of the industries open to the private sector, as port privatization is an important element for increasing the region's export competitiveness. In addition, the inherent discipline of a new competitive environment may render unnecessary a reassessment of the role of the port sector regulatory institutions (ministries, public agencies, and

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[71] Mattos and Acosta (2003).
[72] Mattos and Acosta (2003).
[73] Loaiza (2006).
[74] Loaiza (2006).

port authorities).[75] These institutions have suffered problems such as political pressure, excess bureaucracy, and an absence of plans and clear objectives, among others.[76]

Given that Central America cannot escape from the global trend towards trade liberalization, integration, and economic reform, the incorporation and participation of domestic and foreign private actors could make a big difference in the region. This means that Central America ports should accept the entry of new private operators that could compete with newly transformed public companies.

Central America has to implement four strategies to solve its current port problems. These strategies are commercialization, liberalization, privatization, and modern polices. Perfect commercialization refers to the reform of port institutions to make them work independently of political interference, and the development of quick solutions to changes in market circumstances.[77] In addition, commercialization would focus on changing operational practices and organizational structure.[78] Specifically, private sector operators would be able to would be able to engage in personnel hiring, firing, leasing, setting tariffs and targeting investments without being subject to bureaucratic approval.[79] The second strategy, liberalization, involves the reduction of monopolistic conditions in port operations.[80] Liberalization thus entails introducing public entities to competition in port services for common users, a major change from prevailing monopolies in port services in Central America.[81] Privatization is oriented towards selling public agencies to the private sector, with the purpose of eliminating subsidies, improving efficiency, and making the user pay the real cost of the services. Finally, modernization concerns the improvement of institutions in charge of the ports. If Central America follows these patterns, some of the main problems in the region's ports will be solved, thus making them profitable and attractive to the private sector.

Even though the private sector has been particularly involved in the maritime transport sector in Central America, it is not enough to make ports competitive. According to CAFTA-DR, there are two main reasons why the private sector must be involved in the development of

[75] Hochstein (1996).
[76] Hochstein (1996).
[77] Trujillo and Nombela (1999).
[78] Trujillo and Nombela (1999).
[79] Trujillo and Nombela (1999).
[80] Trujillo and Nombela (1999).
[81] Madrigal Castro (2006).

ports.[82] First, the private sector can offer services at a lower cost than the public sector.[83] This is the main reason for the agreement. Second, using private capital liberates the public sector to allocate its resources to higher national priorities.[84]

In the case of ports, three factors must be taken into account. First, expert private investors are very important for investment financing, since governments have restricted their budgets due to debt service payments, these investors must be enticed by potential profits.[85] Second, rapid economic growth has generated new traffic, which requires new facilities and more efficient services.[86] Finally, competition is indispensable for stimulating the improvement of port facilities in Central America. Otherwise they are likely to be displaced by rival ports in the region such as Panama and Cartagena (Colombia).[87] As the success of CAFTA-DR depends on these factors, Central American countries must improve their ports to make them competitive.

The above-mentioned port capacities in the region, as well as estimated growth, are elements to be considered for future ports infrastructure development in Central America. Ports in the region will be required to expand their capacities to satisfy the estimated growth in external demand over the next few years.[88] Improvements in facilities such as modern buildings and advanced technology may reasonably be expected to decrease ports' costs while increasing their productivity.

4.3 Port Productivity

Port activities, like any other, must be evaluated on the basis of their productivity. The determination of productivity plays an important role in the development of any business or institution,[89] and various indicators can measure a company's performance and suggest where change may be necessary.[90] A service industry must first consider the satisfaction of its clients, and CAFTA-DR will require ports to improve their customer service. Generally, the port industry is associated with long-term investments, and its productivity is based on the number of

[82] Mattos and Acosta (2003).
[83] Mattos and Acosta (2003).
[84] Mattos and Acosta (2003).
[85] Mattos and Acosta (2003).
[86] Hoffmann (2001).
[87] Hoffmann (2001).
[88] Hoffmann (2001).
[89] Cullinane et al. (2004).
[90] Cullinane et al. (2004).

containers moved during the year.[91] Recently, ports have paid more attention to customer service, cost, and quality services.[92] Specific customer demands include faster and better services, competitive prices, a reduced incidence of damage to products during the operation process, and standard services such as ISO 9000[93] or the equivalent. Many of the ports have data on their activities. Productivity is determined according to how fast a port can load and unload a ship, and move it in and out of the port. All of these issues are likely to have to have a negative influence the efficient implementation of CAFTA-DR in the region, if they are not corrected on time.

When productivity is measured by the time that a ship spends in port, Central American ports generally perform poorly, although recent experiences in the region show that private ports surpass their public counterparts. For example, only two months after Costa Rica privatized the Pacific port of Caldera, the results were evident,[94] as productivity at this port increased by 63 percent. The government and the shipping companies were satisfied with the quality and the rate of the work performed, as were importers and exporters.

The number of containers moved in Caldera also shows interesting results. Before privatization, only 17 containers were moved per hour, compared to a and today, the movement of containers is up to twenty-seven per hour. Likewise, the time for time for unloading and loading a ship was reduced 30 percent, and the port is now open 24 hours a day. The improvements at this port will benefit both exporters and importers under CAFTA-DR.

On the other side of the Costa Rican coast, however, the story is very different. Improving productivity is not an objective for the Caribbean port of Moin. This facility is run by public employees (paid by the Costa Rican government), whose October 2006 strike effectively closed the port for two weeks, to the great distress of the government, shipping companies, exporters, and importers.

As noted by World Sea Trade Services (WSTS),[95] the Central American economy has been growing.[96] This is reflected in shipping: the number of containers entering the region has

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[91] Doerr Nuñez and Sánchez (2006)
[92] Fourgeaud (2000).
[93] ISO 9000 is a family of standards for quality management systems. ISO 9000 is maintained by ISO, the International Organization for Standardization and is administered by accreditation and certification bodies. For a manufacturer, some of the requirements in ISO 9001.
[94] The discussion in this paragraph and the two that follow are based on Loaiza (2006).
[95] Hoffman (1999).
[96] Hoffman (1999).

risen from 1.41 percent in 2000 to 1.99 in 2005, and it is estimated that in 2010 it will increase by up to 2.56 percent.[97] The WSTS points out that the number of containers leaving the region has increased from 0.92 percent in 2000 to 1.22 in 2005, for a forecast of 1.66 by 2010.[98] Even though the region's exports and imports have increased, ports in the region still have the same infrastructure, and there are no concrete projects for improving.[99] Of particular concern is that the figures cited immediately above were estimated before CAFTA-DR; the number of containers is expected to increase even more than these estimates, since Central America's access to the vast US market has increased.

Port serves as a border crossing for international carriers,[100] and cargo and ships crossing the border are assessed charges for their use of port facilities. CAFTA-DR requires the signatories to not only speed customs procedures but also to improve trade facilities,[101] which include a logistics chain consisting of a variety of nodes. The chain process starts at the entrance buoy to the harbor and usually ends when the cargo passes through the port's gates after it is nationalized and claimed by the consignee; related procedures include anchoring, inspection, security, and loading and unloading.[102] Although terminals are more efficient when port operators use computerized control systems, some Central American ports still lack computerized processes to optimize container movement and storage. In addition, a number of ports in Central America also lack computerized processes to provide electronic conveyance of documents and data.[103] These factors will complicate CAFTA-DR implementation.

The experience of the port of Cartagena, however, suggests that many of these problems can be overcome through privatization.[104] Colombia realized that trade reform itself would be at risk unless structural constraints on trade were also addressed.[105] The country's infrastructure assets, particularly ports, were notorious for low productivity. Furthermore, Colombia's ports were characterized by inefficiency, with inadequate security and extremely high operational

[97] Hoffman (1999).
[98] Hoffman (1999).
[99] Hoffman (1999).
[100] Clark, Dollar and Micco (2004).
[101] CAFTA-RD 2004, Chapter 5).
[102] Bichou and Gray (2004).
[103] Kent and Hochstein (1998).
[104] Londoño-Kent and Kent (2003).
[105] Londoño-Kent and Kent (2003).

costs.[106] These problems were addressed in the port reform of 1990.[107] After opposition from national industries, Colombian ports have become a model for Latin America.

Since freight carriers base their shipping decisions on the cost of doing business,[108] high costs and other deficiencies are likely to have a negative effect on CAFTA-DR imports and exports. This is a significant concern in light of Central America's high freight rates, which cannot be attributed exclusively to low cargo volumes.[109] Port inefficiencies appear to be responsible as well.

Unless these inefficiencies are addressed, they will notably impede the region's economic development. According to the Central America Commission of Maritime Transport, Central American ports are expected to grow by 8.7 percent per year in the Atlantic and 9.1 percent in the Pacific.[110] As an estimated 90 percent of world trade involves maritime transport, shipping is crucial in linking Central America to a growing world economy.[111] Nevertheless, along with trade advances, there are signs of concern due to the increasing demands of international standards such as the International Code for the Protection of Ships and port installations, the container security initiative, the alliance of Customs and trade against terrorism, and concerns with bioterrorism, as well as traceability, technical standards, and sanitary and phitosanitary measures.[112] Central America will have to deal with these requirements. Consequently, all of these requirements require additional effort and cost for trade and transport. At the moment Central American countries may have the worst of both worlds: their ports have not assumed the full responsibility of meeting those standards, and they have also failed to delegate those responsibilities to private sector entities.

5. Conclusion

Central American ports need several changes in order to satisfy CAFTA-DR demands, which will only be completed with the participation of the private sector. Governments have demonstrated their incapacity to manage and update ports in the region. Therefore, private sector participation must be incorporated into port operations to make them more competitive and

[106] Londoño-Kent and Kent (2003).
[107] Londoño-Kent and Kent (2003).
[108] Francois, Fox and Londoño-Kent (2003).
[109] Londoño-Kent and Kent (December 2003)
[110] ECLAC (2004).
[111] ECLAC (2004).
[112] United States Mission to the European Union (2004).

efficient, as well as less expensive. While there is no single standard to port investment and privatization in Central America, some approaches or models are used more than others, particularly the combination of public port authorities with private concessions or lease arrangements. In general, the methods used depend on a range of factors, including local laws and practices, the level of demand for improved port services, supplies of the port services, and the extent and nature of competition.

However, deficient port administration, poor infrastructure, and the high cost of transportation in Central America under public control highlight the necessity of private sector involvement, especially in port operations and services, for meeting CAFTA-DR demands. Private sector involvement should not substitute for the importance of the public sector taking much more than just a passing interest in its seaport systems. Whether through a port authority or other body, the public sector retains a central role in seaport planning, regulation, development and investment. The deficiencies of the current approach, however, are becoming more evident every day.

Considering the investment in transport infrastructure, a discussion of port privatization must go beyond a narrow calculation of costs and benefits. It is particularly important to leave national perspectives behind and move towards a regional vision, beginning with regional dialogue. In this dialogue port transportation represents the central nexus of a seamless intermodal transportation system that enjoys efficient cargo handling at each node.

Ports can be updated with technological advances related to the vessels, their uses, and the congested and increasingly costly land transport of goods. However, a fundamental question as to their viability exists: “Can ports survive without extensive government subsidies?” In the case of Central America, this implies the creation of a balanced multimodal regional transportation system benefiting from existing geographical conditions. Ports can play an important role in creating the pathway onwards a more environmentally friendly, financially affordable and sustainable transport system.

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