

Background paper prepared for the World Development Report 2005

MANAGING INVESTMENT CLIMATE REFORMS: COLOMBIAN PORTS SECTOR REFORM CASE STUDY

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Bogotá, Colombia, February 26, 2004

Abstract

This document discusses the case of the Colombian Port Sector reform undertaken in 1990. Section A presents a brief description of the situation of the Colombian ports before the reform including a discussion of the political and economic context at the time. The discussion shows how the operational and financial deficiencies that prevailed led to the decision to revise the ownership and administrative model and describes the main components of the reform. Section B discusses the critical aspects of the reform management process, describing the critical aspects of the formulation and implementation. This section highlights how the reform was initiated with the enactment of a law that provided the general guidelines to the new model and the transition from the previous system. Finally, Section C discusses the main impacts of the reform from the perspective of the economy as whole, the effect on transportation costs and the observed improvements on operational efficiency. It also identifies the current issues in port policy towards the forthcoming years.

The views expressed are those of the authors and do not necessarily reflect official views of the World Bank.

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Introduction

This document discusses the case of the Colombian Port Sector reform undertaken in 1990. Section A presents a brief description of the situation of the Colombian ports before the reform including a discussion of the political and economic context at the time. The discussion shows how the operational and financial deficiencies that prevailed led to the decision to revise the ownership and administrative model and describes the main components of the reform. Section B discusses the critical aspects of the reform management process, describing the critical aspects of the formulation and implementation. This section highlights how the reform was initiated with the enactment of a law that provided the general guidelines to the new model and the transition from the previous system. Finally, Section C discusses the main impacts of the reform from the perspective of the economy as whole, the effect on transportation costs and the observed improvements on operational efficiency. It also identifies the current issues in port policy towards the forthcoming years.

The new model for the port system in Colombia has resulted in substantial efficiency gains both from an economic an operational perspective. Port and freight tariffs have dropped nearly by half in the past decade since the reform was implemented. Also investments in equipment and infrastructure by private operators have reached approximately \$400 million in the same period. The analysis that is presented leads to propose four key lessons to be learned from the way this particular reform was conceived and put into practice:

- The Government succeeded in driving the reform process on its own and bringing the most critical interest groups into play when it became necessary to deploy the new ownership and operational structure.
- The most critical decisions were taken readily and a course of action was established by way of a law that limited the space for deviations or recoils from the basic model during implementation
- The main focus of the government throughout the reform process was to insure that the new model was effectively implemented while the pursuit of financial profits for the Nation remained only as a secondary concern.
- A series of concurrent decisions that favored a more lenient liquidation for existing employees helped to preempt most of the reaction from the workers and unions but also created favorable conditions for corruption and fraud in the settlement of pensions and severance payments.

A. Reform Context.

(i) Pre-reform situation

At the beginning of the 20th century, Colombian ports were owned and operated mostly by foreign companies, some of which integrated ports with existing railways. The Government's involvement in port activities was mainly focused in custom controls and related procedures. In 1959 the Colombian Government decided to centralize and to nationalize port activity, which lead to the law that created Empresa Puertos de

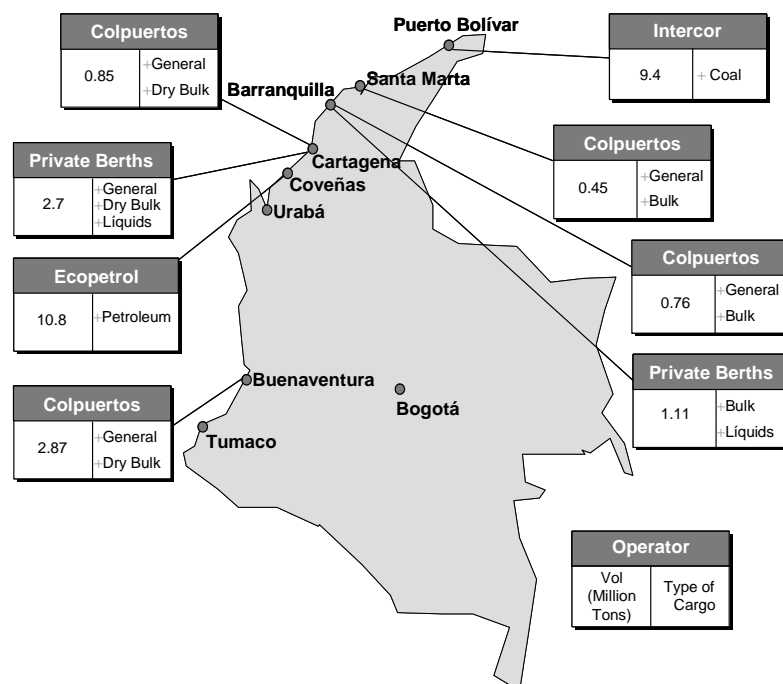
Colombia - Colpuertos, a state owned monopoly in charge of managing, operating, regulating and setting tariffs in the Colombian port sector.

Colpuertos faced several difficulties from its origin. To begin with, it was the result of the merger of the existing companies, situation that led to inherit labor related problems as well as an inadequate institutional structure. All of the workers inherited by Colpuertos were previously employed by the companies that built and operated the ports facilities. By law, the new company was required to assume the existing labor obligations although the previous employers did not contribute with pension savings or other labor related funds.

Colpuertos was in charge of the five main ports in Colombia; Buenaventura and Tumaco in the Pacific Coast, and Cartagena, Barranquilla and Santa Marta in the Atlantic Coast. The origin of most of Colombia's main ports goes back to the colonial period and their development had been erratic and unconnected. The new company worked on a centralized basis, maintaining its headquarters in Bogotá and promoting a national regulation and tariff structure that was common to all of the ports. Nevertheless each port maintained its own regional manager, had an independent budget and was designed to reach self sufficiency. However due to regional differences and cargo distribution, some ports were self sustainable while others were not. That figure led to a cross subsidy between ports, while the increasing costs of the headquarters reduced the general profit. As a result there was no ground to improve the ports' performance and no incentive to obtain higher profits.

Table No. 1 and Figure No. 1 show the location of the country's main ports and the freight mobilized by each port between 1980 and 1988.

**Figure No. 1
Colombian Port System (1990)**



Source: Ministerio de Obras Públicas y Transporte, Así Cumplimos 1986 – 1990, Superintendencia de Puertos

Table No. 1
Cargo Share by type of Port (000 Tons)
(1980-1988)

	Colpuertos	%	Private Berths	%	Private Ports	%	Total
1980	4,925	54.1	4,179	45.9	0	0	9,105
1981	4,091	45.7	4,435	49.6	423	4.7	8,950
1982	4,625	49.1	4,342	46.1	461	4.9	9,429
1983	4,125	37.6	5,929	54.1	903	8.2	10,957
1984	3,872	34.3	5,792	51.3	1,635	14.5	11,300
1985	4,560	32.6	5,573	39.8	3,859	27.6	13,393
1986	4,127	20.8	5,639	28.4	10,087	50.8	19,854
1987	4,462	16.4	6,027	22.2	16,699	61.4	27,189
1988	4,392	16.3	6,013	19.8	19,469	64.0	30,440

Source: Reestructuración y Privatización de Servicios de Transporte en Colombia, IDB, April 1992

Starting in the 1970's, the Government implemented a policy that allowed private berths or terminals to operate, although on a limited basis and subject to several restrictions. The rationale behind this policy was that, given the increasing cost of Colpuertos, it was reasonable to allow companies to operate their own berths as long as their activities were directly related to imports or exports and their production facilities were located on the coast. However, these berths were not authorized to provide services to third parties and they were required to pay a fee to Colpuertos. Strictly speaking, Colpuertos maintained the exclusivity to handle cargo within the port regions under its control allowing private operations in newly built berths in return for a fee.

Although this policy was only a relief to certain specific industries which benefited from the measure, it was one of the first opportunities to identify Colpuertos' inefficiencies and to take actions to overcome them. The private berths that were constructed at that time were located mainly in Cartagena and Barranquilla and handled mostly bulk cargo.

In addition, some macro projects, also with export oriented production, required the construction of specialized facilities. This is the case of Puerto Bolívar, a port built in La Guajira to export coal from "El Cerrejón" mine by Intercor, a society between the Colombian Government and private companies in charge of the extraction, transportation and commercialization of the mine's production. Coal exports accounted for approximately half of the total cargo mobilized through maritime ports in 1989. In addition, Ecopetrol, the state owned oil company also built and operated independent facilities in the Atlantic coast to export and import oil related products.

As a result, much of the total growth in cargo during the 1980's decade was channeled through other facilities, while the cargo moved through Colpuertos remained flat. At the end of the 80's decade Colpuertos' share of mobilized import and export freight in tons was only 16.3% (see Table No. 1). From the 1970's to the end of the 1980's, export freight share decreased by 55%, from 17.5% to 7.8%. From an economic perspective however, the inefficiencies of Colpuertos were still a major issue as the

majority of the break bulk cargo users still had to rely on Colpuertos for their import export operations.

Over time, Colpuertos experienced a tremendous deterioration of its productivity, partly because of strong unions and procedures implemented that lacked incentives to increase efficiency levels. The main symptoms were: high tariffs, increasing financial problems, high labor costs, high labor demands, overstaffing, difficulty in executing investment plans, operational problems, decision making highly influenced by political agendas, etc. These issues are the matter of the following sections.

a) Tariffs

The policy for setting tariffs was inadequate as it lacked incentives to increase productivity. Colpuertos' tariff structure was originally oriented to break-bulk cargo and since stevedoring labors were highly labor intensive, its cost was a function of the total weight of the cargo. However, lightweight cargo, which was easier to handle, had to pay a conversion of its volume to an "equivalent" weight (1 cubic meter was "equal" to 1 Ton).

When stevedoring services became less labor intensive due to mechanization, the added efficiency was not reflected in the tariff structure. Further on, when containerized cargo appeared, the tariff structure was not modified and therefore each container was charged on a weight / volume basis, regardless of the fact that its handling was not labor intensive. As it was common during the 1970's, tariffs were expected to cover all costs. Despite the fact that by 1981, this system had been eliminated and a separate tariff structure had been developed and implemented for both imports and exports, the existing import tariffs were still set on American Dollars while export tariffs were set on Colombian Pesos. Both of these tariffs did not increase in nominal terms, but the continuous devaluation of the Colombian Peso during the 80's resulted in a large disparity between import and export tariffs which were not even adjusted for local inflation. This system led to another cross subsidy since import cargo helped pay for the increasing costs of exports. As a result Colombian port tariffs were not only among the highest in Latin America, but carried an extra cost to the final consumer of around 4.5%. It was estimated that by the end of the 1980's the cost of port inefficiency was US\$127 million per year, US\$102 million from high tariffs and US\$25 million from freight rates.

b) Financial issues

Financial problems were escalating at a rapid pace. The trend for the period between 1987 and 1989 was worrying as the total loss grew six times in dollar terms, from US\$5.85 million to US\$33.03 million (Table No. 2). For the same period, income decreased by 7% in dollars, while total cost increased by 10% and the administrative costs by 23%.

Table No. 2
Colpuertos Financial Results 1987 – 1989 (US\$ Millions)

	1987	1988	1989
Operational Revenue	141.5	139.8	133.2
Operational Cost	68.4	60.8	68.3
Gross Operational Profit	74.1	79.0	64.8
Administrative Expenses	55.1	63.1	67.7
Net Operational Profit	19.0	15.9	(2.9)
Other Revenue	20.5	13.6	7.1
Other Expense	2.1	1.6	2.1
Earnings Before Taxes Pension and Extraordinary Provisions	29.9	29.1	8.6
Pension Provisions	33.6	38.7	33.0
Earnings Before Taxes and Extraordinary Provisions	(3.7)	(9.6)	(24.3)
Income tax	1.0	1.0	0.4
Extraordinary Provisions	(1.2)	(0.5)	(8.3)
Net Earnings	(5.9)	(11.1)	(33.0)

Source: Ministerio de Obras Públicas y Transporte, Así Cumplimos 1986 – 1990

c) Labor issues

Labor costs were high and showed an upward trend. By the late 1980's Colpuertos' labor costs were four times higher than the industrial sector, and from 1986 to 1989 they increased 23%, in real terms. The employees earned the equivalent of 20.1 monthly wages per year and received a very generous health service. Wages were not subject to any deductions to cover the costs of health services or pension funds.

Overstaffing was also an issue. Although by 1989 the number of employees had decreased by 30%, from about 12.400 employees in 1982 to approximately 8.700, according to government estimates only 4.900 were required. This reduction was the result of a sustained effort from the administration between 1982 and 1986 to curb concessions to the workers unions and introduce more efficient practices. This specific administration gained sufficient bargaining power with the workers and unions after it successfully confronted a union strike with the use of military personnel to operate the terminals. The strike was meant to protest against administrative decisions to reduce personnel but it was dissolved only after a few days allowing the administration to continue promoting personnel reduction initiatives.

The estimates of overstaffing varied as efficiency was very dissimilar among the various terminals. Using Buenaventura as a benchmark (the most efficient port in terms of throughput per worker), the required number of total employees should have been around 6.700, while using international standards the requirement would have been around 3.700. Table No. 3 shows the evolution of employees and retirees during the 1980's.

Table No. 3
Active and Retired Personnel (1980-1990)

	Active	Retired	Total
1982	12,406	6,854	19,260
1983	10,249	7,099	17,348
1984	9,678	7,273	16,951
1985	9,028	7,502	16,530
1986	8,716	7,780	16,496
1987	8,600	8,044	16,644
1988	8,491	8,420	16,830
1989	8,698	8,659	17,357
1990	8,595	8,690	17,555

Source: La Modernización del Sector Transporte en Colombia, IDB,

With very few exceptions the administrations of Colpuertos historically avoided confrontation with the unions fearing the consequences of a national port paralysis and political retaliation. As a result the negotiation of the union agreement generally resulted in new wage increments and fringe benefits as well as operational conditions that restricted crew and equipment optimization, thus eroding profitability over time.

For instance, the retirement age in Colpuertos was lower than the average for the industrial sector, and the number of retiree's was growing. Thus, the burden originated by current portion of the pensions became an aggravation factor to the financial crisis. From 1982 to 1990, the number of retired personnel increased by 30.7%, from 6.854 to 8.960. It is worth bearing in mind that by the end of 1990 the number of retirees (8.960) was higher than the number of active employees (8.595).

The collective labor agreements also included clauses on extra wages, including profit sharing: 5% of the company's net earnings were destined to employees, as well as 20% of the total income of new freight. Other benefits included 15.000 hours per year in each port in paid personal absences. Regarding operational restrictions, some of the clauses established a minimum number of employees and guaranteed a minimum wage for each specific task, disregarding technological improvements; promotions were compulsory and automatic; outsourcing was forbidden; a guaranteed minimum wage was fixed.

d) Operational issues

The financial analysis shows that Colpuertos did not have the capability to modernize its facilities and operating infrastructure. In the period from 1976 to 1984, Colpuertos was not able to execute any significant investments. As a consequence, during the late 1980's Colpuertos was only able to provide port services to self-sustained ships and was not capable of receiving, handling and storing the increasing number of containers that the international trade was demanding. A US\$60 million investment program partially funded by the World Bank was largely delayed because of Colpuerto's inability to provide the agreed share of the programmed investments

(equivalent to 40%). The program was originally scheduled to take place between 1985 and 1989 but by 1989 less than 10% had been executed. Furthermore, even if funds had been available, Colpuertos administrative capability represented a serious challenge to any modernization effort.

Given the technological lag, containers only started to play an important role by the late 1980's under non optimal operating conditions. As an example, containers were unloaded while on the berth and then returned back empty to the ship.

Even though estimations showed that there was excess capacity in the ports significant delays and congestion existed. This was mainly caused because of local practices induced by collective labor agreements such as: no port service on Sundays or holidays, and shift and lunch time procedures that created discontinuity in the service. Table No. 4 shows, for each port, the difference between the theoretical and the actual availability of the berth. Of all the time spent by the ship in the port (6.5 days), on average only about one third was effective working time.

Table No. 4
Berth Occupancy and Idle Time in 1989
(%)

	B/quilla	C/gena	S/Marta	B/ventura
Available Time	54.5	15.0	30.2	20.4
Occupied Time	45.5	85.0	69.8	79.6
Working	10.2	24.8	26.0	23.5
Idle	35.3	60.2	43.8	56.1
Total	100.0	100.0	100.0	100.0

Source: Reestructuración y Privatización de Servicios de Transporte en Colombia, IDB, April 1992

e) Interest Groups

In general terms, it can be argued that the existing Colpuertos employees at the time were the only group that directly benefited from the pre-reform situation. As discussed before, their wages were about four times higher than the industrial average, and through the collective labor agreements they had managed to establish clauses that favored their periodic increase. Additionally, through their labor unions, they succeeded in maintaining a monopoly, and securing their stability and job promotions. Finally, they benefited from free health services and generous retirement benefits.

Port unions and national associations of workers had also benefited from the situation at a political level. During the 70's and part of the 80's decade port strikes were commonly used as a factor of intimidation in discussions with the administration and the national government. A few of these resulted in strikes that were very harmful to the economy and especially to port users. This ability gave the union leaders greater political power at the local and national levels to intervene in political and economic debates and even to influence appointments for public posts to some extent.

Other interest groups such as local politicians and congressmen did play an important part in the process. Traditionally, local politicians that supported the unions had received their electoral support. This support was important to guarantee subsequent reelections and allowed them to have some control of bureaucratic nominations within Colpuertos. The potential reaction of congressmen and local politicians had been seen as a substantial impediment to undertake structural reforms until 1990 when the Gaviria administration initiated the reform.

On the other hand, given that the tariffs were cost based, all the inefficiencies became a pass-through cost to the consumer of around 4.5% of the price of the goods. In this sense, Colombian consumers and exporters were the main interest groups affected by high tariffs and port inefficiencies. In turn, industries focused on import substitution enjoyed an extra degree of protectionism from this situation. On the other hand, exporters were not as severely impacted as port tariffs were partially subsidized by imports but inefficiencies still accounted for reduced competitiveness in international markets.

Although interest groups such as manufacturers, shippers, importers and exporters were totally aware of the problem, and the matter had been the subject discussions at a general academic and political level, none of these groups had directly assumed a sponsorship role to promote a radical institutional change. To some extent, users had learned to live with port inefficiencies and restrictions, most of which were passed on to the consumer. In a fairly closed economy, whose dependence on external trade was lower than other nations, port inefficiencies could be interpreted as an extra import duty to local manufacturers. On the other side, exporters had been accustomed to pursue other mechanisms to promote exports, such as direct financial subsidies or a favorable exchange rate between the Colombian Peso and the American Dollar. Furthermore, this reform resulted from a government led initiative to boost foreign trade but the involvement of potential beneficiaries was extremely passive. In general the private sector supported the reform but only became actively involved when the government set forth the conditions for private participation in the administration and operation of the ports late in the reform process.

(ii) Reform Genesis

The reform was undertaken in the early 1990's when a new president was elected and four key factors came together:

- The administration that ended in 1990 had started reforms in other sectors like the railways and initiated discussions around the port sector. Although no specific actions had been taken in the ports sector, the case had been under close scrutiny and a consensus about the need to implement a drastic reform had been reached at the governmental level.
- The decision to open the economy required major improvements in the provision of services that in many cases were managed by the public sector and privatization had become the dominant line of thought for overcoming operational inefficiencies.
- The incoming administration took office with unprecedented level of support from the public opinion and mainstream political sectors after an election that was preceded by very unique circumstances.

- Fiscal concerns related to Colpuertos' increasing deficits had began to generate concern as it was evident that the operation could no longer be self-sustained and that government funding would be required in the short term.

At the end of the Barco administration (1990) when the country embarked in an initial effort towards the opening of the economy, it was clear that the existing operating model of the maritime ports was one of the main problems in the import export value chain. The National Planning Department –DNP– and the Transport and Public Works Ministry -MOPT-, had prepared a series of working documents that showed the inefficiency of the system and consequently had discussed several reform options. Although the liquidation of Colpuertos was considered, the Barco administration chose to restructure the company and to move towards an operating scheme where public and private operation would be allowed. The proposed program consisted of a series of actions that are summarized below:

- Decentralize the existing terminals both operationally and financially – in order to eliminate cross subsidies and enable efficiency measurements in each port separately
- Reduce the role of the holding company (central office) to tariff setting and supervision, financial administration of existing loans and general planning
- Renegotiate critical clauses in the labor agreement that prevented third party operations in the existing ports
- Initiate a work force reduction plan of 2,150 employees
- Ease regulatory and legal conditions for private investment in existing and new terminals

This solution was intended to introduce competition in the system while avoiding the political cost of liquidation but it was never implemented as the presidential period ended only three months after this decision was formalized. It is worth to note however, that the discussions that lead to this recommendation served to prepare the environment in political circles, the private sector and technical staff within government agencies for the reform program that was finally adopted.

The new administration took office in 1990 with sufficient political clout to initiate a much more comprehensive and aggressive reform. In 1989 presidential candidate Luis Carlos Galán was killed during a campaign rally. Galán, a young politician from the liberal party, had built strong public support for his platform which called for a firm stand against drug traffic, corruption and bureaucracy. At the time of his death, Galán held a considerable lead in the polls. Cesar Gaviria, one of the key members of cabinet for the incumbent government was designated by the liberal party to succeed Galán as its presidential candidate. Gaviria summoned Galán's supporters and won the elections by a wide margin. These circumstances gave the new president enormous support to undertake reforms aimed at fighting corruption and restructuring the state.

The economic outlook that the new administration presented was the basis for a deeper and more structural change in the growth model. After a steady rise in GNP during the 1970's with annual growth rates averaging 5.8%, the Colombian economy slumped in the 80's decade when average growth rates fell to around 3.4%. According to the new government's diagnostic, the fundamental reason for this inability to

maintain elevated growth rates in the long term was the intricate system of barriers that isolated the economy from the rest of the world. In particular, foreign trade as a percentage of GNP had been falling steadily in contradiction to the pattern that high growth economies had followed throughout the previous 20 – 30 years. In addition to direct barriers such as duties and import licenses, the high costs of transportation imposed a serious restriction towards increasing imports and exports. This particular situation had been faced by other countries attempting to increase the international exposure of their economies in recent years. Such experiences pointed towards privatization and competition as the most effective means to attain higher efficiency in the provision of public services and the operation of infrastructure.

On the other hand, the financial situation of Colpuertos was becoming unsustainable. As it was discussed in the Economic Development Plan of the new government the financial situation in Colpuertos was critical. In the last decade Colpuertos's financial results presented losses in 7 out of the ten periods with only two positive periods. Table 2 shows that in 1989 Colpuertos' losses amounted to an unprecedented \$33 million. Recent estimates showed that the direct cost of cargo mobilization was close to total operational income and that increasing pension obligations would require cash transfers from the Central Government, for the first time in the history of the company, within the following 3 to 5 years.

(iii) Key Reform Changes

Under the circumstances described above, the port reform was aimed at improving productivity and easing transportation costs in support of the new economic and political model. In that sense, the key reform changes had to create conditions to introduce competition and attract private sector investment in order to modernize the existing infrastructure, to reduce the technological lag and enhance competition among the different ports. Law 1 of 1991 was the main regulatory instrument used to implement the reform. Three key elements determined the need for a law to enact this decision:

- The creation of Colpuertos and the delegation of the Nation's port infrastructure to the state owned company had been subject of a law and required a similar act to be reformed
- Other aspects of the port system involving coastal land use, the creation of new state agencies and the institutional framework for the new model required reform of previous laws
- The government needed legal support to terminate the workers contract and determine the conditions for economic compensations

Previous attempts to fix Colpuertos had stopped short of any reform that required congressional approval mainly due to fear for the political cost of such a debate. However, as it was mentioned earlier, the overwhelming vote that president Gaviria received in the election and the general political scene at the moment provided the appropriate grounds for the law. President Gaviria announced the port reform and the hand over of the operation to the private sector in his inaugural speech. Once in office, the new administration decided to privatize the operation of the public ports and included this reform in a set of critical bills that the President intended to pass in the first legislative term. The law was approved in December 1990, less than 60 days after it

had been submitted to congress and only with minor changes to the original text. The new model set forth by the law was based on six key elements:

- **Liquidation of Colpuertos:** The law established a three-year deadline to liquidate Colpuertos and put the new model into operation. It also determined that the Nation would assume the pension liability of Colpuertos through a fund created for that purpose. The fund was to be financed with national budget and the sale of assets that were not essential for the operation of the port facilities.
- **Creation of the Superintendencia General de Puertos (General Ports Superintendency):** The law created the Superintendencia General de Puertos – SGP- that would assume all responsibility for evaluating, awarding and administrating all port concessions. The SGP was also responsible for assuring open access to the public terminals by all operators, resolving claims from users and enforcing technical standards. In addition the SGP was required to maintain a statistical database of the Colombian port system.
- **Creation of Regional Port Societies to operate public terminals:** The law authorized the creation of Regional Port Societies in which the Nation, the departments and the municipalities could participate. It also directed the government to promote private participation in these societies. The law determined that the Regional Port Societies would receive the existing infrastructure to operate it under concession.
- **Creation of stevedoring companies:** Under the new scheme, port operations were to be in charge of privately owned stevedoring companies that would have open access to the terminals operated by the SPR's. The law determined that stevedoring companies would not be subject to any kind of condition to be allowed to operate on public ports.
- **Definition of the legal foundation to award and operate port concessions:** All public and private port concessions were made subject of a compensation payment to the Nation for the use of coastal zones and public infrastructure. The methodology to establish the amount of the compensation would be established by the government.
- **Institutional framework:** In addition to the creation of the new Ports Superintendency, Law 1 revised the institutional framework for policy making and planning in the port sector. Under the new regime the Consejo Nacional de Política Económica y Social –CONPES– (an economic advisory council to the president) was required to approve public policy regarding maritime ports while the Ministry of Transportation and Public Works –MOPT- was responsible for proposing changes and updating policy definitions every two years in a Port Expansion Plan. These plans should establish the requirements for new port zones, the investments required to maintain an adequate level of service, the methodology to set tariffs under the principles of the Law and the methodology to establish the compensation for port concessions. The Plans required the validation of the National Planning Department and the approval of the CONPES.

The Law also conferred the President special powers for a 12 month period to issue additional regulation in the matters subject of the Law.

B. Managing the Reform Process

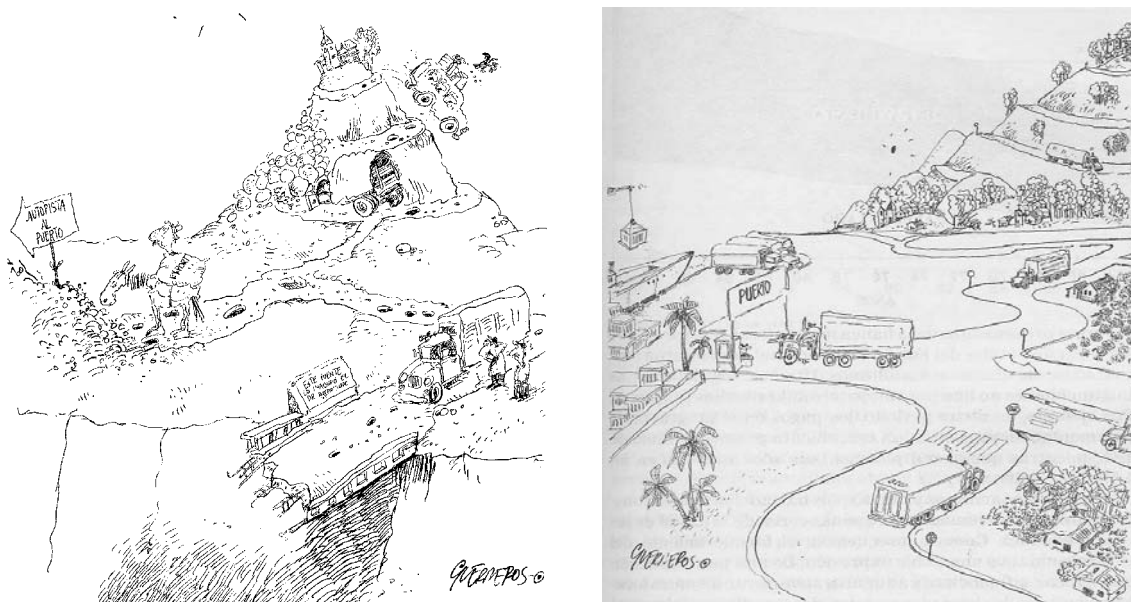
(i) Reform formulation

During the months following his election, President Gaviria's aides began the preparation of the economic program for the next four years. The maritime port reform was the first of a series of structural reforms that were presented to Congress in the first year of the new administration as part of the effort to achieve a greater degree of openness in the economy. As a result, at the time the port reform project was presented several reform laws were being discussed in Congress including the following topics:

- International trade tariff and authorization regime
- Foreign exchange regime
- Foreign investments regime
- Financial sector structure and regulation
- Labor reform

The need to set an ambitious improvement plan to upgrade transportation infrastructure and port services received a very high priority among these initiatives (see Figure No. 2).

Figure No 2
“Highway to Port Before and After”
From the National Development Plan 1990 – 1994



For the new administration however, the plan set forth by the Barco administration to improve port efficiency would take years to implement and did not guarantee that a major change could be achieved. The World Bank also supported this

position after all efforts to improve the performance of Colpuertos through the loan program that was underway since 1986 proved fruitless. Indeed, throughout this process World Bank officials who met with the new economic officials insisted in the need to consider privatization models as an effective solution to the inefficiency of the port system.

Even though the liquidation of Colpuertos seemed to have full support in the new Government, the private sector and large sections of Congress, the approval of such a law presented difficulties due to possible opposition from specific political sectors, especially those representing the port regions and the interests of the entrenched Colpuertos workers in Congress. In the past, traditional politicians from the coastal zones of the country had received bureaucratic concessions in Colpuertos and also benefited from political support from the company's union leaders.

From the standpoint of the Government, the main challenge was to devise a privatization scheme that could be put in place in a short period and that would render the expected benefits. Formulation of the privatization strategy had to meet four key objectives:

- The new system had to be implemented in a short period – the Government expected to see results by the end of the presidential period
- The new model should result in higher efficiency and reduced tariffs
- The end benefits from efficiency gains should be perceived mainly by importers and exporters of goods
- Private participation should be encouraged in new investments and the operation of the facilities

These objectives were apparently more difficult to achieve given the limited knowledge that existed at the time regarding private sector participation processes both at an individual and institutional level. Previous experience in Colombia was limited to the restructuring of the railway system in the Barco administration, which was still underway when the port reform began and therefore still had an uncertain outcome. However, while the railway system was almost in disuse at the time of the reform, maritime ports were, as they still are, a critical node in the international transportation network.

Initial efforts led by DNP since the final months of the previous government focused on analyzing international experiences in public ports reform and estimating potential benefits from reform. Other Latin American countries offered limited applicable experiences, mainly comprised by cases in Venezuela, Mexico, Costa Rica and Chile. Among these, only the Chilean case involved a comprehensive reform including institutional changes at the government level, restructuring of an existing state owned company and the redefinition of the operational model for public terminals.

After his inauguration, the new president assigned the DNP the task of designing a new model and preparing a law to be presented to Congress. It is worth noting that the DNP staff that took part in the reform formulation had little experience in processes involving the transfer of the administration and operation of public infrastructure to the private sector. With the support of the World Bank, DNP hired a Chilean consultant who had taken part in the definition and implementation of the Chilean port reform. The

consultant was asked to analyze the Colombian situation and provide guidelines on how to implement reform in light of the Chilean experience, including institutional, operational and regulatory recommendations. The results of this effort became available before the first sixty days of the new government and were used as a technical framework for the rest of the formulation process. The basic recommendations can be summarized as follows:

- Liquidate the state owned operator Colpuertos – this was a clear deviation from the Chilean experience where the incumbent operator (Emporchi) was only reduced to a terminal administrator
- Promote the creation of stevedoring companies among cargo agents, shipping and transportation companies, custom agents and any other private sector agents with interests in maritime ports – these stevedoring companies were to be allowed open access to public terminals
- Sell or give in concession the existing port infrastructure
- Create a new public agency to enforce open access to public terminals, manage maritime port concessions and promote competition among operators

Another challenge for the Government team was to build a compelling financial case for reform before Congress and other interests groups. In this respect, lack of accurate information became a challenge in estimating potential benefits. In the first place, information regarding time of employment with Colpuertos and other public agencies that was needed to determine eligibility for compensation was inaccurate and, in many cases, incomplete. Second, there was no consensus about the interpretation of the union agreements regarding severance conditions or the extent to which a law could modify the terms of this agreement. These two factors created great uncertainty regarding the Nation's liability with the existing labor force, the magnitude of possible severance payments and the present value of potential savings. However, a broad understanding of the potential savings to the economy from higher efficiency in port services and the opportunity to curb future labor liabilities, helped to make a strong case for reform.

During this phase of the reform process very little input was received from other interest groups. In the previous months industry associations, shipping lines and other players had sponsored discussions around the need to improve port efficiency in different events but these efforts had not gone beyond a mere academic debate. On the other hand, neither the workers nor the unions had established a concrete posture towards the initiatives to improve port efficiency other than their steadfast defense of the existing labor agreements. This passive attitude may be linked to the general belief among workers that any attempt by the administration to layoff a large number of Colpuertos employees would be deterred by its immense financial and political cost.

It also may be argued that workers didn't expect the Government to launch a reform initiative in the first six months of the term or that it would be approved in congress without a difficult and long lasting debate. Government officials were aware that potential sources of opposition were mostly unprepared and decided to move forward in the reform process rapidly and with almost no consultation with other interest groups.

By early October the Minister of Public Works and Transportation became involved in the preparation of the bill that was to be presented to Congress. Also, Hugo Palacios Mejía, a legal consultant, former Finance Minister and Director of the Colombian Central Bank, was hired to produce the text of the port sector reform law. His participation was deemed of importance not only because of his economic and regulatory expertise, but also because of his reputation and credibility among key sectors of Congress and the general public. Together with DNP, the Ministry and a small group of his closer aides held several working sessions to discuss and adjust the initial drafts of the law.

Perhaps the most important contribution to the model in this phase was the definition of the mechanism by which the existing infrastructure would be operated by the private sector. Although several forms of privatization were considered, the model that was finally adopted achieved the desired balance between retaining some degree of control on the side of the Government and promoting private sector initiative. In particular, at the time the Government had three critical considerations that led to the privatization model that was finally included in the bill to Congress.

- Uncertainty about the real interest of private investors in the port infrastructure – the lack of experience in private participation in infrastructure made it difficult to assess the potential interest of private investors for running port infrastructure. In addition, the inefficiency and corruption that characterized the existing system seemed to be a major deterrent for private investors to become involved.
- Concern of creating a new form of monopoly in hands of private parties – since the public port infrastructure is in many ways a natural monopoly, the government team was reluctant to move towards a model which did not include safeguards against a private monopoly in the port system.
- Perceived need to align the interests of different groups – the operation of the port infrastructure was critical to various interest groups and the Government wanted to make them part of the new model. More than a political consideration this concern aimed towards attaining support from critical sectors that were already part of the system.

The resulting model called for mixed economy societies to take charge of the existing facilities and related infrastructure. These societies would have equity participation from the National, Regional and Local governments, while the private sector would be invited to invest without a preset limit. In addition, the Nation and the Local Governments could sell their participation in these societies at any time. In this way, the port societies were guaranteed to exist even if there was no private interest but, at the same time, the private sector could participate to the extent to which investors decided.

The final discussions of the drafts included representatives from the Finance Ministry –MHCP- since the liquidation would clearly have a significant impact on the Central Government's finances during the coming years. The proposal elaborated on most of the issues set forth in the technical framework but also introduced new items derived from the discussion within the team and the need to regulate more coherently the whole maritime port operation.

(ii) Reform implementation

Two distinct phases can be identified in the implementation of the reform. These phases are defined by the focus of the tasks that were being carried out, the resources that were involved and the differences in the leading roles within the government.

First Phase: Subsidiary Regulation and Detailing

The first phase came after the approval of the law and comprised the majority of the subsidiary regulation to the law as well as the detailed design of the key elements of the reform. During this phase the government team was still restricted to a small group among which the issues and decision regarding the model were discussed. The participation of other interest groups was limited to a few meetings with Colpuertos employees and local chambers of commerce. These meetings served to present the basic concepts set forth in the law and to raise critical issues from the side of the workers and the private sector.

After the approval of the law, the Government set up an informal committee with members of DNP, MOPT, MHCP and Colpuertos to manage the implementation of the reform. Although the Committee did not have a rigorous line of report, one of its main responsibilities was to raise issues that needed approval or validation at the higher ranks of the respective Ministries or other branches of government. In this sort of situation, each of the members would raise the issue within its respective agency while the MOPT would take the responsibility of resolving the issue at hand and coordinating the discussions. Thus, a major change in the approach for this phase with respect to the formulation was that the lead shifted from the DNP to the MOPT.

The MOPT made a contract with two external consultants to assist the Minister in the coordination of the reform process and the detailed formulation of the new model. The consultants were in charge of programming the Committee's activities, documenting issues for discussion and submitting them to the Minister. The choice of these specific consultants was also motivated by their experience in the restructuring of the national railway system which, at the time, was the only experience of this sort including private participation to a limited extent.

One of the major activities in this phase was to plan, contract and supervise a number of studies that were required to specify different components of the model. These studies were funded mostly through a major institutional reform loan from the World Bank that was secured in the beginning of the new administration. Further legal consulting was also required in this phase especially for the creation of the Superintendencia General de Puertos and the expedition of all the subsidiary decrees. A team of legal consultants who had also been part of the restructuring of the National Railway System was hired to assist the MOPT in the preparation of these decrees. This team reported directly to the Minister and worked closely with the Interinstitutional Committee to produce the drafts and final versions of the new regulation.

Second Phase: Transition to the New Model

The second phase covers all the execution of the major changes including the liquidation of Colpuertos, the formation of the SPR's and the first proceedings of the

SGP. In this phase the SGP and a new management team in Colpuertos took the day-to-day responsibility for implementing the mandates of the law and the subsidiary decrees. The MOPT maintained the responsibility for coordinating the reform and resolving issues issued with other Ministries and Government agencies. Also throughout this phase the team of consultants hired by the MOPT to lead the process remained active in the promotion and structuring of the new model for the public ports.

In the second semester of 1992 a new Minister of Public Works and Transportation was appointed. The new head of the MOPT was responsible for designating the first Superintendent. As a transitional measure it was decided that the SGP and Colpuertos would be maintained under one person's direction. This arrangement was supposed to provide the SGP with backoffice and financial support until it began receiving funds from the fees that were established in the Law for that purpose. This particular decision possibly allowed for better coordination between the liquidation of the existing company and the creation of the new system. However, in light of the results of the liquidation process it can also be argued that the liquidation process did not receive the appropriate level of attention from the government.

The implementation process is better understood by analyzing separately each one of four main components:

- a) Expedition of the 1991- 1993 Port Expansion Plan
- b) Creation of the new SGP
- c) Liquidation of Colpuertos
- d) Creation and promotion of the SPRs among the private sector

a) Expedition of the 1991 – 1993 Port Expansion Plan

In September 1991 the Government issued the first biannual Port Expansion Plan. As established in the Law, the Plan provided a general definition of the coastal zones that were appropriate for port development, the investments that the Nation would make in dredging in the following years, a general methodology for establishing tariffs and the specific methodology to determine compensations for coastal zone use for maritime port concessions. The plan also outlined the next steps in the transition to the new port system and the liquidation of Colpuertos. Since its first version, the plan has become an important instrument to insure that policies regarding port sector development are periodically updated and discussed at the higher levels of the government.

Later versions of the Plan have made detailed definitions of the investments that the Nation will undertake and revised the formula to calculate the compensations that port societies are required to pay for the use of coastal zones as well as the use of infrastructure belonging to the Nation. Lately the Plan has focused on determining the zones in which new port developments may be established, especially for coal exports that have grown substantially with the discovery of new reserves in the northern coast. This issue has become a critical concern to the Government given the environmental impact of the operation of coal ports.

b) Creation of the New SGP

One of the most important studies carried out in the first phase of implementation was the design of the operational and organizational model for the SGP. This study provided the basis for the expedition of a series of decrees that detailed the responsibilities, organizational structure and attributions of the new agency. The SGP was conceived as a small technical group with the capabilities to award port concessions and supervise compliance of the port societies and operators with the regulation. The SGP was also granted funding by the law through a fee to be charged to the operators of port infrastructure. The organizational design comprised five major areas:

- Office of the Superintendent
- Secretary General
- Technical direction
- Port Planning direction
- Advisory Committee

The first stages of the SGP were dedicated to assess and award the first port concessions as specified by Law 1 and the subsidiary decrees. With the support of external consultants the SGP structured the first concession contracts by mid 1993. By this time the SGP also had produced a tariff methodology that was later modified to allow supervised autonomy in 1997.

The SGP was also modified in 1999 and later on in 2003. The first major reform expanded the responsibilities of the SGP to all the transportation activity and modified its name to Superintendency of Transportation and Ports (STP). A reform passed in 2003 removed all the responsibilities that the SGP had in regard to supervision of port concession contracts, transferring them to the newly created National Concessions Institute –INCO. INCO is now responsible for awarding and managing all existing and future infrastructure concessions but the impact of this change is still unknown as the agency has only a few months operating. After this last reform the responsibility of the STP is now limited to the supervision of port operations and service, insuring the financial stability of port societies as well as controlling open access to stevedoring companies or any other behaviors that may limit competition in public ports.

An assessment of the performance and impact of the SGP shows that since its inception it has focused in the administration of concession contracts but it has failed to build a true capability to supervise port operations. Initial budget constraints and the recent appointment of new responsibilities have hindered an appropriate level of attention to this critical capability. Today the role of the Superintendency has been limited to insuring compliance of the port operators with the technical conditions and the rules regarding practices that restrict competition. Going forward the ability of the Superintendency to establish itself as a valid authority will be critical as the trend towards consolidation of port operators and vertical integration of SPRs becomes stronger.

c) Liquidation of Colpuertos

The liquidation of Colpuertos within the established deadline also required considerable attention from the government, especially in regard to the conditions to layoff personnel. During the first stages the Ministry took direct responsibility for the conversations with the unions and workers. Demonstrations and protest meetings were common in the ports after the expedition of the law. However, it is worth noting that, although a few attempts were made by the unions to make the liquidation of Colpuertos the subject of debate, the discussions rapidly trickled down to the economic conditions for retirement. This behavior is probably explained by the forcefulness imposed by the law about the liquidation of Colpuertos.

The existing union agreement expired in 1990 and the MOPT, together with the administration of Colpuertos agreed to renegotiate a new one. The discussions during this phase were mainly focused on criteria to determine eligibility for pension and the final agreement allowed for more employees to qualify for pension rather than a severance package. The new union agreement was finalized in June 1992 but some sectors of the government insisted that this negotiation was illegal in light of Law 1.

By initiative of MHCP, and using as a base the special faculties granted to the executive by Law 1, the Government issued Decree 35 in 1992 which established a different set of criteria to determine which workers were eligible for pensions. In response to a request from the MHCP, the high courts ruled that the 1991 agreement was not valid since it was signed after the expedition of Law 1. Table No. 5 shows the differences between applying the union agreement and Decree 35 with respect to the number of people that would have been retired with a pension.

Table No. 5
Eligibility of Colpuertos' Employees to Pension or Severance Based on Union Agreement and Decree 35 as of Nov 1999

Eligibility	Union Agreement	%	Decree 35	%
Pension	4,350	64	1,250	19
Severance	2,400	36	5,500	81
Total	6,750	100	6,750	100

Source: La Modernización del Sector Transporte en Colombia, IDB

The discussion surrounding the legal foundations to layoff Colpuertos personnel raised intense debate within the Government, especially between the Finance Ministry and the MOPT. The MOPT was against using the special faculties Decree, as it believed that the Law did not provide a solid legal base to overrule previous union agreements and, thus, could lead to future lawsuits against the Nation. The MHCP on the other hand, pushed for the application of Decree 35 as it represented annual savings to the Nation worth approximately US\$20 million in pensions against and additional one time additional cost of US\$18 million for severance payments.

This discussion took more than one year to be resolved and, as a result, the beginning of the liquidation process in Colpuertos was delayed. At the end, the position of the MOPT prevailed and the union agreement was accepted as the basis to layoff personnel. This decision was thought to ease pressures from the workers as it meant

very favorable retirement conditions for an important portion of the existing work force. As it turned out, this concession did preempt almost all potential opposition from the workers, but also ended up fostering rampant corruption in the settlement of pensions and severance payments that amounted to several times the estimated expected cost of the liquidation.

In total 8,595 workers were retired, 84% of which received pension benefits and 16% received severance. The proportion of retired personnel with pension benefits was notably higher than any other liquidation process in the past. As a result total cost of pensions amounted to US\$875 million while severance payments totaled US\$90 million. Although the Government provided some assistance to the retired workers to retrain them and help them invest their compensation packages, apparently the effort was not consistent enough to produce clear impact. Most of the workers did not find employment in the new operators or the SPRs. This situation became especially critical in Buenaventura where the liquidation of Colpuertos together with a general downturn in the regional economy triggered unemployment to levels well above the national average.

The settlement of severance payments and pensions became the single most critical drawback of the whole reform process. In 1992 the Government created Foncolpuertos, as mandated by Law 1, to manage the pensions of all the retired workers. Foncolpuertos received all the requests that had been submitted to Colpuertos and assumed responsibility for the process thereafter. Although it had been anticipated that managing the liquidation process would require strict controls and close overview, after the creation of Foncolpuertos, this part of the reform did not receive the same degree of attention from the higher level of Government as other components. In the period from 1993 to 1996, the Government failed to stop and uncover corruption behind a landslide of lawsuits that elevated even further the cost of the pensions.

Poor access to information and the complexity of the calculations nurtured fraud in Foncolpuertos. The union labor agreement considered a wide diversity of variables to determine the pension amount for a retired worker and made the calculation extremely complex. In broad terms severance payments and pensions depended on the level of income and the time of employment of the worker in Colpuertos. Both variables were tampered in the settlement process, as the required information was not readily available and required manual processing to a great extent. This situation encouraged the emergence of a vast corruption network that included the former employees, auditors, external lawyers, labor judges and Foncolpuertos's personnel. By altering documents and deliberately introducing flawed calculations in the settlements they were able to increase the value of the payout several times. Moreover, after the initial requests had been settled, Foncolpuertos admitted and lost numerous lawsuits that further increased the amounts of the pensions. Although this subject has not been totally clarified it has been calculated that this fraud may have cost anywhere between US\$2.0 billion to US\$3.0 billion. Today, criminal investigations are still underway. A few of the individuals implicated have been sentenced, and the Nation is attempting to recover the excess payments.

d) Creation and promotion of the SPRs among the private sector

As the liquidation of Colpuertos evolved the new port system started to gain momentum. During the first year after the expedition of Law 1 MOPT began summoning regional players to promote among them the creation of SPRs. The lead role in this effort was assumed by the consulting team in charge of coordinating the implementation. They did so by distributing basic information among potential candidates and approaching local authorities. The local chambers of commerce also took an important role in the first stages of promotion by organizing meetings with members of the Government Committee, regional governments and businessmen to explain the scope of the reform and the opportunities it generated. Later on, these meetings became the seed of the new SPR's in each city. However, many questions regarding the structure and operation of the SPR's and even about the certainty of the liquidation of Colpuertos were still unresolved and prevented the process from progressing any further at this stage.

In the second phase of implementation the creation of the new SPR's and stevedoring companies followed a successful track. Local Governments and the private sector rapidly assumed the lead in the creation of the SPR's (Table No. 6). The general objective for the Government in this task was to include all the key groups in the new SPR's in order to align their interests. Steering meetings were held over a period of one year in each of the main ports and a set of rules was established by the Government. One of these rules required that no participant would hold more than 3% of the ownership of the SPR except for the Nation, the Departments and the Municipalities that could hold up to 30% between them. This measure was intended to guarantee a diversified ownership.

The initial conception of the SRP's called for the Nation to transfer the infrastructure to the SPR in exchange for equity. However, preliminary valuations, based on reposition value, indicated that the infrastructure was worth so much that private investors would have to incur in significant capital investments to match the government's equity position, which in turn would have exceeded the requirements to finance the proposed operations and investments. This approach reflects the limited knowledge that existed regarding private participation schemes that could have solved this apparent obstacle. This issue raised a controversy between MOPT and DNP about the form of participation of the Nation in the SPRs as DNP favored a scheme that granted control to the private partner. After a discussion among the Ministries the Government opted for a concession type model in which the SPR received the infrastructure for a fixed time in exchange for an annual payment and the obligation to reinstate the infrastructure. The specific parameters to determine the amount to be paid by the concessionaires were determined through a study commissioned by the DNP.

The private groups that had organized by the time were expected to present proposals that would be evaluated by the SGP. The efforts conducted by the Government to bring all the interest groups together in one SPR for each port resulted in that only one proposal per port was presented except for case of Buenaventura. In this case the Government had to produce a more elaborate bidding system that narrowed the conditions regarding the distribution of the ownership in the new SPRs. In this respect,

the Government required that specific percentages of the equity were allocated to various interest groups such as ex-workers, shipping companies, exporters and importers. The proposal that better fulfilled these requirements was selected to form the SPR to manage the port of Buenaventura.

Table No. 6
Ownership Composition of the SPR's in 1993

Terminal	Equity Participation			
	Nation	Department	Municipality	Privates
Cartagena	2%	2%	13%	83%
Santa Marta	2%	13%	10%	75%
Barranquilla				100%
Buenaventura	2%	13%	1.5%	70%
Tumaco			22.75%	77.25%

Source: Reyes Hasley, Patricia, Why Privatization? An Assessment of the Colombian Ports, 1998

Private ownership of the SPRs was typically in the hands of shipping companies, cargo agents, large exporters, local investors and, in the case of Buenaventura, ex Colpuertos employees who totaled 9%. As it turned out, some groups managed to attain control of more than 3% by splitting their participation between different affiliated companies. The property of the SPRs has changed since and some of the original investors have attained buffer shares of the equity. Municipalities and Departments have sold most of their equity in the SPRs to cash in their investments.

In August 1993 the control and operation of the ports was transferred to SPRs. The switch to the new operating model did not present any major problems and the new model rapidly began to render benefits in terms of efficiency and costs to the users of public port services.

B. Impact of Reforms

The overall benefits of the reform are very much in line with the objectives set forth when the process was conceived, mainly reflected in efficiency gains. The steady rise in foreign trade during the last decade may have been hampered if the port reform had not been implemented. Other positive effects, such as the elimination of uncertainty about the future liabilities with the work force and the elimination of political fortresses can be considered as side benefits.

In general terms it can be said that the port reform resulted in significant benefits to society and the economy as a whole. As it is discussed in this section, the main benefits come from the reduction of total transportation cost due to improvements in the port's operation. In this sense, Colombian consumers have benefited from lower prices in imported goods, and Colombian industry, particularly the export oriented, has become more competitive as a result of the lower tariffs.

Major efficiency gains were observed from the very early stages of the new model. Three different sources of efficiency can be specified:

- **Removal of direct restrictions imposed by union agreements:** Under the new system the operational restrictions imposed by the union agreements were automatically lifted. Such restrictions reduced the working time availability of berths, forced crew overstaffing and prevented the use of mechanical equipment that could significantly increase throughput.
- **Improved incentives for service and efficiency in the operation:** The new stevedoring companies and SPRs provided services in competition with similar companies and other ports. Although some of the new companies were commercially linked to the shipping lines and cargo agents, competition created a natural benchmark in costs and quality of service that forced every agent in the system to pursue efficiency measures. Similarly, although with less intensity, competition among ports created incentives for efficiency as key cargo such as containers could move to alternative ports without a significant impact in ground transportation.
- **Improved cash flows and investments in infrastructure:** The new tariff system allowed the SPRs to recover their operational costs plus a sufficient margin for capital expenditures. The floor and ceiling levels adopted by the SGP resulted in healthy cash flows for the SPRs, which were rapidly reinvested in the form of equipment and infrastructure improvements. The administrations of the new SPRs recognized the potential return of these investments derived from further efficiency gains and did not hesitate to use the available cash towards this purpose.

On the other hand, it can be said that former Colpuertos' workers turned out as the main losers from the reform as most of the employees lost highly rewarded jobs. Estimations show that the total number of employees in the public port system had fallen from 8,595 in 1990 to 3,145 in 1995, the majority of which did not come from the Colpuertos. In addition, the salary conditions for workers in the new system were the same than for the rest of the labor market and thus, significantly lower than the old regime.

Some individuals who received large severance payments had spent most of it after a few years and were left with no source of income. Another group, dominated by the union leaders and activists, were granted pensions that allowed them to retire with a higher standard of living than what they had while being Colpuertos employees. This group, however, may suffer the consequences of the investigations underway, which may imply for them to return a considerable part of their earnings and even facing criminal charges. Recently a judge involved in the rulings against Foncolpuertos was sentenced to 8 years in prison for Fraud. In Buenaventura, a small group of workers who invested in the SPR have directly benefited from the profitability of the port under the new system.

Unions as such, also lost in the process. The undisputable success of the new model partially undermined their cause against privatization and created a strong precedent about the inefficiencies that a union agreement left astray may bring in the provision of public services. The port unions themselves lost their political power in the cities and regions where Colpuertos operated and national labor unions as a whole lost one of their main advocates and allies.

The next sections present a more detailed review of the impact of the reform from six different perspectives:

- Investments
- Operational efficiency
- Maritime freight rates
- Economic cost benefit
- Institutional effectiveness

(i) Investments

Investments in port infrastructure, dredging and information technology has significantly risen since the SPRs took over the operations. Total investments in ports add more than US\$160 million most of which occurred during the first 5 years of the reform (Table No 7). These investments have allowed the SPRs to revamp the facilities, expand container dockage space and acquire specialized container cranes, especially in Cartagena. On the side of the government planned investments in dredging have fallen short of expectations as budgetary constraints have limited the allocation of funds in the past years. To solve this problem, a recent law mandated that the proceeds from the compensations for coastal zone use paid by the port societies should be allocated exclusively for improvements and dredging of port zones.

Table No 7
Investments in Ports Formerly Operated by Colpuertos
1994 – 1999 (US\$ million)

SPR	Civil Works	Dredging	Equipment	Other	Total
Buenaventura	39.7	18.8	12.3	4.3	75.1
Barranquilla	9.1	0.2	6.2	0.0	15.5
Santa Marta	6.5	0.0	6.6	0.2	13.3
Cartagena	30.1	4.9	20.2	0.0	55.2
Tumaco	0.4	0.0	0.1	0.0	0.5
				Total	159.6

Source: Superintendencia de Puertos y Transporte

It is estimated that the stevedoring companies have invested a similar amount in equipment for cargo handling within the terminals. However, recent diagnostics show that stevedoring companies have yet to reach levels of efficiency comparable to international benchmarks. This limitation is apparently connected with the failure to adopt new technologies and also with the restriction imposed on the SPRs to participate in stevedoring operations, which in turn may result in further efficiencies. The convenience of allowing the SPRs to integrate vertically has been the subject of current policy debates.

(ii) Operational Efficiency

Since SPRs began running the public ports, efficiency has improved greatly. Many indicators that have been tracked by the government help to show these efficiency gains. Some of these indicators have improved as much as five times: waiting time and total time in the port, have decreased from 10 days to 1.5 or less. Similarly, bulk throughput increased from 500 to at least of 2.500 tons per ship per day. Table No. 8 shows a few key indicators before and after the reform.

Table No. 8
Comparative Operational Indicators
Before 1993 and 2001

	Before 1993	2001
Average vessel time at port	10 days	1.5 days
Working Hours / Day	16	24
Tons - Ship / Day (Bulk)	500	Minimum 2.500
Tons - Ship / Day (General)	750	1.700
Containers - Ship / Hour	16	45

Source: Superintendencia de Transporte, Estatuto de Puertos Marítimos: Evolución y Desarrollo

Two issues are noteworthy regarding the operational impact of the reform. As Tables No. 9 and No. 10 show, at least for the time related indicators, efficiency gains were realized rather early in the process, and efficiency in handling the cargo varies greatly from port to port.

Table No. 9
Comparative Operational Indicators
1993 - 1998

	Before 1993	1995	1996	1997	1998
Waiting Time / Ship	10	2	1	0	0
Time in Port / Ship	10	4	2	1.5	1.5

Source: Superintendencia de Transporte, Estatuto de Puertos Marítimos: Evolución y Desarrollo

Table No. 10
Port Cargo Handling Efficiency by SPR
(Tons / Hour)

SPR	General Cargo	Bulk	Containers
COLPUERTOS (1990)	6.85	7.04	5.05
Barranquilla	8.03	21.53	6.02
Cartagena	7.97	N.A.	24.75
Santa Marta	26.98	24.72	8.50
Buenaventura	18.70	47.41	18.70

Source: Superintendencia de Transporte, Estatuto de Puertos Marítimos: Evolución y Desarrollo

(iii) Port Charges

According to SGP's figures for 2001 and 1993, the import and export port tariffs have decreased substantially in the period following the reform. Average tariffs for port services in 2001 were approximately \$12.24/ton, which is considerably lower than the \$19.92/ton equivalent tariff for exports and \$34.14/ton for imports. These differences represent reductions of 38.5% and 64.1% respectively. Given that the imports account for almost two thirds of the external trade throughput going through the main four ports, the average reduction has been around 50%. Table No 11 shows that the average container handling costs in Colombia are generally lower than other ports in the region.

Table No. 11
International Container Handling Costs Comparison

Port	Cost / TEU US\$	Cost / Ton	Difference vs Colombia (TEU)	Difference vs Colombia (Tons)
Quetzal	135	12	15	5
Miami	225	25	105	18
St Thomas	120	14	0	7
Limón	238	26	118	19
Cristobal	293	33	173	26
Cortés	127	14	7	7
Caldera	259	29	139	22
Acajutla	100	11	-20	4
Kingston	291	33	171	26
Rio Hana	150	17	30	10
Average Colombia	120	7		

Source: Superintendencia de Transporte

(iv) Maritime Freight rates

An analysis prepared by the administration of the Cartagena SPR in 1999 exemplifies the impact of the port reform in freight charges. This comparison shows how the rate for machinery transported in a 40 ft. container from the US East Coast to the Caribbean coast in Colombia decreased around 70%, from \$7.300 in 1990 to \$2.100 in the year 2.000.

(v) Cost Benefit Assessment

Several studies have attempted to assess the cost benefit relationship of the reform. Although these studies differ in the methodology, scope and time horizon they all coincide to show that the net economic result of the reform has been positive at large. This paper presents the results of three studies and a brief description of the key assumptions and methodologies.

The first assessment was performed by Luis Alberto Zuleta, who took part in the reform process a consultant to the MOPT. Although the detailed calculations and

assumptions used to assess the results cannot be completely tracked, it is the most comprehensive effort available to understand the impact of the reform. This evaluation makes an effort to identify the main sources of benefits and costs and quantifies them, as shown in Table No. 12. The main benefits taken into account are the reduction of the SPRs tariffs and the vessel's idle time.

On the cost side, transaction costs including the liquidation of Colpuertos were quantified. The evaluation considers the net cash flows from 1993, the year when the SPRs were created, to 2001 using 2001 as the base year for discounting. Under these conditions estimated total net benefits amount to US\$11.732 million.

Table No. 12
Total Benefits Estimate from Port Reform
1993- 2001

	NPV 2001 (US\$ Millions)
New Revenue and Savings	
Tariff reduction	1.951.2
Reduction in idle times at port	12.060.9
Net revenues from compensation	22.6
Costs	
Total transaction costs	2.302.7
Total	11.732.0

Source: Luis Alberto Zuleta, ¿Por qué ha sido exitosa la reestructuración portuaria en Colombia?

In respect to tariff reduction, the evaluation compares the average of the SPRs tariffs, with the weighted average of the existing Colpuertos' tariffs in 1992. This comparison only considers the charges related to the use of infrastructure and does not include the benefits from the stevedoring companies. These benefits are estimated to be US\$1.950 million.

The vessel's idle time benefits account for 86% of all benefits. These were calculated taking into account the number of vessels arriving to the SPRs ports and calculating their savings as a result of the operational efficiency gained in terms of total delay, compared with the existing figures in 1992. The estimated benefits are of US\$11.732 million.

The main transaction costs to the government are associated with the lawsuits filed against Foncolpuertos and lost by the Government. Their estimated cost is US\$2.302 million.

The second assessment was performed in 1999 by the SGP and shows a net result of \$5.141 millions. Costs are estimated at \$1.219 million, of which the majority corresponds to the estimated net present value of pensions worth \$873 million. On the other hand, benefits amount up to \$6.179 million, mainly generated by savings on imports (\$4.368 million), as shown in Table No. 13.

Table No. 13

Cost-Benefit Analysis
(US\$ million)

	Cost	Benefits	Net Benefits
Severance payments	90		
Pensions	873		
Investments in rehabilitation	75		
Maintenance dredging	120		
Investment in Buenaventura	50		
Investment in Barranquilla	11		
Total Costs and Investment	1.219		
Compensations for Coastal Zone Use		39	
Compensation for Infrastructure Use		40	
Income Tax		83	
Other Taxes		20	
Total Income		181	
SPRs and others investment		116	
Savings to Exports		574	
Savings to Imports		4.368	
Overcost reduction		1.121	
Total Savings		6.179	
Net Benefits			5.141

Source: De Colpuertos a las Sociedades Portuarias: Los Puertos del Caribe Colombiano 1990 – 1999

The third study was performed by the administration of the Cartagena SPR and focuses on the benefits for containerized cargo during the period 1994-1999. The estimate is based on the difference in port charges and the observed volume of containers mobilized through the SPRs. The estimated net benefits amount to \$4.050 millions.

In spite of the differences in assumptions and methodologies these assessments show that the port reform has brought significant benefits for exporters and importers of goods. However, from a broader look at the values chain of foreign trade, there are still critical hurdles that hinder competitiveness in Colombia. Customs procedures have not fully adapted to ease the flow of containers, thus imposing the need for additional time in ports. Also, the effort to recuperate the national railway system for freight transportation has lagged and the observed results have not been satisfactory. Lastly, although important improvements in the highway network have been achieved in the past 10 years, the pace at which investments have been made has been considerably slower and some of the most critical bottlenecks are yet to be solved.

(vi) Institutional Effectiveness

The institutional arrangement established by Law 1 relied on the SGP as the administrator of port concessions and the guarantor of open competition and high service standards. While the SGP was active in awarding concessions, managing contracts, and insuring the fulfillment of the agreed investment plans, its role as a supervisor of port activity has lagged expectations. With the creation of INCO the SGP (now Superintendencia de Transporte y Puertos) is no longer involved on the concession process but it kept its responsibilities as a supervisor of operations and agents involved the port business. However, the ST is not yet regarded as a reliable authority to resolve disputes among users, stevedoring companies and port societies as it was conceived in the law. Neither has the Superintendency been effective in building a capability to proactively identify and deter unwanted behaviors from the agents in the port sector. These issues are becoming more critical as pressures for vertical integration in the SPRs and consolidation among port operators have become more intense lately.

Recent changes in the institutional framework removed the responsibility for awarding and managing the concession contracts from the SGP. Looking ahead, the ST will have to focus on consolidating an efficient supervision capability to assume its role as the guarantor of the new model in the port sector.

In addition, the periodic review of the Port Expansion Plans has served as a systematic check and balance of the state of the port sector policies. It is often the case that issues in Government only reach decision makers when they have become a major concern. In this case, the aforementioned mechanism has created the opportunity for the high level government to be updated about the performance and needs of the port sector, through the obligation to approve the Port Expansion Plan every two years.

D. Conclusions and Lessons Learned

The case of the Colombian ports sector reform is useful to illustrate how a concrete and decisive action to remove inefficiencies in the provision of public services may render substantial benefits to the economy as a whole. In this particular case, the reform was framed within a much broader set of structural changes aimed at modernizing the economy and attaining a higher degree of international exposure. All together these actions have brought about radical changes to the economy and the productive apparatus of the country in the past decade. The overall effects of the efforts to open the economy initiated in 1990 are not the subject of this paper but the contribution of the port reform in removing barriers to foreign trade is unquestionable. Not only have the operational and financial results improved dramatically in benefit of importers and exporters but the administration and operation of port infrastructure has become a solid and dynamic business in the Colombian economy.

Based on the facts and assessments presented in this document four lessons about the process help to summarize the key findings:

- The Government succeeded in driving the reform process on its own and bringing the most critical interest groups into play when it became necessary to deploy the new ownership and operational structure. As discussed in this document, the Government initiated and led the reform in the formulation, detailed design and implementation stages with very limited participation or consultation with other interest groups. This strategy allowed a rapid turnaround

during the formulation and especially in the approval of the Law in congress. However, the new model relied heavily on the involvement of different agents in the private sector and the implementation phase successfully drew the most critical interest groups together around the opportunity to improve port services under profitable conditions.

- The most critical decisions were taken readily and a course of action was established by way of a law that limited the space for deviations or recoils from the basic model during implementation. The expedition of Law 1 served as a very powerful signal to workers and private interest groups about the unchanging condition of the decision to privatize the ports. The political environment made it possible to take this action early in the process, thus preempting a long and complex debate around the fundamental decisions.
- The main focus of the government throughout the reform process was to insure that the new model was effectively implemented while the pursuit of financial profits for the Nation remained only as a secondary concern. At the time of the reform the country had very little experience in privatizing infrastructure or public services which created great uncertainty about the feasibility of private agents investing and taking charge of the services. Given this uncertainty and the conviction on the side of the Government about the need for reform, the main decision criteria throughout the process was to insure clear and attractive conditions for the private sector to become involved. In hindsight it may be argued that the Nation could have retained a larger share of the financial profits of the SPRs but this was clearly not the main concern. Had this been the case, the involvement of private investors and the conformation of the SPRs could have been placed at risk as well as the economic returns to society derived from the reform.
- A series of concurrent decisions, which favored a more lenient liquidation for existing employees, helped to preempt most of the reaction from the workers and unions but also created favorable conditions for corruption and fraud in the settlement of pensions and severance payments. Given the historical record of Colpuertos's labor unions, the Government feared a radical response and a harsh conflict. Under these circumstances, high-ranking government officials leaned towards making concessions to the workers in the discussions about the conditions for settlement.

As events unfolded, decisions taken in different stages of the reform process ended in a very favorable settlement package for the employees. In addition, once the main decisions had been taken, the liquidation process failed to receive the necessary attention from the high ranks of the Government. Corruption and fraud helped to increase the payout to the workers even further. As a result, the expected reaction from the unions and workers was nearly suppressed but the financial costs of the liquidation to the Nation escalated.

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