

PRIVATE PARTICIPATION IN INFRASTRUCTURE AND LABOR ISSUES:
THE PRIVATIZATION OF MEXICAN RAILROADS

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The Privatization of Mexican Railroads**

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Executive Summary

The discussion about the relevance of railroads in Mexico goes beyond its economic dimension. Due to historical reasons the debate is typically charged with an enormous amount of ideological and political content. When the privatization decision was made in 1995, under President Zedillo, all these issues were brought into the discussion. The labor union of FNM was an important support of the official party, PRI, and had a good deal of political weight in the public sphere. However, the financial condition of the company, as well as its productivity indicators, were clearly an objective factor in favor of privatization. In order to carry out the privatization process successfully, the labor issue was the main hurdle to jump. Making the company attractive to investors, while respecting all the labor rights of the people and reducing labor redundancy, was the main challenge for the privatization team. When the privatization process started in 1996, FNM had around 43, 000 active workers (more detail on this below). In 1998, 7% of that labor force (3,000) had opted for retirement, 54% (23,300) had been re-hired by the new companies, and 39% (16,700) ended their relation with the company. The characteristics of the severance packages offered to the workers at FNM were similar to those designed in previous privatization processes in Latin America. The packages included: i) Allowing people with at least 25 years in the company to retire (20 years for female workers). This retirement would include all the rights established in the labor contract, as well as a special bonus for tenure at a rate of 20 days of salary per year of service, ii) those workers who were not eligible for retirement would be laid-off, receiving four months of salary, plus 30 days for each year of service and a special bonus for tenure. iii) The base salary would be called the *daily-integrated salary*. iv) Part-time workers would be retrenched receiving three months of salary plus 20 days of salary for each year of service. On average, workers got between 10,000 and 25,000 dollars as a severance payment. The evidence shows that those workers who stayed in the company earn higher wages, though the skilled-to-unskilled salaries ratio also increased after privatization.

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Private Participation in Infrastructure and Labor Issues: The Privatization of Mexican Railroads

A. Introduction and Methodology

The discussion about the relevance of railroads in Mexico goes beyond its economic dimension. Due to historical reasons the debate is typically charged with an enormous amount of ideological and political content. Even one of the most famous popular songs played by Mexican *mariachis*, says:

“*Negrita* of all my sorrows,
Flying eyes of paper,
negrita of all my sorrows.
You say yes to everyone,
But you don’t tell them when,
Just as you did to me.
That is why I live in pain...”²

It is dedicated to a locomotive. “Flying eyes of paper” is a metaphor making reference to the flags every locomotive usually had in the front, which would wave as the locomotive moved, driven by the wind. Today, the central office of the National Railroad Company (Ferrocarriles Nacionales de México, FNM hereafter) is decorated with photographs of the revolutionary forces, transported by the railroads to fight against the dictator. “The revolution came from the north”, the tradition says. It did so on a railroad, it must be added.

The first contract to build a railroad in Mexico was signed during the 1830’s, but it was not until 1872 that the line connecting Mexico City and the port of Veracruz was finally finished, after President Juarez died, under President Lerdo de Tejada. It was also President Lerdo who, according to historians, was originally opposed to the construction of the Railroads, fearing an invasion by the U.S. Army. “Between strength and weakness” –he allegedly stated—“we’d better keep the desert”.

When the privatization decision was made in 1995, under President Zedillo, all these issues were brought into the discussion. The labor union of FNM was an important support of the official party, PRI, and had a good deal of political weight in the public sphere. However, the financial condition of the company, as well as its productivity indicators, were clearly an objective factor in favor of privatization. The latter was reinforced by the weak financial condition of the treasury and the impossibility of devoting scarce public funds to invest in that public service, while the priorities were on health, education, and poverty alleviation.

² “*Negrita* de mis pesares, ojos de papel volando,
negrita de mis pesares,
ojos de papel volando, a todos diles que sí,
pero no les digas cuándo, así me dijiste a mí.
Por eso vivo penando...”

In order to carry out the privatization process successfully, the labor issues were the main hurdles to jump. Making the company attractive to investors, while respecting all the labor rights of the people and reducing labor redundancy, was the main challenge for the privatization team. The strategy to deal with those issues is the main theme of this paper. Given the lack of good public information on this issue, the methodology for the preparation of this paper relies heavily on personal interviews. There are aggregate data obtained from the FNM files, which is presented in the section on labor issues.

Three are the main lessons from the Mexican experience. First, the fact that political opposition to privatization by the labor unions can be overcome successfully. This depends a lot on the strategy, which has to be always inclusive of the workers, respecting always their labor rights. The second is that this is typically attainable at a high financial cost. Severance payments, retirement funds and legal battles are very costly for the treasury. Finally, it is clear that the labor productivity and the conditions of the workers who remained in the company improved enormously.

Data Sources and Availability

One important restriction faced when writing this document was the restricted access or non-existence of good data. The data used has been taken from FNM files, which were kindly provided by the remaining FNM personnel when the study was made. However, given the fact that the company was about to disappear as a legal entity, the files were not well-organized and the amount of people working were unavailable to spend time going through the files. Also, data were obtained from the Ministry of Communications and Transport, where, again, access to data was severely under the control of officials who always argued to be overwhelmed by day-to-day obligations and did not have time to respond to our research needs. Finally, the access to the “white-books”, which contain the official description of the process, was always denied. Data restrictions were an enormous hurdle to jump.

Thus, our research is based on the analysis of available reliable information, which was put together and made consistent using different sources and, especially, by interviewing people in different offices. Discussions with a former FNM’s CEO, the office of advisers to the current FNM CEO, as well as government officials helped us organize the information and put the all the pieces of the puzzle in place. Perhaps one of the most important lessons to be learned from this study is that a thorough analysis of this kind of processes is impossible if there is no systematic gathering of information during the process itself and a real commitment of the public officials to release such information.

The paper contains four more sections. After showing an overview of the privatization strategy in the next section, the third part gives the general guidelines in terms of the labor strategy. Then, a more detailed look at the labor restructuring issues is offered. The conclusions and lessons learned close the paper.³

³ Those interested in a detailed review of the privatization in Mexico since 1988, see Rogozinski (1999).

B. Nature of Transaction

Objectives of the privatization process

The tradition of government intervention in the railroad industry came from the Diaz administration, during the last quarter of the XIX century. During the 1880s, the railroad network expanded enormously. This had a strong economic foundation, given that such expansion fostered economic growth during that period (Cárdenas, 1997). Moreover, for a long time the railroad was the most important means of transportation of people in Mexico. Recent research on this area has emphasized the impact of railroads in terms of the political influence of the labor union, as well as the importance of this way of transportation on the internal market. Recently, the absence of proper economic incentives and the urgency of other priorities in the government's budget resulted in a railroad company without capital and with enormous liabilities. The main problems FNM faced at the beginning of the nineties were a completely anachronistic tariff structure; obsolete operating strategies and an important amount of labor redundancy. The organizational inertia and the political power of the labor union thwarted several attempts to restructure the company.

As shown in graph 1, FNM systematically incurred a deficit during the period (the “jump” in operating deficit, as well as the increase in transfers and subsidies in December 1997, December 1998, and April 1999 has to do with the cost of the labor restructuring plan). On average, FNM received 0.4 billion dollars per year as a subsidy from the treasury during the 20 years previous to privatization. Total sales of the railroad company from 1990 to 1999 are shown in graph 2. Starting in 1997, the effect of the liquidation of the company is clear, even though the trend was not favorable. Before privatization, between 1970 and 1995, the participation of railroad transportation in total transportation in the economy had fallen from 23 to only 12%. (See graphs 3 and 4).

[Insert graphs 1-4]

Most of FNM indebtedness was external debt, and represented, on average, about 0.5% of the total government external debt. Graph 5 shows FNM's physical investment throughout the period (See graph 5).⁴

[Insert graph 5]

Under these circumstances, President Zedillo decided to privatize the company in order to improve its efficiency and attract private funds to that sector. The stated objective was precisely that: improve the efficiency and competitiveness of the sector, re-directing public funds used to subsidize FNM towards social expenditure. Officially, the objectives were:

⁴ Though the graphs are in pesos, the intention is to show the seasonal patterns and the trends in the variables.

- i. The promotion of the development of a railroad structure in the country;
- ii. The creation of a service with the highest standards in terms of safety, competitiveness, and efficiency;
- iii. To strengthen the state's role as main transport authority in the country;
- iv. To foster private and "social" investment in this sector to support its modernization;
- v. To guarantee the labor rights of active and retired workers;
- vi. To make sure that the government would carry out a sale under the best conditions in terms of the sale price and all the other objectives.

As it shall become clear as this paper develops, the achievement of all these objectives was a hard task for the privatization committee.

Adjusting the Legal Framework

The first step in the restructuring strategy was a proposal to modify the constitutional mandate that declared railroad transportation as an activity exclusive of the state. President Zedillo sent the proposal to modify the article 28 of the constitution to the congress. In March 1995, the proposal was approved, allowing the private sector to participate in this activity.

In order to accomplish the stated objectives, in April 1995 the government created the *Comisión Intersecretarial de Desincorporación* (CID) by a presidential decree.⁵ This committee was integrated by the ministries of finance, trade and industry, administrative control, labor, communications and transport, and a special appointment of the undersecretary of budget planning. This committee was in charge of carrying out the privatization sales.

In May 1995, the Regulatory Law of the Railroad Service was published to found the basic regulatory framework. This Law defines the mechanisms and rules to award the concessions. This Law was created to regulate the construction, operation, exploitation, and maintenance of the railroads, as well as the public service of railroad transportation. In order to participate in this business, the Law stated, the investor would need a government concession. The requirements to obtain such concession were also established in the Law.⁶ The concession period was established as 50 years and only Mexican corporations would be eligible, restricting foreign participation in such corporations to a maximum of 49%. The regulations did not include any commitment on the

⁵ Inter-Ministerial Privatization Committee.

⁶ Given that railroads have characteristics of natural monopoly, competition in the market is not socially efficient. Competition for the market, through a concession, is the best alternative, especially in cases in which assets are observable (see López-Calva, 1998).

side of the concessionaires to re-hire any share of the labor component at the time of the sale. The only commitment was in terms of training of the workers who remained in the company.

Also, June 19, 1995 the Ministry of Communications and Transport (SCT) established the Restructuring Committee of the National Railroad System, formed by SCT officials and workers of FNM. This committee was directly responsible for the privatization process.

The activities of this committee included: the adjustment of the legal framework, definition of the restructuring strategy prior to the sale, and the eventual dissolution of the company. In November 1995, the government issued the general guidelines, in which the important historical role of the labor union and the workers was acknowledged and the government committed to respect all their labor rights.

Restructuring Strategy⁷

The restructuring committee of the railroad system reviewed different restructuring alternatives during the first half of 1995. The international experience was carefully studied. Furthermore, a seminar-workshop with experts from the World Bank was carried out and specialized consulting firms, both Mexican and foreign, were hired. The government ruled out the option that proposed to privatize the whole system as only one company, opting for the segmentation of FNM into several regional monopolies. Each firm would have the responsibility of bearing the operating costs, though the property of the assets remained on the government's hands. One of the advantages of such scheme is the possibility of establishing a regulatory scheme based on yardstick competition. Also, this scheme would attract more investors to the sector. Despite all the advantages, an official from the Ministry of Communication and Transport, accepts that under this scheme "competition and efficiency go in opposite directions, due to the fact that it limits the profitability of the firms in the long run and increases costs (particularly costs by "switching rails"). Once the decision to divide the company took place, a second decision had to be made, regarding the possibility of functional separation (or vertical unbundling). This option would include the sale of the essential facilities (including the rail tracks themselves) to one company, while allowing different companies to provide the services with their locomotives and cars, making the access to the essential facility mandatory. Examples of countries where such scheme was implemented are Great Britain and Portugal. That option was discarded due to evidence of coordination problems and potential failure.

Regional Segmentation

In July 1995 the Inter-Ministerial Commission approved the separation of the network into three regional monopolies, corresponding to the Northeast (also called "la joya de la corona", the jewel of the crown), North Pacific, and Southeast-Pacific regions, as well as one firm in charge of

⁷ It is important to mention that the official story of the privatization is in the so-called "white books." All the officials we consulted mentioned the relevance of those records, though, to our surprise, no one allowed us to have access to them, after four months of sending several requirements to different offices within the Ministry of Communications and Transport and the Ministry of the Treasury.

connecting Mexico City with the central network, called Terminal Ferroviaria del Valle de México (TFVM). Such concession was owned by the three regional concessionaires (25% each), and the Federal Government (25%). Besides these three regional enterprises, several short lines were created, mainly those providing services to specific large users. Important short lines are: Chihuahua-Pacifico, Coahuila-Durango, Nacozari and Tijuana-Tecate, among others. The monopolies were awarded through a competitive bidding process. Table 1 shows the situation of railroads before the bidding process.

Table 1. Railroads Situation before Bidding Process (1994)

{PRIVATE} Railroad	Length (km)	Traffic (Million Ton per KM)	Income (million dollars)	Income/ Km (dollars)
North Pacific	6,200 (30.3)	17,200 (46.2)	360.76 (44.7)	58186 (1.5) ^a
Northeast	3,960 (19.3)	14,000 (37.6)	299.16 (37.1)	75546 (1.9)
Southeast	2,200 (10.7)	3,200 (8.6)	79.190 (9.8)	35995 (0.91)
Short lines	7,950 (38.7)	2,900 (7.8)	67.458 (8.4)	7372 (0.2)

Note: Numbers in parenthesis represent the percentage of the 1994 network

a) Taking as an index the national average

Thus, Federal Government chose to go for a regional segmentation scheme, strengthened by mandatory access rights on critical points of the network. It was considered that this restructuring scheme would result in an operation focused on market needs, minimizing the operative and regulatory complexity, and stimulating the operation according to regional needs.

Mandatory access rights consist the obligation of the regional monopoly to allow other railroad companies to have access to the network at certain points. This gives rise of the access-pricing problem. The parts would negotiate the fee freely and the government would intervene only in those cases where the parties had not reached an agreement. These rights were meant to increase competition in the system, without interfering its operation.

Inside the created legislation it was assured that access mechanisms do not owned markets in order to promote competition. The regional companies are entitled to provide the service on its lines, but they are also obliged to grant competitive access to other companies at points in which they are connected. Access rights are of two types:

- i. Mandatory, which are meant to eliminate bottlenecks that obstruct the flow in the system, and
- ii. Commercial, meant to increase competition between the suppliers of the service.

Concession contracts determine, on a case-by-case basis, both types of access rights.

Besides the agreements on access rights, there are also the so-called inter-connection contracts. These are services that are provided among railroad transporters in order to exchange railroad equipment. Other types of agreements are those between the companies that share terminals. Finally, there are international agreements concerning access rights to railroad companies from the United States. An example is the agreement subscribed with Union Pacific/Southern Pacific and Santa Fe Railroad, for access between Matamoros and Brownsville and between Piedras Negras and Eagle Pass.

Internal Restructuring of FNM

A fundamental step in preparation for the sale was the administrative and financial unbundling of FNM into the regional segments to be sold. These business units, corresponding to different regional railroads, started to operate autonomously since April 1996.⁸ The government started to make decisions regarding pre-privatization restructuring in two main areas:

- i. Estimating and absorbing the financial liabilities of the companies to eliminate that burden and increase the number of potential bidders for the sale,
- ii. Eliminating routes and leaving only those that made economic sense.

By September 1997, 19 routes had already been eliminated. The review and renegotiation of the labor contract, as well as the estimation of the labor liabilities is discussed in more detail below.

Dissolution of National Railroads

The formal privatization process of FNM started on November 13, 1995, after the official publication of the *General Guidelines for the Opening to Investment in the National Railroad* and was officially declared complete on August 31, 1999. The valuation of the companies to be sold started immediately. Based on the technical valuation, minimum acceptable bids were established for the sales.⁹ During this process, workers of FNM were not involved, since there was no scheme that allowed them to buy neither stocks nor anything of the sort.

On June 1996 the first summons for acquisition of the Ferrocarril Chihuahua Pacífico, was published. Yet, the bidding was declared deserted since none of the offers surpassed the technical value of reference. That way, the short route Ojinaga-Topolobambo was denominated as an option to be acquired for whom resulted winner of the Ferrocarril Pacífico-Norte. The concessions awarded were defined as shown in table 2.

⁸ The process of separating the national company into different business units, from an accounting perspective, had actually started since 1990.

⁹ It is known that the two central problems in bidding processes is the uncertainty about the value of the company (resulting in the so-called *winner's curse*) and the potential lack of competition. When the number of bidders is low, it is recommended to set a minimum acceptable bid, which can be seen as adding one more bidder: the seller itself.

With the sale of those lines, 99.6% of the whole railroad loads in México are handled by operators of the private sector. Summons for the bidding of short routes to Oaxaca and Tijuana-Tecate were also published. Yet, the bidding was declared deserted since in both cases, none of the offers surpassed the technical values of reference.

Investment

On what is related with the improvement of railroads on terms of investment, the minister of communications and transport announced on November, 1998 that new concessionaries would invest more than 1,300,000 dollars for their expansion and modernization. Since the privatization took place, 50 million dollars were invested in the TFVM on 1998 while on 1996 and 1997 only 2 million dollars were destined. The director of the TFM (Northeast), Mario Mohar, announced that the program of investment 1997-2002 for \$721 million dollars. Ferromex, on his side, maintained an aggressive investment program (350 million dollars between 1998 and 1999). Some actions have been made to incorporate the railroad industry to the *System of Normalization and Certification of Labor Competition*. The latter is an attempt to deepen the reform of labor within the company and increase the qualification of the workforce.

Participation of the World Bank

According to the records and the interviews to government officials, the World Bank's main role consisted of providing consulting and advisory services throughout the process. This was mainly done through a new area in the Ministry of Transport and Communications, called "Support Unit of Structural Change." The Bank seems to have played a minimum role in terms of financing the restructuring.

Table 2. Railroads Concession

{PRIVATE} Railroad	Date of bidding	Km	Winner	Trade Mark	Amount offered (million dollars)
Northeast	Dec. 1996	4,252	Grupo Transportación Ferroviaria Mexicana	TFM	1,403.282
TFVM	June 1997	296	Grupo Mexico, TFM and Ferromex (25% each). The government has the last 25%	TFVM	
North Pacific	July 1997	6,521	Grupo Ferroviario Mexicano Grupo México (74%) and Union Pacific (26%)	Ferromex	402.643

Table 2. Railroads Concession (cont.)

{PRIVATE} Railroad	Date of bidding	Km	Winner	Trade Mark	Amount offered (million dollars)
Ojinaga- Topolobambo (Chihuahua- Pacífico) ^a		945	Grupo Ferroviario Mexicano Grupo México (74%) and Union Pacific (26%)	Ferromex	52.873
Coahuila- Durango	Oct 1997	974	Grupo Acerero del Norte and Industrias Peñoles		20.930
Southeast ^b	June 1998	1,479	Grupo Triturados Basálticos de México ^c	Ferrosur	318.461
Chiapas- Mayab	July 1999		Compañía de Ferrocarriles Chiapas-Mayab		14.764
Nacozari	July 1999		Grupo México		2.146

a) As it was stated this short line was offered to Ferromex optionally. b) It is important to point out that this concessionaire decided not to operate nor exploit the short route Coatzacoalcos –Mérida (MAYAB) that was offered for free. c) Ferrocarriles del Sureste actually belongs to Grupo Financiero Inbursa and Grupo Frisco since Tribasa sold 100 % of his stocks.

Duration and Terms of the Contract

The Article 11° of the Prescribed Law of the Railroad Service specifies that the concessions will be granted for a maximum of 50 years. It can be renewed, provided that the conditions established in the concession were fulfilled, the company accepts the new conditions established by the ministry, and they announce their intention to continue providing the service with at least five years advance-notice, before the end of the contract.

The concession contains:

- i. Indicators of efficiency and security for the evaluation of the service;
- ii. The period of the concession;
- iii. The characteristics and amounts of the guarantees the firm has to commit to the government,
- iv. All the payments and the form of payment in which the concessionaire must pay.

The Law allows the firm to outsource construction services, conservation and maintenance of the rails. The company is at any time, however, responsible for the obligations established in the

contract. Article 14 of the Law states that the railroads, the tracks, traffic control centers, signals of railroad operation, and the other goods that have been awarded, shall be given back to the government in good operational condition and at no cost after the concession matures.

Article 17, on the other hand, specifies that the concessions will only be granted to Mexican corporations. The foreign investment will be restricted to a maximum of 49% of the capital share of the company. However, it opens the possibility of a participation of foreign investment above that limit, provided that the National Commission of Foreign Investment authorizes such participation.

A concession is considered finished when the one of the following scenarios arises:

- i. The term of the concession or the extensions granted end,
- ii. The holder of the concession quits,
- iii. The government revokes the contract for no provision or unsatisfactory provision of the service,
- iv. There is a need of financial bailout,
- v. The decision to eliminate the object of the concession

The Law only specifies the terms for revoking the contract but does not specify the conditions for a potential bailout. The law says that the concessions can be revoked in anyone of the following scenarios, among others:

- i. Failure to exercise the rights conferred in the concession within a period of 180 natural days after the concession has been awarded
- ii. Interruption, total or partial, of the operation of the railroad without any justified cause,
- iii. Establishment of tariffs that are higher to those authorized by the government;
- iv. Change of nationality of the concessionaire.

Labor Licenses

The fifth chapter of the Law establishes the guidelines for personnel policy in the railroads. The only thing established by the law related with work is that dispatchers and *maquinistas* (locomotive drivers) require a license, called *railroad federal license*, issued by the Ministry of Communications and Transport. A person interested in getting such license must satisfy the following requirements:

- i. Being at least 18 years old;

- ii. Not having a criminal record;
- iii. Take medical exams established by the ministry;
- iv. Having obtained a technical certificate through courses approved by the ministry;
- v. Demonstrating to have the technical expertise and knowledge for the performance of the specific activities.

The *railroad federal license* has to be renewed every two years. The ministry is entitled to examine the licensee owners in terms of “psycho-physic aptitude” and technical capacity at any point in time. The federal license can be cancelled.

Retraining

Articles 156-159 of the Railroad Services Bylaws establishes the obligation of concessionaries to train the technical railroad personnel through training programs that allow them to carry out inspection duties. This way the personnel will have the corresponding training certificate according to the programs established by the concessionaries.

C. Labor Issues in the Privatization of FNM

General Overview

The restructuring of FNM was carried out under permanent consultation with the Mexican Union of Railroad Workers (STFRM hereafter) whose leader was Victor Félix Flores Morales.¹⁰ The purpose was always to respect the rights of the workers, established in the labor contract. As discussed later, a *pension fund* was created with the proceeds from privatization and workers whose contract ended received generous severance payments (More on this below).

Resistance to Reform: The “*Mad Locomotives*”

The internal restructuring process required an enormous amount of political work. The greatest political resistance took place when the government tried to integrate the line Coatzacoalcos Salina-Cruz to the Southeast route. The opposition of the labor groups in the Tehuantepec region was so strong that the authorities decided to cancel the plans for a while. The CEO of the company reported that his personal vehicle received gunfire in one occasion in which he was not in it, event that he interpreted as a warning sent by some group within the union.¹¹

Part of the workers of railroads started to boycott operations before the imminent possibility of massive dismissal. Thefts and sabotage where multiplied as the privatization date became closer,

¹⁰ This union leader started a movement within the group called “Labor Union Democracy” (*Democracia Sindical*). According to a former FNM director, the leader was convinced that the only way to improve the workers conditions was through privatization.

¹¹ Most of this section is based on personal interviews with former and the current CEO of FNM.

given that the workers wanted to show their opposition to the policies implemented in the company.

The workers had a means of protest known as the *mad locomotives*. They would put weight on the locomotive and leave it empty but running on the track, without control, until it crashed. Before the privatization process, the number of *mad locomotives* incidents increased. Mr. De Pablo, who was the CEO during the privatization process, believes that the only way in which the privatization could succeed was by making the union a fundamental part of the process and keeping a constant communication with the leaders. As an example, the CEO organized a tour that took the CEO of FNM and the union leader throughout the country, process in which the effort was focused on convincing the union that privatization was the only way to save the company.

Labor Issues: A Deeper Look

The starting point

As can be clearly seen in graph 6, the cost or payroll of FNM was a very high proportion of the operating costs during the period 1990-1999, close to 80%. One can see a slight tendency to rise, since the operation of FNM decreased less than the number of workers.¹²

[Insert graph 6]

Table 3 shows that FNM had already been going through a labor retrenchment program since 1986. Productivity indicators, however, were low relative to an international standard, as shown in Table 4. Revenues per employee were 1,245% higher in *class one*- railroads in the U.S. The ratio of number of employees by kilometer of operated rail was higher in FNM.

Personnel Census

The team in charge of privatization carried out a personnel census between 1995 and 1996, because the files were not appropriately organized and there was not even a clear idea of the real composition of the labor force at that point in time. As in other privatization sales, there was a so-called *data room*, in which all the necessary information was gathered. All the potential buyers had access to the data room. The result of the census was included in the network of the data room with access for the managers of human resources and legal aspects.

¹² Operating cost includes personnel services, supplies, interest payments and other services.

Table 3. Personnel and Productivity

{PRIVATE}Year	Traffic Units (millions)*	Number of positions	Productivity (Thousands of traffic units per position)
1986	46,475	81,132	573
1987	46,303	81,670	567
1988	46,796	81,248	576
1989	43,953	82,928	530
1990	41,753	83,290	501
1991	37,374	78,114	478
1992	38,991	58,626	665
1993	38,992	55,664	699
1994	39,170	49,323	794
1995	39,142	46,283	846

Source: FNM.

Table 4.
FNM vs. US RAILROADS, CLASS ONE
 Average Productivity Rates, 1995

{PRIVATE}Concept	FNM	Class 1 USA Railroads Average	Difference + o (-)
Revenues/employee (thousands of pesos)	88	1,184	1,245%
Employee/Km of operated rail	2.29	0.94	1.35
Traffic density (millions of TKB/Km. operated)	3.27	19.28	(16.01)
TKB locomotive (millions of TKB)	48.30	185.00	(136.70)
TKB own railway car (millions of TKB)	1.93	6.65	(4.72)
Combustible expenses/TKB (pesos)	0.86	0.41	0.45

Source: FNM, and Mercer for class-one USA railroads.

As can be seen in the tables, the labor force was already reduced from 1990 to 1995, going from more 83,000 to around 46,000. Even though there is less information about this previous retrenchment process, available data show that there was an early retirement program, whose cost was absorbed by the federal government, and the number of retirees went up from 41,921 to 60,000 during those 5 years (1990-1995). That means that almost 20,000 workers opted for retirement during that period. The rest of the workers who left the company in that period took advantage of a program to voluntarily resign from the company. Those who resigned got a severance payment 48% higher than what they were entitled to by Law. Unfortunately, there is less data about that period (1990-1995) which does not allow us to estimate the cost of the first rationalization stage. We know, however, that such program was accompanied by the sale of small factories and workshops that provided services to the company. Many of the workers who left the company in that period joined the small factories as workers.

By 1996, the composition of the labor force showed a clear gender bias, as shown in tables 5 and 6. Female workers were relatively younger in the company. More than 30,000 workers had been in the company between 5 and 25 years. About 2,500 workers had been hired during the previous four years. A very important piece of information is that around 28,000 workers were between 15 and 45 years of age, which implied that they were in a very productive moment in their lives (see tables 5 and 6). Tables 7-9 shows the detailed composition of the labor force before privatization by activities.

Table 5
Tenure of the Personnel
December, 1996

{PRIVATE}Range	Men	Women	Total
0-4	2,426	509	2,935
5-9	10,265	1,294	11,559
10-14	7,177	507	7,684
15-19	6,970	448	7,418
20-24	6,029	461	6,490
25-29	3,991	189	4,180
30-34	1,111	34	1,145
35-39	784	18	802
40-44	433	7	440
45-49	186	3	189
50-54	76	0	76
55-59	15	0	15
>59	142	18	430
Total	39,875	3,488	43,363

Source: FNM.

**Table 6. FNM Labor
Age Structure by Gender, 1996**

{PRIVATE}Range	Men	Women	Total
15-19	108	10	118
20-24	1,888	213	2,101
25-29	6,473	744	7,217
30-34	7,921	742	8,263
35-39	7,632	665	8,297
40-44	6,875	565	7,440
45-49	4,699	336	5,035
50-54	2,411	140	2,551
55-59	1,132	49	1,181
>59	734	24	758
Total	39,875	3,488	43,363

Source: FNM.

Table 7. Labor Force by Occupation in Each Division

{PRIVATE}Description	Position	Office	Northeast	North-Pacific	Chihuahua	Valley	South east	Total
Wire	Station agent	0	86	158	30	34	127	435
	Telegraph operator	33	201	210	32	66	151	693
	Electrician	7	153	331	18	137	164	810
Office	Trust workers	2217	1113	1727	405	571	921	6954
	Train auditor	67	14	47	11	0	47	186
	Driver	0	0	0	0	0	0	0
	Officer	544	578	1622	131	423	621	3919
	Nurse	0	0	0	0	0	0	0
	Longshoreman	1	0	4	0	7	1	13
	Vigilant	0	3	61	1	4	4	73
	Subtotal	2829	1708	3461	548	1005	1594	11145

Table 8. Labor Force by Occupation in Each Division (cont.)

{PRIVATE} Description	Position	Office	Northeast	North- Pacific	Chihua hua	Valley	South east	Total
Dragging Equipment	Bricklayer	0	3	291	0	0	5	299
	Kettle	0	0	0	0	0	0	0
	Carpenter	0	0	67	0	0	0	67
	Tinsmith	0	0	0	0	0	0	0
	Forger of metals	0	0	0	0	0	0	0
	Mechanic Electricist	0	265	805	129	241	801	2241
	Molder, Foundry man	0	0	0	0	0	0	0
	Modelist	0	0	0	0	0	0	0
	Painter	0	0	0	0	0	0	0
		1	239	2292	133	341	599	3605
	Cuter	0	0	0	0	0	0	0
	Subtotal	1	507	3455	262	582	1405	6212
Trains	Locomotive providers	0	66	108	19	34	51	278
	Conductor & Stringy	0	1169	1601	148	318	991	4927
	Machinist	0	735	865	72	166	578	2416
	Train Conductor	0	1052	1392	171	708	726	4049
	Crew Member	0	169	233	25	97	118	642
	Subtotal	0	3191	4199	435	1323	2464	11612

Table 9. Labor Force by Occupation in Each Division (cont.)

{PRIVATE} Description	Position	Office	Northeast	North- Pacific	Chihua hua	Valley	South east	Total
Rail	Rail service	30	1661	2191	248	578	1910	6618
	Bridge and buildings service	11	262	2089	14	103	445	2924
	Machine service	8	65	66	11	42	90	282
	Arboreal service	3	0	10	0	6	3	22
	Sweeper service	0	14	72	0	47	50	183
	Water and fuel service	2	10	52	5	25	42	136
	Platform scale service	1	0	39	0	3	4	47
	Clinching service	12	18	27	6	12	64	139
	Impregnate plant service	0	0	32	0	0	50	82
	Division motors service	7	174	332	26	81	174	794
	Soldiers service	1	41	26	5	12	32	117
	Heavy machine service	1	18	35	18	20	26	118
	Fair Service	10	2	2	0	1	6	21
	Subtotal	86	2265	4973	333	930	2896	11483
Dorm train	Officers	18	0	9	2	11	0	40
	Repairers	0	4	30	0	98	0	132
	Housekeeping	10	3	55	0	116	0	184
	Conductors	28	0	24	0	0	0	52
	Chef and Doorman	146	3	138	0	0	0	287
	Subtotal	202	10	256	2	225	0	695
Not listed	Not listed	0	0	270	8	0	0	278
	Subtotal	0	0	270	8	0	0	278
	Total	3158	8121	17313	1668	4302	8801	43363

Source: FNM.

Workers were followed from August 1995 to July 1999 so that this system allowed the analysts to know whether the labor trajectory of the worker in this period had been constant or irregular. Along that period, such information was used by the new owners to make decisions regarding re-hiring. In the case of workers included in the process of lay-off or early retirement, which started in July 1996, it was also possible to know the date in which such decision had been made. The

data room also contained data about the retirees, as well as those workers who had been separated from the FNM payroll before 1997.

When the privatization process started in 1996, FNM had around 43, 000 active workers (more detail on this below). In 1998, 7% of that labor force (3,000) had opted for retirement, 54% (23,300) had been re-hired by the new companies, and 39% (16,700) ended their relation with the company. By 2000, among those who never returned to the new companies, 29% opted for retirement and 71% of those left the company and received their severance package.¹³

Some workers decided to challenge legally the decision of the company to end the contract. By February 2001, there were about 18,500 ongoing legal disputes, which implied a contingent liability close to 1.2 billion dollars, in case the company loses those trials. Not all of those legal processes, however, have to do with the restructuring after 1995, but at least 35% of those are indeed related to the privatization.

Legally, FNM was ready to be shut down in 2001 and the relation of the workers was already with the new companies. As an example, FNM already had only 3,187 workers by June 30, 1999; in August (when the privatization process was concluded) the last unionized workers where fired and original union disappeared. By March 2000, FNM only had 731 workers, all of them part-time. If you consider the workers who were re-hired by the privatized companies, more than 20,000 of them did not lose their job in the process. As a means of comparison, in Argentina’s railroad privatization the labor force went from 94,800 workers to less than 16,000. Table 10 shows the summary of employment situation only for FNM. As stated above, more than 20,000 workers out of those laid-off by FNM were re-hired by the new companies.

**Table 10. FNM
Employment Summary**

{PRIVATE}Personnel working at FNM from January 1997 to June 1999	
Before 1997	44,109
Rehiring (+)	197
Admitted (+)	305
Subtotal	44,611
Layoffs (-)	41,424
Active Personnel until June 30, 1999	3,187

According to the census and data from FNM, during the period January 1997-June 1999 the number of workers in FNM went from 44,616 to 3,187. A total of 41,424 workers left the

¹³ According to the database of FNM in August 2001.

company. Among those, 39,680 were laid-off, 1,211 opted for retirement, and 106 passed away. Additionally, 427 people who apparently worked at FNM never appeared in the payroll.

Re-hiring

People interview from FNM, Ministry of Labor and new companies were unable to provide a specific criterion as the one used for re-hiring. The coincidences are that the productivity history in the data-room, the level of education, experience and age were the key criteria. Specific emphasis was made to attract the most productive workers by offering incentive-contracts and promotions within the new firms. Unfortunately, there is no record of a specific strategic plan or specific criteria used by each one of the companies.

Process and Restructuring Approach Used

The rationalization of the FNM redundant labor was done on the basis of productivity of the workers according to the position they had. It required the preparation of retrenchment agreements, letters and receipts of retirement, as well as documental support in each case. The workers, in order to verify their severance payment, signed the lay-off agreement, or letters and receipts of retirement. With a copy of these agreements and receipts, the office of Human Resources integrated a file of retrenched and retired personnel, organizing the files by sequential number.

The following principles were established for the retrenchment program:

- i. The lay-off of the personal would have to take into account, as a reference, the salary of the last fortnight, which corresponded to the level of salary zone registered in the payment system.
- ii. The lay-off period would be considered from the date of registration in the personnel census to the date of retirement.
- iii. For the payment of vacations, as well as the savings and incentives funds, they would consider the average days worked per year and calculate the proportional payment. The same would be done for special Christmas-bonus payments. The payroll area of FNM was in charge of making the payments of vacations and vacations premium according to the registry (FORM CE-1).
- iv. Union contributions would be deducted from the salaries according to the established ranking for each position.

The workers who were laid off had access to the *National Employment Service*, established by the Ministry of Labor. The general secretary of the union announced in December, 1996 that the concessionaries were not obliged to hire personnel who had worked at the FNM. Workers were then invited to join the *Program of Employment and Scholarships for Qualification of Railroad Workers*, which consisted of scholarships for workers to get training in different activities and increase their employment opportunities in different sectors, including some activities related to

companies who were service providers to the railroad industry. The information in terms of how many laid-off workers decided to enroll in training programs is not known, but the Ministry of Labor estimates that around 6,000 workers decided to take some way of training scheme. Unfortunately, there is no evidence on the effect of these training programs on the workers ability to be re-hired in different sectors.

Retirement Scheme

The legal rights for retirees in FNM were established in the labor contract.¹⁴ The labor contract consisted of more than 3,000 clauses before the privatization took place. Indeed, there was one clause that was repeated in different ways 42 times throughout the contract. After the restructuring, a new labor contract emerged with only 108 clauses. To achieve this goal, the collaboration of the union leader, Víctor Félix Flores-Morales, was key in the process. Before restructuring of the contract, there existed 5000 different forms of payment specific for each branch. The restructuring of the contract basically helped reduce the forms of payment, making easier the calculation of payment to drivers, based on trip value and *patio* value. As it was stated in the old labor contract workers were entitled to opt for retirement after 30 years of active service in the case of male workers and 25 years in the case of female workers. The retirement scheme for unionized workers also included life insurance.

The restructuring prior to privatization included, under an agreement with the union, to extend retirement rights to people with 25 years of service (male workers) and 20 years (female workers) (voluntary retirement). In addition to this, male workers who turned 60 and female workers who turned 55 and had at least 15 years in the company were also granted retirement benefits. Finally, people with the latter condition in terms of age and tenure between 10 and 15 years would get the option to retire with the proportional benefits. These retirement plan was far more generous than the one stated in the labor contract since it reached more people. All the financing of these retirement schemes comes from a trust fund negotiated by the labor union, which included part of the privatization proceeds and public funds from fiscal sources.

Retirement Fund

Before the privatization, the company had a pay-as-you-go pension scheme directly attached to the operational accounting of the firm. There did not exist a special fund for retirement of workers. On December 19, 1997 a trust fund to finance retirement benefits was created. With this fund they will only pay the pension of people who decided on retirement before dissolving the FNM. Yet it does not cover the pension of workers who could have been hired by concessionaries. The company transferred the pension liabilities to the federal government's budget.

In fact, the trade union negotiated independently with concessionaries so they would receive life insurance and pension schemes under a new agreement with each concessionaire. The federal government contributed with 1.64 billion dollars and started the above mentioned trust fund with

¹⁴ Called "Contrato Colectivo de Trabajo."

the state-owned Bank *Nacional Financiera* as the fiduciary institution.¹⁵ The purpose was to guarantee the payment of the pensions to FNM retirees, and the funds came from the proceeds of privatization. The trust fund only covered those employees who had already retired or opted for retirement at the time of the privatization. The other workers, as explained, started a completely new scheme with their new employers. It is very important to mention that, given the pay-as-you-go nature of the previous retirement scheme and the generous severance payments given to those who did not opt for retirement, the workers who were transferred to the new companies lost their tenure benefits in that respect. This means that their retirement contributions were not explicit previously and were not recognized at the time of the layoff.¹⁶ In a way, these implied some screening of the workers. The combination of severance packages and earlier retirement schemes induced only relatively younger workers to choose the option of layoff and re-hiring.

The operation and payment of the retirement pensions were established in two stages:

First Stage: From December 1997 to August 31, 1999 the Trust paid the pensions using the administrative and operative infrastructure of FNM, due to the fact that the trust fund did not have its own administrative structure.

Second Stage. Starting on September 1st, 1999 the trust fund will pay directly the retirement pensions and other benefits to the retirees according to the terms and conditions established in the contract (see severance package below). A special “Fiduciary Delegate” was appointed to be in charge of the creation of the organizational structure of the fund. The difference between the financial returns and the monthly disbursements from the fund would be added to the endowment of the trust fund.

There are periodical revisions of the payroll of retired workers (57,000 in December 2000). These include tests of survival. With the intention to pay for a life insurance for the retired personnel, FNM and the STFRM agreed to create a fund, with resources from the federal government, which guaranteed the payment of 2,600 dollars as life insurance for those who retired. The contract also establishes that all benefits and life insurance payments will be adjusted on an annual basis, according to inflation, as officially reported by the consumer price index.

Severance Package

The characteristics of the severance packages offered to the workers at FNM were similar to those designed in previous privatization processes in Latin America. The severance package was offered across-the-board, without specific restrictions on certain categories.

The packages included:

¹⁵ This Trust Fund No. 5012-6, denominated FERRONALESJUB.

¹⁶ At the same time, in México there was a pension reform. The new companies would hire the workers under the new mandatory fully-funded retirement scheme.

- i. Those workers who were not eligible for retirement would be laid-off, receiving four months of salary, plus 30 days for each year of service and a special bonus for tenure.
- ii. The base salary would be called the *daily-integrated salary* (see below).
- iii. Part-time workers would be retrenched receiving three months of salary plus 20 days of salary for each year of service.

The *daily-integrated salary* was calculated by adding the monthly amount of the following concepts, divided by 30 days of the month:

- i. Base salary
- ii. Savings fund (monthly equivalent)
- iii. Christmas bonus (monthly equivalent)
- iv. Payment for vacations
- v. Special bonus for rent of housing
- vi. Special bonus for transportation
- vii. Payment for basic bundle of goods
- viii. Payment for educational support of children
- ix. Incentive payment for attendance and punctuality
- x. Incentive payment for productivity
- xi. Incentive payment for training
- xii. Tenure bonus
- xiii. Performance bonus
- xiv. Support for gasoline of the car

From the addition of all those concepts, divided by 30, the daily-integrated salary was calculated. The severance payment would thus be determined according to tenure, age, and gender of the worker. This would be used both for retirement rights and layoffs. Depending on these conditions, workers got, on average, between 10,000 and 25,000 dollars as a severance payment.¹⁷

Estimated Cost of the Labor Restructuring Process

According to the information given above, the total estimated cost of the severance packages is 521.9 million dollars. When added to the cost of the retirement packages, the total amount would be around 2.1 billion dollars. Another way to estimate the cost is by analyzing the operating balance of FNM. We can observe a sharp increase in personal services expenditures, which includes wages. These amounts were 1.9 billion dollars in December 1997; 183.6 million dollars in December 1998, and 50 million dollars in August 1999. That seemed unusual with respect with the average (about 26 million dollars). We then verified that those amounts represented severance payments for the retrenchment stages FNM went through. That allowed us to estimate a lower bound for the cost of the labor restructuring process, which is surprisingly close to the above estimate, 2.2 billion dollars. This estimate could reach up to 95% of the proceeds from the

¹⁷ Taking the average exchange rate in 2000.

sale of the regional companies, without considering the one that provides service to the central valley of Mexico.¹⁸

On the other hand, the company had incurred a deficit of about 400 million dollars a year, on average. That means that it would take less than five years for the federal government to recover in net present value the amount invested in restructuring and even less if one considers the fact that the new companies would start paying taxes on profits. It seems, from that perspective, a good financial decision.

Changes in the labor contract

The original labor contract in 1995 consisted of 3,045 clauses and was very confusing. After the negotiation with the union, it was possible to reduce this contract to only 211 clauses and new “bylaws” were created, describing general guidelines for each division. More than 1,800 clauses were eliminated and the rest were introduced in the bylaws. These new bylaws were divided into:

1. General section (interior bylaws)
2. Bylaws for franchises
3. Bylaws for hotels and restaurants
4. Real estate bylaws
5. Training bylaws
6. Medical services bylaws
7. Wages and payments
8. Pensions bylaws

This labor contract was only valid for FNM during the restructuring process and until its dissolution. After the restructuring, each company created its own labor contract and they are negotiated separately. Also, labor organizations within each firm are affiliated to a labor association for the sector, but are completely independent. Given that, it is not possible to know exactly what type of changes were made to the previous labor contract, as they vary across companies. Comparisons between white-collar and blue-collar workers’ salaries before and after restructuring are shown below.

¹⁸ This calculation is the sum of the restructuring liabilities incurred by FNM on December 1997, December 1998 and August 1999 in pesos of 1994, divided by the sum of the income received, also in pesos of 1994, from the sale of all the concessionaries except TFVM.

Labor Retrenchment by Division

The composition of FNM workers at the beginning of the privatization process is shown in table 11. Clearly, blue-collar, unionized workers dominated the labor force composition.

Table 11. White and Blue Collar Workers
Personnel Census, 1996

{PRIVATE}Railroad	Blue collar	White collar	Total
Central office	941	2,217	3,158
Northeast	7,008	1,113	8,121
Pacific-North	15,586	1,727	17,313
Chihuahua-Pacific	1,263	405	1,668
Valley of Mexico	3,731	571	4,302
Southeast	7,880	921	8,801
Total	36,409	6,954	43,363

Source: FNM; blue collar: asalariados (union members), white collar: "De confianza" (non-unionized).

Northeast Railroad

A total of 8,121 were assigned to the Northeast railroad, 4,058 to the regional department of Monterrey and 3,362 to San Luis Potosí. The Queretaro division belonged to the central region. According to the personnel census, there were 8,121 workers in the Northeast railroad payroll in 1996.

The rationalization process was done on three stages: the first two until November 15th and November 30, respectively, and the third one until December of that year. In the first quarter of 1997, 1,564 workers were retrenched in seven groups and 7,920 stayed active. The retrenchment of the train operators was a little bit different because their monthly salaries use to change as long as the number and tariff of the services changed. The criteria and considerations to define the salary of this group of people were particular to their case.

In April 1997, the list of workers was revised again. The idea was to identify people with any kind of special permission for not working, or those who had decided to resign. From April to May 15, 1997, 4,851 workers were retrenched and 1,022 retired. This required again the issue of severance checks, letters of retrenchment, and retirement agreements.

The final day to deliver the control of the railroad to the private investors was postponed in order to carry out a second retrenchment "module" by June 17, 1997. The final delivery of the railroad to the concessionaries took place on July 23, 1997. Right after that, 5,501 additional

retrenchment checks were issued. That payment was already done by the Northeast railroad's human resources office.

North-Pacific Railroad and Chihuahua-Pacific Railroad

The Chihuahua-Pacific railroad planned the retrenchment program in two stages: the first one ending on November 30, 1996 and the second on December 15, 1996. On June 23 of 1997, the data room was brought to the Guadalajara office, and according to the information thereby contained 17,803 workers were retrenched. It is important to clarify that the list of workers was separated by payment system and classified by type of workers: white collar, unskilled blue-collar workers, and transport-technicians blue-collar workers.

The first stage of the lay-off process in the North-Pacific and Chihuahua-Pacific Railroads took place from September 19 to October 4, 1997. The decision of who should be laid-off took into account the skills and labor history of each worker. Also, the area of social security of the North-Pacific Railroad, along with the union representative, determined that certain workers could not be retrenched for reasons related to disease. At the beginning of the process, there were 18,981 workers in these companies, 17,313 in the North-Pacific Railroad and 1,668 in the Chihuahua-Pacific Railroad. A total of 15,495 workers were either retrenched or opted for retirement: 14,496 from North-Pacific Railroad and 1,199 from Chihuahua-Pacific Railroad.

The second process of lay-off ended in January 31 of 1998. During this period the following activities were carried out:

- i. Reception and control of non-paid checks during the first stage of the process
- ii. Estimating the severance payment and issuing the documents of 12,259 people who did not receive their payment during the first stage.

The process ended in February 1998. Finally, the short line Coahuila-Durango, which belonged to the North-Pacific Railroad, was also granted in concession on April 26, 1998.

Southeast Railroad

In May 1997 the Southeast Railroad had 8,801 workers (921 white collar and 7,880 unionized workers). After the creation of the data room it was possible to carry out the first stage of the general lay-off process for which a deadline was established on September 30, 1998. A total of 7,947 severance payments were issued: 6,541 people were retrenched and 1,406 opted for retirement. The second stage was carried out until the end of that same year. The final delivery of the railroad took place in December 1998.¹⁹

¹⁹ It is important to mention that not all people collected their payments. As an example, out of 2,757 severance payments issued for people who worked in the short-lines of the Southeast Railroad, only 906 were collected. The main reason for this, according to FNM official Issac Ron was that those people decided to sue the company legally because they did not accept the arrangement or the fact that they were laid-off (see footnote above).

Valley of Mexico Railroad

In the case of the Valley of Mexico Railroad, 4,302 workers were laid-off. The Union, however, negotiated for these workers an additional lump-sum bonus of about 2,000 dollars, which was extended to workers in other divisions.²⁰

Personnel Retrenched from January 1997 to June 1999: Summary

The whole retrenchment process is summarized in tables 12-14. These are workers in the FNM payroll between 1996 and 1999.

Table12. Summary of FNM Retrenchment Program
1997 - 1999

	December 1997	December 1998	December 1999
Initially active	44,109	30,169	6,986
Re Hired	109	49	39
New Hiring	213	75	17
Retrenched	(13,234)	(22,613)	(3,833)
Retired	(976)	(213)	(22)
Passed Away	(52)	(54)	
Not Known		(427)	
Total	30,169	6,986	3,187

Table13. Summary by Company of labor force before the sale and at the time of the sale

Northeast		Pacific-North		Chihuahua-Pacific		Valley of Mexico		Southeast	
Before	At sale	Before	At sale	Before	At sale	Before	At sale	Before	At sale
8,121	684	17,313	2,817	1,668	469	4,302	1,537	8,801	854

Table 14. Composition of labor force after re-hiring by the privatized companies

	Northeast	Pacific-North	Chihuahua-Pacific	Valley of Mexico	Southeast	Total
After re-hiring	4,706	10,034	966	2,493	5,101	23,300

²⁰ It was exactly 20,000 pesos.

Salaries

As we can observe in table 15 the privatization process brought an improvement of the real daily salaries in the period between 1992 and 2000. The salary of all categories rose more than 100% in real terms. This means, workers that kept their jobs in the railroad company did receive a better salary. The category that more improved his salary was the qualified office workers with an increase of the 164%, followed by the qualified operative in rails.

Table 15. Average Salary of the Mexican Railroad System

	Salary Description	Daily Salary (US dollars, 1992=100)	Daily Salary 2000
Patio	Patio Chief	14.27	19.12
	Patio Mayordomo	12.93	17.87
	Patio Machinist	12.93	17.87
	Patio Machinist Assistant	11.73	15.88
	Patio Stingy	11.73	15.88
Wires	Qualified operative	15.81	19.81
Office	Qualified Office worker	14.07	23.14
	Office worker	12.04	16.15
Dragging Equipment	Qualified operative	20.66	24.14
	Operative	19.71	19.81
Rail	Qualified operative	12.02	19.61
	Operative	9.42	16.46

Obtaining the salary ratio between the qualified and non-qualified workers we can see a growth of the gap in general terms. The Qualified vs. non-qualified salaries ratio rose from 1.16 to 1.43 for the office workers and from 1.04 to 1.21 for the dragging equipment. A decrease in the ratio from 1.27 to 1.19 is observed in the rail area though. We can conclude that the specialized workers are making more money now in relation with their non-specialized work partners. Graphics 9 and 10 show the change of salaries in time as well as the change mentioned in salaries ratio.

D. Lessons Learned

The theoretical literature on state-owned enterprises predicts a tendency to maintain labor redundancy in such companies.²¹ The first lesson to be learned from the Mexican privatization of railroads is that such prediction is confirmed in a robust manner. Productivity comparisons show

²¹ See Sheshinski and López-Calva (1999) and Svenjar and Terrel (1991), for example.

that the company was over-staffed before privatization. Also, the political constraints on labor retrenchment caused a labor-intensive bias in the operation of the railroad, inconsistent with the international trends and the pattern of technological change in the sector.

Perhaps one of the more important lessons from this process is that obstacles to reform that seem disproportionate from the political perspective can be overcome if the proper strategy is followed. The main components of such strategy are:

- i. Inclusion of the labor union in the design of the restructuring process, as well as a close and permanent communication with the workers.
- ii. Political will on the side of the government to provide full support to the people in charge of the privatization program.
- iii. Appointment of few people with all the support to carry out the process, under the guidance of an inter-ministerial committee.
- iv. Willingness and capacity to bear the fiscal cost of the reform.

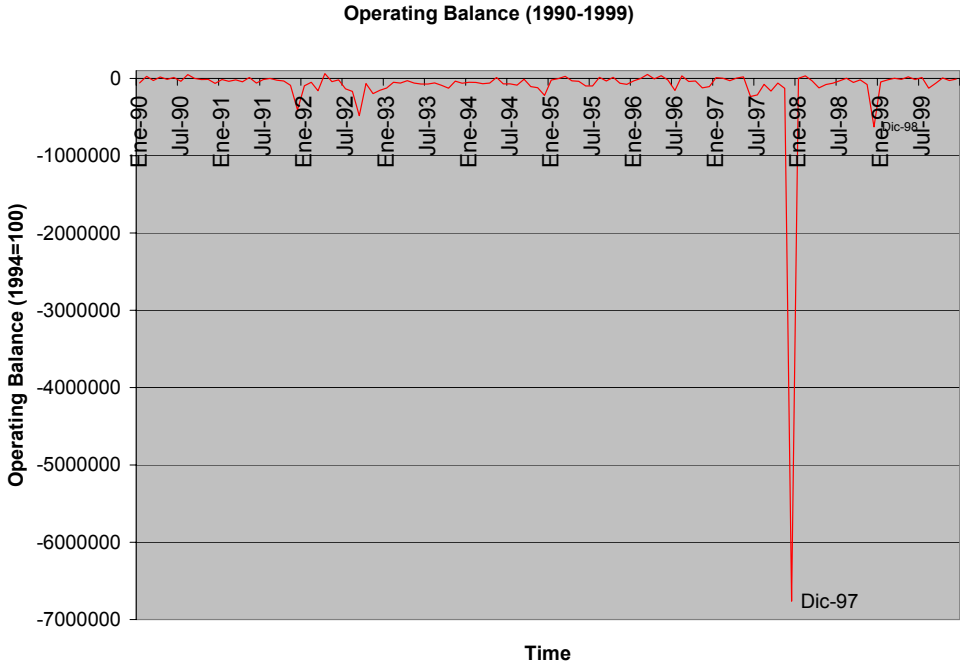
It is important to make clear that the government should not try to save money on this process and must be generous towards the workers, giving them more than what they are entitled to obtain by law. The Mexican Government did not establish any rules or clauses that force the concessionaries to hire those who previously worked at the FNM with a minimum wage level and fringe benefits. Basically, the process involved schemes of retirement with benefits above those established in the labor contract, and to force concessionaries to provide technical personnel training. The government is currently in the process of dissolving Ferrocarriles Nacionales de Mexico, considering, as one option, replacing it with a regulatory office that oversees conflict settlement between new operators, in addition to mergers and acquisitions. Labor restructuring is expensive. In the case analyzed above, the estimate of the financial cost of restructuring could reach up to 95% of the total proceeds from the sale of the regional companies, without considering the fiscal burden of the retirement plans. About 23,000 workers, out of 43,000 originally working for the company, were re-hired by the concessionaires. Those who stayed seem to be getting higher wages on average, though the spread between skilled and unskilled salaries also widened.

Finally, perhaps one of the most important lessons learned is that more information should be made available about these processes in order to learn from them after the fact. In this specific case, either the non-existence of systematic data about the process or the reluctance of the government officials to make it available has left many obscure pieces that thwart the attempts to get a deeper sense of the costs and benefits of the process. Transparency is, in that respect, not only important from the political perspective, but also from the analytical one.

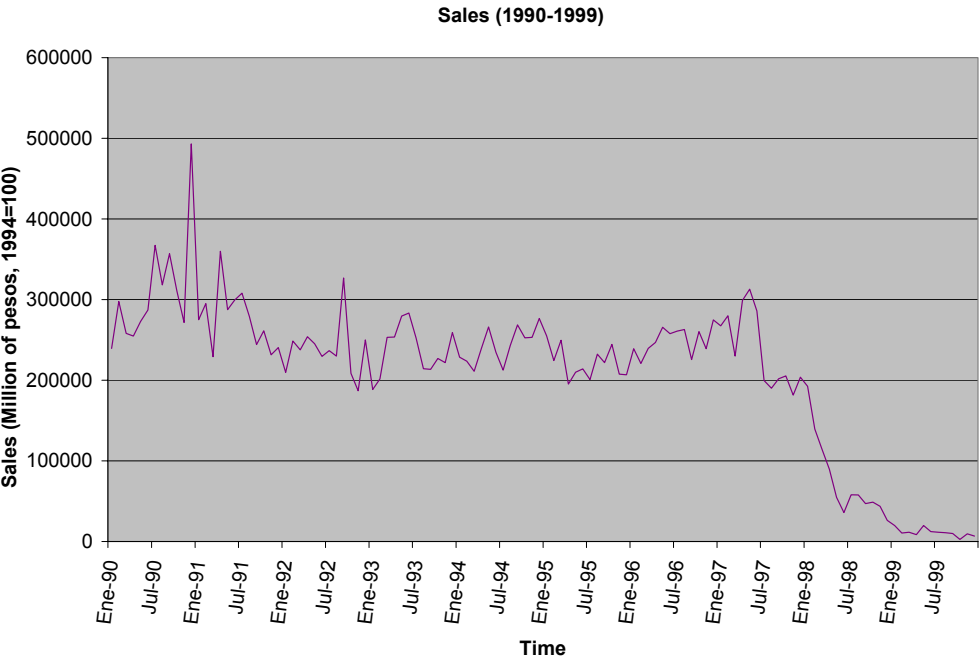
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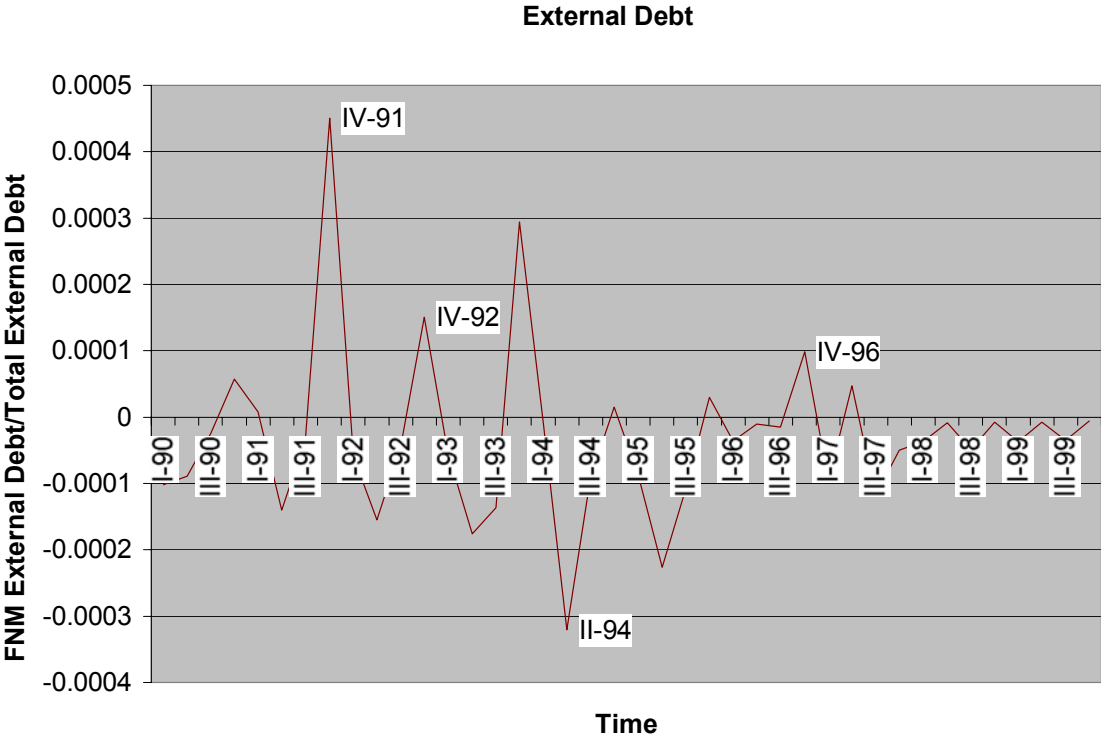
Graph 1



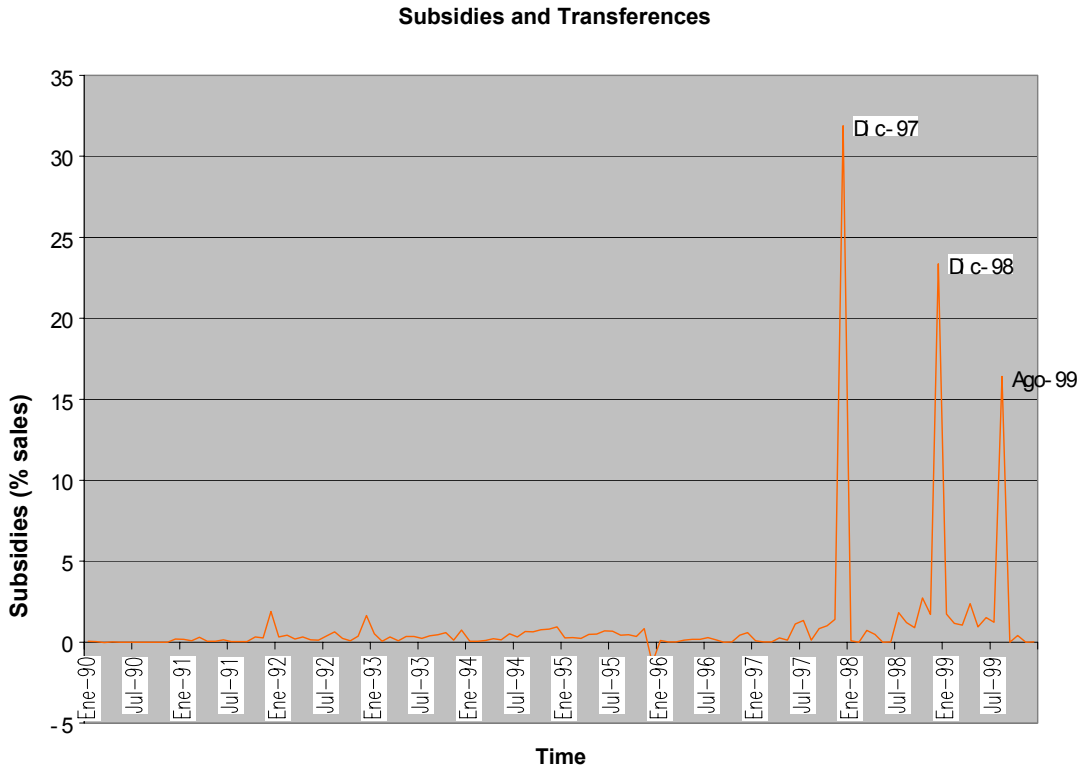
Graph 2



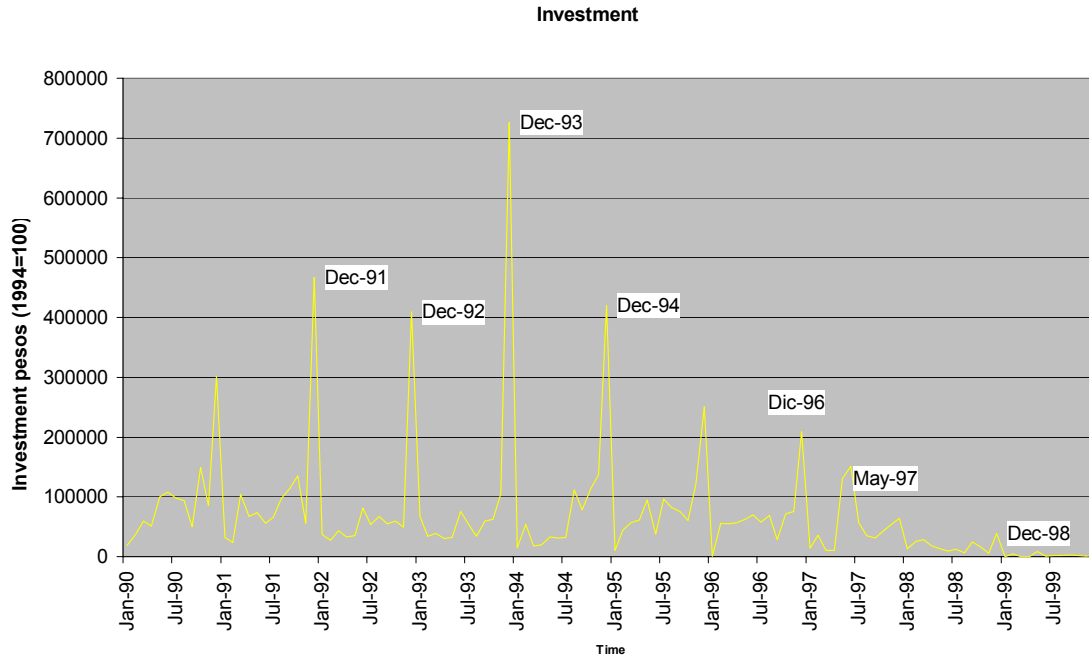
Graph 3



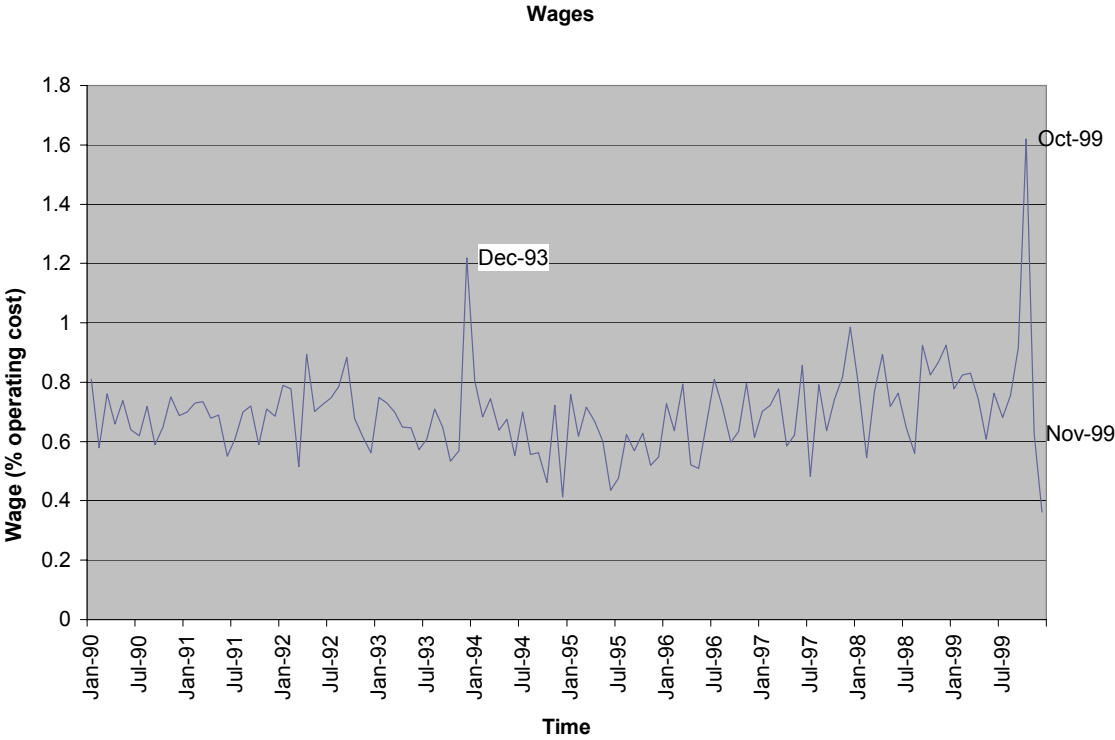
Graph 4



Graph 5

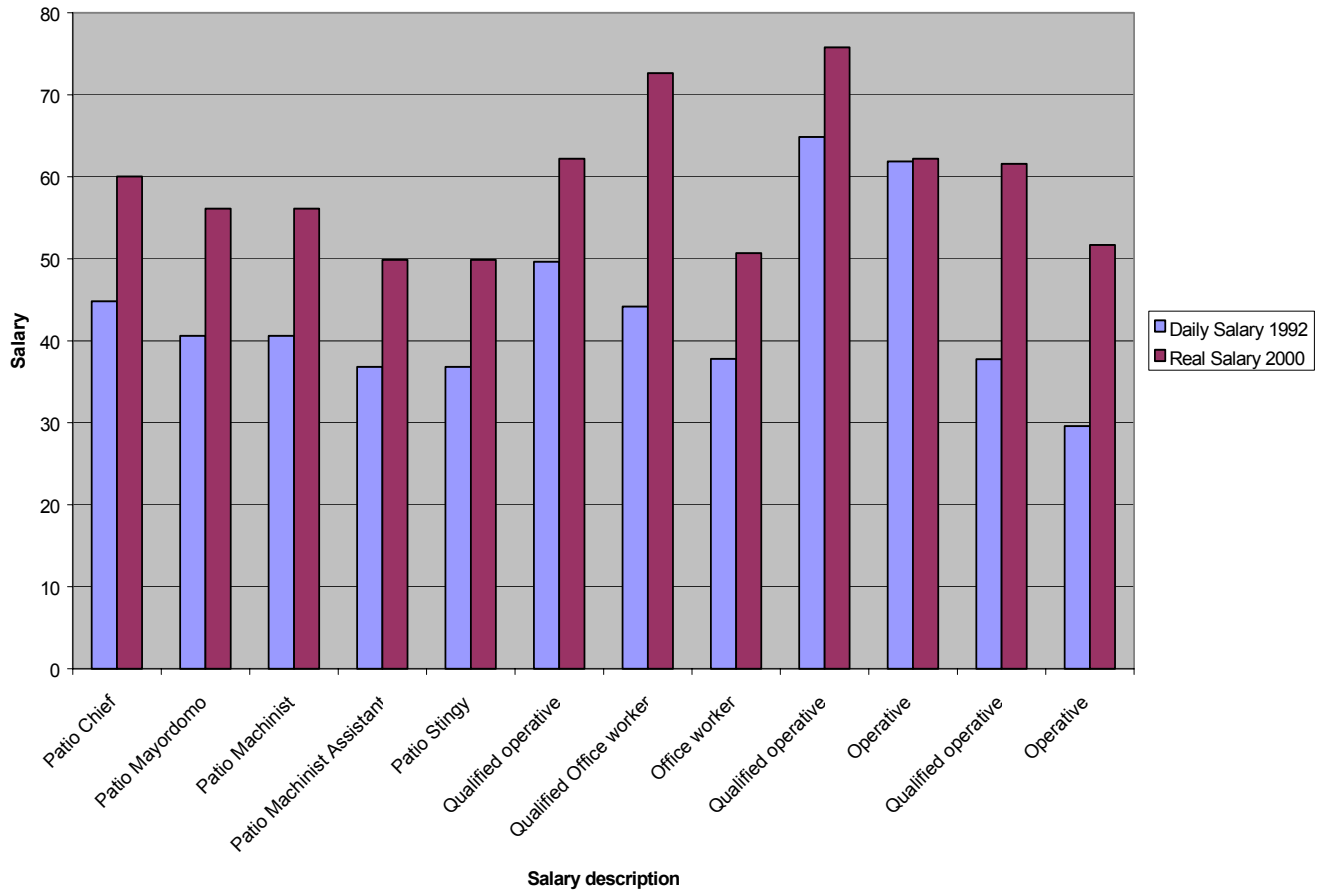


Graph 6



Graph 7

Salaries in the Mexican Railroad System



Graph 10

Qualified vs non-qualified workers Ratio

