

## THE OPPORTUNITIES AND RISKS ASSOCIATED WITH PRIVATIZING RAILWAYS IN LATIN AMERICA

### SUMMARY

Most railways in Latin America were built by private firms, often foreign owned. Over time, owing to a combination of nationalizations and competition from road transport, virtually all railways passed into government hands; the railroad industry became more and more of a white elephant for the Government because of the ever-increasing subsidies it swallowed up, its dwindling role in national economies, and a conviction that Governments should not be involved in productive activities. Consequently, the late 1980s saw the start of a trend towards denationalization of railways, with the latter being turned over to private, often foreign, interests. In this way, the railway industry in Latin America has come full circle in the space of 150 years.

So far, there has not been any assessment of the recent privatization of railways in Latin America. However, the conclusion would probably be that: (i) privatization has on the whole been successful, and (ii) the results achieved would have been more positive still, had some things been done slightly differently. One problem is that the bidding process has failed to take into account the positive externalities associated with railways, such as the contribution they make to reducing road maintenance costs and environmental damage caused by road transport. Another unresolved issue is whether to put the entire railway system up for tender, or to invite separate bids for infrastructure and services.

Economies of scale operate in the railway industry, favouring the existence of a number of rail companies. In the past, the railway companies of neighbouring countries such as Argentina and Paraguay, and Bolivia and Chile, enjoyed ties at director level, but these came to an end with the nationalization of railways. Now that the era of State involvement is itself drawing to a close, we can expect to see the formation of integrated railway systems, one of which might extend from Quijarro, on the border between Bolivia and Brazil, to Puerto Montt in the south of Chile.

TABLE 1

<b>PRIVATIZATION MODELS ADOPTED IN DIFFERENT COUNTRIES</b>	
<b>Main features</b>	<b>Areas applied</b>
1. A state-owned enterprise continues to own and manage the infrastructure, but the operation of railway services is awarded to a concessionaire.	Colombia (initially); Sweden (ancillary private operations); cargo services on main routes in the south of Chile (on a temporary basis).
2. A company is set up to own and administer the infrastructure and is subsequently put up for tender; similarly, companies are set up to own the rolling-stock and are then put up for tender: these companies lease to operators; companies are established to operate services and leases granted on the basis of the bids and the investment plan proposed; minimum standards of service are specified and some restrictions imposed on rate or fare increases.	Great Britain.
3. The infrastructure and rolling-stock are sold off, without any stipulations as	Chile ( <i>Ferromor</i> , with the obligation to

regards investment plans, minimum service or freight rates.	maintain route efficiency).
4. Combined concessions for both infrastructure and rolling-stock are awarded, with stipulations as to investment plans and traffic volumes and, sometimes, tolls for third-party use, but no controls on charges.	Argentina (non-urban lines).
5. Concessions are awarded for the operation of services, with the public sector retaining ownership of infrastructure and rolling-stock; charges and minimum levels of service are stipulated.	Buenos Aires suburbs.
6. The infrastructure and rolling-stock are leased long-term, with stipulations as to minimum levels of service, but no controls on freight charges.	Chile (Arica to La Paz, Chilean section - pending).
7. Concessions are awarded for both infrastructure and rolling-stock, with the funds raised earmarked for future investments.	Bolivia.
8. Concessions are awarded for the management of infrastructure and the use or ownership of rolling-stock, with stipulations as to quality of service and investments.	Chile (probable model for the passenger service on the Southern Network).

## HISTORIAL BACKGROUND

**Private initiative and open access.** Mechanized railways were first operated by private interests, chiefly in the coal-mining areas of Great Britain. Coal was practically worthless in the mine, but when extracted was of considerable value to cities, manufacturing plants or ports, and the value added by transportation provided sufficient incentive for private firms to invest in building railways. In some cases, like the world-famous railway between Stockton and Darlington -the first such service to be open to the public and mechanized-, the company that owned the railway not only operated its own trains but also leased track rights to individuals or other firms so they could operate their own trains on the system. Basically, this amounted to a kind of open access; indeed, the Council of Ministers of the European Union attempted to recreate a similar situation 166 years later, when it adopted resolution 91/440, which required that separate accounts should be prepared for railway infrastructure and the services operated on them.

**Private-sector participation in Latin America.** The first railway to operate in Latin America was state-owned and was built in Cuba for the Real Junta de Fomento (Royal Development Board); however, most of the region's railway systems were promoted and built by private firms. Obviously, however, private firms invested only in those projects they deemed profitable; with mining railways high on the list of priorities. In some countries, such as Argentina, which is predominantly flat, construction costs were low enough to induce the private sector to build railways for the transportation of general cargo (mainly agricultural and livestock products) and passengers. In other countries, like Peru (prior to the War of the Pacific) and Chile (subsequently), Governments used the earnings derived from mineral wealth to build high-cost or potentially low-demand railways that quite possibly might never have been built by the private sector, despite the existence of a number of risky private entrepreneurs who hoped to convert feats of engineering such as the Transandean Railways between Argentina and Chile into profitable businesses.

**Nationalization in Latin America.** In subsequent years, the Governments of many countries, including Argentina, Chile, Colombia, and Ecuador, built railways whose commercial viability was dubious but which were considered desirable in terms of socio-economic or strategic development. In addition, particularly after the mid- 1940s, Governments decided to acquire private railway companies, which had begun to suffer the adverse effects of the rise in competition from road transport. In some countries, such as Paraguay, the main objective of nationalization

was to keep a service running that was considered essential, as this was no longer profitable for the private sector; but, in other countries, the role of nationalization was equally important, since the majority of railway companies were foreign-owned.

**Denationalization in Latin America.** Since the late 1980s, Latin American Governments starting with Colombia, disappointed by the poor results and high deficits recorded by the railways under their control, despite the huge budget appropriations sunk into capital investments, concluded that the railway could be better run by private companies than by politically sensitive budget appropriations. In the following years, the entire Bolivian railway business was handed over to consortia of private corporations, one of the most important of which is an offshoot of the company that had operated the entire route between Antofagasta and La Paz until its nationalization some 35 years previously.

Important segments of the Argentine, Brazilian, Colombian, Chilean and Mexican railways were also transferred to the private sector and a number of other countries are also contemplating privatizing their railway industries.

It would be no exaggeration to say that the state-owned railway is an endangered species in Latin America. The trend towards privatization is clear and, when it is not considered feasible or appropriate, closure of the system sometimes seems a more attractive option than having the Government continue to run it at a loss, as in Nicaragua and, at least temporarily, in Costa Rica.

Latin America has been in the vanguard of rail privatization. The only country in the world where ownership and management of the railway is wholly in private hands is Great Britain, but in other European countries, progress towards privatization has been minimal compared with Latin America. Bolivia appears to be the only other country in the world where management of the sector (but not ownership) is totally in private hands.

The Latin American experience with privatization of the railway, has been, for the most part, positive, and in some cases, for example, in the suburbs of Buenos Aires, its success has been remarkable. However, the results obtained can be improved. It would be appropriate to declare a long moratorium on the railway privatization process to give us time to reflect a bit and assess the results obtained to date and ensure that the second round of privatization of Latin American railways yields more satisfactory results.

## PRIVATIZATION MODELS

**Sale or leasing.** Railway privatization can take a number of different forms. First, there is the option of a sale or a lease, the difference between these being the period of the concession (whether for thirty years or more); sometimes, it is not very long. In many countries, sale of the railway infrastructure by the Government is precluded by law, so that leasing is the only possible form of privatization.

**Duration of a lease.** Of greater practical significance is the period of the concession. If it is short, the leaseholder will have a greater incentive to offer a good level of service in order to have a better chance of a renewal at the end of the period. However, on the other hand, a short lease is unlikely to encourage the leaseholder to invest; hence, in Great Britain, where the vast majority of leases are for a period of between seven and 15 years, leaseholders have the option of acquiring new rolling stock through leasing companies instead of making outright purchases. In Latin America, leases normally are for a longer duration of approximately thirty years. There is always the potential danger that an operator may minimize its investment in the purchase and repair of equipment in the last few years of a lease, with the risk being proportionately higher in the case of short leases and in cases where, for one reason or another, the lease does not carry an option for renewal.

**Separate bidding for infrastructure and services?** One basic decision is whether to lease or sell the railway as a whole, or whether to treat infrastructure and operation of services separately. Either method offers advantages and disadvantages.

The main advantage to be derived from leasing out the infrastructure and services separately is that new operators can enter and compete with the service lease-holder, leaving him a potential monopoly only over captive users (such as mining companies). If the track-owners are different from the train-operators, the former would be willing to rent rights of way not only to the latter but also to others, for example, to the rail transport clients themselves; these would then be in a position to buy or rent wagons and locomotives for their exclusive use and operate their own trains, if they considered the freight rates charged by the operating company too high.

But separate leasing also carries some disadvantages. On the one hand, a large portion of costs, i.e., those related to the infrastructure that it uses would be beyond the control of the rail service company. The track concessionaire would need to minimize maintenance costs and would find himself in quite a strong bargaining position vis-a vis an operating company that requests improvements in the quality of the infrastructure. For this reason, it was proposed, for example, in Colombia, Chile and Great Britain, on different occasions, that the railway, like the roadways, should belong to a State-owned company or to the ministry of public works, which would be responsible for maintaining it in good condition.

If traffic is heavy, as it tends to be in the approaches to large cities where tracks are often used by suburban, freight and main line passenger trains, the existence of various train operators could cause different problems related to rail traffic control and the allocation of slots to the different operators. Generally, difficulties may also arise with respect to the apportioning of liability if a train belonging to one company derails or is delayed, causing delays for the following train operated by another company.

From the Government's point of view, the railway concession would be of less value if separate invitations to tender were issued for the infrastructure and for operation of the service, precisely because this would limit the scope for excessive profits through adoption of monopolistic practices. Infrastructure maintenance costs may be distributed between fixed costs and those related to the volume of traffic; therefore, it would be justifiable to require the company leasing the services to pay to the track-management company both a fixed annual rate and a specific toll each time a train runs, as is the practice with the Chilean freight train operator, Ferrocarril del Pacífico (FdP, Pacific Railway Company).

**Each country's models.** Each country has a different approach to railway privatization and it is not uncommon to find countries where different approaches have been adopted for different railways. The examples in table 1 show some of the different options adopted to date.

**Subsidies and efficiency.** In some cases, the lease contains provision for a subsidy, the value of which is one of the factors taken into account in making the award, as occurred with the Buenos Aires suburban passenger services and similar services in cities in Great Britain. Often, the infrastructure or rolling stock are leased out at figures well below their book value.

One of the main arguments in favour of railway privatization is that it increases efficiency and reduces the need for government subsidies. When Latin American railways were State-operated, they were notoriously inefficient; the railway system operated by *Ferrocarriles Argentinos*, which had reached a daily deficit of around US\$ 1 million, had a staff of 85,000 persons in 1991; now, it operates with less than 20,000, although it has still not been fully privatized and the volume of traffic is generally higher than at the beginning of the decade. In Great Britain, the annual subsidy offered to the private passenger transport companies was 1,887 billion pounds sterling in the first

year of operation (1995/1996) but, under existing contracts, it will fall to £ stg. 910 million in 2002/2003. A number of rail companies which were are operating at a deficit, or receiving very poor returns on their investment have been sold or leased for quite favourable prices (FdP, Red Andina/Ferrocarril Andino boliviano, Ferronor, etc.)

**Positive externalities of railways.** In general, rail transport is less harmful to the environment than the competition by road, (it causes fewer accidents, less congestion, less pollution, etc.). Moreover, heavy vehicles with per axle weights of over ten tons, cause severe damage to road infrastructure, especially to poorly maintained or poorly constructed roads. In many countries, especially in Europe, efforts are being made to internalize these costs, by applying penalties in the form of different types of taxes to road transport; however, in Latin America such taxes are scarcely ever paid, at least in terms of the values that should apply to truck transport, for various reasons, some technical (related to the method of collection) and others of a more political nature, for example, fear of a work stoppage by truck-drivers or of perceived inflationary effects. In Latin America, high taxes are not levied on bus transport for social reasons.

Normally, trucks and buses (rather than cars) are the modes of transport that compete with the railway, and increased use of the railway would generate significant external benefits by reducing road maintenance costs and environmental damage. In Chile, in 1993, authorities started to pay various national railway companies bonuses for each net ton-km transported and for each passenger-km, based on recognition of the above-mentioned external economies. However, in subsequent years, the per unit values of the bonuses fell to ridiculous lows.

**Possible contradictions between privatization and maximizing positive externalities.** Frequently, State-owned railways are administered in such a way as to facilitate the beneficial externalities associated with rail transport, by applying freight charges that make it possible to cover the short-term marginal costs of the services offered, although they may be insufficient to contribute in any significant way to fixed costs, such as costs of administration, station personnel, or the portion of infrastructural maintenance costs not linked to the volume of traffic transported, etc. The railway's relatively low freight rates attract traffic that would otherwise have been transported by truck if the rail company had tried to cover all its costs or to maximize its profits.

**An example: *Ferronor*.** The Chilean company *Ferronor* applied freight rates equivalent to marginal costs for the La Calera-Copiapó and Baquedano-Iquique routes, where the demand for rail transport is relatively low. In just a few years, *Ferronor's* income was sufficient to cover its operating costs, but the company never generated a commercial rate of return on the capital invested in it.

*Ferronor* was sold to a private consortium in early 1997. Immediately, the new owners set in train a programme for generating a commercial rate of return on the amount invested for the purchase. As part of this programme, it abandoned the principle of charging freight rates equivalent to short-term marginal costs on low-demand routes. Following the inevitable price rises, traffic on the routes in question switched to road transport. The bulk of the traffic previously transported by rail consisted of relatively high density products such as cement or copper products. These are now being transported by trucks with high load per axle capacity, which are causing damage to major roadways out of all proportion to the toll payments or fuel taxes they bring in. It should be added that the motives behind the measures adopted by the new management of *Ferronor* are anti- social. An executive of the former State-owned company commented that if it had remained under his portfolio, he would have done exactly the same.

**There has not been any solution so far in the case of *Ferronor*.** If the Government of Chile wanted to redirect the traffic towards *Ferronor* just as any other Government in the same position, it would not be able to do so by offering rail bonuses such as previously granted to *Ferrocarriles del Estado*, because this would imply a politically

unacceptable transfer of public funds to a private company. It could, on the other hand, try to increase the tax on the competing road service, but this is no easier to do than in the past and, in any event, it would also be unacceptable for political reasons, as it could be interpreted as preferential treatment towards a private railway company.

**However, this option may be of use in the future.** It is now too late to solve the *Ferronor* problem, at least partial solution could have been found: for example, a system of bonuses could have been worked out for *Ferronor*, on a per ton-km basis, to reflect the external advantages of rail over road transport, prior to issuing the invitation to tender. The bonuses would have had to be worked into the bids; in other words, the amounts offered would have had to be increased, in anticipation of the payment of bonuses in subsequent years. The positive externalities would thus have been internalized.

A solution of this kind would be partial rather than complete, since the private company would have to generate sufficient income not only to cover its fixed costs but, also, to generate a return on the capital invested that would satisfy the investors, a condition not normally required of a State corporation given its socio-economic imperatives.

**Reducing costs or maximizing income.** In a number of cases, privatized railways in Latin America have placed the emphasis on cost reduction and improvement of productivity indices. On the other hand, they have not always assigned any comparable significance to commercial activities, and at times have tended to lose lower volume traffic. This is probably due to the fact that, on assuming control of the company, the new owner is obliged to convert an operating deficit into a sufficiently large surplus to generate an adequate return on the capital invested. In the short term, it seems more feasible to correct the deficit by reducing costs than by seeking new clients. One risk related to this attitude is that it results in a loss of volume, making it difficult to cover fixed costs. In the case of FdP, one of the cost-cutting measures involved a substantial increase in the length and weight of trains, with a corresponding reduction in frequency of service and it seems to have contributed to the loss of some clients. The company forecast that the cost-reduction policy would enable it to generate profits from 1996; however, its operations have continued to show a deficit.

Generally speaking, the unsatisfactory financial situation of the Argentine privatized railways has not enabled them to fulfill their contractual obligations with respect to traffic volumes or investments.

With respect to passenger transit, the situation is different. In almost all cases, at least in Argentina, Bolivia and Great Britain, private companies are bound to continue to provide specified frequencies and are not authorized to shut down routes. This limits their scope for cutting costs; thus, they have attempted to improve their financial position by maximizing income, for example, by making higher investments than necessary in the contracts signed with Governments (Argentina) or by adopting innovative commercial policies (Great Britain).

**Can one expect an integrated railway system in the Southern Andes?** Railways offer considerable scope for reducing costs by expanding the scale of operations i.e. through economies of scale. Hence, it would be perfectly feasible to establish a binational or multinational railway system under a centralized administration or, at least, coordinated by different components of those systems. There is already a certain degree of integration at the director level between *Ferrocarril Antofagasta a Bolivia (FCAB)* (the Antofagasta-Bolivia Railway), *Ferrocarril Andino* (the Andean Railway) and *Ferrocarril Oriental* (Eastern Railway). In terms of cost-cutting, especially with respect to maintenance of traction equipment, it would be preferable for the *FCAB* and *Ferronor* to be more closely integrated. If the *Arica - La Paz Railway* (Chilean section -*FCAB*) were integrated with the *Ferrocarril Andino*, it could operate the whole route between Viacha (which serves the city of La Paz) and Arica more efficiently by reallocating different types of engines for each section. Incorporation of the *Ferrocarril Belgrano*, which is still a State-owned corporation, into a new private railway system of the south-west of Latin

America, would also generate savings by integrating all the railways along the line linking the east of Bolivia and the Pacific ports, through Salta and Socompa.

In the centre and south of Chile, *FdP* would do well to purchase the concession for management of the infrastructure used by its freight trains, soon to be put up for tender by the Chilean government. Groups making bids for this infrastructure will also be required to present bids for lease of the passenger service operation; this would also suit *FdP*, as it would generate economies of scale; a locomotive that pulls a night passenger train could be used in the day for freight. The same economic group that controls *FdP* already manages the *Ferrocarril Oriental* in Bolivia. One hardly needs a powerful crystal ball to envisage a situation in which all the railways between Puerto Montt and Quijarro, serving points as remote from each other as Talcahuano, Antofagasta, Arica, Guaqui, Salta and Rosario, could all be integrated into one system.

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