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Global Trend to Railway Concessions Delivering Positive Results

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Few railways have been truly privatized, beyond such recent examples as New Zealand, Canadian National, East Japan, Conrail in the United States, and the infrastructure and freight services of the old British Rail. Instead, most governments have preferred to concession (franchise) their railways. Why concessioning is usually preferred to privatization is not always clear, but the main reason is probably that governments believe that concessioning offers them the best of both worlds: they retain ultimate control over the infrastructure (at least in the political sense), while the private sector carries out the operating functions and competes for customers.

Rail concessioning is not new. Many railways were originally built and operated as concessions, and if not for the wave of public ownership (especially strong in countries undergoing decolonization) after World War II, many would never have been publicly operated. Since then rail has performed badly, for two main reasons. First, governments have promoted highways and air travel, often operated by the private sector. Second, and perhaps more important, railways have become mired in politics, often depriving them of adequate capital for investment and repairs, always lumbering them with a confused and contradictory set of objectives in competition with modes that had a much clearer mission. The downward slide of nationally owned railways has coincided with increasing globalization and tightening national finances. Governments can no longer afford bad rail services, and this has led to politically painful measures to fix the problem. These pressures prompted reform in the early 1990s in Argentina and the United Kingdom and the early steps toward reform by the European

Commission. The success of the early concessions—and the lack of credible alternatives—has caused a snowballing of such reforms in Latin America. Concessioning is also beginning in Africa and the Middle East and, tentatively, in Asia. A similar process, based in part on concessioning and franchising and in part on privatization, has also taken hold in the European Union. (Tables 1, 2, and 3 show basic railway indicators for actual and forthcoming concessions and privatizations, by region, excluding Europe.)

Case studies

There have been interesting pioneers in these regions. The rail concessions in Argentina involved several innovations: they were the first negative concessions and they were the first to require concessionaires to share tracks. But the impact of complexity and lack of transparency in the initial bidding process is also instructive. Brazil had the first concession for which the World Bank directly funded severance payments. Chile introduced the first real separation of infrastructure and operations. Mexico achieved rapid implementation and emphasized fostering cross-border traffic. And Côte d'Ivoire and Burkina Faso launched the first new rail concession in Africa and the first binational operating concession with the Abidjan-Ouagadougou railway, which links their capital cities.

Argentina

The concessioning strategy adopted by the Argentine government was grounded in five basic principles: The railway deficit was no longer sustainable. The monolithic federal railway was unsalvageable as an enterprise. Some freight



TABLE 1 ACTUAL OR POTENTIAL RAILWAY CONCESSIONS IN LATIN AMERICA
(1994 or latest available year)

Country, railway	T-km (000,000)	P-km (000,000)	Line (km)	Employees	TU/km (000)	TU/employees (000)
Argentina^a	7,037		29,118	5,151	242	1,366
<i>NCA (1997)</i>	1,741		4,520	865	385	2,013
<i>FEPSA</i>	982		5,163	575	190	1,708
<i>Ferrosur Roca</i>	854		4,791	808	178	1,057
<i>Bs. As. al Pacifico</i>	2,029		5,493	1,079	369	1,880
<i>Mesopotamico</i>	620		2,751	524	225	1,183
<i>Belgrano</i>	811		6,400	1,300	127	624
Bolivia	836		3,261	5,255	188	133
<i>Andina (1995)</i>	322	114	2,082	2,443	209	203
<i>Oriental (1997)</i>	514		1,179	632	436	1,089
Brazil						
RFFSA^b (1996)	35,118		21,715	28,401	1,805	966
<i>Nordeste</i>	674		4,260	4,402	158	153
<i>Centro-Leste (Centro Atlantico)</i>	6,917		7,092	3,400	975	2,034
<i>Sudeste(MRS Logistica)</i>	18,580		1,770	5,528	10,497	3,361
<i>Sul (Sul Atlantico)</i>	6,939		6,814	10,208	1,018	680
<i>Terezina Cristina</i>	92		168	351	548	262
<i>Oeste (Novoeste)</i>	1,916		1,611	2,512	1,189	763
FEPASA	6,520	1,100	4,929	15,319	1,546	497
CVRD^c						
<i>EFVM</i>	50,137		898	4,991	55,832	10,045
<i>Carajas</i>	37,500		1,175	1,814	31,915	20,673
Chile Freight, FEPASA^d (1997)	816		2,200	475	371	1,718
Costa Rica^{e, f}	80	72	480	2,300	317	66
Guatemala^{f, g}	28	240	640	430	420	624
Mexico, FNM	37,300		20,360	48,030	1,820	775
<i>Northwest^g</i>	17,200		6,200	21,300	2,774	808
<i>Northeast^g</i>	14,000		3,960	9,830	3,535	1,424
<i>Southeast^g</i>	3,200		2,200	9,043	1,455	354
<i>Chihuahua al Pacifico^g</i>	600	84	1,457	2,053	469	333
<i>Short lines</i>	2,300		6,543	5,804	352	396
Peru	483	242	1,609	3,337	450	217
<i>Southeastern</i>	5	83	185		474	
<i>Central</i>	209	49	509		507	
<i>Southern</i>	269	110	915		414	

Note: Covers primarily freight railways. Italics indicate that railway has been concessioned. T-km means metric-ton-kilometers. P-km means passenger-kilometers. TU means traffic units, the sum of metric-ton-kilometers and passenger-kilometers. Some employee totals do not add because they include central overhead employees not transferred to the concessionaires.

a. The Argentine concessions were completed between 1993 and 1995. Suburban passenger concessions are not shown.

b. The RFFSA concessioning was completed in 1996 and 1997.

c. CVRD (parent company) was privatized in April 1997.

d. Concessioned in June 1995.

e. Estimated on the basis of 1988 data.

f. Currently out of service.

g. Data are estimated.

Source: Authors' compilations.

services were probably viable. The Buenos Aires suburban passenger services, though loss-making, were so important to the city's development that they had to be continued. And operating efficiency, particularly staffing levels, would have to be improved.

By mid-1990 the government and the World Bank had agreed on a plan that called for restructuring the railway into several separate freight and commuter rail networks, concessioning these networks, rationalizing intercity passenger services, establishing new rail regulatory agencies, creating a metropolitan transport authority for Buenos Aires, revising operating practices and rules, reducing the workforce and improving productivity, and disposing of redundant assets.

Six freight packages were created for concessioning on thirty-year terms, with an optional ten-year extension. The concessionaires have exclusive use of the tracks but must grant access to passenger operations in return for a compensatory track fee. Bids for the freight networks were evaluated using the net present value of the *canon* to be paid to the government during the first fifteen years of the concession, the quality of business and investment plans, staffing levels, the proposed track access fee for intercity trains, and the share of Argentine interest in the consortium. The weighting used reflected the importance attributed to investment in the railways, but also political compromises on employment.

The perceived lack of transparency in the freight concessioning led to a simpler process for the suburban passenger concessions. Bidding documents defined the minimum service to be provided (seats per hour, frequency, travel time, punctuality) and a required capital program to make up for years of neglected maintenance. Maximum fares were established for standard service, with fare increases as a premium for improved services. Bidding was on the basis of lowest government payment, allowing the government to ensure that the bidding process was direct and transparent, yet

leaving the concessionaires with the commercial risks and the responsibility for decisions on the timing of investments.

The level and timing of the investment program are now being renegotiated. In freight the reason is that demand will not support the promised investment levels. By contrast, suburban passenger and metro demand is so much higher than expected that the government-specified capital program is proving inadequate, so new provisions for investment must be made. Although most of the freight concessions appear stable, none is highly profitable, and some may even be in financial trouble. Traffic density on Argentina's freight railways is low, and success will be hard to come by. In addition, most intercity rail passenger services have been lost for good. That said, the freight concessions have made real gains in performance: a turnaround in traffic trends, a quadrupling of labor productivity, improvements in service quality, reductions in prices, and a reduction in the public deficit of about US\$600 million a year (equal to about 0.5 percent of GDP).

Brazil

Before reform in Brazil, there were four principal railways—the national railway (RFFSA), the railway of São Paulo State (FEPASA), and the two railways owned by the Companhia do Vale do Rio Doce (CVRD)—totaling about 30,000 kilometers of track. RFFSA was the largest, accounting for about two-thirds of the track, rolling stock, and employees. Rail accounted for about 25 percent of freight movement (measured in metric tons per kilometer), but there were almost no intercity passenger services.

Reform started with RFFSA. The government considered many options before settling on the concessioning of six exclusive regional systems, a configuration that seemed optimal because of regional differences in geography, track gauge, and rail traffic. Two other major considerations for the government as it assessed restructuring were employment and the condition of track and rolling stock.

Big redundancies were inevitable and required careful handling to prevent their becoming an obstacle to reform. The government developed a redundancy package and target employment levels reflecting an average reduction of about 40 percent. In addition to legally required severance payments, the redundancy package included incentives for early retirement and voluntary separation, involuntary separation grants for the remaining redundant staff, retraining programs aimed at regional employment opportunities, and job search and outplacement assistance. On average, the total package corresponded to about twenty-one months of salary. The program was phased. Before concessioning, it introduced the incentive schemes for early retirement and voluntary separation, with involuntary separation possible, depending on the results. In the second phase, after concessioning, RFFSA paid or will pay involuntary separation grants to the remaining redundant staff not hired by the concessionaire. Compensation for any additional employees laid off is the responsibility of the concessionaire. Because the initial employment decision is out of the concessionaire's hands (unlike in Argentina), it will be harder for the concessionaire to reach the most efficient levels of employment. This fact undoubtedly was reflected in the auction prices.

The government also faced a maintenance crisis. Government investment in RFFSA had declined significantly in the previous few years, and network quality suffered badly. By mid-1995 locomotive availability had fallen to less than 50 percent, causing RFFSA to refuse traffic. In the first eight months of 1995 more than 200 accidents occurred, and the continued deterioration of the roadbed meant further reductions in speed and service quality. The government was forced to undertake emergency track repair and rolling stock renewal so that the new concessionaires could assume the systems in operable condition (and meet the requirement to lower the accident rate in the first five years of operation).

All six concessions have been successfully auctioned on the basis of the highest bid above

the government's stipulated minimum price. Concessionaires are required to make an upfront payment immediately after the auction and then a stream of predetermined payments over the life of the concession. Once the RFFSA program began, the Brazilian government decided to sell its equity in CVRD, which resulted in privatization of the two railways that CVRD owned. The national government is also negotiating with the government of São Paulo State on a concession for FEPASA similar to that for RFFSA. Rio de Janeiro State is concessioning its suburban passenger services (Flumitrens) and metro along lines similar to those used in Buenos Aires. São Paulo is engaged in a similar effort. In a few years Brazil will have no railways left in public operation.

Initial indications are that the concessionaires are rapidly developing their traffic base and reducing costs. There is good reason to expect that results in Brazil should equal or even surpass those in Argentina.

Chile

For several reasons, particularly the continuing importance of passenger services, the Chilean government rejected the Argentine approach. Instead it initially decided to concession only the freight services on the broad-gauge network while keeping the infrastructure and passenger services in public hands. This concession, launched in 1995, was the first based on full infrastructure separation.

The freight concession (also called FEPASA) has faced a difficult battle in its first years of operation. It has had to stabilize traffic, learn to live with its public sector infrastructure partners, get locomotives back in service, and stand up to the challenge of trucks (not easy, since the average freight haul distance in Chile does not favor rail). Recent traffic trends suggest that it will win the battle.

The government, not fully satisfied with the operations remaining in public hands, has committed itself to concessioning the infrastructure

TABLE 2 ACTUAL OR POTENTIAL RAILWAY CONCESSIONS AND PRIVATIZATIONS IN ASIA AND NORTH AMERICA (1994 or latest available year)

	T-km (000,000)	P-km (000,000)	Line (km)	Employees	TU/km (000)	TU/employees (000)
<i>Canadian National^a</i>	159,540		29,700	27,979	5,372	5,702
<i>New Zealand^b (1996)</i>	3,260	525	4,000	4,500	946	841
<i>Pakistan^c</i>	5,939	16,385	8,775	116,026	2,544	192
<i>United States, Conrail</i>	128,627		19,082	24,728	6,741	5,202

Note: Covers primarily freight railways. Italics indicate that railway has been privatized. T-km means metric-ton-kilometers. P-km means passenger-kilometers. TU means traffic units, the sum of metric-ton-kilometers and passenger-kilometers.

a. Privatized in late 1995.

b. Passenger traffic estimated.

c. Most traffic is passenger.

Source: Authors' compilations.

in one piece and to concessioning the passenger operations in one intercity piece and two suburban services. These concessions will be complex and will take another year or so to show results. In addition, Chile recently concessioned its meter-gauge railway (the old Ferronorte, which had been operated separately from the broad-gauge railway) and the Arica-La Paz railway, one of the steepest and most difficult in the world.

Mexico

Mexico is in the unusual situation for a developing country of sharing a border and a free trade area (NAFTA) with an industrial country. It has sliced up and concessioned its system in a way that maximizes opportunities for both cross-border traffic and domestic flows. Mexico divided the system into three major pieces and a terminal company serving the Federal Capital area that will be jointly owned by the three concessionaires. The northeast concession, connecting to the United States at Nuevo Laredo, was sold first (for about US\$1.4 billion), to a Mexican-U.S. consortium headed by a large Mexican transport company (TMM) and a U.S. regional railway (the Kansas City Southern). The northwestern concession (Pacífico Norte) was recently sold for US\$524 million to a consortium of Mexican industrial interests and the Union Pacific Railroad of the United States. The government intends to market the southeastern concession

soon, along with a series of short lines that, like those in the United States, appear to have more value as independent operations.

The Mexican government proceeded in a different way than the others, adopting an approach that appears to be useful for governments wanting to move rapidly. It divided the railway (FNM) into the four planned concessions, then converted the concessions into stock companies with separate management teams. The government then sold a controlling interest in the stock by sealed bid (the remaining stock must be offered on the stock exchange or purchased by the concessionaire at the original price). By selling stock rather than the concession, the government was able to transfer a going concern, in a process that can occur more smoothly and rapidly than a concession alone. And it was able to influence FNM's actions before concessioning was finished. The concessioning was completed too recently to report results.

Côte d'Ivoire and Burkina Faso

The Abidjan-Ouagadougou railway links the capital cities of Côte d'Ivoire and Burkina Faso and has a history of binational ownership. Advised in the later stages of the concessioning by the World Bank, the governments jointly awarded a fifteen-year concession in 1994 to SITARAIL, which began operations in August 1995. SITARAIL is a consortium made up of a

TABLE 3 ACTUAL OR POTENTIAL RAILWAY CONCESSIONS IN AFRICA AND THE MIDDLE EAST (1994)

	T-km (000,000)	P-km (000,000)	Line (km)	Employees	TU/km (000)	TU/employees (000)
Cameroon	592	450	1,006	3,853	1,036	270
Congo (Brazzaville)	339	421	510	4,989	1,490	152
<i>Côte d'Ivoire and Burkina Faso</i>	417	163	1,155	1,823	502	318
Gabon	295	98	683	1,893	575	208
Malawi	52	65	789	3,658	148	32
Senegal and Mali (international only)	752	346	1,548	4,935	709	222
South Africa (Spoornet) ^a	92,536	9,204	33,275	150,470	3,058	676
<i>Togo (management contract)</i>	19	9	532	800	53	35
Zambia	1,025	241	1,273	8,544	995	148
Jordan	675		293	1,219	2,304	554

Note: Covers primarily freight railways. Italics indicate that railway has been concessioned. T-km means metric-ton-kilometers. P-km means passenger-kilometers. TU means traffic units, the sum of metric-ton-kilometers and passenger-kilometers.

a. Considering concessioning five suburban passenger operations.

Source: Authors' compilations.

private shareholder (51 percent), both governments (15 percent each), railway staff (3 percent), and local private investors (16 percent). The majority shareholder is itself a consortium of international freight forwarders, an international shipping line, an Ivoirian investment group, and international railway engineering consultants. The consortium approach, with a controlling strategic shareholder from the private sector but significant public ownership, is one that has been adopted elsewhere (for example, in Bolivia, Chile, and some of the Argentine freight concessions). It responds to a lingering political belief that there ought to be continuing local awareness of railway performance and some public stake in the railway's success.

Unlike most rail concessions, SITARAIL provides both freight and passenger services and can set the tariffs for both. It also is obligated to operate public services at the local or national government's request. It would run these service obligations under separate contracts specifying the service characteristics and the financial

compensation. There has been no request for such service, even though the concessionaire abandoned all unprofitable local passenger services when it took over the railway.

Because of the relatively short concession period, the concessionaire does not own rolling stock or other equipment. Instead, two national "railway landlord corporations" were established to own track and equipment and lease rolling stock to the concessionaire as necessary (though the concessionaire may purchase its own equipment). These landlord corporations also finance infrastructure investment, though SITARAIL defines and implements the program and contributes a fee for debt service. SITARAIL is also responsible for maintaining the track and equipment. All these arrangements are meant to ensure that it is the concessionaire, acting out of commercial interest, that makes decisions on investment needs and timing.

SITARAIL's payments for the concession are threefold: a usage fee related to revenues on

the railway, to be negotiated every three years; the debt service payment incurred by the landlord corporations; and a lease fee for the use of motive power and equipment. Most payments are kept in an investment and renewal fund to allow the landlord corporations to renew the equipment as necessary. Since the concessionaire both selects the timing and level of investment and pays the debt service, the payment arrangements ensure that commercial incentives drive investment decisions. And because the usage fee will be renegotiated every three years, the concession will evolve with the revenue streams and required investment levels. The payment arrangement represents a compromise, common in concession agreements, among three objectives: removing railway operations and decisionmaking from the government realm; reducing uncertainty for investors, who are reassured by a phased negotiation; and maximizing government income from the concession.

The concession agreement contains an important—and controversial—feature. Most railways are concessioned on an exclusive basis, with perhaps some access rights for connecting railways to certain track segments, vital for creating competition in major markets (as in Mexico) or for noncompeting services (such as passenger services on freight tracks). The governments granted SITARAIL only a seven-year exclusivity period, after which SITARAIL must grant track access, for an agreed fee, to any third-party carrier they specify. This arrangement too was a clear compromise—between the governments' desire to reap the benefits of allowing competitive access to the tracks and the private sector's preference for full control over the tracks and over the market, to make forecasting revenues easier and earning adequate profits more feasible.

Although the SITARAIL concession has been in place only two years, the initial results are encouraging. Much that SITARAIL has done mirrors the actions of the Argentine concessionaires, and the results too are much the same as those in Argentina at this stage in the process.

Lessons

Rail concessions cannot be reduced to a simple recipe. But in defining a concession, all governments have to specify many of the same dimensions—the term, concessionaires' rights and obligations, investment responsibility, the tariff regime, the bidding process, and preset rules for renegotiation.

Experience shows that, although all concessions are different, there are several common fault lines. First, the term of the concession must be consistent with the government's objectives for the balance between public and private investment. In general, the private sector will not finance assets whose service life is significantly longer than the term of the concession. Second, public enterprises tend to lose interest in operations and maintenance as soon as plans for concessioning are announced, so once started, the concessioning process should be finished as quickly as possible. Third, railway concessioning has always lowered employment levels, so a responsible program for dealing with redundant labor must be developed. Fourth, risks should be in the right place. Retaining the environmental risks of cleaning up already polluted facilities is acceptable for government, but taking the commercial risk of projecting demand and cost of operation is questionable. Fifth, concessions inherently require continuing government involvement in regulating safety, monopolistic behavior, and compliance with the pricing and service requirements of the concession. This does not necessarily mean creating an elaborate new regulatory mechanism, but the state cannot walk away from its transport concessions once they are completed.

Finally, defining how the “winner” will be selected is no trivial matter. Precision in procurement would suggest that everything should be defined perfectly and price alone should be the determining factor. But allowing the concessionaire maximum initiative argues for broad performance specifications from government, followed by flexible offers from the private

concessionaire. Even the issue of price needs care. There can be a choice in the basis for award between, for example, maximum payment to government (or minimum payment by government) and minimum tariff. There can also be a choice between unrestricted bidding and prequalification followed by bids only from those judged fully qualified. There are no universal answers to these questions. There are only informed choices, and calculated risks.

Each country has approached its problems slightly differently, providing different insights into what can be achieved through concessions. But a few common trends can be discerned. Restructuring and substantial government investment in the design of the concession pay off. If allowed to, concessionaires can do exactly what is expected—increase traffic, improve service, and enhance labor and asset efficiency. There is nothing magic about this. Concessions work because government interference is ended and commercial management techniques are introduced and allowed to operate.

A growing number of companies and consortiums are interested in investing in railway concessions—if the concessions are offered on reasonable terms. In almost every concession the new majority owners are local investors—thus, no “recolonialization” has occurred. Instead, the local owners have partnered with experienced foreign firms (Canadian, Chilean, French, Portuguese, and U.S.) holding only a minority share in the equity of the concession.

Experience also shows that both positive concessions (where the concessionaire pays the government an agreed sum for the concession rights) and negative concessions (where the government pays the concessionaire for operating and maintaining the property) are possible. So loss-making but socially necessary services can also be concessioned.

Looking ahead, perhaps the most important innovation in railway organization over the next few decades will result from the European Commission’s Directive 91-440 and its follow-

on orders opening national networks to operations by all qualified carriers. While Directive 91-440 explicitly requires only that infrastructure accounts be separated from operations accounts, it implicitly requires that social passenger services, intercity passenger services, and freight services be accounted separately to show that state subsidies are limited to social passenger services. The order has launched a clear trend in the European Union toward institutional separation of infrastructure from operations by creating a perception of infrastructure as a state responsibility and operations (except for social services) as commercial. An eventual result of institutional separation will be franchising or even privatization of most freight services and possibly intercity passenger services. British Rail has shown that total privatization is possible, and Deutsche Bahn AG (Germany) and Ferrovie dello Stato (Italy) have announced plans to privatize freight services as an initial step. Romania is also considering privatizing freight services, though it has no plans to privatize infrastructure.

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