Case Study

Camrail

Figure 1 Cameroon Rail Network 1994-2010

1 Background

Cameroon, on the coast of West Africa, is home to 23 million people. The country has large cultural and geographic diversity and is potentially wealthy, endowed with significant natural resources, including oil and gas, high value timber species, minerals, and agricultural products, such as coffee, cotton, cocoa, maize, and cassava.

However, in 1987, the economy went into a steep decline. By 1994, gross domestic product (GDP) had fallen by more than 25 percent, culminating in a 50 percent devaluation of its currency. Since then, economic recovery has been slow but steady, with average annual GDP growth of about 4.0 percent[186].

Before WWI, Cameroon was a German colony. During this time, two railway lines were built inland from the port at Douala: one eastward as far as Eseka; and one from Bonaberi, opposite Douala on the north side of the Wouri estuary, to Nkongsamba in the north. After the war, Cameroon became a French colony, and the Eseka line was continued to Yaounde including a short branch to Mbalmayo (which is now closed). In 1960, Cameroon became independent. Another short branch railway was opened from Mbanga to Kumba[187]. In 1974, the 626 km Trans Cameroon Railway 2 was completed from Yaounde north to Ngaoundere

[186] World Bank national accounts data: http://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG

[187] The Mbanga to Nkongsamba portion of the line was closed in the mid-1990s.

with the help of European funding. The network is meter-gauge, diesel operated, and almost entirely single-track. Its maximum length was about 1,100 km, but the operational network is now about 977 km (Figure 1).

2 Performance Prior to Concessioning

Beginning in 1947, the government-owned Régie Nationale des Chemins de Fer de Cameroun ('Regifercam') operated the railway, which played a central role in the commodity-dominated economy. Railways were the preferred mode to transport large volumes of timber products and cotton for export because many main roads were in poor condition and some became impassable during the rainy season. The railway carried transit traffic between the coast and Chad and the Central African Republic, and general freight to central and northern Cameroon.

Box 1 Background to the Concession

During the 1980s, Cameroon's state-owned enterprises (SOEs) performed poorly. Management was weak; operations were not commercial; responsibilities were unclear; and accountability was lacking. Line ministries meddled in daily management, and audited accounts were rare. Financial losses, direct and indirect subsidies, and non-payment of debts were widespread.

In 1991, despite subsidies and transfers that amounted to 12 percent of GDP, only three SOEs out of over 100 avoided making losses. By 1994, the accumulated debt of the SOEs was over US$1 billion. Government introduced performance contracts that specified financial and operating targets but these proved ineffective. Restructuring proceeded slowly, largely due to lack of funds to settle SOEs' liabilities, including staff layoff compensation. Little progress was made on privatization.

In mid-1994, Government adopted a formal strategy to divest all public enterprises engaged in productive or commercial activities, through privatization or liquidation. Performance contracts were abandoned and subsidies were provided only for public service contracts, such as railway passenger services. Divestiture was planned in phases with an annual target of 10 SOEs privatized each year. In 1996, the first 15 SOEs that were privatized included REGIFERCAM, Cameroon Airlines (CAMAIR), and Cameroon Shipping Lines (CAMSHIP).

Despite railways' importance to the economy, lack of maintenance of track and rolling stock led to declining service quality and poor infrastructure condition. This was especially true on the line north of Douala, which had little freight traffic. During the 1980s, part of the southern section was upgraded, but the line faced stiff competition from road transport between Douala and Yaounde. However, poor road conditions from Yaounde to Ngaoundere, especially during the rainy season, meant that passenger and freight traffic on the aforementioned rail section were maintained at a reasonable level.

In 1999, at the time of concessioning, the railway was carrying 1.5 million metric tons of freight (about 40 percent was transiting to Chad and Central African Republic), for an average distance of 600 km. In the same year, about 1.3 million passengers were transported for an average distance of 230 km.[188] Annual transport revenues were equivalent to €40 million, with freight accounting for €33 million and passengers, €5.0 million. Working expenses were about €35 million, but depreciation of €16 million and interest charges of €4 million contributed to average annual operating losses of about €10-15 million. These financial results were not catastrophic, but the railway was unable to fund its asset overhaul and replacement, so infrastructure and rolling stock were deteriorating steadily.

The railway required substantial repair and rehabilitation work, and a large percentage of the rail and sleepers were in poor condition. In terms of rolling stock, only half of the 61 main line locomotives were available for operations. Many of the 1,296 wagon freight fleet needed to be refurbished, and only 50 of the passenger car fleet of 73 vehicles were operational. In 1998, Regifercam had 271 derailments, with 37 occurring on the main line, creating long service disruptions. Since the 1980s, delays had almost quadrupled. The average delay was 150 minutes for passenger trains, and 280 minutes for freight trains. Unreliable rail operations and poor service was compounded by poor security and a widespread culture of petty corruption.[189]

In 1994, Regifercam reduced its workforce to 3,800 employees, down from about 6,000 in 1988. However, productivity remained low, especially given 60 percent of the network was relatively new. Regifercam suffered from the familiar problems of other Cameroon SOEs: a lack of commercial orientation and continued Government meddling in management and procurement. Poor financial performance required annual support through a performance contract and capital funds, creating a significant financial burden on the economy. Since Regifercam had major investment needs, Government designated it among the first candidates to enter a general program of privatization (see Box 1). In 1998, after a public tender, Government awarded the concession. In March 1999, Camrail began to operate the railway.

3 The Concession

At the end of the concessioning process, two groups had submitted financial offers. One group comprised two Bolloré companies (SAGA/SDV) and Systra, a subsidiary of the French Railways (SNCF); and the other was Comazar. Government awarded the concession to SAGA/SDV but requested that they use Comazar as the operator rather than Systra, which they did. Under a partnership, Bolloré and Comazar owned a controlling interest in the holding company, Société Camerounaise des Chemins de Fer (SCCF).[190] The SCCF in turn owned 85 percent of Camrail, the actual concession manager and operator, while the Government and employees owned the remainder. In April 1999, Camrail began operations as a private company incorporated in Cameroon, with the objective of transporting freight by rail, sea, or air, and providing ancillary services such as storage and maintenance.

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188 Both freight and passenger traffic volumes had remained broadly constant for the previous five years.
189 Such as payments to make freight wagons available.
190 Comazar is no longer involved, and Bolloré now owns 77.4 percent of SCCF.

Box 2 Bolloré

Bolloré is a long-established large diversified French-based group. In 2015, it had over 58,000 employees worldwide and a turnover of €10.8 billion. Bolloré specializes in transport and logistics, which is about two-thirds of their turnover (most of the remainder is related to fuel distribution). They operate in over 100 countries, with over 20,000 employees related to Africa, particularly West Africa.

In Africa, Bolloré is active in ports, forwarding (through SDV, Saga, Transami and NOTCO), logistics, and commodity exports. Bolloré classifies its railway interests as one of its "activities connected with transport."

In Cameroon, Bolloré is the concessionaire of the Douala International Terminal at the Port of Douala. Since 2005, the terminal has seen an increase in container traffic of over 60 percent.

Camrail was granted a 20-year rolling concession to manage railway property and operate, maintain, and improve railway infrastructure. Every five years, the concession could be extended for another five years.[191]

Government retained legal ownership of the infrastructure, including stations and track. Camrail selected the rolling stock that it then leased for eight years with an option to buy. Camrail could also buy and sell its own equipment, and Government retained the right of first refusal on any sale of any rolling stock.

Box 3 Comazar

Comazar, registered in South Africa, was involved primarily in transport services and operations. In 1998, it was 65 percent owned by Transnet, the state-owned South African transport company that included Spoornet, the main railway. Comazar was actively involved in rail concessions, including operating the railway in the Democratic Republic of Congo for a short period, and railway projects in Tanzania, Mozambique, and Brazil. Since 2000, it has undergone several changes in ownership and now is no longer involved in Camrail.

Camrail could make infrastructure investments through a Government delegation and agreed to undertake an investment program of about US$92 million over a five-year period. The program was 58 percent funded by loans from the World Bank/IDA, the French and German development agencies and the European Investment Bank; and 42 percent funded by equity injections (17 percent) and retained earnings (25 percent). Infrastructure rehabilitation, mostly north of Yaoundé, comprised about 50 percent of the program and rehabilitation of rolling stock, about 25 percent.

[191] However, Government could cancel the concession after 10 years, after giving five years notice and upon compensation payment.

Camrail had to take over 3,000 employees from Regifercam, out of the pre-concessioning total of 3,400, and reduced this number to 2,800 after the first year of operation. Retrenchment costs were borne by Government.[192] Camrail had plans to reduce staff to 2,600 employees over five years, which was achieved early in 2002.

For commercial services, Camrail was free to establish tariffs and contract with shippers and suppliers. Camrail was required to take over only two existing contracts, one for aluminum and the other linked to construction of the Chad-Cameroon pipeline. Camrail was also obliged to provide some specific noncommercial services—principally the 'omnibus' passenger services from Douala to Yaoundé that stopped at all stations (many of which were not connected to all-weather roads) and some services north of Douala for plantations—for which it was to be compensated. Rail has strong competition from trucking, and no price regulation was imposed for freight[193]. For the first five years of the concession, Camrail had an operating monopoly. After that, if the concessionaire was found to be abusing rail operating rights or discriminating against clients, other operators could be allowed in.

Concession payments consisted of the following:

- An annual fixed amount of FCFA 500 million (US$862,000), escalated according to industrial prices; and
- A variable amount of 2.25 percent of revenues in the first year, 3.0 percent in years two to five, and a negotiated amount not less than 5.0 percent from year six onwards.

3.1 The 2008 Amendment

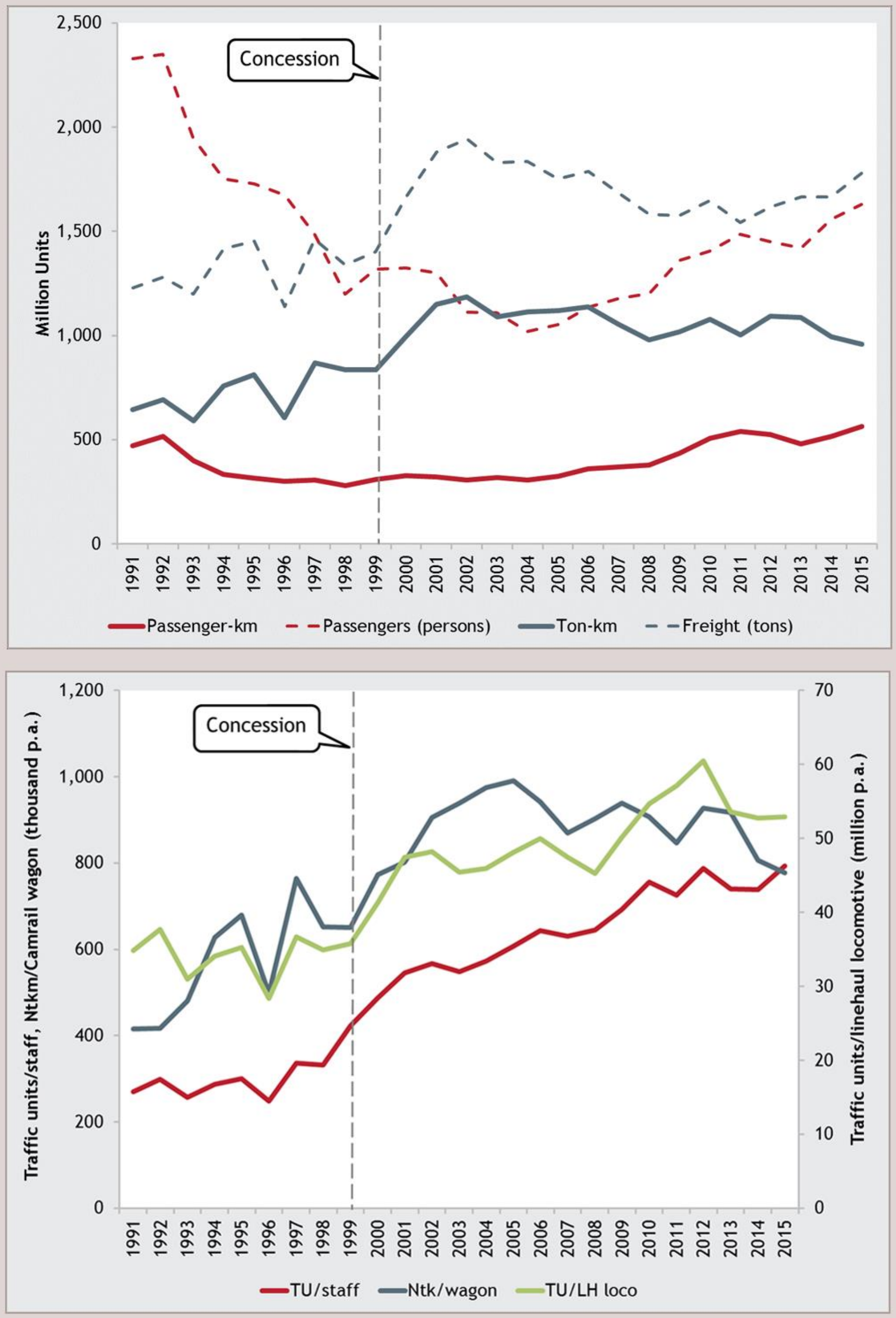
In 2008, the concession contract was amended and the following key measures were introduced: (i) the concession was increased to 30 years from 20; (ii) capital was increased by US$9.0 million; (iii) fixed and variable concession fees were capped at an annual US$4.4 million as part of a fixed concession fee; (iv) Government guaranteed financing of US$193 million for a new infrastructure renewal program through 2020, which would be partially funded through introducing a RIRIF[194] payable by the concessionaire to Government in an account managed by the concessionaire; (v) Government would finance US$27 million in passenger-only rolling stock; and (vi) the concessionaire would finance US$290 million in rolling stock and rolling stock-related investment through 2020.

[192] The African Development Bank and European Development Bank financed severance and pension payments.
[193] In most country reports, Cameroon's roads are said to be in poor condition, e.g. in 2006, only 30 percent of the national network was reported in 'good' or 'average' condition. In 2003, estimated rail corridor market share was 60 percent for transit traffic and 22 percent for domestic traffic.
[194] Redevance d'Investissement et de Renouvellement des Investissements Ferroviaires (Rail Investment and Renewal Fee). This is calculated annually as 50 percent of net income before taxes of the previous year.

4 Concession Performance

Following the takeover, and until the mid-2000s, freight traffic quickly increased by about 40 percent in terms of ton-km. Passenger-km remained constant, although the number of passengers declined steadily, suggesting short-distance passengers moved to other modes. During the mid-2000s, freight traffic dipped, particularly after the 2008 global financial crisis. It is now recovering, albeit not at the same level of growth as the first years after the concession. Since 2005, passenger numbers have grown steadily and are now approaching the level of the early 1990s. This growth has been confirmed by an increase in passenger-km since their lowest level in 2003 (Figure 2).

Figure 2 Camrail Traffic and Productivity 1991-2015



After concessioning, Camrail labor productivity increased sharply as traffic grew and initial staff redeployments were made. Labor productivity has continued to increase, although at a slower pace. Generally, asset productivity increased as Camrail made greater use of assets that were idled or waiting for repair. Figure 2 summarizes traffic volumes and three key productivity indicators: traffic units (passenger-km plus net ton-km) per staff, an indicator of labor productivity; traffic units per locomotive; and net ton-km per Camrail wagon, during pre- and post-concession.[195]

In the years following the concession, the compensation for 'omnibus' passenger services included in the concession agreement[196] and the standard of passenger service provided by Camrail were continuing problems. For the first three years, Government paid no compensation to Camrail, then a specific business unit was created for passengers (Mobirail). In 2003, Government agreed all passenger services would be compensated, not just the 'omnibus' services. However, this did not resolve the issue, and passengers made continued protests over the quality and number of services, including blocking trains, particularly with respect to the all-stops 'omnibus' services.

Meanwhile, Camrail was investing significantly because the rail link was also a lifeline for its own activities: around 30 percent of traffic was associated with Bolloré subsidiaries and another 25 percent was timber and fuel, of which the two minor shareholders are major shippers. Between 1999 and 2007, the investment program had three main components:

- Urgent investments of €32 million made by Camrail in the first two years, from its own resources and borrowings of €8 million, subsequently refinanced by French/European agencies;
- 'Complementary' investments of €12 million made by Camrail due to delays in mobilizing funds from international agencies;
- 'Priority' investments of €64 million, of which Camrail contributed €19 million, and most of the remainder contributed by IDA and European/French agencies.

Of the total €108 million investment, Camrail contributed €55 million, after netting out the refinancing, of which €15 million was its own funds. The remainder was borrowed from banks. Nevertheless, network and rolling stock condition remained substandard. The average commercial speed was around 17 km/hr, and it was clear that the railway could not generate enough cash to renew the infrastructure as required.

Performance under the 2008 amendment

Under the 2008 amendment of the concession, a modernization program is underway to rehabilitate the rail line, which is expected to be completed in 2022. The Cameroon rail network is split into two major segments, Douala to Yaounde

[195] A consistent series is available only for railway-owned wagons; about 130 privately-owned wagons also move on the network.
[196] This represented about 10 percent of total passenger revenues; Camrail was claiming annual compensation of around €2.0 million.

(Transcam 1) and Yaounde to Ngaoundere (Transcam 2). The 263km Douala-Yaounde segment supports the highest traffic levels on the railway, yet has not benefited from a major overhaul, in some cases for as long as 35 years. Transcam 1 already makes use of an automatic, remote-controlled signaling and switch system. It is anticipated that the track improvements will lead to better reliability and availability, increased speeds and reduced travel times, and better rolling stock productivity.

As a component of the same 2009-2020 investment program, the 621km northern line from Yaounde to Ngaoundere will be modernized through financing of US$9 million from the World Bank/IDA. Upgrades will include the mechanization of the existing manual signaling and switch system (US$5-6 million), the rehabilitation of bridges (US$1.7 million), and safety interventions at two accident-prone level crossings (US$0.84 million).

Regarding passenger transport, in 2014, Camrail began a non-stop express service from Yaoundé to Douala, offering twice daily trips in each direction in 3 h 40 min. The service had been well-regarded by the general public and local authorities. However, the Yaoundé-Douala service recently suffered a devastating derailment, resulting in over 80 fatalities. Investigations into the cause of the crash are ongoing.

Under the terms of the 2008 amendment, Camrail has already invested US$56 million in rolling stock and US$42 million in infrastructure, and the Government of Cameroon US$28 million in rolling stock and US$69 million in infrastructure. Improvements in rail services have benefited both road- and rail-freight customers. Competition from rail has in fact driven down road transport prices, where rail tariffs are on average 10 percent lower than road. Between 2008 and 2012, freight tariffs (both road and rail) decreased on average by 15 percent. For example, the average cost to move a 20-foot container from Douala to N'Djamena in 2012 was approximately US$0.13 per ton-km using road and rail, compared to US$0.15 per ton-km by road only. However, when put into context, transport along this corridor is still one of the most expensive in Sub-Sahara Africa[197].

5 Financial Performance

In 1999, at the time of concessioning, financial forecasts anticipated rapid and sustained turnaround; the overall concession was expected to return 16 percent. Projections anticipated immediate revenue growth of about 10 percent, and subsequent slower growth, which was confirmed over the next 15 years. By 2003, revenue was up by 20 percent in real terms compared to the late 1990s. In subsequent years, revenue grew at a slower pace, and stabilized by 2010. Operating costs have proportionally grown more quickly. Recently, the operating margin has been as high as almost 100% (Figures 3 and 4).

[197] Average freight tariffs are US$0.06 to US$0.08 per ton-km in West African and East African corridors, and US$0.05 to US$0.06 in Southern Africa (2009 figures)

Figure 3 Camrail Key Indicators 1994-2015

	1994/5	1999/00	2005	2010	2015
Volumes					
Tonnes (000)	1,452	1,401	1,751	1,648	1,779
Ntk (000)	812	995	1,119	1,080	960
Passengers	1,728	1,320	1,053	1,406	1,631
Pax-km (000)	317	309	324	506	565
Financials (Euro million*)					
Freight	32	36	57	76	70
Passengers	5	7	8	13	14
Other	1	0	9	12	17
Total	**38**	**43**	**74**	**100**	**100**
Operating expenses	24	43	55	74	96
Total expenses	**37**	**45**	**65**	**88**	**99**
Operating margin	**37%**	**0%**	**26%**	**26%**	**4%**
Staff, Equipment, Track					
Employees	3,754	2,711	2,376	2,098	1,921
Locos (linehaul)	32	32	30	29	29
Wagons	1,194	1,287	1,130	1,190	1,234
Coaches	77	76	65	63	90
Route-km	1,016	1,016	977	977	977
Productivity					
Labor (000 TU/staff)	301	488	607	756	794
Loco (million TU/loco)	35	41	48	55	53
Wagons (000 TU/wagon)	680	773	990	907	778
Wagon turnaround (days)	n.a.	8	6	8	9
Breakdowns/100,000 loco-km					
CC2200	n.a.	9	5	-	-
CC2600	n.a.	6	13	13	16
Loco availability (linehaul) (%)	n.a.	73	77	86	83

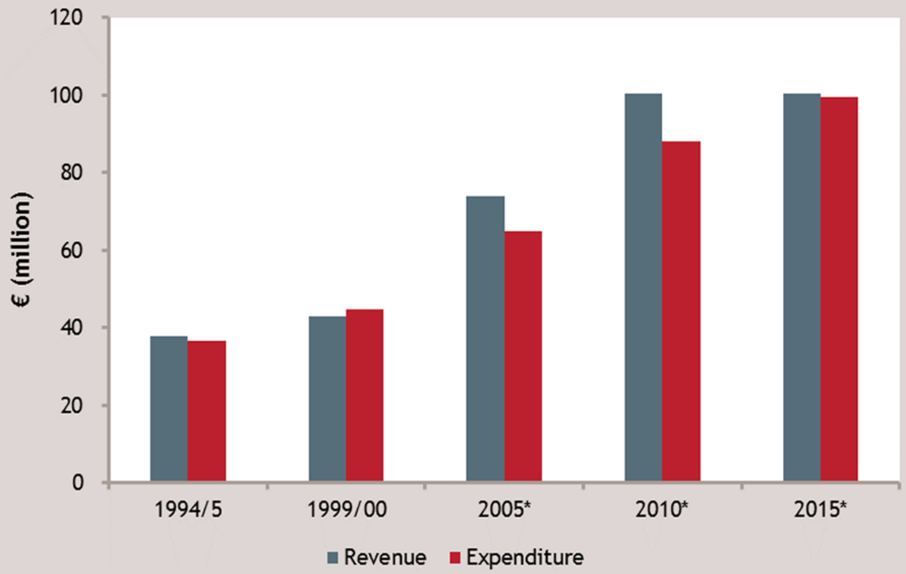
Note: 1 XOF = 0.00152 Euro

As a result, the optimistic financial projections – that long-run net profit would rise to 19 percent and operating margins would be around 25 percent – have not been achieved. Instead, the operating margin has declined, and by 2015 was 4 percent. It is worth mentioning that, given Camrail's additional investment in rolling stock and track since the concession, higher operating costs from increased maintenance spending are justifiable.

In 2015, Camrail recorded an annual turnover of US$113 million and an operating profit of US$4.8 million[198]. Since the beginning of the concession in 1999, aggregated financial flows to the Government have amounted to over US$270 million (including fixed and variable concession fees, taxes, import duties, etc.).

[198] XOF = 0.0017 USD as of December 31, 2015

Figure 4 Camrail Revenues and Expenditures 1994/5-2015



* Since the concession, passenger service compensation is included as revenue.

6 Conclusion

Carrying nearly 40 percent of all freight between Duala and Ngaoundere in the north, Cameroon's rail network plays, and will continue to play, an important role in Cameroon's economy as well as in those of its landlocked neighbors, Chad and the Central African Republic (CAR). At the start of the concession, Camrail faced substantial tasks in improving all areas, from operations to labor, management, investments, rehabilitation, security, and environmental issues. Camrail's financial performance was positive but fell short of the margins anticipated by the financial projections at concessioning. Camrail has undertaken a substantial investment program, combined with planned investment programs in signaling, and track and infrastructure improvements as part of the World Bank Multimodal Development program. These programs will help Camrail achieve its initial commercial and financial objectives by increasing the reliability of services, and therefore the capacity on the network, which has become a major constraint.

However, Camrail is a success story in terms of meeting Government objectives for privatization. Now the railway is recovering a greater share of operating costs, and it relieved Government of almost a decade of significant capital expenditures until the 2008 concession amendment. Major investments have been made, traffic volumes have increased, and the concessionaire, as a major railway user, has created a much-improved service for its own traffic. Both the Government and the operator have therefore benefitted. So have other freight shippers, as far as can be judged, with improvements in service quality, security, and reliability. Although Bolloré is a shareholder and a major railway user, there is little evidence of favoritism at the expense of other shippers.

The most significant development is that this concession was restructured to address two fundamental issues that are by no means unique to Cameroon.

First, most passenger rail services do not cover their costs and even covering routine above-rail (direct) costs is a serious challenge. Therefore, without external contribution, passenger rail services cannot be a business priority for commercially-focused concessionaires. They consequently make only cosmetic investments in these services. The Cameroon press regularly levels heavy criticism at Camrail passenger services (although service levels have recently improved between Yaounde and Douala, capacity and average fare levels remain a concern). Media criticism mostly reflects nostalgia for the old government-controlled Regifercam, and the public (and the government) expected the concession to bring significant improvement in passenger services. This was not going to happen, considering the lack of specific government contribution, particularly for the first three years when the government failed to fulfil its public service obligations (PSOs)[199]. It was easier, then, to put the blame on the concessionaire rather than address this fundamental funding issue.

Second, as a result of the passenger services continuous deficit, it fell on freight services to cover the full cost of the infrastructure maintenance and renewal. Although most functioning railways carry enough freight traffic to cover routine maintenance, low density railways like Camrail cannot generate enough surplus to pay for major periodic maintenance or upgrades. Without financial support from government, infrastructure will thus steadily deteriorate. Despite Cameroon's railway being relatively healthy in terms of financial performance, traffic levels are too low for any operator, private or public, to generate surpluses sufficient to finance replacement infrastructure to a standard that would provide high-quality freight and passenger rail services – or at least guarantee the sustainability of the network.

In addition, unlike investment in rolling stock, infrastructure investment is not portable and must be abandoned if the concession is terminated. As much as governments may wish to think that infrastructure funding problems will disappear once a railway is privatized, the problem of inadequate infrastructure investment is common to many concessions. In any concession, this fundamental issue will occur unless significant traffic volumes can be captured to generate the required revenue level and the concessionaire is committed for a long term. In the event that there is not sufficient traffic, the government needs to be committed to bringing the public contribution through direct or indirect subsidies. The concession strategy should be focused on finding new and efficient management practices, and target significant improvements and radical modernization in rail services (particularly freight) to increase reliability and capacity.

The 2008 amendment is a milestone in the development of African concessions. First, the Government established a specific program of passenger-related investment to replace the previous general commitment. Second, the original agreement required the concessionaire to fully cover infrastructure renewal, and the Government to provide only partial financing for initial rehabilitation (through IFI loans, which the concessionaire was responsible for repaying). This proved financially non-viable, and so the 2008 amendment transferred responsibility to the Government for infrastructure renewal while the concessionaire retained responsibility

[199] At the time of concessioning, Government planned to phase in all-weather road access to the villages that had only rail, which would have allowed the 'omnibus' services to be phased out. But 'omnibus' services are still being operated.

for maintenance. The concessionaire now contributes renewal costs through fees based on concessionaire profitability. Similar arrangements will need to be established in most concessions that currently (still) require the concessionaire to be responsible for passenger services *and* infrastructure renewal to ensure a long-term future for the rail system.

References

Blanc, Aymeric and Gouirand, Olivier, *La concession du chemin de fer du Cameroun: les paradoxes d'une réussite impopulaire*, Document de travail 44, Agence Française de Développement

Bullock, R., 2005, *Results of Railway Privatization in Africa*, Report for the World Bank, Washington, D.C.

Camrail Monthly Activity Reports (various).

di Borgo, Pozzo P, and others, 2006, *Review of Selected Railway Concessions in Sub-Saharan Africa*, World Bank Report, Washington, D.C.

International Union of Railways, 1990-2010, Railway statistics (annual publication)

Murdoch, Jill, 2005, *Assessing the Impact of Privatization in Africa—Case study of Camrail*

Strong, John, 2004, *The Development of Railway Concessions in West and Central Africa,* The Journal of Structured Finance, Winter 2004