

Cameroon: Sector Programme National Railways

Ex-post evaluation

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| OECD sector | 21030 / Railway sector | |
| BMZ project ID | 1989 65 558 | |
| Project-executing agency | Initially Régie Nationale des Chemins de Fer du Cameroun (RNCF), since April 1999 Camrail | |
| Consultant | DE-Consult, GERI-Engineering | |
| Year of ex-post evaluation | 2005 | |
| | Project appraisal (planned) | Ex-post evaluation (actual) |
| Start of implementation | 2nd half of 1992 | 2nd half of 1994 |
| Period of implementation | 24 months | 90 months |
| Total cost | EUR 21.0 million | EUR 20.4 million |
| Counterpart contribution | EUR 2.55 million | EUR 1.43 million |
| Financing, of which Financial Cooperation (FC) funds | EUR 18.45 million | EUR 18.96 million* |
| Other institutions/donors involved | None | none |
| Performance rating | 2 | |
| • Significance / relevance | 2 | |
| • Effectiveness | 2 | |
| • Efficiency | 2 | |

* Including increase by EUR 0.51 million in 1997.

Brief Description, Overall Objective and Programme Objectives with Indicators

At the time of appraisal the programme consisted in the procurement of superstructure materials, permanent way rehabilitation and the procurement of spare parts for rolling stock. The latter component was later financed from other sources so that the programme was able to concentrate on permanent way improvement. In the framework of a sector adjustment measure coordinated and financed with other donors (World Bank and Agence française de Développement – AfD) the programme was designed to contribute to consolidating the transport performance of the then state-owned Cameroon railways. This was considered a prerequisite for the integration and development of the northern and eastern parts of the country.

Project objective: End of disruptions to operation as a result of flaws in the superstructure and permanent way on the renewed route sections

Indicator: Changes in service disruptions on the renewed route sections resulting from the condition of the line

Overall objective: to maintain and increase transport performance

Indicator: changes in RNCF passenger kilometres and tonne kilometres travelled

The system of targets defined at programme appraisal was deficient. In principle, the overall objective that was formulated relates to the level of programme objectives which, for its part, rather contains results. So the system of targets is changed as follows:

Overall objective: to make an economically efficient and environmentally sound contribution to sustainable economic growth and further poverty reduction and to an improved supply of the population.

Indicator: In a programme whose target group comprises all users of the railway this objective should be measured by an appropriate economic rate of return (which was not calculated at the time of programme appraisal) or by the reduction of the need for state subsidies for the railways. These funds would then be available to fund a pro-poor government policy.

Project objective: Appropriate utilisation of the improved transport infrastructure

Indicator: Number of passengers and volume of cargo transported by the railways

Programme Design / Major Deviations from the original Programme Planning and their main Causes

The detailed planning required prior to the implementation of the programme revealed modifications in the priorities of needs. As the RNCF had already financed the procurement of spare parts for rolling stock from other sources the FC programme could focus on the superstructure and permanent way. Besides the planned measures at kilometre 21.9 and kilometre 40 on the Douala-Yaoundé line the measures primarily referred to the Yaoundé-Tabéné section built in the 1960s. Increasingly frequent track fractures and derailments had rendered safe and reliable operation impossible. Furthermore, the permanent way was rehabilitated by gravel fills, replacement of track, turnouts and sleepers on a total length of approximately 150 kilometres east of Yaoundé (up to the village of Mbandjock, the location of a large sugar factory).

Extensive procurement activities were carried out under the programme, particularly for track, steel and wooden sleepers and connecting material (total amount approximately EUR 8.7 million). Equipment, machines and consumables for the construction yard of the executing agency were also procured in order to prepare the wooden sleepers for laying (at a cost of around EUR 1.8 million), so were tools and machines including spare parts (especially rail trolleys for supplying the construction sites, cost of around EUR 1.5 million).

The impregnation works for the wooden sleepers replaced an older works in the central construction yard which was inadequately sealed and threatened to pollute the environment. The new works rests on a concrete basin to prevent hazardous fluids from seeping into the ground. Camrail has set up protected storage sites for impregnated sleepers and for the tins containing impregnating fluid. The wooden sleepers were supplied by local firms and prepared for impregnation in a semi-automatic milling and drilling works belonging to the executing agency.

Imported iron sleepers were used on the section severely threatened by termite attacks (Mbandjock-Tabéné). On the heavily used 44-km Yaoundé-Batchenga stretch the 54-kg/m track now used worldwide was laid according to the UIC standard (Union internationale des chemins de fer), replacing the weak 30-kg track laid 35 years ago.

The selected implementation conception was only partly successful. As some of the local building firms contracted were not adequately qualified, considerable delays occurred, leading to cost increases of nearly 50% for consulting services. In retrospect it would probably have been better to have the complete rehabilitation carried out by an international general contractor. Altogether, however, the quality of the measures implemented was acceptable. The size of the package of measures was appropriate and adequate.

Key Results of the Impact Analysis and Performance Rating

As a result of the programme, not only was the line secured at kilometre 21.5 and kilometre 40, but on the Transcam I 44-km line (Yaoundé-Batchenga) were completely rehabilitated and extensive repairs were performed on another approx. 100 km of line. If maintenance is done properly, safe operation on the section first mentioned will be possible for decades; on the second section there will be no more urgent need for rehabilitation for the time being. The quality of the permanent way on the rehabilitated sections allows passenger trains to travel at a maximum speed of 90 km/h (instead of 50 km/h as before) and freight trains at a speed of 50 km/h (previously 20 km/hour) where derailments were nevertheless often registered in the past. This has made it possible to use the line capacity better and increase the competitiveness of the railways again. The measures constituted a major technical contribution to increasing the amount of freight transported by the railways.

The decisive breakthrough that enabled the railway company to significantly improve its use of the line and, hence, allowed the programme to contribute to the economic development of Cameroon were the significant changes that have taken place within the railway company.

At the time of programme appraisal the core problem was the lack of financial means available to the state-owned RNCF to make the investments that were indispensable for proper operation. Owing to declining railway transports the sector policy of Cameroon at the beginning of the 1990s aimed to increase railway transports through various measures but without actually changing the statute of the RNCF as a state-owned enterprise. In the mid-1990s this attempt proved to be unsuccessful. The still unsatisfactory technical and financial performance of the executing agency prompted the government to concession the RNCF in a second step (1995/96). The railway operation was transferred for 20 years to a private joint venture, Camrail, established by international enterprises in the form of a local stock corporation. The fixed assets remain the property of the state and are the basis for the concession fee to be paid by Camrail. Camrail is responsible for repairing, maintaining and replacing track as well as locomotives and wagons. However, under the concession agreement Camrail is free to develop and implement business strategies, define investment programmes and run its own human resources policy. While Camrail is free to set its own tariffs for freight transports it must observe the price limits set by the state for passenger transport on social grounds on a low level that is below cost recovery. In return, however, Camrail obtains state subsidies of around EUR 6-7.6 million per year.

At the time of the transfer Camrail aspired to swiftly eliminate the core problems of inadequate railroad safety, reliability and service quality. It concluded partnership agreements with a number of large road transport enterprises that deploy their lorries on the short distances to and from the railroad stations and commission Camrail as sub-contractor for the long distances. Within a short period it succeeded in increasing the freight transport volume from around 850 million tonne-kilometres in mid-1999 to around 1.1 bn tonne-kilometres annually between 2002 and 2004. At the time of programme appraisal, in the base year 1990, the volume was only 644 million tonne-kilometres. Passenger transport, on the other hand, declined. It fell from 470 million passenger-kilometres in 1990 to 303 million passenger-kilometres in 2004, essentially as a result of competition from express buses. With a turnover share of 10% passenger transport has become relatively insignificant for Camrail.

Since the concession the operating situation of the railway company has improved noticeably. The technical availability of the engines was over 80% in three of the last four years (and improving), the annual kilometric performance of the engines is 90,000 kilometres per year and locomotive, and accidents have become much less common.

The economic performance of Camrail is very positive. With a turnover in the equivalent of EUR 62.25 million in 2004 Camrail achieved full cost recovery and a profit of EUR 2.11 million. Camrail receives annual subsidies of 4 to 5 billion FCFA from the Cameroon government for passenger transport (approximately EUR 67.6 million) but pays 2 billion FCFA (EUR 3.0 million) in concession fees and an average of 5 billion FCFA (EUR 7.6 million) in taxes and other charges to the state. From the perspective of the state the balance has been positive each

year since the concession was made and has amounted to a total of 5.65 billion FCFA (EUR 8.6 million) in the period from 1999 to 2004.

Because of the size of the FC programme this was enough to overcome only some of the deficiencies that hampered railway operation. The funds needed for maintenance on other route sections and to overcome the remaining major operational weaknesses were estimated in 2002 at around EUR 67 million, around 40% of which for permanent way and around one quarter for rolling stock. In the first five years of the concession Camrail financed considerable more investments from its own funds than was prescribed in the concession agreement. The company also received loans totalling EUR 72 million from donors (the World Bank, the AfD and the EIB) and local banks for an investment programme to finance further route rehabilitation (including the renewal of critical points on bridges and worn-out sleepers) and necessary investment in rolling stock. So the prospects for further improvements to the railway as an efficient means of transport can be considered good, and given the full cost coverage and considerable investment we rate the risks to the sustainability as low.

We rate the developmental effectiveness of the programme as follows:

- The indicator for the programme objective has been achieved, measured both against the criteria defined at programme appraisal and according to the modified indicators. No damage to the rehabilitated tracks has occurred since resumption of operation. Passenger kilometres did decline but freight transport, which is particularly important for the railroad, has increased substantially. The risk to the sustainable operation of the railway infrastructure is low, not least because of the successful transfer of the concession. The private operator created the organisational and material preconditions for the necessary maintenance to be performed in future as well and for fulfilling the calculated lifetime of the permanent way. We rate the developmental **effectiveness** as satisfactory (**rating 2**).
- Despite sometimes considerable delays in implementation the works were completed at reasonable cost and in good, durable quality. The construction costs were even lower than planned at the time of programme appraisal. Production efficiency is given. The Camrail schedules document a high line utilisation. In comparison with other African railway companies the operating performance of Camrail is very good. The company is generating profits at full cost coverage. Allocation efficiency is given. We rate the **overall efficiency** of the programme as satisfactory (**sub-rating: 2**).
- The indicators for the achievement of the overall objective originally defined at programme appraisal are considered achieved when the increase in freight transport compensates the decline in passenger transport, which is comparatively insignificant for Camrail. It is considered fulfilled even when the overall objective is defined according to current standards - as a contribution to economic growth and poverty reduction - because the need for state subsidies for the railways has been reduced and the state earns net revenues through the concession which can be used under a national poverty reduction strategy supported by the international donors. Given the geographical position of Cameroon, where important parts of the country are accessible only by rail, it is generally plausible to assume that measures designed to overcome constraints on these routes contribute to improving the transport situation, enabling positive growth effects to be achieved. The significance of the programme is also illustrated by the high importance of the railroad for the transport of freight in Cameroon (40% of overall freight transport). The economic infrastructure has also been improved and a transport link has been created to the northern regions that are particularly poor and inaccessible by road, and foreign exchange has been generated through the transport of transit goods. The access of the neighbouring landlocked countries to international trade could thus be maintained and the preconditions for regional cooperation and trade were created. The assumption on impacts made at the time of programme appraisal (improvement of the performance of Camrail through the programme measures) was in principle correct. Without the successful privatisation of the executing agency, which other donors also encouraged, however, the developmental impact of the programme would certainly

have been noticeably lower. We rate the developmental **relevance and significance** of the programme as satisfactory (**sub-rating: 2**).

After weighing the above key criteria for the evaluation of the developmental success we rate the programme overall as having a **satisfactory degree of effectiveness (rating 2)**.

The programme is not a directly target group-related programme. Neither was it intended to specifically improve the situation of women nor was it designed to encourage good governance or improve the environmental situation. The programme measures themselves had only an insignificant impact on the environment. The operation of the railroad on the respective line sections produces a generally acceptable environmental impact. The replacement of the impregnating works has reduced the emission of toxic chemicals; additionally, moving freight transport from the road to the railroad has made a positive contribution to reducing carbon dioxide emissions.

Conclusions and Recommendations

In contrast with roads, railroads constitute highly networked systems. Prior to its concession the RNCF was a classical state-owned railroad company in charge of permanent way and complementary installations (signalling equipment, overhead lines, etc), rolling-stock and railroad operation. State-owned enterprises of this kind are usually subject to considerable political influence regarding tariffs, human resources and management and the often rigid and scarcely efficient human resources regulations of the public sector (lack of sanctioning mechanisms, inadequate incentive structures). These factors usually have very negative consequences for the efficiency of the railroad as a provider of transport services, particularly as it competes with road transport. The example of Camrail shows that transferring the formerly state-owned railroad to a qualified private operator under a concession agreement is an appropriate measure for reducing these deficiencies to such a degree that the financing of railroad sector measures under German Financial Cooperation can produce durably positive impacts. For this reason FC projects in the railroad sector with problematic state executing agencies should not be carried out unless the government is ready to implement the necessary structural reforms (concession or privatisation). Moreover, the FC measures should be closely conditioned on the necessary structural reforms. In this context close donor coordination is necessary as this offers a better chance to convince the government of the recipient country of the necessity to implement the structural reforms.

Legend

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| Developmentally successful: Ratings 1 to 3 | |
| Rating 1 | Very high or high degree of developmental effectiveness |
| Rating 2 | Satisfactory developmental effectiveness |
| Rating 3 | Overall sufficient degree of developmental effectiveness |
| Developmental failures: Ratings 4 to 6 | |
| Rating 4 | Overall slightly insufficient degree of developmental effectiveness |
| Rating 5 | Clearly insufficient degree of developmental effectiveness |
| Rating 6 | The project is a total failure |

Criteria for the Evaluation of Project Success

The evaluation of the "developmental effectiveness" of a project and its classification during the ex-post evaluation into one of the various levels of success described in more detail below concentrate on the following fundamental questions:

- Are the **project objectives** reached to a sufficient degree (aspect of project **effectiveness**)?

- Does the project generate sufficient significant **developmental effects** (project **relevance** and **significance** measured by the achievement of the overall development-policy objective defined beforehand and its effects in political, institutional, socio-economic and socio-cultural as well as ecological terms)?
- Are the **funds/expenses** that were and are being **employed/incurred** to reach the objectives appropriate and how can the project's microeconomic and macroeconomic impact be measured (aspect of **efficiency** of the project conception)?
- To the extent that undesired **(side) effects** occur, are these tolerable?

We do not treat **sustainability**, a key aspect to consider for project evaluation, as a separate category of evaluation but instead as a cross-cutting element of all four fundamental questions on project success. A project is sustainable if the project-executing agency and/or the target group are able to continue to use the project facilities that have been built for a period of time that is, overall, adequate in economic terms, or to carry on with the project activities on their own and generate positive results after the financial, organizational and/or technical support has come to an end.