

Evaluation Report

2015-8

**Ex-Post Evaluation on
the Procurement of Locomotive Project Phase III in
Bangladesh**

The Export-Import Bank of Korea

(Government Agency for EDCF)

EDCF Evaluation Team

(Evaluated by Korea Entrepreneurship and Management Research Institute)

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I. Project Overview

1. Project Details

- Name of the Project: The Procurement of Locomotive Project Phase III
- Name of the Borrower: Ministry of Finance
- Execution Agency: Bangladesh National Railway Administration (BR)
- Amount of Loan: USD 28 million
- Condition of Loan: Annual interest rate of 0.5% and repayment period of 30 years (including a 10-year grace period)

2. Project Purpose

- The project aimed to improve the railway management and service in Bangladesh by replacing 10 old locomotives.
 - This project was the last of the three projects implemented as part of the long-term locomotive procurement strategy. The Executive Committee of the National Economic Council and the Ministry of Finance in Bangladesh approved the plan of purchasing 47 locomotives in December 1995.
- BR was in dire need of new locomotives in 2007; 72.4% of the 259 locomotives in operation were more than 20 years old, requiring urgent replacement.

- It was expected that this project would help BR to meet the rapidly increasing demand for ground transport. With economic development, the need for affordable transportation connecting Dhaka and Chittagong, the two major economic zones in Bangladesh, had increased.

3. Project Scope

- The original scope of this project included supplying ten narrow gauge locomotives and training eight BR staff members. However, the number of locomotives decreased to nine due to the changes in costs caused by the delay in project implementation.

II. Summary of Evaluation

1. Purpose of Evaluation

- This ex-post evaluation aims to assess the performance of the Procurement of Locomotive Project Phase III in Bangladesh and to draw lessons learned and make recommendations for future projects.

2. Methods of Evaluation

- The project was evaluated using the OECD DAC's five evaluation criteria (i.e. relevance, efficiency, effectiveness, impact, and sustainability), according to the evaluation method and standards set by EDCF's Ex-post Evaluation Report Guidelines.
- An aide memoire was signed during the first mission and a dissemination workshop was held to jointly review the mid-term results of the evaluation and to receive feedback from various stakeholders in the partner country.

3. Results of Evaluation

- This project was evaluated to be highly successful (3.7/4.0).

<Evaluation Result>

Relevance	20%	Highly Relevant	3.9
Efficiency	20%	Efficient	3.5
Effectiveness	20%	Highly Effective	3.8
Impact	20%	Highly Influential	3.7
Sustainability	20%	Sustainable	3.4
Overall Rating		Successful	3.7

- (Relevance) This project was highly relevant (3.9/4.0) to EDCF's support strategy and the partner country's development policy. It had a good level of validity in project design and goal-setting. The partner country's ownership was also strong.
 - The project was well-aligned with EDCF's aid strategy since it provided the basic infrastructure essential for achieving economic growth.
 - The project was one of the three successive projects which fulfilled one of Bangladesh's development priorities by meeting the urgent need for better ground transportation.
 - The partner country's ownership appeared to be strong. The Bangladesh government established its railway master plan and two consecutive five-year economic development plan, which were aligned with each other. This strategic planning and political will provided strong support for the project's implementation. Moreover, Bangladesh worked with various donors to improve the railway system, enabling this project to deliver greater outcomes.

- (Efficiency) This project was deemed to be efficient in terms of project duration and budget execution (3.5/4.0).
 - The project was delayed about 7 months and took 39 months to complete. The delay was caused by political instability in Bangladesh. Meanwhile, the changes in exchange rates and raw material prices caused the reduction of the number of locomotives to be purchased.
 - However, by reducing the number of planned locomotives, the project

was able to be implemented within the planned budget.

- (Effectiveness) This project was evaluated to be highly effective (3.8/4.0); the project delivered nine out of ten locomotives. New locomotives contributed to reducing the frequency of accidents and breakdowns.
 - The number of locomotives procured through the project decreased from ten to nine, due to budget constraints. Other components of the project such as training of BR personnels were delivered as planned.
 - The number of railway passengers did not significantly change before and after the project. However, the frequency of accidents and breakdowns has decreased since the project's completion. Railway passengers expressed a good level of satisfaction with the railway services.
- (Impact) This project's contribution to the socioeconomic development of the partner country was very significant (3.7/4.0).
 - The locomotives were running between Dhaka and Chittagong, the two most important economic zones in the country. They were playing a vital role in transporting passengers and materials.
 - According to the survey of railway passengers, the project appeared to have a positive impact on increasing the numbers of businesses, banks, and other financial services around the railway stations.
- (Sustainability) This project was evaluated to be sustainable (3.4/4.0) in terms of human resources, institutional framework, financial arrangement, and the environment.

- The project's sustainability in human and financial resources scored low. BR faced a shortage in budget and manpower; available budget for maintenance fell short by 30%. Financial constraints also limited the number of employees in maintenance service.
 - Financial resources along with the institutional arrangement, however, were expected to be improved in the near future since more weight was given to railway improvement in the sixth and seventh Bangladesh's five-year economic development plans.
 - BR was running four maintenance depots at the time of evaluation. BR invested in updating the facilities. Such efforts would increase sustainability even though the maintenance depots were not fully equipped and the spare parts for the locomotives was not always easy to supply.
 - The project appeared to be environmentally sustainable. The Bangladesh government established a natural disaster management department to control the damages caused from weather and other events. Moreover, the locomotives had a low environmental impact since they were emitting far less greenhouse gas.
- (Cross-cutting Issues) From the perspective of environmental pollution, railway locomotives emit less carbon compared to other means of transportation, thus contributing to environmental preservation.
- According to an interview with the maintenance director of the Bangladesh National Railway Administration, carbon emissions from the railway are 3.5 times less than those from road transport, according to research results.

III. Lesson Learned and Recommendation

1. Lessons Learned

1.1 Success factors

- The project was highly relevant to the partner country's development policy and needs.
 - Bangladesh had been focusing on railway development and EDCF supported the locomotive project to meet this need at the right time, contributing to the growth of the economy.
- The project responded to the needs of the partner country by providing the most needed hardware required to achieve further economic development.
 - Locomotives were the most outmoded infrastructure in the railway system in Bangladesh. The partner country's officials expressed a high level of satisfaction with the project output.
- The project provided valuable input for boosting economic growth in Bangladesh by transporting people and materials between the two major economic zones.
 - The nine locomotives supported by EDCF were running between Dhaka and Chittagong, connecting the two most important areas for the economic development in Bangladesh.

1.2 Limitations

- Deterioration of the entire railway infrastructure weakened the effectiveness of the project.
 - More frequent and punctual railway services were expected to be provided thanks to the project. However, the average speed of the trains and punctuality of the service were not significantly improved despite the superior quality of the new locomotives. It was found that the locomotives could not run full speed due to the deterioration of railroads and other related infrastructure.
- Weak capacity for locomotive maintenance negatively affected the sustainability of the project results.
 - The capacity to maintain the locomotives appeared to be the challenge for maintaining the sustainability of the project. Maintenance facilities were out-dated and the unit in charge suffered from the shortage of financial and human resources.

2. Recommendations

- It is recommended that EDCF invest in other railway infrastructure in Bangladesh to maximize the impact of this project.
- The government of the partner country and EDCF need to reinforce the maintenance of locomotives to sustain this project's benefits.
- The partner country needs to improve the maintenance depots and other related facilities as soon as possible for safer locomotive services.

- In the future, external risks should be better reflected in predicting the scope of contingency to more effectively respond to the unexpected increase in project costs caused by external factors such as political elements and price fluctuations.