Third Party Evaluator's Opinion on
Rehabilitation and Maintenance of Bridges Along Arterial Road (1) (2)

Victor S. Limlingan
Professor
Asian Institute of Management

Efficiency

Phase I of the project planned the rehabilitation of 37 bridges. In fact, the rehabilitation of 25 bridges was cancelled. Phase II of the project planned for the rehabilitation of 4 bridges. In fact, the rehabilitation of 1 bridge was cancelled. The primary reason for the cancellations and the subsequent construction work changes was that instead of merely in need of repair and reinforcement many more bridges required complete reconstruction that previously estimated. Thus, the accuracy of rehabilitation estimates in the feasibility study needs to be upgraded.

Faced with this reality, the project wisely focused on the full completion of fewer projects rather than spreading the now inadequate budget thinly among all the 41 planned projects. Such approach would take on the risk of not completing or delaying the completion period or even worse loosening the technical specifications.

Moreover, the project was able to fully utilize the plan. Out of the total planned project cost for Phase I and II of 5,525 million yen, 5,313 million yen was actually spent for a utilization rate of 96.16%. While we have no direct measure of how economically the inputs for the rehabilitation of the 15 bridges have been converted to outputs, we are assured by the indication provided by the Economic Internal Rate of Returns (EIRR) of the specific bridges. The EIRR are lower at time of evaluation as compared to the time at appraisal. Nevertheless, in absolute terms all exceed the 10% benchmark with the sole exception of the Indiana Bridge of 4.58%.

The most critical variance in the project was the completion time of Phase I and Phase II. Phase I was delayed by 29 months. This is due to two major reasons, the changing of the contractor for the Marilao and Plaridel-Pulilan bridges and the unforeseen need to remove high voltage lines when the Marilao Bridge was replaced. The first cause of the delay would indicate a lapse in the monitoring of the work progress of contractors as well as the natural tendency to give a lot of leeway to delays incurred by contractors. Also, the decision to change a contractor has to be weighed against the additional delay of engaging the services of a new contractor. Despite such complex considerations, the project must establish guidelines that will allow for the changing of the contractors while minimizing delays. In sharp contrast, Phase II was completed 4 months ahead of schedule. This was due to the full cooperation between the consultants and contractors who wisely worked to finish the foundation engineering construction work during the dry season.

Sustainability

For projects such as these which are implemented following international standards and amply supported by consultants and contractors, sustainability becomes an important issue when the project is turned over to a local implementing agency. In this case the operation and maintenance of the bridges has been turned over to the relevant Department of Public Works and Highways (DPWH) district offices which are under the management and supervision of the DPWH Bureau of Maintenance. For this reason, even in the technical design emphasis is given to making the bridges maintenance-friendly and technologically appropriate. While no direct measure that these were taken into consideration, there are strong indications that this is so. Under JICA technical cooperation, seminars on bridge operation and maintenance were conducted for domestic engineers, district office operation and maintenance staff. The seminar participants considered such seminars as useful in their operations.

The sustainability issues on the operation and maintenance of the bridges revolve around two major issues, the first the dearth of manpower and second the budget inadequacy. With respect to the manpower, the innovative approach of some district offices to use Road Maintenance Crews (RMCs) drawn from barangay residents is cost-effective, politically astute and socially beneficial. So too is the tapping of the private sector through the use of Maintenance By Contract systems. These two initiatives should be encouraged and disseminated.

With respect to the budgetary constraints which are somewhat eased by the above initiatives as well as the welcome move of the government to allocate more funds for maintenance of national roads and bridges, financial efficiencies are possible through a restructure of the financial allocation system. Instead of fixing budgets on a per bridge basis, district offices could be given a consolidated budget for the bridges in the district with the office given the discretion to allocate the funds to the bridges that need the support more. Finally, district offices should not be evaluated based on how much they have spent for maintaining the bridges but rather on the number of days bridges have been kept open.