Recommendations for the Evaluation and Administration of Sector Loans

External Evaluator: Satoshi Ohira (Keio University)

Outline and Objectives

Unlike ordinary large-scale infrastructure ODA loan projects, sector loans have unique characteristics which make evaluation by the five DAC evaluation criteria difficult to apply. In consideration of the inherent differences of sector loans, JBIC at present is in the process of pursuing evaluation methods that might be appropriate for evaluating sector loans. One difficulty is that output cannot be clearly specified at the time of project formation, and consequently, it is not possible to set planned values for the outcomes ex-ante. While project effectiveness in individual ex-post evaluation is judged by comparing the targets set ex-ante with its level of achievement at the time of ex-post, this method cannot be applied to sector loans.

This thematic evaluation considered the effectiveness evaluation of sector loans from various perspectives. As a result, it identified areas of improvement for future sector loan evaluations and accordingly recommended: 1) the quantitative effectiveness evaluation method using a "with/without analysis" that compares group targeted by the project and group which was not, and 2) the preparation for the evaluation during the project management period including continuous data collection.

Evaluation Results

1. Difficulties in Evaluating Sector Loans

Sector loan in this evaluation is defined from the perspective of ex-post evaluation as a loan which ① does not have a planned value for the output of individual subprojects ex-ante, and ② includes a number of subprojects. Accordingly, two-step loans whose sub-borrowers are unspecified beforehand also fall under this category.

The evaluation of "effectiveness" in individual ex-post evaluation is judged by comparing the effectiveness target set ex-ante and the actual achievement at the time of ex-post. Furthermore, although the ultimate target is the maximum impact (project objectives) arising from the output, because there are various difficulties in measuring the real impact, importance is attached to the judgment of "effectiveness" in the ex-post evaluation. When it comes to evaluating sector loans, however, not being able to clearly specify output ex-ante also means that outcomes (short-term and medium-term effects of the project) cannot be set ex-ante.

2. Methods for Evaluating Effectiveness

Application of the following methods may be considered as a means of resolving the issue of targets not being set ex-ante:

Palm oil plant supported by a sector loan (Thailand)

① **Verification using a contingency table**

When targets are not clearly set ex-ante, a "with/without analysis" is performed by comparing a group targeted by a project ("With case") with a group which was not ("Without case"). Verifying the results of the comparison using a contingency table makes it possible to determine whether there is a significant difference statistically in the effectiveness indicators and enables a judgment as to whether or not there are project effects. In other words, if there are applicable effectiveness indicators following the completion of the project, it is possible to evaluate the effectiveness. Even if the sample size is small, verification using a contingency table can extract significant results and therefore this method could be useful for individual ex-post evaluations.

② **Regression analysis**

If enough samples of "With cases" and "Without cases" can be collected, a retrogression analysis is performed using the success or failure of the subprojects as the dependent variables based on the effectiveness indicators and the implementation of the subprojects as the dummy variables (probit model: a regression model where the dependent variables have a value of 0 or 1). If the dummy variables are statistically significant, it can be proven that there is a correlation between the implementation of the subprojects and the success of the project. For example, it could be shown based on the regression model below.

$y = \beta_1 x_1 + \beta_2 x_2 \cdots + \varepsilon$

y : subproject success or failure (failure: 0, success: 1)

x_1: subproject implementation (no: 0, yes: 1)

x_2: other explanatory variables related to the success or failure of subprojects

3. Methods for Evaluating the Effectiveness of Two-Step Loans

Since the above definition of a sector loan also applies to a two-step loan ("TSL"), a method for evaluating TSL is also considered. TSL is defined as those whose cash flow from the direct borrower of an ODA loan to end user is partly a loan. A characteristic of TSL is that the amounts provided to end users could exceed the amount of the ODA loan provided to the end user when a revolving fund, consisting of repayments of the principal as well as interest, is utilized. To evaluate the effectiveness of TSLs, the following methods may be considered:

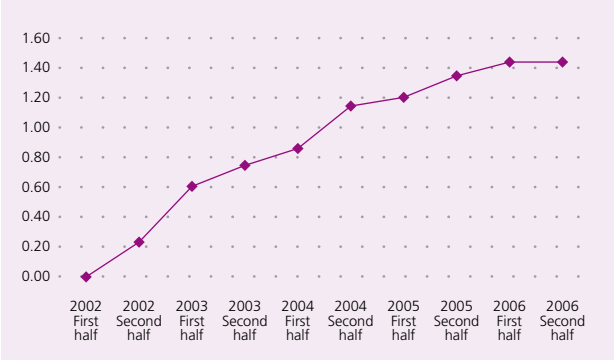
Indicator setting: The effective management of a revolving fund is also covered in the evaluation, so it is advisable to establish indicators. The following indicators may be considered:

Indicator 1: The point when the amount of revolving fund exceeds the amount of TSL financed directly from the ODA loan

Indicator 2: The ratio of the amount of revolving fund at a certain point to the amount financed directly from the ODA loan

However, issues remain when the above indicators are used in an evaluation. If there are bad loans among the loans provided directly from the ODA loan, it may be assumed that the revolving fund will not reach the amount lent directly from the ODA loan and a calculation using Indicator 1 may not be possible. In that case, a time series calculation using Indicator 2 may be used and considered as the standard of judgment for the evaluation. Figure 1 below shows Indicator 2 in a time series depicting the Small and Medium-Sized Enterprises Finance Project in Vietnam. A point which should be considered from the perspective of sustainability is that it is not desirable for a revolving fund to continue to increase indefinitely without limitations. Therefore, it is advisable to set the period for operating the revolving fund, establish the target level of Indicator 2, and gradually encourage a shift to their own funds.

Figure 1: Management of the Revolving Fund in the Small and Medium-Sized Enterprises Finance Project in Vietnam (Indicator 2)



4. Evaluation from the Perspective of Synergy Effects

In the evaluation of a sector loan, an aggregate calculation of several effectiveness indicators weighted based on the policy stance of a government is also relevant to the evaluation of its impact. However, ongoing close dialogue with the executing agency is essential for weighing the policy stance.

If there are a number of subprojects with high risk, it is not realistic to assume that all of them will generate project effects. When a project is successful, it is possible to establish an overall balance between risk and returns by combining a number of subprojects (see Figure 2). When there is a subsequent project, the social experiments investigating project effects by piloting a high-risk subproject could be required. In such cases, the attention should not be focused on details of an individual subproject but rather on whether or not capacity improvement of the executing agency to control the overall project is evident (collection of outcome information, etc.).

A printing plant which was an end user in the Small and Medium-Sized Enterprises Finance Project in Vietnam

Figure 2: Optimal Combination of Subprojects Taking into Account Overall Risks and Returns of the Projects