## Simplified Ex-Post Evaluation for Grant Aid Project

Evaluator, Affiliation	Junko Noguchi Foundation for Advanced Studies on International Development	Duration of Evaluation Study
Project Name	The Project for Up-gradation of Plastic Technology Centre	January 2010 – December 2010

## I Project Outline

Country Name	Islamic Republic of Pakistan		
Project Period	June 2004-March 2006		
Implementing Agency	Plastic Technology Center (PTC)		
Project Cost	Grant Limit: 804 million yen	Actual Grant Amount: 804 million yen	
Main Contractors	Mitsubishi Corporation		
Main Consultants	UNICO International Corporation		
Basic Design	"Basic Design Study on the Project for the Up Gradation of Plastics Technology Center in the Islamic Republic of Pakistan," UNICO International Corporation, March 2004		
Related Projects (if any)	<ol> <li>JICA, Expert (advisor on SME policies) (2003-)</li> <li>JICA, Senior volunteer</li> </ol>		
Project Background	Established in 1988, PTC has served as the sole public institution in the field of plastics processing sector in the country. It provides technological guidance, product tests, and information about technologies to small and medium-sized enterprises, and also offers various educational and training courses. However, a preliminary survey found that the center was not satisfying requests from small and medium-sized firms sufficiently.		
Project Objective	To construct workshop facilities and procure necessary equipment for training and testing in order to upgrade the function of PTC's technological know-how and to expand employment opportunities for the graduates.		
Output[s] (Japanese Side)	<ol> <li>Procurement of the training equipment, testing equipment, and general supplementary equipment</li> <li>Construction of the workshop facilities</li> <li>Training on market survey and quality control (Soft Component)</li> </ol>		

# **II** Result of the Evaluation

## Summary of the evaluation

This Project aimed to upgrade the functions of training and technical consultation of the Plastic Technology Center (PTC), and the necessary equipment was procured and the facility was constructed as planned. However, the training needs from the enterprises decreased after the Project was completed due to the recent economic crisis, and therefore, much fewer training courses have been implemented than planned. PTC, on the other hand, has adequate system and skills for operation and maintenance of the procured equipment and its financial status is sound. In short, the equipment was procured efficiently and has been well maintained, but the decreasing training demand has made the Project less relevant and effective.

In light of the above, this project is evaluated to be unsatisfactory.

## <Recommendation to PTC>

It is necessary to reassess the needs of pre-service and in-service training in the plastic industry, and, based on the assessment result, to make all kinds of efforts so as to increase applicants for the training courses. For example, seek the possibility of lowering the fee if it is regarded as expensive, while it is covered by the increasing income from the tuition fees from the bachelor course. If the training needs exist outside the existing curriculum, it is necessary to revise the course curriculum to the extent that the instructors can handle the equipment at PTC.

## <Recommendation to JICA>

In projects where the training is delivered with procured equipment, it is indispensable to verify the training needs and affordability to the clients with middle and long term forecasts, as well as to verify the validity of the equipment for the training. It is necessary to investigate and have a common understanding with the implementing agency regarding the potentiality of the target sector, including the facility investment and employmen, in the near future.

#### 1 Relevance

## (1) Relevance to the Development Plan of Pakistan

Industrial development is one of the priority issues described in the "Ten-year Perspective Development Plan 2001-2010," in which, human resource development and development of small and medium-sized enterprises (SMEs) are regarded as important strategies. Also, this plan describes the necessity of prividing institutions for technical support including PTC, and of strengthening vocational training.

#### (2) Relevance to the Development Needs of Pakistan

According to the "Poverty Reduction Strategies Paper" prepared in 2002, one-third of the national population was under the poverty line, and the unemployment rate was about 10%. Because the plastic industry provides necessary parts for water pipes, domestic products and many other machinery products, it has played an important role in Pakistan's industrial development, and it was hoped to generate more employment opportunities. Till the present, the plastic industry has been developing, and the SMEs need to upgrade their employees' skills and receive technical support and the latest information. On the other hand, due to the recent economic crisis, training needs and affordability from the SMEs side have been decreasing.

#### (3) Relevance to Japan's ODA Policy

Based on the survey on economic cooperation made by the Japanese government in 1996 and on the subsequent discussions, improvement of the economic infrastructure is one of the priority areas for assistance to Pakistan. The "Country Assistance Program for the Islamic Republic of Pakistan" prepared in 2005 pointed out that the manufacturing industry needs to generate more employment, and technical and vocational education is regarded as a priority issue in the secondary level.

This project was partly irrelevant to the country's development needs at the time of ex-post evaluation; therefore, its relevance is fair.

#### 2 Efficiency

(1) Project Outputs

Outputs were generated as planned, except the following two. First, there was a small change in specification of the construction and procurement. The reasons for this are that (i) a few things were not accepted by the Pakistani authorities regarding the facility to be built and so an instruction order for change was given, (ii) the Project purchased cheaper equipment to prevent the influence of the rise of oil price, and (iii) some hadn't been procured by the Project as PTC bore the cost. Secondly, technical training on marketing provided only lectures, not practical exercises due to a delay of the related equipment.

(2) Project Period (Project Inputs)

It took 19 months to complete the Project, as planned. All the Project activities were implemented as scheduled except the above two.

(3) Project Cost (Project Inputs)

The actual cost was 804 million yen as planned.

Both project period and project cost were within the plan; therefore, efficiency of the project is high.

## 3 Effectiveness / Impact

## (1) Quantitative Effects

PTC has provided training and technical support with the procured equipment which satisfied the client. However, the number of the implemented courses is much less than was targeted. In 2009, 0-20 trainees participated in the 3-month basic course and the following 6 short term courses (plastic materials, extruders, injection molding, thermoforming, blow molding, testing equipment), though the target was 60 trainees for each course. The following 4 courses weren't conducted because there were no applicants (extruders, thermoforming, blow molding, testing equipment). As a reason for this situation, PTC says that "due to the recent economic depression, the market demand and new investment in manufacturing enterprises have decreased, so the training needs were much smaller than expected." The same is explained in the report "Pakistan Economic Survey 2009-10," which says that the manufacturing sector has been stuck since 2005 in terms of business investment and employment. Thus, it is assumed that the training needs of the enterprises have been limited since the time of delivery of the equipment.

In this Project, technical training was delivered to the PTC staff on marketing, but they haven't appreciated this training much, saying that a "more practical approach was necessary," "it should have included onsite-visits to other major industries," and "it was not very useful for the current work." It is also possible to estimate that the training wasn't based on the curriculum which matched the market and clients' needs, and therefore there were few applicants.

Regarding the commissioned examinations on the products, PTC conducted 106 examinations in 2009, compared to the target figure 400. As reasons for this result, PTC says that the demand from the enterprises has decreased, and also that PTC doesn't have all necessary equipment to satisfy the needs.

(2) Impacts (Impacts on the natural environment, Land Acquisition and Resettlement, Unintended Positive/Negative Impact)

As a result of the utilization of the equipment, PTC has strengthened the sections of plastic exams and processing. The graduates from the training courses can find jobs easily. Also PTC says that the client enterprises have come to generate products of better quality and that the import of plastic produces has increased; however, it is difficult to verify whether these are the direct results of the Project.

This project has achieved its objectives at a limited level; therefore, its effectiveness is low.

### 4 Sustainability

# (1) Structural Aspects of Operation Maintenance

PTC has 5 departments (Testing, Technology, Academics, Administration and Accounts) under the General Manager. The staff in charge of training are from the department of Technology. The teaching staff in charge of lectures and practical exercises conducts regular maintenance of the procured equipment.

#### (2) Technical Aspects of Operation Maintenance

At the time of the Basic Design Study in 2004, PTC already had sufficient skills for operation and maintenance of the equipment. Till now, more than 80% of the staff who received technical training at the delivery of the equipment remain at PTC, and the necessary training is given to the newly hired staff. After the Project, PTC revised the material for training courses for more effective use.

#### (3) Financial Aspects of Operation Maintenance

PTC had received financing from NFC to cover the deficit balance until 2003, but after 2004, PTC has a surplus. This is mainly because the income as course fees (of B. E. Polymer) has been increasing. At present the budget is sufficient for regular operation and maintenance of the procured equipment, but it doesn't cover the purchase of spare parts (Fortunately, right now PTC doesn't need to buy them). At the time of the Basic Design Study, a major concern was losing the financing from NFC if it is privatized. But actually, NFC is still publicly owned, and more than that, PTC has sound financial management.

#### (4) Current Status of Operation Maintenance

Among the major procured equipment, an extruder is under repair, but the rest is regularly inspected and functioning without problems, as of June 2010.

The Project hasn't generated effects as expected, but no major problems have been observed in the operation and maintenance system; therefore, sustainability of the project effect is high.