

Impact Evaluation and Implications for Korea's ODA Evaluation System

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I. Introduction

There has been increasing demand for new evaluation methodology to rigorously measure the causality between the results and activities in the development cooperation sector. The impact evaluation is a method that can complement the shortcomings of former evaluation methodologies by rigorously measuring the impact of a project through an experimental approach. Unlike existing evaluation methods, the causal relationship between results and activity is measured by using scientific experimental methodology and econometric techniques. In addition, impact evaluation can reveal the main factors of success/failure of the development activity. Thus the result of impact evaluation can be used for future policy design and contribute to the establishment of evidence-based policy making.

Two factors supported the rise of impact evaluation. First, awareness of the role of rigorous evaluation to enhance development effectiveness has continued to rise following the Paris Declaration. The Busan Partnership for Effective Development Cooperation in 2011 also emphasized the role of evaluation as a

tool for accountability and learning, managing for development results, and eventually the input for evidence-based policy making in the international community. Second, development economists contributed to the rise of impact evaluation by developing rigorous evaluation methodology such as experimental and quasi-experimental methodologies in the setting of developing countries.

Development agencies have begun to adopt impact evaluation to demonstrate the effectiveness of development projects. The World Bank, as a leading agency for development effectiveness, has conducted a number of randomized controlled trial (RCT)-based impact evaluations to reveal the causality between development projects and results, and to provide evidence for future policy making. The ADB, USA and Japan also recently reformed their evaluation systems and adopted impact evaluation to scientifically demonstrate the results of development projects. In comparison to other donor agencies, Korea yet lacks related policies or a system for impact evaluation. But there is an increasing demand for impact evaluation to establish evidence-based policy making and enhance development effective-

ness in Korea.

The goal of this study is to examine the trends, policies and issues of impact evaluation, and to draw policy implications for the introduction of impact evaluation in Korea's ODA evaluation system. To achieve this goal, this study first compares and analyzes the policy, evaluation system and various cases of impact evaluation from other donor agencies such as the World Bank, ADB, United States Agency for International Development (USAID), US Millennium Challenge Corporation (MCC), and the Japan International Cooperation Agency (JICA). Second, we analyze the major issues related to impact evaluation in details. Three issues are raised and analyzed: evaluability assessment, methodology design, and feedback of the result. Third, we conduct an impact evaluation using clustered-RCT to assess the performance of a health project supported by the Korean government in Vietnam. Finally, we analyze the tasks for introducing impact evaluation into Korea's ODA evaluation system at the level of an ODA-integrated evaluation system and implementing agency. This study also proposes a mid- to long-term roadmap to reform Korea's ODA evaluation system.

II. ODA Evaluation and Impact Evaluation

The evaluation methodology to measure the effect of development activities has changed over time. In the 1960s, before-after analyses and cost-benefit analyses were utilized to evaluate the effect of development activities which are mostly focusing on the infrastructure construction. The evaluation methodology was extended to qualitative analyses to reveal the effect of development activities on the

beneficiaries' well-being in the 1970s. The macroeconomic model was raised in the 1980s, with both macroeconometric analyses and qualitative analysis being utilized. But these evaluation methodologies have limitations when it comes to answering the question whether the economic development of developing countries can be attributed to development assistance. Also, if the effect of development assistance is negative, it is impossible to know which factors in the project have contributed to this negative effect. Such evaluation methods were of little help in later policy design and development effectiveness.

Table 1. Trends of ODA Evaluation

	Development Projects	Evaluation Methods
1960s	Mostly focused on Infrastructure and Agricultural Sector	Cost benefit Analysis Before-after Analysis
1970s	Social infrastructure such as education and health	Qualitative Evaluation
1980s	Structural Adjustment Program	Macroeconomic Analysis
1990s	Rise of Aid Effectiveness and Good Governance after 'Aid Fatigue'	Quantitative Analyses based on Econometric Model
2000s	Emphasis micro effect on beneficiaries	Rise of Experimental Approach
2015~	Development Effectiveness and evidence-based policy making	Mixed Method (Quantitative and Qualitative Analysis)

Source: Morra Imas and Rist (2009), Recited from Pamies-Sumner (2015)

In the early 2000s, an effort was made to improve the effectiveness of development cooperation projects through results-based management in order to respond to criticism surrounding the effectiveness of assistance and scientifically demonstrate the performance of

development projects. The Busan Partnership for Effective Development Cooperation in 2011 emphasized the role of evaluation in providing results and enhancing development effectiveness. Development agencies have begun to demonstrate the effectiveness of development cooperation projects by rigorously assessing the impact of individual development cooperation projects on beneficiaries. The World Bank, as a leading agency for development effectiveness, actively adopted RCT-based impact evaluation methods to assess the causality between activity and impact. The US, Japan, and UK also recently reformed their evaluation systems to scientifically demonstrate the performance of development projects using experimental and quasi-experimental methodology. Compared to former evaluation methods, rigorous evaluation procedures that include, for instance, impact evaluation are better suited to reveal the causality between activity and impact and the reason why things are working or not. Thus these rigorous evaluation methods are used as a tool for accountability and learning, managing for development results, and eventually the input for evidence-based policy making in the international community.

Recently, the internal and external demands to adopt rigorous evaluation methodology in ODA evaluation systems are increasing in Korea. Korea has been reforming its ODA and evaluation system to enhance the efficiency and effectiveness of its development assistance since its joining the OECD DAC in 2010. The evaluation system of Korea's ODA can be categorized into two parts: integrated evaluation and self-evaluation. Self-evaluation is managed by each executing agency, while integrated evaluation is conducted by the subcommittee for evaluation under the CIDC of Prime Minister's Office. Under the current sys-

tem, each development agency and ministry selects the project to evaluate and conducts self-evaluation, in accordance with guidelines from the integrated evaluation system. Most evaluation for Korea's ODA projects focuses on ex-post evaluation, which is limited when it comes to revealing the causality between project and effect, and thus makes but limited contribution to future policy planning.

III. Comparative Analysis of Impact Evaluation System

Recently, development agencies have invested a significant amount of resources in impact evaluation and are actively adopting experiment-based methodology. To draw policy implications for Korea, this study conducted a comparative analysis of the policy, evaluation system and cases of impact evaluation from aid agencies such as the World Bank, ADB, MCC, USAID, and JICA. Table 2 lists the organizational framework of each institution that is highly engaged in impact evaluation.

Table 2: Organizational Frameworks of Impact Evaluation

Institution	Category	Organizational Framework
World Bank Group	Large and long-standing IE producer	-Independent Evaluation Group -Committee on Development Effectiveness -Development Impact Evaluation -IFC Result Management Unit
Asian Development Bank	Medium-sized producer	-Interdepartmental Impact Evaluation Committee -Economics and Research Department -Independent Evaluation Department
MCC	Medium-sized producer	-Department of Policy and Evaluation -Office of Foreign Assistance and Resources

USAID	Medium-sized producer	-Office of Learning, Evaluation, and Research -Office of Evaluation and Impact Assessment
JICA	Medium-sized producer	-Evaluation Department -Advisory Committee on Evaluation

Note: The criteria for “Category” is cited from Pamies-Sumner (2015)

The World Bank, as a long-standing and large impact evaluation producer, launched the Development Impact Evaluation (DIME) initiative in 2005 and began to mainstream and strengthen the role of impact evaluation in the Bank as a corporate priority in 2008. The DIME team, which belongs to the Development Research Group, implements the Impact Evaluation to Development Impact (i2i) program to support the use of impact evaluation in areas that have traditionally been under-evaluated.

The Asian Development Bank, a medium-sized impact evaluation producer, piloted its own impact evaluation initiative through a research and development technical assistance (TA) project in 2010. The Economics and Research Department (ERD) in ADB is mainly in charge of conducting impact evaluation. When the project team proposes an evaluation plan, ERD performs an impact evaluation for selected projects. Meanwhile, the Interdepartmental Impact Evaluation Committee in the Bank manages and supervises the quality of impact evaluation undertaken under the Technical Assistance Program.

The USAID and MCC have established evaluation guidelines to perform impact evaluations on new pilot projects or projects with innovative interventions. The evaluation department provides technical support and advisory services on the impact evaluations proposed by the operations divisions, while the evaluation itself is mainly performed by exter-

nal experts. Sharing knowledge on impact evaluation results and strengthening organizational capacity are the main objectives of conducting impact evaluation for both institutions.

The Japan International Cooperation Agency has recently reformed its evaluation system and adopted impact evaluation. JICA organized the Impact Evaluation Study Group in 2007 and has been working to utilize the results of studies on impact evaluation through various workshops. Impact evaluations are selectively applied to certain projects that can rigorously measure the changes brought in the target village by the intervention. The main objective of performing impact evaluation for JICA is to more accurately grasp the changes brought about by the intervention using statistical data.

IV. Issues on Impact Evaluation

This paper draws out the issues to be considered when introducing impact evaluation to the evaluation system in Korea, based on the results of a comparative analysis of impact evaluation systems at various donor agencies. First of all, it is necessary to assess the evaluability of development projects, as impact evaluation requires a considerable amount of budget and time and thus it is not possible to apply impact evaluation to all development projects. The reality, validity, and usability are suggested as the main elements to be considered when assessing the evaluability of any given project. Second, it is also important to design an appropriate evaluation methodology from among the experimental and quasi-experimental methodology, such as Difference in Differences (DID), Propensity Score Matching (PSM), and Regression Discontinui-

ty Design (RDD). The purpose of the development activity, evaluation environment, and advantages and disadvantages of each methodology should be considered at the stage of evaluation design. Finally, a result-based management system to reflect the result of impact evaluation to policy making is needed.

V. Case Study: Impact Evaluation for Eyeglasses Project in Vietnam

This study introduces the process and results of an impact evaluation conducted on eye-health projects in Vietnam. Vietnam is a country where health care services are inferior to the nation's economic growth and income level. In particular, youths in rural and fragile areas have very low accessibility to healthcare services. A Korean development agency is contributing to improving the accessibility of public health infrastructure by providing eye-health training and distribution eyeglasses to elementary school students in Than Hoa province, Vietnam. In order to measure the effect of this eye-health development project, the evaluation team randomly sampled the treatment and control schools, and compared students' cognitive and non-cognitive skills. The clustered RCT is selected as evaluation methodology, and two rounds of survey, before and after the intervention, were conducted in 2016 and 2017.

We estimate the project's impact on students in grades 4 to 5 with poor vision by using the following specification:

$$y = \alpha + \pi PV + \theta T + \beta PV * T + \gamma X' + \mu$$

Where y is a student's test score, PV is a dummy variable indicating poor vision, and T indicates the treatment group. The project's

impact on student with poor vision is $\theta + \beta$, which equals β , since θ equals zero.

The results tell us that the project has a positive effect on students' language test scores, while it was not very effective on students' math test scores (Table 3). Through the process of the impact evaluation, this report draws practical policy implications for Korea's ODA system. In the future, when applying the impact evaluation to ODA projects in Korea, it will be necessary to build firm cooperation between the project team and the evaluation team from the early stages of project design. Also, institutional apparatus to prepare for the risk, and the awareness of stakeholders regarding the importance of impact evaluation are needed.

Table 3. The Effect of Project on Test Score: Grade 4 Only

	(1)	(2)	(3)	(4)
VARIABLES	Verbal	Verbal	Math	Math
Poor Vision (PV)	0.0865 (0.0658)	0.0755 (0.0645)	0.0919 (0.0721)	0.0875 (0.0723)
Treatment	0.0354 (0.103)	0.0213 (0.102)	0.0176 (0.0968)	0.0123 (0.0965)
PV*Treatment	0.368*** (0.104)	0.375*** (0.103)	0.104 (0.107)	0.107 (0.107)
Age		-0.0415 (0.0747)		-0.0229 (0.0678)
Gender		0.361*** (0.0458)		0.133*** (0.0441)
Test score in R0		0.0474** (0.00537)		0.0515** (0.00600)

Observations	1,946	1,946	1,946	1,946
R-squared	0.031	0.456	0.006	0.379

Note: Standard errors clustered within school in parentheses.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. The independent variable is standardized test score by subject using the mean and standard deviation of control group's test score. 'Test score in R0' means test score from Round 0.

VI. Conclusion and Policy Implications

In conclusion, this study emphasizes the introduction of impact evaluation to improve result management and enhance the effectiveness of Korea's ODA. The first step for that would be to build knowledge about the importance of rigid evaluation among stakeholders. In addition, a bottom-up evaluation planning system should be set to plan the evaluation from the beginning of the project.

In the short term, it will be necessary to introduce impact evaluation to the fields of education, health, and agriculture as these are the fields in which impact evaluation can be carried out relatively easily, thus strengthening the evaluation capacity of Korea. In the mid-to-long term, a strategic direction should be set up to establish policies supporting impact evaluation and systematic result-based management. It is necessary to carry out impact evaluation for large flagship projects and new projects that need to establish an evidence-based policy making process. This strategic impact evaluation system will ultimately contribute to the development effectiveness of Korea's ODA. **KIEP**