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Case Study Evaluations

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Overview

In OED, much use is made of the case study. For example, the audits of two water projects in Malawi (World Bank 1997c)[1] and five transportation projects in Thailand (World Bank 1997d) and our study of paddy irrigation and water management in Southeast Asia (Rice 1997) are essentially all case studies. We use case studies for in-depth consideration of the results of a project or group of projects or to illustrate given points. Case studies are convincing and capture the reader's attention. But they are not generalizable; a case—no matter how well done—cannot tell you whether it is the only such instance or whether the problem (or success) is widespread.

There is considerable confusion about what is and is not a case study, what is case study methodology, what use can be made of them, and how they should be written-up for dissemination. This paper attempts to clarify these issues.

Definition of a Case Study

> ***A case study is a method for learning about a complex instance, based on a comprehensive understanding of that instance obtained through extensive description and analysis of that instance taken as a whole and in its context.***

Site visits are generally associated with case studies, but not all site visits are case studies. We may do site visits to villages in-country to observe or to utilize other data collection methods, such as interviews. These site visits, however, do not necessarily use case study methodology. The case study method involves the elements of the definition presented above. That is, it entails *comprehensive* understanding and *extensive* description and *analysis* of the instance as a whole and in its context.

Types of Case Studies

There are three main categories of case studies—explanatory, descriptive, and combined methodology. While in real life there is often overlap among the types, one of the following approaches will predominate.

Explanatory. The purpose of explanatory case studies, as the name implies, is to explain the relationships among program components.

1. *Program implementation.* This case study investigates operations, often at several sites, and often normatively.
2. *Program effects.* This case study examines causality and usually involves multisite and multimethod assessments.

Descriptive. These studies have a narrower focus than the explanatory cases.

3. *Illustrative.* This type of case study is descriptive in character and is intended to add realism and in-depth examples to other information about a program, project, or policy.
4. *Exploratory.* This is also a descriptive case study, but is aimed at generating hypotheses for later investigation rather than being illustrative.
5. *Critical instance.* This examines a single instance of unique interest or serves as a critical test of an assertion about a program, project, problem, or strategy.

Combined Methodology

6. *Cumulative.* This brings together findings from many case studies to answer an evaluation question, whether descriptive, normative, or cause-and-effect.

Size of the Case Study

We tend to think of a case study as small, but the size of the instance can vary greatly. Sometimes the case is larger rather than smaller. For example, a case may be one site within a project, three sites within a project, one project, a group of projects, all projects within a sector in a given country, all projects within a sector across a set of countries, or all projects within a country. A country may be a case. The question is, what is the "instance that we want to take as a whole"? The instance as a whole can be:

- A site (fishery at Songkla Lake in Thailand)
- A function (public sector management)
- A project (Daxinganling, China Forest Fire Rehabilitation Project; Indonesia, University Development Project; or Equatorial Guinea, Technical Assistance Project)
- A policy (promoting gender equality)
- An office or department (Department of Education)
- An event (Rwanda emergency relief effort)
- A region, nation, or organization (Northwest Brazil, South Asia and Pacific Region, India, UNESCO)
- "Nested" units in a large or complex case study (Tunisia, first through the seventh water supply project, or Malawi, Country Assistance Review).

The Korea impact evaluation is an example of a case study that focuses on a region (see box 1).

It is important to note that because an evaluation covers one or a small number of instances, this does not necessarily make it a case study. An important part of the definition of case studies is the phrase: "obtained by extensive description." If minimal information was collected on a site with little depth of inquiry, it would not appropriately be classified as a case study. Field work or site visits are not in themselves case studies.

The Kingdom of Morocco impact evaluation is an example of a case study that focuses on a region (see box 2).

Box 1: Delayed Development of the Cholla Region: An Institutional Study

The study assesses (1) short-run "direct" project impacts on the beneficiaries as anticipated by the projects and (2) long-run "side-effects" (indirect impacts) on the industrialization process and institutional learning. The main hypothesis tested in this study is that the World Bank intervention "triggered" the industrialization process in South Cholla and that it brought the opportunity to extend the "rules of the development game" to the region.

The principal findings are that the Bank intervention integrated rural areas and acted as a catalyst in triggering the "organizational learning" industrialization process of the region, and that this lesson can be applied in other cases. The challenge is to find a mechanism, political or otherwise, to "trigger" the process. The main caveat of this case study is that it documents project impacts in a country with sustained economic growth. This means that the same projects may fail to generate such impacts in a slow-growing economy.

This case study is an example of the program effect **type**. It explores the reasons behind the short-term and long-run economic success of the Cholla Region of the Republic of Korea. The **size** is the region. The case is also used as an illustrative example of the importance of the economic context in the success of entrepreneurial investments. The **projects selected** were Bank loans to the Cholla Region.

The analysis is derived from **multiple data sources**: statistical tables; questionnaires/field surveys; and numerous interviews with political, administrative, and academic officials. In addition to quantitative **analyses** of primary and secondary data, the report uses qualitative evidence gathered through case study methodology to reach conclusions through triangulation and to maintain a chain of evidence, especially in the historical aspects of the study.

Source: World Bank 1997a.

Box 2: Kingdom of Morocco: Socioeconomic Influence of Rural Roads, Fourth Highway Project

The study, conducted during 1995, aims to understand the impact of rural roads, five to ten years after completion of the improvements carried out under the project. It focused on the impacts on transport infrastructure and services, agriculture, social services, and the environment. It also assesses the economic benefits of the improvements and their sustainability.

The study's main finding is that the benefits of paving rural roads extend considerably beyond making traffic easier; lowering the cost of operating cars, trucks, and other vehicles; and improving the quality of transport services. The extended benefits include triggering major changes in the agricultural economy, including higher outputs; transformation of the agricultural output mix, for example, from low-value cereals to high-value fruit orchards; and increased use of modern inputs, especially fertilizers. Improved access to health and education facilities increased enrollment rates in rural education as well as frequency of visits to health care services, and allowed recruiting of professional personnel to staff schools and health facilities. The biggest impact was on girls' enrollment in primary education, which more than trebled in the project zones during the study period. Women also benefited, because the paved roads sharply increased the affordability of butane for cooking and heating, dramatically reducing women's daily chore of collecting fuelwood. Impacts on the environment were both positive and negative, although overall, no environmentally sensitive areas were put at risk by the road projects, which did not involve new construction.

These case studies, focusing on four of the ten rural roads improved under the project, represent two **types**: (1) program effects and (2) critical instance. This impact study is an example of program effects because it compared present conditions in the areas of project roads to the situation prior to the improvements, and to conditions in comparison roads located nearby that were not subject to improvements during the project period. The case studies are critical instances of rural roads lending—a better understanding of the impact of these selected operations would be of wide interest because rural roads account for a significant proportion of Bank clients' rural infrastructure programs and of Bank lending for roads. The **size** of the case is a project—the Kingdom of Morocco Fourth Highway Project (Loan 2254-MOR). The sample roads were **selected** to achieve geographical distribution in the north, center, and center-south of the country, thus representing a variety of climate, agricultural, and economic conditions.

Data were obtained from (1) surveys conducted at the farm, regional, and village levels; (2) focus groups conducted at these levels, which provided important qualitative insights for the analysis of the household-level data; and (3) meetings with representatives from all economic sectors and elected county-level representatives to help interpret data and to refine or correct the findings derived from **analyses** of the surveys and focus groups.

Source: World Bank 1998a.

The size of the Kenya case study is the city of Nairobi (see box 3).

Methods of Obtaining and Analyzing Data in Case Studies

We tend to associate case studies with in-depth interviews. Case studies do involve what methodologists call "thick descriptions." They tend to be rich, full of information that comes from multiple data sources, and often from interviews. But multiple methods can be used, from interviewing to first-hand observation, to document review.

Growing use of case study protocols to organize the data collection has been reported (Yin 1997). These protocols are far broader in scope than a questionnaire, and are particularly appropriate when multiple evaluators are collaborating on a number of case studies that are part of the same evaluation.

Greater understanding that case study evidence may be contained in a separate case study database—different from the actual final case study report—has reportedly also taken hold (Yin 1997).

Box 3: Kenya: Development of Housing, Water Supply, and Sanitation in Nairobi

The study assesses the effectiveness of the complementary interventions in the development of housing, water supply, and sanitation in Nairobi; their medium- and long-term impacts five to fifteen years after completion; and their sustainability.

The principal findings are that the projects helped support rapid economic growth and, despite the population increase, raised the standard of living in Nairobi throughout the past two decades. Particularly in water supply and sanitation, the report finds that the results are sustainable. In contrast, although progress was made in developing housing programs, no lasting impact was achieved in housing policies or cost recovery in the housing sector. This leaves sustainability of future public housing programs in doubt. In institutional development, the Water and Sewage Department of the Nairobi City Council serves as a good example of substantial achievements in effective capacity building. The sequencing of technical assistance and investment interventions proved particularly effective in the evaluated water projects.

This study exemplifies the program effect and implementation **types** of case studies. As an impact study, the report describes the effects of five loans made to Nairobi for water supply and urban projects. As an implementation case, it provides an in-depth study of the **implementation** of these complementary interventions. A workshop attended by the Nairobi City Council and the Bank evaluation team to review the findings of this evaluation also served to use the findings of the report to plan for project sustainability, with particular attention to those departments involved in housing. The **size** is a city—Nairobi. The housing household survey focuses on seven **sites**: three urban project sites; two unplanned settlements that grew without much external intervention; and two fully developed, middle-income areas.

Methods of obtaining data included a review of relevant documents and records, key personnel and group interviews citywide, the housing survey of households, and on-site observations of infrastructure facilities. Measures of the impact of the projects on target groups were derived from the survey findings and previous studies. The scope of the study extends from an **analysis** of socioeconomic impacts at the household level to an analysis of institutional, financial, economic, technical, and environmental impacts at the neighborhood and citywide levels. Each relevant stage of analysis addresses whether the projects and their specific components are sustainable.

Source: World Bank 1996b.

Analysis of case study data is generally extensive.[1] This key analysis technique used is triangulation. This technique involves developing the reliability of the findings through multiple data sources **within** each type. The validity of the findings, especially when trying to determine cause and effect, is derived from agreement **among** the types of data sources, together with the systematic ruling-out of alternative explanations and the explanation of "outlier" results. Examining consistency of evidence across different types of data sources is a means of obtaining verification. There are particular strategies for making such comparisons, such as pattern matching, explanation building, and thematic review, which can be found in evaluation texts.[2] They involve techniques such as graphic data displays, tabulations of event frequencies, and chronological or time series orderings.

The study on Mongolia's informal sector merges quantitative and qualitative data to understand and quantify the explosion of entrepreneurial activity during Mongolia's transition to a market economy (see box 4).

Selecting the Number of Cases or Instances

The right number of instances or cases to select should be based on the question that is to be answered. There are three general bases for selection: convenience, purpose, and probability. Using the wrong basis for selecting an instance is a fatal error in case study design. Only rarely will convenience be a sound basis for decisionmaking, and probability sampling is generally not feasible. Thus, the decision is usually which variety of purposive site selection is appropriate.

Case Study Methods

Technique	Methodology
Extensive or "thick" analysis	Analysis of multiple types of data sources, such as: — Interviews with all relevant persons — Observations over time — Participant observation — Documents — Archives — Physical information.
Analysis via triangulation of data	Analysis through: — Pattern matching — Explanation building — Thematic review.
Comparison of evidence for consistency	Analysis through techniques such as: — Matrix of categories — Graphic data displays — Tabulation of event frequencies — Chronological/time series ordering.

A few additional words on probability samples are in order. A probability sample is one in which all members of the population have a known and equal chance of being selected. It is the method of choice for answering questions about how much or how extensive a problem is in a population. A problem with its use in case studies is that the laws of probability operate on large numbers—fewer than 30 instances do not always provide the generalizability to the population as a whole that probability samples promise. Some case studies have involved 30 or more sites selected on a probabilistic basis.

Case Study Types and Site Selection

This section provides a more in-depth look at the case study types, the evaluation questions they can answer, design features, potential problems, and relation to site selection.

Explanatory Case Studies

Program Implementation Case Study

In evaluation, we frequently need to know whether programs and projects are being implemented as intended or designed, what problems have been encountered, and what adaptations were made and why. We may want to do such a study when a given project is failing in order to provide a picture of what happened over time and what might be learned from the experience that could be applied to other projects. Or we may want to look at a project that appears successful in achieving its desired outcomes, also in order to learn from it and apply the lessons to other projects. We may want to represent diversity, the best and/or worst cases, or typical cases.

Program implementation case studies typically use a purposive sample. The number of cases is dependent on variability across the sample, and whether generalization is sought. This type of case study relies heavily on published documents and observation. Because they generally require multiple sites, training issues and supervision for quality control become issues.

The involuntary resettlement cases provide rich detail on the implementation of the World Bank's policy on involuntary resettlement (see box 5).

Program Effects Case Study

Case studies are appropriate for determining the effects of programs or projects and reasons for success or failure. OED does most impact evaluation case studies for this purpose. The method is often used in combination with others, such as sample surveys, and there is a mix of qualitative and quantitative data. Analysis usually identifies emerging themes. Site selection depends on program diversity; this method should not be used in cases where there is great diversity among sites or projects. Its use with the best of projects, the worst of projects, or a typical project is appropriate.

The case study on small and medium industries in Sri Lanka studies the effect of Bank lending to small and medium enterprises (see box 6).

Box 4: The Size, Origins, and Character of Mongolia's Informal Sector During the Transition

The study examines the trends and current size of the informal sector; the reasons for growth of informality; the legal and regulatory environment faced by informals; and the approach to the informal economy taken by officials. It also explores how Mongolia's citizen reacted to the crisis of the 1990s, how microenterprise can contribute to poverty alleviation, and how informals are affected by policy.

Four principal findings emerge. Formal labor markets have not absorbed the labor made available by the crisis and by migration, and have not fully responded to the demand for new services. The relative ease of entering the informal market explains that market's great expansion. The relative difficulty of entering formal markets is not random but is driven by policy. The citizens seem to be optimistically following market signals and addressing society's needs. The author concludes that improving policies in the formal sector could afford the same ease of entry there as is currently experienced in the informal sector.

The study is of the program effects **type**: it examines the reasons for the burst of informal activity in Mongolia since 1990. Its **size** is a sector within a nation (the informal sector in Mongolia). The site was **selected** as part of a larger program of research on the impact of institutional changes in Mongolia and on the rule of law in transition economies.

Since **data** on the informal sector are scant, the paper uses an eclectic approach, piecing together information from a wide variety of sources and using a broad range of techniques to draw inferences and conclusions. The **analysis** is based on four types of data. (1) Qualitative interviews were conducted with official statisticians, local tax officials, licensing officials, staff of unemployment agencies, academics, NGOs, and participants in the informal economy. (2) Seven-hundred and seventy informals were surveyed; the sample included kiosks, taxicabs, "street informals" from different parts of Ulan Baatar, and informals from three of the city's most popular outdoor markets, the "Black" Market, the Technical Market, and the *Harhorin* Market. These occupations provide contrast in capital intensity, nature of competition, levels of income, and the degree to which the activity is suitable for moonlighting. (3) Data compiled by the State Statistical Office (SSO), particularly employment statistics and the monthly household survey of income and expenditure, were analyzed to estimate trends over time and the aggregate impact of all informal activity. (4) Laws and regulations pertaining to taxation, to labor, and to social insurance were examined. As the freedom to engage in informal sector activities is new to Mongolia's citizens, the informal sector data collection and analysis have received little attention.

Source: World Bank 1998b.

Selecting the Number of Cases

Selection basis	Questions to be answered
Convenience	Is this site selected because it was expedient for data collection purposes? What is happening and why?
Purpose	
Bracketing	What is happening at extremes? What explains such differences?
Best cases	What accounts for an effective instance?
Worst cases	Why isn't it working?
Cluster	How do different types of instances compare with each other?
Representative	In instances chosen to represent important variations, what is the situation like and why?
Typical	In a typical site, what is happening and why?
Special interest	In this particular circumstance, what is happening and why?
Probability	What is happening as a whole and why?

Box 5: Recent Experience with Involuntary Resettlement

This study assesses the resettlement process of Bank-supported projects and determines the impact on involuntarily displaced people. It consists of eight projects from six countries: Brazil, China, India, Indonesia, Thailand, and Togo. Two projects were included from India and two from China.

The principal findings are mixed. With respect to results: (1) Compensation rates and schedules range widely, but the trend appears to be toward improvements in fairness and timeliness. (2) Although uneven, the record with relocation is satisfactory. (3) The record on restoring—let alone improving—incomes has been unsatisfactory. (4) Improvements in physical infrastructure are evident everywhere but, with the exception of China and Thailand, there are frequent complaints about the operation and maintenance of these structures. (5) At five of the eight sites, locals expressed dissatisfaction with their respective resettlement projects. Bank performance is better than in the preceding decade but not as good as expected; its commitment to the principles of resettlement is visible. Borrower performance ranges from better than the Bank's policy standards to unsatisfactory.

The eight cases selected for this six-country impact study represent four **types** of case studies:

- Illustrative—describe the policy with details of the projects.
- Critical instance—examine eight instances of the application of resettlement policy to mitigate the impact of involuntary relocation.
- Program implementation—investigate the operation of the projects.
- Program effects—examine causality or the outcome of the Bank's relocation policy.

The **size** is a policy—involuntary resettlement. The **project selection** was limited to cases of involuntary resettlement associated with the construction of large dams, because they are the classic, best-known case of resettlement, and the Bank's resettlement policies were designed largely with dams in mind.

This report uses **multiple data sources**—it is based upon a review of project files, other relevant documents, and the results of a socioeconomic monitoring program in five of the six countries, with repeating surveys of resettler households and communities, plus a follow-up survey for OED and site visits by OED evaluators.

Up to 90 percent of the households surveyed were the same as those in previous surveys. Thus, incomes of the same households were compared over several years. The study benefited from data gathered for OED's 1993 report, *Early Experience with Involuntary Resettlement*, but the study was limited by the lack of data before 1991.

The studies do an **extensive analysis** of the multiple types of data at their disposal, often using the triangulation method to verify the evidence for consistency. Case studies are often used to understand the reasons behind a set of circumstances or outcomes, but these studies stop short of asking "why questions," emphasizing project results and Bank and borrower performance findings instead.

Source: World Bank 1998c.

Descriptive Case Studies

The Illustrative Case Study

These case studies primarily describe what is happening and why, to show what a situation is like. This is especially useful to help interpret other data that may be available, such as survey data. OED has many examples of this type of case study. Its study of structural and sectoral adjustment (Jayarajah and Branson 1995) sampled and reviewed 99 loan operations in 42 countries, and provides an annex with case studies of 5 countries.

Box 6: World Bank Support for Small and Medium Industries in Sri Lanka: An Impact Evaluation

This evaluation provides an empirically based perspective on the Bank's strategy and impact on small and medium industries (SMIs).

The central finding is that Bank support of SMIs was unquestionably an important, if subordinate, aspect of Sri Lanka's development strategy. Cumulatively, Bank loans had desirable effects on income distribution, as well as industrial financial development. Through a longer-term prism, it is clear that the credits (1) played a significant role in developing a more diversified, private sector–oriented economy, (2) contributed to the development of a more effective financial infrastructure, and (3) efficiently helped generate a significant number of jobs, largely for lower-skilled workers.

This single case study represents two **types**: program effects and cumulative. It evaluates Bank policy regarding loans for SMIs—the **size** is the policy. To do this, all the Bank's SMI projects in Sri Lanka were **selected** to show the cumulative effect of Bank loans over time on **one case**—Sri Lanka. One of three case studies conducted by the Bank to obtain detailed, cumulative effects of Bank policy regarding loans for SMIs, the Sri Lanka case could also be regarded as exploratory. The other two studies are of Ecuador and the Philippines. Together, these three cases represent 20 percent of the Bank's SMI portfolio and offer broad geographic coverage. Analysis of the three studies could yield useful insights as to whether they contain enough information to inform a larger study of the entire portfolio, using the same or less resource-intensive methodology.

The report uses **multiple data sources**—project data; quantitative economic data; a survey of more than 300 firms, half of whom were beneficiaries, while the other half served as a control group; and structured interviews with participating financial institutions. The analysis considered the effects of both the credits and nonlending services on the behavior of SMIs and participating financial institutions. This broader perspective on Bank intervention is part of a greater OED emphasis on the country, rather than a project, as the "unit of analysis."

Source: World Bank 1997b.

Illustrative case study sites are usually selected as typical or representative of important variations. They provide the realism and vividness of anecdotal information. The number is kept small to help keep the reader's/user's interest. Data often include visual evidence. Reports may use self-contained, separate narratives or descriptions.

In using the illustrative case study, the challenge is in selecting the instances. The case or cases should adequately represent the situation. Where considerable diversity exists, it may not be possible to select a "typical" site.

The Exploratory Case Study

The exploratory case study is a shortened case study, undertaken before launching a large-scale investigation. Its function is to develop the evaluation question, measure, design, and analysis strategy for the larger study. It is most useful where there is considerable uncertainty about what the situation is really like. OED frequently uses such case studies as part of the scoping work.

The study on the World Bank's health and nutrition portfolio, although a large-scale investigation in itself, also explores hypotheses and methodologies for further investigation of the HNP sector (see box 7).

Valadez and Bamberger illustrate the potential benefit of explicitly using case studies in scoping projects (Valadez and Bamberger 1994, pp. 297–98). They present a study to evaluate the impacts of one housing project in Cartagena, Colombia, on household income. A major design issue was to determine how to define a "household." A descriptive case study investigating this concept was prepared on a small number of families. The study concluded that many community residents had different concepts of the household than did the evaluators.

Site selection for exploratory case studies needs to include one site that represents each important variation to make a convenience sample acceptable.

The exploratory case study is often used to investigate cause and effect evaluation questions. It is important in exploratory case studies not to yield to the temptation to make the exploratory

Box 7: Lessons from Experience in HNP

This study describes and assesses the HNP portfolio as part of OED's ongoing effort to learn about the development effectiveness of the Bank's activities in the sector. It includes four case studies: Brazil, Mali, Zimbabwe, and India (forthcoming).

The principal findings about Bank lending policy are that although the Bank has designed technically sound projects, these projects have not taken the demand for health and the local institutional and political environments into consideration in the design of interventions. The average outcome rating of 61 percent satisfactory in the completed portfolio is low relative to other social sector projects (79 percent satisfactory). Fewer than 50 percent of HNP projects are rated as sustainable at completion, and only 21 percent of HNP projects achieve substantial institutional development.

The cases used in this study exemplify two types—exploratory and program implementation. As exploratory case studies, they ask how we can learn more about program implementation. As program implementation case studies, they look for patterns in the implementation of Bank HNP lending policy. Because of the exploratory nature of the study, the protocols differed somewhat from site to site. Consistency across case studies was achieved by using a common analytical framework. The size is the HNP sector.

The four countries selected bracket the role of World Bank loans in the respective countries, showing what happens at the extremes: (1) where Bank loans constitute a significant proportion of the country's outlays in health care (Mali and Zimbabwe) and (2) where Bank loans represent a small fraction of the country's outlays in health care (Brazil and India).

The study uses multiple data sources—a review of World Bank sector studies and project documents; extensive interviews with World Bank staff, government officials, and other stakeholders; and a series of papers commissioned as background for the study.

The case studies do an extensive analysis of the multiple types of data. The extreme cases selected for in-depth study dramatize the consistency of the findings, are consistent independent of the relative size of Bank lending in the sampled cases.

Source: World Bank.

work the basic study data collection, even though the data may seem convincing. Such a procedure is premature and confirms the investigator's hypotheses, rather than testing them.

The Critical Instance Case Study

The critical instance case study, one of the more frequently used types of case studies, examines one or more sites for one of two purposes. The first is to examine a situation of unique interest. In such cases, there is little or no interest in generalizability. The second purpose, used far less often, is when a highly generalized or universal assertion is being questioned, and we test it through examining one instance.

The Post-Conflict Resolution case studies are critical instances of the Bank's policy on this function (see box 8).

Combined Methodology

The Cumulative Case Study

This method is new to the field, but it is one in which OED is a pioneer. This application of the case study brings together the findings from case studies done at different times. Previously discussed case study methods are cross-sectional—that is, they collect information from several sites at the same time. In contrast, the cumulative case study aggregates information from

Box 8: The World Bank's Experience with Post-Conflict Reconstruction

The study distills lessons for ongoing and future operations from the Bank's experience in providing assistance for post-conflict and, to some extent, post-disaster reconstruction. Key issues analyzed include the comparative advantage of the Bank in relation to other international actors; the efficiency and efficacy of its instruments, modes of operation, and skill mix; the longer-term development implications of its efforts in post-conflict reconstruction; and tracking the progress and long-term impact of reconstruction assistance through improved monitoring and evaluation systems.

The report's **findings** address implementation and Bank policy. From an implementation standpoint, Bank performance has been strongest in supporting macroeconomic stabilization and rebuilding physical infrastructure. Restoration of human and social capital has been neglected in most Bank post-conflict portfolios and in economic and sector work. Results of Bank post-conflict efforts in the social sectors have been modest, with little attention paid to gender issues. From a policy perspective, the main conclusion of this study is that the Bank needs to revise its current policy guidance, "A Framework for World Bank Involvement in Post-conflict Reconstruction," and transform it into an Operational Policy Statement.

Three of the nine country studies in this report are case studies, and six are desk studies. The case studies exemplify the program implementation, critical instance, and cumulative **types**. As program implementation studies, they identify factors of performance related to process and attempt to assess the Bank's understanding of the factors that contributed to the complex emergency, and how the Bank used that understanding to reduce the likelihood of collapse before the crisis and/or to prevent or mitigate setbacks in the post-conflict period. They are critical instances of three socio-political emergencies: El Salvador is a case of state erosion caused by ideological conflict; Bosnia-Herzegovina, of state erosion or failure because of ethnic/regional conflict; and Uganda, of state failure attributable to predatory or ineffectual governance. To the extent that they rely on previous studies for their analysis, these represent the cumulative type of case study. The case study countries were also **selected** for the recency of their respective loans and their geography. Bosnia-Herzegovina was a relatively new recipient of such assistance, El Salvador was a more mature recipient, and Uganda was a country where post-conflict reconstruction was essentially completed. They represent wide geographic coverage. The size of the study is (1) policy—Bank policy on post-conflict reconstruction assistance—and (2) a function—post-conflict reconstruction.

This in-depth **analysis** of **data** is based on a review of the Bank's global portfolio of 157 Bank-supported post-conflict operations in 18 countries, representing US$ 6.2 billion in lending. Data sources include both Bank and non-Bank publications and operational documents; a literature review; and interviews and focus groups with Bank staff, other donors, international agencies, NGOs, and (for field studies) member governments.

Source: World Bank 1998e.

several sites collected at different and even extended times. In a sense, the cumulative case study is similar to an evaluation synthesis. The study of Irrigation O&M and System Performance in Southeast Asia exemplifies this type of case study.

In OED applications, our analysis has generally been qualitative. USAID did an interesting prospective cumulative case study evaluation. The purpose was to identify input and process components of economic assistance that could be quantitatively associated with differences in outcome measures. The method entailed the specification that a common set of data (both qualitative and quantitative) be collected over a 5-year period as projects were initiated, together with a means of coding the data across the 47 studies eventually completed. The coded results were analyzed quantitatively (Finsterbush 1984).

Difficulties with conducting cumulative case studies include inadequate or uncertain quality of original data or its analysis. In OED and the World Bank we could greatly strengthen our use of the cumulative case study by developing and using standard case study protocols. If all case studies of rural health projects, for example, had a standard core set of questions, we would soon have an extensive body of knowledge.

Box 9: Irrigation O&M and System Performance in Southeast Asia

This study assesses the agro-economic impacts of investments in gravity-fed irrigation schemes in the paddylands of Southeast Asia to determine whether and how the quality of operation and maintenance (O&M) services—considered to be the key intermediate objective that ensures the sustainability of all the improvements—influences the sustainability of those impacts.

The study finds that the causality it assessed is being reversed in this case. Given that they offer poor economics and low incomes, these paddy irrigation schemes face an uncertain future: improved O&M performance will not rescue them. As the lack of competitiveness of paddy farming drives younger family members off the farms and the older members who stay behind concentrate on basic subsistence crops, social capital will erode and O&M standards are likely to suffer.

The study exemplifies four **types**—program effects, program implementation, cumulative, and exploratory. As an impact study, the report is a program effect study; it is rich in details on the implementation of the projects in their respective countries, thus exemplifying the program implementation type; it brings together findings from individual country case studies focusing on irrigation O&M, making it a cumulative study. The authors are of two minds about their findings: that they were relatively similar at all sites suggests to them that the lessons learned may have wider application; however, because the findings fly in the face of conventional wisdom, the authors are uncertain about their generalizability and recommend viewing them as hypotheses in need of additional empirical work. From this perspective, the study is exploratory. The **size** of the case is a function—gravity-fed irrigation schemes (in the paddylands of Southeast Asia). Six schemes were selected as sites: three in Myanmar, one in Vietnam, and two in Thailand. They are widely dispersed in the targeted region and were chosen for variety without guaranteeing representativeness.

The **analysis** is based on **multiple data sources**, including previous Performance Audit Reports (PARs), Project Completion Reports (PCRs), Staff Appraisal Reports (SARs), World Development Reports (WDRs), stakeholder interactive interviews, and site inspections. An audit of a flood control and drainage project at the three sites in Bangladesh was included in the field work to help identify any obvious differences from and similarities in O&M organization and effectiveness in protecting against excess water and O&M aimed at managing limited water supplies. The interviews (lasting up to five hours each) were with groups and households in all four countries and included officials at the scheme sites and pertinent public irrigation authorities, headenders, tailenders, men, women, and other characteristic irrigators. The evaluation team visited the sites to observe the condition of the canals and control structures; agency activity in allocating, distributing and maintaining the flow of water; and the strengths and weaknesses of farmer O&M, especially as managed through informal associations. The study does not include control cases, and many statements about impact are based on comparison with appraisal projections, not with farmers' original conditions.

Source: World Bank 1996c.

Participative Evaluation and the Case Study

The process of doing case study evaluations has become more participative or collaborative (Yin 1989, 1993, 1994, 1997). It is no longer uncommon for case study evaluators to work closely with project officials—for example, to help define the questions to be addressed by the evaluation. Such participation is seen as helping to strengthen ownership of the project, facilitate the transfer of evaluation skills and capability, and promote democratic governance itself (World Bank 1996a).

Reporting or Critiquing the Case Study

We often publish case studies in the form of précis or summaries of longer reports. What should we look for in the decision to publish or not to publish? The standards are similar to those for other kinds of evaluation studies.

1. *Are the evaluation questions stated clearly and explicitly?* The questions investigated as well as the underlying issues should be explicitly presented.

2. *Is the case study application clearly described?* The case study should describe the application that was selected (critical instance, illustrative, or cumulative) and explain why this application is appropriate for the kind of evaluation questions that needed to be answered (descriptive, normative, or cause-and-effect). Where one or more methods other than the case study are used, the relationship of the case study to the other methods is clear, appropriate, and well-described.
3. *Was the time span of the study long enough to address the core issues fairly?* A good case study reports how much time the investigation covered in relation to the history of the instance or program. This is asking, in other words, if the study is sufficient "to provide a comprehensive understanding of the event as a whole"— one of the key parts of the definition of case studies.
4. *Is the basis for selecting cases clearly specified?* A good case study presents the rationale for selecting particular cases.
5. *Are the data collection methods adequately described?* If an illustrative or exploratory case study is being undertaken, and data collection is unstructured, this should be indicated. When multisite approaches are being used, the actual protocol for data collection should be available.
6. *If more than one investigator collected data, are the quality control procedures described?* This would potentially include the bases for selecting data collectors, training provided, and the like.
7. *Are the information sources fully described?* A good case study presents in detail the sources of evidence. Numbers and positions of people interviewed and extent and nature of records reviewed and/or situations observed should be evident. The reader needs to be able to determine from the information in the case study report how credible the conclusions are through the appropriateness and completeness of information sources.
8. *Are database formations and data analysis techniques clear?* Readers need to know how the data were organized and analyzed. Detail should be available on the steps taken to reduce and code the data. Analytic procedures such as triangulation should be explicitly described.
9. *Are arguments for and against various resolutions of the evaluation questions presented?* If other studies relevant to the issue are available, their results should be presented and reconciled with the case study findings. A good case study discusses how the study findings and conclusions converge or diverge from other related work. It also specifies any differences in the interpretation of the evidence among members of the investigative team or reviewers of the draft report.
10. *Are the strengths and weaknesses of the case study identified?* A good case study discusses the strengths and limitations of the evidence and takes this into account in formulating conclusions. Generalizations are in line with instance diversity and the method of selecting the instances.

If we are issuing a précis or other shortened form rather than the full case study report, the methodology may also be summarized, but it should be given in full in the report. In such cases, reference should be made to the availability of the complete description. The particular form of the case study write-up will depend on the audience and its needs.

Case Studies and Teaching Case Studies: Critical Differences

Case studies used for teaching purposes have a different structure than the evaluative case study we have been describing. We may frequently want to publish case studies or study summaries so that others can learn and we can add to the body of knowledge on a given issue, such as resettlement. If the case studies generally meet the criteria for good case studies presented here, we should publish these lessons. Teaching case studies go a step further, however, and are usually a subset of case studies.

Teaching case studies generally try to illuminate a decision or a set of decisions—why they were taken, how they were taken, and what led up to them. In most cases, the problem is described, with much detail, and the class is given the exercise of coming up with and justifying the decision. The students may then be given an opportunity to compare that decision with those actually taken in the case. Seldom, however, is there a single right or wrong answer.

An example is the John F. Kennedy School of Government, Harvard University, case of "The Buenos Aires-Colonia Bridge" (Case No. C15-97-1400.0):

> This case recounts the work of a special Argentina-Uruguay bi-national commission convened to examine the economics of a proposed bridge that would link the two counties. The bridge being considered by commission officials in the spring of 1996 was to extend 41 kilometers across the River Plata estuary, from Buenos Aires to the Uruguay City of Colonias. It would be by far the longest in the world. The case recreates the problem as faced by the commission, which had to consider whether it would make financial sense for a private concessionaire to build and operate the bridge. Specifically, bridge commission staff had to critique the work and recommendations of a private consulting firm whose market projections led it to conclude that the US$1 billion bridge could successfully be financed by tolls of US$60 per car.

Another case example was developed by the Kennedy School for the World Bank, "The Problem of Project Assessment in Social Finance: The Local Initiatives Support Corporation (B)" (Case No. CEI-97-1396-0).

Public policy cases fall into two main types: "action-forcing" and "retrospective." (Kennedy and Scott 1985; Robyn 1986).

- *Action-forcing* cases try to place the reader into the shoes of a government official (or group of officials) faced with a problem requiring action. The bulk of the case is devoted to a description of the dilemma and the available options for resolution: at the end, the reader, like the protagonist, is poised at the moment of decision. The fundamental question here is, "What would you do in X's place and why?"
- *Retrospective* cases tell the whole story—up to and beyond the decision point, and including some account of the consequences. In this instance, the basic question is "What do you think of what X has done, and why?"

Criteria for selecting teaching case studies. Having a good and exciting case study is only the first precondition for trying to turn it into a teaching case study. Key questions that need to be answered are:

- What problem is being illustrated?
- What are the underlying issues?
- Who is the target audience?
- What are the specific objectives for them?
- What is the specific decision that needs to be made?

As Dorothy Robyn has pointed out, teaching cases should be brief, of general applicability, conflict-provoking, and decision-forcing (Robyn 1986). Regarding the last two points in particular, she notes:

> *Conflict-provoking.* Controversy is the essence of a good case discussion: it engages students; it forces them to think through and defend their position; and it demonstrates to them that while there are generally no right answers, there are certain questions that are essential to ask.
>
> *Decision-forcing.* Controversy, even in success stories, generally collects around decision points. Many—perhaps most—teachers find that all else being equal, a case works better if it leaves those decisions unresolved—that is, if it presents a choice or decision that confronts a manager or analyst without revealing what the protagonist did and the consequences of that action. This principle applies both to cases that are written prospectively and those that are retrospective.

How to write cases. Producing the teaching case study is a special skill, and there are professionals who specialize in this. There are also those—not necessarily those producing the study, who specialize in the teaching of the case study. Those who are good at producing them are not necessarily good teachers, and vice versa. Kennedy and Scott cite five basic steps for writing case studies (Kennedy and Scott 1985):

1. *Develop the situation or problem.* The most important element in researching cases quickly, effectively, and economically is having a clear notion of what the case is *for*. Ideally, this means having a strong sense of the particular teaching points the case is intended to support and how it fits into the curriculum. In order to ensure realism and relevance, ideas for case studies should originate from real problems: as outcomes of investments in health and nutrition, growth of free enterprise in Southeast Asia, post-conflict resolution, and the like.
2. *Research the case.* Case research usually proceeds in two

distinct stages after a topic is chosen: library work, followed by interviews. The library stage is an opportunity to learn quickly and cheaply. The interview stage is an opportunity for the now informed writer to learn, from the case's principal actors, the details of the story that are particularly relevant to the case's focus, the actors' own insights into and reflections on their significance, and the anecdotes that color, spice, and illuminate what might otherwise be dry, dusty history.

3. *Write the case.* Cases vary in length and level of difficulty; there are no absolute guidelines. It is advisable to adhere to the following principles when writing a case:[3]
   - Objectivity: do not analyze and do not editorialize.
   - Disguise. This may be necessary to preserve confidentiality or to synthesize a single case from several projects, but disguise only when necessary.
   - Worksheets are helpful in the early stages of the course but should not be included later, when students need to provide their own structure.
   - Exhibits, statistical data, and other relevant information can be included in the body of the text or in appendixes.
   - Extraneous material. Some needs to be included in order to force participants to distinguish between relevant and irrelevant information.
   - Leader's guide. It may include material that is not essential to the case, such as the reason the project was selected and a statement of teaching objectives.
   - Pre-testing. Have someone unfamiliar with the material review it to make sure that it is understandable to a cold reader.
4. *Develop questions*, and in some situations *activities,* to support the case. Typical case study questions include (Sullivan and Ruyle 1997):
   - What is the problem?
   - What are the most significant aspects and effects of the problem?
   - What is the root cause of the problem?
   - How could this problem have been avoided?
   - How can it be corrected?
   - What can be done to ensure the problem does not recur?
5. *Develop thorough instructions* for the case study. These instructions can be developed by answering a series of questions (Sullivan and Ruyle 1997):
   - Will learners work on the case individually or in small groups?
   - Will there be a group discussion during a training session, or will learners receive feedback individually?
   - Will the assignment be completed during the training session or will learners complete it outside of class?
   - Will the learners simply report answers, or will a more formal presentation with supporting media be required?
   - Will each group have the same case, or will different problems be tackled by different groups?
   - Will learners require reference materials to complete the assignment?
   - Will additional research be required, or will learners have all the necessary information to answer all the questions?

How to teach cases. In a typical group instruction format, a case is presented to learners who work individually or in small groups to analyze it and answer a series of related questions. The questions are usually open-ended and have more than one correct solution. The work in small groups is followed by class discussion led by the instructor. Austin suggests that the discussion leader include the following categories of questions (Austin 1993).

- *Information seeking*: These are the "who, what, when, where" questions that elicit factual responses that can highlight certain particularly relevant pieces of information and ensure a common data base.
- *Analytical*: These "why and how" questions provoke diagnostic, causal, and interpretive thinking, which is often central to achieving mental skill-building objectives.
- *Challenge*: These are "why" questions to force students to extend and deepen their analyses by giving supporting statements or by responding to counterarguments.
- *Action*: These "what would you do when, how, and why" questions press the students into making decisions and dealing with implementation processes.
- *Hypothetical*: These "what if" questions allow you to create new situations that force the students to extend their thinking under different assumptions; this is a way to go beyond certain factual or information gaps in a case.
- *Predictive*: These "what will happen" questions force students to plunge into uncertainty and to substantiate their forecasts. These may be helpful when the instructor knows what actually happened and wishes to reveal that after the students have given their prediction, thereby enabling a

comparative discussion.

- *Generalization*: These "what general lessons" questions push the student into a more abstract level of cognitive reasoning, which is often particularly helpful to achieving knowledge-enhancement objectives dealing with conceptualization.

The instructor needs to develop a plan that includes the topics to be covered and a set of questions. Every detail in the case can be used as evidence in a class debate, so the essence of the instructor's preparation task is contingency planning: analyzing the case for all its possible interpretations (Maister 1981).

Case Study Workshops

OED will sponsor workshops on writing and teaching case studies and will invite network representatives and other World Bank personnel to increase the use of teaching case studies in the dissemination of its work and lessons learned.

Endnotes

This paper has borrowed liberally from the United States General Accounting Office publication, *Case Study Evaluations*, Transfer Paper 10.1.9, November 1990. The authors are indebted to Lois-Ellin Datta, the author of the publication. This book is in the public domain.

1. Yin 1989 contains excellent sections, replete with examples, of case study protocols and means of analyzing case study data.

2. See, for example, Miles and Huberman 1994 for extensive, easy-to-read, within-case and cross-case analysis techniques.

3. Most of the following points are taken from Cohen 1978.

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* These publications are soon to be available in both French and Spanish.