



Completion Report

Project Number: 47299-001
Technical Assistance Number: 8489
June 2017

Development of the ADB Infrastructure Project and Infrastructure Database under the ADB Data Library

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Asian Development Bank

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TA Number, Country, and Name:			Amount Approved: US\$225,000.00	
TA 8489-REG: Development of the ADB Infrastructure Project and Infrastructure Database under the ADB Data Library			Revised Amount: N/A	
Executing Agency: Asian Development Bank		Source of Funding: TASF-Other Sources	Amount Undisbursed: US\$16,253.00	Amount Utilized: US\$208,747.00
TA Approval Date: 22 October 2013	TA Signing Date: 30 October 2013	Fielding of First Consultant: 20 January 2014	TA Completion Date Original: 30 April 2015	Actual: 31 March 2017
			Account Closing Date Original: 30 April 2015	Actual: 22 May 2017
<p>Description</p> <p>Given the importance of infrastructure projects in the ADB portfolio, easy access to statistics about ADB projects is important for planning, monitoring, and research purposes. However, bringing together different types of statistics on ADB infrastructure projects has so far required collating data from different databases and sources. The Economic Research and Regional Cooperation Department (ERCD), in close collaboration with the Office of Information Systems and Technology (OIST) implemented the small-scale research and development technical assistance (S-RDTA) 8489 in response to the need to develop a central repository of infrastructure projects. This has resulted in the development of the Database of Infrastructure and Other Projects (InfrAsia+), a test phase database that compiles data on infrastructure that were closed between 1968 and 2014 and were evaluated by Independent Evaluation Department (IED). From its original design, the scope of the database has been expanded to include information on non-infrastructure-related projects. InfrAsia+ provides ADB staff access to a wide range of indicators on projects, including general information, economic analysis, financing, costs, outputs, outcomes, and assessments associated with each project.</p> <p>Expected Impact, Outcome, and Outputs</p> <p>The intended impact of the TA is informed decision-making to support infrastructure development which would ensure sustainable economic progress, connect the poor to markets, and increase access of the poor to basic productive assets.</p> <p>The outcomes of this TA are increased use of relevant statistics and knowledge base that facilitate better design and monitoring of ADB infrastructure projects; and improved ADB research and knowledge products that provide strategic support to ADB's priorities.</p> <p>The main output of this TA is a database of ADB projects which can support the data and information needs of the operations departments, mainly in relation to the operational or project cycles, as well as ADB's research and analysis needs.</p> <p>Delivery of Inputs and Conduct of Activities</p> <p>The TA carried out the following activities: (i) consultation meetings and workshop with Sector and Thematic Group on Transport, Southeast Asia Department, and Strategy, Policy, and Review Department to provide inputs for identifying baseline indicators and developing a preliminary design of the database; (ii) expanded the scope of the database to include information on both infrastructure and non-infrastructure-related projects; (iii) approved the revised business case implementation request (standard OIST procedure); (iv) establishment of a new data scheme which included developing and populating the database; (v) developed software applications for web-based interface of the database; (vi) provided data-support to various knowledge products (e.g., <i>Meeting Asia's Infrastructure Needs</i> report, blogs, brown bags, etc.); (vii) conducted a users' assessment test to get comments on the usefulness of the database; and (viii) developed the test-phase of the database.</p> <p>The TA provided 123.5 person-months (2 international and 121.5 national) of consultancy services for the following: (i) compilation and validation of project-level data, (ii) development of database and its web-based interface, (iii) background research work on the analysis of infrastructure investment gaps and on how innovative types of data sources such as satellite images of nighttime lights can be potentially useful in evaluating impacts of projects in the absence of reliable baseline and endline socioeconomic indicators, and other relevant research topics. All individual international and national consultants performed satisfactorily and their work was closely monitored by the project officer to ensure delivery of high quality outputs.</p>				

Five minor changes in implementation arrangements were undertaken to accommodate the following activities: (i) data extraction and cleaning from project documents; (ii) expansion of the scope of the sectors, and (iii) inclusion of research work to analyze the indicators extracted from the project documents. Due to the additional activities, the project completion date was extended for two years.

Evaluation of Outputs and Achievement of Outcome

Most of the outputs originally targeted were produced within the revised completion date. In particular, the TA has produced a database that consists of project-level data on key indicators based on information collected from projects that were closed between 1968 and 2014 and were evaluated by the IED. Moreover, a user-acceptance test showed that the database can be easily navigated and information is very well-organized. However, there is still a need to improve the database, especially with respect to data visualization. A research component was also included in the project and InfrAsia+ has provided data support to various studies that are either published or ongoing. Published studies include the ADB flagship report, *Meeting Infrastructure Needs*, as well as the blog, *How Nighttime Lights Help Us Study Development Indicators*, and an ADB seminar presentation, *Benefits of International Competition: Evidence from Contract / Project Level Data*.

Overall Assessment and Rating

The overall TA rating is successful and the desired outputs were achieved in a cost-effective manner. In addition, the TA was relevant since its output is designed to assist ADB's operational work. The TA was also effective, with all outputs achieved, including the compilation of data from all sectors and not just for road and water infrastructure projects as originally envisaged. The outcome achieved will be sustainable if (a) ADB staff capitalize on the rich information provided in the database to conduct research and analysis that can inform program and project design and monitoring and (b) the appropriate ADB units update the available indicators in the database

Major Lessons

One major lesson learned is that notwithstanding advances in technology, the costs of bringing different types of information on projects together in one database remains quite high. In particular, the amount of potentially useful information on projects contained in different media and sources (e.g., various types of documents) is extremely large. Further, converting this information into digitized variables that can be included in the database requires considerable knowledge of operations. In other words, it is not a task that can be carried out by statisticians and research economists alone. The key implication is that careful cost and benefit analysis is needed before extending this data set. If some information is to be digitized and added to the database, there needs to be a compelling case that the information to be added is significantly useful for addressing some meaningful operational or research question.

Another lesson is that in deciding which software to use for data visualization, more extensive analysis of a wider range of software should be conducted. Even though OIST evaluated and recommended the visualization platform (e.g. Highcharts) used, it would be good if extensive studies can be conducted on other software.

Recommendations and Follow-Up Actions

The information from the database can be used to conduct a range of studies including, for example, analysis of factors that affect project delays and cost overruns and analysis of project performance ratings and ex-ante economic internal rates of return. However, whether the database is used widely or not remains to be seen. ERCD will evaluate how much demand there is for the database after launching it. If there is sufficient demand, cost- and time-effective modalities for updating the database will be proposed. Consultation meetings with other relevant departments are needed to be able to strategically identify who will manage and update the database to maximize its usefulness for ADB's operations.

TA = technical assistance.

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Design and Monitoring Framework

Design Summary	Performance Targets/Indicators	Data Sources/ Reporting Mechanisms	Assumptions and Risks	Accomplishment
Impact Improved statistics and knowledge basis for better informed decision making to support infrastructure development which would ensure sustainable economic progress, connect the poor to markets, and increase access of the poor to basic productive assets	Policies and projects which take into consideration statistics from the database	ADB project documents, reports and/or papers as well as reports and/or papers by agencies (both government and non-government) related to infrastructure development and/or poverty issues.	Assumptions Infrastructure development and poverty reduction remain key objectives of ADB and governments in the region.	
Outcome Better designed and monitored ADB infrastructure projects that address more accurately the existing infrastructure needs of the region; and improved ADB research and knowledge products that support "Finance++" approach.	Project documents which use the database for design and monitoring Reports and/or papers which use the data from the database	ADB project documents, reports and/or papers	Assumptions Operations and Knowledge Departments are willing to use infrastructure projects and infrastructures statistics and data in formulating project documents and research papers.	The database provided data support to various studies that are either published or ongoing. Published studies include the ADB flagship report, <i>Meeting Infrastructure Needs Report</i> , as well as the blog, <i>How nighttime lights help us study development indicators</i> , and an ADB seminar presentation, <i>Benefits of international competition: evidence from contract / project level data</i> .
Outputs 1. ADB infrastructure projects and infrastructures database	Statistics and data accessible from the database	Peer review by ADB specialists	Assumptions Access to infrastructure project data. Operations departments and other parts of ADB	Database on infrastructure and other projects was developed. Access to a wide range of indicators on projects, including general information, economic analysis,

			actively support the development of the database. Risks Unavailability of data	financing, costs, outputs, outcomes, and assessments associated with each project.
2. Consultation workshops	Workshops and Launch event attended by staff from relevant parts of ADB			Consultation meetings and workshop with Sector and Thematic Group on Transport, Southeast Asia Department, and Strategy, Policy, and Review Department to provide inputs identifying baseline indicators and developing a preliminary design of the database.
3. Dissemination activities				The database will be accessible through ADB intranet in July 2017.