

Indonesia - Procurement Modernization

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Overview

Identification

COUNTRY

Indonesia

EVALUATION TITLE

Procurement Modernization

TRANSLATED TITLE

Proyek Modernisasi Pengadaan Millennium Challenge Corporation (MCC) di Indonesia

EVALUATION TYPE

Independent Impact Evaluation

ID NUMBER

DDI-MCC-IDN-ABT-PSU-2020-v01

Version

VERSION DESCRIPTION

Licensed datasets, accessible under conditions,

Overview

ABSTRACT

Abt Associates evaluated Indonesia's Procurement Modernization Project using mixed methods. The qualitative approach used the 5-S framework (modified from McKinsey's 7-S framework) to analyze organizational change within procurement service units (PSUs) related to shared values (perception about corruption), structure (permanency of PSUs), systems (procurement processes adopted), skills (staff procurement skills), and staffing (staff preference for careers in procurement). To evaluate changes along the 5-Ss and several key procurement outcomes, the evaluation used a quasi-experimental impact evaluation design - a weighted difference-in-difference that compared outcomes for Phase 2 treatment PSUs with outcomes for comparison PSUs. The comparison PSUs were shortlisted in Phase 2 but not selected to receive the program's core services and were weighted to look similar to the treatment PSUs. Data for the evaluation come from structured surveys with PSU and spending unit (OPD) staff at the baseline (2016) and endline (2019), semi-structured interviews with PSU staff at endline (2019), and semi-structured interviews with key stakeholders after the project ended (November 2018-January 2019). The quantitative analysis also used time series data from the Procurement Management Information Service (PMIS) on two tender-level final outcomes: time efficiency and cost-efficiency.

Evaluation questions -

Shared Values

a. Are there any issues related to the political economy (or other aspects) of the procurement system and its actors not addressed by the project that may have impacted the project's ability to achieve its intended results?

b. Did the program result in a change in culture or shared values?

Structure

What types of organizational or operational changes are taking place at the PSU level?

a. Have PSUs adopted the Maturity Model (a set of self-assessment and development tools) as an approach to supporting their organizational development goals?

Systems

What types of procedural changes are taking place in the conduct of procurements?

- a. What was the quality of policies and procedures developed by the project (e.g., public private partnerships - PPPs)?
- b. Are there changes in policies, procedures, or otherwise that could lead to quality improvements in ultimate procurement (contract) outcomes? How so?
- c. Are there changes in policies, procedures, or otherwise that could lead to savings (financial or total lifecycle) in government procurements? How so?
- d. Are PSUs using e-catalog for standard purchases?
- e. Are PSUs using the lifecycle PMIS?
- f. What was the quality of PMIS?
- g. Has the PMIS contributed to changes in procurement planning or implementation?
- h. Does the design of PMIS meet the needs of the UKPBJs and other procurement actors?
- i. Have PSUs developed their own framework contracts?
- j. Have PPPs been conducted in accordance with the policies and procedures developed by the project?
- k. Has there been an increase in PPP transactions?

Skills

- a. Are the skills/knowledge emphasized in the training spreading within the PSU? How so?
- b. Has the procurement knowledge and skill of trainees improved?
- c. What was the quality of training and mentoring?

Are staff now permanent staff?

- a. Do staff seem committed to and engaged in pursuing a procurement career path?
- b. Are trained or "permanent" staff retained?
- c. Do staff feel more supported administratively and legally?
- d. Was there a gender inclusive strategy for recruiting procurement staff?

Overall

Were the Activities/Sub-Activities implemented as designed?

- a. What were the implementation challenges and successes?
- b. Is there evidence that the interventions have resulted in the outcomes outlined in the project logic?
- c. Was the set of activities designed the most strategic intervention for the Indonesian procurement context or to improve procurement?
- d. Has framework contracting/e-catalog resulted in time and/or cost savings?
- e. Is there evidence for cost savings in the program PSUs?
- f. How has budget absorption [execution] in the PSUs changed over time?
- g. Are there detectable improvements in budget execution and efficiency of procurement execution in the UKPBJs and

spending units?

In terms of treatment exposure, Phase I PSUs received treatment from 2013-2018 and Phase 2 from 2016-2018. Through efforts that had nationwide reach and through PSUs that became centers of excellence (COE), it is possible that the comparison PSUs received some treatment at the same time, but less intensively.

The evaluation found evidence of positive impact of PM project's intensive activities in only a few areas. The project improved staff skills-as measured by their quiz scores on procurement processes-but absolute quiz scores remained quite low. Additionally, more PSUs achieved permanency as a result of the PM project. The evaluation found that the relative odds that a PSU was permanent increased almost nineteen-fold because of the project. However, we did not find clear evidence that the project's intensive activities improved the adoption of improved procurement processes, maturity model, e-catalogues, PMIS, and/or framework contracting. Adoption of policies and procedures and PMIS increased over time, even in comparison PSUs. Some of these efforts were simultaneously being promoted by nationwide policies, which can explain improved performance in the comparison PSUs. Conceivably, COEs could have also helped improve the outcomes in comparison PSUs but our data suggests that majority of comparison PSUs did not receive COE input. Overall, despite the small gains in staff skills and greater permanency of PSUs, the PM project's intensive activities did not improve the quality, cost, or time efficiency of procurement. These outcomes did not improve in the comparison group either.

EVALUATION METHODOLOGY

Difference-in-Difference;

UNITS OF ANALYSIS

The unit of analysis was PSU and OPD staff employees for most analyses, for some it was the PSU and OPD managers only.

KIND OF DATA

Sample survey data [ssd]

TOPICS

Topic	Vocabulary	URI
Capacity Building and Institutional Development	MCC Sector	

KEYWORDS

procurement management, public procurement, civil sector capacity building, local governance, public finance, procurement management information system

Coverage

GEOGRAPHIC COVERAGE

The data provided national coverage.

UNIVERSE

Managers and employees of selected PSUs and OPDs across all of Indonesia.

Producers and Sponsors

PRIMARY INVESTIGATOR(S)

Name	Affiliation
Abt Associates	

FUNDING

Name	Abbreviation	Role
Millennium Challenge Corporation	MCC	

Metadata Production

METADATA PRODUCED BY

Name	Abbreviation	Affiliation	Role
Millennium Challenge Corporation	MCC		Review of Metadata
Abt Associates			Independent Evaluator

DATE OF METADATA PRODUCTION

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MCC Compact and Program

COMPACT OR THRESHOLD

Indonesia Compact

PROGRAM

The PM project was designed to accelerate Indonesia's procurement reform agenda and transform operation of its public procurement system. The project activities intended to improve staff and institutional capacity, enabling higher quality assessment of the services and goods needed, greater competition, lower costs and higher quality services and goods, and reduced procurement and delivery time. The two major subactivities were 1) the procurement professionalization activity and 2) the policy and procedure activity. As part of the first activity, the institutional structure and professionalization subactivity included using a Procurement Maturity Model tool to provide a roadmap for institutional development, and using training programs for professionalization of staff. The program included mentoring and peer-to-peer programming. The Procurement Management Information System (PMIS) sub-activity comprised setting up an electronic procurement system and also developing a new e-catalog system. The second subactivity focused on improving outcomes for public-private partnerships (PPPs) and researching sustainable procurement practices. It supported new regulations and training programs and also partnered with four government contracting agencies and developed documentation for a more efficient bidding process.

MCC SECTOR

Capacity Building and Institutional Development (Cap Bldg & Inst Dev)

PROGRAM LOGIC

The PM project was designed to accelerate Indonesia's procurement reform agenda and transform operation of its public procurement system. Procurement reform has the potential to reduce resource inefficiency and save resources for other investments that can contribute to the country's economic growth. In this context, the project's objective was to strengthen the implementation of the procurement function within the Government of Indonesia (GoI) by building capacity and facilitating the institutionalization of PSUs, equipping them with systems, processes, and skilled procurement professionals per PR No. 54/2010 and PR No. 16/2018. This was expected to result in efficiency improvements for procured goods and services, ensuring that their quality satisfies public need and that they are delivered to the public as planned. The logic of the project was that these savings would lead to more efficient provision of goods and services, leading to budgetary savings that could be applied to other productive investments, potentially enhancing economic growth.

PROGRAM PARTICIPANTS

Program participants: PSUs selected for the program and the evaluation are the same. Employees did the project training on an ad-hoc basis depending on availability and interest to travel to the training sites. Evaluation participants: The survey covered Phase 1 and Phase 2 Procurement Service Units (PSUs) and associated OPDs (spending units) that received the Procurement Modernization Project, along with selected comparison PSUs and ODPs. Two PSU managers and either all employees (if fewer than 15) or a randomly selected subset of employees were interviewed in each PSU and associated OPD. All respondents were adults age 18 or older. Respondents were selected randomly from a list generated by the survey firm within PSU/OPD units. The baseline and endline surveys are not a panel, and employees are for the most part not the same over time due to the program's implementation of permanent rather than part-time employees. More employees are surveyed at endline than at baseline, especially in OPDs, to increase sample size.

Sampling

Study Population

Managers and employees of selected PSUs and OPDs across all of Indonesia.

Sampling Procedure

Stages of sample selection are at the PSU level and employee level, as well as Phase I and Phase 2. At the organizational level, the project supported 44 PSU at several levels of government: city, district, institution, ministry, and province. These PSUs were engaged in the project in two phases. In the first phase, the project engaged 29 demonstration PSU for the full project period (2013-2018). In the second phase (2016-2018), the project supported an additional 15 PSUs.

All but one Phase I and Phase II PSUs receiving treatment were included in the evaluation. All shortlisted PSUs were included as comparison and reweighted. The selection process done by the program and so followed by the evaluation. The PSU selection was as followed:

Participating PSUs in both phases were chosen for the program through a process of application, shortlisting, and interviews/site visits. Twenty-nine PSUs were selected for Phase 1, and 16 PSUs (including the LKPP, which was excluded from the analysis since it is also a national level agency) were selected for Phase 2, representing a broad geography and different levels of government.

In Phase 1 the first step in the process was to solicit expressions of interest in the program at a conference for PSUs. At the conference, a short questionnaire was fielded to PSUs that were interested in the program, and just under 40 PSUs were shortlisted from among the respondents for the program. Site visits were scheduled, which helped further narrow down to 29 the PSUs that were selected overall, on the basis of expressed commitment to reform, response to questionnaires, site visits, and other characteristics recorded in a Commitment Scorecard from the questionnaire responses, as well as on the basis of institutional and geographic diversity. The elements for eligibility in the Commitment Scorecard were:

Willingness to commit to the main goals of the PM project

Willingness to share data with LKPP

Willingness to use e-procurement and an e-catalogue

Interest in establishing permanent and independent status of the PSU and in establishing permanent functional procurement positions

Maturity of the PSU (year of establishment, legal basis for the establishment of the PSU, degree of permanence, independence, etc.)

Organizational structure (number of staff and their positions, whether they were full-time personnel or on temporary assignment)

Diversity of volume, type and value of procurement

Presence and use of the Layanan Pengadaan Secara Elektronik (LPSE), LKPP's system for e-procurements, and percentage of procurements conducted with e-procurement

Presence of one to two years of historical data

Level of implementation of procurement regulations

Institutional capacity

1 Management and 1 non-management employee was sampled at endline per PSU for Phase I based on interest. Phase 1 was not sampled at baseline. To sample respondents for the survey within Phase 2 PSUs, up to 15 PSU employees and 15 employees at OPDs were selected within the sampled PSUs. The target samples for each PSU and OPD were smaller in the baseline by the survey firm since overall staff sizes were smaller at that time. If fewer than 15 employees were available, the survey firm selected all employees. The minimum number of surveyed employees was 10 from one PSU and one for the associated OPD. If the number of PSU employees was greater than the target sample size, the survey firm selected at least two management staff and randomly selected the remaining employees from a list of all employees generated by the survey firm. If the number of OPD employees was greater than the target sample size (which was very rare), the survey firm randomly selected employees from a list of all employees. Staff were approached three times and if unavailable or did not respond they were not interviewed (with no replacement) - this occurred ten times at endline. Two managers were sampled by PSU based on interest and availability.

See section on weights for how comparison PSUs were weighted.

According to power calculations, the sample size was 600 Phase 2 respondents (300 for certain subsets of questions to PSU staff only).

See Final Report for sample sizes by phase and PSU/ODP.

Deviations from Sample Design

PSU deviations: All PSUs that were part of the design were sampled.

Respondent level deviations: There were fewer staff than we had anticipated surveying at baseline. At endline we increased OPD respondents to increase sample size further.

Response Rate

PSU level: All PSUs responded. In terms of analysis, one PSU was dropped from the analysis because its data was not yet in the PMIS system so weights could not be generated based on it. Three PSUs did not answer baseline questions and were dropped from the analysis due to the particular status of the PSU at baseline (attached to ministry). In addition to data points dropping out of the analysis, there are some qualitative interview response indications that likely one control PSU received treatment - treatment PSUs were actively encouraged to "sister" with non-treatment PSUs and mentor them as part of the program.

Respondent:

At the baseline, we surveyed 426 staff at 22 Phase 2 treatment and comparison PSUs and associated OPDs. This is 71% of the 600 target sample size and was due to lack of sufficient staff to interview - many PSUs were still impermanent and understaffed. At the endline, we exceeded the target sample and surveyed 658 staff at 25 Phase 2 PSUs and 22 associated OPDs. Of the target of 300 PSU staff at baseline and endline, 295 were interviewed at baseline and 298 at endline. Also at endline, we surveyed an additional 40 respondents at 20 Phase 1 PSUs (2 respondents at each PSU). The number of respondents at Phase 2 PSUs was similar across baseline and endline, with approximately the same number of managers and staff surveyed. At endline, the total number of respondents at Phase 2 OPDs was larger than at baseline to help achieve a higher overall sample size. Fewer respondents reported working at both a PSU and an OPD at endline, particularly in the treatment group. This change may be a reflection of the increase in the number of permanent staff at the procurement units, which reduced the reliance on staff from either PSUs or OPDs. All targeted PSUs were included at baseline and endline. Within the respondents, almost all finished by the end of three attempts to contact them. 20 interviews at baseline and 10 at endline were incomplete. One respondent at baseline and endline each refused to participate.

Weighting

The comparison group consisted of 10 PSUs that the MCA-I shortlisted but did not select for treatment. To account for baseline differences between the treatment and comparison groups, the evaluation used data on baseline characteristics on these measures to assign analysis weights to PSUs in the comparison group. The analysis weights used predicted probabilities of being selected for the project from a logistic regression with a treatment dummy as the dependent variable, regressed on baseline characteristics of the PSUs that were closest to the factors that influenced their selection by the PM project.

Baseline Characteristics influencing comparison PSU selection:

PSU Selection Criteria Baseline Characteristic

Institutional permanency Dummy of whether the PSU has permanent status

Total PSU procurement spending Average expenditure on tenders; Average number of bidders per tender

Proximity to Jakarta Distance to Jakarta (km)

Leadership commitment Whether the PSU has a set of standard operating procedures

Using estimates of predicted propensity of being selected for treatment, p , each treatment PSU received a weight of 1, and comparison group PSU receive a weight of $p/(1-p)$ (Nichols 2007 and 2009).

Questionnaires

Overview

Structured questionnaires for PSU and OPD staff covered ten modules with substantially similar questions. Modules were 1. respondent characteristics 2. participation 3. permanency status and staff professionalization 4. practices 5. desirability and/or stature of procurement career paths 6. involvement throughout the procurement process 7. procurement timeliness, efficiency, responsiveness, and fitness to purpose 8. use of framework contracting, e-catalog, PMIS and/or PPP, 9. use of performance monitoring data 10. perceived levels of biased or collusive practices 10. knowledge of procurement. In addition, OPD staff were asked questions on customer satisfaction.

Data Collection

Data Collection Dates

Start	End	Cycle
2016-07	2016-09	Baseline
2019-08	2019-09	Endline

Questionnaires

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Data Collectors

Name	Abbreviation	Affiliation
SurveyMeter		

Supervision

Teams of interviewers led by a supervisor conducted interviews. A programmer worked remotely. The supervisor reviewed questionnaires daily to check for inconsistencies and incompleteness. The supervisor coordinated field data collection activities as well, including notifications to appropriate agencies around travel. The supervisor assigned work to interviewer, spot checked work, maintained field control documents and coordinated with Abt Associates.

There was one main supervisor with occasional support from other SurveyMeter staff. Enumerators conducted approximately 25-32 interviews each. At baseline, SurveyMeter employed 12 male enumerators and 12 female enumerators for the quantitative survey while at endline they employed 11 male enumerators and 11 female enumerators. The qualitative team consisted of 7 female and 4 male enumerators.

Data Processing

Data Editing

Data editing took place as part of automated and in-person checks conducted during the data collection process to ensure completeness and lack of errors in entry. Abt Associates conducted secondary editing and structural checking of STATA data files. Data cleaning do files are provided as part of the data package for both baseline and endline. Corrections were done automatically through the codebooks.

Other Processing

Data entry was conducted using CAPI on tablets. The supervisor and programmer checked output daily and communicated to the field team daily by WhatsApp. The supervisor and programmer checked missing data, interview duration, daily interview recapitulation, and consistency on key variables.

Data Appraisal

Estimates of Sampling Error

Please see Abt Associate's 2020 Final Report for regression output that includes, for each reported statistic, its estimate, standard error, and the 95 percent confidence interval.

Here we report the design effect (DEFF) for the interaction term for one outcome per domain. To calculate this, we use the stata "estat effects, deff" command as documented in the stata help file for the survey set prefix command: <https://www.stata.com/manuals13/svyestat.pdf>. Also see stata help_robust's methods and formulas section, including a link to svy variance estimation. Note the svy prefix command was not used when calculating report regressions, so there are negligible variations in calculating the DEFF this way, compared to constructing ratios of the standard error with and without weights directly.

Shared values- perception of corruption in one's ULP: DEFF=1.31
Structure - permanency of ULP: DEFF=0.96
Systems - use of PMIS: DEFF=1.19
Skills - quize score: DEFF=1.25
Staffing - desirability of a career in public procurement: DEFF = 1.36
Overall procurement outcomes - perception of outcome quality: DEFF= 1.25