

## Supplementary Materials

### Appendix A. Development Effectiveness Matrix (DEM)

#### Project Logic

<b>Program Diagnosis</b>	<b>DEM Tutorial, the answer is "yes" if:</b>
<b>The main problem being addressed by the project is clearly identified</b>	The "Background and Problem Addressed" section of the POD specifies: i) clear, accurate, and adequate information about the situation. ii) the reasons why the situation constitutes a problem requiring a solution. iii) basic quantitative and qualitative data that allow for an adequate dimensioning of the problem.
<b>The intended beneficiary population is clearly identified (households, localities, firms, users, or overall population)</b>	The "Background and Problem Addressed" section of the POD clearly specify the households, localities, firms, persons, among other entities, that are expected to receive goods and services delivered by the project, and that fulfill certain characteristics.
<b>The main factors (or causes) contributing to the problem are clearly identified</b>	The "Background and Problem Addressed" section of the POD includes the relationships and interactions that occur among the factors and elements that constitute the problem.
<b>Empirical evidence of the main determinants of the problem is provided (See Guidelines for guidance on what constitutes sufficient empirical evidence)</b>	The "Background and Problem Addressed" section of the POD includes the basic quantitative and qualitative data that allow for an adequate dimensioning of the factors.
<b>Magnitudes of deficiencies are provided for main factors (in order to assess the relative importance of identified factors)</b>	The "Background and Problem Addressed" section of the POD includes, in a precise manner, a review of studies or assessments that try to identify and quantify the contribution of the main determinants of the problem. The POD should include the references to these studies.
<b>Diagnosis takes into account specific country characteristics in the area of project intervention</b>	The "Background and Problem Addressed" section of the POD includes, in a precise manner, the historical, political, social, and economic context in which the problem arose, as well as those in which its solution will be attempted.
<b>Proposed Interventions or Solutions</b>	<b>DEM Tutorial, the answer is "yes" if:</b>
<b>Proposed Intervention(s) are clearly linked to problems or needs identified in the Diagnosis</b>	There is a clear and precise specification on how the proposed intervention will contribute to solve the problems identified in the diagnosis. The proposed intervention should include all problems or needs identified in the Diagnostic. If not, a justification of why the Bank is not going to intervene should be presented.
<b>Evidence of the effectiveness of the intervention(s) is based on existing evaluations of interventions in other or similar contexts (internal validity)</b>	The "Justification" section of the POD includes empirical evidence (quantitative and qualitative updated data) of the effectiveness of similar interventions. The POD should specify the references to these studies, and as mentioned before, also the specific empirical evidence contained in each study.

<b>Information about the applicability of the intervention in the country where it is implemented is provided (external validity)</b>	The "Background and Problem Addressed" section of the POD includes, in a precise manner, a review of studies or assessments that addresses the degree to which the intervention would hold in the country in which the intervention will be implemented, and in a certain time and moment. The POD should include the references to these studies.
<b>The dimension of proposed solution is related to the objective of the project and its magnitude</b>	The scope of the interventions (mainly addressed by the Indicators in the results matrix) is clearly related to the magnitude of the problem.

## Results Matrix Quality

<b>Vertical Logic</b>
<p>Verify the vertical logic. Each level logically contributes to the next higher level.</p> <p>Inputs → Activities → Outputs → Outcomes → Impacts</p> <p>Top down: Ask how a particular level can be attained. The answer should be: by successful completion of the immediate lower level</p> <p>Bottom up: Ask why a particular level is being done. The answer should be: in order to attain the next higher level.</p>
<b>Impact of the program</b>
<p>The desired medium- or long-term impacts are stated in the POD and are clearly related to the country strategy/country program results matrix for that sector or area of intervention. In fact, the impact of the project usually is the same as the stated sector objective and indicator for a country strategy result matrix.</p> <p>A single project may generally not be the sole means for attaining the general objective; it may only contribute towards the general objective indirectly. Several other countries and/ or sector programs are needed to support the achievement of the general objective or desired impact. They are specified as an expected verifiable achievement that is expected as a medium- or long-term result of the intervention.</p>
Indicators are SMART (Specific, Measurable, Achievable, Relevant and Time-bound).
Every indicator has a baseline value or a predetermined starting point for subsequent comparison of performance.
Every indicator has a target value. A target is a predetermined level of success that is expected within a specified timeframe. In the case of performance-based loans the accomplishment of targets trigger disbursement, otherwise targets are indicative directions for change.
Every indicator has one source of data, or a clear plan for collecting it.
<b>Outcomes</b>
<p>The desired improvements (effects) as a result of the project are clearly stated.</p> <p>The outcome (s) should describe what is expected to be different as a result of the delivery of project outputs by the project; NOT what the project is going to do.</p> <p>They are stated as expected, verifiable achievements (i.e. increased reading scores for children, decrease in malnutrition, etc. are project outcomes of cash transfer programs. Potable water access 24/7 can be an outcome of a water project. Lower transportation cost is an outcome of a roads project. Reduced time or cost for legalizing a business is a public sector project outcome.)</p>
Indicators are SMART (Specific, Measurable, Achievable, Relevant and Time-bound).

Every indicator has a baseline value or a predetermined starting point for subsequent comparison of performance.
Every indicator has a target value. A target is a predetermined level of success that is expected within a specified timeframe. In the case of performance-based loans the accomplishment of targets trigger disbursement, otherwise targets are indicative directions for change.
Every indicator has one source of data, or a clear plan for collecting it.
<b>Outputs</b>
Project deliverables are clearly specified. Outputs are project “deliverables”. They summarize what the project is contractually accountable to provide. They are stated as expected, verifiable achievements. (i.e. school access increased, children de-wormed, hectares planted, new procedures operational, personnel trained, # of connections to clean water).
Indicators are SMART (Specific, Measurable, Achievable, Relevant and Time-bound).
Every indicator has a baseline value or a predetermined starting point for subsequent comparison of performance.
Every indicator has a target value. A target is a predetermined level of success that is expected within a specified time frame. In the case of performance-based loans the accomplishment of targets trigger disbursement, otherwise targets are indicative directions for change.
Every indicator has one source of data, or a clear plan for collecting it.

## Economic Analysis

<b>Cost-Benefit Analysis (CBA)</b>
The project has an ERR and/or NPV for its main components.
The economic benefits are adequately identified and quantified.
All real resource costs generated by the project during its life are included in the calculation.
Assumptions used in the analysis are reasonable and clearly spelled out.
Sensitivity analysis is performed and includes all key variables that could affect project costs, benefits and assumptions.
<b>Cost-Effectiveness (CEA)</b>
The project has a cost-effectiveness analysis for its main components.
Key outcomes are adequately identified.
All available alternatives are considered.
The economic costs of each alternative are adequately estimated.
Reasonable assumptions are used in the analysis.
Sensitivity analysis is performed and includes all key variables that could affect the costs of the alternatives and the assumptions.

## Monitoring and Evaluation

Monitoring & Evaluation
I. Monitoring
The Bank and borrower have agreed to use the results matrix and the activities defined in the PMR to monitor the operation.
Outputs indicators have annual targets.
Total project costs are grouped by each expected output.
Costs for each output have annual expected amounts.
The sum of the total planned costs for all outputs is equivalent to the total project amount (including counterpart) detailed in the Loan Proposal.
Monitoring mechanisms have been planned and budgeted.
Ensure that the source, or means for collecting data (for outcomes, outputs and activities) actually exists, either with the executing agency or/and with the IDB.

General Evaluation Arrangements
General
The project has an evaluation plan in accordance to the Bank's guidelines for DEM of SG operations.
Timelines are defined to design survey tools/collect baseline/follow up surveys.
The evaluation plan has allocated budget.

Methodology to measure incremental benefits Ex post (at completion)
Method used to evaluate results:
1. Random Assignment and/or Non-Experimental Methods (Difference-in-Differences, Propensity Score Matching, Regression Discontinuity, Instrumental Variables, Simulation Model, or other approaches that allow attribution)
2. Ex-post Cost-Benefit Analysis
3. Ex-post Cost-Effectiveness Analysis
4. Before-After or With-Without Comparison (no attribution)
Evaluation aspects required to be defined at project design
A valid comparison/control group has been selected.
The definition of the counterfactual was done at the appropriate level (groups, organizations or individuals), taking into account that it may be necessary to assign groups in order to evaluate (i) interventions with sizeable spillover effects, (ii) interventions delivered to whole groups.
Power analysis was performed to ensure that meaningful impacts will be detected.
The number of waves of data collection and the timing for data collection have been determined.
The information that needs to be collected (survey questionnaire) and other variables of interest are specified.

# Appendix B. Full Results: Satisfactory Cost Performance; Cost Performance Difference; Satisfactory Schedule Performance

	Satisfactory Cost Performance				Cost Performance Difference				Satisfactory Schedule Performance			
	Last Score		Full Sample		Last Score		Full Sample		Last Score		Full Sample	
	(Probit)		(GEE)		(Probit)		(GEE)		(Probit)		(GEE)	
Project Logic Score	0.035	***	0.03	***	-4.999	***	-2.469	**	0.033	**	0.032	**
Economic Analysis Score	0.06		0.099	***	-7.404		-9.278	**	-0.042		0.017	
Monitoring Score	0.012		0.012		9.096		5.232		0.023		-0.043	
Evaluation Score	-0.021	*	-0.003		1.745		-0.563		-0.002		0.001	
Year=2009	0.095		0.051		-9.557		-5.416		-0.021		0.091	
Year=2010	0.203	**	0.079		-28.29	**	-15.576	**	-0.014		0.104	
Year=2011	0.149		0.001		-27.57		-5.63		0.036		0.151	
Year=2012	0.287		0.112		-44.60		-26.73	*	0.155		0.327	**
Year=2013	0.294		-0.07		-56.98		-8.948		0.162		0.143	
Year=2014	0.741	**	0.442	**	-100.2	**	-70.94	***	0.515		0.678	***
Project Delay	-0.003	***	-0.003	***	0.307	***	0.308	***	-0.004	***	-0.004	***
Specific Project Yes=1	-0.003		-0.003		-0.434		-0.11		-0.039		-0.051	
% Change in Real GDP Per Capita	-0.371		-0.644		-63.35		-5.811		-0.127		-0.246	
Variance in Real GDP Per Capita Growth Rate	-0.011	*	-0.007		-1.072		-0.407		-0.002		0.003	
Land area per population (km2/person)	-37.29	***	-22.41	***	-259.5		241.116		7.906		14.016	
Concessional Funds Yes=1	1.148	**	0.713	*	96.391		43.017		0.108		-0.493	
Ratification needed Yes=1	0.174	**	0.143		-38.13	*	-26.436	**	0.064		0.164	
Project approved amount [ln(millions of USD)]	-0.048	***	-0.046	***	3.402		2.477		0.007		0.008	
Foreign exchange instability (consecutive months)	0.445	***	0.052		-18.28	*	-13.735	***	-0.025		0.007	
Number of years between approval and PMR	0.168	***	0.14	***	-15.46	**	-13.397	***	0.145	***	0.145	***
Division = Capital Markets=1	-0.176	***	-0.119	*	10.671		-1.153		-0.051		-0.001	
Division = Technology & innovation=1	-0.072		-0.022		2.766		-4.375		0.025		0.002	
Division = Education=1	-0.017		0.062		-0.194		-11.707		0.159	*	0.042	
Division = Energy=1	-0.038		-0.001		-0.601		-7.121		0.164	*	0.076	
Division = Institutional Capacity=1	-0.058		0.029		5.67		-4.975		0.071		0.028	

Division = Labor Markets=1	0.227	**	0.183	*	-1.701		-5.673		0.424	***	0.224	*
Division = Agriculture & Environment=1	-0.139	**	-0.082		24.657	*	11.49		-0.091	*	-0.073	
Division = Social Protection & Health=1	0.092		0.163	**	-1.421		-9.128		0.114		0.08	
Division = Trade & Integration=1	-0.379	***	-0.241	***	62.458	**	47.122	**	-0.28	*	-0.168	
Division = Transport=1	-0.051		0.005		10.998		-4.046		-0.008		-0.027	
Division = Water & Sanitation=1	-0.042		0.017		-4.249		-9.154		0.095	*	0.019	
Argentina=1	1.062	***	0.648	***	-2.434		-3.16		-0.116		-0.325	
Bahamas, The=1	-1.863	***	-1.192	***	22.065		33.19		0.12		0.208	
Barbados=1	-0.678	***	-0.332	**	-10.96		1.786		-0.142		-0.263	
Belize=1	0.828	**	0.496	*	-7.22		-8.145		-0.095		-0.098	
Bolivia=1	1.18	**	0.696	**	-60.41		-41.306		-0.591		-0.518	
Chile=1	-0.488	***	-0.442	***	34.771		42.724	**	-0.182		-0.283	
Colombia=1	-0.8	***	-0.496	***	37.356		36.392		0.187		0.199	
Costa Rica=1	-1.083	***	-0.753	***	1.72		26.509		0.293		0.183	
Dominican Republic=1	-1.438	***	-0.839	**	26.319		33.374		0.352		0.481	
Ecuador=1	-0.957	***	-0.636	***	-17.44		8.191		0.179		0.254	
El Salvador=1	-1.652	***	-1.017	***	23.482		36.098		0.137		0.445	
Guatemala=1	-3.409	***	-1.715	***	-83.38		-3.594		0.341		1.011	
Guyana=1	7.081	***	4.588	***	13.718		-82.767		-1.626		-2.278	
Haiti=1	-1.681	***	-1.067	***	23.784		36.236		0.152		0.246	
Honduras=1	-2.258	***	-1.454	***	-77.41		-14.861		0.362		0.915	
Jamaica=1	-1.625	***	-1.135	***	-9.858		42.915		0.198		0.292	
Mexico=1	-0.875	***	-0.487	**	-16.37		0.549		0.436		0.476	
Nicaragua=1	-1.849	***	-1.133	**	-72.86		-15.592		0.343		0.928	
Panama=1	0.051		0.057		0.608		-2.216		0.081		0.002	
Paraguay=1	-0.89	***	-0.57	**	35.329		48.504		0.256		0.313	
Suriname=1	9.483	***	5.577	**	76.822		-43.352		-2.103		-3.676	
Trinidad and Tobago=1	-1.635	***	-1.168	***	58.802		83.257		0.237		0.487	
Venezuela, RB=1					-20.18		-9.087		0.384		0.313	
Uruguay=1	0.359	***	0.158		9.996		11.582		0.008		-0.083	
Constant					88.753		49.254					

Number of observations	497	853	497	853	497	853
Pseudo R2	0.341				0.262	
Adjusted R2			0.198			
corr[Y, E(Y X)]		0.523		0.463		0.505

\* p<0.10, \*\* p<0.05, \*\*\* p<0.01

## Appendix B. Full Results: Schedule Performance Difference, % Disbursed, Synthetic Indicator

	Schedule Performance Difference				% Disbursed				Synthetic Indicator			
	Last Score (Probit)		Full Sample (GEE)		Last Score (Probit)		Full Sample (GEE)		Last Score (Probit)		Full Sample (GEE)	
Project Logic Score	-1.763	*	-2.09	**	0.005		0.002		0.051	***	0.042	***
Economic Analysis Score	1.813		-3.258		-0.021		-0.01		0.003		0.048	
Monitoring Score	-8.275		-0.81		-0.077		-0.092		-0.047		-0.147	
Evaluation Score	0.975		0.604		-0.002		-0.004		-0.005		-0.001	
Year=2009	-11.897	**	-10.129	**	-0.2	***	0.068		-0.267	***	-0.071	
Year=2010	-31.242	***	-20.257	***	-0.467	***	0.082		-0.6	***	-0.275	***
Year=2011	-41.662	***	-24.754	***	-0.697	***	0.165	***	-0.845	***	-0.348	**
Year=2012	-58.473	***	-39.903	***	-1.034	***	0.148	**	-1.059	***	-0.265	
Year=2013	-70.411	***	-20.906		-1.263	***	0.192	**	-1.217	***	-0.323	
Year=2014	-120.53	***	-82.468	***	-1.442	***	0.327	***	-1.235	***	-0.147	
Project Delay	0.382	***	0.359	***	-0.005	***	-0.005	***	-0.007	***	-0.006	***
Specific Project Yes=1	-2.483		-1.519		-0.071	***	-0.08	***	-0.093	*	-0.109	**
% Change in Real GDP Per Capita	7.633		5.663		0.588	*	0.561	*	-0.263		-0.353	
Variance in Real GDP Per Capita Growth Rate	-0.134		-0.387		-0.003		-0.001		0.003		0.005	
Land area per population (km2/person)	-3426.4	*	-2704	**	15.56		10.717		49.001	*	42.715	**
Concessional Funds Yes=1	83.784		92.397	**	-0.237		-0.237		-0.99		-0.898	
Ratification needed Yes=1	-14.167		-19.962	**	-0.046		-0.035		-0.163		-0.201	
Project approved amount [ln(millions of USD)]	-0.253		-0.353		-0.007		-0.011		-0.015		-0.03	
Foreign exchange instability (consecutive months)	-4.178		-5.434		0.008		0.009		0.149		0.111	
Number of years between approval and PMR	-22.48	***	-14.919	***	-0.143	***	0.169	***	-0.222	***	-0.051	*
Division = Capital Markets=1	9.794		5.666		0.063		0.164	*	-0.228		-0.083	
Division = Technology & innovation=1	-2.547		3.038		0.027		0.014		-0.011		-0.011	
Division = Education=1	-4.712		-5.717		0.123	**	0.135	***	0.199	*	0.218	**
Division = Energy=1	-4.257		0.503		0.102	*	0.103	**	-0.079		-0.044	



Division = Institutional Capacity=1	-4.487		-1.713		0.061		0.056		-0.05		-0.058	
Division = Labor Markets=1	-21.992	**	-17.899	**	-0.141	**	-0.1		0.027		0.124	
Division = Agriculture & Environment=1	10.321	*	5.51		-0.047		-0.024		-0.193		-0.119	
Division = Social Protection & Health=1	-7.512		-8.47	*	0.07		0.107	**	-0.025		0.037	
Division = Trade & Integration=1	19.757	*	12.589		-0.056		-0.068		-0.433	**	-0.327	**
Division = Transport=1	0.624		-0.238		0.08	**	0.089	**	0.014		0.091	
Division = Water & Sanitation=1	-8.178		-2.347		-0.001		-0.003		-0.021		-0.019	
Argentina=1	72.522		58.686	*	-0.333		-0.237		-1.16	*	-1.037	**
Bahamas, The=1	-117.06		-91.53	*	0.403		0.218		1.589		1.485	*
Barbados=1	-51.394	*	-25.564		0.261		0.162		0.363		0.312	
Belize=1	134.74		84.368	*	-0.395		-0.32		-1.345		-1.216	**
Bolivia=1	148.41		101.385		-0.738		-0.455		-1.893		-1.546	*
Chile=1	25.861		31.427	*	0.052		0.041		-0.221		-0.298	
Colombia=1	-63.325	*	-44.152	*	0.274		0.207		0.502		0.359	
Costa Rica=1	-109.35	*	-66.095		0.425		0.234		2.073	**	1.868	***
Dominican Republic=1	-115.78		-85.197	*	0.662		0.458		2.05	**	1.864	**
Ecuador=1	-91.32	*	-63.179	*	0.484		0.387		1.146	*	0.912	*
El Salvador=1	-119.5		-88.161	*	0.899	*	0.666	*	2.135	**	1.97	**
Guatemala=1	-219.23	*	-195.79	**	0.856		0.641		2.833	*	2.521	**
Guyana=1	665.603	*	491.281	*	-3.513		-2.461		-9.707	*	-8.223	**
Haiti=1	-123.66		-84.489		0.679		0.444		1.821	*	1.519	**
Honduras=1	-171.31	*	-149.56	**	0.965		0.808		2.763	**	2.43	**
Jamaica=1	-119.48		-88.907	*	0.555		0.368		1.458		1.18	
Mexico=1	-98.367	*	-70.234	**	0.661	**	0.57	**	1.214	*	1.07	**
Nicaragua=1	-153.35	*	-136.87	**	0.692		0.553		2.295	*	2.124	**
Panama=1	-3.594		1.392		-0.012		-0.04		0.012		-0.005	
Paraguay=1	-70.425		-43.449		0.277		0.14		1.307	**	1.175	**
Suriname=1	901.03	*	718.462	**	-4.319		-2.874		-13.18	**	-11.42	**
Trinidad and Tobago=1	-106.96		-75.908		0.167		0.261		1.548		1.538	*
Venezuela, RB=1	-78.714	***	-57.116	***	-0.137		0.085		0.296		0.335	
Uruguay=1	26.459		30.381	**	-0.458	***	-0.146		-0.645	**	-0.425	*

Constant	312.421 ***	232.759 ***	1.424 **	-0.358	2.601 **	1.942 **
Number of observations	497	853	460	763	460	755
Pseudo R2						
Adjusted R2	0.293		0.588		0.171	
corr[Y, E(Y X)]		0.558		0.764		0.472

\* p<0.10, \*\* p<0.05, \*\*\* p<0.01