

Operational Excellence: Understanding Project Financial Cancellations and its Impact on the Delivery of Results

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Planning and Development
Effectiveness Department

TECHNICAL NOTE N°
IDB-TN-02417

January 2022

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Cataloging-in-Publication data provided by the
Inter-American Development Bank
Felipe Herrera Library

Operational excellence: understanding project financial cancellations and its impact on the delivery of results / Leonardo Corral, Giulia Lotti, José Martínez-Carrasco, Camilo Pecha.

p. cm. — (IDB Technical Note ; 2417)

Includes bibliographical references.

1. Economic development projects-Management. 2. Economic development projects-Evaluation. 3. Project management. I. Corral, Leonardo. II. Lotti, Giulia. III. Martínez-Carrasco, José. IV. Pecha, Camilo. V. Inter-American Development Bank. Office of Strategic Planning and Development Effectiveness. VI. Series.

IDB-TN-2417

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Operational Excellence: Understanding Project Financial Cancellations and its Impact on the Delivery of Results[§]

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January 2022

Abstract

The objectives of this analysis are twofold: (i) First, it aims to enhance our understanding of the role design and execution characteristics of IDB financed projects play in project success and effectiveness in delivering results. (ii) Second, it empirically explores which project characteristics are more likely to explain partial financial cancellations, which plays a key role on the delivery of results. Based on the knowledge gained, we identify specific measures that can be taken to enhance the likelihood of project success

JEL classifications: O1; O12; O19; O22

Keywords: Development Effectiveness; Quality-at-entry; Project Performance

[§] We are grateful to Luis Marcano for supporting data access. We are grateful to Carola Alvarez and Francesca Castellani for helpful comments and guidance.

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Introduction

The goal of development assistance is to deliver results. As such, during the last decades, the concept of development effectiveness has progressively gained strategic relevance within development institutions (United Nations Development Program [UNDP], 2001; World Bank, 2005; Crespo et al., 2013; International Fund for Agricultural Development [IFAD], 2014b; Asian Development Bank, 2015; Carneiro and Garbero, 2017; Corral and McCarthy, 2018).

This movement has materialized into an important agenda of the international community, of which a major milestone is the 2005 Paris Declaration on Aid Effectiveness, endorsed by the Inter-American Development Bank (IDB). At the same time, the harmonization efforts carried out by the Multilateral Development Banks (MDB) have been noteworthy. Through the Evaluation Cooperation Group (ECG), MDBs have formulated and agreed upon common standards and good practices for evaluation. Finally, the MDBs have also set in motion several initiatives to support management for results, such as the Common Performance Assessment System (COMPAS), which establishes a common framework for MDBs to report results.

At the IDB, the Development Effectiveness Framework (DEF) was adopted in 2008 to align with these efforts and enhance the likelihood that the projects it supports deliver measurable results. The instruments of the DEF (Development Effectiveness Matrix (DEM), Project Monitoring Report (PMR) and Project Completion Report (PCR)) were designed with the hope that each would contribute to assure that projects reach their development objectives. In a sense, one can imagine a production function for delivering projects that attain their results, where the key factors are the quality at entry (captured by the DEM); the performance during execution (captured by the PMR indicators); and other context specific factors that might affect project success. The end result is captured by the PCR, where final reporting and assessment of a project's success is prepared by IDB's management (MGT) and externally validated by the Office of Evaluation and Oversight (OVE), which reports directly to the Board of Directors of the IDB.

The objectives of this analysis are twofold: (i) First, it aims to enhance our understanding of the role design and execution characteristics of IDB financed projects play in project success and effectiveness in delivering results. (ii) Second, it empirically explores which project characteristics are more likely to explain partial financial cancellations, which plays a key role on the delivery of results. Based on the knowledge gained, we identify specific measures that can

be taken as part of the Operational Excellence initiative to enhance the likelihood of project success.

This work builds on Álvarez et al. 2021a and Álvarez et al. 2021b in the following ways. First, it expands the data set on PCRs by incorporating results from projects that achieved operational closure (CO) in 2019. This should lead to more robust findings. Second, it incorporates additional design and execution characteristics of projects, allowing for a more complete picture of potential factors. As in Álvarez et al. 2021a,b the overwhelming impact partial loan cancellations have on project success and effectiveness is confirmed. Given this finding, a third expansion from previous work is to focus on what leads to partial cancellations in the first place. Here we use project design and execution characteristics to shed light on elements that might be driving cancellations in the first place. We assess these elements for projects that have closed in the past three PCR cycles and to the portfolio of projects in execution.

Finally, as in Álvarez et al. 2021b, we extrapolate our findings on the impact of cancellations on project success and effectiveness to the portfolio currently in execution. The aim here is to identify projects that due to the characteristics they already exhibit, have a lower likelihood of closing as successful/effective projects.

The key findings of this report are the following. Financial cancellations (from the originally approved amount) are highly associated with a lower likelihood of successful and/or effective projects. Extrapolating this finding to the current portfolio, projects that cancel more than 20% of the originally approved loan amount have less than a 50% chance of ending as successful projects and less than a 20% of being found effective when their PCRs are due. Due to their large impact, even small cancellations (slightly greater than 10%) are likely to affect the achievement of the CRF target for 2020-2030 of 70% of operations with satisfactory results at completion. In our sample of 304¹ active projects in the portfolio, over 25% have already experienced some cancellations.

Given the outsize role cancellations play, we analyze what is associated with them in the first place. We find that having a project in alert/problem in the first three years after it reached

¹ This sample has the following characteristics: First, we identified the projects in the current portfolio for which we have complete information. Second, we adopted the selection criteria for this sample are the following: (i) The year of eligibility is 2013 or later. In this way we guarantee they all have homogeneous PMR information. (ii) All of them were approved with a DEM. (iii) Year of eligibility is 2018 or before. This criterion was added to properly define the variable "Alert/problem share in first three years". (iv) Closed year \geq 2020. Given this last criterion, these projects do not have a validated PCR yet (although they can be under the process of preparing or validating its PCR). We have 315 projects in our portfolio with these characteristics. (v) The financial cancellation share is lower or equal to 70%. Whenever a project cancels more than 70% it does not need to write a PCR. We have 304 projects in this sample.

eligibility is associated with a greater likelihood of partial financial cancelation. For instance, if a project is in alert/problem 2 of the first three years in execution, then the likelihood of canceling a share higher than 20% of the originally approved loan amount increases by 13%. Other project characteristics associated with cancelations include a larger loan amount, projects with multiple bookings, time delays between the effective and eligibility date.² Projects rated as B for environmental risks and projects that require legislative ratification experience on average a lower likelihood of cancelations.

As part of this report, we have identified the projects in the portfolio that have canceled a higher share than 20% of the original loan amount. The aim here is to spotlight these projects so that further analysis can be undertaken to assess the impairment caused by these cancelations during, for instance, portfolio reviews, mid-term evaluations, or purpose specific reviews. The key assessment here should be of the continued validity of the vertical logic of the project. That is, has the cancelation affected essential products without which it would not be possible to achieve the desired results?

This report is organized as follows. In the next section we present a brief conceptual framework focusing on some of the hypotheses to be tested. We also present the data and variables used throughout the report. Next, we present the main data analysis conducted, including regressions on the role that design and execution characteristics play in determining a project's effectiveness and overall success, as captured by PCR ratings; and their role in cancelations. We then present the extrapolation of the findings to the projects currently in execution. Lastly, we present some conclusions and recommendations.

² The effective date is the latest one between the signature of the contract or the legislative ratification of this signature. Not all IDB clients need to go through legislative ratification.

Conceptual Framework, Data and Variables

In this section we begin by presenting a framework to illustrate what might be at play in determining successful and effective projects. We start by noting that, all else equal, better design projects are likelier to achieve their development objectives. Likewise, for better executed projects. In a sense one can imagine a production function for delivering projects that attain their results, where key design factors, performance during execution; and other context specific factors affect project success. Table 1 presents the explanatory variables utilized in this report, organized by observable project design and execution characteristics.

Table 1: Variables included in the analysis:³

<i>Variables determined at design</i>	Overall DEM Score	Standardized overall DEM score. A unit is an increased in 1 standard deviation
	Results Matrix Quality DEM	Standardized Results Matrix Quality DEM score.
	Economic Analysis DEM	Standardized Economic Analysis DEM score.
	Evaluation DEM	Standardized Evaluation DEM score. The last 4 variables are the main components of the overall DEM score.
	N. components	Number of components in an investment project.
	1[Significant env. risk- A]	Environmental code is A - Likely to cause significant negative impacts.
	1[Local/short-term env. risk- B]	Environmental code is B - Likely to cause mostly local and short-term negative impacts.
	N. components	Number of components in an investment project.
	Loan Amount (in \$ millions)	Loan amount in US\$ millions
	1[Multiple booking project]	Indicator variable for multiple booking projects
	1[Cofinanced w/ other sources]	Indicator variable for projects that have been co-financed with other sources (i.e. other multilateral banks).
	1[w/ legislative ratification]	Indicator variable for projects in countries that need legislative ratification for loans
<i>Variables determined after design and during execution</i>	Approval-Effective date month overdue	Country specific's months overdue in the period between approval and effective date
	Effective date-eligibility month overdue	Country specific's months overdue in the period between the effective and eligibility date
	Overall number of months overrun	Overall number of month overrun. Difference between the actual last disbursement and the expected one at design.
	Alert/problem share in first 3 years	Share of years in which a project is under alert or problem in the first three PMR after it has achieved eligibility (stage 2)
	Years since eligibility	Number of years since the moment a project reached eligibility
	1[Reformulated project]	Indicator variable for projects that have been reformulated
	Budget Modification Index	Index that measures how relevant has been the changes in budget at the component level from design to current stage. Continuous variables that takes value from 0 to 100.
	Financial Cancellation Share	Share of original approved loan amount cancelled during the life of the project.
	1[Financial Cancellation>0]	Indicator variable for projects that cancels part of the original approved amount.
	1[Financial Cancellation>20]	Indicator variable for projects that cancels more than 20% of the original approved amount.

Under this framework we can posit, for instance, that successful projects will likely have higher DEM scores. Similarly, we can posit that certain characteristics, such as the number of components, multiple-booking, or significant environmental risks might be elements that denote

³ Annex 1 includes a detailed explanation of how these variables were calculated.

undue project complexity that could hinder the achievement of results. On the execution side, we can posit that projects that have delayed execution and are classified in alert or problem will likely not deliver products in a timely and cost effective way, thereby affecting the delivery of associated results. We can also anticipate that projects that cancel a share of their loan amount (or switch resources among components) might hamper their vertical logic, affecting the delivery of results.

Given the outside impact cancelations and budget reallocations can have, we are also interested in analyzing what project design and execution characteristics might lead to cancelations or budget alterations in the first place. We suspect that some of the same characteristics that ultimately affect project results also influence cancelations. Thus, a priori we would expect that well designed projects that exhibit some degree of execution readiness would be less susceptible to cancelations, all else equal. On the other hand, projects that are unduly delayed at start-up, or have problems in execution might be likelier to suffer cancelations.

The data we employ in this report comes from projects that reached operational closure (CO) and for which we have final OVE validated PCR scores, and from projects currently in execution. The sample for projects with PCRs includes projects with CO in 2017, 2018 and 2019 with the following characteristics: (i) all projects have PCRs prepared and validated with 2018 PCR guidelines; and (ii) data is limited to investment projects (INV) comprising specific investment projects (ESP), global credit programs (GCR) and multiple works programs (GOM). The sample for closed projects has been restricted to get a sample as homogeneous as possible with complete information. In addition to design characteristics (including DEM ratings), all projects have execution information from their PMRs. In total, the projects with PCRs number 115 projects. We will refer to this as the PCR sample.

The sample for projects currently in execution was determined on the following criteria: (i) the project reached eligibility between 2013 (this lower cutoff guarantees the availability of homogeneous PMR information) and 2018 (this upper cutoff guarantees the availability of the variable "Alert/problem share in first three years"); (ii) the project was approved with a DEM evaluation; (iii) projects do not have a validated PCR yet (although they can be under the process of preparing or validating its PCR). We have 315 projects in our portfolio with these characteristics. Finally, (iv) given that if a project cancels more than 70% of its loan resources, it is not required to prepare a PCR, we also drop projects with a financial cancelation share above 70%. This leaves us with 304 projects in this sample. We will refer to this as the portfolio sample.

Characteristics of Effectiveness and Successful Projects

This section assesses the role of project design and execution characteristics in determining a project's effectiveness and overall success as captured by PCR ratings.

We apply Probit regressions to the PCR sample to assess the role observable design and execution characteristics played in the likelihood of projects closing as successful [Overall PCR score \geq Partly Successful] or effective [Effectiveness PCR score \geq Satisfactory]. Table A1 presents the PCR sample's descriptive statistics.

Table 2 shows the marginal effects of these estimations under different specifications. The estimated marginal effects appear to be consistently estimated across specifications. We also estimate these with Linear Probability Models, as a robustness check, finding that the main results largely hold.

The only project design feature that is statistically significant is that related to the environmental classification of the project. Projects classified as B are likely to be less successful as compared to C projects. We suspect the main mechanism for this result comes from the Sustainability criteria of the PCR rating. That is, B projects are likely to have higher unmitigated risks at closure. Although this result might appear counterintuitive, it conforms with the observation that A projects are extensively supervised, and C projects rarely have significant environmental or social risks. B projects seem to fall in no man's land, where supervision efforts are not commensurate with the potential risks.

Unlike Alvarez et al 2021a, we do not find a significant impact for the quality of the result matrix variable. This is likely due to the inclusion of projects with CO in 2019 in our sample. As the years have passed there has been a convergence on DEM scores as projects teams have become familiar with the evaluability requirements. Therefore, there might not be enough variability in the dimensions of the DEM across projects to be picked up. In a sense, this new result suggests that the DEM has moved the needle on designing evaluable projects to a level where marginal improvements are small. This result might change in a few years, as projects formulated under new DEM criteria that include the specification of valid result indicators for each specific objective start to close.

Table 2: Determinants of having a successful / effective PCR – Reviewed Results – Probit Marginal Effects

	1[Successful PCR]	1[Successful PCR]	1[Successful PCR]	1[Effective PCR]	1[Effective PCR]	1[Effective PCR]
	(1)	(2)	(3)	(4)	(5)	(6)
Results Matrix Quality DEM (Std.)	0.043 (0.05)	0.052 (0.05)	0.042 (0.05)	0.004 (0.04)	-0.001 (0.04)	-0.004 (0.04)
Economic Analysis DEM (Std.)	0.013 (0.05)	0.016 (0.05)	0.011 (0.05)	0.008 (0.05)	0.008 (0.05)	0.013 (0.05)
Evaluation DEM (Std.)	0.019 (0.06)	-0.001 (0.06)	0.007 (0.06)	0.073 (0.05)	0.090* (0.05)	0.089* (0.05)
N. components	0.012 (0.04)	0.026 (0.04)	0.012 (0.04)	0.013 (0.04)	0.012 (0.04)	0.018 (0.04)
1[Significant env. risk- A]	-0.196 (0.31)	-0.1 (0.27)	-0.08 (0.27)	0.017 (0.29)	0.051 (0.27)	-0.067 (0.28)
1[Local/short-term env. risk- B]	-0.246* (0.14)	-0.245** (0.12)	-0.233* (0.13)	-0.156 (0.12)	-0.124 (0.12)	-0.164 (0.12)
Loan Amount (in \$ millions)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Square - Loan Amount (in \$ millions)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
1[Multiple booking project]	-0.022 (0.24)	-0.01 (0.21)	-0.03 (0.22)	-0.067 (0.20)	-0.11 (0.20)	-0.136 (0.20)
1[w/ legislative ratification]	0.091 (0.11)	-0.033 (0.11)	0.036 (0.13)	0.185** (0.09)	0.151 (0.11)	0.129 (0.13)
Approval-Effective date month overdue		-0.002 (0.01)	-0.002 (0.01)		0.002 (0.01)	0.00 (0.01)
Effective date-eligibility month overdue		-0.012 (0.01)	-0.011 (0.01)		0.004 (0.01)	0.005 (0.01)
Overall number of months overrun		0.00 (0.00)	0.00 (0.00)		0.00 (0.00)	0.00 (0.00)
Alert/problem share in first 3 years		0.00 (0.00)	0.00 (0.00)		0.002 (0.00)	0.002 (0.00)
Budget Modification Index		0.003 (0.01)	0.001 (0.01)		-0.008 (0.01)	-0.007 (0.01)
Financial Cancellation Share		-0.011*** (0.00)	-0.011*** (0.00)		-0.010*** (0.00)	-0.010*** (0.00)
Department (Sector) Fixed Effects	YES	YES	YES	YES	YES	YES
Region Fixed Effects	NO	NO	YES	NO	NO	YES
N	115	115	115	115	115	115

As with Alvarez 2021a, the most significant variable is the financial cancelation share. It negatively affects the success and effectiveness of projects. There is almost a one-to-one correspondence with the share canceled and the drop in the likelihood of success and effectiveness of projects. If a project undergoes a cancelation of 20% of its loan amount, its likelihood of ending as a successful effective project drops by a similar 20% probability, all else equal.

Potential Impact on Project Success of current level of cancelations in Portfolio

To assess the implications of the analysis presented above, based on PCR outcomes, for the current portfolio in execution, we first need to define the sample of projects in execution for which the analysis is relevant and can justifiably be applied. We also need to bear in mind that the key assumption for the validity of the extrapolation we present here is that the underlying structure (the data generating process) in place that yielded the results above is likely to hold for projects in execution. This means that similar PCR Guidelines will be applied to current projects in the portfolio when they close and that projects in the PCR sample are broadly similar to projects in the Portfolio Sample. Current PCR Guidelines are in line with best practice recommendations by the ECG and are unlikely to change. Table A2 presents tests of means for various key variables between our PCR sample (used in the estimation above) and our portfolio sample to be used in the simulation here. The tests show that with few exceptions, having largely to do with the execution cycle of the two samples, it seems reasonable to assume that the data generating process is sufficiently similar to make our results defensible.

Table 3 presents the predicted probability of having a successful/effective PCR for projects in the current portfolio (Portfolio Sample), grouped in brackets by the current share of financial cancelation. The methodology employed to conduct these simulations follows Alvarez et al. 2021b. It performs an out of sample prediction of the regressions presented in columns 3 and 6 (Table 2) over the set of projects in the current portfolio. Results of these simulations show that projects that canceled more than 20% of the original approved loan amount have less than 50% and 20% expected probability of being rated as successful and effective, respectively, under current PCR Guidelines. Table A3 lists the 31 projects that have canceled 20% or more of their original approved loan amount. Given the analysis presented, these projects are at high risk of not delivering their results and of being rated poorly at closure. It is important to note that cancelation share is not only driven by number of years in execution. These findings motivate

the next section of the document.⁴ In the Conclusions and Recommendations section we will present some proposals on how Management can use this information to assess individual project's specific circumstances more closely.

Table 3: Predicted probability of a successful/effective PCR by current level of financial cancelation share bracket among the projects in the portfolio

Bracket	Predicted 1[Successful PCR]	Predicted 1[Effective PCR]	Average years since eligibility	1[Average years since eligibility>=5]	N
0	0.81	0.48	4.9	0.75	225
[0,10[	0.72	0.46	6.6	0.97	37
[10,20[	0.55	0.27	6.6	1	11
[20,30[	0.52	0.12	7	1	9
[30+]	0.29	0.09	4.8	0.77	22
All	0.74	0.43	5.23	0.79	304

But what is Driving Cancelations?

As shown in the previous section, cancelations can be deleterious to project success and effectiveness. The main channel through which cancelations affect project success is by breaking elements of the vertical logic. That is, outputs necessary to achieve an outcome are not realized. In the last PCR validation cycle (for projects with CO in 2019) over 15% of outcome indicators were not measured. A common reason stated for not measuring was that the necessary outputs had been discontinued.

In this section we explore what project design and execution characteristics are associated with cancelations in the first place. Ideally, gaining a greater understanding of what drives cancelations in the first place can lead to the adoption of measures or good practices in project design and execution that minimize this risk. Table 4 presents probit marginal effects associated with the probability that a project has suffered cancelations (columns 1 to 3) and for the probability that a project has suffered more than 20% canceled of its original loan amount (columns 4 to 6). Different model specifications are explored, but results are largely consistent across models. For brevity, we will focus on the full model of column 6. Unsurprisingly, the larger the loan amount, the more likely a partial cancelation will take place. Projects with an environmental and social classification of B are less likely to cancel funds. Projects with multiple booking are more likely to cancel more than 20% of their funds. This result might be associated

⁴ Remember that our Portfolio Sample is comprised of operations that have at least 3 years post Eligibility.

with the increased complexity of executing and supervising a loan with multiple divisions involved in the design stage, but where execution supervision might largely fall on the lead division with sector specific knowledge and, frankly, limited interest in activities that fall outside of its sectorial purview. This result is also in line with Avellán et al. 2018, who find that projects designed by multiple divisions are more likely to have problems in their execution. The longer the delay between the effective date of the project and the moment it can start its financial execution (eligibility),⁵ the likelier it will cancel resources. Those delays might lead to alteration in the nature of the project and its vertical logic. On the other hand, projects that have more time to execute, through the granting of extensions, appear less likely to cancel. Reformulated projects are more likely to cancel resources. Finally, projects placed in alert or problem in the PMR are more likely to cancel resources. This result suggests that projects might cancel resources associated with difficult to execute outputs in order to get back to a satisfactory rating. This however might hamper the achievement of associated outcomes, limiting the chances of the project being rated successful at closure. For instance, if a project is in alert/problem 2 of the first three years (Alert/problem share in first three years==67), then the likelihood of canceling more than 20% of the originally approved amount increases by 13% ($0.13=0.002*67$).

⁵ The effective date for a project is the latest one between the signature of the loan contract and its legislative ratification. Note that only a subset of countries working with the IDB needs a legislative ratification for their loans.

Table 4: Financial Cancellation Share determinants in new portfolio Sample – Probit Marginal Effects

	1[Financial Cancellation>0]	1[Financial Cancellation>0]	1[Financial Cancellation>0]	1[Financial Cancellation>20]	1[Financial Cancellation>20]	1[Financial Cancellation>20]
	(1)	(2)	(3)	(4)	(5)	(6)
Results Matrix Quality DEM (Std.)	-0.009 (0.02)	0.001 (0.03)	0.002 (0.02)	-0.011 (0.02)	0.002 (0.02)	0.003 (0.02)
Economic Analysis DEM (Std.)	0.000 (0.02)	0.003 (0.02)	0.011 (0.02)	-0.001 (0.02)	0.005 (0.02)	0.006 (0.01)
Evaluation DEM (Std.)	0.016 (0.02)	0.008 (0.02)	0.008 (0.02)	0.031 (0.02)	0.026 (0.02)	0.023 (0.02)
N. components	-0.044* (0.02)	-0.041* (0.02)	-0.034 (0.02)	-0.023 (0.02)	-0.022 (0.01)	-0.021 (0.01)
1[Significant env. risk- A]	-0.124 (0.13)	-0.113 (0.13)	-0.116 (0.12)	0.05 (0.08)	0.036 (0.07)	0.027 (0.07)
1[Local/short-term env. risk- B]	-0.210*** (0.06)	-0.177*** (0.05)	-0.174*** (0.05)	-0.103** (0.05)	-0.088** (0.04)	-0.086** (0.04)
Loan Amount (in \$ millions)	0.001*** (0.00)	0.001*** (0.00)	0.001*** (0.00)	0.001*** (0.00)	0.001*** (0.00)	0.001*** (0.00)
Square - Loan Amount (in \$ millions)	-0.000** (0.00)	-0.000* (0.00)	-0.000* (0.00)	-0.000** (0.00)	-0.000** (0.00)	-0.000* (0.00)
1[Multiple booking project]	0.068 (0.05)	0.071 (0.05)	0.062 (0.05)	0.067 (0.04)	0.070* (0.04)	0.068* (0.04)
1[Cofinanced w/ other sources]	-0.056 (0.15)	-0.011 (0.14)	-0.056 (0.16)	-0.029 (0.09)	-0.006 (0.08)	0.008 (0.09)
1[w/ legislative ratification]	-0.072 (0.05)	-0.038 (0.05)	-0.066 (0.06)	-0.096** (0.04)	-0.044 (0.04)	-0.033 (0.05)
Years since eligibility	0.081*** (0.02)	0.139*** (0.02)	0.131*** (0.02)	0.020* (0.01)	0.052*** (0.02)	0.048*** (0.02)
Approval-Effective date month overdue		0.003 (0.00)	0.004 (0.00)		0.004* (0.00)	0.003* (0.00)
Effective date-eligibility month overdue		0.013** (0.01)	0.012* (0.01)		0.011** (0.00)	0.010** (0.00)
Overall number of months overrun		-0.008*** (0.00)	-0.008*** (0.00)		-0.004** (0.00)	-0.004** (0.00)
Alert/problem share in first 3 years		0.002** (0.00)	0.002*** (0.00)		0.002*** (0.00)	0.002*** (0.00)
1[Reformulated project]		0.154** (0.07)	0.170*** (0.07)		0.069 (0.04)	0.078* (0.05)
Department (Sector) Fixed Effects	YES	YES	YES	YES	YES	YES
Region Fixed Effects	NO	NO	YES	NO	NO	YES
N	307	307	307	307	307	307
Mean	0.28	0.28	0.28	0.12	0.12	0.12

Note: All regressions control by sector department fixed effect, a constant and a dummy equal to 1 if approval year is equal or greater to 2012. Standard errors are robust.

Conclusions and Recommendations

Results from the last PCR validation cycle (for projects that closed in 2019) reported that 52% of 71 assessed projects were successful and that 31% were effective in delivering their development objectives. Unfortunately, these poor results are not outliers. The previous validation cycle for projects that closed in 2018 reported almost exact outcomes. This stresses the fact that business as usual will not suffice to meet the current CRF goal of 70% of projects with satisfactory development results at completion.

This report aims to enhance our understanding of the role design and execution characteristics of IDB financed projects play in project success and effectiveness in delivering results. Finding the large role financial cancelations play, it then aims to explore which project characteristics are likely to explain partial financial cancellations to begin with. The ultimate goal is to provide Management with actionable measures, supported by robust data analysis, to break out of the low success and effectiveness rut.

To that end, in this report we have identified 31 projects in the portfolio analyzed that based on the characteristics they exhibit, and in particular the fact that they have already canceled more than 20% of the original approved amount, are in high risk of not achieving their development goals.

Microdata from the previous PCR cycle found that projects that suffered cancelations of over 20% (8 out of 71 projects) experienced a higher level of result indicators not being measured and not attributable, as well as a lower level of achievement. Projects with no cancelations had 55% of indicators achieving at least 80% of their target, as opposed to 47% for projects that suffered cancelations.

Taking this information together, points to the need to identify projects that are at risk (using the type of analysis presented in this report) and then assess them individually, for example during portfolio reviews and mid-term evaluations. In these instances, the continued soundness of the vertical logic of these flagged projects as well as the capability to monitor and report on all result indicators should be assessed. Additionally, an action plan should be required to re-steer these projects on the track to achieve results and closely follow its implementation. For projects that are deemed unsalvageable to the damage done to their vertical logic a reformulation should be considered (of objectives and their related outcomes to be approved by the Board of Directors) so as to ensure that their PCR results will be measured against these new more realistic

outcomes. The efforts currently underway to reduce the transaction costs and to demystify the reformulation of projects should help righten the ship for these projects, however, it should not be thought of as a rapid cure for all that ails.

The fact that 15% of result indicators were not measured in the last validation cycle points to a critical failure of monitoring and evaluation systems. To enhance the tracking of outcomes and specific objectives and reporting Management should consider the implementation of systems that allow for the following. For result indicators where data is readily available (for example, from periodically published administrative data) and it is deemed cost effective, tracking and reporting on a yearly basis should be considered. For result indicators where regular updating is not cost effective (for example when purpose specific surveys are required) reporting could focus on the continued soundness of the vertical logic (i.e. critical outputs have not been discontinued) and the capacity of the monitoring and evaluation system to be able to track, report and attribute outcome indicators are in place.

Likewise, during Start-up review, indicators that lack a proper baseline would be flagged. When feasible, additional indicator that can be added at this time with a proper baseline and a well justified target, and that can be used to demonstrate achievement of the related Specific Objective, should be identified.

In terms of what leads to financial cancelation to begin with, our analysis highlights the large role being classified in Alert or Problem in the PMR plays. Our findings suggest that this might lead to canceling resources associated with difficult to execute outputs in order to get back to a satisfactory rating. This however might hamper the achievement of associated outcomes, limiting the chances of the project being rated successful at closure. We recommend assuring that the exit plan from alert/problem does not come at the cost of the ultimate goal: a successful and effective project. In their review, division chiefs and chiefs of operations should verify that this is not the case.

More broadly, Management needs to consider what the implications for project success are of the relentless pressure put on project teams to prepare and execute projects that tick as many boxes as possible, from multi-booking to co-financing to being align with as many regional and Bank priorities as possible. Although these projects can present a good face when being presented to and approved by the Board, their execution, monitoring and evaluation can be highly complex. It is not at all clear if current systems in place are adequate for the complexity these project present.

Finally, this analysis has been hampered by the number of PCRs available for inclusion. It is recommended that as more PCRs are concluded and validated, this type of analysis be replicated to obtain more robust statistical estimates and assess the role of a greater number of factors and variables in project success and effectiveness. In particular, extrapolating the findings of the PCR analysis to the portfolio under execution, will benefit significantly from additional statistical robustness. Other extensions include assessing the validity of other execution indicators as early warnings of projects in the portfolio at risk of failing to deliver results.

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Annex 1: Detailed explanation of the variables used in the main analysis

Type	Variable Name	Definition	Comments / Formula
Variables determined at design	Overall DEM Score	Overall DEM score. A unit is an increased in 1 standard deviation	All regressions include the standardized version of variable
	Results Matrix Quality DEM	Results Matrix Quality DEM score.	All regressions include the standardized version of variable
	Economic Analysis DEM	Economic Analysis DEM score.	All regressions include the standardized version of variable
	Evaluation DEM	Evaluation DEM score. The last 4 variables are the main components of the overall DEM score.	All regressions include the standardized version of variable
	N. components	Number of components in an investment project.	
	1[Significant env. risk- A]	Environmental code is A - Likely to cause significant negative impacts.	
	1[Local/short-term env. risk- B]	Environmental code is B - Likely to cause mostly local and short-term negative impacts.	
	N. components	Number of components in an investment project.	
	Loan Amount (in \$ millions)	Loan amount in US\$ millions	
	1[Multiple booking project]	Indicator variable for multiple booking projects	
	1[Cofinanced w/ other sources]	Indicator variable for projects that have been co-financed with other sources (i.e. other multilateral banks).	
	1[w/ legislative ratification]	Indicator variable for projects in countries that need legislative ratification for loans	
	Variables determined after design and during execution	Approval-Effective date month overdue	Country specific's months overdue in the period between approval and effective date
Effective date-eligibility month overdue		Months overdue in the period between the effective and eligibility date	Equal to [Number of months effective-eligibility date] - 3 months. 90 days is the expected number of days between the effective and eligibility date for all projects at the bank
Overall number of months overrun		Overall number of month overrun. Difference between the actual last disbursement and the expected one at design.	Equal to [Number of months between the current last disbursement expiration date and the original last disbursement expiration date]. The original date is generated when the project reached its effective date. It is typically 4 or 5 years after the effective date which depends on the expected life of the project. The current date move with every extension asked for the project team.
Alert/problem share in first 3 years		Share of years in which a project is under alert or problem in the first three PMR after it has achieved eligibility (stage 2)	The variable can take only four values: 0 (0 out of 3 years); 33,3 (1 out of 3 years); 66,67 (2 out of three years); 100 (3 out of three years)
Years since eligibility		Number of years since the moment a project reached eligibility	
1[Reformulated project]		Indicator variable for projects that have been reformulated	
Budget Modification Index		Index that measures how relevant has been the changes in budget at the component level from design to current stage. Continuous variables that takes value from 0 to 100.	First, we estimate the budget deviations for each project component: [Current Expected Budget (PA) - Original Expected Budget (P)]. Second, we sum all these deviations. Finally, we divide those over the Original Budget for the Project. This measure is a key component of the "Expenditure composition outturn Index" estimated by the Public Expenditure and Financial Accountability (PEFA) data repository. This measure is used to capture budget reliability in the national public accounts.
Financial Cancellation Share		Share of original approved loan amount cancelled during the life of the project.	
1[Financial Cancellation>0]		Indicator variable for projects that cancels part of the original approved amount.	
1[Financial Cancellation>20]		Indicator variable for projects that cancels more than 20% of the original approved amount.	

Table A1: PCR Sample Descriptive Statistics:

	Mean	SD	p25	p50	p75	Min	Max
1[Successful PCR]	0.59	0.49	0.00	1.00	1.00	0.00	1.00
1[Effective PCR]	0.30	0.46	0.00	0.00	1.00	0.00	1.00
Overall DEM Score	8.03	1.28	7.26	8.30	9.10	4.76	10.00
Results Matrix Quality DEM	2.64	0.45	2.55	2.74	3.00	0.86	3.00
Economic Analysis DEM	8.39	2.53	7.00	10.00	10.00	0.00	10.00
Evaluation DEM	4.49	1.77	2.80	4.56	6.03	0.00	7.50
N. components	3.10	1.27	2.00	3.00	4.00	1.00	7.00
1[Significant env. risk- A]	0.03	0.18	0.00	0.00	0.00	0.00	1.00
1[Local/short-term env. risk- B]	0.55	0.50	0.00	1.00	1.00	0.00	1.00
Loan Amount (in \$ millions)	94.84	167.43	15.00	30.00	90.00	3.00	1148.63
1[Multiple booking project]	0.05	0.22	0.00	0.00	0.00	0.00	1.00
1[w/ legislative ratification]	0.26	0.44	0.00	0.00	1.00	0.00	1.00
Approval-Effective date month overdue	-1.32	7.20	-6.00	-1.00	1.00	-13.00	35.00
Effective date-elegibility month overdue	2.38	4.45	-1.00	2.00	4.00	-3.00	33.00
Number of months overrun	16.37	13.03	2.00	17.00	24.00	0.00	48.00
Alert/problem share in first 3 years	28.70	37.43	0.00	0.00	66.67	0.00	100.00
Budget Modification Index	7.20	6.89	2.32	5.51	9.42	0.00	33.24
Financial Cancelation Share	7.68	15.77	0.00	0.29	6.02	0.00	75.29
1[Financial Cancelation>0]	0.58	0.50	0.00	1.00	1.00	0.00	1.00
1[Financial Cancelation>20]	0.11	0.32	0.00	0.00	0.00	0.00	1.00
1[Approval year >=2012]	0.19	0.40	0.00	0.00	0.00	0.00	1.00
1[CSD]	0.23	0.42	0.00	0.00	0.00	0.00	1.00
1[IFD]	0.30	0.46	0.00	0.00	1.00	0.00	1.00
1[INE]	0.28	0.45	0.00	0.00	1.00	0.00	1.00
1[SCL]	0.20	0.40	0.00	0.00	0.00	0.00	1.00

Table A2 – Means Tests comparing PCR and New Portfolio samples used in regressions

Variable	(1) Overall Mean	(2) PCR sample	(3) New Portfolio	(4) Diff.7
Overall DEM score	8.608 (0.974)	8.031 (1.277)	8.825 (0.724)	0.794*** (0.099)
Results Matrix Quality DEM	2.751 (0.360)	2.642 (0.454)	2.792 (0.309)	0.149*** (0.039)
Economic Analysis DEM	9.202 (1.635)	8.395 (2.527)	9.504 (0.981)	1.109*** (0.171)
Evaluation DEM	5.320 (1.554)	4.489 (1.771)	5.632 (1.340)	1.143*** (0.161)
N. components	3.002 (1.163)	3.104 (1.266)	2.964 (1.121)	-0.140 (0.127)
1[Significant env. risk- A]	0.047 (0.213)	0.035 (0.184)	0.052 (0.223)	0.017 (0.023)
1[Local/short-term env. risk- B]	0.576 (0.495)	0.548 (0.500)	0.586 (0.493)	0.038 (0.054)
Loan Amount (in \$ millions)	90.377 (123.346)	94.844 (167.427)	88.703 (102.365)	-6.141 (13.498)
1[Multiple booking project]	0.192 (0.394)	0.052 (0.223)	0.244 (0.430)	0.192*** (0.042)
1[w/ legislative ratification]	0.315 (0.465)	0.261 (0.441)	0.336 (0.473)	0.075 (0.051)
Approval-Effective date month overdue	-0.502 (8.320)	-1.322 (7.204)	-0.195 (8.692)	1.126 (0.909)
Effective date-elegibility month overdue	2.182 (3.581)	2.383 (4.450)	2.107 (3.201)	-0.275 (0.392)
Overall number of months overrun	18.408 (16.130)	16.365 (13.027)	19.173 (17.104)	2.807 (1.760)
Alert/problem share in first 3 years	26.027 (33.785)	28.696 (37.434)	25.027 (32.321)	-3.669 (3.694)
Financial Cancellation Share	7.164 (17.394)	7.678 (15.766)	6.971 (17.986)	-0.707 (1.904)
1[Financial Cancellation Share>0]	0.360 (0.481)	0.583 (0.495)	0.277 (0.448)	-0.306*** (0.050)
1[Financial Cancellation Share>20]	0.118 (0.324)	0.113 (0.318)	0.121 (0.326)	0.007 (0.035)
Budget Modification Index	6.910 (8.172)	7.203 (6.892)	6.800 (8.610)	-0.403 (0.894)
Observations	422	115	307	422

Table A3 – Projects in current portfolio that has cancelled more than 20% of original approved amount (N=31)

Project ID	Region	Department	Division	Share Cancelled	Approval Year	Eligibility Year	Closed Year	1[Reformulations]
AR-L1068	CSC	CSD	RND	24.4	2012	2013		0
AR-L1136	CSC	INE	WSA	27.2	2012	2013		1
AR-L1148	CSC	CSD	HUD	28.0	2013	2014		1
AR-L1154	CSC	IFD	CMF	27.5	2014	2014		1
AR-L1243	CSC	CSD	HUD	50.0	2016	2017		1
AR-L1254	CSC	SCL	SPH	32.5	2017	2018		1
BR-L1328	CSC	SCL	EDU	22.4	2013	2014		0
BR-L1369	CSC	INE	WSA	42.6	2014	2018		0
BR-L1415	CSC	SCL	SPH	26.2	2014	2016		0
BR-L1490	CSC	IFD	CTI	44.5	2017	2018	2021	0
CH-L1084	CSC	CSD	HUD	64.4	2015	2016		0
CH-L1085	CSC	IFD	ICS	34.0	2014	2015	2021	0
CO-L1091	CAN	INE	TSP	51.3	2011	2014		0
CO-L1102	CAN	IFD	ICS	20.3	2014	2014	2020	0
CO-L1105	CAN	INE	WSA	50.0	2012	2013		0
EC-L1119	CAN	IFD	ICS	48.4	2013	2014	2021	0
EC-L1120	CAN	IFD	ICS	52.0	2014	2015		0
JA-L1046	CCB	IFD	ICS	46.1	2013	2014	2020	0
ME-L1142	CID	SCL	LMK	65.1	2013	2014	2020	0
ME-L1148	CID	IFD	CMF	36.7	2014	2016		1
ME-L1258	CID	SCL	LMK	69.5	2017	2018		0
ME-L1267	CID	INE	ENE	50.0	2018	2018		0
PE-L1026	CAN	CSD	RND	57.2	2014	2016		0
PE-L1122	CAN	CSD	RND	66.4	2014	2016	2020	0
PE-L1147	CAN	INE	TSP	35.8	2014	2016		0
PR-L1066	CSC	SCL	LMK	23.2	2011	2013		0
PR-L1081	CSC	IFD	CMF	50.0	2014	2016		0
TT-L1034	CCB	IFD	ICS	27.8	2013	2014		1
TT-L1039	CCB	SCL	SPH	56.0	2014	2017		0
TT-L1042	CCB	IFD	ICS	37.8	2015	2017		1
UR-L1113	CSC	CSD	RND	48.9	2016	2017		0