

Beginning With The End In Mind: Implications for Project Design

Soniya Carvalho

Gillian Perkins

Gary Reid

Acknowledgements

The authors are staff or consultants at the Independent Evaluation Group (IEG) of the World Bank.

Background work was conducted by Filippo Cavassini and Stephanie E. Trapnell. Rich Kraus provided administrative support. Comments from Marie Gaarder, Hugh Waddington, and Howard White are gratefully acknowledged. While the article draws heavily on World Bank experience, most of the conclusions are relevant for development interventions more generally.

BEGINNING WITH THE END IN MIND

Implications for Project Design

As with other donor agencies, the World Bank uses an objectives-based approach to monitoring and evaluating the effectiveness of projects. When projects run into problems and fail to meet their objectives, experience suggests that many of the problems could have been avoided or mitigated through a more systematic focus, from the outset, on the project's objectives, the outcomes embedded in those objectives, and the associated results framework. This article discusses how to improve the prospects of achieving sustainable outcomes by addressing specific questions from the very start of project design, or, in other words, by beginning with the end in mind.

Starting with Objectives

Being clear about project objectives is critical. It can help not only to measure performance against a well-specified benchmark *ex-post*, but also to ensure, *ex-ante*, that the project is well-designed to meet its objectives, to monitor progress during implementation, and to make any necessary course corrections. Greater attention to project design and implementation seems warranted: reviews of the Implementation Completion and Results reports (ICRs) of World Bank lending operations by the Bank's Independent Evaluation Group (IEG) show that the share of projects with moderately satisfactory or better development outcome (DO) ratings declined from 73 to 70 percent of rated projects between FY08-10 and FY11-13. Continuing a long-term, steady downward trend in overall performance since

FY06-08, the decline across the two most recent periods is statistically significant at the 90 percent confidence level (IEG 2014).

In theory, one typically expects a project to start by identifying its core objectives, with the alternative interventions for achieving those objectives most cost-effectively being identified next. In the real world, however, early discussions relating to a new project often start with a specific intervention or set of activities already in mind. The rationale for the proposed intervention or set of activities may be based more on assumptions, ideology, vested interests, or standard practice, than on evidence and analysis of the expected impact. In-country stakeholders are often focused on the tangible or visible actions that the project aims to support – what will the funds be spent on and what assets will they build? For people working on the particular issue, it is often “obvious” that what is needed is, for example, to train more teachers, build a new road, construct health clinics, or privatize the power utility. In short, contrary to the common expectation, and, in practice, the precise objectives of a project may be determined only as a proforma requirement of project preparation, rather than the principal factor guiding project design. To avoid this situation, a good strategy would generally be to start with clear project objectives, while staying alert to iteratively developing and refining the precise formulation of those objectives as the project activities are more fully developed.

Thinking Through the Project Logic

Once clear objectives are identified, the next task is to determine what project activities and interventions are most likely to bring about the desired outcomes, drawing on relevant literature (for example, systematic reviews – see White and Waddington, 2012; see also Snilstveit et al., 2013) and past experience. Identifying interventions may sometimes require conducting new analyses to

determine the current, context-specific, pressing, or binding constraints for achieving the identified objectives. These interventions can then become the object of donor support, depending on the donor agency's comparative advantage and the client country's commitment and capacity to address those constraints.

Required inputs and outputs will then need to be systematically identified. A credible chain of results, from inputs, to outputs, to intermediate outcomes, to downstream outcomes, is required to identify the needed interventions. Assumptions (or theories) implicit in initial program design on the linkages between project interventions and short- or long-term results may need to be confirmed if they are not already well-established in the literature. This may require more analytical work. Does the results chain include all inputs and outputs required to achieve the desired outcomes? If not, is there confidence that all other necessary inputs and outputs are being adequately provided through other complementary interventions? As one moves through the results chain towards downstream outcomes, the other factors that affect outcomes increase, and the issue of complementary actions (as well as national and even international economic and political developments) becomes increasingly significant.

The evidence-based results-chain approach, also called theory-based evaluation, requires both (i) a clear understanding of the cause and effect from inputs to outputs to each of the various types of impacts, as well as (ii) a well-specified plan for continuously capturing evidence on the results of each step in that results chain. Such a theory-based evaluation approach, if borne in mind during project design, can force rigor in thinking-through the results chain. Such theory-based evaluation sets out the theoretical assumptions underlying an intervention in terms of a phased sequence of causes and effects. Data are then collected to examine how well each step of the sequence is, in fact, borne out. If the posited sequence breaks down along the way, the evaluation can tell at what point the breakdown occurred and

what the final impact is likely to be. The analysis also seeks to determine whether the required conditions are in place for the desired outcome. If they are, and if the theory is correct, then there is a good probability of success (Weiss 1998, 2001; Carvalho and White, 2004).

Before the project design is finalized, alternative approaches or interventions should be carefully considered. Is the proposed approach the least cost one? Is it best suited to country conditions? Is it the least complex, risky, or demanding of implementation capacity?

A common weakness at this stage is to overestimate how much can be achieved in the particular country context. The project theory or results chain may be technically sound and logical in generic terms, but it may fail to account sufficiently for country-specific conditions, including constraints in implementation capacity or political obstacles to smooth implementation. Some of these constraints will be evident from the recent experience of other projects in the country. Sector studies, as well as projects with similar objectives and approaches in other countries, can help reveal likely obstacles that need to be accounted for in project design. Additional non-physical inputs (e.g., consultation, communications, capacity building activities) and contingency plans may need to be incorporated. Ambitions may need to be scaled back. Many risks could be anticipated and addressed through prior analysis of the incentives structure surrounding project implementation. What are the respective incentives and disincentives faced – or likely to be faced – by different stakeholders in supporting implementation? Who are the likely winners and losers? Understanding possible sources of resistance to the project activities in advance makes it possible to incorporate mitigating measures in project design (Carvalho and White, 1996).

Articulating the Statement of Project Objectives

Project success depends on its objectives. Unclear or vague objectives present problems in implementation both by providing confusing signals to the stakeholders in terms of necessary actions and by making it difficult to track progress. Under an objectives-based approach, the statement of objectives provides the benchmark for monitoring during implementation and for assessing project performance. The final “Outcome” rating at evaluation after project completion – as defined by the World Bank and IEG – is a function of (i) the appropriateness of the project’s stated objectives (relevance), (ii) the extent to which the stated objectives were achieved (efficacy), and (iii) how efficiently the stated objectives were achieved (efficiency). The focus on relevance of objectives is to ensure not only that projects address high priorities in the country concerned which are also within the comparative advantage of the donor agency supporting them, but also to discourage the pursuit of high ratings through taking on unambitious and very easily achieved objectives. In practice, it is more common to promise too much, either through lack of realism concerning how much can be delivered within the life of a project or by promising broader outcomes than can be attributed directly to the project itself. In short, the onus is on the project’s statement of objectives to get it exactly right – neither over-ambitious nor under-ambitious.

Although objectives should be the starting point for project design, the project’s statement of objectives cannot be finalized until the “project logic”, including the results chain, has been carefully articulated. The results chain provides the basis for specifying the expected changes that will result from the project over a specific time period. This would require an understanding of how tight the link is at each step in the chain, and of the likely time lags between steps. It would also require careful consideration of factors outside the project’s control. In addition, the best available indicators would have to be identified for each step in the results chain.

Based on this information, the statement of objectives should address ends, not just the means of achieving them, identifying:

- **What:** Clearly and concisely stating what specific changes – outcomes (not outputs) – are expected to be achieved as a result of the project intervention.
- **How much:** Defining the scale of the intended results by specifying how much change is expected (alternatively, this may be specified under the ‘project description’ and may take the form of targets).
- **Who:** Identifying the beneficiary or target groups to be reached and the project’s geographical scope.

An important challenge is to determine the highest level of outcomes that can be measured and plausibly attributed to the project’s interventions. This requires good outcome indicators that are not heavily subject to factors outside the control of the project. Project outputs (such as buildings constructed, pipeline laid, people trained, new curriculum designed) are easily attributed to the project, but these are means, not ends, and so the objectives should not be stated in output terms (there can be some exceptions in disaster or conflict situations, when rebuilding physical infrastructure is a high priority in itself). Only in rare cases, can an individual project promise a direct, measurable impact on the highest level objectives, such as reducing poverty or boosting shared prosperity, since movements in the concerned outcome indicators are typically subject to a range of factors beyond the project itself. All Bank-supported projects are required to support the twin objectives of ending poverty and boosting shared prosperity. The rationale for the expected contribution to these over-arching objectives is to be explained in project documentation. The project’s statement of objectives, however, needs to focus on specific outcomes that can be measured and directly attributed to the project. For some types of

projects, this can be quite straightforward. In other cases, when the impact of the project cannot be so easily distinguished, the best option may be to retreat to intermediate outcomes in the objectives statement.

In the education sector, for example, which outcomes to promise may not be a straight forward decision. Increases in enrolment can be relatively straightforward to measure and attribute to a specific project, but when projects are focused on learning achievement or improvements in incomes or productivity, the influence of other factors can be difficult to separate. Short of building a rigorous impact evaluation into the project, which is not always feasible, the best solution may be to aim for intermediate outcomes or for changes that can be directly attributed to the project (such as demonstrated improvements in specific classroom practices, or in teachers' knowledge or skills) while continuing to monitor performance on learning achievement tests or incomes of graduates.

Sometimes a project can promise outcomes seemingly beyond its purview. While downstream outcomes may depend on several factors beyond the control of a project, if these factors are clearly being addressed through other on-going development initiatives, then the project in question can promise the downstream outcomes in question.

Outcomes may also depend on factors that are outside the timeframe of the project, thus taking longer than the project period to materialize. At the self-evaluation stage, the Bank's methodology allows demonstrating the extent to which objectives are met – or expected to be met – at project closing. If the likelihood of achieving those outcomes after project completion, even if not yet achieved, can be demonstrated already at project closing – by providing evidence that the outputs or intermediate outcomes achieved by the project are strongly correlated with the downstream outcomes – the project

in question could realistically promise those downstream outcomes. For example, immunization rates are excellent proxies for the incidence of specific diseases, and the contraceptive prevalence rate is closely correlated with the fertility rate, so reductions in the incidence of specific diseases and in fertility rates could be promised in a project's statement of objectives so long as the project addresses immunization rates and the contraceptive prevalence rate (Carvalho and White 1994; White 2003).

Keeping in mind from the outset how the intended project outcomes will be measured can help to refine the statement of objectives. The issues involved vary greatly between sectors and different types of projects. Sometimes – especially in the case of institutional objectives, as discussed below -- the difficulty in identifying a small number of good indicators is a major constraint. When the conceptual and empirical linkage between the outputs and the desired outcomes is weak, this can sometimes be resolved through more attention to indicators and more specific articulation of the objectives. In other cases, it may indicate the need to rethink the whole project rationale more fundamentally.

Determining the appropriate target level for outcome indicators – a level that is realistic but at the upper end of what is achievable – is not always straightforward, especially when a new indicator is introduced and there is no data on historical trends. Too often, outcome targets are set arbitrarily, without a firm empirical basis for determining how much movement can be expected in the indicator linked to a given set of project outputs. When knowledge is lacking, one approach is to require outcome targets to be revisited annually, using data generated by the project to help form more evidence-based projections. As far as possible, the outcome targets should be quantitative. When there is not a sound basis for specific numeric outcome targets, it may be best to require a “pattern of improvement” over the course of the project; i.e., a tendency for impact indicators to show improvement. Furthermore, targets should not be based on a simple before-after conceptualization. That mistakenly assumes that

without the project everything else would have remained the same. Targets should be set against a ‘without project’ scenario so as to more explicitly ensure that thought and evidence is brought to bear on other factors affecting the project (Gaarder and Bartsch 2014).

In all cases, stakeholder involvement is important. Country stakeholders are the primary source of relevant information on how much of what changes can reasonably be expected. The outcome targets need to be “owned” by those responsible for meeting them. This is easily neglected when the counterparts in client countries are unfamiliar with the objectives-based approach and may be happy to leave this work to the donor agency’s team.

The Millennium Development Goals showed the support-mobilizing power of targets such as halving, between 1990 and 2015, the proportion of people whose income is less than \$1 per day, even if such world-wide targets are not meaningful for individual countries and have to be customized based on the country’s respective initial conditions (IEG 2002; White and Black eds. 2004).

Sometimes objectives need to be revised during implementation, either because initial assumptions about country commitment or capacity turn out to be misplaced or because country circumstances change. When things are not going according to plan, one of the first things to ask is whether the project objectives have remained relevant and realistic. Generally, restructuring should be considered earlier and more often. The Bank’s own self-evaluation methodology now encourages earlier restructuring by applying weights in the outcome rating according to the share of disbursements under each set of objectives – original and revised.

Unforeseen changes, events or outcomes, within or outside the project, should prompt a formal revision of objectives as, in particular, when:

- The project is producing unforeseen positive outcomes that are not captured in the original objectives. Under an objectives-based evaluation methodology, these outcomes will not be given credit in the project outcome rating unless objectives have been formally revised to include them.
- The country's priorities for development assistance, or the Bank's Country Partnership Strategy, have changed significantly, making the original objectives less relevant.
- Something has happened internal to the project (for example, earlier assumptions regarding country capacity have turned out to be over-optimistic) to make it unlikely that the project will achieve its original objectives.

Particular Challenges for Institutional Development Objectives

A great majority of Bank projects depend on institutional development or reform as a means of achieving their stated objectives and of ensuring the sustainability of project benefits. IEG experience suggests that more attention at the design stage to the nature of the institutional change that is intended and to its correlates can prevent many subsequent problems while also helping to optimize institutional outcomes.

Institutional reform poses a fundamentally different set of challenges than do either stroke of the pen policy reforms (which can be decreed as part of a project), or investments in infrastructure and other physical works. The impacts depend fundamentally on factors that cannot be fully addressed within the project. No single, optimal route to success can be specified ex ante, although it is possible to specify a

strategy for such a reform effort. Impacts depend at least as much on how reforms are put into practice, as on what reforms are undertaken. Finally, the interdependence of institutional changes makes both impacts and their sustainability dependent on progress on multiple fronts.

Depending on the context and the development objectives, changes may be needed at one, or more, of several levels:

- **Legal framework:** Framework of relevant laws, regulations and policies.
- **Institutional incentives:** Political economy factors, perverse incentives, informal “rules of the game,” that may support or prevent effective interpretation and enforcement of the laws, regulations and policies.
- **Organizational structures and processes:** Configuration of departments, and their roles, responsibilities, and lines of reporting.
- **Capacity:** Relevant knowledge, skills, and competencies on the part of individual actors.

Addressing any one of these in isolation may not be effective. For instance, training interventions to address *capacity* constraints are unlikely to have sustainable effect unless the broader environment (first three bullets above) is already conducive to applying the new skills and behaviors. In many contexts, coordination and sequencing of a range of initiatives across these levels is crucial.

The institutional objective of a project should derive directly from the institutional problems to be addressed. Objectives such as “strengthen the capacity of the Ministry of X” and monitoring indicators such as the “number of persons trained” are either too vague or too activity-focused. Capacity for what exactly, and why? What specifically is to be changed as a result of the project and will the change be measurable? How are staff behaviors expected to change as a result of the training – will the work get

done faster or to a higher standard? Will the career opportunities and/or incomes of those trained improve? Combining qualitative and quantitative evidence on a number of these aspects of capacity will typically be required to assess institutional outcomes (Carvalho and White 1997; White 2011).

Indicators for institutional reform objectives may be usefully defined along four distinct dimensions:

- *Rules of the game*; e.g., legislation passed to allow resource transfers from central to local government (input and output indicators);
- *Intermediary agent/stakeholder behavior*; e.g., district authorities using transparent criteria to allocate the district budget across sectors (input and output indicators);
- *Beneficiary behavior*; e.g., percentage of pregnant women receiving antenatal care four or more times from a skilled health provider (intermediate outcome indicators and outcome indicators); and
- *Final impacts*; e.g., percentage change in average earnings of youth after receiving vocational training (final impact indicators).

Appropriate framing of objectives can be quite straightforward when the end is clearly in sight and the deficiency in institutional capacity is specific and monitorable. For example, “increase transparency in budget formulation” might be posited as an objective, as long as it is monitored by well-defined indicators such as: (a) % of line ministry budget requests published on-line within x days of their submission to central authorities, (b) differences between line ministry budget requests and final budget proposals submitted to Cabinet; and (c) time lag between submission of the budget to Cabinet and publication on-line of the submitted budget proposal. Similarly, “increase the operational efficiency of Primary Health Care (PHC) facilities in delivering services to those who need them” might be posited as

an objective, as long as it is monitored with well-defined indicators such as: (a) average cost per some standardized PHC service; or (b) average PHC cost per population within the PHC's service area.

Problems arise when generalized institutional capacity constraints impede sector outcomes, and a capacity assessment of the organization(s) concerned runs into an overwhelming catalogue of deficiencies. Addressing some of these deficiencies through the project, with a vague objective of strengthening capacity, is unlikely to produce sustainable results. If more specific outcome objectives are difficult to identify, more attention may need to be paid to the prevailing constraints and to prioritizing, sequencing, and coordinating interventions towards a specific and achievable objective. Focusing on the creation of 'good enough' institutions may be a pragmatic start. Good enough governance can help, for example, to focus attention on the consideration of the minimal conditions of governance necessary to allow political and economic development to occur – from among the long list of things that must be done, good enough governance helps to weed out what's essential and what's not, what should come first and what should follow, what is feasible and what is not (Grindle 2002).

Ascertaining client demand for institutional change is an important prerequisite for designing a project with institutional objectives. If client demand does not exist, the project could help to create it with interventions to raise awareness among the relevant stakeholder groups. Even when demand appears to be strong, projects do well by combining complementary initiatives from several directions, for example, incorporating measures to educate and empower local clients regarding their access to public services while simultaneously supporting the decentralized delivery of those services by local government.

Conclusion

IEG's project evaluations indicate that key issues frequently associated with poor development outcomes are often, at least partially, "fixable" at the project design stage. This article has attempted to show how several of these issues, and the consequent waste of scarce development resources, can be reduced by maintaining a clear focus from the outset on the final intended outcomes of the project, or, in other words, by beginning with the end in mind.

References

- Carvalho, S., and White, H. 1994. "Indicators for Monitoring Poverty Reduction." Discussion Paper, 254. Washington, DC: World Bank.
- Carvalho, S., and White, H. 1996. "Implementing Projects for the Poor, What Has Been Learned?" Directions in Development. Washington, DC: World Bank.
- Carvalho, S., and White, H. 1997. "Combining the Quantitative and Qualitative Approaches to Poverty Measurement and Analysis: The Practice and the Potential." Technical Paper No. 366. Washington, DC: World Bank.
- Carvalho, S., and White, H. 2004. "Theory-Based Evaluation: The Case of Social Funds." American Journal of Evaluation, Vol. 25, No. 2.
- Gaarder, M., Bartsch, U. 2014. "The Second Wave of Independence: Shopping for Solutions". Policy Research Working Paper, Washington, DC: World Bank.
- Grindle, M. 2002: <http://grc-exchange.org/docs/hd32.pdf>
- IEG. 2002. Annual Review of Development Effectiveness (ARDE). Achieving Development Outcomes – The Millennium Challenge, 2000-2006. Washington, DC: World Bank.
- IEG. 2014. Results and Performance of the World Bank Group 2014. Washington, DC: World Bank.

Snilstveit, B. Vojtkova, M., Bhavsar, A. and Gaarder, M., 2013. "Evidence Gap Maps: A Tool for Promoting Evidence-informed Policy and Prioritizing Future Research." Policy Research Working Paper 6725. Washington, DC: World Bank.

Weiss, C. 1998. Evaluation: Methods for Studying Programs and Policies. Upper Saddle River, NJ: Prentice Hall.

Weiss, C. 2001. Theory-based Evaluation: Theories of Change for Poverty Reduction Programs. New Brunswick, NJ: Transaction Publications.

White, H., 2003. "Challenges in Evaluating Development Effectiveness." Paper presented at Fifth OED Biennial Evaluation Conference, July 15-16, Washington, DC: World Bank.

White, 2004. Using Development Goals and Targets for Donor Agency Performance Measurement, in Black and White (eds.) Targeting Development: Critical Perspectives on the MDGs, London: Routledge.

White, H., 2011. "Achieving High-quality Impact Evaluation Design Through Mixed Methods: The Case of Infrastructure." Journal of Development Effectiveness, Volume 3, Issue 1.

White, H. and Waddington, H., 2012. "Why do we care about evidence synthesis? Introduction to the Special Issue on Systematic Reviews." Journal of Development Effectiveness, Volume 4, Issue 3, pp. 351-538.