A recent World Bank (IBRD) mission to Rio de Janeiro signalled a new development in the Bank’s focus on improving the efficiency of public expenditure in developing countries. It follows agreement in 2010 on a Development Policy Loan to the Municipality of Rio de Janeiro (population of about 6.3 million) partly contingent on implementation by the city of a Public Investment Framework to evaluate and select capital investment projects; a first in terms of loans by the Bank.

Against a background of donor concern about the allocation of public expenditures in developing countries, in 1996 the World Bank issued a Discussion Paper [pdf] intended to provide an analytical framework for its staff when undertaking Public Expenditure Reviews in client countries. The six key elements of the framework emphasised the need for public spending to be allocated in a way that maximises social welfare, particularly its impact on the poor, and the building of in-country analytical capacity in evaluating projects.

More recently, the Bank has taken the initiative to improve the efficiency with which public expenditures are managed in countries that receive financial assistance. The rationale underlying this program – the so-called PIM (Public Investment Management) framework – is that improved managerial efficiency can increase the benefits generated by publicly funded projects. Countries that reap greater benefits from public projects will not only gain directly, but will also need to rely less on assistance from donor countries and international agencies.
Broadly consistent with the 2001 multi-donor Public Expenditure and Financial Accountability program, the Bank’s PIM framework is based on a set of diagnostic indicators designed to assess various stages of the public investment process in a recipient country. For example, unexpected cost over-runs may indicate shortcomings in project appraisal methods, or poor project design or procurement practices.

The PIM program does not seek to promote “best practice” approaches such as those advocated by agencies like the OECD. Rather, it more realistically seeks to ‘identify the bare-bones institutional features that would minimise major risks and provide an effective systemic process for managing public investments’. The framework and associated indicators have been tested in Ukraine and Cape Verde, and work is now proceeding on incorporating its use in Public Private Partnerships.

The eight so-called “must-haves” of the PIM program are:

- Investment guidance, project development, and preliminary screening
- Formal project appraisal
- Independent review of appraisal
- Project selection and budgeting
- Project implementation
- Project adjustment
- Facility operation
- Basic completion, review and evaluation.

The PIM framework contains many sensible features. Independent review of appraisals, for example, is particularly important to guard against optimism bias in proposals put forward by government spending agencies. Scope for adjustment of projects after implementation is similarly to be recommended for its realism, and ex post review of completed projects offers valuable learning opportunities. Most importantly, indicators are not combined into composite indexes, a
technique that suffers from arbitrariness and bias[1]: the Bank is to be congratulated for resisting the temptation of aggregating incommensurable quantities.

However, if there is an Achilles Heel in the PIM framework, it lies in its first step. The indicators used to assess the effectiveness of investment guidance and project development view positively projects that are consistent with government policy and its strategic planning. To the extent that strategic planning in many countries is based on ‘nation-building’ and other ‘visions’, it is difficult to be confident that projects selected for formal appraisal under the second PIM step are necessarily the most welfare-enhancing set available. In particular, visionary approaches used by governments often employ subjective procedures, including Multi-Criteria Analysis, a form of the composite index technique. Loan recipients may thus be encouraged to increase the efficiency of their public spending, but for the wrong projects.

On the other hand, it would admittedly be unreasonable to expect developing country governments with insufficient project evaluation capacity to identify in their strategic plans the country’s most welfare-enhancing set of potential projects. And to its credit, the World Bank is well aware of the need for capacity-building in terms of the economic evaluation of projects at all stages of project development and implementation.

However, there may also be scope for adding an indicator to the first of the eight PIM steps: that of the loan recipient’s efforts to improve institutional evaluative capacity in formulating strategic plans. To the extent that future loan agreements include a requirement for implementation of a PIM framework by the recipient government, countries would be encouraged over time to focus on a key step in their planning process. Improved up-front economic evaluation would naturally flow through to the other steps in the PIM framework.

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Disclosure

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Leo Dobes is Adjunct Associate Professor at the Crawford School of the ANU, and co-author of the recent World Bank APEC report on Climate Change and Fiscal Policy.

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Renascent interest in adaptation to climate change has inevitably resulted in a variety of competing conceptual approaches. Despite the existence of suitable analytical tools, a credible economic perspective has been lacking.

In a report I recently co-authored with Stephen Howes for the World Bank, I set out to fill this gap.

Possibly because of the strong techno-scientific genesis of climate change issues, most analytical effort to date has been misdirected at estimating potential impact costs, or on developing indexes of ‘vulnerability’ and ‘adaptive capacity’. Apart from the empirical difficulty of estimating costs at the local level, it is generally not possible to distinguish between costs that are attributable purely to climate change and those that involve development. Moreover, the costs of damage alone cannot provide a basis for formulating policy, because they are unlikely to accurately reflect benefits in terms of willingness to pay to avoid the damage. Indexes of vulnerability are conceptually flawed because of their arbitrary and atheoretical nature, including the use of scores and weights to aggregate incommensurable variables. But the key flaw in the ‘damage costs’ and index approaches is that they provide no policy insights into how much action should be taken, or when it should be taken.

The hallmark of climate change is uncertainty. The stochastic nature of a myriad of key variables means that it is not possible to say with any certainty – or even to estimate probabilities with any significant confidence – when changes will occur, how strong the impacts will be, how they will differ at the local level, how frequently extreme events will occur, and how successful mitigation will be.
Efforts to specify deterministic policies and projects for adaptation in response to unknown levels and timing of climate change are doomed to result in either over or under adaptation. Planning under conditions of uncertainty is thus likely to be wasteful of resources. Building a two metre sea wall around the entire coast of Australia today, for example, would be wasteful of social resources, as would failure to take any action at all over the next 100 years.

Rather than focusing on deterministic solutions based on unknowable probabilities, it is better to proceed from the basis that climate change involves very significant levels of uncertainty. Fortunately, economists already have well-developed tools for analysing situations of uncertainty. For example, financial markets involve significant uncertainty about future price movements of traded assets like bonds and equities (shares). Investors in such markets are able to reduce their risks by using options as a hedge. A financial option provides a right, but no obligation, to buy or sell a share if its price moves above or below a contracted level within a set period. If the price of the share moves in the direction expected by the investor, its purchase and sale will generate a profit. If it moves in the opposite direction, only the cost of the option is lost, rather than the value of the share itself.

Options also exist in the world of physical (‘real’) assets. They are useful for assisting decision-makers to incorporate uncertainty within a cost-benefit framework as well as incorporating flexibility into the design of adaptation policies and projects. For example, airport runways may need to be lengthened in future to provide sufficient lift during take-off. But building longer runways immediately is likely to be premature and costly. A ‘real option’ would be to merely buy additional land that will permit future expansion (it may also be cheaper to buy an option to buy the land). If not required in the future, the land can be sold, or put to other uses. However, the flexibility or potential to make use of the land, if required in the uncertain future, is valuable. The use of options in the face of uncertainty is also intuitively sensible.
An investment diagram can be used to illustrate the ‘real options’ approach in terms of the construction of a sea wall or dike. In panel A, the dike is built immediately, while in panel B only the land is prepared, as an option, and the dike itself is built once it is clearly required due to the extent of actual climate change. Clearly, in this simplified example, the net present value of the benefits will be higher where an option has been generated.

Generating or creating options on projects and policies requires a good deal of creativity by both the public and private sectors. However, the effort involved will be repaid by savings, both financial and in terms of social resources.

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*To find out more, see Ch. 5 of the World Bank report, and the references therein.*

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