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The Treatment of Cost-Benefit Analysis in Developing Countries¹

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Nobel laureate and economist Simon Kuznets put forth the concept of Gross Domestic Product (GDP) in response to a need for good data in public policy planning in the 1930s. Since then, policymakers have increasingly relied upon GDP and other national income indicators. If only one macro indicator is available in any given country, chances are the indicator is the country's GDP. This demonstrates the extent to which national income has become the most important macroeconomic indicator. However, as Kuznets himself and other critics of GDP have repeatedly pointed out, national income statistics are not ideal measures of welfare (Kuznets, 1934). Of the many criticisms, two of the more prominent are the lack of consideration of equity and the fact that these statistics only measure economic activity and do not account for non-economic costs of growth (Kuznets, 1962).

The good news is that equity considerations are increasingly being accounted for by augmenting national accounts with measures of inequity (e.g. Gini coefficient). Unfortunately, no indicator for measuring the non-economic costs of growth has been as successful as GDP in gaining wide acceptances; as a result, national income statistics continue to present only one side of the picture. The need for more data is clear – optimal policy formulation requires information on the trade-offs between choices.

It is a fact that costs of economic growth are often nonmarket in nature, such as environmental harm or loss to psychological well-being. The list of nonmarket items is long; to properly account for the full costs of growth, all such items should be quantified, and any changes in their levels should be meticulously recorded. Additionally, to utilize the data to analyze trade-offs, it is necessary to assign monetary values to them. While this form of accounting may seem difficult to carry out, some semblance of it already exists in the form of what is popularly termed “green accounting”.

Green accounting notwithstanding, maintaining a complete record of changes in the levels of all nonmarket goods is more of a grand vision than an achievable goal; the costs involved in such an endeavor are too high especially for most developing countries. Often, developing nations account for these costs by conducting the analysis at a micro level when considering public projects, differing from their developed counterparts in this respect. As such, there is a need to approach cost-benefit analysis in developing nations differently to account for both behavioural and executional differences.

¹ This paper is an extension of Quah (2013).

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The Need for Cost-Benefit Analysis in Developing Countries

Economic theory indicates that efficiency requires cost-benefit analysis. For developing countries, there are three broad reasons why the need for cost-benefit analysis is especially pressing.

First, to catch up to developed economies, developing economies need to grow even faster. The shorter the time frame for convergence, the faster developing countries need to grow. Based on the average growth rate over the last decade, it would take the least developed countries⁴ approximately 190 years to catch up to the countries in the Organisation for Economic Co-operation and Development (OECD). 60 years could be shaved off the catch up process if the least developed countries instead grow at a rate of one percentage point faster⁵.

Second, most of the world's natural resources are concentrated in developing countries. According to a United Nations report, the world's tropical forests are primarily located in developing nations (FAO, 1997). For instance, the Amazon, the largest unbroken rainforest in the world, is largely located in Brazil and Peru. As a result, there is growing international pressure on developing economies to take on greater responsibility for sustainable development, and for these nations to bear the future responsibility for reducing their carbon emissions.

Lastly, governments of developing countries face significantly greater budgetary constraints than their developed world counterparts. Taken together the heightened urgency for development, the great international pressure for environmental conservation, and the relative lack of financial resources at governments' disposal mean that developing countries have to be extremely prudent about their choices of projects. Since developing nations face the greatest need for optimal decision making, cost-benefit analysis becomes an important tool to ascertain the net benefits of proposed projects.

A Brief Review of Cost-Benefit Analysis Principles

Given the clear differences in the circumstances faced by developed and developing economies, should cost-benefit analysis in developing countries differ? Answering this question requires a review of some fundamental principles of cost-benefit analysis (Mishan and Quah, 2007). First, cost-benefit analysis must account for all benefits and costs of direct and indirect effects, including externalities. In addition, valuations must be as accurate as possible, reflecting the true social costs and benefits. This requires measuring use and non-use values, distortions in prices due to taxes or subsidies, and opportunity costs. Future benefits and costs must be discounted to allow a fair comparison in current dollars, and uncertainty must be

⁴ As defined by the United Nations Statistics division. The list of all 49 countries may be obtained from <http://unstats.un.org/unsd/methods/m49/m49regin.htm#least>.

⁵ The data involved in the calculation were obtained from the World Bank World Development Indicators Database.

accounted for through sensitivity analysis. Finally, double-counting must be avoided, and transfer payments should be ignored.

Clearly, the differing circumstances under which developed and developing economic operate have no bearing on the fundamental principles underlying cost-benefit analysis. However, in applying the principles, certain valuation techniques commonly used in developed countries are not appropriate for developing countries. To shed light on this, this paper examines how labor, goods, and financial markets differ between developing and developed economies, and how these differences may result in erroneous cost-benefit analysis if certain valuation techniques are used. The article then discusses behavioural aspects, and the relative advantages and disadvantages of employing various valuation techniques in conducting cost-benefit analysis in developing countries. Finally, the piece looks at whether the limitations of cost-benefit analysis are more severe for developing nations.

Differences between Developing and Developed Nations, and the Implications on Cost-Benefit Analysis

Labour Markets

There are three differences between developed and developing economies pertaining to labour markets that could significantly influence the results of cost-benefit analysis. The first is the higher level of disguised unemployment in developed economies, the second is the higher level of household production, and the third is the incompleteness of labour markets in developing nations.

Unlike in developed nations, the majority of the workforce in developing nations is employed in agriculture. In India, for example, 47 percent of the labour force is employed in the agricultural sector (CIA, 2014). This in itself will not necessarily distort a cost-benefit analysis. However, a significant portion of these agricultural workers are actually only employed in name and paid a token wage despite making no marginal contribution to the production process. This practice is not uncommon in developing nations, where farm owners routinely hire family members and pay them a token wage, even when there are clearly no additional gains to be made from their employment apart from familial goodwill.

This phenomenon has serious implications for cost-benefit analysis, which requires that items be valued at their opportunity cost. The opportunity cost to reallocate a disguised unemployed labourer to a new position is zero. However, conventional cost-benefit analysis values the cost of labour using the wage rate. If a government project resulted in a labourer moving from disguised unemployment to a new, productive position paying the same wage, that new wage would count as a cost for a project. But, in reality, there is no opportunity cost associated with that labourer's prior position – the prior employer loses no productivity when the worker leaves, and just saves the wage. In this instance, the cost is overestimated.

The challenges posed by disguised unemployment are illustrated in the following scenario. Imagine a communal farm that currently produces \$9,000 worth of output every year. The farm is co-owned by the whole village that has a population of 30 people. All the villages who work on the farm received an equal share of the total output's value, ie \$300 per year. Because there are more than enough farmhands, 10 of the workers do not actually contribute to the total farm output. That is, even if they stopped working, the farm output would remain exactly the same. Therefore, the marginal output of the last 10 farmhands working in the village is zero.

Now, imagine that the government proposed to start a project in this particular village that would generate \$1,000 in benefits. To carry out this project, the government will have to hire 10 local workers, at a total cost of \$3,000, which is the exact amount those 10 villagers would have earned working at the farm for the year. A typical practice in cost-benefit analysis is to enter the prior wages of the workers who switch jobs as a cost item, because it is assumed that their prior wages represent their productivity at their past jobs. Since the project reallocates their labour, the opportunity cost is the work they would have otherwise been doing.

Using this calculus, the hypothetical project yields net costs, because the wages of \$3,000 are greater than the benefits of \$1,000. However, in truth, the opportunity cost for the 10 farmhands giving up their previous employment should be zero, since their marginal productivity was zero. When they quit working at the farm, it continues to generate \$9,000 worth of output. The average output per farmhand increased from \$300 to \$450, because 10 of the original workers no longer draw income from the farm. Those 10 workers, in their new positions, together generate \$1,000 worth of value. Adding together the farm and new government project, the total productivity for the village is now \$10,000. Indeed, the government could pay for the project by taxing the 20 villages that remain as farmlands, and everyone could be made better off by the new project's additional benefits.

There is a caveat. Although hiring the disguised unemployed is said to carry zero opportunity cost based on productivity, this does not account for the value of forgone leisure or household production, including childcare and household work and maintenance. Such items may be significant if leisure is highly valued by individuals or if a large portion of the disguised employed are indeed actually employed in valuable household production.

This leads us to our next point: there are higher levels of household production in developing nations than in developed nations. Household production is defined as the production of goods and services by members of a household for their own consumption, using their own capital and their own unpaid labour⁶. This value is difficult to measure. Valuation methods generally fall into two categories: the opportunity cost method, where household production is valued at the forgone wage rate, and the replacement cost method, where the value is the cost of employing other people to do the work (Quah, 1993).

⁶ For a more detailed definition, see Ironmonger (2002).

In developed economies, household production can be priced because labour markets are generally efficient and reflect opportunity costs, and because demand for hired help exists. The same cannot be said for developing economies, where labour markets are largely incomplete and households undertake most household production. The households do not pay themselves for their household production, and therefore, such production cannot be easily priced. The same problem can be seen in the production that occurs in the underground economy, where illicit transactions of goods and services are not captured.

The valuation problem is twofold. First, there is the methodological issue that techniques relying on market behaviors to measure preferences will be inadequate because markets for hired help either do not exist or are significantly incomplete in developing countries. Second, the higher levels of production undertaken by households mean that cost-benefit analysis, which does not incorporate this production, is biased and inaccurate. While developed nations may sometimes face similar problems in conducting cost-benefit analysis, the scale of the impact is much smaller. Accordingly, the accuracy of cost-benefit analysis is much higher because of the existence and relative efficiency of the market for hired help, and much lower levels of household production.

The third difference between labour markets in developed and developing economies is their relative incompleteness and hence, inefficiency of the latter when compared to the former. This arises for a variety of reasons, including the extent of information failure and the ability of employers in developing countries to exercise monopsonistic power in the labour market.

The implication of the above differences is that wages in developing countries rarely reflect an individual's valuation of job attributes. In an efficient labour market, by contrast, undesirable job attributes are compensated with wage premiums, which may then be used to place a value on the job attributes. The wage premiums represent individuals' willingness to accept the disutility arising from the undesirable job attribute. The implication for cost-benefit analysis in developing countries is that intangible job characteristics, such as status and location, cannot be valued using hedonic pricing. A specific implication is the potential error in estimating the Value of Statistical Life (VSL), which is conventionally calculated by studying the wage premiums associated with the increased level of risk of losing one's life on the job, and then extrapolating to estimate the theoretical amount required to compensate someone for the loss of life (Mishan and Quah, 2007). Using wage premiums that do not accurately reflect the compensation required for the differing levels of risk results in an erroneous VSL. This has severe implications for all other cost-benefit analyses that will be used to evaluate projects that impact health and safety, since the values of many costs and benefits are derived from the VSL.

Goods Markets

Another major difference between developing and developed economies is that the goods markets in developing economies are likely to be less efficient than those of developed economies because of information asymmetry. The disparity is even more apparent since the advent of the Internet, which has, by and large, been more accessible to and more effectively utilized by the developed world. This point is best illustrated by the growth of online shopping, which has driven down prices in the developed world but has not had the same impact in the developing world.

Additionally, unlike in developed economies, the goods markets of developing countries are more likely to be distorted by taxation, subsidies, or other forms of governmental interventions (Dinwiddie and Teal, 1996).

The inefficiencies and distortions of the goods markets mean that in developing countries, prices may not reflect the true values of goods. Therefore, using prices to value input items, as is usually done in developed countries, would likely result in an inaccurate cost-benefit analysis in a developing country.

An indirect issue that arises from the inefficiencies and distortions of the goods markets is the valuation of intangibles and externalities. Typically, in developed economies, where the goods markets are considered efficient, intangibles and externalities are valued in relation to consumption through a revealed preference approach. For example, in estimating the value of national parks and related recreation in the United States, the travel cost approach is commonly used. This approach obtains a demand curve by examining the price of recreation in a national park, which is the cost visitors are willing to pay to travel to visit the park (Fix and Loomis, 1997; Beal, 1995). However, the credibility of such revealed preferences breaks down when a goods market does not produce prices that reflect the true value of a good. In the example of the national park, if fuel were distributed through a rationing system, then the private cost of traveling would be very hard to determine, and the demand curve obtained through typical techniques would be inaccurate. Rations and other forms of price distortions are prevalent in many countries in the developing world. The consensus is that where there are market distortions, shadow prices – the estimated prices of a good or service for which no accurate market price exists – should be used⁷.

The calculation of shadow prices is also subject to complications and much debate. Tradable goods in developing economies are an example of a class of goods for which it is difficult to obtain shadow prices. The problem arises due to the fact that exchange rates are required in the calculation of shadow prices for tradable goods. Unlike developed economies, the exchange rates of developing economies may fluctuate wildly and may not be reflective of the appropriate exchange rates. This exacerbates the issue of accuracy when using cost-benefit analysis, especially the technique of shadow price calculation.

⁷ This issue is not a new one, and there is an abundance of literature dealing with the matter. Boardman et al. (2006) provides a good summary of the literature and methods.

Financial Markets

Like the labour and goods markets, the financial markets in developing economies are also weaker than those in developed economies. Private banks in developing countries usually wield considerable monopolistic power, which they may exploit by charging interest rates above what a free market would produce (Yildirim and Philippatos, 2007). This bears on the issue of discounting, as the social discount rate takes into account both the opportunity cost of capital and a society's time preference. In developed economies, the opportunity cost of capital is usually estimated by the market interest rate. This is reasonable because financial markets in developed economies are generally mature enough to generate sufficient competition to drive down the market interest rate so that it truly reflects the opportunity cost of capital. Thus, it is less contentious to use the market interest rate to represent the opportunity cost of capital in calculating the social discount rate in developed economies. Unfortunately, the same cannot be said for developing economies.

Interest rates in developing economies are likely to be higher than the true opportunity cost of capital, because of profiteering by private banks. If the social discount rate for developing economies is calculated using the market interest rate as the opportunity cost of capital, the result is a higher social discount rate than is appropriate for measurement. Consequently, both future benefits and costs are more heavily discounted, and cost-benefit analysis is biased in favor of projects that yield short-term benefits and long-term costs. Thus, both the opportunity cost rate and the social time preference rate used as discount rates in most cost-benefit studies need adjustment downwards.

The market power exercised by private banks is different from the way time preferences in developing and developed societies are influenced by other social and economic factors. Populations in developing economies have shorter lifespans and lower incomes. Thus, these populations often have a higher preference for current, rather than future, consumption when compared to the preferences of populations in developed countries. Developing societies are likely to have shorter time preferences, and *ceteris paribus*, their social discount rate will therefore be higher. This difference in preference further raises social discount rates, albeit not as a result of some inefficiency in the market, but more reflective of genuine differences in individual preferences.

Overall, the nature of the labour, goods, and financial markets in developing economies clearly differs from those in developed economies. These differences can significantly affect the result and accuracy of a cost-benefit analysis if certain valuation or discounting techniques are used. These distinctions between developed and developing economies should be kept in mind by analysts seeking to develop accurate measures of the costs and benefits of social policies in developing countries.

Behavioural Economics and Cost-Benefit Analysis

In addition to fundamental differences between developed and developing countries with regards to discount rates, differences in behaviours also affect experimental design and results. This difference in behaviour detracts from traditional cost-benefit analysis, suggesting that both gains and losses have to account for psychological as well as physical attributes.

Loss Aversion

In practice, the study of loss aversion is the most common example which alters measurement values in cost-benefit analysis. Theoretically, gains and losses should be identical in nature and hold the same valuation when it comes to measurement. In the case of gains, it is the maximum amount that a person is willing to pay while losses account for the maximum payment that a person is willing to accept for the loss. Results of cost-benefit analysis should then be a summation of the respective valuations of gains and losses, with the end results being similar (Henderson, 1941; Mishan and Quah, 2007).

Yet, there is a significant disparity when measured, with values that accounted for a person's willingness to accept being far larger than his willingness to pay (Putler, 1992; Knetsch and Sinden, 1984). Knowing that differences do arise when considering people's valuations of losses and gains, failing to account for this will create inefficient and often biased decision-making. This is especially the case when analysing developing countries where the majority of the population is often poor, making them more risk averse since their margin for error is lower as compared to individuals in developed countries.

The Choice of Measurement

Another debate would be the use of appropriate methods of measurement. Due to loss aversion, the use of the willingness to pay criterion, a method of measurement in cost-benefit analysis, may sometimes not be appropriate for situations where willingness to accept measures should have been implemented instead, leading to systematic undervaluation of the actual costs (Knetsch, 2013).

This presents a danger in policymaking in developing countries as policies that aim to counter actions that have negative externalities, such as pollution, are likely to be under-weighted, and there may be an undue encouragement of activities that have negative consequences. This explains lax environmental standards especially since the benefits of economic growth are quantitative while the costs are subject to measurement bias.

Sunk Costs

Another behavioural oddity is that of sunk costs. It appears that behavioural economics shows that many people consider such costs, while conventional

neoclassical economics does not. This has serious implications for the evaluation of infrastructure expansion. For example, would an old ferry's capital cost be considered when deciding a new ferry or alternative transport mode? Behavioural economics, in considering sunk costs, may seem to say so whereas standard economics may not.

In developed economies, this may not pose a major problem with a larger budget but in poorer developing countries, it makes a big difference as to whether the old ferry is kept or scrapped. The correct decision based on cost-benefit analysis is that as long as the old ferry can still cover its operating cost, the decision to have the new ferry should not be affected by this. In other words, cost-benefit analysis does not consider sunk costs.

Challenges of Various Valuation Techniques in Developing Economies

Valuation techniques in cost-benefit analysis may be broadly classified into two categories: revealed preference approaches and stated preference approaches. Revealed preference approaches are indirect methods that attempt to discern the values of items by observing how people behave. To find out the value people attach to a particular view from a house (for example, with a sea view), hedonic pricing – a revealed preference approach – may be employed. This involves comparing the prices of two houses that are similar in every aspect apart from the view. The price differential is then taken to be the value people attach to the view. Stated preference approaches are methods based on directly eliciting the individuals' preferences. Going back to the example of valuing a view, a stated preference approach – the contingent valuation method – could be used. It would entail a survey requiring people to state how much they would be willing to pay for a particular view (Quah and Tan, 1999). Hedonic pricing and the contingent valuation method are the prototypical examples of each approach.

Neither method is perfect. Most revealed preference approaches, including hedonic pricing and the travel cost method, require strong assumptions of rationality, perfect information, and perfect mobility to be valid (Quah and Ong, 2009), while stated preference approaches, including the contingent valuation method, are susceptible to a large number of behavioural effects (Kahneman and Knetsch, 1992; Carson et al., 2001) and methodological biases. In the context of a developing nation, such flaws may be magnified. We look at each approach in turn.

As illustrated previously, incomplete accounting in the labour, goods, and financial markets in developing economies make the assumptions required by revealed preference approaches untenable. Stated preference approaches may not be entirely suitable for developing economies either. The behavioural effects may be even more pronounced in developing economies because of the relative rarity of people's experiences in survey participation. List (2003) shows that behavioural effects are, at least in part, brought about by a lack of experience with the decision-making circumstances. Therefore, the magnitude of behavioural biases in stated preference approaches is likely to be much more significant in developing nations.

Methodological biases in stated preference approaches also tend to be larger in developing nations because of the lack of trained interviewers (Hanley and Barbier, 2009). One common problem is the inability of both interviewers and interviewees to differentiate between willingness to pay and ability to pay. Such misunderstandings are further exacerbated by cultural and linguistic differences. Additionally, surveys typically carry significant costs that cash-strapped governments will be hard-pressed to cover. Thus, particularly for developing nations, these two valuation techniques have obvious pitfalls which may render results dubious.

A third valuation technique, the paired comparison approach, may prove to be the best solution, as it avoids the obvious flaws of the other two methodological classes (Quah et al., 2006). The paired comparison approach uses a survey to elicit individual preferences for public and environmental goods. Sets of elements are presented in pairs as discrete binary choices in a survey. The set may include gains, losses, activities, environmental resources, or anything else being scaled. Respondents choose the item that they feel is more important, in that sense that larger compensation should be paid for it than for the other (Rutherford et al., 1998). The variance stable rank method is then used to derive the ranking. This method takes the total number of times an element is selected by all respondents and divides it by the maximum number of times it could have been selected. Ordinal rankings are derived based on the results, with some degree of discretion allowed since some elements may have the same ranking.

Since a paired comparison uses surveys, like stated preference methods, it avoids the need for the strong assumptions required by revealed preference methods. It also overcomes the key behavioural effect that plagues contingent valuation methods, which is known as the endowment effect. The endowment effect uses willingness to pay, which is obtained from a buyer's point of view. By contrast, the willingness to accept is obtained from a seller's perspective. These different reference points often result in different valuations (Knetsch and Sinden, 1984). Paired comparison offer a third reference point – that of the selector. As no real or perceived loss occurs in this case, behavioural effects like loss aversion, which can impact the results of a willingness to accept survey, are avoided (Kahneman et al., 1999).

Detractors claim that the paired comparison method has the severe drawback of not providing a measure of the net benefits derived from a project. While the method may indicate a society's priorities and may prove useful to policymakers in deciding which projects should take precedence over others, this method does not provide policymakers with information on how to get the maximum mileage out of their dollars. However, this concern can be addressed by including monetary items in the paired comparison choice set. Ranking of all items, both monetary and nonmarket, can then provide estimates of the upper and lower bounds of the monetary values of the nonmarket items.

While neither revealed nor stated preference approaches are entirely suitable for developing nations, a paired comparison approach may prove to be a valid and useful option. Nonetheless, in conducting cost-benefit analysis, governments of developing economies will have to exercise caution in choosing the most appropriate valuation method for their purposes in order to avoid distortions.

The Severity of the Limitations of Cost-Benefit Analysis for Developing Nations

A serious criticism of cost-benefit analysis is that it may result in forgoing equity in the pursuit of efficiency. In a typical cost-benefit analysis, the value of a dollar does not reflect who receives the benefits of a project, or who pays its costs. Hence, it is conceivable that cost-benefit analysis could increase inequity by approving projects that yield net benefits even when most of the benefits accrue to the rich and most of the costs are borne by the poor. In a developed nation, this is not a major problem, as there are usually governmental channels, such as progressive taxation and estate taxes, to redistribute wealth and prevent the income gap from widening too much or too quickly. Developing nations, however, tend to lack such channels. In fact, prevalent corruption, a chronic problem for most developing nations, specifically prevents the formation of such channels, because it is often in politicians' interests to line the pockets of their business-sector donors.

Additionally, income inequality is generally a larger problem for developing nations than for developed nations. When ranked by their Gini coefficient, the ten countries with the highest income inequalities are all developing nations, while majority of the ten countries with the lowest income inequalities are developed nations (UNDP, 2016).

Cost-benefit analysis need not completely ignore equity. One commonly proposed strategy is to apply weights to costs and benefits, to reflect the relative importance of monetary values to different social classes. For example, benefits or costs accruing to low-income groups may be multiplied so that the costs and benefits to them are magnified, and projects in their favour will have better chances of being approved. While this principle is basically sound, the application of this weighting is highly problematic. First, there is the technical issue of determining what weights should be employed to adequately address inequity. While it is clear that the greater the importance attached to inequity issues, the larger the weights should be, the appropriate number is still difficult to calculate or determine. One possible solution is to infer the implicit weights attached to different social groups by examining existing policies. However, this solution is problematic, as it can merely reinforce existing biases, which may be completely unjustified in the first place.

A second concern is the possibility of abuse. With equity weighting, cost-benefit analysis could be manipulated to produce any result desired simply by adjusting the weights attached to a particular group's welfare. In developing countries, the possibility of abuse is higher because of the relative lack of checks and balances on ruling powers. This further renders the usage of weights to address the inequity

issue unsuitable for developing economies and consequently, reduces the ability of cost-benefit analysis to take into account inequity issues in these economies.

Conclusion

As this discussion indicates, there are both similarities and differences between cost-benefit analyses conducted in developed and in developing countries. While the fundamental principles underlying cost-benefit analysis remain unchanged, the methodologies that are most appropriate in each context may differ. In fact, it is precisely in abiding by those principles that certain valuation techniques may become unsuitable. For example, it is specifically through the desire to achieve accurate valuation – a cardinal principle of cost-benefit analysis – that the incompleteness of the labour, goods, and financial markets in developing economies may render revealed preference approaches unsuitable and inferior to stated preference and paired comparison approaches.

In addition, the overall merits and limitations of cost-benefit analysis shift depending on the state of economic advancement. The need for cost-benefit analysis is indeed more pressing for developing economies, since they must contend with a number of conflicting and yet critically important goals, such as increasing economic growth while nonetheless, conserving natural resources. However, cost-benefit analysis has severe limitations regarding equity concerns, which poses a pronounced challenge for developing economies utilizing the technique. The question then follows: should governments of developing economies employ cost-benefit analysis as a decision-making tool?

This evaluation has argued that cost-benefit analysis can, and should be used by the developing world. Cost-benefit analysis is a very useful tool for policymakers. Conducting the analysis requires asking important questions, including what costs and benefits should be measured and how to measure them; what communities and stakeholders will receive the benefits and pay the costs; how uncertainties and equity issues will be addressed; what the appropriate investment decision criteria are; and whether there are constraints on the results. Systematic decision-making that uses consistent and transparent methodologies is valuable in formulating public policy in both developed and developing countries. At the same time, cost-benefit analysis can only fulfill its potential if three important issues are taken into account. First, cost-benefit analysis is only meant to be a guide and should not be the final or only arbiter of project proposals. Second, in conducting cost-benefit analysis, the appropriate valuation techniques must be selected. Finally, potential equity issues must be independently considered and treated as an imperative complement to a robust cost-benefit analysis.

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