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ESTIMATING THE MONETARY BENEFITS OF BUSINESS ENVIRONMENT REFORMS

SPEED PROJECT GUIDELINES

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INTRODUCTION

This paper sets out a pragmatic and systematic framework for estimating the monetary benefits for Mozambique from business environment reforms supported by USAID's SPEED project (hereinafter, the "project"). The framework can be applied to a variety of issues, including policy changes, regulatory measures, efforts to strengthen the implementation of reforms, and even interventions aimed at preventing the introduction of new regulatory obstacles to trade, investment and job creation.

In view of its broad applicability, the framework does not impose a standard model or methodology for valuing benefits. As recognized in the guidance on regulatory analysis by the United States Office of Management and Budget, "You cannot conduct a good regulatory analysis according to a formula." Instead, the analytical methodology is to be determined case by case, depending on the nature of the benefits, the availability of data, and the cost to the project of conducting the analysis in terms of budget and time resources.

By demonstrating the tangible effects of market-supporting reforms, the benefit estimates produced under this framework should serve as a valuable instrument for strengthening advocacy and building political support for improvements in the business environment in Mozambique, Indeed, the intention is that the SPEED project will not only develop and implement this tool, but also transfer the methodology to local stakeholders in order to institutionalize the capacity for evaluating the benefits of other policy reforms.

The framework also calls for assessing the extent to which benefits can be attributed to USAID involvement. These attributable benefits can be summed and compared to SPEED project costs to provide a lower-bound estimate of the rate of return on USAID's investment in these reform activities. There are two reason for regarding the results as a lower-bound to the actual benefits of SPEED-supported reforms: first, some benefits will not be quantifiable; and second, the framework calls for applying conservative assumptions to resolve uncertainty about parameter values or benefit estimates, to ensure that the results are credible and defensible.

OVERVIEW

For each SPEED-supported reform activity, the framework involves four steps: first, establish a pragmatic evaluation plan for quantifying benefits in monetary terms; second, conduct the analysis; third, prepare the benefits report and document the findings; and fourth, verify the results and finalize the documentation.

ESTABLISH THE EVALUATION PLAN

For each project initiative supporting a business environment reform, it is important to think systematically at the outset about what the reform is supposed to achieve, the extent to which the benefits can reasonably and pragmatically be quantified, and the technical approach for conducting the impact evaluation. The purpose of this up-front process is to establish the scope of the evaluation and clarify the associated data requirements. This process may also help to inform the selection of project activities, and perhaps the design of the intervention.[1]

The preparation of an **Evaluation Plan** for each activity should not be a lengthy exercise. The idea is to conduct initial discussions about the issue and then record the plan in a short memorandum covering four points:

- What is the issue? What is the purpose of the reform, or the underlying development hypothesis?
- What are the major benefits for Mozambique? What are the major economic or social costs, if any? Who are the main stakeholders?
- What is the role of the SPEED project?
- To what extent can the benefits be measured and monetized? What methodology is to be used? What are the data requirements (including baseline data), and the plan for obtaining the data? What approach will be used to assess the extent of attribution to SPEED support?
- At what point in the reform activity should the evaluation be scheduled? Should there be an ex ante appraisal, or just an ex post analysis? Even the latter will require action up front if baseline data are needed.

Annex 1 provides a template for this purpose. The Evaluation plans that are completed each quarter should be appended to the respective quarterly reports.

CONDUCT THE ANALYSIS

The methodology and data requirements for estimating the monetary benefits of SPEED-supported reforms will be defined case by case, depending on the nature of the reform and the availability of data, and project resource constraints. In every case, however, the methodology has to answer the question:

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[1] This approach creates an incentive for project management to ensure that the portfolio of activities includes interventions that not only have a catalytic impact, but also an impact that can be quantified and monetized. Given the importance measuring results, this is a healthy incentive.

"What difference does this reform make?" This is the essence of an impact evaluation:2 one must compare the change in key outcome indicators as observed or projected *with* the reform to an estimate of the outcomes that most likely would have occurred *without* the reform (or the "counterfactual").

Simply measuring changes in the value of a key indicator relative to the baseline situation can give a very misleading picture of the impact of the benefits, because observed outcomes can be heavily affected by factors other than the reform itself. Suppose, for example, that the data show a 10% increase in income from tourism following a reform to simplify the visa process and reduce visa fees. By itself, this observed outcome says nothing about the impact of the reform, because tourism income might have been increasing due to other factors. To measure the benefit of the reform one must compare the observed outcome to a plausible counterfactual, taking into account factors such as the underlying trend in tourism, the price elasticity of tourism visits, and international benchmarks.

It is also important to establish, where possible, the extent to which benefits can credibly be attributed to USAID involvement (discussed below). If the attribution is less than 100%, then the impact of SPEED support will be correspondingly less than the overall monetized benefit of the reform. Both estimates are of interest.

Depending on the issue, the impact analysis can take anywhere from a few days to several weeks of effort. For particularly important reforms, it may even be worthwhile to conduct special surveys to obtain baseline and post-reform data for a rigorous impact evaluation; in this case, the process might involve months of effort and a relatively large budget commitment.

Even when quick and simple methods are used (which will often be the case, on grounds of pragmatism and cost), there is always a premium on producing credible estimates. Any time a benefit estimate would rely on unsupported suppositions, the benefit should be identified and classified as non-quantifiable, but excluded from the quantitative impact analysis. A credible measure that covers a subset of the benefits is more useful than a contrived measures of the full benefit. And even though the quantitative estimates are limited to a subset of the overall impact of the project, any well managed USAID project to facilitate business environment reforms ought to show a high rate of return on the investment of taxpayer funds.

PRESENT THE RESULTS

For each project-supported reform initiative, the results the benefits analysis should be reported and documented concisely and transparently in a package with three components.

- First, the technical details – including the key data points, the assumptions, the calculations and the sources – should be summarized in an Excel spreadsheet.[3] Annex 2 presents a model template for this **Benefits Evaluation Sheet**.

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[2] USAID's Evaluation Policy (2011, p. 4) defines an impact evaluation as one the measures "the change in a development outcome that is attributable to a defined intervention." This is distinguished from a performance evaluation, which addresses "descriptive or normative questions" about project or program achievements.

[3] The MCC has been a world leader in providing transparent access to spreadsheets showing the technical details of their economic analysis calculations. See http://www.mcc.gov/pages/results.

- Second, the results of the analysis should be summarized in a **Benefits Report**, in a maximum of 3 pages. The report should very briefly:
  - Explain the issue;
  - Outline the role of the SPEED project intervention;
  - Summarize the basis for the calculations, including the specification of the counterfactual scenario;
  - Report the monetized benefit of the reform (where available); and
  - Report the monetized benefit attributable to USAID (where available).
  - Explain any major benefits or costs that cannot reasonably be monetized, including likely spillover effects from the reform.
  - Annex 3 presents a model for standardizing the Benefits Report.
- Third, the project should maintain a **Benefits Summary Matrix** to provide a cumulative tabulation of the monetized benefits across project activities. Annex 4 presents a model template for this purpose.

Subject to verification (below), the Benefits Report that are completed each quarter should be appended to the respective Quarterly Report for the project, along with the Benefits Summary Matrix showing cumulative results to date. In addition, all three of the results documents should be posted on the project website.

VERIFY THE ANALYSIS

Once the Benefits Evaluation Sheet and the Benefits Report for a particular reform activity are in draft form, and following an internal quality-control review, the Chief of Party should solicit an external review to validate the methodology, data, and assumptions, and confirm the credibility of the results. At least for initial applications of the framework, the review should take the form of a written statement to the COP by a local consultant with expertise in economic analysis and familiarity with the business environment issues; this review should be part of the project record. The COP should also share the draft with USAID and selected stakeholders or officials, requesting comments on the credibility of the analysis. The distribution list for comments and any responses should be placed on file.

For especially important reform issues, it would also be worthwhile organizing a seminar or a validation workshop for stakeholders to review the methodologies, data, assumptions and endorse the results.

Following the verification process, the Benefits Evaluation Sheet and the Benefit Report can then be finalized, taking into account the feedback.

GUIDELINES FOR MONETIZING BENEFITS

This section briefly discusses the main technical issues involved in estimating the monetary benefits of SPEED-supported business environment reforms.

DEFINING BENEFITS

The basic target for evaluation is the monetary value of benefits *to Mozambique* resulting from SPEED-supported reforms to the business environment, where the benefit is measured relative to a well defined counterfactual (discussed below). The present framework focuses on the monetary benefits of project-supported reforms, but does not require a full *economic* analysis. While this is less than ideal, it is still a major advance over the evaluation methods used in most USAID projects. An economic analysis is more complex and it requires more data and more technical training. This is discussed further below.

The benefits may come in a variety of forms, including:

- A reduction in administrative compliance costs for the private sector due to the elimination or modification of government-imposed requirements. Compliance costs can be estimated with data on the number of procedures required per year per firm, the time per procedure, the average wage per unit of time, and the number of firms affected. This calculation is the focus of the Standard Cost Model, discussed below.
- A reduction in explicit financial costs to the private sector in the form of fees, levies, and stamp duties. A saving on fines and penalties associated with burdensome regulations can also be a significant benefit to the private sector, though it may be more difficult to measure. Note that this type of benefit would be excluded from an economic impact analysis because it involves a transfer rather than a net economic gain. In this case the financial gain to the private sector involves a loss in revenue to the government, which should be noted in the analysis. Nonetheless, if support for the private sector is an objective, the financial saving to the private sector is still a meaningful indicator.
- A reduction in delays involved in fulfilling a regulatory requirement, gaining a required approval, or dealing with a government agency. Examples include reforms that reduce the time required for obtaining a business registration, a VAT refund, or border clearance for imports or exports. The value of a delay can be calculated in various ways depending on the issue. For example, if a reform reduces by one day the average waiting time for a truck to drop off exports or load an import shipment, the saving can be valued by getting data on the average cost of a truck and driver per day and the number of trucks entering the ports. In other cases the economic benefit of reducing the delay might be estimated using the pro-rated cost of working capital, or the opportunity cost of time for the entrepreneur,[4] combined with data on the frequency of the respective procedures.

[4] This might be done, for example, using income distribution data and assuming that the opportunity cost of labor for the average entrepreneur is no less than the 50th percentile of the distribution.

- Economic effects in the form of increased revenue or income (as in the example of increased tourism cited earlier), or cost saving through efficiency gains, or the benefit to consumers from price reductions due to increased competition.
- A reduction in training or equipment costs that are solely needed for compliance with government mandates or procedures.
- A reduction in administrative costs to the government, for example by streamlining procedures for revenue collection or converting to electronic payments.
- A reduction in "unofficial" costs or penalty costs. In most cases it will not be possible to quantify this element, especially given that the pre-reform costs vary enormously from one firm to the next, and even one instance to the next for the same firm.

The benefits of a reform may include some once-off gains, but most of the effects will be recurrent, and even growing over time. Hence, a single-year estimate would seriously understate the benefits. Where possible, the evaluation should estimate (very conservatively) the prospective time stream of benefits. In this case the appropriate measure is the present value of the estimated benefits over time, with future values discounted to a suitable base period, preferably year 1 of the project. (The issue of the discount rate is discussed below.) Standard practice for cost-benefit analysis within the U.S. government is to use a horizon of 10 years. A shorter time frame should be used, though, when there is no credible basis for longer estimates. In all cases, changes over time that are measured in monetary value should be adjusted for inflation and expressed in constant price terms.

In some cases, a business environment reform entails economic costs, along with benefits. For example, economists often cite restrictive labor market regulations as a significant barrier to job creation and labor-intensive investment. These regulations also provide benefits to workers with formal sector jobs, such as a guarantee of severance pay. Indeed, this is the reason for such regulations in the first place – and the reason that labor market reforms are difficult to achieve politically. A reduction in the restrictive labor market regulations therefore entails both benefits and costs, including possibly job losses in the short run. In cases like this the impact evaluation should seek to measure the net effects. If the costs cannot be quantified, the write-up should at least explain these considerations to provide a balanced view of the effects of the reform.

Finally, it is important to stress again the need to be pragmatic. The basic objective is to monetize the main benefits of SPEED-supported reform initiatives to the extent that the exercise makes sense technically and financially. The analysis need not and should not seek to quantify minor benefits, or benefits that are too costly to quantify relative to the value of the information. These considerations should inform the Evaluation Plan from the outset, and drive mid-course adjustments in implementing the benefits analysis.

DATA SOURCES

The heart of the evaluation process is the collection and analysis of data to quantify major benefits accruing from SPEED-supported reforms. This will include up-front efforts to collect baseline data and establish procedures for tracking key indicators. Indeed, one of the main reasons for producing an Evaluation Plan at the outset of each reform initiative is to think through these data requirements.

Depending on the nature of the reform, and on cost considerations, the benefit evaluation can draw on some combination of the following sources:

- *Primary data reports*. Official statistics provide a great deal of information on economic conditions, ranging from household surveys to sector statistics (for example, on tourism, agriculture, or business registrations), trade and investment flows, financial sector performance, and fiscal indicators, among many other. In some cases, details needed for the benefits analysis will not be found in the published statistics, but can be obtained through direct contact with the responsible agencies.

- *Special purpose surveys*. Where randomized trials can be applied (see Counterfactual, below), special surveys are essential to the evaluation process, covering both the beneficiary group and the control group. In other cases, special surveys can produce extremely important and detailed data that would otherwise not be available. These surveys can be expensive, and should be used only if the cost is justified by the value of the information, either for the SPEED evaluation or broader purposes. For example a recent USAID project in Armenia was involved in reforms to enhance the competitiveness of the tourism sector. One of the first steps taken by the project was to work with the government to conduct a comprehensive tourism survey at every major entry/exit point. The survey produced vital baseline data for assessing the benefits of project activities, but also served wider purposes.[5]

- The cost itself can be reduced by using on-line survey resources,[6] or by making arrangements to add special questions to an existing survey instrument. In addition, for some purposes a small-sample "quick survey" may provide useful information, even if the results fall well short of textbook standards for statistical validity.

- *Secondary sources*. Key indicators can often be obtained from reports and studies produced by the World Bank, the IMF or other organizations; from academic studies; or from a variety of on-line data sets, the best known being the World Bank's World Development Indicators, and the IMF's International Financial Statistics. The international data sets draw on primary sources from the national governments, and with a lag. Hence, Mozambique sources will usually be the first recourse. But international data sets are the best source for international benchmarks, and may often be the most convenient source for time series data to establish trends (for defining the counterfactual, as discussed below).

- *Structured interviews*. An excellent way to begin the evaluation process is to conduct interviews with people in the business community, government officials, and other experts, including SPEED project personnel who are working on the issue. These interviews can be an invaluable and highly cost-effective source of information about the reform issues and data for the benefits analysis. The quality of the information will depend on the knowledge of the experts, and on their personal perspectives. It is important, where possible, to validate the information , triangulate the results through multiple interviews, and exclude any dubious data from the benefits analysis.

- *Focus groups.* A focus group brings together a set of experts or stakeholders to discuss a specific set of issues. Focus groups are led by a facilitator, whose preparations and guidance are critically important. An excellent way to organize a focus group is through a relevant business association that is engaged

[5] This was done under the Competitive Armenia Private Sector Project (CAPS).

[6] There are inexpensive services for this purpose, such as http://www.surveymonkey.com/.

with the SPEED project. A strength of focus groups is that they permit interaction among stakeholders. Often this interaction is helpful in clarifying issues, verifying information, and challenging idiosyncratic views. A weakness of focus groups is that social norms or personality differences may lead to one stakeholder dominating the discussion. An effective facilitator will counteract this to achieve an open discussion and sharing of independent viewpoints.

- *Business associations*. Business associations may be a valuable source for specialized data on the effects of regulations, and access to data from members. Through these associations, it might also be possible for the project to organize a panel of business leaders to meet regularly for discussions about the impact of reforms and associated data issues. The project can also consider outsourcing data collection to associations, to benefit from their relationship networks. For example, in the Armenia project mentioned above, a leading association for the Information Technology sector was able to conduct a confidential survey of software firms and obtain data that the government would not have been able to get. Other types of non-government organizations may also be useful sources of special-purpose information or data.

It is essential to document the source for any data used in the benefit evaluation. This information should be recorded in the Benefits Evaluation Sheet for each reform initiative, and the main data sources should be identified briefly in the Benefits Summary.

NON-MONETIZED BENEFITS

Many reforms will deliver benefits that cannot easily be quantified and monetized. Indeed, the main objective for many reforms is to elicit broad market responses over time, in the form of new investments or business expansion. This type of benefit is inherently difficult to quantify. As an example, with the customs reform cited above it is relatively easy to estimate the direct economic benefits from reducing the waiting time for trucks at the port, but it would be very problematic to estimate the overall effects on trade, the multiplier effects, or the general equilibrium impacts on the economy.[7] In other cases, it may be quite feasible in technical terms to estimate the benefits, but only at a high cost (as discussed in the next section).

Thus, the monetized benefits will usually be limited to the direct effects of project supported reforms (where benefits are always defined relative to a plausible counterfactual), excluding dynamic market responses over time or multiplier effects. If these indirect effects are important, they should be discussed as such in the Benefits Report even if the impact is not quantified. The same treatment should apply to any significant economic costs that cannot be quantified.

For some reforms it will be possible to quantify the impact, but not in monetary terms. Referring again to the example of a visa reform, there may be adequate data to gauge the impact on the number of tourist-days, but no data on expenditure per tourist, which would be required to monetize the benefit. In cases

[7] Even in the United States, and for measures as familiar as counter-cyclical government expenditures, estimates of the multiplier effects are subject to wide variation from one model to the next. See Alan Auerbach, William Gale and Benjamin Harris, "Activist Fiscal Policy," *Journal of Economic Perspectives* 24:4 (Fall 2010), 141-164. In Mozambique, multiplier estimates would be even more problematic.

where a non-monetary impact is the only measure available it should still be cited in the Benefits Report and in other project reports. But it cannot be added to the list of monetized benefits.

COST OF DOING THE ANALYSIS

In theory, nearly every benefit can be measured with high accuracy if enough resources are devoted to the evaluation. In practice, decision on what benefits can be quantified for any given reform initiative must take into account not only technical factors but also the cost to the project for conducting the analysis, in terms of both budget resources and personnel time.

USAID's Evaluation Policy (2011) states that "approximately 3 percent of total program dollars, on average," should be devoted to external performance and impact evaluations. This guidance refers, however, to expenditure on independent evaluations. The Policy does not provide similar guidance for the extent to which a project's own resources should be devoted to evaluation activities. Budget and time costs may dictate frequent use of rapid appraisal methods based on accessible primary or secondary data and benchmark comparisons, a limited number of expert interviews or focus group discussions, and sound professional judgment.[8] It is important to emphasize that low-cost appraisal methods of this sort can often produce reasonable and defensible results.

It is the responsibility of the COP to decide on the allocation of resources for the benefits assessment case by case, in consultation with the COTR and the SPEED technical team. In some cases the COP might decide that the quantitative analysis should be limited to impacts that can reasonably be estimated in three days of staff time or less. In other cases five days of staff time might be warranted. Of course, more costly methods could also be used when justified by the importance of the reform activity.

THE COUNTERFACTUAL

The counterfactual scenario for an impact evaluation is ideally determined using a randomized control trial that yields a rigorous statistical comparison between a "treatment" group of beneficiaries and a control group not covered by the treatment (forming the counterfactual). An alternative approach, also with a high degree of rigor, is a quasi-experimental design that isolates the with-versus-without effect of the intervention through an econometric analysis using a data set that includes beneficiaries and non-beneficiaries. These methods are not widely applicable, though, to business environment reforms because it is often not possible in this context to isolate a control group through the sample design or statistical analysis. Also, as emphasized above, cost considerations will often dictate the use of rapid appraisal methods to determine the counterfactual, along with other aspects of the analysis.[9]

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[8] See USAID (2010), Conducting Mixed-Method Evaluations, Performance Monitoring & Evaluation TIPS note Number 16. Also: World Bank Operations Evaluation Department (2004), Monitoring & Evaluation: Some Tools, Methods & Approaches.

[9] USAID's Evaluation Policy (2011, p. 9) calls for "a credible and rigorously defined counterfactual..." and states that "…experimental methods generate the strongest evidence. Alternative methods should be utilized only when random assignment strategies are infeasible." The OMB's 2003 circular on Regulatory Analysis is less stringent, calling for "the best assessment of the way the world would look absent the proposed action" (p. 15). The OMB also emphasizes the need to establish "sound and defensible values and procedures… and ensure that key analytical assumptions are defensible" (p. 27).

In some special cases the counterfactual will be trivially easy to determine because the available information will indicate convincingly that the baseline indicators would have remained unchanged without the reform. In this situation – but only in this situation! – a simple before-and-after calculation can provide a valid measure of the benefit of the reform.

Usually the counterfactual has to take into account, at a minimum, the recent trend for key indicators. The impact of the reform is then determined by comparing the observed change to the change that would be projected from the trend. The analysis should also adjust for significant changes in economic conditions that affect the growth trend for key indicators, such as the economic crisis in 2008-2009. For reforms affecting particular sectors, a plausible counterfactual might also be established using a benchmark derived from contemporaneous changes for a comparable sector, or the same sector in a comparable country. In some cases it may also be possible to establish a credible scenario by probing this question carefully in interviews or focus group discussions, and triangulating the responses. Data-based methods, however, are strongly preferred.

DISCOUNT RATE

As noted above, business environment reforms produce benefits that accrue over more than just one year. To measure the overall benefit, year-by-year estimates have to be converted into base-year "present values" using an appropriate discount rate reflecting the rate of return that invested resources could be earning in other uses.

The choice of an appropriate discount rate has been a source of debate for decades within the professional literature. In the United States, OMB guidance for regulatory analysis suggests using a discount rate of 7 percent for measures affecting private investment (rather than consumption).[10] This is an estimate of the average before-tax real rate of return on private capital, and thus the opportunity cost of capital.

For developing countries, a simple approximation to the opportunity cost of private sector capital: the average real interest rate (RIR) on one-year bank loans for businesses. The RIR can be calculated as the average lending rate minus the average inflation rate for the base year of the investment.[11] The investment appraisal method used at the MCC calculates a rate of return on each program component and applies a country-specific "hurdle rate" between 10% and 15% as the cut-off for deciding whether the investment is justified.[12] The decision on the hurdle rate is essentially equivalent to selecting a discount rate. The World Bank conventionally uses a discount rate of 12%, subject to country-level considerations.[13]

For monetizing the benefit of SPEED supported reforms in Mozambique, the recommendation here is to use an estimate of the opportunity cost of capital to determine the discount rate, with a minimum value of 10% (in line with the MCC guideline).

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[10] OMB, *op. cit.*, p. 33.

[11] A more exact formula is: RIR = (1+i)/(1+p) – 1, where i is the nominal interest rate on one-year bank loans to businesses, and p is the average inflation rate for the latest year.

[12] Franck Wiebe, Aid Effectiveness: Putting Results at the Forefront, Millennium Challenge Corporation, October, 2008, p. 7.

[13] Institute for Transport Studies, *Toolkit for the Economic Evaluation of World Bank Transport Projects*, University of Leeds, 2003, at: http://www.its.leeds.ac.uk/projects/WBToolkit/

ECONOMIC IMPACT

The present framework focuses on quantifying in monetary terms the benefits for Mozambique from various reform initiatives. As discussed above, this requires that the benefits of each reform are measured relative to a well defined counterfactual scenario. It also calls for estimating the expected time stream of benefits, and applying an appropriate discount rate to compute the present value of the benefits. In line with requirements of the SPEED project contract, the framework does not mandate a full economic impact assessment.[14] This type of analysis would typically be more complex, and it would requires more data, more time and budget resources, and more training for the analysts.

To understand the distinction between monetary benefits and the *economic* impact of a reform, consider the example of a customs reform that results in $50 million of additional exports by local businesses, compared to a plausible counterfactual scenario. By itself, this is a useful measure of the monetary benefit from the reform. It is also a powerful statistic for demonstrating the importance of the reform activity. Yet it does not show the economic benefit to Mozambique from increased exports. To do that, one must take into account, among other things, the extent to which the additional export earnings derive from value added in Mozambique, versus import content or payments accruing to foreign investors. Furthermore, the economic analysis also has to take into account the opportunity cost of domestic resources used in the production process (among other technical requirements).

In essence, the monetized benefit is a measure of the gross value to Mozambique of particular outcomes, whereas the economic impact analysis measures the net increase in real incomes for Mozambique, or equivalently, the net saving in real resource costs. The export example shows that these two measures can be very different. It also suggests the type of additional data (or additional assumptions) that may be required for an economic impact estimate. (See also footnote 6 above.) Sometimes the extra data will be relatively easy to collect. If so, the benefit assessment should take the additional steps to estimate the economic impact of the reform. Indeed, for some cases no extra work is needed. For example, a USAID initiative in Georgia led to a reduction by two days in the dwell time for trucks entering customs zones to deliver exports or pick up imports. In this case, the monetized value of this benefit coincided with the direct economic benefit for Georgia.[15]

In cases where an economic impact estimate can be obtained, it should be shown in the Benefits Evaluation Sheet and summarized in the Benefits Report. To avoid complicating the reporting format, the proposed Benefits Summary matrix tabulates only the monetized benefits. The economic impacts can be summarized, however, in the quarterly and annual reports.

STANDARD COST MODEL (SCM)

In calling for the development of an analytical tool for estimating the monetary benefits of project-supported reforms, the SPEED Scope of Work specifically cited the Standard Cost Models (SCM) as an

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[14] The contract calls for the development of an analytical tool to provide “reasonable estimates of the monetary benefits” for each reform pursued.

[15] The full economic benefit, of course, would include the effects of this reform on trade and competitiveness. Over time, these indirect effects are likely to be far larger than the direct benefit of saving truck time. These indirect benefits are difficult to quantify, but they should certainly be discussed in the Benefits Report in qualitative terms.

approach to be used. The SCM has been widely applied to regulatory analysis by the European Union, endorsed as an international standard by the OECD, and adapted by the World Bank for application to developing countries. Following a pilot test of this approach, the SPEED project concluded that the SCM does not adequately cover the range of benefits from business environment reforms in Mozambique because it focuses narrowly on the administrative compliance costs of a regulation (see Defining Benefits). In addition, the technique can be difficult to implement in Mozambique because of data constraints.

Still, the SCM, as adapted by the World Bank, can be a useful part of the benefits evaluation in cases where administrative compliance costs are a major issue and the associated data requirements can be satisfied at reasonable cost. Hence, this section provides a brief explanation of the SCM methodology. [16]

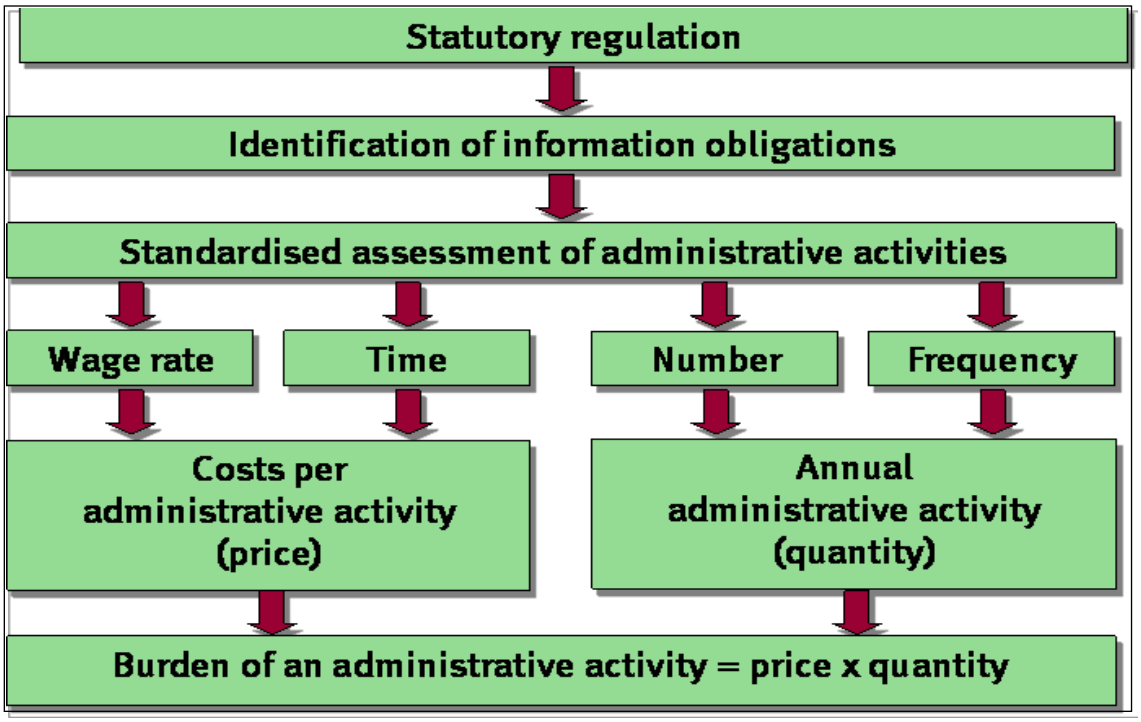
The SCM has been widely used to quantify the administrative costs to businesses for complying with a particular government regulation or requirement. Figure 1 provides a simplified summary of the logic involved. The analysis starts by identifying the procedures or "information obligations" imposed on the private sector by a given regulation or requirement, followed by an enumeration of the "administrative activities" needed to carry out these procedures. The burden of each procedure per firm is the sum of labor and non-labor cost required to carry out these activities. The calculation should also take into account that costs are tax-deductible; this simply involves multiplying the cost by a factor of one minus the tax rate.

The result is the administrative burden per procedure for a representative firm. To get the total cost per procedure one multiplies this result by the frequency of the procedure per year, and the number of firms affected by the regulation. Finally, the total compliance cost of the regulation is the sum across all of the required procedures.

Procedures can also create a cost in the form of delaying business activities (for example, the movement of goods during a trading process, the establishment of a new business, or construction of new facilities). This consideration is not included in the international SCM, but is included as a possible cost factor in the World Bank adaptation, which has been applied to several countries in Africa by the IFC. In Mozambique, delay costs can be an important component of the regulatory burden on the private sector.

[16] For further information, see SCM Network (2005), *International Standard Cost Model: Measuring and reducing administrative burdens for businesses*, at http://www.administrative-burdens.com/default.asp?page=140; and World Bank Investment Climate Advisory Services (2010), *Here is Your Money: Using the Standard Cost Model to Measure Regulatory Compliance Costs in Developing Countries*, at http://www.fias.net/uploads/SCM+Final.pdf.

FIGURE 1. EU IMPLEMENTATION FRAMEWORK FOR THE STANDARD COST MODEL



Source: Statistisches Bundesamt (2010) Administrative Burden: Identifying, Measuring, Reducing it with the Standard Cost Model.

The SCM analysis yields a baseline estimate for the compliance cost created by a given regulation or government-imposed requirement. For business environment reforms that eliminate or streamline required procedures, the corresponding reduction in compliance cost should be included in the evaluation of the monetary benefits if the data inputs can be obtained or reasonably estimated.

Several technical issues should be kept in mind in applying the SCM:

- Labor cost is the product of the average number of work-days per procedure times the cost per work-day, including the average daily gross salary of the respective employees and an overhead percentage covering general office costs. The labor cost will typically include the time of clerks, accountants, administrative assistants, and in some instances senior management. If several types of staff are involved, the hours for each type should be recorded and a weighted average of salaries used.
- Non-labor cost includes acquisitions directly related to the procedure and other costs such as fees for consultants, accountants and lawyers, travel costs, and photocopy expenses.
- Data on labor and non-labor costs can be obtained from direct interviews or focus groups, or estimated using national wage data from labor market statistics or household survey data.
- For the number of active firms, potential data sources include the company registry, the revenue authority (number of tax filers), records from the ministry responsible for the regulation, or business associations. (It should be noted that official registries include firms that no longer operate; the estimation has to take this into account.)

- The SCM methodology calls for estimating per-firm costs for a "normally efficient firm" in the affected industries. In the European context it is relatively easy to contact a representative sample of firms covered by a regulation in order to estimate an average cost or a cost range. In Mozambique, it difficult to define a normally efficient firm because effects of a regulation will differ greatly by region and firm size (see next section). It is also difficult to survey a range of firms to obtain an estimate of the average compliance cost or the cost saving from a regulatory reform. On both counts, resort to pragmatic short-cut methods will often be essential.
- The international SCM calculation includes all of the labor or non-labor costs that are required to comply with a regulatory requirement. Some of these are "business as usual" costs that would be incurred by a normal business even in the absence of the government requirement. This is done as a practical matter to simplify the analysis. For the purpose of evaluating the benefit of a regulatory reform, however, an effort should be made in soliciting data to focus on compliance costs that are reduced or eliminated.

HETEROGENEITY

One difficulty in applying this framework is the heterogeneity of firms affected by any business environment reform. The cost of a given regulation, and thus the impact of a reform, can be very different for small versus large businesses, and for firms in Maputo versus those in other locations. In some cases this will not be a major issue. In others it may be possible to obtain suitable data through interviews in just a few cities. It may be also possible to assess the differential effects in cases where national survey data can be used to quantify key indicators, or where the reforms involve a large enough impact to warrant an extensive evaluation exercise covering different types of firms.

Often, however, it will not be possible or practical to quantify reliably this type of variance. If the absence of disaggregated data is a critical problem, and if there is no basis for establishing a plausible assumption about the parameter values, then the benefit should be categorized as non-quantifiable and excluded from the monetization analysis. The Benefits Report can still cite the benefit in qualitative terms, if it is important.

ATTRIBUTION

As noted in the Introduction to this paper, the framework for monetizing benefits serves two purposes. First, the quantitative analysis can strengthen advocacy for business environment reforms and build political support for these reforms. And second, the results can also be used to evaluate the effectiveness of USAID's investment in reform initiatives undertaken by the SPEED project. To this point the technical Guidelines have concentrated on the first of these two aims. For evaluating the effectiveness of USAID's investment, it is necessary as a separate calculation to account for the extent to which measured benefits can credibly be attributed to USAID involvement.

This raises a new counterfactual question: Would the reform have taken place in the absence of SPEED activities and influence? The degree to which a reform can be attributed to the project requires careful discussion with multiple parties who have direct knowledge about the project's contribution, supported by a review of evidence on the role of the project, such as policy studies that influenced the reform decision, inputs to the design of the reforms, drafts of legislation or regulations, or technical assistance in implementing the reforms.

If there is no reasonable basis for establishing attribution, this step should be omitted from the evaluation and so indicated in the records. In any case, the attribution should err on the conservative side, to ensure that the results are credible.

For full attribution the evidence would have to indicate clearly that involvement by the SPEED project played a pivotal role in motivating or developing the reform, or in overcoming obstacles to the reform. Another possibility, commonly encountered, is that project support served to accelerate the reform process. For example, expert opinion may indicate (as a counterfactual) that the reform very likely would have been adopted without SPEED assistance two years later. In this case, benefits for the first two years can be fully attributed to SPEED, but only for those years.

More generally, attribution need not be a yes-no issue. When multiple partners contribute to the success of a reform initiative, it is appropriate to apportion a share of the monetized benefits to USAID support. Attribution is often determined by estimating the extent to which each support agency contributed to the outcome, based on a triangulation of expert opinion. An alternative method, recommended in DFID guidelines, is to assume that attribution is proportional to funding shares.[17]

Another option is to assess attribution in terms of the probability that the reform would have been enacted without SPEED support. This would require justification based on a triangulation of information from expert interviews and related documents. Expressing this in probabilistic terms permits the analysis to be interpreted as the expected value of benefits created by the project. It can also take into account the probability that an enacted reform will survive over time. Some SPEED project activities are intended to maximize the probabilities that reforms will survive and endure into the future. For example, a forum to facilitate public-private dialogue is intended to both bring reforms about and keep them from being reversed. To the extent that the contribution of the project to reform survival probability can be assessed, it may be possible to estimate these benefits.

The result of the analysis will be an attribution factor with a maximum of 100%. Multiplying this factor by the value of the monetized benefit of the reform gives the value of the benefit attributable to USAID. Thus, with 100% attribution, the monetized benefit and the benefit attributable to USAID will be equal. With a 50% attribution factor, the attributable benefit will be half the monetized benefit.

The estimate of benefits attributable to USAID, should be included in the Benefits Evaluation Sheet and the Benefits Report for each initiative, with a concise explanation of the reasons for the attribution. In addition, both the overall estimate of monetized benefits and the estimate of benefits attributable to USAID should be recorded in the cumulative Benefits Summary Matrix.

UNCERTAINTY

The evaluation of benefits from business environment reforms almost always involves a high degree of uncertainty, particularly in defining a meaningful counterfactual scenario and determining the attribution to USAID involvement. In addition, there is often uncertainty about key parameter values, such as the price elasticity of tourism visits, the value of lost time due to regulatory delays, or the labor cost for a "normally efficient firm" in the Standard Cost Model.

[17] DFID How to note: A Strengthened Approach to Economic Appraisals, February 2009, p.7.

For evaluating the benefits from SPEED-supported reforms, the approach recommended here is to resolve uncertainty by consistently adopting conservative parameter values and assumptions in the quantitative analysis, documenting these choices, and excluding from the calculation benefits that cannot be reasonably quantified. This approach results in a low-ball estimate of the benefits, but one that will be most credible and defensible. An alternative is to conduct a sensitivity analysis by examining a range of plausible parameter values and alternative assumptions, and then reporting medium, high, low benefit estimates. This is more complicated and more difficult to explain, but it may be worthwhile doing for particularly important reform initiatives.[18]

PROVIDING PERSPECTIVE

In addition to reporting the results of the benefits analysis in monetary terms, it is also useful to put the results in perspective by comparing the monetized values to other indicators. For example, annual reports can compare the measurable benefits and the benefits attributable to USAID for that year to SPEED project spending for the year, either in total or for business environment reform activities only. Similarly, the cumulative value of measurable benefits since the beginning of the project can be compared to cumulative project costs, to determine the benefit. Even though the measurable benefits understate the impact of the project, the portfolio of project activities should be managed to ensure that the measurable benefits cumulatively justify the project cost in terms of the return on taxpayer dollars.[19] This means that measurability should be one of the criteria used in selecting which initiatives to pursue.

For purposes of advocacy within Mozambique, it may also be useful to compare the monetized benefits to other denominators that convey a clear message to the government and the public about the value of business environment reforms. Comparing the benefits to Mozambique's GDP may not work, because the measurable impact of even a transformative reform may amount to only a small fraction of total national economic activity.[20] In any case, it may be more effective as a public information strategy to express the monetized benefits relative to indicators such as value added in manufacturing (excluding megaprojects) or the budget for public schools.

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[18] OMB guidelines for regulatory analysis call for numerical sensitivity analysis for rules with annual economic effects between $100 million and $1 billion, and formal quantitative analysis of the probabilities for rules involving annual effects of $1 billion or more. (OMB, op. cit., pp. 40-41)

[19] See Nathan Associates, *Guidance Note on Improving the Effectiveness of Economic Growth Programs* (September 2010). This Guidance was prepared for USAID's EGAT Bureau as part of a series of Briefing Notes on *Programming for Growth*. See: http://www.countrycompass.com/policy_briefs.php.

[20] The annual budget for the project is well under 0.1% of Mozambique's GDP. Even with a very high rate of return on USAID's investment in the project, the quantifiable benefits will likely be a fairly small percentage of GDP. Hence the value of seeking other ways to express the benefit measures.

ANNEX 1. EVALUATION PLAN TEMPLATE

Memorandum

[Maximum 3 pages, preferably 2]

Date: **[date]**

To: **Scott Simons, SPEED Chief of Party**

From: **[TBD]**

CC: **[TBD]**

Re: **Evaluation Plan for [activity name and file #]**

Summary of the issue

- Briefly describe the issue, and the purpose of the reform or the development hypothesis.

Benefits to Mozambique

- What are the main types of direct benefits associated with this reform? Although the framework focuses on benefits that can be quantified and valued in monetary terms, it is important also to identify major benefits that cannot be quantified.
- Indicate major indirect benefits, if any.
- Will there be any significant costs to Mozambique from the reform? In other words, is the reform dismantling regulations that have had beneficial effects (even if the overall impact has been negative)? If so, then the analysis should note these costs, and the analysis should be framed in terms of net benefits to Mozambique if possible.

Role of the SPEED project

- How will the SPEED intervention support the reform?

Scope and timing of the evaluation

- Which benefits can reasonably be quantified and valued in monetary terms, relative to a well defined counterfactual scenario? Which cannot? Explain briefly.
- What data or parameter estimates will be needed to monetize the benefits? How will this information be obtained?
- Can the benefit estimates be extended into an economic impact assessment?
- When should the evaluation be conducted? Are baseline data required? Or on-going monitoring data?

COP Decision: Approved: _____ **[sign]** _____ **[date]**

Not approved: _____ **[sign]** _____ **[date]**

ANNEX 2. BENEFITS EVALUATION SHEET TEMPLATE

[Template for Excel sheet on next page; to be modified as needed, case by case]

[Activity name and SPEED file #]											
A. What are the benefits?											
[Brief explanation of the benefits]											
B. Calculation of Benefits	**[Show data in black font, with parameter assumptions, calculated values and projections in red font]**										
[Cite source for data and explain parameter assumptions; for calculated values and projections leave formula in cells (rather than converting to value format)											
C. Data summary -- *with* the reform											
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
[Data item]											
[Data item]		**[relevant time frame determined case by case]**									
[Data item -- as many rows as needed]											
D. Counterfactual scenario - *without* the reform											
[Brief explanation of basis for counterfactual scenario]											
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
[Brief explanation of each quantitative assumption											
[Data item]											
[Data item]											
[Data item -- as many rows as needed]											
E. Monetized benefit = monetized outcome *with* the reform - monetized outcome *without* the reform (in USD)											
		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Discount rate	*x%*										
[Brief explanation of choice of discount rate											
Measurable benefit of the reform, per year (in USD)											
PDV of benefit, per year (with 2011 as base year)											
PDV of benefits, sum (USD)		**$ -**									
F. Monetized benefit *attributable to USAID* = monetized benefit * % attribution											
Attribution to USAID-SPEED (%)	*x%*										
[Brief explanation of basis for attribution]											
		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Measureable benefit attributable to USAID-SPEED, per year (in USD)											
PDV of attributable benefits, per year (with 2011 as base year)											
PDV attributable benefits, sum (USD)		**$ -**									

ANNEX 3. BENEFITS REPORT TEMPLATE

Memorandum

[Maximum 3 pages, preferably 2]

Date: [date]

To: Scott Simons, SPEED Chief of Party

From: [author]

CC: [TBD]

Re: Benefit Summary for [name and file # for SPEED business environment activity]

Summary of the issue

- Briefly describe the issue, the purpose of the reform or development hypothesis. This section may be copied from the Evaluation Plan if there are no changes.
- Identify the effects that have been quantified, and outline any major benefits or costs that cannot be quantified.

SPEED project involvement

- Explain briefly the role of the SPEED intervention in supporting the reform and the extent to which measured benefits are attributable to USAID involvement (expressed as a percentage of the total benefit).

Calculation summary

- Explain briefly the methodology used to evaluate the benefits, including key assumptions or parameter estimates (citing sources).

Result

- State the overall monetary value of the estimated benefit
- State the monetary value of the benefit *attributable* to USAID involvement
- If it is possible to conduct an economic impact assessment, state the resulting estimate of the economic benefits to Mozambique.
- Explain briefly any other major benefits or costs from the reform that are not quantifiable or not monetized.

COP Decision: Approved: _____ [sign] _____ [date]

Not approved: _____ [sign] _____ [date]

ANNEX 4. BENEFITS SUMMARY MATRIX TEMPLATE[21]

Summary of Monetized Benefits of SPEED-Supported Reforms			
Quarter	Reform Initiative	Monetized Benefit	Attributable to USAID
Q#	Short description of reform	$_____	$_____
Q#			
Q#			
Q#			
Q#			
Q#			
Q#			

Other Reforms: Results Not Monetized	
Quarter	Reform Initiative
Q#	Short description of reform
Q#	
Q#	
Q#	
Q#	
Q#	
Q#	

[21] This format draws on the Table of Monetized Benefits presented in Chemonics International Inc, *Georgia: Opened for Business – Georgia Business Climate Reform Final Report*, October 2009, page B-5. If an economic impact assessment can be conducted for some project-supported reforms, the table can be modified to include that information.