



Department  
for International  
Development



# Value for Money

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In the Business Case



May 2013

# Practice Products for the CCVRI

## Improving Measurement in DFID Crime, Conflict & Violence Programming

This document is one of a series of Practice Products developed under the **Conflict, Crime, and Violence Results Initiative (CCVRI)**. The full set of products is intended to support DFID country offices and their partners to develop better measures of programme results in difficult conflict and fragile environments.

DFID recognises the need to focus on the **results** of its work in developing countries. To this end, DFID strives to account better for our efforts on behalf of UK taxpayers, offering clarity regarding the value and impact of our work. The Results Initiative operates under the assumption that we will achieve our development objectives with our national partners more effectively if we generate—collectively—a clear picture of the progress being made.

Within DFID, the Conflict Humanitarian and Security Department has established a partnership with a consortium of leading organisations in the fields of conflict, security and justice to develop more effective approaches to the use of data in the design, implementation and evaluation of programmes that contribute to reducing conflict, crime and violence.

In addition to producing these Practice Products, the consortium has established a Help Desk function to provide direct and customized support to country offices as they endeavour to improve measurement of results in local contexts.

The Help Desk can be accessed by contacting [helpdesk@smallarmssurvey.org](mailto:helpdesk@smallarmssurvey.org).

*The views expressed in this Practice Product are the sole opinions of the authors and do not necessarily reflect the opinions of all consortia partners. This Practice Product does not reflect an official DFID position.*

### Members of the consortium

# Document Summary

**Title:** Value for Money in the Business Case

**Purpose and intended use of this document:**

This document is intended to assist DFID staff to prepare the Value for Money (VfM) component of the Business Case (BC). It presents two quantitative tools, cost-benefit analysis (CBA) and cost-effectiveness analysis (CEA), and discusses their application, strengths and weaknesses. The paper identifies specific challenges related to VfM assessment in the Security and Justice (S&J) sector and introduces different steps of a VfM assessment.

**Key questions this document addresses:**

- What are the steps in a VfM assessment?
- Input on how to implement the two most common quantitative VfM methods (cost-benefit and cost-effectiveness analysis).
- What are the challenges in applying these methods to interventions in the security and justice sector?
- How can these challenges be overcome?

**Key messages/essential “take aways”:**

- The main criterion for determining whether a project is VfM is not simply its cost, but its cost in relation to its effects. Therefore, all steps of the results chain are important when considering the VfM.
- A BC should always include a qualitative discussion of the VfM of different intervention options, regardless whether it contains a quantitative assessment or not.
- The main challenge for assessing VfM in the security and justice sector is that there is no universal indicator which meaningfully combines different dimensions of the desired impact.
- Ex-ante VfM assessments, whether qualitative or quantitative, are always based on expectations, as information on the actual effects of a programme can only be obtained ex-post.
- A condition for a quantitative VfM comparison is that the interventions share the same output, outcome or impact, and that this common “benefit” can be measured using a single quantitative indicator.
- Even if quantitative methods are applicable, qualitative explanations are still necessary to explain why a certain intervention is VfM. A VfM appraisal should illustrate the need for the intervention, the conditions under which it is implemented, and the (expected) chain of results.
- A critical question in CBA and CEA is the value of the discount factor, which can be understood as a negative interest rate. It is used to weigh costs and benefits in different time periods differently.
- As VfM comprises various criteria, a VfM assessment often involves trade-offs between the “four E’s” (economy, efficiency, effectiveness and equity).
- VfM appraisals are often best approached on a case-by-case consideration of a variety of factors, including financial constraints, existing programmes, country-specific needs and potential side effects.
- A programme designed to provide long-term benefits by combating the root causes of a problem is often more VfM than a short-term programme only targeting symptoms.

**Intended audience of this document (including assumed skill level):**

DFID Country Officers, who need to prepare the Value for Money components of the Business Case

**Key topics/tags:** VALUE FOR MONEY, COST-BENEFIT, COST-EFFECTIVENESS

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# 1. Executive Summary

This paper discusses the assessment of Value for Money (VfM) in the Business Case (BC) format. It presents two quantitative tools, cost-benefit analysis (CBA) and cost-effectiveness analysis (CEA), and discusses their application, strengths and weaknesses (section 4). It identifies specific challenges related to VfM assessment in the Security and Justice (S&J) sector (section 5) and introduces different steps of a VfM assessment which serve to complement or replace quantitative methods (section 6). Finally, it briefly discusses sources and methods of collecting evidence on the impact of interventions (section 7).

- In the business case (BC) format, different intervention options should be compared according to the Value for Money (VfM) criteria of efficiency and effectiveness in the appraisal case. Based on this analysis, one option is recommended. The “third E”, economy, should be addressed in the commercial case for the recommended intervention.
- Quantitative methods, such as Cost-benefit analysis (CBA) and Cost-effectiveness analysis (CEA), require a quantification of outcomes, which can be challenging given data constraints and the lack of universal indicators in the Security and Justice (S&J) sector.
- A BC should always include a qualitative discussion of the VfM of different intervention options, regardless whether it contains a quantitative assessment or not.
- Ex-ante VfM assessments, whether qualitative or quantitative, are always based on expectations, as information on the actual effects of a programme can only be obtained ex-post.
- The different steps of a VfM assessment include describing context, disentangling the results chain, comparing and contrasting different options, prioritizing, considering side effects and different points of view, and citing evidence.
- Establishing VfM in Security & Justice programming carries additional challenges. In order to mitigate these challenges it is important to draw on a solid evidence base in writing up the Business Case. This evidence base should be used to support and strengthen the Theory of Change being used.

## 2. Value for Money

Value for Money is a concept used to achieve an optimal use of public resources. The UK Audit Commission defines value for money as “obtaining the maximum benefit over time with the resources available”.<sup>1</sup> The main components of *value for money* are the “three E’s”, economy, efficiency and effectiveness. Many methods of program evaluation focus mainly on **efficiency** (how are inputs transformed into outputs) and **effectiveness** (are outputs adequate to achieve the desired outcome?). In addition to these, VfM emphasizes the cost of inputs for a given level of outputs (**economy**). The main criterion for determining whether a project is VfM is, however, not simply its cost, but its cost in relation to its effects. Therefore, all steps of the results chain are important when considering the VfM of a project of programme. A “fourth E”, **equity**, has been added more recently, to ensure that benefits reach those population groups most in need (ICAI, 2011). It implies assessing results along dimensions such as “caste, gender, regional, rural/urban, age, or other disaggregation suited to the context” (DFID, 2012). This focus on assessing results relative to investment requires that the programme design of the particular intervention is grounded in a robust Theory of Change, which in turn is supported by a reliable

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<sup>1</sup> Audit Commission website, accessed 21 May 2013. <http://www.audit-commission.gov.uk/audit-regime/codes-of-audit-practice/value-for-money-conclusion/>

evidence base. This paper discusses Theory of Change with particular reference to VfM assessments. For a more comprehensive discussion of Theory of Change see [Review of the use of 'Theory of Change' in international development \(Vogel, 2012\)](#).

## How Does Value for Money Enter the Business Case Format?

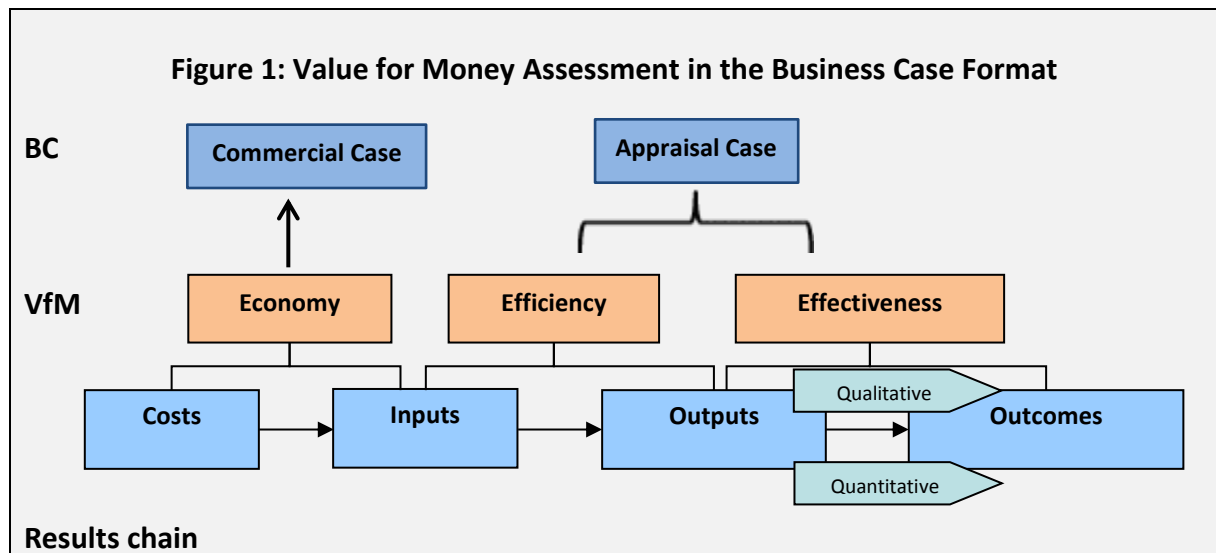
The business case model as outlined in the DFID practice paper (DFID, 2013a) comprises five interdependent cases: strategic, appraisal, commercial, financial and management case. VfM should be explicitly discussed in the appraisal and commercial cases.

The **strategic case** explains the need for DFID intervention and the expected outcome and impact. In the **appraisal case** (sometimes also called “economic case”); different feasible options are reviewed with respect to their VfM in achieving these outcomes and impacts. The intervention options are also compared to the counterfactual of not intervening. The option with the highest VfM is recommended for approval. The **commercial case** describes how, within this option, highest possible VfM will be ensured by choosing adequate procurement. The **financial case** establishes the affordability of the chosen option, and the **management case** details the management arrangements of the intervention. Figure 1 illustrates how the VfM criteria relate to the elements of the results chain, and where each criterion should be addressed in the BC format.

While the concept of VfM is central to the appraisal and commercial cases, it in principle enters all the components of a business case. If a strategic case is not compelling because the proposed outcomes are not relevant, a programme cannot be VfM. Similarly, a poorly managed project cannot achieve maximal efficiency, and is thus of less VfM than a well-managed project.

### The Appraisal Case

The appraisal case presents and compares different possible courses of action in order to determine which one has the highest VfM. The comparison process should identify the preferred option and recommend it for approval subject to a VfM assessment in the commercial, financial and management case. In this component of the business case, the focus is on two of the “three E’s”: efficiency and effectiveness. Put otherwise, the appraisal case serves to assess which intervention will achieve the proposed outcome and impact best, while taking into account the relative cost of the different options. If an intervention is slightly more expensive, but much more effective than another, it can be regarded as better VfM. The appraisal case identifies the best option and recommends it for approval. It should also consider the counterfactual of not intervening. Especially in a fragile context, inaction may result in a deteriorating situation. In this case, even an intervention which solely maintains the status quo can be of high VfM (further discussion in section 4.2 of this paper).



A detailed example of a VfM assessment in an appraisal case can be found in a DFID Rwanda Business Case ([DFID-Rwanda-business-case 2012](#)). It compares three intervention options and the counterfactual, detailing their expected effects, advantages and disadvantages and existing evidence, with a strong emphasis on country-specific characteristics.

### The Commercial Case

The commercial case discusses how, within the option recommended in the appraisal case, VfM will be maximized by appropriate procurement. This analysis should take into account price and quality considerations, and identify the cheapest procurement option which will deliver inputs at an adequate quality to enable a successful intervention. If appropriate, additional considerations may be included. If, for example, local procurement is likely to contribute meaningfully to poverty alleviation, it may be more VfM than importing even if an input of comparable quality is more expensive when locally purchased. Further concerns to factor into the commercial case include contract management and supply chain management so as to ensure that the supplier performance yields value for money (see updated [Commercial Case guidance on p.27-31 of the Business Case practice paper](#)).

As VfM comprises various criteria, a VfM assessment often involves trade-offs between the “four E’s”. One intervention option may be more efficient, but less effective than another. One intervention may be very cost-effective, while an alternative is optimal under equity considerations. In such cases, the choice of recommending a certain option can thus not be made on quantitative comparisons exclusively. The decision becomes a case-by-case consideration of a variety of factors, including financial constraints, existing programmes, country-specific needs, potential side effects and others, along which the different options are compared.

### Theory of Change as a crucial part of Value for Money in the Business Case

The key purpose of the Business Case is to strengthen the use of evidence in the decision making process (DFID, 2013a). Evidence on its own is not sufficient to build a strong Business Case. Evidence needs to be supported by a robust ‘Theory of Change’. In simple terms, a ‘Theory of Change’ is the ‘description of a sequence of events that is expected to lead to a particular desired outcome’ (Davies, 2012). It features in at least four parts of the Business Case; in the Strategic Case – justifying the need for the intervention; in the Appraisal Case – demonstrating why we think the intervention will work; in the financial case – when determining budget for the intervention and assessing affordability; and in the

Management Case – understanding how well the intervention is working and priorities for evaluation (DFID, 2013a).

Given the centrality of Theory of Change in the Business Case it makes sense that it has implications for the VfM elements of the Business Case. If the Theory of Change is weak, it will impact adversely on the VfM case regardless of how sophisticated the VfM analysis might be. An intervention might appear to be good VfM from an efficiency perspective, but if it is not based on a reliable evidence base and supporting Theory of Change then the intervention is likely to score low because its chance of delivering the intended outcome is very weak. This is further elaborated in some of the practical examples that are used in this paper.

## Tools for Assessing Value for Money – Quantitative versus Qualitative Techniques

VfM is frequently associated with **quantitative techniques**, such as cost-benefit analysis or cost-effectiveness analysis. These tools, which will be discussed more in detail in the following section, can be very useful to compare the VfM of different interventions. A necessary condition for such a comparison is, however, that these interventions share the same output, outcome or impact, and that this common “benefit” can be measured using a single quantitative indicator.

This requirement is often not fulfilled, as projects and programmes can have multiple and/or non-quantifiable goals. Furthermore, while outputs can often be measured relatively easily, the attribution of outcomes or impacts to a particular intervention can be very difficult given the complexity of societal processes and the amount of outside factors which may affect the result of interest. Producing an ex-ante estimate of outcomes and impacts is even more challenging, especially in fragile political situations, in which unexpected events are likely to occur. Finally, at the time of the VfM assessment, it may not be known to which other programmes the intervention in question will be compared at a later stage.

There are many situations in which quantitative tools are not applicable due to the above-mentioned reasons, or in which they can only be applied to certain aspects of an intervention (for example, only outputs but not outcomes). In this case, various **qualitative techniques** can be applied to demonstrate that a project is VfM. These techniques will be discussed in section 5. Also note that, even if quantitative methods are applicable, qualitative explanations are in general necessary to explain why a certain intervention is VfM. A VfM appraisal should illustrate the need for the intervention, the conditions under which it is implemented, and the (expected) chain of results.

## 3. Cost-Benefit-Analysis and Cost-Effectiveness Analysis

Guides to VfM frequently recommend the use of quantitative techniques (for example, ICAI, 2011). This section describes how to implement the two most common methods, cost-benefit and cost-effectiveness analysis, in VfM assessments. Challenges in applying them to interventions in the S&J sector are discussed in section 4.

**Cost-Benefit Analysis** is a tool to assess the relation between the costs of a project or programme and its benefit as measured in monetary terms. It can be applied before, during or after completion of the intervention. The basic idea of a CBA is to sum all costs and (expected) benefits related to a project in order to obtain its net benefit:



$$\text{Net benefit} = \text{Total benefit} - \text{total cost}^2$$

In general, the net benefit of a project should be positive – otherwise, it is not worth undertaking. A shortcoming of this method is that desirable (side) effects of an intervention are not accounted for if they cannot be monetized. It is to be noted that benefits do not have to be income streams in order to be monetized. If an intervention, by making a process more efficient, allows to free up resources which can then be used elsewhere, this type of benefit can also be measured in monetary terms.

Performing a CBA requires putting a monetary value on the benefits of an intervention. However, this is often not feasible or desirable. If the effect of an intervention can be expressed in a quantitative indicator other than money, a suitable alternative to CBA is **Cost-Effectiveness Analysis**. This method involves the computation of a cost-effectiveness ratio. It expresses the average cost in GBP of achieving one unit of the measured effect:

$$\text{Cost-effectiveness ratio} = \text{Total cost/Unit of effectiveness.}$$

CEA is, for example, applied in the health sector, where certain intervention outcomes can be pinned down numerically using indicators such as life expectancy, child mortality rates or DALYs (Disability Adjusted Life Years). The cost-effectiveness ratio can, for example, indicate how much it costs to improve life expectancy by one year with the help of the programme which is being assessed.

## How to Apply CBA or CEA in Value for Money Considerations?

Both CBA and CEA are tools to illustrate the efficiency of a programme or project with respect to a certain indicator. These methods can be applied meaningfully if the principal goal of an intervention can be measured in monetary terms (CBA) or using a numerical indicator (CEA).

CBA or CEA can be performed to assess the VfM of a project on different levels of the results chain, as illustrated in example 1. The desired level of analysis determines which benefits are measured. It should be chosen with respect to the question one wants to answer, or the type of projects one wants to compare the current project to. The “fourth E” equity, can be taken into account at different steps of the analysis by choosing appropriate indicators. If one wants to target a particular group, such as women, it is for example possible to use the increase in businesses run by women as an impact indicator. The applicability and appropriateness of the indicators selected is closely tied to the validity of the Theory of Change being employed. In the example below, the particular Theory of Change being used is based on evidence of successes elsewhere so there is validity in the Theory of Change being used. The Theory of Change for Example 1 might be explained as follows– if former combatants are disarmed then this will lead to fewer incidents of gun violence which will in turn lead to improved security and improved security is a key enabler of development.

It isn't only the choice of indicators that is influenced by the validity of the Theory of Change. If the Theory of Change is weak, or is based on shaky evidence then the entire VfM analysis will be flawed.

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<sup>2</sup> A more detailed way to present the formula would read: Net Present Value = Discounted benefit – discounted cost. See section 4 below.

### Example 1: Disarming Former Combatants

Imagine a project to disarm former combatants. The output of the project is the collection of firearms, which can be measured using the number of arms collected. The targeted outcome is to reduce violent incidents in the area covered by the project. It is quantified using the change in the number of incidents (for example, per month), comparing the situation before and after the project. The desired impact (apart from fewer victims) is to facilitate business activity (by making the area safer). The indicator for this impact is the change in the number of businesses in the area.

This project can be compared to other projects sharing the same output, outcome or impact indicators. The level at which projects are to be compared determines the level at which the cost-effectiveness analysis should be performed. Each level is relevant for the VfM of the project, and can be related to one of the “three E’s”.

Level of analysis	Description	Indicator	Cost-effectiveness ratio	Comparison to...	Corresponding VfM criteria
<b>Output</b>	Disarming former combatants	Number of arms collected	Total cost/No. of arms	Other disarmament projects	Efficiency
<b>Outcome</b>	Increasing security	Change in the number of violent incidents involving firearms	Total cost/Reduction in number of incidents per month	Other projects aiming to reduce armed violence	Effectiveness
<b>Impact</b>	Facilitating economic activity	Change in the number of businesses	Total cost/Increase in number of businesses	Other projects aiming to facilitate economic activity	Cost-effectiveness

(Author’s example)

As discussed, total costs are meant to correspond to the actual monetary costs incurred by the project / programme, to be matched by well identified project/ programme indicators (for example, number of arms collected, etc.). Indeed this is the most direct and straightforward way to proceed. It should be noted however that the total cost for the purpose of CEA may be represented by the cumulative numerical value of several non-monetary indicators such as, for example, years of life expectancy, ratio of school enrolment, child mortality rate, number of DALYs.

The cost-effectiveness ratio can be computed for an entire project or programme or for parts of it. It can be useful to demonstrate that adding elements to a project can be very efficient. Example 2 illustrates such a case. The extended project will be more expensive, but it may still have greater VfM. Again, it is important to note the role and influence of the particular Theory of Change being utilized in the example. In undertaking the VfM analysis one would expect to find evidence of the impact of local justice committees, and a clear articulation of the Theory of Change.

### Example 2: Women’s Empowerment Project – Justice Committees

The goal of this project is that women and the socially excluded are empowered to play a greater role in society, especially governance and political activities. The envisaged outcome is that women and children, especially those from disadvantaged groups, are better protected from violence and abuse, have improved access to justice and local mediation when they do experience violations, and feel more empowered to assert their rights.

The key intervention mechanism is the establishment of local ‘justice committees’ where women and girls can meet with their peers as well as specially trained paralegals. The task of these justice committee meetings is to increase awareness on prevention of violence against women and girls. The justice committees act as a hub of information on the rights to protection for victims/survivors of violence. In some cases, the committees will also provide mediation services and often they refer victims of violence to a range of service providers.

The core costs associated with the project relate to the justice committee meetings as it is crucial that the members have access to safe and reliable transport to and from the meeting. The justice committee has made a request to the DFID country office for additional funds to put up street lighting along the street where the meeting venue is as it is known to be a high crime zone. The DFID country office needs to present a VfM assessment in order to reach a decision.

	Cost [GBP]	Additional life expectancy in the district [years]	Cost-effectiveness ratio [GBP/year of additional life expectancy]
Bus to get to meetings	100,000 GBP	+1 year	100,000 GBP/year
Street lighting	30,000 GBP	+2 years	15,000 GBP/year

## 4. Key challenges in Applying Quantitative Methods

### 4.1. General Challenges

#### Determining Impact

A causal relation between a programme output and its outcome or impact is difficult to establish. Indicators assist to monitor the development of an outcome or impact, but often, it is not possible to determine whether changes in an indicator have been caused by a particular programme or project. Correlation does not equal causality, and outcomes are likely to be influenced by a variety of outside factors, which cannot always be taken into account in the analysis. This challenge obviously has a bearing on the VfM analysis. While there is not an easy remedy to this dilemma there is existing DFID guidance that can be used to establish impact. See for example the practice paper on [‘Assessing the Strength of Evidence’](#) (February 2013).

As noted above, the question of impact is closely tied to questions around Theory of Change. The vast (and growing) literature on Theory of Change is a valuable resource in making VfM assessments (cite the CCVRI SSPs). However, even without consulting this literature, one is able to detect the level of validity of the Theory of Change being proposed. One can ask questions about the probability of intervention x resulting in output y and then the likelihood of output y leading to outcome z. The basic “if this then that” formula will quite quickly reveal the robustness of the Theory of Change and its evidence base.

#### How to Value Future Costs and Benefits?

A critical question in CBA and CEA is the value of the discount factor, which can be understood as a negative interest rate. It is used to weigh costs and benefits in different time periods differently. It is commonly suggested that costs and benefits which will occur at a later stage should enter the analysis with a lower weight. The rationale for this argument stems from several considerations, among them individuals’ time preferences, political cycles, risk and financial interest rates. First, people generally prefer receiving goods or services today than tomorrow. Second, governments need to achieve tangible

results within the same election cycle. Third, future costs and benefits can be estimated less precisely, as unforeseeable events may affect their value, especially in fragile contexts. Fourth, instead of implementing a programme, DFID could theoretically invest the money in a financial product, obtain the money plus interest after several years, and distribute it to the beneficiaries. Example 3 illustrates how the choice of different discount factors affects the predicted net benefit of a project.

### Example 3: Discount Factor and Net Benefit in CBA

Example 3 illustrates how the discount factor can affect the net benefit of a project. The table contains the CBA of the same project at three different discount rates: 0, 5% and 10%. The project is over three years and costs 100,000 GBP per year. In the first two years, there is zero benefit. In the last year, there is a benefit of 250,000 GBP. When a zero discount rate is applied, the net benefit of the project is 50,000. With a 5% discount rate, it drops to 47,150, and with a 10% discount rate, to 44,000. This is explained by the fact that future costs and benefits are given less weight. As the benefit of the project occurs only in the last period, the net benefit is smaller the more the future is discounted.

	Discount factor	Year 0	Year 1	Year 2	Total
<b>Cost</b>	<b>0</b>	100,000	100,000	100,000	300,000
<b>Benefit</b>	<b>0</b>	0	0	350,000	350,000
<b>Net benefit/year</b>	<b>0</b>	-100,000	-100,000	250,000	<b>50,000</b>
<b>Cost</b>	<b>5%</b>	100,000	95,000	90,250	285,250
<b>Benefit</b>	<b>5%</b>	0	0	332,500	332,500
<b>Net benefit/year</b>	<b>5%</b>	-100,000	-95,000	225,625	<b>47,250</b>
<b>Cost</b>	<b>10%</b>	100,000	90,000	81,000	271,000
<b>Benefit</b>	<b>10%</b>	0	0	315,000	315,000
<b>Net benefit/year</b>	<b>10%</b>	-100,000	-90,000	234,000	<b>44,000</b>

Choosing a time discount rate (or, in a non-quantitative analysis, deciding how much emphasis to put on results to be achieved in the future) is a difficult, yet crucial task. The choice of the weighting factor can sometimes tip the scales between two projects. For public sector projects, the UK treasury recommends the use of a time-discount rate of 3.5%. However, urgent need for intervention or a high-risk environment may justify higher discount rates. Sustainability considerations, on the other hand, may require a lower discount factor. In practice, a higher discount rate can be chosen if the context of intervention requires urgent action, for example, if a sudden outbreak of violence occurs. A lower discount rate should be chosen for problems with systemic roots, such as persistently high levels of corruption.

As stressed by the World Development Report 2011, the institutional changes required to achieve sustainable progress in improving security and justice can take a long time, especially in fragile contexts. (World Bank, 2011). While donors and populations hope to see rapid progress, expectations are sometimes unrealistic. A programme designed to provide long-term benefits by combating the root causes of a problem is often more VfM than a short-term programme only targeting symptoms. For instance, in their review of crime prevention programmes, Welsh and Farrington (1999) consider evidence on developmental approaches, such as early childhood intervention, and situational approaches, such as anti-burglary security. They conclude that a combination of developmental (=long-term) and situational (=short-term) approaches is most efficient in combating crime.

While the above-mentioned challenges apply to CBA and CEA in all sectors of development cooperation, the S&J sector presents a number of specific challenges, which are discussed below.

## 4.2. Specific Challenges in the Security and Justice Sector

### Creating Indicators for Outcomes and Impacts

As noted above, CBA requires a monetary valuation of the outcomes of an intervention. The crime prevention literature has developed different approaches to estimate the cost of crime (see, for example, Van Soomeren and Wever, 2005; Shapiro, 1999 and Dossetor, 2011). A key challenge in this endeavor is the multiplicity of costs that any crime can entail. They include the value of stolen goods, the cost of protecting oneself against crime, the cost of the police and judicial system and the damage inflicted on the physical and psychological health of victims, which can be measured in DALYs. It is debatable whether these different types of costs can be adequately expressed in monetary values. The same rationale applies for the cost of conflict and violence in general. A good overview of different approaches to measuring the cost of violence is provided in Skaperdas et al. (2009). For more specific guidance on calculating the economic cost of armed violence and insecurity see [‘What’s in a Number? Estimating the Economic Costs of Armed Violence’](#) (Geneva Declaration Secretariat, 2008).

CEA requires the expected outcome of a project to be quantifiable in a single indicator. The main challenge for assessing VfM in the security and justice sector is that there is no universal indicator which meaningfully combines different dimensions of the desired impact. In the absence of such a globally accepted indicator, it is extremely difficult to meaningfully compare VfM across programmes. This problem has also been observed in sub-fields related to S&J. As noted in a meta-evaluation of Mine Action commissioned by DFID, “there is not yet a clear agreement on how ‘impact’ should be measured in relation to Mine Action and therefore what effectiveness and VfM measures should be” (O’Reilly et al. 2012). Creating such an indicator for the S&J sector is challenging because of the multi-dimensional nature of the outcomes interventions aim to achieve. There are various lists of proposed indicators for governance (DFID, 2011b), the police sector (Rynn and Hiscock, 2009), armed violence (Gilgen et al. 2010), safety and security (Vera Institute of Justice, 2003) and access to justice (Vera Institute of Justice, 2003).

Recently, the need for common indicators has been addressed in the discussions and deliberations on the post-2015 development framework. As part of this process the United Nations Secretary General appointed a High Level Panel of Prominent Persons (HLP) to provide him with clear ideas and recommendations for the post-2015 agenda. In May 2013 the HLP released its report, [‘A New Global Partnership: Eradicate Poverty and Transform Economies through Sustainable Development’](#). The report states that freedom from conflict and violence is the most fundamental human entitlement, and the essential foundation for building peaceful and prosperous societies. The report calls for the new development framework to recognize peace and good governance as a core element of wellbeing, not an optional extra. The HLP report proposes 12 universal goals and national targets with one suggested goal being of particular relevance for S&J programming, namely Goal 11: **‘to ensure stable and peaceful societies’**. This goal is further elaborated into four sub-goals –

- Reduce violent deaths per 100,000 by x and eliminate all forms of violence against children
- Ensure justice institutions are accessible, independent, well-resourced and respect due-process rights
- Stem the external stressors that lead to conflict, including those related to organised crime
- Enhance the capacity, professionalism and accountability of the security forces, police and judiciary

It is worth keeping in mind that these macro level goals were derived from a range of other consultations and processes. The [New Deal for Engagement in Fragile States](#) is one such that process that might hold special relevance for S&J VFM assessments given the S&J indicators that were developed as part of the process. See Box 1 below.

### Box 1: The New Deal for Engagement in Fragile States

The New Deal for Engagement in Fragile States proposes the following indicator for the security and justice goals:

#### PSG 2: Security

##### Dimension 2.1. Security Conditions

- Violent deaths per 100,000 population
- Major and minor assaults per 100,000 population
- Incidence of rape and sexual violence
- Internal displacement (# of IDPs, by conflict)
- Perception of security conditions (by region, gender, social groups)

##### Dimension 2.2. Capacity and Accountability

- Ratio of prosecutions of police misconduct over the total number of cases
- Capacity to monitor, investigate and prosecute police misconduct

##### Dimension 2.3. Performance and Responsiveness

- Level of confidence in police/security (by gender, region, social group)
- Average response time to distress call and/or response rate to distress calls
- Perception of corruption of security forces

#### PSG 3: Justice

##### Dimension 3.1. Justice conditions

- Trust in customary and formal justice system
- Ratio of lawyers to total cases

##### Dimension 3.2. Capacity and Accountability of Justice Institutions

- Ratio of public officials tried and convicted to reported cases
- % of overall budget allocated to justice sector (and actual % expenditures)
- % of population who believe they have affordable access to justice system (by region, gender, income, identity)
- Number of judges per 100,000 population

##### Dimension 3.3. Performance and Responsiveness of Justice Institutions

- Perception of overall performance of the justice system
- % population with awareness of legal and human rights

While these indicators constitute adequate and identifiable outcome measures, implementing a CEA would require aggregating them to a single quantitative indicator. When assessing the cost-effectiveness ratio of a programme, costs need to be assigned to a single outcome indicator, as it is not possible to separate the effect of each GBP spent on each one of several indicators. If, for example, a project improves both trust in the judicial system and the ratio of public officials tried and convicted, it may not be possible to disentangle which amount of the total cost of the project was responsible for improvements in which indicator. Building a single indicator for CEA is a difficult task, as there is not one correct solution as to which indicators should be combined and how they should be weighted. However, interventions can still be compared with respect to multiple indicators in a VfM assessment, such as illustrated in example 4.

#### Example 4: Comparing Two Police Capacity-Building Projects

Two alternative intervention options consist in increasing the number of police and in implementing anti-corruption measures. The table below compares these two projects with respect to the police performance and responsiveness indicators. Increasing the number of police is expected to reduce the average response time to distress calls, but not affect the perception of corruption. Its effect on the level of confidence in police is not predictable. The anti-corruption measures are expected to increase confidence and decrease perception of corruption, but not have any effect on response to distress calls. The two projects are expected to achieve different outcomes, which is why the assessment which one should be recommended depends on which problems need to be addressed most urgently in the given context.

	Expected Outcomes - Police Performance and Responsiveness Indicators		
	Level of confidence in police	Average response time to distress call	Perception of police corruption
Project 1: <b>Increasing number of police</b>	?	+	0
Project 2: <b>Anti-corruption measures</b>	+	0	+

(Author's example)

For a more complex breakdown of a similar case study see Kenan Gul and Dogutas, '[Providing Efficient Police Services: A Cost-Benefit Analysis](#)', 2009.

### Data Availability and Reliability

Many indicators relating to S&J, such as access to the judiciary system or security perception, can theoretically be established in population surveys. However, the corresponding questions are not always included in standard surveys, which is why data availability may be problematic. Further indicators are constructed from crime statistics, for example information on reported incidents. While these numbers can certainly be informative, they have to be interpreted with caution, as the number of reported incidents does not equal the total number of incidents. Improvements in the judiciary or police system may even lead to an increase in reported incidents, as individuals may now deem it "worth" reporting a crime, because prosecution has been improved. Therefore, it is important to treat available data with caution and remain vigilant to the possibility of skewed interpretations. There is existing DFID guidance on precisely these dilemmas. See the most recent [DFID practice paper on Writing a Business Case](#) (DFID, 2013a) as well as the practice paper on [Assessing the Strength of Evidence](#) (DFID, 2013b). In addition to the tips for evidence classification that these guidance notes provide, both products also make the important point that often there simply isn't any evidence (DFID, 2013a, p.18). While such a scenario warrants caution, this should not mean that the particular intervention should not be explored. The *Business Case How to Note* makes the distinction between 'lack of evidence and evidence that something does not work – solid evidence of lack of effect' (DFID, 2013a, p.18).

### Context Specificity

A further challenge, which affects development programmes in general but is of particular relevance in the S&J sector, is context specificity. While a to-the-letter application of the "three E's" would prescribe investing in those countries and regions where impact indicators respond most favorably to each GBP invested, the "fourth E", equity, makes such an approach more complicated. As stated by former International Development Secretary Andrew Mitchell: "If it costs twice as much to educate a child in a conflict country as it does in a stable one, it's still good value" (Mitchell, 2011).

The notion of context specificity is currently integrated into the Business Case format through the 'Sensitivity Analysis' sub-section of the Appraisal case. The current Business Case guidance suggests that sensitivity analysis can be undertaken by anticipating any possible changes in your key assumptions and assessing how the net benefits of the intervention might change (DFID, 2013a, p.24). Climate and

environmental issues are common features of the sensitivity analysis, as evidenced in a recent example of a Business Case for a De-mining project in Herat Province, Afghanistan. The table below shows the results of the sensitivity analyses that were undertaken to consider the effects of changes assumptions made about a) the discount rate and b) the percentage of land being used for agriculture (De-Mining in Herat, 2013, p.14).

### Summary of the sensitivity analysis

Sensitivity Analysis			Option 2a UNMAS / MACCA (Helmand Province)	Option 2b UNMAS / MACCA (Kandahar and Zabul Provinces)	Option 3 HALO (Herat Province)
A. Discount Rate	A1. 10%	NPV (£million)	-1.5	-1.4	0.8
		IRR (%)	-4%	-4%	2%
		Benefit/Cost Ratio	0.8	0.8	1.1
	A2. 14%	NPV (£million)	-0.2	-0.07	2.8
		IRR (%)	-1%	0%	6%
		Benefit/Cost Ratio	1.0	1.0	1.4
B. Land used for agriculture	B1. - 20%	NPV (£million)	-4.7	-4.6	-0.9
		IRR (%)			-2%
		Benefit/Cost Ratio	0.3	0.3	0.9
	B2. +20%	NPV (£million)	2.7	2.9	4
		IRR (%)	6%	6%	10%
		Benefit/Cost Ratio	1.4	1.4	1.6

In addition to climate and environmental concerns, S&J programmes also need to consider conflict sensitivity analyses. The underlying rationale for conflict sensitivity analyses is based on the understanding that all interventions introduce resources into a context, be they equipment, funding, training or process enhancement. And these resources have the potential to become caught up in the conflict dynamic. So, unless there is specific analysis of how any type of intervention may inadvertently contribute to tensions there is a real risk that conflict or tensions may escalate. The CCVRI has developed a practice product on this issue<sup>3</sup> and provides input on the range of tools that have been developed to enable conflict sensitivity in the development and humanitarian sector.

Whether context specificity is analyzed in terms of conflict or environmental issues the challenge remains that the stark differences between contexts make it difficult to quantitatively compare VfM across countries. CBA and CEA can however provide valuable information for comparing different intervention options in the same context, such as those compared in the appraisal case of a BC. For relatively small programmes, undertaking a quantitative analysis to compare options is recommended when the necessary indicators can be obtained without incurring large cost.

<sup>3</sup> See CCVRI Practice Product on 'Monitoring and evaluating conflict sensitivity - challenges and practical solutions'.



## 5. Steps in Assessing VfM

This section presents a number of practical steps for the appraisal case of a VfM assessment. It is not an exhaustive list, but provides a number of elements which can be used in the VfM assessment of all types of interventions. In each of these steps it might be helpful to step back and check that there is a convincing Theory of Change underpinning the proposed intervention. A VfM assessment should not be divorced from Theory of Change considerations, as a weak Theory of Change will ultimately nullify any potential value for money.<sup>4</sup>

### 5.1. Describe the Context of Intervention

At the risk of over-stating the obvious it must be noted that VfM is highly context-specific, especially in the S&J sector. It is important to explore context-specific opportunities and constraints (such as the existence of infrastructure or the political situation) in order to determine which intervention is most adequate. These characteristics should be linked to relevant aspects of programme design in order to explain why a certain approach is recommended. A similar intervention can be of high VfM in a certain social, cultural or political context, but significantly less effective in another. If the Business Case is attempting to motivate for one intervention over another then it would be important to list the relevant VfM specifics linked to each intervention.

For example, if the business case is comparing two options for providing human rights training to police officers in Afghanistan the following contextual variables might apply:

Service provider X offers their training programme at a total cost of 80GBP per participant. This cost includes childcare for the participants' children. Service provider Y offers their training programme at a much lower cost of 55GBP per participant, but this does not include childcare.

In some contexts the provision of childcare might seem superfluous and unnecessary, but in the Afghan context it is a crucial factor to ensure attendance at the training. Female police officers face numerous challenges linked to the traditional gender norms that dictate that women stay home to care for children.

The CBA and CEA for the business case would therefore need to take these kinds of contextual variables into account.

*(Example derived from ESDC Gender in Operations Course material)*

### 5.2. Disentangle Different Elements of the Results Chain

Even if no quantitative indicators are used, it is important to clearly distinguish between the different elements of the results chain, in order to link them to the corresponding criteria for VfM (the "E's") (see example 5). When comparing different options in the appraisal case, they can be compared according to their efficiency and effectiveness. The economy criterion should be discussed in the commercial case.

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<sup>4</sup> Vogel (2012, p.25) uses an example of a DFID project in the DRC to show how Theory of Change intersects with all other aspects of the programme assessment and Business Case.

Point in VfM chain		When should it be measured?
Economy		At all stages (design, implementation and evaluation), to ensure minimal input costs in the different programme areas.
Efficiency		At all stages, to avoid over- or under spending on overall administrative costs of delivering the programme outputs.
Effectiveness	Cost-effectiveness analysis	At design and evaluation stages, if programme outcome or impact can be quantified but not necessarily in money terms
	Cost-benefit analysis	At design and evaluation stages, if programme outcome or impact can be put in money terms

(Hodges, White and Greenslade; 2011,p.8)

### 5.3. Compare and Contrast

The appraisal case ranks different options for intervention (and non-intervention) in order to determine which one has the highest VfM. This implies discussing the specific strengths and weaknesses of each approach with respect to efficiency and effectiveness. It should become clear why the proposed intervention is judged to have higher VfM than other interventions. The construction of an overview table may be useful to visualize the key differences between the different options (see example 5).

A comparison should only be undertaken between programmes which share similar outcomes. For example, it is helpful to compare two programmes which aim to increase access to justice for women by different means. Comparing a programme aiming to increase access to justice for women with a programme aiming to reduce violent crime is unlikely to yield meaningful results. Furthermore, programmes can be compared to the counterfactual of not intervening. In order to gather evidence for such a comparison, it is possible to compare regions where a programme was active to regions where it was not. Such a comparison needs to pay close attention to other region-specific developments which might have affected programme results. If, for example, the comparison region has benefitted from a programme by another organization, it cannot be considered a no-intervention counterfactual.

#### Example 5: Two Projects to Address Police Corruption

Two hypothetical projects to reduce police corruption are disentangled according to the different elements of the results chain, which correspond to the “three E’s”. The two projects, providing anti-corruption training for police and establishing a corruption hotline, share the same planned outcome, reducing police corruption. They can be compared along all elements of the results chain. In the present example, police training is expensive while the corruption hotline is cheap. However, police training is expected to achieve higher efficiency and effectiveness. Police are likely to improve their awareness of corruption and to engage less in corrupt practices after the training. The hotline is expected to work less well: people are not likely to call it, and reporting incidents does not decrease the overall incidence of police corruption. Thus, while the training is more expensive, it is expected to yield higher VfM.

	Economy Input cost	Efficiency Inputs → Outputs	Effectiveness Outputs → Outcomes
<b>Project 1</b> Anti-corruption training for police forces	How much does it cost to train a certain number of police?	How is their knowledge and understanding of corruption improved?	How does their increased awareness lead them to avoid corrupt practices?
	Expensive	Well	Medium
<b>Project 2</b> Establishing a phone hotline to report police corruption	How much does it cost to establish the phone hotline?	How often is the hotline used to report incidents?	How does this translate into reduced police corruption?
	Cheap	Rarely	Not at all

## 5.4. Prioritize

Programmes can be disaggregated into their different components in order to determine their respective importance. Some components are absolutely necessary to the success of the programme; others may be highly desirable in order to maximize VfM. Others again may be useful, but of less value-add. In the appraisal case, different elements can be classified according to their contribution to the VfM of the programme. Different combinations of programme elements should be compared in order to identify the most effective programme design. Prioritization is also useful to identify the optimal timing of programme components. Urgent components, as well as components necessary for the success of others, should be implemented early, while other, less time-critical components can be phased in later.

The process of prioritization can be made easier and more transparent through the use of a 'decision-tree' matrix that clearly shows the logic underpinning a particular course of action.

## 5.5. Consider Side Effects/unintended consequences

While each intervention has a main output and (desired) outcome, it may also have positive or negative side effects. An over-emphasis or over-reliance on quantitative indicators can often lead to these side effects or unintended consequences sneaking in to the programme implementation. Without the necessary vigilance, these factors can eventually compromise the achievement of key impacts. They can thus tip the VfM balance between two interventions, which is why their discussion should be included in any VfM assessment. Negative side effects can be particularly dangerous in the context of conflict, as it has been highlighted in the "Do No Harm" debate. A discussion of potential side effects which should be considered can for example be found in the "Do No Harm Handbook" (CDA, 2004). The Conflict Sensitivity Analysis discussed above can also help to anticipate any negative unintended consequences.

## 5.6. Highlight Different Points of View

As discussed above, quantitative indicators may represent the benefits accruing to a specific group of the population, which is why alternative indicators should be considered in order to ensure equity. The same reasoning applies for a qualitative assessment. The points of view of the main beneficiaries, but also of other population groups should be taken into account in VfM considerations. Furthermore, VfM may also accrue from externalities involving actors other than beneficiaries, for example improved relations with the local government or other organizations.

## 5.7. Quote Evidence

The use of evidence is critical in optimally assessing the VfM of any intervention. Evidence may be quantitative or qualitative and stem from a variety of sources, which will be discussed in more detail in the next section. When quoting evidence from similar projects, it is important to pay close attention to differences in project design or context, as these might influence effectiveness.

When comparing different intervention options on their potential outcome and impact, it is important to distinguish between effects which are expected out of theoretical considerations and effects which have already been observed elsewhere. A VfM assessment relies on a series of assumptions, and it is important to be clear about the information these assumptions are based on.

Given that evidence on the impact of projects in the security and justice sector is relatively rare, external validity is an important concern. Results may depend on details of project design or context-specific characteristics. Therefore, the numerical values of impact evaluations conducted elsewhere can only provide an idea of the order of magnitude of the effect of interest.

## 6. Obtaining Evidence on Effectiveness

In line with what has been noted above, evidence plays a crucial role in the Business Case, both in terms of showing that the proposed intervention is needed as well as showing that the proposed intervention will in fact be effective i.e. developing a robust Theory of Change. An exhaustive discussion on sources of data and research findings is beyond the scope of this paper and is covered extensively in three other CCVRI Practice Products.<sup>5</sup> This section will briefly discuss different methods of collecting and evaluating evidence and will provide an overview of different resources that can assist DFID staff in preparing the Business Case.

Generally, evidence for VfM assessments is obtained in similar ways as evidence for other purposes such as programme design or monitoring. Many of the same data challenges therefore apply. In the context of security and justice work, data challenges become more acute. Conflict, crime and violence data typically describe negative events such as, for example, people killed or injured by armed conflict or crime. 'Progress', for most conflict, crime and violence indicators, is represented by a reduction rather than an increase in absolute values or rates. This differs when it comes to other conflict, crime and violence data that describe positive events such as safety perceptions. Progress in these indicators will be represented by increases in values – such as percentage of persons that trust the police, for example. These characteristics, amongst others make security and justice data slightly more complicated in terms of the VFM analysis.

A helpful guide to assessing evidence is provided in a [DFID Practice Paper on Assessing the Strength of Evidence](#). This Practice Paper should be read in conjunction with the January 2013 Practice Paper on [Writing a Business Case](#).

What follows below are some practical tips in terms of quantitative and qualitative data usage for the VFM assessment.

### 6.1. Quantitative Evidence

Quantitative evidence is mainly found in impact evaluations of other interventions or economic research papers. Randomized Controlled Trials (RCTs) are often deemed to be the 'gold standard' when it comes to showing evidence of impact. RCTs have not been that common in the security and justice sector. While this is gradually changing, it remains the case that there is a general paucity of quantitative data in the S&J sector. Other more abundant sources of quantitative evidence can also be obtained through regression analysis, using data from different sources (household surveys, censuses, and other statistics).

The key challenge is how to translate data into evidence of impact. In many cases it is only possible to identify correlation, not causality, which is why findings need to be interpreted with great care. If the necessary information is not available, it is possible to collect survey data, although this assumes sufficient time and budget allowance.

### 6.2. Qualitative Evidence

Qualitative evidence can also stem from a variety of sources. Results or observations from similar projects (project documentation) and prior experience of team members or other colleagues can yield important insights into potential effects of an intervention. Other sources include government or NGO

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<sup>5</sup> See CCVRI Practice Product on 'Sources of data on conflict, crime and violence'; CCVRI Practice Product on 'Uses of data on conflict, crime and violence' and CCVRI Practice Product on 'In-depth focus on surveys'.

publications from the recipient country, local media or the scientific literature from disciplines such as economics, law, political science and anthropology.

Qualitative evidence can furthermore be collected by conducting interviews, for example with beneficiaries or experts. Interviews with selected partners are generally less costly and time-consuming than conducting a representative survey, which is why they may be a suitable option to gain additional insight into the working of a programme. The evidence, again, should be interpreted with caution, as the choice of informants may not be representative of the target population and because informants may give misleading answers or interpretations for a variety of reasons.

While it is sometimes suggested that quantitative evidence more useful than qualitative evidence, this is not generally the case for ex-ante VfM assessments. Before setting up a programme, interviews with experts or focus group discussions can often provide better insights into why and how a programme can work than a statistic. Further advantages of qualitative data collection methods are that they are relatively cheap and require less planning in advance. As a general rule, desk-based research combined with interviews (if adequate) is sufficient for most small to medium, relatively standard projects. For large and/or innovative programmes, it may be useful to incorporate a survey in order to obtain ex-ante evidence on context-specific needs or ex-post evidence on impact. Surveys should be planned relatively long in advance and in cooperation with an impact evaluation specialist.

### 6.3. Databases

While it is beyond the scope of this paper to provide an extensive list of resources, the following databases may be useful to find evidence on the effectiveness of security and justice programmes and publications on governance, conflict and social development issues:

- R4D <http://r4d.dfid.gov.uk/>
- 3ie International Initiative for Impact Evaluation. <http://www.3ieimpact.org/en/evidence/>
- Vera Institute for Justice: Cost-benefit knowledge bank for criminal justice (CBKB), Reference database, on <http://cbkb.org/basics/references/> (criminal justice topics, mostly U.S.)
- Governance and Social Development Resource Centre (GSDRC) Document library, on <http://www.gsdrc.org/go/document-library>
- The Knowledge Brokers' Forum (KBF) is a collaborative space to promote knowledge sharing and dissemination around intermediary work in international development. <http://www.knowledgebrokersforum.org/home>
- ODI's Research and Development programme (RAPID) works to understand the relationship between research, policy and practice and promoting evidence-informed policy-making. <http://www.odi.org.uk/programmes/rapid>
- The EBPDN is part of the Overseas Development Institute (ODI)'s CSP programme. This website is a key outcome of [ODI's Civil Society Partnership Programme \(CSPP\)](#). This programme aims to establish a worldwide community of practice for think tanks, policy research institutes and similar organisations working in international development, to promote more evidence-based, pro-poor development policies. <http://www.ebpdn.org/resource/index.php>
- Research to Action - <http://www.researchtoaction.org/>
- [Afrobarometer](#): perception survey data from several African states;
- [Bertelsmann Transformation Index](#): political legitimacy, democratic transitions, etc.;
- [Corruption Perceptions Index](#): TI's global perception survey of corruption;

- **Failed States Index:** social, political and economic pressures, and state legitimacy;
- **Freedom in the World:** assessments of global political rights and civil liberties;
- **Gallup World Poll:** perception surveys from a range of countries on political and social issues
- **Ibrahim Index of African Governance:** includes indicators on Safety; Rule of Law; Participation; Human Rights; Sustainable Economic Opportunity; Human Development;
- **Minorities at Risk:** analyzes the status and conflicts of politically-active communal groups;
- **Open Budget Index:** measures budget transparency and accountability;
- **State Fragility Index;** includes measures of state effectiveness and legitimacy;
- **UN Statistics Division:** wide range of data including MDGs, economic, social, and environmental indicators;
- **Uppsala Conflict Data;** rigorous data on numbers of conflict deaths;
- **World Bank/IMF DSA;** debt sustainability assessments for low-income countries;
- **World Development Indicators;** over 400 indicators that (in some cases) can be disaggregated for conflict and fragility monitoring purposes.

## 7. Conclusion

The VfM assessment of an intervention can be implemented linking the VfM criteria to the corresponding elements of the results chain. The efficiency and effectiveness criteria should be addressed in the appraisal case, and the economy criterion in the commercial case in the BC format. Quantitative methods, in particular CBA and CEA, can be a valuable tool to compare different options in the appraisal case if the outcome of interest can be captured by a quantitative indicator and if data of adequate quality is available. Particular challenges for applying quantitative analyses to interventions in the S&J sector are context-specificity, data constraints, and the lack of universal outcome indicators. A qualitative, evidence-based discussion of the VfM of the intervention should always accompany the quantitative analysis, and may replace it in case quantitative assessment is not feasible.

## List of Abbreviations

<b>BC</b>	Business Case
<b>CBA</b>	Cost-Benefit Analysis
<b>CEA</b>	Cost-Effectiveness Analysis
<b>DALY</b>	Disability-Adjusted Life Year
<b>S&amp;J</b>	Security and Justice
<b>VfM</b>	Value for Money

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