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**Swiss Agency for Development
and Cooperation SDC**

Working Aid on Economic and Financial Analyses (EFA) for Vocational Skills Development (VSD) projects

Updated version, August 2023

→ Introduction

The SDC Directorate decided in spring 2020 to implement Economic and Financial Analysis ('EFA') for all project phases with a budget above 6 million CHF, making it mandatory at the ex-ante stage. Project proposal phases below 6 million CHF are encouraged to present a solid argumentation of the value for money invested. The SDC Quality Assurance Section in November 2021 published a How-to-Note (H2N) to instruct SDC Staff on the implementation of EFA with a Part I that provides a basic understanding of EFA and a Part II that provides practical guidance for SDC staff who mandate an EFA. The H2N and other helpful documents can be found [here \(QA Padlet\)](#) or [here \(E+E Shareweb\)](#).

To facilitate the implementation of EFA and particularly Cost-Benefit Analysed (CBA) for Vocational Skills Development (VSD) projects, the responsible thematic network already developed a first working aid in 2019 and an [Excel template](#) for the analysis of directly implemented VSD projects. Their aim is to support SDC program officers, project implementers, consultants, and other stakeholders in assessing costs and benefits of VSD interventions, be it in the planning stage of a project (ex-ante), for monitoring purposes (ex-inter) or as part of a mid-term or end of phase evaluation (ex-post).

This updated version of the VSD working aid considers the above-mentioned decisions of the Directorate and is fully in line with the QA Section's EFA H2N. Please refer to this document for terminology and methodological details.

→ EFA in VSD – some basics

The SDC needs to clearly show project results, including benefits of primary stakeholders. Cost awareness and value-for-money considerations are important elements to assess whether the investment for an intervention (i.e., project) will be, is or was justified (i.e. how many people can be reached and the benefits from every monetary unit spent) and if there might be cheaper alternatives producing equal outcomes.

Economic and Financial Analyses are thus part of SDC's overall results-based management system. EFA is applied to (a) assessing a project's efficiency regarding its net contribution to the national economic and social welfare in a country - known as **economic analysis**; and/or (b) examining the financial return for different project stakeholders to identify financial incentives or impeding factors for participants - known as **financial analysis**.

The purposes mentioned above do also apply to VSD. The tangible benefits of VSD consist primarily of additional employment and thus of net additional incomes for graduates, while costs are mainly borne by training providers (either financed through the state budget, donor contributions or school fees), relating to training expenses such as investments into school buildings, equipment and teacher/trainers' salaries.

→ EFA in VSD – Economic or Financial Analysis?

In VSD, both, economic and financial analyses might be justified and needed, depending on what you need to know. On the next page you can see two examples:

A **financial analysis** takes a look at direct monetary flows to and from an individual entity, thus analysing interests of specific actors (e.g., a company deciding on training apprentices in a dual VET setting or a young woman wondering if she shall attend vocational training or not).

An **economic analysis** is concerned with the costs and benefits to society as a whole, regardless of who pays and who gains. While the financial analysis exclusively considers the costs and benefits related to the market aspects of the project, the analysis from an economic point of view defines benefits as an increase in social well-being.

Example for a *Financial Analysis in Vocational Skills Development (VSD)*

The Germany-Pakistan Training Initiative (GPATI), implemented by GIZ, piloted the applicability of a cooperative Vocational Education and Training approach according to the Pakistani context. In this pilot, leading Pakistani and multinational companies like Suzuki, General Tyre and Siemens provided work-based training for different occupations. In order to bring additional companies on board and respond to the often-voiced assumption that participating in Vocational Education and Training results in a loss for private companies, the project in 2019 mandated a financial Cost Benefit Analysis (financial CBA).

The analysis compared the monthly training costs incurred by the firms (direct costs) with the productive output generated by the trainees (direct benefits) and the savings on hiring and induction costs when a trainee stays with the company (downstream benefits). The CBA concluded that the five interviewed companies on average saved PKR 462,000 on recruitment costs and thus achieved a net benefit.¹

Example of an *Economic Analysis in Vocational Skills Development (VSD)*

After a successful completion of Phase I, the Building Skills for Unemployed and Underemployed Labour (B-SkillFUL) programme, financed by the SDC and implemented by Swisscontact, commenced its second phase with the aim to improve productivity and competitiveness of small and medium enterprises (SMEs) and create better jobs in the furniture making, light engineering and leather goods manufacturing sectors across six districts in Bangladesh.

During the planning of the second phase of the programme, the costs and benefits of different implementation scenarios were analysed by the implementer and discussed together with the Embassy of Switzerland in Bangladesh. With the aim of assessing the meaningfulness of the programme from the donor's perspective, an economic analysis was carried out.

The analysis compared the net income increases of employed training graduates (incomes of graduates minus incomes of non-participants) for a duration of 3 years after graduation with the overall programme costs (programme management costs, programme funds and opportunity costs for the training participation). Residual assets and expected externalities (benefits resulting from increased productivity of the skilled workforce, estimated as an additional 5% to income increases) were included as additional benefits. Depending on the scenario, the analysis came up with an Internal Rate of Return (IRR) between 27% and 35%. These results show that the project is economically worth.

As the two examples above illustrate, a **financial analysis** can be very helpful mainly for project implementation (ensure that financial incentives are strong enough for all stakeholders) and can also be used as an advocacy tool, e.g., for dual VET modalities.

An **economic analysis** looks at the worthiness of a project for society and is therefore needed to inform a donor (such as SDC) if a project is worth investing.

In this Working aid we therefore focus on economic analyses and particularly ex-ante analyses (as requested for SDC project proposal above 6 million CHF).

¹ C.f. Schläpfer & Troxler (2019): Return on investment or an investment without return? A cost-benefit ratio analysis of in-company training in Pakistan (https://www.dcdualvet.org/wp-content/uploads/2019_GIZ_Return-on-investment-Build4skills-Pakistan_long.pdf)

→ EFA in VSD – what kind of analysis / method?

VSD projects can have quite diverse objectives and thus take very different forms as you can see in figure1 below. Of course, not for all projects (or project components) the same EFA methods is equally suitable. Kindly also have a look at the decision tree of the EFA H2N (figure 2, below) to select the most appropriate EFA methods and learn more about those.

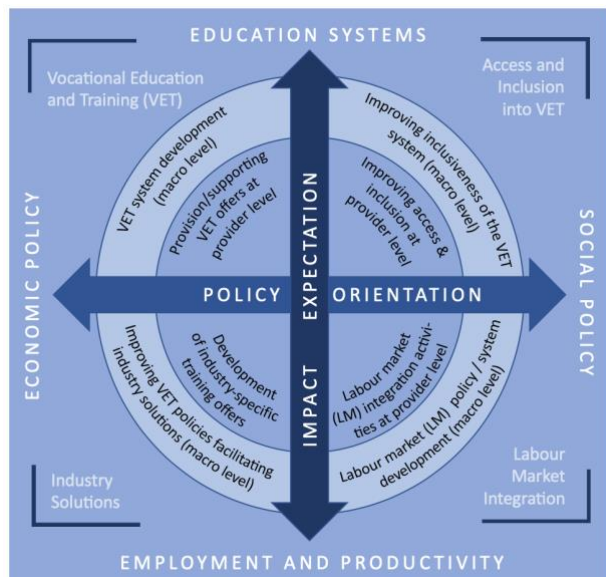


Figure 1: Prototypes of VSD, differentiated by macro and micro level (own graph, based on VSD typology, 2019: SDC)

In principle, a Cost-benefit analysis (CBA) makes sense where a clear attribution of costs and individual, **monetizable benefits** can be established. In VSD, this is particularly the case when a project is active at the micro level, i.e., providing training by itself or directly contracting or collaborating with selected training providers.

For these types of projects, also the [Excel template](#) can be very handy.

As well, for a proper CBA you need to have a **solid counterfactual**, telling you what income your beneficiaries would make without the project.

Where benefits at the output level can be quantified, but not monetized (e.g. numbers of schools built, numbers of teachers trained) a cost-efficiency analysis (CEA) might be the best solution.

Finally, for projects that are mainly active in the areas of system development and reform (i.e. macro level) or consist primarily of advocacy activities, it is virtually impossible to isolate and quantify the exact attributable benefits. In this case considerations on costs and benefits should rather be assessed in a qualitative statement (“argumentation of economic worthiness”).

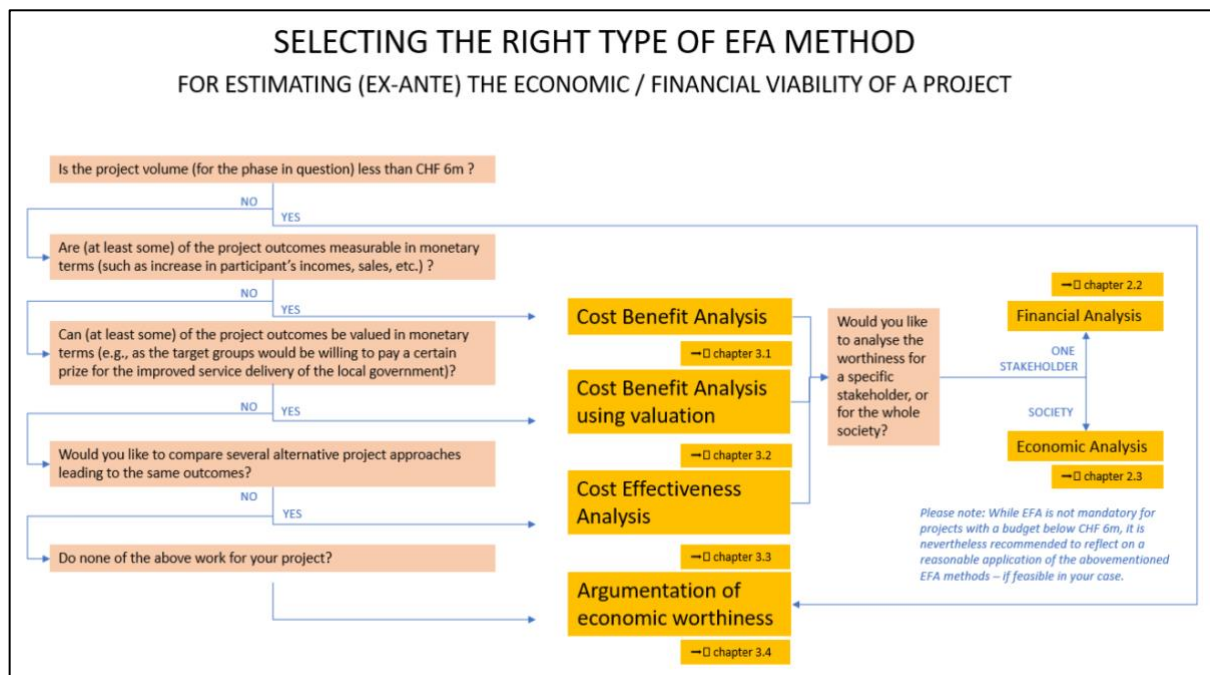


Figure 2: Decision tree to select the best-suited EFA method (taken from EFA H2N)

→ Costs and benefits in VSD – what to consider?

In case you plan to run a Cost-Benefit Analysis (CBA) of your VSD project, we kindly invite you to consider the following aspects, in addition to the points mentioned in the EFA H2N:

→ THE VARIOUS COSTS OF VSD...

The cost of VSD activities can be divided into fixed (independent of the number of trainees) and variable costs. Main cost factors are investments in infrastructure, equipment and consumables, wages for teachers/trainers, management and administrative overheads, the cost for developing training content (occupational standards, curricula, teaching materials, test items) and capacity building, as well as opportunity costs and project management.

→ ... COMPARED TO THE DIRECT AND INDIRECT BENEFITS OF VSD

- Clearly the **trainees' incomes after the training** (minus a counterfactual income they might make without the training and minus opportunity cost) make up the main benefit of VSD interventions. However, at least two additional types of benefits and related effects should be considered as well:
- Additional **Employers' benefits**: Better skilled workers are more productive, so that is why they make a higher income. If we assume that not all productivity gains will be passed on to the workers through higher incomes, a surcharge can be made to integrate employer's productivity gains into the calculation.
- **Training providers' revenues and assets**: The revenues of training providers, such as incomes from production or marketing of learning media are considered as benefits too. Likewise, the residual value of all assets (such as buildings, equipment) will be considered as potential income, once the project ends.

Other benefits you might consider (*but where we recommend being very prudential*):

- **Multiplier effects**: When developing a CBA, multiplier effects may be considered too (i.e. extra employment and income leads to more spending, which creates more employment and income, and so on). In the case of VSD projects we only recommend calculating multiplier effects if a large part of the graduates works abroad which results in a significant share of remittances. Multipliers might also become relevant in circumstances where most graduates are employed in professions contributing to significant foreign cash inflows.
- **Substitution and displacement effects**: From a macroeconomic perspective, one could also consider taking certain general equilibrium effects into account. Sceptics may argue that particularly short training courses do not lead to overall employment growth, but that graduates simply replace other workers of the local economy, which then become unemployed themselves (i.e. substitution or displacement effect). These effects might indeed be relevant; however, they are extremely difficult to grasp.²

→ INTRODUCING AN EXPANDED TIMELINE

An important characteristic of training programs is the time lag between the training and the employment stages. As a result, VSD projects often show higher costs than benefits over the duration of their project duration. This picture changes as soon as the timeline is expanded and graduates' incomes for a limited number of years after the end of the project are also taken into account (see figure 3 below). This should, however, only be done with the necessary restraint (and applying a reasonable discount factor) in order to keep the intervention's attribution at least plausible.

² For more information on indirect and induced employment and income effects of development programs, we recommend the work of Jochen Kluge and Jonathan Stöterau commissioned by GIZ: [Measuring employment effects of technical cooperation interventions](#), 2011, page 13 and [A Systematic Framework for Measuring Aggregate Employment Impacts of Development Cooperation](#), 2014, page 16ff.



Figure 3: Negative (red) and positive (green) difference between costs and benefits of a prototypical 12-year project – for the duration of the project only (left graph) and including an extended timeline (right graph). Source: screenshot taken from the CBA Excel workbook.

→ SOME EFFECTS JUST CAN'T BE QUANTIFIED AS PART OF CBA

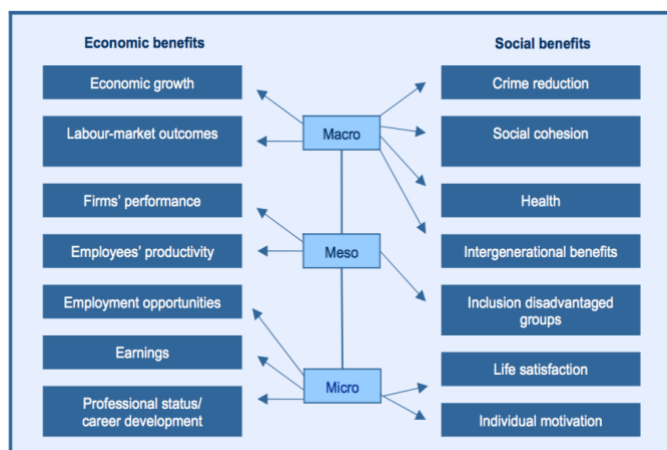


Figure 4: Types of VET benefits (Source: CEDEFOP research paper no 10, The benefits of vocational education and training, 2011: Publication Office of the EU)

Finally, it is also important to highlight, that not all effects of VSD can be put in quantitative terms. What CBA basically captures are the higher earnings of graduates which may be a result of higher productivity and better employment opportunities.

Figure 4 shows that besides the economic benefits (which can to a large extend be covered in a CBA) social benefits such as social cohesion, inclusion of disadvantaged groups or individual wellbeing are relevant too. These dimensions are very difficult to quantify and/or to derive a plausible attribution.

In a qualitative statement (“argumentation of economic worthiness”) the expected effects on some of these non-monetary dimensions, can be explained.³ Therefore in practice we often see mixed-methods approaches, where some components of a VSD project are analysed using CBA, while others (those more on the macro level where attribution to the target groups’ employment and income is quite difficult to prove) are rather analysed qualitatively.

→ LAST BUT NOT LEAST: MAKE IT A USEFUL TOOL!

We highly recommend not to use CBA as a standalone activity when developing a ProDoc and / or Credit Proposal, but to then integrate it systematically in a project’s M&E process (regularly revising assumptions based on new data available) and thus also make it a steering instrument between donor and implementer.

HELP! Are you stuck? Do you have questions? Do not hesitate to contact the experts at the e+i focal point or the VSD backstopping team! We are ready to support you!

→ Andrea.Inglin@eda.admin.ch (E+E section) / Roman Troxler@kek.ch (VSD backstopping).

³ Another option would be to apply different weighting of effects on different target groups within a CBA/CEA (i.e. give higher priority to increased incomes of disadvantaged groups). This approach is however very difficult to justify and therefore not recommended.

→ Annex: How to use the Excel template on CBA for VSD

Since 2017, several templates have been developed⁴ to provide SDC program officers, project implementers, consultants and other stakeholders with hands-on tools to compare costs and benefits of VSD interventions.

Based on user feedback, a simplified [Excel template](#) for direct skills provision (micro-level) focussed VSD projects has been published in 2019. This tool reduces the cost part to your project budget (and overall third-party costs if there is a co-financing by other donors or national stakeholders, including the private sector), thus quite useful particularly for an ex-ante CBA.

Some key features of the **simplified workbook** are outlined below:

- **Purpose and results:** The purpose of the workbook is to assess costs and benefits of a direct skills provision (micro-level) focussed VSD project design, quantified and time bound. The result will - in technical terms- be expressed as "net present value" (NPV) and "internal rate of return" (IRR). In addition, the "benefit-cost ratio" (B/C) is provided too. Non-monetary effects (outside the NPV) should of course be taken into account too.
- **Step-by step structure:** The 5 steps of the workbook shall be filled in from top to bottom. The workbook is fully editable in order to encourage users to adapt it to their specific project context, if needed.
- **Input fields:** In the workbook, there are three sections. On the left: blue and orange input fields. On the right: Values calculated by the programme. In the middle: Graphs visualising some key parameters. All input fields in steps 1 to 4 are mandatory, the fields in step 5 are optional (i.e. may set to zero or assume a default value).
- **Complete or component design:** The modules provide for a full VSD project on micro. If however some components of your project do not directly contribute to skills provision (but rather to an enabling system on the macro level), you may opt for a CBA only for the relevant components (and other methods for the other components)
- **Project duration:** We recommend calculating costs and benefits for more than just one phase. However, you will have to regularly revise the assumptions based on new data. The workbook allows a maximum project duration of 12 years.
- **Attribution period:** Benefits (such as higher incomes) should only be attributed to a specific intervention for a limited period of time. We recommend between 1 year for a very short training (duration of 1-4 weeks), around 3 years for a training of several months and up to a maximum of 10 years for a multi-year apprenticeship.
- **Counterfactual:** To do a proper CBA you will have to establish a counterfactual (non-participants with similar socioeconomic characteristics). If no control-group can be identified/created, a before-after comparison might be considered. The gold standard of impact evaluation would of course be a RCT or a difference-in-difference study.

⁴ Tools developed by the SDC's backstopping mandate for VSD (KEK-CDC and INBAS). An in-depth workbook was mainly designed by Gunter Kohlheyer († 2018) and tested by the COOF Albania and the S4J project. The simplified tool has been developed by Andrea Inglin and Roman Troxler based on discussions with Peter Beez, Brigitte Colarte-Dürr, Beatrice Ferrari, Pradeep Itty, Katrin Ochsenbein, Horst Idler, Matthias Jäger, Franz Kehl, Wolfgang Schlegel and Sibylle Schmutz.