Cost- Benefit Analysis

Meaning of Cost Benefit Analysis

Cost-benefit analysis may be defined as a process of estimating good and bad sides of considered alternatives when deciding about a new project. In other words, it is a calculated process for finding the ratio between costs and benefits of a project and determining if it is worth its price. When the analysis is finished, it is known which project is better in terms of finance and anything else that might be important.

The part of cost-benefit analysis is putting a monetary value on things that are not measurable by money (for example, living in a city versus living in a country). While transferring the benefits into monetary values some of the meaning might be lost, but it is important that this can be done. Of course, the results are not as precise and there is always a risk because of the factors that simply cannot be measurable.

The Purpose of Cost Benefit Analysis

The purpose of cost benefit analysis in project management is to have a systemic approach to figure out the pluses and minuses of various paths through a project, including transactions, tasks, business requirements and investments. Cost benefit analysis gives you options, and it offers the best approach to achieve your goal while saving on investment.

There are two main purposes in using CBA:

1. To determine if the project is sound, justifiable and feasible by figuring out if its benefits outweigh costs.

2. To offer a baseline for comparing projects by determining which project's benefits are greater than its costs.

Process of Cost Benefit Analysis

While it's not clear if this Founding Father followed this exact process, it has evolved to include these 10 steps:

1. **What Are the Goals and Objectives of the Project?** The first step is perhaps the most important because before you can decide if a project is worth the effort, you need a clear and definite idea of what it is set to accomplish.

2. **What Are the Alternatives?** Before you can know if the project is right, you need to compare it to other projects and see which is the best path forward.

3. **Who Are the Stakeholders?** List all stakeholders in the project.

4. **What Measurements Are You Using?** You need to decide on the metrics you'll use to measure all costs and benefits. Also, how will you be reporting on those metrics? With ProjectManager.com, you can create eight different project reports with just one click, including project status reports, variance reports and more.

5. **What Is the Outcome of Costs and Benefits?** Look over what the costs and benefits of the project are, and map them over a relevant time period.

6. **What Is the Common Currency?** Take all the costs and benefits you've collected, and convert them to the same currency to make an apples-to-apples comparison.

7. **What Is the Discount Rate?** This will express the amount of interest as a percentage of the balance at the end of a certain period.

8. **What Is the Net Present Value of the Project Options?** This is a measurement of profit that is calculated by subtracting the present values of cash outflows from the present values of cash inflows over a period of time.

9. **What Is the Sensitivity Analysis?** This is a study of how the uncertainty in the output can be apportioned to different sources of uncertainty in its inputs.

10. **What Do You Do?** The final step after collecting all this data is to make the choice that is recommended by the analysis.

Quantitative and Qualitative Aspects

Quantitative factors are numerical outcomes from a decision that can be measured. These factors are commonly included in various financial analyses, which are then used to evaluate a situation. Managers are typically taught to rely on quantitative factors as a large part of their decision making processes. Examples of quantitative factors are:

- **Direct labor hours**. A change in the number of labor hours required to complete a task if automation is used.
- **Direct materials cost**. A change in the per-unit cost of materials if a purchase is placed in a larger order volume.
- **Interest cost.** The amount of additional expense that will be incurred if a loan is used to buy a fixed asset, rather than selling stock.
- **Product returns**. The cost of the product returns that will occur if the decision is made to use lower-quality materials in the construction of a product.

While quantitative factors certainly should form a large part of any decision, there are other issues to consider. For example, the outcome of a decision to shut down a factory will impact the local community, which has supported the business for many years. Or, the numbers may state that a single product within a product line should be cancelled, but the company needs to present a complete product line to its customers, and so elects to retain the product.

The decision to use quantitative factors is considered more important when a large amount of funding will be deployed, since there is a greater risk of losing or at least under-utilizing the money. Quantitative factors are less important when there is less money that will be impacted by the decision.

Qualitative factors are decision outcomes that cannot be measured. Examples of qualitative factors are:

- The impact on employee morale of adding a break room to the production area.

- The impact on customer opinions of a business if an investment is made in answering their phone calls in less time by adding customer support staff.
- The impact on investors of conducting a road show to meet as many of them as possible.
- The impact on the local community of allowing employees to spend a few hours of paid time assisting with community projects.
- It may be possible to use somewhat cheaper components in products. However, if this is done too much, it may create an overall impression of reduced quality, which may lead customers to buy fewer products.

A manager should consider qualitative factors as part of his or her analysis of a decision. Depending on the manager and the level of investment involved, qualitative factors can be the deciding point in whether to engage in a certain activity. For example, if a large investment of funds is involved, the key decision factors are more likely to be quantitative, since the investing business has a great deal at stake in the decision. However, if the investment of funds is minor, the impact of qualitative factors could play a more important role in the decision.

From a branding perspective, qualitative factors can be particularly important. Proper branding requires high expenditure levels to establish and maintain an aura of quality, which a purely quantitative analysis might not justify.