

Cost-Benefit Analysis – A Research on Plan Quality Management Technique

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## Abstract

Quality is a distinct attribute that any company today wants to achieve, perhaps the only element that any organization wouldn't want to trade with 'cost factor' as it directly ascribes to the business value, that the organization is being built on. However, the 'cost factor' plays a key role in assessing the quality delivered in a product or a service. For this reason, from the time of first uncredited Mesopotamian man who had successfully invented (and sold!) wheels, to this time of digital era where Siri and Alexa are more than our friends, companies today, to satisfy the ever-changing needs of the customers, follow robust measures, tools and techniques to assess the quality, or in other words to estimate whether it's worth the effort or not. One of such techniques is the Cost Benefit Analysis(CBA) also referred as Benefit-Cost Analysis sometimes. This exploratory research paper, alongside referring to the overview of Plan Quality Management provided by PMBOK 5<sup>th</sup> Edition, explains the steps in cost-benefit analysis, its advantages and its limitations while applying it in the quality management phase of a project.

*Keywords:* quality management, plan quality management, cost-benefit analysis

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### Plan Quality Management- An Introduction

Before we break down the cost-benefit analysis, it's important to understand the foundation of quality management through the eyes of project management standards. In PMBOK 5<sup>th</sup> Edition, PMI encompasses Quality Management within 3 essential processes. They are:

1. Plan Quality Management – What to Measure? = Analyzing Quality Requirements
2. Perform Quality Management – How to Measure? = Auditing
3. Control Quality Management- Do the measure work? = Validating

The plan quality management is a process of identifying and analyzing the quality requirements defined by the customer and describing how feasible it is to deliver the defined quality. The general outcome of this process is the quality management plan including a complete quality checklist, metrics, and a process improvement plan. Each of these outcomes is delivered through specific tools and techniques and cost-benefit analysis is one such tool which is used in the plan quality management process to deliver the quality management plan.

### Cost-Benefit Analysis

Cost-Benefit Analysis is the process of delivering a comprehensive summary of every cost and benefit factor incurred to determine the overall value of the project. In a nutshell, CBA calculates the benefits of the company and estimate whether it is worth to continue the project or not.

### Steps in CBA

The first step of the process is to Create a list of all the costs and benefits that can be identified in the project. All the direct, indirect, tangible, intangible costs, benefits, and risks are considered. The second step is to compare the cost and benefits with respect to a common

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measuring unit. Care should be taken while calculating all the factors with a common unit as any mistakes in this step could result in an accurate cost estimation. And the last step is to decide from the comparison: Whether the benefits outweigh the cost or not, if yes, proceed, otherwise a project review is needed to revisit the project plan, cost estimations and quality requirements.

### **Advantages and Limitations**

The main advantages of the CBA are its simplicity and equitableness. CBA is easier to understand from the monetary point of view and by providing the actual cost, it helps in the decision making especially when the business owners experience pre-disposed nature while undertaking specific projects. In an article titled, 'Conducting cost-benefit analyses' (Sahni & Gaertner 1996) the authors state that using CBA, they not only achieved the benefits of implementing total quality management, but it also helped the workforce by utilizing them (retrain) to their full efficiency. While the process seems to be generally effective for small-medium level projects, some case studies show that it is not effective in large projects. In the article titled, 'Framework of Organizing a Resilient CBA' (Torp, 2016) the authors mention that traditional CBA lacks dynamics and systematic thinking for which made them revise the framework by building new key attributes to fill the gaps of CBA

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### **Conclusion.**

To sum up, it is suggested to use CBA in only after carefully assessing the nature of the project Or Perhaps, it is more relevant to conclude that one should assess the pros and cons of CBA with his/her project to determine whether it's worth implementing CBA or not.

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