

# [Costs and benefits of a non monetary nature economics essay](https://assignbuster.com/costs-and-benefits-of-a-non-monetary-nature-economics-essay/)

## Introduction

Cost Benefit Analysis (CBA) is a technique which seeks to bring a greater objectivity into decision making. It is a well respected appraisal technique that is widely engaged by both public and private organisations to aid the decision making process. It can be applied to almost any kind of decision in any kind of field. It is help to identifying all the relevant benefits and cost of a particular scheme and quantifying them in money terms. The process arrived in the United Kingdom in the 1960s for use in the transportation sector. CBA techniques was extended to cover a wide range of applications, such as water resource management, motorways, nationalized industries, airport locations, forestry, recreational facilities and a wide range of urban investment projects (Paul, 2000).

Private sector, direct monetary costs and benefits determine the profitability or increase the output and investment. Public sector, all costs and benefits for all individuals affect by an investment must in some way be evaluated. Welfare economics helps to solve such problems as how to evaluate costs and benefits of a non-monetary nature, hoe to assess social benefit when no charge made for public facility and how to adjust for market failure.

## Government Decision- making

Government may take the form of regulation such as building regulation to reduce fire hazards, taxes or subsides or providing goods and services. The difficulty is many public-sector goods are provided free or below market price. Further, need to focus short-term effect on the economy and the long-term sustainability of the public finances.

CBA is likely to have its main use in the public sector where:

Price signals are inadequate to guide investment decisions

Spill-over benefits and costs are important owing to the magnitude of the schemes

The welfare of unborn generations has to be allowed for

## History and Uses of CBA

CBA is currently used in both government and international organization. While certain concepts of the technique oriented from Europe in the 1840s, the use of CBA in environmental economics is a relatively new occurrence becoming established after regulations were set by the US government which made the use of CBA mandatory in the 1930s (E. J. Mishan and Euston, 2007). It was used to create a solution to problems of water provision. After World War II, there was pressure for “ efficiency in government” and the search was on for ways to ensure that public funds were efficiently utilised in major public investments. This resulted in the beginnings of the fusion of the new welfare economics, which was essentially Cost-Benefit Analysis and practical decision-making. The process arrived in the United Kingdom in the 1960s for use in the transportation sector. It was applied to the construction of the M1 motorway and the Victoria line on the underground (Economic & Labour Market Review, December 2008). In recent years, it is recognised as the major appraisal technique for public investments and public policy.

## Cost Benefit Analysis

CBA rests on the identification of a potential Pareto improvement. The basis for this is the proposition that a decision is justified if those who benefit from it could compensate those who lose by it. Compensation needs not actually occur. What is important is that the costs of a policy to those who suffer the costs are exceeded by the value that beneficiaries place on it. This may still remain an adequate basis for decision making because CBA attempts to establish whether resources are being used efficiently. It will often be the case that the incidence of costs and benefits, i. e. who bears them, will also be important. CBA may provide a framework for identifying precisely where the costs and benefits fall so that a political judgement may be made as to their acceptability.

CBA is a technique for evaluating public spending, which aims to avoid inappropriate distribution of public resources. In theory, it helps public decision-makers to invest only in those projects that will be the most profitable from the viewpoint of the community.

To function correctly, CBA must be employed before the decision is made so that the potential of the various project proposals can be compared and evaluated. It ” aims to evaluate the set of direct and indirect effects of a project, its financial and non- financial effects on the set of economic agents concerned with the investment. These effects are then synthesized, after monetary evaluation, to insure a socio-economic balance which establishes the return on the investment, with this return being estimated on the basis of specific indicators” (Auzannet, 1997).

According to Boardman et. al. (2006) the major steps in CBA are as follows;

Specify the set of alternative projects

Decide whose benefits and cost count

Catalogue the impacts and select measurement indicators

Predict the impacts quantitatively over the life of the project

Monetize (attach dollar values to) all impacts

Discount benefits and costs to obtain present values

Perform sensitivity analysis

Make a recommendation

## 3. 1 The Main Consideration in CBA

Individual projects may create specific problems. There are number of considerations which are common in CBA;

The projects in the public sector should be capable of achieving a potential Pareto improvement in social welfare. That is, social benefits involve any gain in welfare resulting from the project including non-market benefits such as investment in public transport may produce benefits in the form of lower congestion, accidents, noise and pollution. Also many public facilities are provide free of charge to users, social benefit, determine by willingness to pay criteria may have to estimate indirectly.

The evaluation of non-market gains and losses. It is useful to separate two categories. The first one is, no direct market exist and the second one is no efficient surrogate market exist.

Distributional issues represent. It means, if a project is expect to produce an excess of social benefit over social cost, there may be still be some objection that the creation of a potential Pareto improvement will tell nothing about who gain and who loses.

Discount rate.

## 3. 2 Limitations of CBA

CBA cannot be used where political decisions dominate.

CBA may be difficult to apply to certain decisions such as the survival of a species of animal or plant.

CBA cannot deal objectively with the redistribution of income which results from a project.

CBA encounters formidable difficulties both measuring and aggregating intangible.

There is always the problem of the cut-off point in deciding the benefits and costs to be included.

## Application to Construction Industry

Government is the responsible for roads, bridges, airports, parks, amenity land, new urban areas and housing. CBA preferred by many transportation economists. It assesses all benefits and costs associated with highway project, including both capital and user costs. In this case, project requires less cost but provides more benefits throughout the analysis period is chosen first. CBA evaluate in monetary terms. Traditionally, a benefit-cost ratio, net present value or internal rate of return has been used. Recent research suggests that the net present cost may provide the best project selection measure if the transportation program is under financial constraints (Reed and Rutherford, 1997).

## 4. 1 The use of cost benefit analysis in the transportation sector

Transportation policy and planning decisions often involve tradeoffs between conflicting objectives. Most highway cost allocation and investment evaluation studies are primarily concerned with direct market costs, such as road construction and maintenance, travel time, vehicle operating costs, and crash damages, and how these vary depending on vehicle type and roadway conditions. They assumed that the total amount of vehicle travel does not change and so were unconcerned with vehicle ownership and parking costs. Other types of studies incorporate environmental impacts, primarily air pollution, but sometimes also noise and water pollution, and various categories of land use impacts. Some studies have only considered external costs.

CBA are widely used within the transportation sector. CBA of transportation investment projects tend to neglect long-term environmental consequences and needs among population groups with a low ability to pay. It has emerged as one of the most used tools in deciding the viability of proposed infrastructure projects. The predictions about the impact of such projects are often problematic perspective. The growth in road traffic to channelling needs for transportation into more environmentally friendly modes of travel than the private car transport. The transport modelling tools used in order to estimate positive as well as negative impacts.

U. K Department of Transport used CBA to evaluate highway proposal. Compare construction and maintenance costs against the benefits such as time savings, fuel vehicle operating costs and accident savings. It does not vale environmental loss, air pollution, wildlife, etc. (Willis, 1998). Decision-makers have to balance the monetary benefits of highway scheme with descriptive assessments of physical impact.