

Cost-Benefit Analysis: A Short Literature Review

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ABSTRACT

Cost-benefit analysis (CBA) is a fundamental decision-making tool used to evaluate the financial and strategic viability of projects by comparing expected costs with anticipated benefits. Originating from the work of Jules Dupuit and later refined by scholars such as Alfred Marshall and the U.S. Corps of Engineers, CBA incorporates both tangible and intangible factors to determine whether a project is worthwhile. In today's dynamic and competitive business environment, firms increasingly rely on CBA to guide strategic choices, enhance performance, and allocate resources effectively. This conceptual paper reviews key scholarly literature to explore how the principles of CBA can contribute to improved firm performance, particularly within the context of twenty-first-century organizational challenges. The study also highlights the relevance of applying strategic management accounting perspectives to CBA and proposes hypotheses for future research. The paper is especially significant for Iraq and other socioculturally connected Middle Eastern economies, offering theoretical and methodological insights into the relationship between strategic CBA applications and firm performance.

Keywords: Cost-benefit Analysis, Firm Performance, Management Accounting, Business Environment

INTRODUCTION

Cost-benefit analysis (CBA) is commonly understood as a systematic and structured approach for comparing the expected or estimated costs of an action with its anticipated benefits. In essence, it serves as a decision-making tool that helps determine whether a particular project or strategic choice is economically justified from a business perspective. The basic logic behind CBA is straightforward: all relevant costs associated with a decision are identified, quantified, and aggregated, after which this total is compared with the combined value of all anticipated benefits. In some cases, the comparison is expressed in terms of net benefits, while in others it may be represented as a benefit-cost ratio. If the benefits exceed the associated costs, the decision is generally regarded as sound and worthy of implementation. Conversely, if the costs outweigh the benefits, the organization may need to reconsider, revise, or abandon the initiative.

The importance of carrying out such evaluations before making significant organizational decisions cannot be overstated. CBA provides a structured framework through which firms can obtain critical information about the potential financial and strategic implications of their choices. It offers insights into key metrics such as the value chain of the firm, the likely return on investment of a project, operational efficiencies, opportunity costs, and trade-offs between alternative courses of action. Because it relies heavily on quantitative assessment and evidence-based reasoning, CBA represents one of the most widely adopted forms of data-driven decision-making in both established organizations and entrepreneurial ventures. In today's globalized environment, the relevance of CBA has grown substantially. Globalization and international business have become defining characteristics of the twenty-first century economy. As noted by Maresova et al. (2017), heightened economic

volatility and periodic downturns have increased the need for organizations to pay closer attention to firm performance, efficiency in business processes, cost optimization, and measurable returns on investment.

Overall, the literature suggests that CBA remains a vital tool for improving organizational decision-making, enhancing firm performance, and navigating the increasingly complex global business environment. Its structured approach, emphasis on measurable outcomes, and flexibility across different types of decisions make it indispensable for both private firms and public institutions.

LITERATURE REVIEW

Researchers across disciplines have long attempted to develop reliable and comprehensive measures of firm performance. Despite decades of inquiry, the concept of performance remains contested, and the academic literature continues to show gaps, inconsistencies, and ongoing debate. Numerous approaches have been proposed to evaluate or enhance firm performance, yet many of these frameworks have been sharply criticized by scholars for their narrow focus, methodological weaknesses, or limited applicability in real business settings. Among the various tools available, cost-benefit analysis (CBA) has emerged as one of the more prominent and frequently discussed methods.

Given its structured approach to decision-making, CBA offers a systematic way to compare the potential advantages and drawbacks of strategic actions, investments, and operational changes within a firm. However, its use in the context of firm performance has also raised theoretical and practical questions. To understand the relationship between CBA and organizational outcomes more clearly, this section reviews the existing literature under three major themes: the conceptual foundation of cost-benefit analysis, the evolving understanding of firm performance, and the application of cost-benefit analysis as a tool for assessing and improving firm performance. Each theme highlights key scholarly contributions while also identifying gaps that remain in current research.

History of CBA

Benjamin Franklin (1772) described one of the earliest systematic approaches to decision-making, in which he proposed listing all advantages on one side and disadvantages on the other, and then eliminating items that held equal weight. At times, this meant striking out several minor advantages against a more significant disadvantage, or the reverse. Once the balancing process was complete, the remaining items revealed the stronger choice. Franklin acknowledged that the “weight of reasons” could never be measured with the precision of mathematics, yet he believed that evaluating each reason individually and comparatively led to clearer judgment. His method highlights a key aspect of rational decision-making: the need to determine the relative importance of the factors involved. Modern analytical tools build on this same principle. Most techniques that systematically weigh pros and cons fall under two broad categories—multi-criteria analysis (MCA) **and** cost-benefit analysis (CBA). Both methods quantify impacts and assign weights—what Franklin called “algebraic quantities.” In MCA, these weights are typically assigned by analysts, policymakers, or experts. In contrast, CBA bases its evaluation on the preferences of individual citizens, often expressed through their willingness to pay for different outcomes (Sen, 1979). Franklin’s method may be seen as a simplified form of MCA because he assigned importance himself, without using numerical values. In CBA, however, the importance of impacts is determined through monetary valuation, reflecting what society—citizens and firms—is willing to pay for the changes a project produces.

Today, nearly all Western nations require CBA for significant regulatory reforms, and many have developed detailed guidelines for its implementation. Government agencies in these countries continue to refine these frameworks, as documented by Boardman et al. (2018), ensuring that CBA remains a central tool for evaluating public policies, major investments, and regulatory changes

Conceptualizing Firm Performance

Taouab and Issor (2019) explore the evolving understanding of firm performance and note that the concept has become increasingly central in strategic management research, where it is frequently used as a dependent variable. Despite its popularity, scholars still struggle to reach consensus on how firm performance should be defined or measured. Because no single operational definition has gained universal acceptance, researchers often interpret the term through their own disciplinary lenses, resulting in varied and sometimes conflicting explanations. As a result, the idea of firm performance is often described in ways that are broad, ambiguous, or conceptually abstract.

Some authors attempt to clarify the concept by linking it to organizational capability. Le (2005), for example, defines firm performance as the organization's ability to utilize both human and material resources effectively in pursuit of its goals. This perspective aligns with arguments made by Truong and Tran (2009) and Nguyen et al. (2021), who suggest that firm performance should also reflect how efficiently a company applies its business resources throughout the production and consumption processes. Their views reinforce the idea that firm performance is not only about outcomes but also about the processes and managerial practices that contribute to those outcomes.

Riegg and Edwin (2015) extend this discussion by examining two evaluation tools that help assess the value of programs and interventions: cost-benefit analysis (CBA) and cost-effectiveness analysis (CEA). They explain that CEA evaluates how the costs of a program compare to the key outcomes it generates, making it useful when benefits cannot easily be expressed in monetary terms. CBA, in contrast, goes further by attempting to convert both costs and a broad range of benefits into monetary values, thereby allowing direct comparison between the two. Their chapter outlines both methods, highlights the practical challenges involved in estimating and calculating program costs and benefits, and describes a series of common steps shared by CEA and CBA. The authors place particular emphasis on social or economic forms of CBA rather than purely financial analyses, and they illustrate the application of these tools through a ten-step evaluation of a high school dropout reduction program designed for at-risk students.

Conceptualizing Cost Benefit Analysis

Cost-benefit analysis (CBA) refers to the process of comparing the expected costs and the likely benefits of a project or decision to determine whether it is worthwhile from a business perspective (Mishan & Quah, 2020). The roots of this idea can be traced to the work of Jules Dupuit, who argued that any choice among multiple alternatives should be based on a careful examination of the total cost of each option relative to the benefits it is expected to deliver. His view established the foundation for evaluating competing courses of action using economic reasoning. Over the years, several scholars have elaborated on this concept. Kenton (2018) describes CBA as a technique for identifying all expenses linked to a business proposal and comparing them with the potential gains it could generate. Similarly, Kevin et al. (2010) explain that CBA provides a systematic way to assess the strengths and weaknesses of projects by weighing their anticipated benefits against the costs required to carry them out. John (2009) views CBA as a practical analytical tool that offers managers essential information about the financial viability of new investments, whether they involve constructing a facility or launching a new activity. Robert (2014) further notes that although CBA can assist in evaluating almost any type of decision, its most common use is in determining whether large expenditures or significant commitments are justified.

Robinson (1993) highlights that CBA is one of the most comprehensive forms of economic evaluation and can be applied using different approaches. The first is the human capital approach, which assigns value to individuals' contributions based on their earnings. The second is the preference-based approach, which relies on either observed or stated preferences to estimate how much individuals are willing to pay for a particular service or accept as compensation for increased risk.

Cost Benefit Analysis CBA versus Economic impact analysis EIA

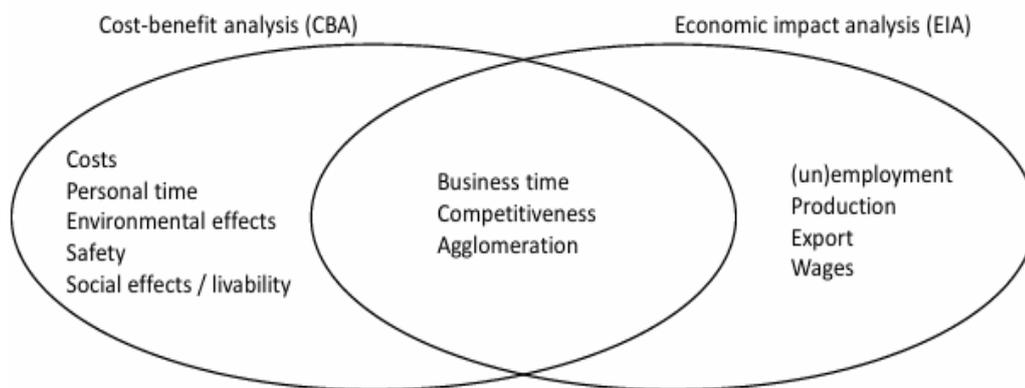
Economic Impact Analysis (EIA) is one of the most frequently applied analytical tools for understanding how specific decisions, policies, or projects influence the broader economy. Whether used by governments, public agencies, or large organizations, EIA helps identify how an intervention affects various economic indicators that reflect overall economic health and activity. These indicators typically include changes in competitiveness, gross domestic product (GDP), unemployment levels, wages, business profits, investment flows, and economic output across different sectors of the economy. Such impacts are often illustrated through structured economic models, diagrams, or frameworks, as shown in Figure 1 of many analytical reports.

A distinctive feature of EIA is that, unlike cost–benefit analysis (CBA) or multi-criteria analysis (MCA), it does not merge impacts into a single summary value or overall score. In CBA, for instance, all costs and benefits are converted into monetary terms and aggregated to determine whether benefits exceed costs. MCA similarly scores and weights different criteria to derive an overall ranking of alternatives. EIA, by contrast, presents each impact separately and does not attempt to combine them into one unified measure. Aside from aggregate figures—such as total change in GDP or total employment—EIA treats each economic indicator independently. This approach enables decision-makers to observe the distribution and magnitude of economic effects across regions, industries, and demographic groups rather than reducing them to a single figure.

Another characteristic of EIA is that its focus is largely on macro- and meso-level economic outcomes rather than on individual or household welfare. With the exception of unemployment or employment-related changes, most household-level impacts such as changes in consumer surplus, living standards, or private well-being are typically not included in the analysis. This reflects EIA’s primary purpose: to identify how economic activity shifts across sectors, industries, and regions rather than evaluating personal financial gains or losses.

According to Weisbrod (2008), EIA plays a crucial role in supporting public policy and strategic planning because it helps identify the winners and losers of economic decisions, the magnitude of expected economic shifts, and the sectors that stand to benefit or face challenges. For this reason, EIA is widely used in infrastructure planning, environmental regulation, transportation projects, industrial development, zoning decisions, and economic development programs.

Figure 1 Different elements in CBA and Economic Impact Analysis



source: Weisbrod et al. (2008)

Cost Benefit Analysis and Firm Performance

Studies such as Chan et al. (2012) show that firms often rely on cost–benefit analysis to compare alternative projects and strengthen their decision-making. Srhoj and Walde (2020) add that this process requires a careful review of all possible costs and potential income before a project is approved. The outcome of the analysis helps a firm decide whether a new initiative is financially sound or whether expected returns will fall short of

covering costs. Similarly, Aigbogun et al. (2017) note that companies use cost–benefit analysis to estimate future gains and losses, while also considering opportunity cost—what might be lost when one option is chosen over another.

AL-Obaidi and Salman (2019) emphasize that comparing total project costs with expected benefits can signal the financial value of a project and also reflect the accounting competence of those conducting the evaluation.

Kelman (1990) takes a broader view, describing cost–benefit analysis as a structured way of thinking through decisions. He argues that decisions should generally not be taken unless benefits exceed costs, and that expressing all costs and benefits in a common measure, even when no market value exists, supports clearer judgment.

CONCLUSION

The literature reviewed shows that how well a firm performs often depends on its ability to weigh project costs against expected benefits. Cost–benefit analysis (CBA) serves as a practical method for this purpose because it helps compare different choices in clear monetary terms. By estimating the financial value of both costs and gains, firms can judge the real worth of a proposed project and decide whether it should move forward.

However, the method still involves some important judgement calls. Choosing an appropriate discount rate, for example, can change the outcome because it affects how future benefits are valued today. After completing the analysis, firms may apply different decision rules—such as accepting any option with positive net benefits or selecting the one that promises the highest overall return.

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