
IMPROVING CONSTRUCTION HEALTH AND SAFETY: APPLICATION OF COST-BENEFIT ANALYSIS (CBA) FOR ACCIDENT PREVENTION

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Abstract
Past efforts to reduce accidents in the construction industry have failed to examine the application of CBA for accident prevention. Detailed information about the application of CBA for accident prevention on construction projects is deemed necessary to achieve high productivity. The CBA was proposed as the method to guide decisions on accident prevention in the UK construction industry. A quantitative method was used to collect data from health and safety managers in the UK construction industry for the survey. A total of 79 contractors (small, medium and large) participated in the questionnaire survey. The method used benefit-cost ratio (BCR) to determine if the benefits of accident prevention outweigh the costs of accident prevention. The research found that total benefits of accident prevention outweigh costs of accident prevention by a ratio of approximately 3:1 (62% benefit gain to 38% benefit loss). The method has the potential to improve decision-making process on accident prevention and contribute to a reduction in costs, deaths and injuries in the construction industry. The result of this investigation forms part of a study of cost and benefits of accident prevention in the construction industry.

Keywords
Cost benefit analysis, application, and construction projects

INTRODUCTION
Construction is hugely important to the UK economy. The industry represents some 10% of Gross Domestic Product (GDP) and employs 2.2 million people with output of £104 billion (HSE, 2005; Ferret and Hughes, 2007; BERR, 2008). The figures quoted above are significant, and underline the industry’s importance. This industry is concerned with the provision of the country’s essential infrastructure and ‘backbone’. Although, in the delivery of essential infrastructure, the UK construction industry has developed a world-wide reputation for quality, it has been noted that it remains one of the most dangerous industries in the UK (Bomel, 2001; Ferret and Hughes, 2007). To be able to compete with the best in the world market, to attract the best talent, and to have an attractive image and reputation, the well being of the industry is essential (HSE, 2004). For this reason, it is incumbent on employers and other duty holders to ensure the health and safety and general well-being of workers within the industry are safeguarded at all times.