

Improving project management performance of large contractors using benchmarking approach

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Received 8 February 2007; received in revised form 1 October 2007; accepted 2 October 2007

Abstract

This paper presents how benchmarking approach can be applied to evaluate and improve the construction project management. A conceptual research framework was generally developed to perform a benchmarking study of the project management performance (PMP) from the contractor's viewpoint. Three typical large contractors are involved in this study to validate the research approach. The paper provided in nine key performance indicators (KPIs) which can be applied to measure PMP and evaluate potential contractors as well as their capacity by requesting these indices. The findings suggested that benchmarking approach can help construction firms to learn from the best practices of others and carry out continuous improvement. The research methodology has general use thus it may be applied to other contractors with minor modifications.

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Keywords: Benchmarking; Construction; Implementation; Key performance indicator (KPI); Managing projects; Vietnam

1. Introduction

Traditionally, companies with all of their components of business models working together can often achieve long-lasting success [1]. Similarly, the construction contractors succeed in their business for many years with one measure only – financial norms [2]. With the effect of the management that concentrates on this single measure (profit maximization) may disregard of investing time and money in the improvement of these key success factors [2]. All construction activities may have risk and uncertainty [3], especially in developing countries where the construction environment is much riskier [4]. Vietnam is not an exception. In order to exit and emulate in the dynamic marketplace, contractors must continually improve the

construction project management, the project quality, and their own operation. Performance measurement is the heart of ceaseless improvement. Performance management aims at offering managers and members of staff of all ranks the ability to develop the direction, traction and speed of their organization [5]. As a regular rule, benchmarking is the next step to improve contractors' efficiency and effectiveness of products and processes.

This study is focusing on Vietnam, a developing country in South East Asia with a reformed economical policy. The major purpose of this research is to measure and improve the project management performance (PMP) of large contractors in this local market using benchmarking approach. The research questions seem to be localized, but the approach has general use. Therefore, the paper results in valuable lessons for both researchers and practitioners in application of benchmarking to improve their performance.

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2. Literature review

2.1. Background on benchmarking

Xerox Corporation initiated the concept of benchmarking in order to encounter with the Japanese competitive challenge of the 1970s [6,7]. There are several ways to classify types of benchmarking. Based on what benchmarking focused on, three types of benchmarking are: (1) performance; (2) process; and (3) strategic. The comparison between one company and another may depend on performance benchmarking [8]. It is loosely to point out that performance benchmarking is the comparison with established standards or performance data of other organizations in order to improve the organization's own performance. The comparison of methods and practices for performing business processes is based on the process benchmarking so as to learn from the best and to improve ones own processes whereas strategic benchmarking is the comparison of the strategic choices and dispositions which is made by other organizations for the purpose of collecting information so that they would be able to improve their own strategic planning and positioning [6].

Regarding the environment against benchmarking, the classifications of benchmarking are among internal, external. With internal benchmarking, an organization collects data on its own performance and assessment so as to make improvements through comparing to past years [9], whereas the comparison between one organization and competitors in the same industry is external benchmarking [10]. When dealing with external benchmarking, organizations focus on the identification of performance gaps and learn the best practice of competitors.

Although benchmarking has many advantages but it is not a magic tool. "Benchmarking should not utilize as a way to set goals" [7]. It should be used as an improvement tool. Regarding main problems affecting a successful benchmarking study, Kozak [9] pointed out time constraints, competitive barriers, lack of both management commitment and professional human resources, resistance to change, poor planning and short-term expectation as key problems.

2.2. Previous research

The use of benchmarking technique in various fields has appeared in many academic journals and technical reports. Many studies have been undertaken on the application of benchmarking to customer satisfaction, occupancy rates, capital investment [13–15], productivity in tourism and hotels [16], measuring and improving the performance of tourist destinations [17], financial savings [11], and operation improvements [11].

Since underlying principles of benchmarking resulted from Deming's quality management theory [18], the application of benchmarking has predominantly focused on quality management [10,18,19]. Other efforts has recently

been paid to examples of the effectiveness of benchmarking, but they have focused on application oriented [20], promoting profitability of benchmarking [21,22] as well as its possible benefits [23], results oriented [24] and method oriented [25].

Benchmarking approach has also proved its usefulness in measuring PMP based on key performance indicators (KPIs) or success criteria. There were some papers that provided valuable findings on the different KPIs to measure PMP. New frameworks have been proposed to consider success criteria [26] and to define project success [27]. Success factors and criteria have been also identified through summarizing several research works [28]. Furthermore, Nguyen et al. [29] uncovered 15 project success factors grouped under four COMs: comfort, competence, commitment and communication. According to Shenhar et al. [30], four dimensions for measuring project success are project efficiency, impact on the customer, direct and business success, and preparing for the future. However, regarding perceptions of project success, Wateridge [31] confirmed that project managers often concentrated on the success factors without success criteria whereas users may be more concerned about their happiness with performance in the long-term. Since project managers' success is judged on the quality of a project [32], quality performance measures have been used instead of traditional performance measures of meeting time and costs. To cope with the rise of stakeholders in project management, Mallak et al. [33] identified and radically discussed categories of stakeholders to manage and design strategies for satisfying the stakeholders. In construction industry, the application of benchmarking has also emerged in many academic journals and technical reports and following are a review of predominant papers.

2.3. Benchmarking in the construction industry

Contemporary benchmarking practice frameworks have been proposed to improve construction productivity [34] and identify critical success factors for design-build projects in construction [35]. Furthermore, Chan and Chan [36] suggested a set of KPIs to formulate a framework for measuring and benchmarking the success of selected construction projects. Models for application of benchmarking approach have focused on the UK construction industry [8] and improvement of contractor selection for construction projects [37] in Hong Kong. Application of benchmarking approach is very promising. Benchmarking can be used to improve the overall attainment of total quality management for a UK construction organization [2], to evaluate construction safety management in China [38], to assess safety climates of employees and contractors working within a partnership arrangement [39], and to analyze the quality of project planning for selected industries in Israel [40]. Interestingly, benchmarking also was suggested as a useful tool to investigate and manage changes on construction projects [8]. The literature revealed that very few

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