

# BENCHMARKING PROCESS AND ITS RELATIONSHIP WITH ORGANIZATIONAL PERFORMANCE

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**Abstract** *Benchmarking is recognized as an essential tool for continuous improvement of quality. Nowadays, many public sector organizations have been encouraged to implement benchmarking as one way of satisfying the government's requirement that public organizations provide best value services. This paper begins with discussion of the literature that is integrated to point out the general basis of the topic. Then, this study will address the questions of whether the factors that affecting successful benchmarking has relationship with benchmarking process as well as whether benchmarking process will lead to improvement of organizational performance. Therefore, the study had interviewed officers that involved in benchmarking project within 35 local authorities in Peninsular Malaysia. Finally, this paper also focuses on the methodology and data analysis of the study.*

## Introduction

The essence of benchmarking is the process of identifying the highest standard of excellence for products, services, or processes, and then making the improvements necessary to reach those standards – commonly called “best practice” (Bhutta and Huq, 1999). The original meaning of the word ‘benchmark’ refers to a metric unit on a scale for measurement. From managerial perspective, benchmarking has been defined as a continuous, systematic process for evaluating the products, services, and work processes of organizations that are recognized as representing best practices for the purpose of organizational improvement (Spendolini, 1992).

While examples of the successful implementation of benchmarking in the private sector, especially in the context of continuous quality improvement, are readily chronicled in the literature, examples of benchmarking initiatives in

the public sector are not widely reported. Although the operational realities of public sector organizations differ to some extent from those of private sector organizations, many operations within the public sector do lend themselves to potentially successful benchmarking activities (Dorsch and Yasin, 1998). Regardless of the public organization in question, the number and variety of successfully completed benchmarking projects in the private sector suggest that opportunities exist in the public sector as well, based on the literature that has reviewed for this study.

The government is actively encouraging the use of benchmarking across all spheres of public sector activity (Holloway *et al.*, 1999). Davis (1998) contends that benchmarking is burgeoning in the UK local government sector. However, it seems that the potential to progress benchmarking successfully as a management tool is limited in the Malaysian local government sector. The Malaysia's Third Outline Perspective Plan clearly

emphasized on the development of world-class Malaysian companies using benchmarking for international best practices. A world-class public sector is important to support rapid economic growth and ensure improvements in the standard of living and quality of life (Economic Planning Unit, 2000). Though the concepts and principles of benchmarking in the public sector have received limited recent attention (Magd and Curry, 2003), they are recognized as having great potential in this area (Carpinetti and Melo, 2002).

On the other side, benchmarking involved two important factors that affecting success of the implementation that is degree of organizational commitment and prior benchmarking experience. Like all new management innovations, obtaining senior management support is critical for the success of benchmarking. In many discussions of benchmarking, the need for top management support, involvement and commitment is imperative. Additionally, observations by many practitioners and academics suggest that gaining the support of top and middle-management for change is a critical step towards successful implementation (Elnathan *et al.*, 1996).

Furthermore, strong organizational commitment will result in increase efforts to improve the extent of benchmarking experience of an organization through greater commitment of resources for training and retention of benchmarking experts. Elnathan *et al.* (1996) argued that the preparation for benchmarking projects and the ability to effectively interpret the benefits from learning improves over time. As the organization develops benchmarking experience, the time required for these activities will be shorter (thus lowering cost), and the actual process of benchmarking will be more efficient (thus increasing likelihood

of success). The costs of all activities depend on the level of the personnel involved and their benchmarking skills.

Based on the preceding notified problem statement, it offered two objectives for this study. First, the relationship between degree of organizational commitment and prior benchmarking experience with benchmarking process will be examined. Then, this study intends to examine the relationship between benchmarking process and organizational performance.

The next section briefly reviews the existing literature on benchmarking. The proposed theoretical framework and methodology is then described. Finally, the results from data analysis are discussed.

## **Previous Benchmarking Study**

### **Benchmarking in Public Sector**

In the private sector, benchmarking is widely recognized as the search for and incorporation of best practice into the enterprise to gain competitive advantage. However, benchmarking is a relatively new practice in the UK public-sector organizations (Davis, 1998; Ball *et al.*, 2000). Not only has benchmarking become a very popular management practice in UK private sector organizations, it is now being actively promoted and established in UK public sector organizations, often driven by central government (Holloway *et al.*, 1999). Benchmarking is suggested by some commentators as a management tool which can usefully be employed in the public services (Wolfram *et al.*, 1997).

### **Benchmarking in Local Authorities**

Local government is well established and well known, as it provides many services (protection, welfare, and convenience) at the local

level, whether directly or indirectly, and it can affect the lives of many at one stage or another (Davidson and Grievess, 1996), thus illustrating the need for a quality improvement plan and appropriate strategies to provide the highest quality services. Ball *et al.* (2000) confirmed that benchmarking has been developed, at least initially, by local authorities primarily as a management tool. Not only has benchmarking been developed in a way which is mindful of policy-driven external pressures, it is also wrapped up in central government's mechanism for the measurement and control of performance in the sector.

Fischer (1994), however, focusing on the US local government sector, suggests that benchmarking can develop the traditional approach to performance measurement in the public sector. The study indicated that local authorities have, equally, demonstrated the potential to develop benchmarking beyond the existing private sector model and the assumptions which support it. Previous research by Ball *et al.* (2000) examined the practical experience of benchmarking in the UK local government sector and found the using of benchmarking as a beneficial management approach for improving local accountability. It is clear from the findings that benchmarking has been transferred and enthusiastically adopted in the local authority sector.

### **Factor affecting successful of benchmarking**

There are two important factors that affecting the successful of benchmarking and organizational performance namely degree of organizational commitment and prior benchmarking experience (Maiga and Jacobs, 2004; Elnathan *et al.*, 1996).

### **1. Degree of organizational commitment**

Organizational commitment is considered to be the product of an exchange between employee and organization, whereby individuals bring skills to the workplace, expecting to find an environment in which their abilities can be productively used and their basic needs met (Maiga and Jacobs, 2004).

What make benchmarking successful are both the use of the benchmarking process to its fullest extent and the support of management. In fact, management involvement is essential to benchmarking. This is because benchmarking directly affects the goals to which management commits (Camp, 1989). A high level of employee involvement and participation and teamwork is absolutely necessary for a benchmarking program to succeed. Everyone in the organization has to understand the objectives and benefits of the project and how it fits into the way an organization works. They should be trained in the skills to participate in, interpret the meaning of, and apply the results of benchmarking studies.

### **2. Prior benchmarking experience**

When a cross section of people in the organization, including those from the operational organizations is involved in the benchmarking process, it focuses attention of the entire organization on the correct business goals (Camp, 1989). Strong organizational commitment will result in increased efforts to improve the extent of benchmarking experience of an organization through greater commitment of resources for training and retention of benchmarking experts. Greater organizational experience would improve the ability within the organization to identify appropriate areas to be benchmarked, and to employ the

most effective information gathering and sharing methods.

Furthermore, experienced organizations also have the ability to choose the best set of benchmarking partners, given the area to be benchmarked and benchmarking method. In addition, the experienced organization will be considered an attractive partner by others, thus providing it another opportunity to further improve its own results. Previous experience of team members with benchmarking projects is likely to influence project effectiveness. Spendolini (1992) notes the importance of team members possessing good project management skills; experience and “lessons learned” through after action reviews strengthens those skills by making the team members more apt to participate actively and focus on the tasks at hand.

### **Benchmarking Process**

Benchmarking is a process. The process can include a great variation of steps to be taken depending on the ones involved, some use thirty-three steps or phases, others just use four. When comparing different models with each other, there is a common pattern that returns of how the process goes on from beginning to end. In order to present a simple theoretical model that explains the benchmarking process, a framework can be made (Ahmed and Rafiq, 1998). The process of benchmarking has been modeled in a variety of forms by practitioners, companies and consultants. While these process models may be slightly different from each other, they all have common elements. For example, Spendolini (1992) identified a five-stage generic benchmarking model. Boxwell (1994) outlined eight-steps benchmarking process while McNair and Leibfried (1992) only outlined three

steps of benchmarking process such as measurement, analysis, and change.

The very basic and common model is Camps Benchmarking process model (Fong *et al.*, 1998). It includes five phases and then different steps are taken in every phase (Ahmed and Rafiq, 1998; Fong *et al.*, 1998). The main advantages with using Camps model as the overall framework is that it is systematic in its way of trying to improve performance, has a cyclical nature which makes it continuously ongoing and emphasizes setting up of goals. Figure 1 shows the benchmarking process model as it is presented by Camp (1989) in five phases: planning, analysis, integration, action and maturity.

The process of benchmarking is more than just a means of gathering data on how well a company performs against others. Benchmarking can be used in a variety of industries- both services and manufacturing (Elmuti, 1998). Benchmarking, if properly implemented, can help resolve problems by forcing an organization to compare itself with best-in-class organizations, quantifying the differences in performance, documenting why the differences exist and identifying what to do to become as good as, and eventually better than, these organizations. In order to achieve its vision with the help of benchmarking, an organization needs to understand the critical success factors for the benchmarking process. This is including conducting the right study and using an appropriate benchmarking process (Seman, 2000).

### **Organizational Performance**

Although many authors have tried to set out a clear definition of performance, the debate continues nowadays in the academic literature, especially regarding some aspects of terminology, analysis level, and conceptual basis for

assessment (Montes *et al.*, 2003). Montes *et al.* (2003) also consider three different levels of performance within organizations. Thus, they distinguish among financial performance, business performance and organizational effectiveness, although the later has been subsequently known as organizational performance (Terziovski and Samson, 1999).

Organizational performance can be measured in numerous ways: current and/or change the levels of revenues, profit margins, gross and net profit, customer satisfaction, and market share just to name a few. Any of these measures can serve as cues for how efficient and effective an organization is at a particular point in time. This assessment can be on different levels of analysis, from the total organization, to one function, or at a unit or subunit level (Fedor *et al.*, 1996).

Today, many firms use benchmarking (e.g. AT&T, Avon products, Exxon Chemical, Eastman Kodak, Ford, General Motors, IBM and

Microsoft) and many have shown that benchmarking provides added value (Voss *et al.*, 1997; Elnathan *et al.*, 1996). For example, in a study by Elmuti (1998), 92 of 152 firms (60%) who indicated that they have a benchmarking program in their organizations also reported that these programs were making a great contribution to organization effectiveness. They indicated that the direct dollar savings and the other indirect benefits generated by benchmarking programs were greater than the costs of implementation these programs. Benchmarking principles were believed to help improve performance, enhance responsiveness to customer needs, reduce cycle time, improve the quality of the goods and services in their organizations, enhance job satisfaction through employee empowerment, and improve key business processes.

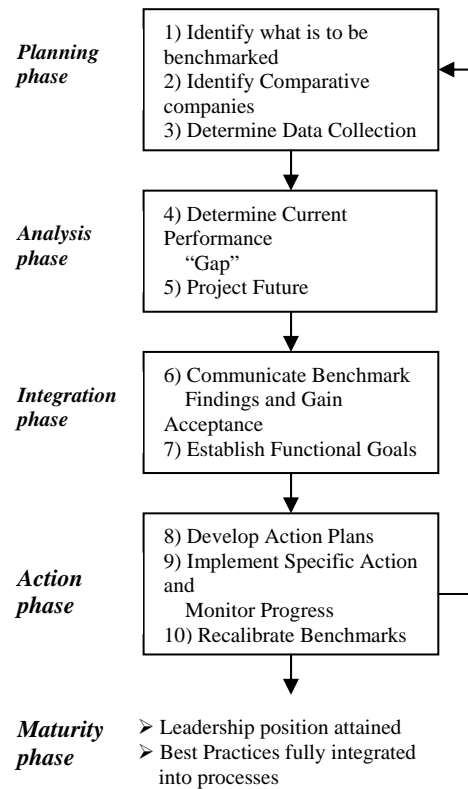


Figure 1. The benchmarking process model (adapted from Camp, 1989).

### Proposed Theoretical Framework and Research Questions

The model illustrated in Figure 2 combines four variables containing factors that affect the success of benchmarking, the benchmarking process and organizational performance. The factors that affect successful benchmarking are the degree of organizational commitment and prior benchmarking experience, which is antecedent to the benchmarking process,

while organizational performance is the dependent variable.

Based on the preceding discussion, the research questions were forwarded to describe the relationship between variables.

*Q1: Does the degree of organizational commitment have a significant relationship with the benchmarking process?*

*Q2: Does prior benchmarking experience have a significant*

*relationship with the benchmarking process?*

*Q3: Does the benchmarking process have a significant relationship with organizational performance?*

### **Research Design**

In this study, local authorities were selected to fulfill the research objectives because it is relevant to the study's context. It was very costly to do a survey of the whole country and it would take a long time. Considering the shortage of resources, this study only selected the local authorities under the urban councils for Peninsular Malaysia consisting of 5 City Councils and 31 Municipal Councils. The urban council was selected rather than the rural district councils because benchmarking projects are mostly implemented in large firms

compared to small firms. This is due to benchmarking being a costly activity in terms of the time to complete, people involved in the activity and money required to fund the activity.

However, out of the 36 local authorities under urban councils, Kuala Lumpur City Hall was excluded from this study because the Building Department was separated recently from the Planning Department. Due to the department restructure and an insufficient period in doing such an improvement program, a study of benchmarking cannot be done for the department. Thus, this study focuses only on 35 local authorities under urban councils. The distribution of local authorities in Peninsular Malaysia that were included in the research population is shown in the following table.

Table 1. Distribution of authorities in Peninsular Malaysia included in research population

State/territory	Number of authorities	
	Cities	Municipalities
Kedah	1	3
Perlis		1
Pulau Pinang		2
Perak	1	4
Selangor	1	6
Negeri Sembilan		3
Melaka		2
Johor	1	4
Pahang		3
Terengganu		2
Kelantan		1
<b>Total</b>	<b>4</b>	<b>31</b>

## Data collection method

In this study, structured interviews were used in order to collect the data. The structured interviews were conducted using a set of questionnaire that were developed and reviewed by several academicians and subject matter experts. After the feedback obtained from the pretest, some adjustments were made on the questionnaire and the final form of

questionnaire ensures that the questions are understood by the respondents.

On the other hand, the application of direct interviews definitely assured that the questionnaire was dedicated to the right person and that it would be returned directly. Hence, the time was accelerated in collecting the data without waiting for returning questionnaires via mail and doubts on the response rate.

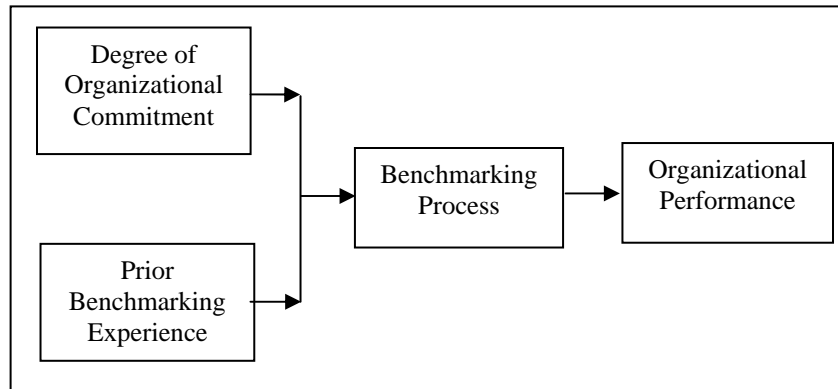


Figure 2. Proposed Theoretical Framework

The unit of analysis in this study is an organization, consisting of departments in the organization, which are headed by their respective directors. In order to measure organizational performance of local authorities in Malaysia, the Building Department was selected as the proxy for the whole organization. The officers that are involved in benchmarking projects are the targeted respondents in this study ensuring that the questionnaires are dedicated accordingly.

## Findings

### Respondent Profile

A total of 35 interview sessions were held from March until June 2006. Therefore, the thirty-five interviews covered the population of Local Authorities in Peninsular Malaysia under Urban Council, consisting of City Councils and Municipal Councils. The respondent's profile is summarized in Table 2.

The respondents consisted of officers from the Building Department that were involved in benchmarking projects, of which there were 12



architects, 9 technicians, 8 Assistant Head of Departments, 4 technical assistants and respectively, 1 engineer and 1 senior technical assistant. The majority of them had six to ten years working experience followed by eleven to fifteen years.

### Validity

Validating and refining the entire construct is important before any further analysis is conducted. To this end, reliability and validity tests were carried out following the sequence and approach taken by Saraph *et al.* (1989) and Yusof and Aspinwall (2000).

The validity of a measure refers to how well an instrument that is developed measures the particular concept it is intended to measure (Sekaran, 2003). Each factor was individually tested for construct validity. A measure has construct validity if it measures the theoretical construct or trait that it was designed to measure. The number of cases in this study, which is only thirty-

five, was rather small to perform a good factor analysis. In this respect, many arbitrary “rules of thumb” exist that specify the required number of cases, but there is however, no absolute scientific answer to this issue (Edari, 2004). Nonetheless, the authors felt that conducting the factor analysis was better than not performing any in order to give an indication of the construct validity of each construct.

The results obtained from the first trial of the factor analysis were not satisfactory, as only seven of the eleven constructs were shown to be “unifactorial”. Problematic items were identified and eliminated. A secondary factor analysis was then performed on those constructs which were not “unifactorial” and it showed that all the constructs to be “unifactorial” and therefore, have construct validity. The results also revealed that more than 54 percent of the variance of each set of items was accounted for by its respective construct.

Table 2. Profile of Respondents

Demographic	Characteristics	Frequency (n=35)	Percent
Council	City Council	4	11.4
	Municipal Council	31	88.6
Designation	1. Asst. of Head Department	8	22.9
	2. Engineer	1	2.9
	3. Architect	12	34.3
	4. Technician	9	25.7
	5. Senior Technical Assistant	1	2.9
	6. Technical Assistant	4	11.4
Year of designation	1. 0 to 5 years	5	14.3
	2. 6 to 10 years	16	45.7
	3. 11 to 15 years	10	28.6
	4. 16 to 20 years	1	2.9
	5. 21 to 26 years	1	2.9
	6. 26 years and above	2	5.7

## Reliability

Reliability of a scale (factor or construct) is to examine its internal consistency by calculating Cronbach's alpha. The results showed that original alpha values for the factors ranged from 0.763 to 0.962. Despite this, certain items were deleted from the factors to further improve their internal consistency. This provides evidence that all the constructs have high internal consistency, and are thus reliable. In essence, all the tests conducted above proved that the constructs developed in this study were both reliable and valid.

## Correlation Analysis

Pearson Correlation was performed to provide initial description of the interrelationship among variables. The first and second research questions were examined in order to answer whether the two factors that affecting successful benchmarking correlate with benchmarking process. Table 3 shows the results of correlation analysis between the antecedents and independent variable.

Table 3. Pearson Correlation between antecedent variables with benchmarking process

		1	2	3
1	Degree of organizational commitment	1.000	0.596**	0.552**
2	Prior benchmarking experience	0.596**	1.000	0.716**
3	Benchmarking process	0.552**	0.716**	1.000

As can be seen, the results from Table 3 indicated that the correlation coefficient was found to be statistically significant between degree of organizational commitment and benchmarking process ( $r = 0.552$ ,  $p < 0.01$ ). On the other hand, the result also revealed that the prior benchmarking experience is significantly correlated

with benchmarking process by  $r = 0.716$  with  $p < 0.01$ . In order to answer the third research question, the correlation analysis was carried out to determine the existence of relationship between benchmarking process and organizational performance. Table 4 contains the results of this analysis.

Table 4. Pearson correlation between benchmarking process and organizational performance

		1	2
1	Benchmarking process	1.000	0.662**
2	Organizational performance	0.662**	1.000

As presented by the above table, it was clearly revealed that the correlation coefficient was statistically significant ( $r = 0.662$  with  $p < 0.01$ .) indicating the existence of strong relationship between benchmarking process and organizational performance.

### Conclusion

This study was discovered the relationship between factors that affecting successful benchmarking with benchmarking process as well as determined the relationship between implementation of benchmarking process with organizational performance. The entire construct were validated and refined using factor analysis and internal consistency analysis. As presented by the

result, it clearly shows that the instrument was valid and reliable.

Accordingly, the correlation results revealed that there are exist a significant relationship between factors affecting successful benchmarking with benchmarking process as well as existence of significant relationship between benchmarking process and organizational performance.

As benchmarking practice is still new in Malaysian public sector organization, specifically to local authorities, the understanding of proper benchmarking process is very limited. The findings are encouraging and provide some theoretical and practical insight to identify factors that influence the intention to implement benchmarking further make it as part of organizational culture in order to improve organizational performance.

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