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studies in the United  
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# Current Performance Measurement Practices – Studies in the United Kingdom (UK) and Malaysia

## Abstract

All types of construction businesses industry are aware of the importance of performance measurement (PM). It is becoming increasingly difficult to ignore it, as it is an important way of improving and sustaining businesses in the long-term as well as creating and developing strategies for organisations. This paper focuses on implementation of PM by construction sector organisations. It explores current practices of PM in construction organisations of two different countries; the UK and Malaysia. Aspects such as PM processes, tools and models used and the relationship between PM and strategy development are explored in both. Besides, challenges and improvement in PM are investigated. The main investigation consists of a literature review and interviews with selected organisations in these countries. Interviews involved twelve large construction organisations in order to seek their views on how organisations approach and conduct PM within their establishments. They revealed that PM is being practised in organisations either directly or indirectly to help improve business and profits. The appropriate use of tools and models to measure performance simplifies the PM process. Furthermore, aspects such as financial and non-financial, for example staff or workers' performance, client satisfaction and social, are evaluated and measured. The interviews also revealed that PM has a direct relationship with strategy development. However, the PM practices in organisations remain a challenge. Staff faced difficulty to understand the PM process, especially the new ones, and where the appropriate data for measuring performance can be sourced. Improvement should be made in the level of awareness of this PM and improvement in PM process and there are several approaches to addressing barriers and challenges in implementing PM. The results from these interviews and the critical analysis of the literature review will enable solutions to be devised for the effective use of PM from a strategic perspective.

**Keywords:** Construction Organisations, Current Practices, Performance Measurement, Strategy Development.

## 1. Background

The aim of this paper is to investigate the current practices of performance measurement (PM) by construction organisations in two countries with view to understanding the implementation of PM within organisations and its purpose in helping to improve organisations' business in those countries. Many organisations have been alerted to the importance of measuring performance of their business, since understanding that measurement can help them to realise their business potential for sustaining long-term competitiveness. The changing nature of work such as increasing competition, specific improvement initiatives, national and international quality awards, changing organisational roles,

changing external demands and the power of information technology have driven organisations from all sectors to search for ways of monitoring and improving performance (Beatham, 2003; Robinson et al., 2005). PM is an approach to identifying the current situation of organisations and gives directions to them in making plans for future organisation movement in markets. PM is on the management agenda (Neely et al., 2002). It is used in aligning with business management of organisations and is needed in developing their strategies. Yet although formulating strategies for long-term business to compete in markets is fundamental to the strategic management process, only a few construction organisations have adopted formal processes such as formulation (Price, 2003).

Success in implementing PM that can be used as an approach to improve business performance is dependent on cooperation among all staff or workers in an organisation and a management style related to a firm-specific strategy and information systems (Hoque, 2004). How to measure and what needs to be measured depends on what is the organisation aim and what it needs to achieve in future in business. It is important for organisations to measure the right elements of their organisation as it will guide it to its success in business. *'To achieve sustainable business success in the demanding world market place, a company must use relevant performance measures'* (Neely et al., 2002). Therefore, an organisation has to be aware of all sources and data that might be used to measure its overall performance.

As economics keep changing, organisations keep changing their aim and strategies for sustainability in business and seize opportunities as much as they can in order to sustain themselves and stay in the markets. Competition will never end and each organisation must take whatever opportunities to achieve success in their business.

## **2. Performance measurement and its use to organisations**

Performance measurement (PM) is a process to identify efficiency and effectiveness by undergoing a critical evaluation of all aspects of management such as leadership, planning, human resources, finance and workers. By the end of the process, it will help managerial staff to formulate effective strategies that help towards achieving organisations' objectives and goals (Latiffi et al., 2009). Organisations measure their performance because they want to identify their level of excellence in financial and non-financial aspects such as leadership, customer satisfaction and policy compared to their competitors. The results obtained will be used to create and develop further strategies for the organisation.

PM is used for many reasons. It is used as a business tool for formulating corporate strategy (Yu et al., 2007). Acceptance of PM in the strategy development process is a way to make sure that organisations take good consideration of all aspects when developing their objectives and goals (Luu et al., 2008). An organisation has not only to consider what it intends to achieve in the future but also to accept PM as a consideration for making its goals and objectives more realistic, achievable and accepted by everyone for a brighter business future. An organisation has to accept that the strategy needing to be developed must also involve assessment and evaluation. This is to ensure that the strategy created is suitable and achievable by the organisation for a certain period for what it plans to achieve. A strategy

that will be created and developed must be reflex with the organisation, current performance of organisation and align with the current economic situation.

Apart from that, the implementation of PM by organisations can attract future investment, to retain and attract more customers and to remain competitive and innovative in order to increase profit and share prices (Kagioglou et al., 2001; Robinson et al., 2005). With PM, organisations can improve their business in all aspects; financial and non-financial such as leadership, profit margins and policy goals. It is clear that PM is primarily to manage the outcome and to reduce or eliminate an overall variation in the work product or process. The goal is to arrive at actions affecting product or process and its output.

### **3. Performance measurement implementation in UK and Malaysia**

Performance measurement (PM) is being practised by most large organisations in the construction industry. The UK Government initiated the Latham Report in 1994 and the Egan Report in 1998, which recommended improving business performance of the construction industry. Since then, many organisations in the UK have been aware on PM needs for their businesses (Khalfan et al., 2001; Latiffi et al., 2009).

In Malaysia, PM is not a new thing for all industries, including construction. The concept has grown since the former prime minister, the fourth, Tun Dr Mahathir Mohammed announced the aim to declare Malaysia a developed country in the year 2020. Many organisations from various sectors of industry have since been aware of PM as they believe it can bring organisations to an international level (involved with international projects, enlarged businesses and growth in markets) just to align with the vision of 2020. Even though industries are aware of it, there is no proper standard or guidance for industry for its implementation as one of the approaches in organisation management. For that reason, many organisations did not consider measuring performance to improve businesses and mitigate risks. As globalisation is a dream of success for all types of organisations including construction, PM is implemented by those which know the benefits to be gained. From time to time, many construction organisations have implemented and are implementing PM as an additional way of improving and sustaining business in the long-term. With the introduction of the Construction Industry Master Plan (CIMP) 2006 - 2015 by the Construction Industry Development Board (CIDB) as an initiative to improve performance of the construction industry, PM will be an approach to achieve the ten -year target of the industry. CIMP has been developed with the intention to rectify the weaknesses and to improve the industry's performance as well as its image (Sundaraj, 2007).

### **4. Research methods**

A literature review of the PM concept has included definitions of PM, criteria, tools and models as well as the importance of PM and its connection with strategy development. Besides an in-depth review of theoretical literature on PM, semi-structured interviews have gained information on current practices of PM. The interviews were with twelve large construction organisations in the UK and

Malaysia, six from each, involved in building and civil works and services. The semi-structured interviews, which consisted mainly of open-ended questions based on topics needing to be covered, as suggested by Fellows and Liu (2008), gave an opportunity to explore answers more widely and expand on specific areas (Barbour, 2008).

## 4.1 Interviews and Procedure

Interviews were a major part of data collection to gain data on current practices in the two countries. The purpose was to identify the differences in implementing PM for running businesses so as to identify the needs of both countries in using PM as an approach to management of organisations' businesses. The interviews had four objectives:

- To identify knowledge and understanding of PM in construction organisations.
- To assess current practices and effectiveness of PM in construction organisations.
- To identify PM tools and models used in organisations.
- To identify the relationship between PM and strategy development.

Pilot interviews took place before the main interviews to examine whether or not the interview questions were well developed and suitable to obtain data for the study.

The face-to-face interviews used a set of questions developed from extant literature. Topics covered included reasons for implementing PM, measurement processes, tools and models used and relationship between strategy development and PM, challenges to implementing PM and approaches to addressing the challenges. Information obtained was then analysed, evaluated and presented using content analysis.

The semi-structured interviews involved twelve managerial staff of different organisations, all of whom have many years of experience with the industry and are responsible for the development of PM in their organisations. They all are directly concerned with arranging, managing, implementing and evaluating organisation performance. A brief summary of respondents' backgrounds is given in Table 1.

*Table 1: Respondents' backgrounds*

No.	Organisation	Business Type	Person Interviewed	Experience in PM
UK				
1	U1	Building and civil	Process Improvement Manager	10 years
2	U2	Building and civil	Head of Business Excellence	26 years
3	U3	Building	Performance Improvement Director	22 years

No.	Organisation	Business Type	Person Interviewed	Experience in PM
UK				
4	U4	Infrastructure services	Business Improvement Director	2 years
5	U5	Building	Business Improvement Manager	7 years
6	U6	Building	Director of Strategy Development	25 years
Malaysia				
7	M1	Building, civil and infrastructure	Technical Director	More than 10 years
8	M2	Building and civil	Executive Director	11 years
9	M3	Building, civil and services	Senior Manager	14 years
10	M4	Trading services	Chief Executive Officer (CEO)	12 years
11	M5	Building and civil	Chief Executive Officer (CEO)	20 years
12	M6	Mechanical and Electrical Services	Managing Director	28 years

## 5. Results and Discussion

The analysis of all the interview data is presented in this section which discusses the results in detail under the following seven headings.

### 5.1 Knowledge and understanding of performance measurement in organisations

Generally, all respondents shared a similar understanding that PM was to 'improve business' and 'maximise profits'. Improve business was in the sense of making improvement in the process of projects and overall business organisation. Furthermore, some respondents believe that performance measurement is an approach to maximise opportunity for organisations and mitigate risk. All respondents agreed that PM has benefits rather than negative impact for an organisation. The benefits gained from PM as mentioned by all respondents are:

- Identify potential areas to be improved by organisations.
- High productivity in work.
- Projects put in place, knowing what can help to deliver projects (what gets measured, gets done).
- Manage resources.

- Enhance organisation reputation and market position.
- Employers more efficient in delivering their tasks.
- High passion of staff in commitment to their organisations.

It was stated that;

*'It allows us to manage our resources...it allows you to make quality decision-based'.*

Apart from that, PM helps them in the process of creating and developing strategies for their organisations.

It was stated that,

*'It does not really matter how you measure it. It is about knowing where you are and where you want to be and put them in the action plan'.*

This quotation illustrates that PM can assist in identifying organisation needs for strategy development.

Based on the studies, Malaysia is quite behind in comparison to the UK in implementing PM, even though awareness of the importance of implementing PM for businesses started eight years ago. This is happening because there is no enforcement from government to implement it. Besides, most organisations at one time were used to playing safe by not focusing on global business and rather sticking with extending business in local markets. At the moment, PM has not appeared critically in organisation management but, from time to time, economics keep changing and lots of organisations focus on embracing success and expanding business in the global market, PM is becoming important and needs to be implemented to identify what should be improved by the organisation and what its position is in business.

Even though there are differences in length of respondents' direct involvement with the PM process and also in position (see Table 1), these are not shown in their interpretation of PM. Ten had more than 10 years' direct PM experience and the other two had less than 10 years.

## **5.2 Performance measurement processes**

The interviews revealed that staff with a wide spectrum of responsibility are involved either directly or indirectly in the PM process. Generally, employees play a vital role by supporting managerial staff in doing their tasks and playing their roles to create efficient and effective ways of management. Managerial staffs are responsible for assisting business and functional units' staff in doing their tasks and aligning these with the organisation's target.

The managerial staff decide organisation targets needing to be achieved every year and every individual has his or her own objectives and targets to achieve those of the organisation. The main objectives come from the main board and are cascaded to everybody in-group. The individual

objectives and targets need to be aligned with organisation needs and senior managers will monitor them to ensure they are suitable to be used and practised to achieve those of the organisation. Any individual objective and target not meeting the organisation's targets or maybe clashing with them will be reset.

### **5.3 Performance criteria measured**

In discussion of performance criteria measured, there is not much difference in choosing the appropriate ones. All aspects, financial and non-financial have been measured by organisations in improving areas needing to be improved. One respondent mentioned that the serious intention to measure non-financial aspects started ten years ago. Until then, the financial aspect was the only necessary criterion measured by any organisation.

It was stated that,

*'If we went back more than ten years, there was very little measurement of anything other than financial performance'.*

This illustrates that the financial aspect is the long standing one to be measured by industry. Nowadays, it has been changed to align with the changes in the economy, trends and needs in the industry. People are interested not only in the financial aspects but also non-financial.

There are many criteria used by respondents to measure the results of business performance. All used four main criteria: business performance, staff or workers, customer or client and society feedback. Business performance mean profits margin, turnover and organisation budget. Staff or workers are measured by looking at their performance in doing their tasks and playing their roles for achieving the organisation's target and aim in business. Customer or client satisfaction is measured to gain information on their level of satisfaction with services delivered as well as product. Society feedback means information gained from the public (non-relationship with organisations) by understanding the needs of organisation related to local people, public, environment, economy and social impact on others. All these criteria have been measured with PM tools and models suitable for the organisation's need.

Even though there were quite a number of similarities in the performance criteria, there were still differences in measuring organisation performance. Some of the criteria were measured monthly and some yearly. All organisations mentioned that identification of criteria is based on organisation needs. No matter what criteria have been and are being used, the overall target of all respondents is to make profit in their businesses.

### **5.4 Performance measurement tools and models**

All respondents agreed that PM tools and models are needed to measure performance. What type is not important as long as they can measure things that need to be measured correctly. It also depends on

what organisations need to see in the results of PM. One UK respondent stressed that the most critical things are what action can be taken after measurement and delivering the right choice for the organisation to improve business. Another from the UK added that the use of PM tools and models is also influenced by clients.

All respondents also justified that the appropriate tools and models to measure performance must be best suited to the organisation's business, the simplicity of the tools and models and the action to put in place for the measurement element. It is not about measurement but about what you do with the information and how to improve it. Table 2 shows the PM tools and models used by each respondent.

*'In terms of what tools and models we want to use, I guess it will be looking at what is out there, what benefit different things give us and then how they fit with what works for us and how easy they are'.*

Table 2: PM tools and models used by respondents

O \ Types	KPIs	BSC	BUSINESS EXCELLENCE	MANAGEMENT OF QUALITY SYSTEM			OTHERS (OWN CREATION)
				ISO 9000/1	ISO 14001	ISO 18001	
U1		√					√
U2			√	√	√	√	√
U3	√						√
U4		√	√				
U5	√						√
U6	√						
M1				√			
M2	√			√	√	√	
M3	√	√		√			
M4	√						√
M5	√			√			
M6	√			√			

\* O = Organisations

\* KPIs = Key Performance Indicators

There are various tools used by UK respondents compared to Malaysia. None of the Malaysia respondents uses the Excellence Model. However, one respondent had heard about the Excellence Model. All respondents mentioned that the board of directors made the decision on what type of tools and models will be used to measure performance of their organisations. Other factors influencing selection of tools and models are clients' requirements and government requirements. In Malaysia, the Standards of the International Organisation for Standardisation, widely known as ISO, need to be implemented by construction organisations if they want to tender for projects, especially government ones. The ISO 9000/1 is a necessity to be implemented by those who want to get projects, especially government ones.

It was stated that,

*'We have no choice, government requirement. If you do not have the ISO, you cannot tender for government project'.*

One respondent stressed that, recently, ISO is a prerequisite announced by CIDB that every construction organisation must get ISO 9000/1 certification to qualify for construction projects. For the respondent, ISO is not new as his organisation has used it for seven years. Two more respondents have used it for nearly ten years. The ISO is used to ensure things are done in sequence. All respondents, in any case, mentioned that they were considering use of any PM tool or model to measure performance even though it has not been made compulsory by the government or any other bodies in the country. They believe that if they want to grow, they have to measure performance of organisations and the right and appropriate tools and models can help them.

When all respondents were asked whether they have a plan to change the tools and models they use, all answered that nothing more needs to be changed. They stressed that they need to determine what they have to establish first rather than thinking about using different types of tools and models.

## **5.5 Relationship between performance measurement and strategy development**

All respondents held shared views about the relationship between PM and strategy development. Eleven believe that there is a direct relationship between PM and strategy development. They all had similar thoughts that PM influences strategy development at all levels of the process. It involves everything from the planning stage or where their project should go and what the organisation needs to do in the implementation and evaluation stages.

Organisations need to measure their performance based on the specific criteria or areas for getting the results for improvement (if needed) and identify what will be the next target to be achieved for the following year and beyond. PM is involved at the implementation stage and evaluation of projects every month. All respondents were aware that an organisation's strategy needs to be revised annually, even though some have made long-term strategic plans for more than three years. One respondent expressed the belief that PM does not have any relationship with strategy development but understood that it is needed for getting information on what needs to be improved by the organisation. Even though all respondents have different points of views on the relationship between these two, all agreed that PM is one of the key success indicators for organisations to achieve objectives or targets and strategy.

## **5.6 Challenges to implementing performance measurement**

The interviews revealed that there are barriers and challenges to implementing PM. All respondents agreed that implementing PM is not as easy as other people think it is. The most challenging part is changing people's mindset about it. Many workers think that by implementing PM in organisations,

they have to work much harder than they should. Workers try to justify the measurement (justify what we are) rather than understand how to achieve the target. It was stated that,

*‘The perception about this is because of lack of understanding and thinking it is more complicated than it should be’.*

Workers are seeing PM as a criticism of them, as everything will be revealed and measured including individual performance in conducting their tasks and responsibilities. If they are interested to do the work, they are willing to do it without any pressure. If not, they will not perform in their work. One respondent explained that workers’ lack of awareness of PM is a real problem in measuring performance. Workers tend not to look at PM as a part of their responsibility and that they must put full commitment into it. For organisations new to PM, one of the challenges is to really understand in depth the PM process of the organisation and the way to make it easy to be implemented and followed by all staff or workers and align with the existing management practices in the organisation.

Another challenge is using numerous PM systems in an organisation. It can create difficulty for staff. One respondent from the UK mentioned that this has caused difficulty to her in the way of delivering information to the right person in the fastest way. Not all the system can be accessed and used by all staff. An accounting type of system can be accessed and read only by staff working in that area and involved with accounting activity. Not all departments can easily or maybe cannot get access to the system. Even though it gives benefit to the person needing to, it does not for several staff who have to get all data and information every time from other staff.

Based on the experience of three respondents from Malaysia, unclear performance measure is one of the main challenges to its implementation. Many staff or workers are unaware about what they have to measure and what they can get from what they measure. It is easy for managerial staff to come out with the list of criteria needing to be measured by the organisation. The managerial staff might not have any problem or difficulty to understand what needs to be measured but it can be a problem and difficult for functional level staff, especially new ones not familiar with PM. Making mistakes in measuring performance and fully understanding the criteria needing to be measured will reflect different points of view on the relationship between these two, but all agreed that PM is one of the key success indicators for organisations to achieve objectives or targets and strategy. .

## **5.7 Approaches to addressing challenges**

There were several approaches to addressing barriers and challenges in implementing PM. The approaches are as follows:

- Firstly, giving early understanding to all staff or workers in organisations of what PM is. Everybody works to achieve targets of organisations. It is not an individual’s agenda but it is the responsibility of all staff and also organisation for the benefits of both parties.
- Improvement should be made in the level of awareness of this PM. Two respondents mentioned that mostly lower level staff are not aware of it. The best way to make them understand about

performances and quality is by giving them training that will benefit them in their career and also benefit the organisation.

- A suggestion has been made by one respondent to improve the storage and delivery of information in an organisation. All information gathered from all departments or units can be put in one system. Creating a 'central system' or 'warehousing facility' can be a good idea for storage of information gathered. Doing so will make it easy to be accessed by all staff or workers in the organisation. Details of the data can also be referred to by the staff or workers (if needed for their roles and tasks). Telephone use can be avoided if such a system exists.

All respondents in Malaysia said that they need to be given more time to use PM and become familiar with it for the benefit of the organisation. They are still in the PM learning process even though all of them had more than ten years' experience of it.

## **6. Conclusions and further work**

Performance measurement (PM) is being practised by organisations because it is an important way of improving and sustaining business in the long-term. Selection of the appropriate and necessary criteria to be measured brings massive impact to an organisation in achieving its aims, objectives and strategy for gaining success in the future. Current studies of PM in two countries revealed some differences besides similarities in implementing PM. The similarities are that PM has been practised and implemented by large organisations for the sake of improving business and increasing profit margins for the organisation. More benefits are gained from implementing PM. Aspects such as financial and non-financial are evaluated and measured for creating strategy. The appropriate use of tools and models to measure performance are needed to complete the PM process. Besides the similarities, differences between these two countries in implementing PM are the duration of implementing PM and tools and models used to measure performance. PM has been more advanced in implementation in organisations in the UK. It can be concluded that UK is more mature in PM rather than Malaysia as the duration of implementation is more advanced compared Malaysia. The PM practices in the UK can be adopted by another country and lessons learnt from the UK will help in improving the PM process in organisations in Malaysia. There is a need to understand the maturity level of the PM process in Malaysia and for a maturity model to help organisations to structure and organise the PM practices. The maturity model will be the next work for this research.

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