Performance Measurement in Malaysian Public Sectors: An Exploratory Study

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https://doi.org/10.58458/ipnj.v01.02.05.0012

Abstract

The purpose of this paper is to look at the adoption of performance measurement in public sectors in Malaysia by specifically examining the extent to which performance measurement is designed, implemented, and used. A survey was conducted to senior civil servants of federal government agencies in Putrajaya, Malaysia. This study found that the public sectors in Malaysia have been to a moderate extent designing their performance measurement system to align to the organizational strategy. This study shows a fairly extensive use of inputs, activities as well as a moderate use of efficiency and quality measures as compared to outcome measures. The results suggest that the Malaysian public sector performance measurement system is seemingly lacking in terms of balanced driver-outcome indicators. Indicators for sustainability, innovation, environmental and social responsibility are also not used extensively. The relatively small sample size causes a limitation to this study which might provide a potential source of bias to generalizability. Besides, the evidence from this study is only descriptive, thus it ignores other variables that can be associated with the performance measurement in use. One important implication of this study is to encourage the Malaysian Government to increase efforts in adopting outcome-based performance monitoring and evaluation method on the governments' projects and programs. Findings from this study provide insights into the design of performance measurement system and would have drawn attention to its implementation and usage in the public sector.

Keywords : Performance measurement, Public sector, Balanced scorecard, Government

Introduction

There is an increasing interest on the performance measurement in government since late 1980s encouraged by the new public management movement (Osbourne and Gaebler, 1992). Reform in the public sector has received worldwide attention, particularly on the performance measurement and management aspects (Kloot and Martin, 2003). Many governments have adopted some sort of performance measurement initiatives to enhance their services and promote transparent and accountable government. However, implementations and practice of performance measurement has been recognized as much less than comprehensive (Niven, 2002). Much has been written in theory about performance measurements. However, less is known in practice about their operation, especially in the public sector and in Malaysian context. Therefore this paper reports an attempt to investigate the perception of senior civil servants of Malaysian public sector on the performance measurement design and implementation. A study was conducted to examine the extent to which performance measurement is designed

in line with the strategy, how it has been implemented and the extent to which it has been used. This study resembles partly the research done by Hoque and Adams (2008) in the Australian government.

There were several reasons for undertaking this study. The first reason is to date, the design and choice of the performance management systems within government departments received minimum attention from researchers and least explored especially in Malaysia. The most recent study was conducted by Hoque and Adams (2008) in Australia. A quite similar study was done much earlier on state and local governments by the Government Accounting Standards Board and National Academy of Public Administration in the USA in 1997. Both studies looked into the performance measurement practices in the public sectors. Therefore, this study adopting a survey approach using questionnaires developed partly based on these earlier studies by Hoque. Within Malaysia, recent studies in regard to performance measurement were done on the private sector by Othman et al. (2004) on the limitations faced by a Malaysian telecommunication company in implementing balanced scorecard (BSC) and Jusoh et al. (2006, 2008a, 2008b) on performance measurements and balanced scorecard usage in Malaysian manufacturing firms. It is hoped that this short exploratory study will promote researchers' interest to investigate further into the issues of adapting and sustaining performance in the Malaysian public sector.

The second motivation for conducting this study is due to increasing efforts taken by the Government of Malaysia in adopting outcome-based performance monitoring and evaluation method on the governments' projects and programs. These efforts emphasizes on outcome/ impact instead of processes. In line with this new development, the Malaysian government has also introduced the use of key performance indicators (KPIs) to all ministers which has resulted in the creation of a new unit called 'Unity and Performance Unit' under the Prime Minister's Department. It is therefore timely to examine if the BSC or its distinguishing characteristics can be used as an effective performance measurement and management tool for the government sector especially its application in the government of Malaysia.

Furthermore, as pointed out by Speckbacher et al. (2003), this study is warranted as to provide more empirical evidence on performance measurement system, its content, implementation and applications as well as the individual user's experience, expected benefits and satisfaction as the type of performance measurement system used may vary from one organization to another.

Hence, focusing on the Malaysian public sectors, this paper attempts to answer the following questions related to the design, implementation, uses, and benefits as well as shortcomings of performance measurement system:

1. How is the performance measurement being designed?
2. How is the performance measurement being implemented and used?
3. What are the benefits and important aspects of successful implementation of performance measurement system?

Literature Review

Evolution of Performance Measurement

The concept of performance management has been going through a gradual change over the years. Performance measurement is defined as management and control systems that produce information to be shared with internal and external users (Henri, 2004). Furthermore, as it encompasses all aspects of the business management cycle, performance measurement constitutes a process for developing and deploying performance direction (Nanni et al., 1992). Neely et al. (1995) view performance measurement as the process of quantifying the efficiency and effectiveness of action while the performance measure represents the metric used to quantify the efficiency and/or effectiveness of this action. Performance measurement based on traditional cost or management accounting system that was introduced in early 1900s is more for fulfilling the requirement of external reporting and government (Johnson & Kaplan, 1987). Johnson and Kaplan (1987) argued that traditional performance measurement systems focus too heavily on the accounting or financial based measures and tend to ignore the non-financial measures. In other words, no or less emphasis is given on long-term value creation, particularly for the intangible and intellectual assets, that generate future growth to the organization. This is because these intangible assets could not be easily quantified in terms of financial or monetary values. Managing organization's intangible assets such as customer relationships, innovative products and services, high-quality and responsive operating processes, and employee capabilities and skills can only be done through the use of non-financial measures.

Accordingly, during the last two decades, an increasing number of companies have implemented performance management systems (PMS) that are based on critical success factors (CSF) and key performance indicators (KPI). Organisations, especially those in the private sector, have implemented a number of broader performance measurement and management system (PMS) tools such as Activity-Based Costing/Management (ABC/M), Benchmarking, Total Quality Management (TQM), Business Process Reengineering (BPR) and arguably the so-called best tool, the Balanced Scorecard (BSC). In a recent survey, Rigby (2003) reported that the BSC is one of the key "compass setting" tools used by managers. Lingle and Schiemann (1996) describe the results of a study that confirms that companies who balance financial and non-financial measurements, but also link strategic measures to operational ones, update their strategic scorecard regularly and clearly communicate measures and progress to all employees, are better performers. Surveys among corporate executives conducted by the consulting firm Bain and Company revealed that by 2004, 64 percent of their respondents in North America and 57 percent of the respondents worldwide were using BSCs in their companies (Rigby and Bilodeau, 2005).

Increasingly, managers have found value in monitoring indicators other than the financial measures. A recent survey of senior executives reveals that short-term financial measures rank fifth behind four non-financial measures in terms of perceived importance (Ittner and Larcker 2001). Atkinson et al. (1997, 25) also conclude that "performance measurement systems based primarily on financial performance measures lack the focus and robustness needed for internal management and control". This is because the information developed using traditional performance measurement framework for external users is inadequate and insufficient for internal users. The perceived restrictions of traditional accounting-based measures are numerous of which Ittner and Larcker (1998a) listed eight most common limitations, namely, too historical and "backward-looking", lack of timely signals, lack of predictive ability to explain future performance, reward short-term or incorrect behaviour, lack of actionability, too aggregated and summarized to guide managerial action, reflect functions

instead of cross-functional processes, and give inadequate guidance to evaluate intangible assets. Traditional financial ratios have worked as important tools of measuring organisational performance in the past. Kaplan and Norton (1992, 71) suggest that they "worked well for the industrial era, but they are out of step with the skills and competencies companies are trying to master today". Their relevance in the information age where the market has no boundary and organisations are competing for talents is questionable. The situation may worsen when the firm is compelled to pursue short-term goals at the cost of the organisation's long term objectives (Anand, Sahay, & Saha, 2005). Eccles, (1991) felt that the leading indicators of business performance cannot be found in the financial data alone.

Performance Measurement in Public Sector Organisations

In the public sector, measuring performance emerged with the drive to revive the management of the sector. 'New public management' discussion surrounds only one key word, which is 'performance' (OECD, 1993: p.7). Performance has been the agenda for new way of doing business in the public sector and that involves paradigm shift towards entrepreneurial government (Osbourne and Gaebler, 1993). In the public sector context, Nyhan and Martin (1999, p. 348) defined performance measurement as "the regular collection and reporting of information about the efficiency, quality, and effectiveness of government programs". According to Pollanen (2005, p. 5), "an ideal performance measurement system in public organizations can enable an evaluation of the effects of programs on the well-being of multiple stakeholders. Thus, public sector nowadays needs to be managed like their business counterpart. However, the design of performance indicators in both private and public sectors are very difficult to match because performance is a broad concept which has various meanings for different audience in a different context (Carter, 1991). Nevertheless, managers of public sector have to face a number of performance measurement-related challenges resulting from the new public management initiative. Public agencies are becoming more aware of their necessity to develop and implement practices and procedures that will make them more business-like (Dixon, Kouzmin and Korac-Kakabadse, 1998). Governments around the world are under pressure to control their costs and improve their services. They are expected to be responsive and accountable not only to their departmental secretary, minister and parliament but also to client groups in the marketplace, even when their respective interests are in conflict (Dixon, Kouzmin and Korac-Kakabadse, 1996).

US Comptroller General David M. Walker, in testimony to a US Senate subcommittee on how to improve the federal government's approach to managing its people, noted that the landmark federal management reforms of the 1990s signaled the arrival of a new era of accountability for results (Walker, 2000). The US federal government will have to go beyond a zero tolerance for waste, fraud and abuse and create a government that is better equipped to deliver efficiently, economically and effectively on its promises to the US people. Randor and Lovell (2003) believe that there is a need to reinforce accountability, so that they are clearly held accountable for the resources they use and the outcomes they achieve. In response, government administrators have begun introducing changes and implementing modern private sector management tools in their organisations to deal with the financial constraints and increasing demand in terms of accountability to stakeholders (Ho & Chan, 2002). According to the World Bank's Independent Evaluation Group's report, growing number of governments are working to improve their performance by creating systems to measure and help them understand their performance (Mackay, 2007).

A measurement system consists of practices, procedures, criteria, and standards that govern data collection, the analysis of data and the compilation of results into quantitative

or qualitative forms (Halachmie and Bouckaert, 1996). The system of measurement can be simple or complex, temporary or permanent. Depending on the desired performance information, agencies may have to use more than one kind of measurement. A properly designed performance measurement system may allow assessment of an agency's various attributes such as size or source of fundings, employees' activities, relationship among different activities, and the resulting goods and services and how they are perceived by various stakeholders. A well-designed performance system may allow an agency to arrive at an index that represents the combination of several measurement efforts.

There are two postures apparent in government measurement systems (Halachmie 1982, 1992; Wholey, 1983): (i) results, outcome oriented management; or (ii) process-oriented management. The two postures might be conflicting (Wholey, 1983, p. 5), which explains why many performance evaluation efforts tend to focus either on the results or on the process for attaining the results (Halachmie and Bouckaert, 1996). Results-oriented systems will target the desired results and specifications of process are derived from the attributes of the desired results. This approach is consistent with total quality management core teaching which treat the outcome as essential. Process-oriented systems involve efforts to re-engineer the business processes of organizations (Hammer and Champy, 1993). Selection of emphasis on results or process for performance measurement should be based on the objective of the assessment (Halachmie and Bouckaert, 1996). The reasons for assessing performance determine the necessary perspective of the evaluation, whether to look at process or impact (Halachmie, 1992). A different perspective of assessment may generate valid evaluation but will not be useful. In example, examining the changes in teachers' proficiency in specific subject areas may not help determine the proficiency of students in a particular grade (Halachmie and Bouckaert, 1996, p. 5). Students' achievement may be poor because of various other reasons such as learning or behavioural problems and little support from parents.

The World Bank's report also highlights various whole-of-government monitoring and evaluation initiatives around the world. Niven (2002), among others, has been actively working with a number of local authorities, i.e. the City of Charlotte and Transport Department of Michigan, USA, to adopt balanced scorecard for monitoring. Performance measurement in European countries like the United Kingdom, Finland, the Netherlands and Sweden has been implemented rather pervasively (Pollit, 2005). Pollit (2005) emphasizes that the UK's public sector has had the strongest history on performance measurement and that performance measurement has become almost universal in the northwestern European governments and it goes well beyond rhetoric and into practice.

However, there are underlying differences between the private sector and the government sector. Private sector and government sector organisations organize functions differently, because their budgeting processes, regulatory and accountability regimes are different (Dixon et al., 1998). Consequently, priority objective would have been different too as the "financial" perspective (which is understandably the most important aspect of a profit oriented organisation) cannot be a bottom-line objective for government organisations, but rather may provide a constraint by limiting spending to budgeted amounts (Kaplan & Norton 1996: pp.179-80). Two important features of the public sector are (Dixon, 2002):

i) bureaucrats often serve several masters which include services' users, services' payers, politicians and professional organizations;

ii) the consequence of serving different masters resulting in the bureaucrats often have several ends to achieve, i.e. they are often expected to increase both efficiency and equity when delivering services to the public.

Steven Van de Walle (2007) highlights that the main problem of measuring public sector performance lying on a conceptual instead of measurement. It is a conceptual problem because in order to measure government and government performance, you first have to define government and agree on its objectives. Failure to define those areas would render the measuring effort as technically correct, but at the same time meaningless. Objectives, as in most cases of governments in the world, may not be revealed – objectives may be contradictory, or policy makers may just not know what exactly their objectives are. When conflicting and/or vague objectives is an essential feature of governing, measuring government performance will be merely a political exercise at best.

Balanced Scorecard (BSC) in Public Sectors

Kaplan and Norton (1992) define the "balanced scorecard" (BSC) as a set of measures that gives top managers a fast but comprehensive view of the business. The BSC includes financial measures that tell the results of actions already taken which is then complemented by the operational measures on customer satisfaction, internal processes, and the organisation's innovation and improvement activities. They identified the operational measures as the drivers of future financial result. Basically, a scorecard can be considered "balanced" if it contains financial and non-financial measures, driver and outcome measures, tangible and intangible measure and internal and external constituents.

Niven (2003) describes a BSC as a carefully selected set of quantifiable measures derived from an organisation's strategy. Strategy is an integral element of a BSC framework which suggests that the foundation of measuring organisational performance should be derived from its vision and strategy. Therefore, any measurements chosen within the four perspectives (financial, customer, internal processes, and learning and growth) should be able to explain the level or extent of achievement of the strategy. In linking strategy to balanced scorecard, it is important to translate strategy into measurable achievement so that it can help to guide the organisation in explaining those typically mouthful words into simple and achievable adverbs and nouns (Kaplan and Norton, 1996). Hence, this study attempts to explore the extent to which performance measurement in the public sector is being developed based on their strategy.

Despite some underlying differences between the private and the government sector, government organisations are increasingly recognizing the BSC as an important performance measurement and management tool. They are also looking for appropriate performance measurement systems to ensure employees are rewarded for good performance. Effective performance management requires fact-based decision making and one of the first requirements is relevant and reliable data. With multiple perspectives (one of the important elements of the current version of the BSC) data at hand, government agencies can show the outcomes and effects of their efforts as real as possible, and taxpayers can judge the agencies' accomplishments across a range of measures and decide whether they are getting the best possible service value for their tax dollars.

Apparently, there has been very little research done on how a standard BSC (originally developed for the private sector), can be effectively applied in the public sector. The effective use of the BSC in the public sector as a performance measurement and management tool represents a gap in the literature (Chan, 2002). Major concern would be on the potential adjustment to the BSC should it be adopted in a public sector. Potential adjustment to the structure of the BSC and the use of composite measures in evaluating an organization is worth to be discussed further.

Structure of BSC

There are some obvious weaknesses of the current version of the BSC when it is applied in the government sector especially with regard to its design and structure. The differing objectives of the government sector indicate some problems of the application of the current version of the BSC in government organisations. Government organisations often place their customers or constituents (not the financials) at the top of their strategy maps (Kaplan & Norton 1995, p.79). But the current version of the BSC fails to provide a blueprint as to how other perspectives (learning and growth, internal business process and financial) may ultimately influence and affect customers.

A clear distinction between the private and the public sector is that in the private sector, it is the customer who pays for the service and receives the service (Kaplan & Norton 2001, p.134). In the public sector, however, the customers or citizens do not necessarily pay for the service they receive (or perhaps pay only proportionately). In other words, the citizens do not receive service in direct proportion to their tax payments and any form of fiscal contribution. Therefore, unlike the private sector, the "financial" perspective is not the bottom-line objective for government organisations (Kaplan & Norton 1996, pp.179-80), but customer perspective is. Hence, in a causal relationship manner, it is very important that a BSC translates all relationships into customer satisfaction but not necessarily into financial success. In fact, in the government sector, it is most often that financial success leads to customer satisfaction (as contrasted with the private sector, where customer satisfaction usually leads to increased revenue).

This has been clearly experienced by the City of Charlotte, USA as highlighted by Kaplan & Norton (2001, p.138) where they placed the customer perspective at the top of their corporate scorecard. They experienced that financial objectives became the enablers for helping the city to achieve its customer objectives by ensuring that the city's services such as sewage treatment, garbage collection, city cleanliness etc are delivered at a reasonable price. They also have seek competitive funding from external partners while maintaining a solid and sustainable tax base and credit ranking in order to fund high-priority projects towards providing better service delivery. All these financial objectives led them to a higher customer satisfaction. The BSC can be effective in the government sector, if and only if, the current perspectives are rearranged as shown in Figure1.

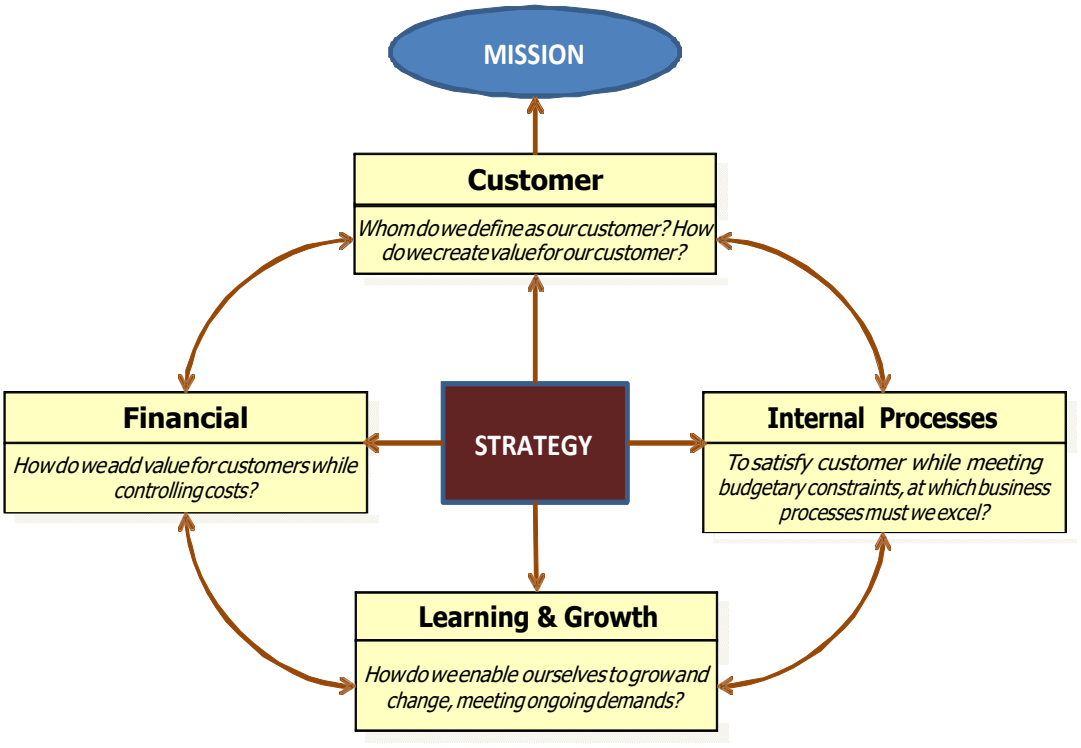

Figure 1: Rearrangements of balance scorecard for public sector

According to Niven (2003), the four perspectives of the current version of the BSC can still be applied in public sector as long as they are rearranged according to governmental priorities. The primary intention of a government agency is to serve the people; hence its main reason for existence or its mission would be at the top of every other objective. The strategy still remains at the focal point of the perspectives however, meeting the people's or customers' expectations is now considered to be the most critical perspective among the four in determining whether the agency has accomplished its mission or otherwise. Another consideration as suggested by the revised framework above is on the rephrasing of the strategic questions to suit the public sector environment. These considerations, if positively dealt with, may contribute to employee satisfaction, superior employee performance, sound internal business process and in turn, may lead to efficient stewardship of taxpayers' dollars which may eventually lead to achieving the main objective - absolute customer satisfaction. In conclusion, in the light of the above observations, it is clear that some modifications are needed to the current version of the BSC albeit having a similar set of performance perspectives for it to be used in the public sector. This study attempts to investigate the design and structure of performance measurement in the public sector in terms of its strategic alignment and balanced characteristics.

Strategic Alignment

The issue of alignment between strategy and performance measures provides a problem with the performance measurement being used in many organizations. In tackling this issue, Banker, Janakiraman and Konstans (2001) have suggested the use of the BSC as it provides the articulation of linkages between performance measures and strategic objectives. Within

BSC framework, performance measures can be aligned with business strategy where its alignment can be essential for successful implementation of strategy (Kaplan and Norton, 2001; Fonvielle and Carr, 2001). Kaplan and Norton (1996, p.149) noted that "all balanced scorecards use certain generic measures which reflect the common goals of many strategies, as well as similar structures across industries and companies." They also noted that the BSC provides a framework for a strategic management system that organizes issues, information, and a variety of important management processes.

In line with this, Neely et al. (1994) argued that performance measures can encourage the implementation of strategy by matching measures and strategies. Specifically, Chenhall and Langfield-Smith (1998, p. 243) argued that "strategic priorities should be supported by appropriate and effectively implemented manufacturing processes and information systems, including those providing management accounting information."

Balance

Besides the issue of alignment, performance measurement systems that are able to capture information on all aspects of business are essential in today's changing business environment. The traditional performance measurement tools are no longer adequate in providing the information needs of today's managers. Thus, it is necessary for organizations to deemphasize the use of simple, aggregate, short-term financial measures and to develop indicators that are more consistent with long-term competitiveness and profitability (Kaplan, 1983). Kaplan and Norton (1996) argued that financial measures are lagged measures that report on how the organization has performed and provide relevant information on the firm's physical capabilities and resources, while non-financial measures are considered as leading measures because they provide information on future performance (Ittner and Larcker, 1998; Kaplan and Norton, 1996; Wallman, 1995). The use of multiple performance measures, both financial and non-financial, is very important for management as these measures have the added advantage of providing enhanced protection against the consequences of uncontrollable outside events (Bruns, 1992; Bruns and McKinnon, 1993). In order to manage the critical success factors and strategic resources such as physical resources, structural resources, and human capital in this new business environment, performance measurement systems should also rely on the use of non-financial measures pertaining to employees, operations, and customers (Widener, 2006). Hendricks *et al.*(1996) and Lynch and Cross (1995) pointed out that organizations need a balanced set of financial and non-financial performance measures that are customer-driven and with operational acceptance in order to remain competitive. Consequently, the balanced scorecard (BSC) was developed by Kaplan and Norton in 1992 as a way of addressing the traditional performance measurement limitations. The word balance refers to the types of performance measures included in the scorecard. These performance measures may include financial and non-financial measures, leading and lagging measures, short-term and long term measures, quantitative and qualitative measures, and internal and external measures.

Implementation and Use

To implement a successful strategy, many people from various levels of the organization should participate and be involved in implementing a BSC. Kaplan and Norton (1996) suggested that organizations should ensure that every employee contributes to the implementation of the strategy by communicating and sharing with them their long-term vision and strategy as embodied in the unit's balanced scorecard. At the same time, the BSC's strategic objectives and measures need to be communicated throughout organization as to signal to all employees the critical objectives that should be accomplished if an organization's strategy is to succeed. The process of communicating and linking is a critical step in the BSC/strategic management system implementation. Furthermore, as communicating business strategy

and aligning individual goals with corporate goals are critical in many organizations (Simons, 1995), BSC can provide a means for communication and alignment of corporate strategies by cascading and linking measures to each level of organization. For example, Malina and Selto (2001) provided empirical evidence that emphasizes the role of BSC in providing effective communications of strategy and knowledge and distributing information. In this manner, BSC may become a source of competitive advantage (e.g. Malina and Selto, 2001; Tucker et al., 1996). Besides providing effective communication, alignment of an organization and scorecard measures towards strategy must ultimately be motivated through the incentive and reward systems. Thus, there must be a link between reward system and scorecard measures. Kaplan and Norton (1996, p. 222) noted that "attempting to gain organizational commitment to balanced performance across a broad set of leading and lagging indicators will be difficult if existing bonus and reward systems remain anchored to short-term financial results. However, a study by Speckbacher et al. (2003) found that even though more than two-thirds of the BSC users linked their reward system to the BSC, they do not actually see cause-and-effect chains as a prerequisite for a BSC-based reward system.

Research Methods

Sample and Survey Procedure

There are more than 900 federal and state government agencies throughout Malaysia. According to listings by federal government ministries and agencies in the website, there are approximately 77 ministries and federal government agencies having headquarters in Putrajaya. The scope of this study was limited to the government agencies having their head offices at Putrajaya in view of the vast locations and respondents which may include many groups and sub-groupings. This would be more practical and achievable given the time and resource constraints of the study. Furthermore, the questionnaire designed demands responses from the senior executives and most senior executives normally are positioned at the head offices in Putrajaya. Concurrent with time constraint and position of the participants, the questionnaires were administered personally to respondents' offices in Putrajaya. All respondents were assured that their responses will be treated confidential; the cover letter states that 'only aggregates will be used for the research and that no individual organisation will be linked to specific responses'. The cover letter also states that filling up of personal information at the end of the questionnaire is optional. Out of 73 questionnaires sent out, only 51 were returned (70 percent), seven via fax and the rest were personally collected.

Respondents' Profile

Demographic information of the respondents is presented in Table 1. Majority responses obtained were from the divisional level (38 respondents, 74.5 percent), followed by sectoral (12 respondents, 23.5 percent) and organisational level (1 respondent, 2 percent). The respondents were divided into three position groupings: Senior Management, Middle Management, and others. There are 28 males respondents as compared to 20 females, while 3 respondents' data were missing. Forty seven respondents (92.2 percent) have been in the government service for 12 years and above and among them, 24 (47.1 percent) respondents have been with the same unit between 2 to 4 years. Twenty four of the respondents (47.1 percent) have a university degree while 21 of them graduated with a master's degree.

Questionnaire Design

The questions in the questionnaire were formulated after a lengthy review of the literature

in performance measurement and balanced scorecard. A total of 35 questions derived selectively from various previous researches such as Hoque and Adams (2008), Kald and Nilsson (1999), and Marr (2005). Majority of the questions were adapted from Hoque and Adams (2008). The questionnaire is broadly divided into three sections, namely: Strategy, Performance Measurement, and Respondent's Background. Strategy section gives the respondents an opportunity to present his/her understanding of his/her unit's strategy and its possible relationship with performance measurement system. Performance measurement section deals with questions related to the design, implementation, and use of the PMS in his/her organisation, sector or division. Majority of the questions were being rated on a 5-point Likert Scale where 1= "To a little or no extent", 2= "To some extent", 3= "To a moderate extent", 4= "To a large extent" and 5= "To a very large extent".

Table 1: Respondents' Profile

	Frequency	Percentage
Levels in organization		
Entire organization	1	2
Sector	12	23.5
Division	38	74.5
Total	51	100.0
Post		
Senior Management	6	11.8
Middle Management	24	47.1
Others	14	27.5
Missing	7	13.7
Total	51	100.0
Gender		
Male	28	54.9
Female	20	39.2
Missing	3	5.9
Total	51	100.0
Tenure		
1 year and below	6	11.8
2 years – 4 years	24	47.1
5 years – 7 years	11	21.6
8 years – 10 years	5	9.8

11 years and above	2	3.9
Missing	3	5.9
Total	51	100.0
Qualification		
Diploma	0	0
Degree	24	47.1
Masters	21	41.2
Ph.D.	2	3.9
Professional qualification	1	2.0
Missing	3	5.9
Total	51	100.0

Results

Survey data of this study was analyzed using descriptive statistics to answer the three research questions posed earlier. As the study was an exploratory in nature, analysis using descriptive statistics deems to be sufficient in order to give a general idea about the current state of nature of performance measurement systems practiced in the Malaysian public sector. Therefore, findings will be presented according to the three research questions.

General Findings

Before the respondents were asked on the specific questions relating to the design of performance measurement, two questions were asked regarding the business performance measurement (BPM) approaches. Out of 44 responded (7 were missing), 41 of them (93.2 percent) said that they had heard and are aware of the balanced scorecard (BSC) approach. In another question asking them whether their performance measurement system is a balanced scorecard, only 7 out of 51 who responded (13.7 percent) say that their performance measurement system is to a large and very large extent resembles a BSC whilst 27 respondents (52.9 percent) reply that their performance measurement systems least likely to resemble a BSC. Among 51 who responded (see Table 2), only five respondents' organisations (9.8 percent) have actually implemented BSC whilst 28 organisations (54.9 percent) are still in the consideration stage, while 12 have rejected the idea and six have not considered it at all.

Table 2: Business Performance Management (BPM) Approaches

	Percentages				
	Not considered	**Considering**	**Considered then rejected**	**Implemented**	**Implemented then abandoned**

ISO	3.9	21.6	9.8	62.7	2.0
Six Sigma	26.0	38.0	28.0	6.0	2.0
Activity Based Costing	44.9	12.2	24.5	16.3	2.0
Balanced Scorecard	11.8	54.9	23.5	9.8	
Customised KPIs	2.0	15.7	19.6	62.7	

This study also attempts to find out if the unit is using any other performance measurement approaches than the balanced scorecard. This is because in Marr's (2005) study, out of 276 respondents, 167 (61.0 percent) are using BSC together with other quality-based approaches such as total quality management, Baldrige, Six Sigma and economic value added (EVA). The results of this study (see Table 2) show that 32 organizations (62.7 percent) have implemented ISO and some sort of a customized KPI system. Eight organizations (15.7 percent) have implemented activity based costing and only 3 (5.9 percent) have implemented six sigma. What is interesting to note is that there is one respondent from each of those who had implemented ISO, Six Sigma and activity based costing had eventually abandoned the approach.

By using cross tab analysis (see Table 3), the result shows that 43.1 and 39.2 percent of those who have implemented ISO and a customized KPI system respectively are also considering implementing BSC. With a move towards outcome-based performance measurement and in increasing awareness towards employing a balanced set of KPIs, there is a high probability that the public sectors will increasingly adopt the BSC approach.

Table 3: BSC with other BPM approaches

	Percentages			
	ISO	**Six Sigma**	**Activity Based Costing**	**Customised KPIs**
Considering BSC	43.1	2.0	4.1	39.2
Considered then rejected BSC	7.8	2.0	8.2	9.8
Implemented BSC	2.0	2.0	4.1	5.9

How is the Performance Measurement Being Designed?

On the specific questions concerning the design of performance measurement system, questions relating to the extent of performance measures being derived from the organisational strategy and the extent to which performance measures are used in a balanced manner in accordance to the BSC approach were asked (see Table 4 and Table 5).

Table 4: Performance measurement design – Derived from strategy

Performance measurement design – Derived from strategy	Percentages			
	Little or no extent	Moderate Extent	Large and Very large extent	Mean
Our unit's strategy is officially documented	11.8	37.3	51.0	3.45
Our unit's organisational strategy is well understood by employees	25.5	49	25.5	2.98
Our unit's operational strategy is influenced by organisational strategy	13.7	23.5	62.7	3.90
Our unit's Key Performance Indicators (KPIs) are derived from the unit's organisational strategy	13.7	47.1	39.2	3.25
We review and reassesses the KPIs used by our performance measurement system whenever our unit's strategy changes	33.3	37.3	29.4	2.98

As shown in Table 4, there are five questions relating to performance measurement design-derived from strategy. Results show that 51 percent of respondents declare that their unit's strategy is officially documented, while 62.7 percent of respondents feel that their operational strategy is to a large and very large extent influenced by the organisational strategy. The overall mean for performance measurement deriving from strategy is 3.31, hence, it can be deduced that the performance measurement of Malaysian public sectors is to a moderate extent being developed based on organisational strategy. This result is somewhat inconsistent with the findings by Kald and Nilsson (1999) on 800 business units in the Nordic countries where there is a relatively strong connection between strategic plan and the measures used. This could be perhaps due to the difficulties in translating the strategy into operational and measureable terms within a public sector as strategy is often nebulous and visionary as Kaplan (1996) suggests that strategy can be a foreign concept to a public sector organisation.

Table 5 shows the scores for questions relating to the extent of performance measures being used in a balanced manner in accordance to the approach of the BSC. The evaluations of balanced indicators are in terms financial vs. non-financial, input vs. output, driver vs. outcome measures as well as internal vs. external constituents. In addition, balanced indicators should reflect the multidimensional nature of performance measurement.

As shown in Table 5, all the ten performance measurement dimensions are used only to some extent by the Malaysian public sectors (mean scores are below 3.0). However, among the 10 dimensions, activity/process measures are used most extensively (mean= 2.49), followed by output measures (mean= 2.29), financial measures (mean= 2.25), inputs measures (mean = 2.25), and customer satisfaction measures (mean = 2.24). Majority of the respondents reported that they use activity/process measures (60.8 percent) and output measures (58.8 percent) to

a large and very large extent. The findings on output and activity/process measures are quite similar to the findings reported by Hoque and Adams (2008) in the Australian government. The results also seem to be consistent with some other studies done in the USA, UK, and Australia where the performance measures have tended to be more output measures rather than more desirable efficiency and effectiveness measures (Pollanen, 2005). However, Chan (2004) revealed that the adoption rate for financial and efficiency measures was up to 70 and 80 percent of Canadian and US municipalities. With lower extent of use of cost and processes efficiency and quality measures, it can be reasonably concluded that Malaysian public sector less emphasizes on internal business process reform and financial accountability where services must be delivered in a cost-effective, high-quality manner. This would suggest that efforts taken to reform processes and systems to reduce cost is lacking. Besides, moderate use of financial measures is basically for annual budget purpose and for financial reports on expenditure against budget.

Table 5: Performance measurement structure – Balanced

Performance measurement dimension – Balanced	Percentages			
	Little or no extent	Moderate Extent	Large and Very large extent	Mean
Output	29.4	11.8	58.8	2.29
Cost & processes efficiency & quality measures	33.3	41.2	25.5	1.92
Activity/process	11.8	27.5	60.8	2.49
Customer satisfaction	13.7	49	37.3	2.24
Outcomes	47.1	37.3	15.7	1.69
Financial	9.8	54.9	35.3	2.25
Inputs	19.6	35.3	45.1	2.25
Learning and growth	41.2	45.1	13.7	1.73
Socially and environmentally related measures	60.8	31.4	7.8	1.47
Innovation	58.8	29.4	11.8	1.53

As expected, socially and environmentally related measures (mean=1.47) and innovation related measures are used least by the Malaysian public sectors. The former is reported to have been used to a little or no extent by 60.8 percent of respondents and the latter by 58.8 percent. The lack of such measures is evident as government agencies seldom undertake extensive market research to gauge people perceptions of their performance across both these dimensions. Lower extent of use of innovation measures was also found in Chan's (2004) study which compared the adoption of balanced scorecards in Canadian and US municipalities. Lower use of innovation measures indicates that little recognition of the importance of learning by individuals in the Malaysian public sector. This suggests that staff development programs and trainings for specific skills and knowledge are not greatly

emphasized, thus lead to a low level of innovation. In relation to this, Kloot and Martin (2000) found that innovation and learning occur largely on an ad hoc basis and not formally addressed in Victorian local government.

The mean score for all 10 dimensions is 2.94, and therefore, it can be concluded that Malaysian public sectors use balanced performance measures only to some extent. It seems that the measurements are to some extent being balanced between financial and non-financial indicators because the financial measurements are being used to some extent (mean= 2.25), while other non-financial performance measurement dimensions such as customer satisfaction and process efficiency and quality are being used to some extent too.

In addition, from the mean scores, the results also indicate that there seems to be a somewhat balanced set of performance measurements between input and output indicators as both types of measurements are being used to large and very large extent by 45.1 percent and 58.8 percent of respondents, respectively. This could be due to the current Malaysian government initiative of implementing Annual Work Target which was enhanced in 2002 (JPA, 2002) that requires every public servant to plan and document all core and non-core activities and deliverables to be accomplished for that particular year which include planned budgets, manpower, activities and trainings. However, with regard to input measures, this finding is quite different from Hoque and Adams's (2008) study whereby inputs and learning and growth measures were the least used in the Australian government.

Not surprisingly, the least used performance measurement dimensions are socially and environmentally related measures (mean= 1.47), measures on innovation (mean= 1.53) and outcomes measures (mean= 1.69). An outcomes measure is defined as the measure that tracks the benefit received by stakeholders as a result of the organisation's operations (Niven, 2002). Outcome measure relates to the achievement of the organisation's overall goals such as reduced incidence of HIV, increased perception of public safety etc. The low percentage of usage of outcome measures among Malaysian public sector might not augur well with the aspiration of the Chief Secretary to the Government to institute outcome measurements in evaluating the achievement of the Ninth Malaysian Plan.

Another possible balanced set of indicators are between a driver and an outcome indicators. A driver indicator is a measure that leads to the achievement of outcome indicators and often includes the measurement of processes and activities (Niven, 2002). Since this study shows an extensive usage of inputs, activities as well as a moderate use of efficiency and quality measures as compared to outcome measures, therefore, we can fairly deduce that the public sector performance measurement system is seemingly lacking in terms of balanced driver-outcome indicators. Tomkins (1987) wrote that measuring outcomes links closely to the concept of effectiveness – the extent to which a public sector program objective has been met. Thus assessing effectiveness is impossible without satisfactorily measuring the outcome (Smith, 1996).

The last aspect of a balanced set of measurements is from the perspective of internal vs. external stakeholders (Kaplan and Norton 1992; 1996). From our results, internal related measurements such as inputs, financial, activity/process, as well as output, are being used to a larger extent as opposed to external related measures. Except for customer satisfaction that were reported to have been used to a moderate extent (49.0 percent), other external related measures such as outcomes (47.1 percent) and social and environmental (60.8 percent) related measures have been used to little or no extent. Therefore, it seems that the Malaysian public sector has been measuring their achievement based most on internal yardstick instead of taking the cues from the stakeholders, customers or the public.

To explore further on the use of socially and environmentally related measures, respondents were asked to rate on the extent of use of nine socially and environmentally related measures as shown in Table 6.

Table 6: Social and environmental related performance measures

Performance measurement structure –Social and Environmental related performance measures	Percentages			
	Little or no extent	Moderate Extent	Large and Very large extent	Mean
Employee diversity	86.3	9.8	3.9	1.18
Economic impacts	54.9	35.3	9.8	1.55
Occupational health and safety	62.7	21.6	15.7	1.53
Stakeholder involvement in community, social and environmental issues	54.9	19.6	25.5	1.71
Community relations	60.8	23.5	15.7	1.55
Employee satisfaction	9.8	74.5	15.7	2.06
Other community, ethical, social and environmental issues	60.8	19.6	19.6	1.59
Natural resource conservation and emission levels	70.6	19.6	9.8	1.39

The mean score of overall nine social and environmental related measures is 2.28 suggesting that the social and environmental related measures are only being used to a little or no extent by the Malaysian public sectors. Among the nine measures, employee satisfaction measures received the highest mean score (2.06) with 74.5 percent of the respondents used these measure to a moderate extent. Interestingly, employee diversity measures received the lowest mean score with 1.18 and were used to little or no extent by 86.3 percent of the respondents. This is particularly interesting given the racial composition in the public sector has been a hot and sensitive issues debated recently (Ahmad, 2007; Abdullah, 2008). Ahmad and Abdullah wrote that according to the Public Services Commission's (PSC) statistic, only 1.78 percent of Chinese and 2.5 percent of Indian had applied to join the public sector in 2006 out of 486,802 total applicants. This goes to show how unpopular the work in public sector is to the non-Malays. According to the Director General of Public Service Department (PSD), his department and the PSC have been relentlessly doing their level best to eliminate the racial gap in the public sector (Ahmad, 2007; Abdullah, 2008). This survey however, shows that employee diversity is not one of their key indicators.

Another interesting observation from the results shown in Table 6 is on the usage of natural resource conservation and emission level measure. A mean score of 1.39 suggests that they have little or no extent of use of the said measure. As alarming as it might suggest, the study by Hoque and Adams (2008) also reveals similar pattern. As part of government's efforts to preserve the environment, the new Prime Minister has taken the lead in restructuring the

Ministry of Energy, Water and Communication into Ministry of Energy, Green Technology and Water effective 9 April 2009 (Prime Minister's Office, 2009). With the new name, perhaps there will be more attention and importance given to the natural conservation measures. There is also little recognition of the need for community measures, suggesting that little efforts have been taken to gauge community perceptions relating to leadership, image, customer service and service delivery.

Another social and environment related measure that is worth mentioning is the low attention given to the economic impact measures (mean = 1.55). Being one of the key tenets in the New Economic Policy as well as in the Ninth Malaysia Plan, one would expect quite a number of ministries, departments and agencies would be addressing the eradication of hard core poverty, reducing overall poverty, tackling the socio-economic inequalities and bridging the income gap between rural and urban area as well as among races. These findings are in line with arguments by various literatures that outcomes of the public sector activities have been rarely measured (i.e. Hood et al, 1999; Schick, 1999; Sanderson, 2001).

How is the Performance Measurement Being Implemented and Used?

Several questions relating to performance measurement implementation and use were asked. The following sub-sections discuss the management/employee participation and communication channels involve in performance measurement system implementation as well as recording, updating and analysis of performance data involved. As part of performance measurement implementation and use, questions about the purposes and users of reports generated from the performance measurement system as well as its specific uses were also asked.

Participation and Communication Channels

Table 7 looks into the intricacies of deployment activities of performance management initiative that entails participation of various functional areas during performance measurement development and the communication channels employed. With regard to participation in the implementation process, the senior management team comprising those in the corporate planning, services and operations as well as the policy groups are to a large and very large extent involved in development of performance measurement (mean = 3.59). Overall results indicate that employees from various functional areas do participate in the performance measurement and management initiatives. Results also indicate that 62.7 percent of the respondents have reported use of information sessions (mean, 3.86) and 60.8% have used memo (mean = 3.69) as their major communication channels to a large and very large extent. Even though community and social performance are weakly measured, government agencies seem to have reasonably good communication channels, thus, suggesting that people in the community are quite well-informed about the services, programs and activities undertaken by the government agencies.

Recording, Updating, and Collecting Performance Data

The survey also asked the respondents to indicate the extent of use of methods or system to track, record, and collect data for performance measurement. The results are as shown in Table 8. The results indicate that spreadsheet application is being used to a large and very large extent (47.1 percent; mean, 3.18) as compared to ERP and specialized packaged PMS which are the being used to a little or no extent. The dominant method of data collection is found to be through manual basis where 51.0 percent (mean = 3.33) have used it to a large and very large extent such as via hardcopy or email submission of spreadsheet and words document.

Table 7: Participation and Communication Channels

	Little or no extent	Moderate Extent	Large and Very large extent	Mean	Valid N
Participation in the development	Percentages				
Accounting / Finance	43.1	41.2	15.7	2.67	51
Policy	9.8	37.3	52.9	3.59	51
Human Resources	31.4	47.1	21.6	2.88	51
Corporate Planning	15.7	25.5	58.8	3.59	51
Services / Operations	9.8	31.4	58.8	3.59	51
Information Technology	41.2	43.1	15.7	2.76	51
Communication	Percentages				
Brochures	74.5	9.8	15.7	1.92	51
Newsletter	35.3	31.4	33.3	2.92	51
Memo	11.8	27.5	60.8	3.69	51
Information sessions	5.9	31.4	62.7	3.86	51
Organisation unit's website	64.7	25.5	9.8	2.02	51

Table 8: Recording, Updating, and Collecting Data

Recording, updating and collecting data	Little or no extent	Moderate Extent	Large and Very large extent	Mean	Valid N
Method / system	Percentages				
Spreadsheet applications	33.3	19.6	47.1	3.18	51
Enterprise Resource Planning (ERP) system	72.5	19.6	7.8	1.73	51
Specialised packaged performance measurement system	49	35.3	15.7	2.33	51
Custom-built applications environmental issues	39.2	45.1	15.7	2.51	51
Data collection method	Percentages				
Manual	23.5	25.5	51	3.33	51
Batch interface	45.1	41.2	13.7	2.57	51
Online	64.7	27.5	7.8	1.98	51

The highly use of spreadsheet applications and manual data collection indicates that the level of use of IT and information system sophistication (ISS) is still low among many Malaysian public agencies. Classe (1999), for example, noted that simple spreadsheet tools might

be sufficient at the initial stage of implementing PMS, but to make the method an integral part of the strategic performance measurement and management, automation will usually be necessary. Bernard Marr (2005) reports in his study that even though 45 percent of respondents use spreadsheet applications, such as Microsoft Excel, as the prime tool for the business performance measurement and management (BPM) activities, the users are not satisfied with their spreadsheet applications as 18 percent felt that they worked poorly as tools to measure and manage performance.

The lack of suitable IT platform could be due to the cost of acquiring ERP that might run into millions of ringgit as according to Spathis and Constantinides (2003), the cost is not correlated to the sum of benefits of its implementation. This finding aggravates the concern stated earlier about the issue of changing or rotating the staff assigned to collecting, analysing and reporting performance measurement. Without a standard process supported by an established IT platform and dedicated staff, there could be a further challenge in monitoring and evaluating governance that could go undetected and might jeopardize the whole integrity and sustainability of the PMS initiative.

To make matters worse, online collection method for performance measurement data is still not prevalent among public sector as 64.7 percent (mean, 1.98) say that they use to a little or no extent of such method. Shaman and Kavan (1999) observe that paper-based measurement systems are too slow, cumbersome, labour intensive and unreliable. This might just compound the issue of governance as stated above.

Analysis Methods

The questions attempt to find out the extent of analysis done on the performance result. The analysis activity is very crucial if the results are going to be used regularly by the executive leadership as well as to help staff monitor progress toward intended program or service results. The findings are presented in Table 9. Results show that majority (58.8%, mean = 3.55) of respondents use qualitative analysis to validate their data through interviews and personal observations. Knowing that there is a lack of technology enabler that is supporting the data collection and recording as found earlier, thus validation tool using interviews and observation is justifiable.

With regard to the role of performance data in benchmarking activities, the results reveal that performance data are often being benchmarked with the established targets (68.6 percent, mean = 4.06), the national standards or guidelines from federal agencies and/or professional groups (62.7 percent; mean, 3.60), prior periods (41.2 percent; mean, 3.26) and with established thresholds (41.2 percent; mean, 3.18). The overall mean for Analysis is 2.97 which imply that the performance measurement result analysis has only been done in a little extent. These findings are almost similar to Hoque and Adams' (2008) survey that the Australian government uses prior periods (75.0 percent; mean, 3.77) and established targets (60.0 percent; mean, 2.62) as their main benchmarks.

The qualitative analysis may not be suitable in most situations as empirical data need to be collected from district, state and departmental levels for purpose of analysis. This finding would reflect that many government agencies do not actually have a robust qualitative analytical tool, well-defined methodologies and IT platform to facilitate them in project measurement/ evaluation especially those with multi-billion worth of projects.

The following sub-sections also discuss about the implementation and use of performance

measurement system with respect to the users/recipients of the performance measurement reports, the reporting purpose and the specific uses of performance measurement system in the Malaysian public sector.

Table 9: Analysis

Analysis	Little or no extent	Moderate Extent	Large and Very large extent	Mean	Valid N
Validation tool	Percentages				
Statistical analysis (e.g. regression, correlation)	66.7	23.5	9.8	2.16	51
Qualitative analysis (e.g. interviews, personal observations)	11.8	29.4	58.8	3.55	51
Validation of relationships between measures are done	39.2	27.5	33.3	2.98	51
Benchmarking data	Percentages				
With prior periods	23.5	35.3	41.2	3.26	51
With established targets	5.9	25.5	68.6	4.06	51
With established thresholds	27.5	31.4	41.2	3.18	51
With national standards or guidelines from Federal agencies, and/or professional groups	15.7	21.6	62.7	3.60	51
With other programs/agencies of other governments	51	25.5	23.5	2.46	51
With other programs/agencies within your governments	60.8	19.6	19.6	2.42	51
With private sector organisations	60.8	23.5	15.7	2.10	51

Users

From Table 10, majority of the respondents reveals that from large to the very large extent, the recipients of the performance measurement reports have been the Implementation Coordination Unit (ICU) (52.9 percent, mean = 3.43) and followed by Economic Planning Unit (EPU) (49.0 percent, mean = 3.43). Other users are the operating managers (39.2 percent, mean = 3.10) and elected officials (37.3 percent, mean = 2.84). This result is understandable because ICU and EPU are two of the four central agencies under the Prime Minister's Office who are involved in planning the country's and policy direction as well as monitoring the physical development throughout the country. Hence, as a large percentage of measurements consist of input, activity/process and outputs, the results would have been useful for EPU and ICU.

Surprisingly, Ministry of Finance has had little to no extent of use of the performance report. This might be due to the availability of an automated finance systems like the Electronic Budget Planning and Control System (e-SPKB) and the Standard Accounting System for Government Agencies (SAGA) that link finance divisions of each ministry and agency to the Ministry of Finance and Auditor General's Office, hence reducing the need for additional finance related measures.

Table 10: Users

User	Percentages			Mean	Valid N
	Little or no extent	Moderate Extent	Large and Very large extent		
Finance Ministry	49	27.5	23.5	2.71	51
Public service department	13.7	56.9	29.4	3.16	51
Economic Planning Unit	23.5	27.5	49	3.27	51
Implementation & Coordination Unit	15.7	31.4	52.9	3.43	51
Parliament	31.4	49	19.6	2.84	51
Program managers	7.8	52.9	39.2	3.33	51
Elected officials	31.4	31.4	37.3	2.84	51
Operating managers	21.6	39.2	39.2	3.10	51
Financial managers	17.6	56.9	25.5	3.12	51
Budget analysts	37.3	39.2	23.5	2.71	51
Citizens	58.8	19.6	21.6	2.47	51
Media	51.0	29.4	19.6	2.57	51
Human resource managers	45.1	41.2	13.7	2.65	51
Sustainability, environmental or social responsibility managers	60.8	27.5	11.8	2.02	51

There were 58.8 percent and 51 percent of the respondents respectively declare that the citizen and media have little use of the performance report. These results however are somewhat different from Hoque and Adam's findings on the Australian government whose 60 percent of respondents replied that the reporting outputs are for the citizens and media. Does this show that the Australian government practices a more open and transparent administration than the Malaysian government? Or does it mean that our citizens are less concern about our right? This study does not have the answer for either question but based on the results, the Malaysian public sector could have been more transparent in its performance reporting especially on issues related to environmental sustainability and social responsibility in order to prevent any environmental mishaps like landslides or cracked highways from happening. In a study conducted by Pollitt (2005) on the European governments, the respondents cited that the only regularly active external scrutiny seemed to occur when state agencies are engaged in commercial activities with private sector. Although transparency is claimed to be drivers for public trust and confidence (Hood, 2006, O'Neill, 2002), little evidence is available in terms of public's utilization of governments' disclosure (Abu Hasan, 2009). The general public

somehow does not seem to have much interest in performance measures published (Abu Hasan, 2009). Public's demand to transparency always differs, which explain why sometimes disclosure was unable to gain interest (Piotrowski et al, 2007).

Reporting purpose

As shown in Table 11, the results indicate that the main purposes of reporting have been to a large and very large extent for internal managerial control (68.6 percent, mean = 3.92) and followed by budget execution (45.1 percent, mean = 3.37). This result substantiates the remark by Pollit (2005) that performance measurement and management system is carried out by and for managers. Interestingly, the results reveal that performance measures are not supposed to be reported for external financial reporting, indicating that external reporting of performance measures in Malaysian public sectors is not mandatory. This could be the reason why community, social and environmental related measures are not used extensively. This outcome is expected as external reporting of performance measures has not received widespread attention even among the developed countries like US, UK and Australia, although it is considered critical for external program accountability purposes (e. g. Pollanen, 2005; Smith, 1993; Kloot, 1999). For example, a study conducted by GASB and national Academy of Public Administration (1997) shows that only three percent of municipal respondents in the US stated that performance measures are required by law or ordinance. In Canada, mandatory reporting requirements do not exist in other provinces except for the Province of Ontario (Pollanen, 2005).

Table 11: Reporting Purpose

Reporting purpose	Percentages			Mean	Valid N
	Little or no extent	Moderate Extent	Large and Very large extent		
External financial reporting	51	25.5	23.5	2.71	51
Internal managerial control	5.9	25.5	68.6	3.92	51
Budget preparation	19.6	52.9	27.5	3.10	51
Budget execution	13.7	41.2	45.1	3.37	51
Legal requirements	68.6	19.6	11.8	1.94	51

Uses

On the question relating the uses of performance measurement system, 60.8 percent of respondents use from large to a very large extent the results of performance measures as a basis for taking actions (mean = 3.76), to manage activity or program (mean = 3.59) and for strategic planning (mean = 3.47), while 45.1 percent are using it to a large and very large extent for measuring program and project performance (mean = 3.10). The results also indicate that performance measures are used at a little or no extent to satisfy professional associations (64.7 percent, mean = 1.98), to follow others (62.7 percent, mean = 2.08), to measure goals in relation to community impacts (62.7 percent, mean = 2.33) and to measure environmental goals (60.8 percent, mean = 2.27). A little or no extent of use of performance measurement system for social responsibility and environmental goals is expected as it was found earlier that the socially and environmentally related measures are used least by the organizations. The results also indicate that performance measurement system is used at a

moderate extent for punish or reward staff. This shows that there is some awareness among the Malaysian public sectors about rewarding the staff on the basis of performance measures. Albeit not extensively, it does indicate some attempts to steer the organizations according to the strategy as the findings earlier show that the performance measurement of Malaysian public sectors is to a moderate extent being developed based on organizational strategy.

Table 12: Uses

Uses	Percentages			Mean	Valid N
	Little or no extent	Moderate Extent	Large and Very large extent		
Measure program and project performance	35.3	19.6	45.1	3.10	51
Satisfy legislative requirement(law, ordinance, policy)	47.1	25.5	27.5	2.59	51
Manage an activity or program	7.8	31.4	60.8	3.59	51
Budget formulation	27.5	49.0	23.5	2.98	51
Taking actions based on the results	9.8	29.4	60.8	3.76	51
Budget execution	13.7	47.1	39.2	3,31	51
Strategic planning	17.6	21.6	60.8	3.47	51
Satisfy community expectations	47.1	23.5	29.4	2.76	51
Social responsibility goals	47.1	25.5	27.5	2.67	51
Goals in relation to local community impacts	62.7	23.5	13.7	2.33	51
Environmental goals	60.8	25.5	13.7	2.27	51
Satisfy professional associations	64.7	23.5	11.8	1.98	51
Punish or reward staff	35.3	43.1	21.6	2.94	51
Follow others	62.7	21.6	15.7	2.08	51

What are the benefits and important aspects of successful implementation of performance measurement system?

Benefits

Performance measurement has promised many benefits since Argyris (1977) claims that performance measurement should contribute to a better understanding of how business works. In this survey, we attempt to identify the extent of benefit of the performance measures that are being used in various managerial activities. Performance measurement system seems to provide benefit largely in improving programmes/service quality (56.9 percent; mean, 3.51), cross agency cooperation /coordination (56.9 percent; mean 3.41), increasing awareness of factors that affect performance results (54.9 percent; mean 3.71), increasing awareness of and focus on result (54.8 percent; mean 3.24) and improving effectiveness of agency programmes (52.9 percent; mean 3.41). The least benefits expected from the performance measurements are to reduce environmental effect (58.8 percent; mean 2.39), changing appropriation level (56.9 percent; mean 2,27), changing the questions the legislators ask government managers or executives (54.9 percent; mean 2.49) and communicating with the public about performance (52.9 percent; mean 2.57).

Table 13: Benefits

Benefits	Percentages			Mean	Valid N
	Little or no extent	Moderate Extent	Large & Very large extent		
Increasing awareness of and focus on results	31.4	13.7	54.9	3.24	51
Increasing awareness of factors that affect performance results	13.7	31.4	54.9	3.71	51
Improving responsiveness to customers	13.7	39.2	47.1	3.41	51
Improving programs/service quality	15.7	27.5	56.9	3.51	51
Communicating with the public about performance	52.9	27.5	19.6	2.57	51
Improving effectiveness of agency programs	17.6	29.4	52.9	3.41	51
Changing strategies to achieve desired results	11.8	45.1	43.1	3.37	51
Changing the substance or tone of discussion among legislators about agency budgets	17.6	41.2	41.2	3.20	51
Improving communication with the legislature and legislative staff	49.0	25.5	25.5	2.53	51

Changing the questions legislators or their staff ask government managers/ executives	54.9	19.6	25.5	2.49	51
Reducing duplicating services	19.6	37.3	43.1	3.16	51
Changing the substance or tone of discussion among legislators about oversight of agency	43.1	25.5	31.4	2.65	51
Improving external government cooperation / coordination	21.6	45.1	33.3	3.12	51
Cost savings	15.7	51.0	33.3	3.16	51
Improving cross-agency cooperation /coordination	15.7	27.5	56.9	3.41	51
Changing appropriation levels	56.9	23.5	19.6	2.27	51
Reducing environmental impacts	58.8	9.8	31.4	2.39	51

On the question about the important aspects of successful implementation of performance measurement system, results shown in Table 14 indicate that respondents perceived that performance measures that help staff monitor progress toward intended program/ service results (mean=3.72), training for management and staff about performance measurement development and selection (mean=3.54) and communication of purpose (mean=3.52) are most important (see Table 7). They also consider that staff participation (mean=3.44), regular use by executive leadership (mean=3.40) and the adequacy of technology for collecting, analyzing and reporting performance measures (mean = 3.28) as critical to ensure successful implementation of PMS initiative. These results are quite comparable to those of Hoque and Adam's (2008) study that reveals regular use of performance measures by executive leaderships is the most important, followed by performance measures that help staff monitor progress towards intended program/service results and the adequacy of technology. Consistent with Hoque and Adam's study, results also reveal that additional or changed staffing for collecting, analysing and reporting performance measures is the least important aspect of successful implementation of performance measurement system (mean= 2.42).

Table 14: Important aspects of successful implementation

Important aspect of successful implementation	Percentages			Mean
	Little or no extent	Moderate Extent	Large & Very large extent	
Regular use of performance measures by executive leadership	31.4	15.7	52.9	3.40
Performance measures that help staff monitor progress toward intended program/ service results	7.8	39.2	52.9	3.72
Adequacy of technology for collecting, analyzing and reporting performance measures	25.5	25.5	49.0	3.28
Communication of the purpose for using performance measurement to employees	11.8	33.3	54.9	3.52
Staff participation in the process of developing performance measures	13.7	33.3	52.9	3.44
Training for management and staff about performance measurement development and selection	7.8	37.3	54.9	3.54
A link of performance measures to budget decisions	21.6	41.2	37.3	3.22
Citizen, client/customer or stakeholder interest in government program performance	19.6	43.1	37.3	3.22
Additional or changed staffing for collecting, analysing and reporting the performance measures	56.9	31.4	11.8	2.42
Regular use of performance measures by elected officials	11.8	49.0	39.2	3.28

Shortcomings

The respondents were also asked to state their opinion on whether their current performance measurement system experiences any shortcomings or weaknesses. These shortcomings are expected to hinder the successful implementation of performance measurement system. Table 15 shows the results of shortcomings of performance measurement system as perceived by the respondents.

The most obvious shortcomings of the performance measurement are that the information is to a large and very large extent, not available on time (70.6 percent; mean, 3, 84) and imprecise (68.5 percent; mean, 3.76). These results seem consistent with those found in Table regarding the data recording, updating, and collection methods. The overly use of spreadsheet applications and manual data collection indicates that the level of use of IT and information system sophistication (ISS) is still low, hence results in data being not available on

time and imprecise. There are 37.3 percent of respondents who say that they have to a large and very large extent too much information and that the information is easy to manipulate.

Table 15: Shortcomings

Shortcomings	Percentages			Mean	Valid N
	Little or no extent	Moderate Extent	Large and Very large extent		
Overly focused on the past	70.6	11.8	17.6	2.31	51
Overly focused on the short run	21.6	49.0	29.4	3.06	51
Overly focused on financial performance	37.3	33.3	29.4	2.84	51
Overflow of information	35.3	27.5	37.3	2.86	51
Information not available in time	11.8	17.6	70.6	3.84	51
Easy to manipulate	35.3	27.5	37.3	3.10	51
Too aggregated	35.3	35.3	29.4	3.00	51
Imprecise, often provides erroneous information	5.9	25.5	68.5	3.76	51

The KPI results information are very crucial for the analysis activities, hence their absence and possible erroneous facts may impede or taint some critical decisions. Marr (2005) observes that even though excel has been primarily used as data collection and analysis tool, most organizations are not happy with the system. PAIB (2008) also concludes that respondents of their survey are much more satisfied with their performance measurement system if it has the capability for capturing, processing and reporting useful information on both financial and non-financial developments. Therefore, it can be concluded that the use of excel and manual data collection would result in major shortcomings as reported above.

Discussion and Conclusion

Assumption that performance measurement will bring real and tangible benefits to organizations has made almost every organization occupied with measuring performance. Meyer (1994) suggested that performance measurement has been useful in clarifying where the organization is at achieving its objective but not explaining what to do differently. Findings from this study provide insights into the design of performance measurement system and would have drawn attention to its implementation and usage in the public sector. This study attempts to provide exploratory empirical evidence on how the Malaysian public sectors design their performance measurement system by specifically looking into two aspects: strategic alignment and balanced characteristics. This study found that the public sectors in Malaysia have been to a moderate extent designing their performance measurement system to align to the organizational strategy. However, the KPIs are found to be less dynamic to reflect the changes in strategy. In examining the balanced nature of performance measurement, this study reveals that there is an overall lack of balanced indicators except for indicators on financial and non-financial such as input, activity and output indicators. Other indicators are

not extensively being used such as outcomes, sustainability, innovation, environmental and social responsibility indicators. Hence, the findings suggest that Malaysian public sector need to measure and manage how the general community and customers views their performance. Mandatory external reporting requirements would force the public sector to enhance their efficiency, effectiveness, and managerial accountability. As the top echelons of the civil servants are calling attention to outcomes-based evaluation of performance, this survey has established to some extent that they might not be quite ready for the push just yet. Direct adoption from private sector practices is not possible as the public sector objectives differ from the private sector. Ferlie and Steane's (2002) study reports that adoption of private sector practices has created ambiguity between public and private sectors where the role of government has become much more of a facilitator of services compared to the the frontline provider. Although outcomes has been recognized as important measures for performance but arguments in terms of how to measure outcome are also intense (e. g. Hood, 1991; Meyer, C; 1994)

A successful adoption of performance measurement system is not just about giving the right training nor having the technology to support it; it is about holistic change which involves the people's readiness and their willingness to embrace and institutionalise a transparent and outcome oriented measurement goals and is accountable to it. Without doubt performance and its measurement should be driven from the top management level (Fitsgerald and Moon, 1996). Leaders who understand subordinates' emotions appear to motivate them more effectively and efficiently (Grossman, 2000).

The overall findings are nevertheless, subject to several limitations. As the questionnaire demands responses from senior executives in order to elicit the prevailing practice of performance measurement in public sector, this study is not able to claim with full certainty that the responses have been made by the senior executives per se. Perhaps due to higher and more critical work obligation, the task might have been delegated to a more junior officer. Other limitation includes the use of survey to capture perceived subjectivity of an issue. Use of survey will not likely be able to dig deeper into a subject matter and solicit better insights from the respondents. Perhaps, a case-study with face-to-face interviews with a number of senior civil servants at various central, federal and state level agencies coupled with a time-series performance data rather than a snapshot of evidence at one time would reveal a much more color to the study. Another limitation is the relatively small sample size which might provide a potential source of bias to generalizability. Furthermore, the evidence from this study is descriptive, thus it ignores other issues that can be associated with the performance measurement in use.

Given the possible impact of the performance measurement results on the management and individual's reputation, it may also be deemed as sensitive to question the strategy. It may even be construed as questioning the management's capability because the senior management has been actively involved in determining the strategy and KPIs. In addition, since the cultural dimension of management style within the Malaysian Public Sector who are coincidently, predominantly Malay, who according to Asma Abdullah (1996) have the main work values of "preserving face", hence, it is possible that the act of questioning other people's performance would have been deemed as obtrusive which would have been avoided at all cost and blame the data integrity for the poor performance.

The lack of questioning and analysis may be due to the inside-out practice of choosing performance measurement. This could potentially be detrimental to the implementation initiative as the integrity of the whole system may be questionable. As a result, everyone

would be starting to lose faith and interest in the PMS and may decide to abandon the whole initiative, which in the end, would put the whole government machinery at risk.

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