Performance measurement: roles and challenges

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Abstract

Purpose – The purpose of this paper is to identify the past and present practices, and the future roles of performance measurement in the Thai public sector. It is part of a transformation effort initiated by the Office of the Public Sector Development Commission (OPDC) on m-government – more mobile, responsive, and flexible government. The paper also aims to identify possible roadblocks from successfully integrating performance measurement into a management process.

Design/methodology/approach – In-depth interviews with 12 executives and top administrators from private firms and public agencies, and document reviews are performed. The analysis on the participants’ opinions is based on the applications of the grounded theory. The interview’s findings are verified with document reviews. The roadblocks are identified and substantiated by two experts.

Findings – For past and present practices, performance measurement is part of management tool and responsibility, a quality management system, and a learning organization. Its future viewpoints include a driver towards good governance, transparency, and accountability, and a success factor of performance audit and organizational competency/capability. Four important roadblocks in implementing performance measurement in an organization relate to staff empowerment, budgeting, external knowledge, and linkage with software usages.

Practical implications – The findings provide important information into the OPDC’s planning process on its m-government transformation initiative.

Originality/value – The paper attempts to blend knowledge on performance measurement from both the private and public sectors. It highlights the greater roles and expectations on performance measurement in an organization.

Keywords Performance measures, Learning, Thailand, Public sector organizations, Private sector organizations

Paper type Research paper

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1. Introduction

Performance measurement has gained more recognition from researchers and higher acceptance from practitioners over the last two decades (Neely, 1998; Try and Radnor, 2007; Hoque, 2008). It has evolved from merely producing accounting-related to more comprehensive information that contains both financial and non-financial information (Wilson et al., 2003). In addition, performance measurement is perceived to be a critical management tool that can help determine a success or a failure in both organizational and functional performance (Sink, 1985; Neely, 1998; Putu et al., 2007). The report[1] published by Office of Small and Medium Enterprises Promotion under Ministry of Industry in Thailand openly suggested a need to have better understanding on the potential benefits of and the impacts from performance measurement. This call is strongly supported by the Master Plan for Thai Automotive Industry for 2006-2010 by Thailand Automotive Institute in cooperation with the Federation of Thai Industries (FTI) (published on February 28, 2006). On the other hand, the speech given to participants by the Secretary General of the Office of the Public Sector Development Commission (OPDC) at the International Conference on Enhancing Citizen Participation in Public Governance stressed the importance of performance measurement. The conference is jointly hosted by the OPDC and the Organization of Economic Co-operation and Development during May 28-29, 2008.

Performance measurement typically provides feedback to the following three questions (Kurstedt, 1992; Neely, 1998; Liebowitz et al., 2007). How well an organization is performing? Is the organization achieving its objectives? How much has the organization improved from a last period? In addition, performance measurement helps create feedback to managers on the effectiveness of improvement interventions as part of learning and development (Cohen and Levinthal, 1990; Liebowitz, 2004). In general, performance measurement represents a system that consists of mechanisms, processes, and criteria or areas of performance (Sink and Tuttle, 1989; Dixon et al., 1990; Kaplan and Norton, 1996; Neely, 2002). It needs to be aligned with organizational missions, policies, and objectives (Kaplan and Norton, 2004; Pongatichat and Johnston, 2008). Attributes that constitute performance areas such as quality and productivity have to be identified. For examples, the maintenance function impacts production disruption, equipment useful lives, and cost, etc. These represent the attributes for measuring the quality performance. It is also important to note that the standards or the benchmarks are typically set through performance measurement (Talluri and Sarkis, 2002). Finally, information visibility and persistent communication throughout an organization helps allow management to contribute where appropriate (Vokurka, 2004).

Despite the strong recognition of its impacts on a management process, performance measurement, especially at the organizational and functional levels, sometimes have no received proper attention from top management. This lack of attention may stem from the premise suggested by Kurstedt (1992) that a manager had typically relied on information and experiences when making decisions (Figure 1). As a result, experiences may overshadow the importance of performance information. In addition, most managers have traditionally paid a lot of attention to financial information (Sumanth, 1998). The reason is that they have to be accountable to shareholders who are mainly interested in financial performance and returns of a firm. Nevertheless, performance measurement has begun to play more influential roles in process management within a company as the database...
becomes more flexible and robust (Kouzmin et al., 1999; Rich, 2007). This is due to the advancement in information and communication technology.

Specifically, for the performance-criteria component, a ratio format is preferred for key performance indicators in order to normalize information (Sink and Tuttle, 1989). The ratio format has been proven to be helpful for external comparisons such as comparison with industrial averages and benchmarking (Kouzmin et al., 1999). In cases of the changes in operations such as acquisition of new plants or expansion of production lines, the quality of information for performance analysis is not compromised. For examples, with a new plant acquisition, the use of revenue alone may not be appropriate since the increase is likely due to this takeover (instead of operational improvement). Finally, it should be noted that the portrayal of information could be in either the tabular or the graphical formats.

To better utilize performance information, Sink and Tuttle (1989) advocated the extensive use of both quantitative and qualitative data with clear definitions and specific frequency for reviews. This is quite helpful for data collection and reporting efforts. For examples, different managers may interpret the term revenue differently. For some, revenue implies cash plus account receivables. For others, revenue indicates cash and future receivable amounts subtracted returns. In addition, the dimensional units must also be stated. The term labor has at least three dimensions, i.e. time (hours), headcounts (persons), and financial value (dollars). The term maintenance may be collected in various dimensional units such as frequency (times), cost (dollars), and headcounts (persons), and time (hours). The specific frequency of review (daily, weekly, monthly, quarterly, and so on) is helpful for reporting. Finally, Hoehn (2003) pointed out the need to recognize different weights when measuring performance. This can be attributed to, for example, the selling price.

Gradually, performance measurement has been recognized for its unique applications when dealing with different objects or domains. For examples, a method used for measuring blue-collar performance (e.g. standard time from motion study) cannot be applied at the functional level or for white-collar workforce (Barnes, 1980). On the other hand, the technique for measuring white-collar workforce's performance, introduced by Zigon (1998) with the integration of a customer diagram, cannot be utilized for evaluating production-line workers' performance. In addition, a method for measuring equipment’s performance (e.g. utilization and effectiveness) cannot be directly adapted for the organizational level (Sink, 1985). The method for measuring financial performance (e.g. return on assets, profit margin, earning per share) cannot be entirely utilized at the plant level which focuses primarily on yield, equipment downtime, work stoppages, and inventory turnover (Harper, 1984).

To highlight unique application of performance measurement, the productivity perspective is used for this demonstration. Specifically, when focusing on the industrial, national, and international levels, many approaches have been designed by

![Performance measurement and the roles of a manager](image)

**Figure 1.** Performance measurement and the roles of a manager
economists such as the total factor productivity (TFP), or Bureau of Labor Statistics multifactor productivity techniques (Duke and Torres, 2005; Meyer and Harper, 2005). At the organizational, functional, program, and project levels, there have been several concepts and ideas involving in the measurement/assessment work. Harper (1984) also developed a performance measurement framework at the organizational/functional levels. Other frameworks and methods at the organizational/functional level include multi-factor productivity measurement model and value-added productivity (Sink, 1985). At the group and individual levels, there were many concepts such as motivational methods based on industrial psychologists and performance appraisals for salary structure/workload analysis extended by human resource specialists, and piece-rate/standard times determined by industrial engineers (Sumanth, 1998).

Interestingly, the term performance has included many conceptual frameworks. For examples, Sink and Tuttle (1989) argued that the term performance consisted of profitability, productivity, quality of work life, innovation, effectiveness, efficiency, and quality. On the other hand, Harper (1984), suggested that there are seven areas when measuring performance. Included are:

1. productivity;
2. unit cost;
3. price;
4. factor proportion;
5. cost proportion;
6. product mix; and
7. input allocation.

There are also other concepts that are more practical such as the balanced scorecard where performance needs to have information from financial, customer, internal business processes, and innovation and learning areas (Kaplan and Norton, 1996). Neely (2002) also suggested that the concept of performance prism with different facets for required information.

Performance measurement’s impacts on the effectiveness of management and the sustainability on continuous improvement can be highlighted by Deming (1986). He summarized that it would difficult to manage without performance measurement. In addition, some of the most recognized early year research outputs from the American Productivity and Quality Center (formally known as American Productivity Center) include measurement-related frameworks such as multi-factor productivity measurement model (Sink and Tuttle, 1989). To signify its important status in a management process, the term performance measurement is explicitly recognized in the Malcolm Baldrige award – performance measurement, analysis, and knowledge management (Vokurka, 2004; Edvardsson and Enguist, 2006). Furthermore, ISO 9001: 2008 clearly specifies performance measurement as part of its requirement no. 8 – performance measurement, analysis, and improvement. Even the European Foundation for Quality Management Excellence Model contains the critical component, so-called the key performance results, including business, people, customer, and society areas.

Gradually, instead of focusing primarily on shareholders, the term stakeholders become more imminent (Goldsmith and Eggers, 2004; Mettanen, 2005; Steiner, 2008). Other corresponding trends relating to the increasing importance of stakeholders have
included corporate citizenship and governance (Eggers, 2005 and see Table I for an overview of performance measurement).

2. Problem background
The OPDC, as a research unit for the Royal Thai Government, aims to transform a bureaucratic into a more mobile and robust structure, known as the m-government initiative – flexible, high performance, and responsive government. In the past, the

<table>
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<th>Subjects</th>
<th>Description</th>
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<tr>
<td>Application levels</td>
<td>Various levels:</td>
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<td></td>
<td>(1) international/national/industrial</td>
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<td></td>
<td>(2) organizational/functional, and</td>
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<td></td>
<td>(3) group/individual</td>
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<tr>
<td>Framework</td>
<td>Uniqueness in accordance with the level of applications</td>
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<td></td>
<td>(1) International/national/industrial levels: TFP, etc.</td>
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<td></td>
<td>(2) Organizational/functional levels: multi-factor productivity measurement model and value-added productivity, data envelop analysis (for efficiency measurement), program evaluation review technique, etc.</td>
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<td></td>
<td>(3) Group/individual levels: motion and time study (for blue-collar workforce), Zigon’s (for white-collar workforce), etc.</td>
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<tr>
<td>Components</td>
<td>Many concepts and frameworks</td>
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<td></td>
<td>(1) Harper (1984): (i) productivity, (ii) unit cost, (iii) price, (iv) factor proportion, (v) cost proportion, (vi) product mix, and (vii) input allocation</td>
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<td></td>
<td>(2) Sink and Tuttle (1989): (i) profitability, (ii) productivity, (iii) innovation, (iv) quality of work life, (v) quality, (vi) effectiveness, and (vii) efficiency</td>
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<td></td>
<td>(3) Kaplan and Norton (1990): (i) finance, (ii) customer, (iii) internal business process, and (vi) innovation and learning</td>
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<td></td>
<td>(4) Neely (2002): (i) customers, (ii) employees, (iii) suppliers, (iv) regulators and communities, and (v) investors</td>
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<tr>
<td>Examples of commonly used indicators</td>
<td>(1) International/national/industrial levels: gross national product, inflation, productivity growth, etc.</td>
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<td></td>
<td>(2) Organizational/functional levels: earning per share, dividends per share, return on investment, return on assets, market share, profit margin, yield, inventory turnover, equipment downtime, unplanned work stoppages, job turnover, rework, etc.</td>
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<td></td>
<td>(3) Group/individual levels: standard time, etc.</td>
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<tr>
<td>Impacted areas</td>
<td>Strengthening a management process and subsequently a management system</td>
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<td></td>
<td>(1) ISO 9001: 2000 and 2008</td>
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<td></td>
<td>(2) Malcolm Baldrige National Quality Award (a key Baldrige criterion for performance excellence framework)</td>
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<td></td>
<td>(3) European foundation for quality management excellence model</td>
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<tr>
<td>Research disciplines</td>
<td>(1) International/national/industrial levels: economics</td>
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<td></td>
<td>(2) Organizational/functional levels: business administration (especially accounting), engineering (especially industrial engineering), social science (especially industrial psychology)</td>
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<tr>
<td></td>
<td>(3) Group/individual levels: business administration (especially human resources management), engineering (especially industrial engineering), social science (especially industrial psychology)</td>
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Table I. Performance measurement overview
OPDC has sponsored various initiatives to support the public sector reforms such as strategic and performance-based management, e-learning, public-private partnership, process improvement, decentralization, knowledge management, governing by networks, etc. These initiatives have been known globally (Wilson et al., 2003; Goldsmith and Eggers, 2004; Roy, 2006; Nisar, 2007; Try and Radnor, 2007).

The term m-government implies an integration of information and communication technology, robust decision-making processes, accurate database, flexibility, and responsiveness to address citizens’ needs (Sheng and Trimi, 2008). From the OPDC’s perspective, becoming m-government requires a comprehensive research on both technical and non-technical aspects. For the technical aspects, there are two important components under current consideration:

1. performance measurement; and
2. database.

On other hand, for the non-technical aspects, the key components are:

- organizational structure; and
- leadership and management styles.

It should be noted that the OPDC was earlier established in early 2000s as an agency that would focus on initiating and driving key reform initiatives in order to help public agencies more achieve higher performance.

In this study, the focus is on the past and present, and future roles of performance measurement. In addition, the future challenges relating to the deployment performance measurement are to be examined. It is decided that the study should include both public and private sectors. This is essential as the expectation on public agencies is similar to that of private firms – cost, delivery, quality, etc. Gaining better insights and knowledge on performance measurement is expected to help prepare the OPDC in developing a plan to gradually transform all public agencies into m-government (see Figure 2 for the scope of this study).

### 3. Objectives

The paper aims to summarize past and current practices in performance measurement, and to identify its future roles and the challenges for integrating into an organization’s management process. As performance measurement have grown in its importance continuous improvement, it is crucial to underline how managers can use performance information for managing their operations and for fulfilling the expectation of

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Figure 2.

Scope of the study
their stakeholders. The expected benefit for this research is to preliminarily provide critical inputs for the OPDC’s plan to better utilize performance measurement as part of its m-government goal.

4. Methodology
This study adapts the grounded theory as the crucial component of its research methodology (Strauss, 1987). The data collection is based on document reviews and interviews. The key points from these reviews and interviews are to be analyzed by developing and assigning the key terms or codes (Strauss, 1987; Goulding, 2002). These codes are determined by the frequency brought up during the interviews. Afterwards, the general ideas that are based on these codes are established as a basis for understanding the trends of performance measurement. To ensure that the identified trends are acceptable, further international comparisons (based on document reviews) with specific cases and initiatives in the USA and Europe are conducted. Finally, the discussion with the experts in the areas of performance measurement helps identify the future challenges for performance measurement (Figure 3).

5. Results
The literatures relating the applications and integrations of performance measurement into an organization are initially reviewed. The policy statements and official documents from as well as new initiatives by key private associations (e.g., Federation of Thai Industries) and agencies in charge of public sector reforms (e.g., the OPDC, the Budget Bureau, and Ministry of Finance) are carefully examined. Information background and the rational relating to performance-measurement initiatives are cautiously studied.

The interviews are conducted with top executives and administrators from the total of 12 organizations (Appendix 1). Six leading private firms and six well-recognized public agencies have participated in this study. The discussions primarily focus on their viewpoints, and past and current policies, objectives, initiatives, and activities relating to performance measurement. Their comments are recorded and later
categorized into key groups or codes. Based on their responses, the following terms represent the descriptions of performance measurement:

- management responsibility;
- management tool;
- a component for a quality management system; and
- a foundation for a knowledge-based organization.

This task adapts the concept from the grounded theory on attempting to group various and diverse data into a common code (Strauss, 1987; Goulding, 2002). This code represents repeated assertions during the interviews in the consensus manner. It is important to point out that there are other descriptions relating to performance measurement. It was deemed to be a tool to help determine reward and recognition. It was earlier perceived to be a tool to identify potential operational areas to be contracted out. However, it was eventually viewed that the roles of performance measurement in the above two manners was not entirely appropriate. Appraisal and outsourcing were too complex and political. Some of the details can be described as follows.

For the opinions expressed by participants from the private sector, they have addressed performance measurement as a necessary tool for successful management. They perceived this term as a representation of a new managerial style in the workplace. From their viewpoint, performance measurement is an important part of ISO 9001: 2008. Performance measurement helps bring more scientific analysis into a decision-making process. Other significant comments can be summarized as follows. Performance measurement underlines the change towards management by information and knowledge instead of primarily relying on experiences and judgment. It signifies one of the desirable outcomes from recent investment in information and communication technology. It should be worked and utilized together with a current accounting system. In addition, due to the recent promotion of Thailand Quality Award (similar to the US Malcolm Baldrige National Quality Award), more attention has been paid to the development and deployment of performance measurement. It is strongly related to knowledge management as information from performance measurement should be shared and communicated throughout an organization. Learning from past mistakes is made possible with performance measurement.

For the public sector, performance measurement is mandated as part of a performance agreement between an agency’s head and his/her superior. This requirement is part of an effort to integrate a four-year strategic plan with annual performance goals and targets into a management process within individual agencies. Performance measurement helps bring new terms and concepts such as efficiency, productivity, and quality into day-to-day operations. Furthermore, it is important to recognize that, for the public sector, the OPDC in cooperation with Thailand Productivity Center have promoted the Public Sector Quality Management Award to improve the quality of services delivered by public agencies in Thailand. In addition, both the Budget Bureau and Ministry of Finance have encouraged public agencies to develop performance measurement that is unique in order to monitor and evaluate the progress of an organization. The summary of the viewpoints on past and present descriptions in regard to performance measurement is as follows (Table II).
It should be noted that, based on the first part of the interviews, the level of complexity on the roles of performance measurement from the past to the present appear to increase gradually. Performance measurement-related tasks such as identifying an appropriate set of key performance indicators, revising and modifying this set at least on the annual basis, and setting and communicating the target levels based on these indicators represents fundamental responsibilities of top management. It also is regarded as an important management tool to help direct an organization and/or an operation. Progressively, it becomes an integral part of a quality management system. Finally, it is considered as a foundation for a learning organization. In other words, the implications of performance measurement have turned out to become broader and more far-reaching (Figure 4).

Examples of the comments on performance measurement from the interviews (from the grounded theory)

<table>
<thead>
<tr>
<th>Past to present groups</th>
<th>Reflecting management responsibility</th>
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<tbody>
<tr>
<td>It highlights the requirements and responsibility of management</td>
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<tr>
<td>It represents a milestone of effective management – when there is no performance measurement, it implies a serious failure on management</td>
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<tr>
<td>It can be considered as an information provider</td>
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<tr>
<td>Representing a management tool (e.g. a decision-making process that is based on performance information)</td>
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<td>It represents a more systematic mechanism for feedback and information</td>
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<td>It reflects a more systematic decision-making process</td>
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<tr>
<td>It can be utilized with accounting information for better insights into a company’s operations</td>
<td></td>
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<tr>
<td>It provides feedback for planning and strategic decisions</td>
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<tr>
<td>It helps link database with managerial decisions</td>
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<tr>
<td>It helps realize benchmarking efforts in an organization</td>
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<tr>
<td>It increases more acceptances from staffs when making policy initiatives and decisions</td>
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<tr>
<td>Indicating a strength of a quality management system (for both ISO 9001: 2000 and 2008, and Thailand Quality Award)</td>
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<tr>
<td>It improves communications between management and workforce with greater visibility</td>
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<tr>
<td>It is required by ISO 9001: 2000 as well as the 2008 version as a means to help make better and timely decisions</td>
<td></td>
</tr>
<tr>
<td>It represents a foundation of knowledge management as required by Thailand Quality Award</td>
<td></td>
</tr>
<tr>
<td>Supporting an effort on becoming a learning or knowledge-based organization</td>
<td></td>
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<tr>
<td>It can enhance a learning capability of an organization as there is more visibility for everyone</td>
<td></td>
</tr>
<tr>
<td>It is part of how information should be made available and accessible to staffs</td>
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<tr>
<td>Table II. Past and present viewpoints on performance measurement</td>
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The next stage of the interview is more challenging. It involves future viewpoints on the roles of performance management. The interviews, with the same group of top management, reveal many remarkable thoughts on the emerging importance and future roles of performance measurement. Despite the fact that some comments may be conceptual and abstract, they are helpful in visualizing the future shape and form of performance measurement. Interestingly, their viewpoints are not as diverse as anticipated. It appears that participants center their opinions, based on past experiences and familiarity with international practices (Table III).

It is important to note that participants generally agree that performance measurement will become more important and will imply how well an organization or a functional unit is managed – high performance with openness to all stakeholders. It is expected to be one of the focal points in an organization for external stakeholders (as part of audits – manufacturers and suppliers for contractual partnership, and citizen groups and agencies for public spending). Apparently, performance measurement largely reflects professionalism and competency of top management (Figure 5).

6. Implications
Given the opinions expressed by leading managers and administrators, it is interesting to see a relatively consistent perspective on performance measurement. Past and present points of view indicate that performance has gradually moved from merely a management tool to become an integral part of a quality management system. Its perceived importance highlights performance measurement as a prerequisite for attaining a learning behavior (Putu et al., 2007). This behavior is nowadays critical in the era of globalization and limited resources with more challenging goals and objectives for continuous performance improvement (Sheng and Trimi, 2008). The participants’ future anticipation on performance measurement appears to be more complex as it symbolizes ongoing and future trends on transparency, accountability, empowerment of staffs, and public participation in governmental affairs (Rantanen et al., 2007). It also represents as a surrogate for desirable characteristics of organizational capability and competent management. It reflects a sought-after evidence of how an organization or a functional unit should be managed. This should be beneficial to any organization operating under financial limitations, demographic changes, technological innovations, and changing expectations of citizens. More importantly, the participants agree that the extensive use of information and communication technology depends on an effective performance measurement.
Examples of the comments on performance measurement from the interviews

It symbolizes good governance in the era of globalization and social responsibility
It shows management commitment towards continuous performance improvement
It strengthens a company’s execution capability on its strategies, policies, and objectives
It indicates a strong evidence for good control and supervision – oversight
It serves as a reminder of future responsibility for managerial decisions made today
It answers the call for more effective mechanism on monitoring and evaluation
It enhances organizational flexibility and responsiveness as information becomes available faster
It is a foundation for a more complex audit on value for money or budget spent
It supports the need to audit outputs and outcomes of a project or a program (instead of focusing on a budget and processes of spending money)
It helps shift the viewpoint from compliance to soundness (impacts and desirable outcomes) of management in an organization
It represents groundwork for making operations in an organization more repeatable and predictable (as the focus is on variations – root causes of a problem instead of random attributes)
It strengthens working environment that focuses improvement such as a use of benchmarking practices
It symbolizes competency of top management and capability of an organization

Future groups (from the grounded theory)

Reflecting good governance, transparency, and oversight
Reflecting good governance, transparency, and oversight
Strengthening accountability
Assisting in the enlargement of the audit scope to be performed by external parties (e.g. governmental agencies and/or citizens)
Attaining desirable characteristics from external parties – competency and capability

Table III. Future viewpoints on performance measurement

<table>
<thead>
<tr>
<th>IMDS 109,5</th>
<th>656</th>
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<tr>
<td>External use</td>
<td>Internal use</td>
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Figure 5. Shift towards external use
Document reviews are examined to support the above findings on performance measurement. Probably, one of the clearest examples is the series of the regulations passed by the US Government. These regulations deal with the reforms to improve performance and a management process within public agencies. They are namely:

- *Government Performance Results Act* (1993);
- *Government Management Reform Act* (1994);
- *Information Technology Management Reform Act* (1996); and

These regulations aim to:

- inspire the confidence of citizens on the performance levels, especially quality, standards, and consistency of services that they receive;
- to ensure that public agencies are responsive to citizens, and are operationally effective, efficient, and productive while maintaining fiscal responsibilities;
- to shift the focus from operational processes and inputs to outputs and outcomes of impacts from an agency; and
- to an adaptive (i.e. continuous learning) management system within individual public agencies with clear objective and quantitative information.

To ensure that all public agencies are accountable with good governance practices with a great deal of congressional oversights, the Office of Management and Budget of the US Government has developed a performance measurement-related tool in the early 2000s. It is called Program Assessment Rating Tool (PART, 2008). Information from performance measurement helps complete most of the checklists contained in PART. Moreover, performance measurement also plays a crucial role in implementing value-for-money or performance audits. There are several regions and countries that have performed value-for-money audits such as European Court of Auditors for European countries, Hong Kong, and Singapore. The aim is to ensure the public’s confidence and trust in governmental spending.

Not only the roles of performance measurement loom larger and emerge as a foundation for many desirable outcomes (e.g. learning, accountability, etc.), its importance in the private sector has also become much more visible. Key quality management-related awards such as the Malcolm Baldrige, the European Foundation for Quality Management Award, and the Singaporean Business Excellence Awards on quality, innovation, and people development advocate an important role of performance measurement. In addition, by studying some of popular management-related models, namely the capability maturity model, it is remarkable to realize the importance of performance measurement. It plays an important role in achieving desirable behavior, so-called capability and maturity in process management (Robinson *et al.*, 2006). According to Blanchard (2004), performance measurement contributes to the “quantitatively-controlled” status as performance is objectively managed. Without quantitative information, the level no. 5 cannot simply be achieved (Figure 6).

After having verified the opinions expressed by participating top executives from 12 organizations with international literatures, the next task for this study is to identify...
the challenges in realizing and utilizing the potentials of performance measurement. The reason is that its roles and importance appear to become more abstract and philosophical. In other words, performance measurement has gradually grown from merely a management tool into a reflection of desirable characteristics (e.g. good governance and accountability) and behavior (e.g. use of quantitative information for continuous improvement). This task is carried out by sharing the findings with two experts in the areas of performance measurement (Appendix 2). In general, both experts assist in identifying the following challenges or roadblocks. It should be recognized that these roadblocks are critical so that the OPDC can successfully plan on deploying performance measurement in public agencies on the long-term basis.

6.1 Empowerment of staffs
It is agreed that the sustainability and effectiveness of performance measurement depends on how top administrators and executives view their staffs. Since information becomes available, staffs should be trusted and empowered to identify problems and initiate improvement interventions. From the experts’ viewpoint, good governance also implies more opportunities for staffs to insert their expertise and skills so that the feeling of ownership can become more apparent when solving public problems (i.e. complex and dynamics). The narrow viewpoint that staffs should only carry out what they are told can hinder the potentials from performance measurement.

6.2 Budgeting practices
It appears that the impacts from performance measurement can be greatly diminished without a drastic change in a budgeting process. As the budget preparation and allocation depends on resources required to perform the work (instead of what an organization is expected to perform and deliver to customers/citizens), information from performance measurement cannot be utilized across functional units (Hope and
Fraser, 2001). For public universities, despite the aim to focus more on research, the budgets allocated are previously based on student enrollments. This hinders the possibility to become a world-class research institution when resource sharing is critical. The misapplications of performance measurement (so that more budget can be granted for resource expansion) can also be described as sub-optimization for private firms – when a production function can maximize the yield rate by not changing product setups while negatively impacts the inventory turnover and the on-time delivery rate by the warehouse and the distribution units, respectively.

6.3 External knowledge
Embracing knowledge from external sources helps gain confidence from staffs on the usefulness of performance measurement. It is important for top administrators to ensure that information from performance measurement leads to more openness and willingness to seek knowledge outside an organization. Many well-recognized public agencies have championed and embraced international participation, partnership, and collaboration (Al-Agtash and Al-Fahoum, 2008). For instance, the Thai Health Promotion Foundation, a public organization that deals with health and accident prevention, is a member of the International Network of Health Promotion Foundations. In addition, the Community Organization Development Institute, a public organization under Ministry of Social Development and Human Security, has regularly participated in many international conferences as a source of external knowledge (e.g. World Urban Forum in 2004 and UN-Habitat Conference in 2006).

6.4 Linkage with software usages
There are many well-known cases in which the selection of inappropriate software has caused the futility on performance measurement. For examples, a software for accounting control practically prevents cross-project collaborations within an organization, especially when project delays and customer satisfaction index represent key performance areas to be measured. This rigid control imposed by this software negatively affects the deployment of performance measurement. Despite excellent financial control and accuracy (where resources for one project can be accounted for), this agencies does not achieve high performance. The reason is that project managers decide to comply with the software requirements (while requesting more resources than necessary in order to prevent shortages) and to abandon performance requirements on leanness and efficiency. This is quite typically for public agencies that involve with construction projects.

From the OPDC’s viewpoint, if performance measurement is to be continuously and successfully used in an organization, more research should be conducted in how to overcome these four barriers. Achieving the goal of becoming m-government requires careful planning and constant research into the technical and non-technical areas. Prevailing over these challenges (in regard to staffs, budgeting, knowledge management, and a linkage with software usages) is critical as performance measurement is deemed to be more important for an organization in the future. This is crucial for transforming public agencies so that they can provide timely responses to citizens’ needs in a cost-effective manner.
7. Conclusion
The study, based on the project with the OPDC, aims to identify the past/present and
the future roles of performance measurement. This study is part of an overall effort to
transform public agencies into m-government – more responsive and flexible
government. Performance measurement is chosen to be one of the four key features in
this transformation effort. From the viewpoints of past and present practices,
performance measurement is part of management tool and responsibility, a quality
management system, and a learning organization. The future viewpoints on
performance measurement include a driver towards good governance, transparency,
and accountability, and an integral part of performance audit and organizational
competency/capability. In addition, this study identifies and describes four important
roadblocks in implementing performance measurement in an organization.
These roadblocks relate to staff empowerment, budgeting, external knowledge, and
linkage with software usages. The identification of the four roadblocks is critical for
the OPDC’s planning on performance measurement.

Note
by OSMEP, Ministry of Industry, the Royal Thai Government.

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**Further reading**

Appendix 1. Background of participating organizations

Private sector
Official title of the interviewees: managing directors, accounting managers, and production/operation managers:

2. Service provider: transportation services (raw materials) with 60 staffs.
3. Service provider: warehouse and distribution services (finished products) with 90 staffs.
4. Manufacturer: food (cooking starch) products with 450 staffs.
5. Manufacturer: automotive parts with 200 staffs.
6. Manufacturer: high-voltage equipment for a distribution system with 250 staffs.

All six participating companies are certified with ISO 9001: 2000 and/or 2008 and have previously applied Thailand Quality Award. They are members of the Federation of Thai Industries and have been recognized as a leading company in their, respectively, industries. They have operated in their businesses for more than 15 years. This selection criterion is important so that performance measurement has been deployed for quite some time.

Public sector
Official title of the interviewees: deputy director generals, deputy commissioners, and senior advisors:

1. Agency in charge of research policies and funding. This agency belongs to Office of the Prime Minister.
2. Agency in charge of the entire public sector’s budget preparation and allocation. This agency belongs to Office of the Prime Minister.
3. Agency in charge of updating and revising the regulations for accounting practices and financial management among public agencies. This agency belongs to Ministry of Finance.
4. Agency in charge of research on science and mathematics teaching and learning for primary and secondary students as well as training and skill development of teachers. This agency belongs to Ministry of Education.
5. Agency in charge of improving social welfares among citizens (e.g. a lack of affordable homes, poverty, and healthcare). This agency belongs to Ministry of Interior.
6. Agency in charge of inspection of industrial factories to ensure health and safety of their workforce as well as pollution control. This agency belongs to Ministry of Industry.

All six participating agencies are considered to be leading candidates for the upcoming event for the Public Sector Quality Management Award (adapted from Thailand Quality Award for public agencies). They have received a high satisfactory mark from their stakeholders and have maintained good reputations and images among their peers.

Appendix 2. Background of the experts for roadblock identification

The first expert, Mr William D. Eggers, has had years of experiences with public sector reforms and has written several publications and textbooks on the new trends in governmental operations, especially in the areas of social and communication networks. Although his work is mainly with US governmental agencies, he has traveled abroad often and has conducted
seminars and workshops for several international governments, including Australia, India, Japan, and Thailand.

The second expert, Dr William K. Hoehn, has conducted several research projects in the areas of performance measurement. He has often used performance measurement as the first step to build a strong management system when companies need to gain confidence and recognition from their clients, especially in the defense-related industries. He has worked in many countries such as the USA and Japan in building a robust performance measurement for a strong management system. Dr Hoehn has also given speeches and lectures relating to performance management in several countries, including Thailand.

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