

Performance measurement, organizational learning and strategic alignment: an exploratory study in Thai public sector

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Summary

Purpose – This paper aims to examine the role of performance measurement in the Thai public sector. It seeks to explore the interactive use of strategic performance measurement systems (SPMS) and organizational learning as a means to achieve strategic alignment at the provincial level of government, inter-organizational networks of public agencies.

Design/methodology/approach – Questionnaires were sent to all chief officials of the Office of Governors in Thailand. Path analysis was used to test the hypotheses.

Findings – The findings revealed significant relationships between interactive use of SPMS and organizational learning and between interactive use of SPMS and strategic alignment. The results also showed an indirect effect of interactive use of SPMS on strategic alignment through organizational learning.

Originality/value – This paper provides a considerable contribution about the use of performance measurement in inter-organizational networks which is relatively limited in the public arena.

Keywords Workplace training, Performance measurement (quality), Regional government, Public sector organizations, Strategic alignment, Thailand

Paper type Research paper

1. Introduction

The widespread embracing of new public management (NPM) around the world along with the rapid change of local stakeholder requirements caused the Thai government to reform public management. Instruments of reform from western countries have guided the administrative reform directions of the Thai governments (Phusavat *et al.*, 2009). The instruments and initiatives of the reform are strategic performance budgeting and management, decentralization, knowledge management and learning organization, governing by networks, information technology (IT) and e-procurement. This reform toward result-oriented government is challenging the long-established process-oriented paradigm of the Thai administrative system. To reform the old governmental fashion into NPM requires new management standards in: focus, procedure, and even the structure of management (Pollitt, 2001). The purpose of the reform according to Thai Public Sector Development (BE 2546-2550), both at the central and provincial levels of governments, is not only to improve the way the public agencies organize and operate, but also, more difficultly, to shift the way the officials think about and perform their daily public services.

At the provincial level of government, the integrative provincial administrative system is a central theme of the reform. According to law, as provincial governors take sole responsibility for area-based issues, they are eligible to act as chief executive officers (CEO governors) to govern all agencies in their networks. This change has caused a reorganization of the provincial government structure as well as redirected the chain of command. Hopwood (1996, p. 589) asserts that:

[. . .] planning, budgeting and control processes flow from one organization into others, creating, as they do, a more explicit awareness of the interdependency of action and the role which joint action can play in organizational success.

In creating such a reform, a vertical structure of the Thai administrative system at the provincial level has become a horizontally-structured organization (an inter-organizational relationship as a network). Currently, the chief regional and provincial officials work under two bosses, the functional line of the ministry and the CEO governor, with a dual focus. It is noted that the performance of an agency in a network does not solely depend on its performance, but depends largely on how well other agencies in the network perform.

Provincial strategy is primarily exercised by incorporating performance measurement. Strategic planning complies with a set of strategic performance measurement systems (SPMS) and has become mandatory since 2004. This practice is consistent with international practices in that performance measurement is a common choice for the management of strategy (Ittner and Larcker, 1998; Kloot and Martin, 2000). Performance measurement is beneficial for CEO governors, ranging from producing performance reports to implementing strategy to creating a platform for strategic learning and cooperation (Smith, 1993; Atkinson *et al.*, 1997; Kloot and Martin, 2000; Mahama, 2006; Kober *et al.*, 2007). The provincial SPMS is a cohesive structural set of performance drivers and strategic outcomes based on the concept of balanced scorecard (Kaplan and Norton, 1996, 2001). Intended or not, it is compatible to a lateral dimension of a horizontally-structured organization as it provides holistic, integrative, and horizontal aspects of strategy to operations (Chenhall, 2008).

A greater degree of difficulty in achieving strategic alignment in the public sector has been previously acknowledged (Kaplan, 2001; Greatbanks and Tapp, 2007; Johnson and Pongatchat, 2008). Organizational learning through the interactive use of performance measurement in creating strategic alignment (Kloot, 1997; Kloot and Martin, 2000) challenges inter-organizational networks. Indeed, a performance measurement is the measurement-information-learning domains and its functions and actions are set to activate strategy. Speculatively, in the Thai provincial government, organizational learning through performance measurement can reinforce officials to work, collaborate and share information with other organizations within networks with an aim to achieve their collective goals. Organizational learning is an approach to acquire, share, interpret, and use information and knowledge to support officials across inter-organizational networks and fosters a dynamic self-correcting system which drives continuous improvement resulting in continual re-alignment (Argyris, 1977).

This paper attempts to gain an understanding of the role of SPMS in creating strategic alignment through organizational learning, during public reform in Thailand[1]. Since the existing evidence that addresses the potential use of performance measurement in inter-organizational settings, especially in the public arena, rather scarce, this paper should provide a considerable contribution about the use of performance measurement in inter-organizational networks which, as noted, is relatively limited in existing body of knowledge.

The rest of this paper is organized into four sections. The first section develops the theoretical models and series of hypotheses. It is followed by a section which describes research methods. After the results are discussed in the third section; conclusions, limitations and potential future research make up the final section.

2. Theoretical model and hypotheses

2.1 Interactive use of SPMS and organizational learning

Management control systems that can be portrayed as information feedback systems provide data and information to facilitate organizational learning (Argyris, 1977; Kaplan and Norton, 1996; Kloot, 1997; Chenhall, 2005). Argyris (1977) suggests that there are two levels of organizational learning (i.e. single and double loop). The first underlies a cybernetic logic



designed to identify and correct errors of operations to ensure the achievement of original objectives without questioning the realm. Although the first level of organizational learning, diagnostic use of SPMS, can be expected to be best for corrective action, it may not encourage dialogues that generate greater innovative ways of actions (Vandenbosch, 1999). As noted at the beginning, the public reform is intended to shift the way officials think about and perform their jobs. This approach to learning may be inadequate for applying management to provincial governments. For this reason, a higher level of learning, interactive use of SPMS, which challenges underlying data, beliefs and actions, is needed to create adaptability.

Use of SPMS interactively in supporting a higher level of organizational learning will foster attention and force dialogue throughout organizations (Simons, 1995). It forewarns management and enhances abilities to anticipate as a means to manage risks and uncertainties. It is suggested that learning through feedback data may be the only means for validating the appropriateness of particular concepts and ideas used in the process of strategic planning (Dermer, 1977). The interactive use of SPMS fosters organizational learning by providing a basis to guide the acquisition of information and the search for understanding (Simons, 1991). Case studies from the French and Australian public sectors show that the interactive use of SPMS is a prime source of organizational learning (Kloot, 1997; Batac and Carassus, 2009). SPMS provides a basis for sharing necessary information, knowledge and attitudes that fosters gaining, distributing, and interpreting information. These arguments suggest that either formal or informal interactive discussions are a means to actively share, interpret and use information and knowledge. This would help organization members to collectively construct key issues in managing organizations.

What has been discussed above supports the view that the interactive use of SPMS can greatly enhance the degree of organizational learning in the gathering, sharing, interpretation and institutional memorizing of knowledge. *H1* summarizes the discussion:

H1. There is a positive relationship between the interactive use of SPMS and organizational learning.

2.2 Interactive use of SPMS and strategic alignment

Strategic alignment, in the present study, is defined according to the concept of internal consistency. Strategic alignment can be perceived as the existence of relationships between organizational strategy and the behavior of key components of an organization (Verweire and Van den Berghe, 2003). It also represents consistency in making strategic decision and action (Beer *et al.*, 2005) or a higher order of integrative capacity (Lawrence and Lorsch, 1986).

According to Ferreira and Otley (2009), the ambiguity of the definition of interactive controls can cause misinterpretation. This research, according to Simons (1995, p. 151), considers interactive uses of SPMS by senior managers in two compartments: generating dialogue and fostering "a positive informational environment that encourages information sharing" (Simons, 1995, p. 158). Thus, a straightforward interpretation of interactive control as strategy-sense making and dialogue of the strategy is made.

The achievement of strategic alignment requires information (Wheelwright and Hayes, 1985). In general, strategic alignment is enhanced by transforming strategic objectives into action plans, which are consequently deployed into departments and individuals (Kaplan and Norton, 2001; Kolehmainen, 2010). It is suggested that the information provided via SPMS is able to foster dialogue and debate among an organization's members both vertically and horizontally which subsequently results in strategic alignment (Labovitz and Rosansky, 1997; Chenhall, 2005). In addition, communicating strategy and influencing organizational behaviors to perform in accordance with organizational directions and goals can be promoted by using SPMS interactively (Verweire and Van den Berghe, 2003). Kaplan (2001) notes that the interactive use of SPMS in public sector organizations can contribute to the achievement of strategic outcomes by developing a common understanding about



strategy and vision. It also reinforces superiors, sub-ordinates and peers to work in line with strategic objectives. In short, the translation and deployment of SPMS foster strategic alignment as it triggers strategic dialogue and discussion throughout an organization. It can then be suggested that interactive use of SPMS is a reinforcing mechanism for strategic alignment. These arguments provide a basis for *H2* that shows the relationship between interactive use of SPMS and strategic alignment:

H2. There is a positive relationship between the interactive use of SPMS and strategic alignment.

2.3 Organizational learning and strategic alignment

Continually successful organizations depend largely on the ability to learn to adapt themselves to an external environment (Senge, 1990). Organizational learning is primarily concerned with the alignment between the organization and its environment, as a rapidly changing environment can cause misalignment (Kloot, 1997). Learning at any level is vital for organizational change, top managers have to provide a basis for learning about external and internal environments, organizational behaviors and strategies to achieve alignment (Beer *et al.*, 2005). However, compared with business organizations, those in public domain tend to have a lesser awareness of changing environments and are settled in a lower uncertain arena. Therefore, internal consistency among organizational behaviors, systems, structures and processes is likely to be more of a concern to the public sector. In contrast, as noted, there is a greater degree of difficulty in achieving alignment in the public sector than in the private sector (Kaplan, 2001; Greatbanks and Tapp, 2007).

SPMS can create internal consistency through organizational learning. While in the command-and-control paradigm, performance measurement is used to review and evaluate employee performance. In an effective learning environment, performance measurement provides a basis to collectively learn, challenge, and improve performance (Otley, 1980; Marr, 2006). It encourages and steers employees to make decisions and take action in accordance with organizational goals (Flamholtz, 1979). The discussion above supports the claim that systematic acquisition, sharing, interpretation and memorization of knowledge can reinforce a self-correcting system and causes continuous improvement, which in turn results in continual re-alignment with the desired status. These arguments lay the groundwork for *H3*, which portrays the relationships between organizational learning and strategic alignment:

H3. The efficiency of organizational learning positively influences strategic alignment.

The theoretical model was constructed upon the relationship among interactive use of SPMS, organizational learning, and strategic alignment. The first construct exhibits the interrelation between interactive use of SPMS and organizational learning (*H1*). The second construct presents the relationship between interactive use of SPMS and strategic alignment (*H2*). The final construct demonstrates the relationships between organizational learning and strategic alignment (*H3*). Figure 1 outlines the paths of these relationships.

3. Research design

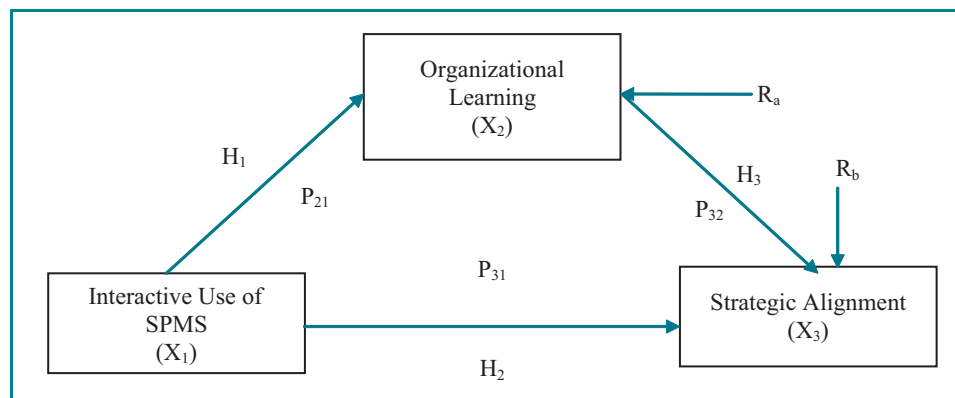
The philosophical approach underlying this research is positivism, which stands as the encompassment of a quantitative research (Bryman, 2000). Since the present study was aimed at investigating how the interactive use of SPMS directly affects strategic alignment and indirectly affects strategic alignment through organizational learning; the path analysis technique using cross-sectional data was the preferred choice[2].

3.1 Sample

Thailand consists of 75 provinces established by the Ministry of Interior. This study focused on the offices of governors in these 75 provinces. Data were collected through a questionnaire survey. A questionnaire package comprised:



Figure 1 Theoretical model



- a questionnaire;
- a letter, addressed to the head of the Office of the Governor, explaining the purposes of the study, confidentiality of the respondents, and how data will be used for academic reasons; and
- a reply-paid envelope was posted to chief officials of the 75 offices.

A total of 53 questionnaires were returned (39 were returned within two weeks; 14 were returned after sending a follow-up letter together with a new set of the questionnaire), resulting in a 70.67 percent response rate. A total of 51 questionnaires were useable; the other two were unusable due to missing data.

Chief officials of the Office of Governors were chosen as participants of the survey due to the following reasons. First, the chief officials have been directly responsible for provincial strategic management, a module of the integrative provincial administrative system. Second, they take full responsibility for provincial strategic planning and its implementation. Consequently, they need to cooperate and facilitate agencies in their networks. Third, their teams are in charge of preparing performance reports which were submitted to the CEO governors as well as to the Office of the Public Sector Development Commission (OPDC). Fourth, they have comprehensive knowledge of provincial SPMS. Table I presents personal information on age, gender, position, working experience, and educational background of respondents.

3.2 Measurement of constructs

Constructs of the questionnaire were adapted from existing literature. These constructs were formed according to the formative model (i.e. it refers to multi-dimensions of a construct which jointly represent several facets and can be connected parsimoniously and meaningfully into one single concept) (Edwards and Bagozzi, 2000). The seven measures of interactive use were adapted from the previously validated scale postulated by Henri (2006). This construct was adapted from Vandebosch (1999), which was consistent with Simons' (1995) concept of interactive control. Four measures of organizational learning and three measures of strategic alignment were adapted from the validated measures proposed by Chenhall (2005). The organizational learning construct was based on Huber's (1991) four dimensions: knowledge acquisition, information distribution, information interpretation and organizational memory. This study defines organizational learning as organizational information and knowledge, used to facilitate managers to take actions aligned with strategic goals. Although organizational learning can be considered either as a means or an outcome, in order to examine the competence of SPMS mechanisms, organizational learning is considered here as an interim procedure. The measures of strategic alignment are drawn from Wheelwright and Hayes (1985). The construct is based on the concept of strategic alignment as internal consistency (i.e. horizontal and vertical fit among organizational components). These constructs are measured on a seven-point Likert-scale ranging from 1 (not at all) to 7 (to a great extent).

Table I Respondents by age, gender, position, working experience and educational background

	n
<i>Age (years)</i>	
≤ 45	6
46 -50	18
> 50	27
<i>Gender</i>	
Male	39
Female	12
<i>Position</i>	
Head of the Office of Governor	20
Head of the Division of Provincial Strategy	20
High rank officials	11
<i>Working experience on management position (years)</i>	
≤ 5	18
6-10	12
> 10	11
<i>Education level</i>	
Bachelor's	11
Master's	40

Reliability tests using Cronbach's alpha coefficients for interactive mechanism, organizational learning and strategic alignment of 0.895, 0.824 and 0.693, respectively, are acceptable (DeVellis, 1991, p. 85).

The questionnaire used for data collection was prepared as follows. First, the constructs were adapted from the previous studies in the private sector in western countries. The constructs were translated into Thai by the authors and then a professional academic English consultant reviewed the translation. Second, the interviews were conducted to review the appropriateness of the questionnaire. Two government officials in OPDC and two senior scholars in management accounting participated in the interviews. The objectives of the study and a questionnaire were provided to the participants. They were asked to assess the appropriateness of items within the constructs and whether those items could reflect the objectives of the study. Third, based on the suggestions of the participants, some wording changes were made to ensure that the constructs were applicable to the Thai context.

4. Results and discussion

The relationships between variables were explained by path coefficients (P_{ij}). These path coefficients are equivalent to standardized beta coefficients (Mia and Clarke, 1999). Residual (R_n) refers to unmeasured variables that affect dependent variables (X_2 and X_3). By using path analysis technique, the magnitude of the relationship between interactive use of SPMS and strategic alignment through organizational learning was computed.

The following regression equations were used to test the hypotheses of this study:

$$X_2 = P_{21}X_1 + P_{2a}R_a \quad (1)$$

$$X_3 = P_{31}X_1 + P_{32}X_2 + P_{3b}R_b \quad (2)$$

- X_1 = interactive use of SPMS;
- X_2 = organizational learning; and
- X_3 = strategic alignment.



Path analysis required the running of the above regression equations. *H1* was tested using the regression equation (1), while *H2* and *H3* were tested using the regression equation (2).

The descriptive results of the three variables in the model of this study are presented in Table II. The first regression equation treated organizational learning as a dependent variable and interactive use of SPMS as an independent variable. The results presented in Table III indicate that the relationship between interactive use of SPMS and organizational learning ($P_{21} = 0.594$) was positive and significant at $p < 0.001$. As a result, *H1* was accepted.

It is argued that interactive activities among officials in inter-organizational networks foster productive discussion and debate, which consequently promote an awareness of common issues. The officials' discussions based on SPMS, targets and how to achieve targets. The dialogue would help officials in networks make decisions more appropriately. For example, a network of public agencies (e.g. the Office of Agriculture Extension, Cooperative Promotion Office, the Provincial Office of Commerce, and Regional Irrigation Office) within the province is responsible for the achievement of gross provincial products (GPP) targets, a key performance indicator. It can be seen that they need a common basis for cooperation. Therefore, by sharing and discussing information, they can create a common understanding to better help adjust their operations and/or generate new plans to ensure the achievement of the targets.

With the integrative nature of provincial SPMS, CEO governors can promote an understanding of cause and effect relationship between operations and strategy along with all components of the value chain (Chenhall, 2005). It also creates cooperation within a network (Mahama, 2006). Abernethy and Brownell (1999) also provide an empirical study of 63 hospitals to support that organizational learning can be enhanced by interactive use of control systems. They suggested that interactive use would help in breaking down functional and hierarchical barriers embedded in vertically-functional lines of the Thai administrative system.

Simons (1991) and Henri (2006) give empirical evidence that interactive use of SPMS fosters organizational learning and helps top management to cope with a competitive market. Henri (2006) considers the interactive use of SPMS as a means to foster learning capabilities of organizations that will contribute to organizational performance. His study indicates that an interactive use of SPMS fosters learning capabilities by stimulating organizational dialogue and debate, and encouraging information exchange. The interactive use also contributes to distribute knowledge and information and creates collaboration throughout the organization.

Although the diagnostic use of SPMS, in performing periodic review and monitoring performance, theoretically enhances organizational learning, Henri's (2006) study indicates that there is a significantly negative relationship between the diagnostic use of SPMS and

Table II Descriptive statistics

Variable	Mean	SD	Actual range		Theoretical range	
			Min.	Max.	Min.	Max.
X ₁ Interactive use of SPMS	5.38	1.11	3.00	7.00	1.00	7.00
X ₂ Organizational learning	5.06	1.43	2.00	7.00	1.00	7.00
X ₃ Strategic alignment	5.37	1.16	1.00	7.00	1.00	7.00

Table III Regression of organizational learning (X₂) against interactive use (X₁)

Variables	Regression coefficients	t value	Significance p <
X ₁ Interactive use of SPMS	0.594	5.162	0.001

Notes: Adjusted $R^2 = 33.9$ percent; $F(1,49) = 26.649$; $p < 0.001$, $n = 51$



Table IV Regression of strategic alignment (X_3) against interactive use (X_1) and organizational learning (X_2)

	Variables	Regression coefficients	t value	Significance $p <$
X_1	Interactive use of SPMS	0.370	2.602	0.05
X_2	Organizational learning	0.313	2.200	0.05

Notes: Adjusted $R^2 = 34.6$ percent; $F(1,49) = 14.210$; $p < 0.001$, $n = 51$

organizational learning. More importantly, as suggested by Abernethy and Brownell (1999), the diagnostic use of SPMS may hinder the relationships among officials in an inter-organizational network as it reinforces the functional lines of authority.

The second regression equation treated strategic alignment as a dependent variable and interactive use of SPMS and organizational learning as independent variables. The results presented in Table IV revealed that the relationship between interactive use of SPMS and strategic alignment ($P_{31} = 0.370$) was positive and significant ($p < 0.05$), therein supporting $H2$.

The results of this study showed a direct effect of interactive use of SPMS on strategic alignment. The interactive use of SPMS is a way to communicate a strategic goal throughout the organizations (Kaplan and Norton, 1996). A longitudinal study of Kober *et al.* (2007) in a public sector entity suggests that the interactive use of management control system helps promote strategic change. At the provincial level of government, strategy has been translated into SPMS and then deployed to all agencies whose roles are to take responsibility for the tasks. This not only ties a set of public agencies in a province together within a network, but more importantly also provides a basis and common view based on SPMS. Consequently, government officials at all levels (including governors, chief officials of public agencies and their subordinates) should actively share and discuss information and knowledge. Discussion among these officials can enhance their understanding of organizational goals, critical success factors and challenges. Therefore, their actions and initiatives are consistent with the strategic goals of provinces, resulting in enhancing strategic alignment.

The results presented in Table IV indicate a positive relationship ($P_{32} = 0.313$, $p < 0.05$) between organizational learning and strategic alignment; $H3$ was thus supported. Sharing information and knowledge among public agencies can provide officials with a clear view of the provincial strategic direction and how their functions contribute to strategic objectives.

Many questions have been raised about how agencies in a network can perform in the same direction and magnitude if they are not directly involved in making decisions about goals and procedures. Inter-organizational learning helps align their managerial processes and goals to avoid duplication of efforts and increases effectiveness of agencies (Rashman and Radnor, 2005). Hierarchical command is not appropriate in a rapidly changing environment where requirements are increasingly unstable. So, only regular inter-organizational learning that creates a platform for working and prompts amendments of strategy is needed. A suggestion from Kloot and Martin (2000) is that learning is required to connect individuals with organizational goals. Further, learning is part of empowerment. People will perform their jobs confidently if they are knowledgeable. Thus, based on the above understanding that the more they learn and are empowered the more they are likely to voluntarily work towards organizational goals.

However, while inter-organizational learning gives a number of benefits, it may need a certain platform for knowledge transfer and capacity building. The primary challenge of an inter-organization network is to ensure partner organizations in a network understand their roles, responsibilities, authority and act consistently. To build such behaviors, Atkinson and Maxwell (2007) suggested that senior management teams of each agency have to build trust within and among agencies and discuss acquisition, analysis and use of shared information.

Using the results in Tables III and IV, the direct and indirect effects of interactive use of SPMS on strategic alignment were calculated in Table V. Based on the results presented in Table V



the indirect effect of interactive use of SPMS and strategic alignment through organizational learning were significant and higher than 0.06; therefore, the indirect effect was considered meaningful (Bartol, 1983).

An organization having interactive use of SPMS requires good information processing capability. Every month, there is a formal meeting among the CEO Governor and chief officials of public agencies in each province. Also, the review of key performance indicators is periodic, since the office of the governors is obligated to report the progression of key performance indicators to OPDC quarterly. The achievement for the key performance indicators depends largely on how well agencies have collaborated. Interactive discussion and dialogue concerning information generated from SPMS will help officials in an agency cooperate with other agencies. This subsequently enables them to work as a team and take action towards strategic goals.

A number of studies in the private sector indicate that the interactive use of SPMS which fosters organizational learning enhances strategic alignment. A longitudinal case study conducted by Tuomela (2005) showed that interactive use of SPMS was an organic control system which supported the emergence of strategic communication and the mutual adjustment of organizational behaviors. Also, Dossi and Patelli (2010) studied the use of performance measurement systems in Italian subsidiaries of foreign companies. The findings indicated that the role of interactive use of SPMS does not only foster sharing and discussing about targets, but more importantly also helps managers plan and cope with emerging issues, which in turn results in continually reinforcing strategic alignment.

In particular, Thailand's politics have been unstable for years (Johnson and Pongatichat, 2008) because of frequent government changes. This has created uncertain situations for provincial governors because a new government normally proposes new policies and managerial practices. Provinces then need to change their strategic goals or objectives to fulfill the requirement of the new government. Hence, provincial governments need organizational learning capabilities in order to be able to quickly process information on new strategies and take appropriate action aligned with new strategic goals.

Although the performance of provinces was not measured here, there is prior research support for the notion that strategic alignment is associated with performance (see Chenhall, 2005). However, it is argued that although strategic alignment is achieved, it may not guarantee an achievement of strategic objectives. This is because the strategic objectives tended to be subjected to uncontrollable factors (including frequent changes in governments, availability of resources and more recently natural disasters). However, compared to long-term objectives, short-term objectives (known as milestones or intermediate objectives) are easier to accomplish since the achievement of the objective is likely to depend on the agencies (Johnson and Pongatichat, 2008). It is noteworthy that not many strategic objectives are short-term objectives and that, although some objectives and targets are negotiable, most of them are compulsory for all provinces.

5. Conclusions

The aim of this paper is to explore the interactive use of SPMS and organizational learning as a means to achieve strategic alignment in the public sector in Thailand. The data were collected from chief provincial officials in the Offices of Governors. The results of this study show significant relationships between: the interactive use of SPMS and organizational

Table V The direct and indirect effects of interactive use on strategic alignment

		<i>Interactive use of SPMS and strategic alignment</i>
Direct effect	P_{31}	0.370
Indirect effect through organizational learning	$P_{21} \times P_{32}$ (0.594 × 0.313)	0.186
Total effect		0.556



learning; the interactive use of SPMS and strategic alignment; and organizational learning and strategic alignment.

Within each province, an inter-organizational network, there are many agencies working and sharing responsibility to achieve provincial strategic objectives. Interactive use of SPMS and organizational learning are necessary for officials to gain a clear strategic direction and to work towards strategic objectives. Without a common understanding, agencies may be unable to cooperate and work towards the objectives. Since strategy and managerial practices of the Thai government have changed frequently, adjusting strategic alignment with the changes is difficult. Therefore, interactive discussion and dialogue among officials, which builds up a basis for dynamic learning, are increasingly important. It is assumed that the results of this study may be also useful for other organizations that have horizontal structure (inter-organization relationship).

The performance measurement that was introduced into the Thai bureaucracy has helped promote managerial reform in improving management efficiency (Phusavat *et al.*, 2009). It is the same as what is mainly done in developed countries (van Gramberg and Teicher, 2000; Bowornwathana, 2007). However, cases from developing countries (e.g. Costa Rica, Indonesia, Ghana, the Philippines, and Pakistan) highlight the role culture has played in the reform process by producing perverse hybrids of reform (Bowornwathana, 2007). Therefore, governments of developing countries should be aware of these issues when adopting performance measurement and other managerial tools. Interplay between basic cultural traits and reform initiatives and tools from western countries might produce unintended outcomes of the reform.

There is awareness that performance measurement theory and practice originated in western countries have been taken to developing countries without considering suitability of their cultural contexts. In the case of Thailand, political pressure and top management involvement are basically needed to overcome inertia, resistance and the production of unintended outcomes. Even though SPMS is useful to enhance organizational learning and creates strategic alignment, it might not be fully utilized if people in the network cannot link the use of collaborative performance measurement to rewards and promotions. Further, management might be involved in manipulating performance measurement for patron-and-client benefit, not for public benefit. If reward and promotion processes are manipulated by politicians, officials will not pay attention to their work, but rather learn to play the political game instead. Thus, the use of performance measurement will be adjusted to the old world of the Thai bureaucratic culture of patronage (Bowornwathana, 2007).

The constructs of the questionnaires which originated in the private sector can be applied to the public sector if theories underpinning the constructs are the same (Bisbe *et al.*, 2007). However, some modifications are needed if the constructs of the questionnaire, which originated in one cultural context is applied to another different context (Behling and Law, 2000). For this study, an assessment of the questionnaire was carried out in order to ensure that the constructs are applicable to the Thai public sectors since there are differences between the West and Thailand in culture and terminologies[3]. Owing to the differences among culture, the modified questionnaire used for this study should be applicable to only the Thai public sector as its language and terminologies are Thai. However, researchers in other countries can apply the procedure of preparing a questionnaire if adapting constructs from different cultural regime is needed.

This study has some limitations. First, the small-sized population resulted in a relatively small sample size. Second, the public sector in this study is at the provincial level whose context might differ from other levels of governments (central and local). For example, local governments normally involve smaller groups of agencies. The hierarchically functional structure of a ministry (central government) provides clear tasks and responsibilities (i.e. a department may not involve working with other departments). It is, therefore, interesting for future research to study the interactive use of SPMS, organizational learning and strategic alignment in other levels of government. Third, even though this study has not tested the extent of use of SPMS, according to law, as noted at the beginning, all provinces are



required to implement SPMS. However, a future study on the diagnostic use of SPMS in performing periodic review and monitoring performance might provide a useful explanation and solution for provincial governors to foster organizational learning and strategic alignment more effectively.

Notes

1. While the approaches for studying public management reform are varied (e.g. Managerial, power and politics, neo-institutional, public choice, globalization/culture, leadership), there is no prevalent one (Bowornwathana, 2007). To be clear at the outset, this paper follows an approach of reform as management effectiveness and control.
2. Path analysis has been widely used in the existing literature (e.g. Chenhall and Brownell, 1988; Shields and Young, 1993; Mia and Clarke, 1999; Patiar and Mia, 2009). It provides a clearer understanding of a causal relationship between variables because it can decompose the relationship into direct and indirect effects (Asher, 1983; Pedhazur, 1997; Chenhall, 2003).
3. For example, even though the term "performance measure" can be directly translated to a Thai word and it seems equivalent to "performance indicator" that is generally used by business sector. Thai government has created a new prescription for "performance indicator" and it only used in government sector.

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