

BALANCED SCORECARD ATTRIBUTES: KEY DETERMINANT AND PERCEIVED BENEFITS

Wasatorn Shutibhinyo, Chulalongkorn University

ABSTRACT

This study explored the application among Thai listed firms of four BSC attributes, i.e. translating strategy into operation terms, aligning the organizational units to the strategy, communicating strategy to employees, and providing feedback and learning. The study also provided evidence of key determinant and perceived benefits of each BSC attribute. With respect to the determinant, it was found, based on 81 returned questionnaires, that top management support was positively associated with each of the BSC attributes. Therefore, the support was the facilitating factor vital to the implementation of each BSC attribute. Concerning the consequence, thirty-seven BSC users perceived the four BSC attributes as the source of various benefits, e.g. overall benefits, planning, control and communication. The study contributed to the existing body of research on BSC as the determinant and consequence findings were derived from examination of each of the BSC attributes separately rather than collectively.

JEL: M190, M490

KEYWORDS: Balanced Scorecard, Strategy-Focused-Organization, Top management support, Perceived benefits

INTRODUCTION

The Balanced Scorecard (BSC), which was invented by Kaplan and Norton in 1992, attracted considerable worldwide interest and became one of the most important developments in management accounting (Atkinson, et al., 1997). Over the past two decades, BSC has transformed itself from merely a performance measurement system to a strategic performance measurement system. In addition, in 2001, Kaplan and Norton introduced the Strategy-Focused-Organization (SFO) framework, which was a sound conceptual foundation of BSC concept and its key determinant (e.g., Kaplan and Norton, 2001). The SFO framework comprises five principles: four BSC attributes and top management support. The four key attributes of BSC are: (1) translating strategy into operational terms, (2) aligning the organizational units to the strategy, (3) communicating strategy to employees, and (4) providing feedback and learning. Interestingly, most studies that examined the determinants or consequences of BSC investigated the BSC implementation in a collective fashion whereas very few studies studied each of the BSC attributes separately.

Most studies acknowledged that top management support was one of the key facilitating factors of BSC implementation. Nevertheless, none has examined the relationship between top management support and each BSC attribute.

Concerning the perceived benefits of BSC, a number of studies showed favorable outcomes; however, they contained limitations. Firstly, most of the papers investigated the contributions of BSC implementation rather than those of separate BSC attributes with the exception of one study by Simons (2000) that genuinely examined whether each BSC attribute was the source of organizational performance. Secondly, most studies not only examined only one single aspect of BSC implication but also narrowly focused on overall benefits and satisfaction. Thirdly, to the best of my knowledge, none has explored the perceived benefits of BSC in terms of planning, control and communication.

These limitations of the prior studies, hence, led to the exploring of the application of the BSC attributes among firms listed on the Stock Exchange of Thailand (SET) or the Market for Alternative Investment (MAI) by (a) investigating whether top management support was correlated with the BSC attributes and (b) examining whether each BSC attribute was the source of various perceived benefits, such as overall benefits, planning, control and communication.

The descriptive analysis which was based on 81 returned questionnaires revealed the degree of application of each BSC attribute. In addition, the empirical results demonstrated that, irrespective of the fact that firms were BSC users or non-users, top management support was positively associated with each BSC attribute. This not just supported Kaplan and Norton’s assertion that this factor was crucial but also contributed to the existing body of research by highlighting the fact that top management support facilitated the application of each BSC attribute in the organization. With respect to the consequence, thirty-seven firms, through self-assessed responses, have identified themselves as BSC users. The examination on the perceived benefits showed that all of the BSC attributes produced diverse types of benefits, such as overall benefits, planning, control and communication.

This paper is divided into five sections. The first section is the introduction. The second section presents a brief literature review, which is followed by the research methodology in the third section. The fourth section shows the empirical results and the last section concludes the paper.

LITERATURE REVIEW

Balanced Scorecard (BSC) and Strategy-Focused-Organization (SFO)

The Balanced Scorecard was initially invented by Kaplan and Norton as the multi-dimensional performance measurement system with a collection of financial and nonfinancial measures. BSC was transformed into a strategic performance measurement system (Kaplan and Norton, 1992; 1996; 2001; 2008) and related to Strategy-Focused-Organization (SFO) in the sense that BSC was part of SFO (Kaplan and Norton, 2008) as shown in Table 1.

Table 1: BSC Attributes and SFO Principles

SFO Principles and Attributes	BSC Explanation
Translating strategy into operational terms (Strategy)	This is a foundation of BSC and consists of three sub-attributes: (1.1) Multiple perspectives, (1.2) Measures derived from strategy and (1.3) Cause-and-effect relationships among the strategic objectives or measures.
Aligning the organizational units to the strategy (Alignment)	Aligning business units’ and functional units’ strategies to the corporate-level strategy helps generate corporate synergy, i.e. a collection of business units create greater value than if each unit operates autonomously.
Communicating strategy to employees (Communication)	Communicating and educating enable employees to understand firm’s strategy and scorecard. This intrinsically and extrinsically motivates employees to perform their work in ways that contribute to the success of the strategy.
Providing feedback and learning (Feedback)	Linking strategy to the budgeting process by setting targets for the strategic measures and by screening the strategic initiatives to achieve such targets. The feedback and learning process enables strategic refinement and makes strategy a continual process.
Top management support	Support from top management, including involvement and resource allocation, is the most important condition for implementing and sustaining BSC.

This table illustrates the relationship between SFO and BSC frameworks, the former of which contains four BSC attributes and their key determinant, i.e. top management support. This paper is based primarily upon the aforementioned relationship in that the SFO framework is a sound conceptual foundation of the BSC concept.

Table 1 illustrates that SFO encompasses BSC concept. BSC comprises four key attributes: (1) Strategy, (2) Alignment, (3) Communication, and (4) Feedback, while SFO consists of five principles: the four aforesaid BSC key attributes and top management support. Firms in the study were not required to implement BSC; instead, they are given an option to either fully implement, partially implement or not

implement. As such, the degree of each BSC attribute adopted and implemented by different organizations was varied.

Key Determinant: Top Management Support

Due to its dominant position in the organization, top management helped generate organizational support in terms of time and resources for implementing innovation in the organization (Chenhall, 2003; Roger, 2003). This also proved true in the case of BSC (Kaplan and Norton, 2008).

Although Chen et al. (2006) found the negative impact of top management support on BSC application, no explanation was provided in their study. Many studies and anecdotal evidence supported the significance of this driver (e.g., Braam and Nijssen, 2008; Kaplan and Norton, 2008).

As several studies acknowledged the importance of top management support in facilitating the collective implementation of BSC, this study thus speculated that the support should facilitate the implementation of each BSC attribute. With the support of top management, translating strategy into operational terms becomes possible by encouraging the use of financial and nonfinancial measures that could reflect firm's strategy through the cause-and-effect relationships. Members in management team normally come from diverse business units and departments within the organization; hence, they could contribute their tacit knowledge and efforts to align strategies of different business units and departments to the firm's overall strategy to create synergy. Additionally, top management tended to support both formal and informal training sessions to enhance employees' understanding of their tasks so that the employees could effectively perform their duties. Furthermore, another responsibility of top management is to oversee all strategy-related activities and decide whether the firm's strategy is appropriate. This underscores the importance of the feedback and learning process that enables strategic refinement or strategy formulation. The arguments led to the following hypotheses:

H1a: Top management support is positively associated with translating strategy into operational terms.

H1b: Top management support is positively associated with aligning the organizational units to the strategy.

H1c: Top management support is positively associated with communicating strategy to employees.

H1d: Top management support is positively associated with providing feedback and learning.

The Perceived Benefits of BSC Implementation

Prior research on BSC implication primarily revealed the significant consequences of BSC application in terms of employees' satisfaction (Ittner et al., 2003; McWhorton, 2001), perceived organization's performance compared to competitors' (e.g., Hoque and James, 2000), perceived performance improvement (e.g., DeBusk and Crabtree, 2006; De Geuser et al., 2009), the integration of management processes, and perceived benefits of BSC relative to its costs (De Geuser et al., 2009). Although the positive ex-post attitudes toward BSC use were discussed in many studies, very few research studies examined various aspects of BSC benefits. Furthermore, most studies did not examine the effects that each BSC attribute could have on the firm's operation.

One paper, nevertheless, did examine whether each BSC attribute was the driver of organizational performance. De Geuser et al. (2009) studied to determine whether the four attributes of BSC and top management support were the sources of BSC contribution. They found that attributes 1 (Strategy) and 4 (Feedback) seemed to be the key sources of overall improvement, while attributes 2 (Alignment) and 3

(Communication) showed marginal impact. Top management support, however, did not influence any perceived organizational performance. This implies that top management support may not directly influence the firm's performance but indirectly through the application of each BSC attribute. Therefore, this study aimed to examine whether each BSC attribute contributed to the firm's performance in the areas of overall performance, planning, control and communication.

As previously mentioned, BSC was one of the most important developments in management accounting, particularly in strategic planning and control (Atkinson et al., 1997). Based on Kaplan and Norton's assertion, organizations using BSC usually emphasized (a) achieving their strategic objectives and measures, (b) cascading the corporate strategy into aligned and integrated strategies at lower-level units, (c) communicating the strategy to ensure that everyone working toward common goals, and (d) adjusting strategy when needed. Hence, for BSC users, each BSC attribute was likely to enhance the perceived benefits in terms of overall benefits, planning, control, and communication. Each BSC attribute was expected to (1) facilitate the planning systems by gathering the strategy-related information to analyze how firm successfully operated in the dynamic environment, (2) strengthen the control systems by encouraging setting strategic goals, measuring leading and lagging indicators, and providing the variance information to ensure that the firm's activities were in line with the firm's goals, and (3) support the communication systems by providing stakeholders with the relevant information in order to analyze the direction and the success of the firm (Simons, 2000). Based on these lines of reasoning, the following hypotheses presented the postulated relationship between each BSC attribute and the various aspects of perceived benefits.

H2a: Translating strategy into operational terms is positively associated with the various aspects of perceived benefits, i.e. overall benefits, planning, control and communication.

H2b: Aligning the organizational units to the strategy is positively associated with the various aspects of perceived benefits, i.e. overall benefits, planning, control and communication.

H2c: Communicating strategy to employees is positively associated with the various aspects of perceived benefits, i.e. overall benefits, planning, control and communication.

H2d: Providing feedback and learning is positively associated with the various aspects of perceived benefits, i.e. overall benefits, planning, control and communication.

RESEARCH METHODOLOGY

Data and Survey Instrument

The sample includes 508 firms listed on the Stock Exchange of Thailand (SET) or the Market for Alternative Investment (MAI). Since 81 replied questionnaires were received, the response rate was 15.94 percent. This low response rate was not unusual for the survey in Thailand. Survey packages, each with a questionnaire, a cover letter and a postage-paid, return-addressed envelope enclosed, were posted to chief financial officers (CFO's) in May and June 2011. The questionnaire was initially designed based on the fundamental concepts of BSC and subsequently revised based on the pre-tested results from and comments by academics and CFOs of the pre-tested firms. Respondents were required to specify both the degree to which each BSC attribute was embedded in their firms' performance measurement systems and the level of top management support (each ranging 0 - 100). The four BSC attributes and top management support were each accompanied with a set of questions in order to strengthen the construct validity. The averages of percentage points of scores of each BSC attribute and top management support were calculated for each firm. Then, the respondents identified whether they were BSC users by

answering the Yes/No question. Finally, they were required to specify the degree of perceived benefits of BSC application in terms of overall benefits, planning, control and communication.

Model Specifications and Variables

A simple regression analysis was employed to test the proposed hypotheses. The model specifications and variables are presented in Table 2. Specifically, Models 1 and 2 were employed to examine the relationships between top management support and each BSC attribute (H1a-H1d) and those between each BSC attribute and each aspect of perceived benefits (H2a-H2d).

Table 2: Models and Variables for Determinant and Perceived Benefit Tests

Model for Determinant Study		Model for Perceived Benefit Study		
M1: $BSCATT_i = \beta_0 + \beta_1 TOP_i + \varepsilon_i$		M2: $BENE_i = \beta_0 + \beta_1 BSCATT_i + \varepsilon_i$		
Variables				
TOP_i	Top management support	$BSCATT_i$	Each BSC attribute	$BENE_i$ Each aspect of perceived benefits
		$STRAT_i$	Strategy	ALL_i Overall benefits
		$ALIGN_i$	Alignment	$PLAN_i$ Planning
		$COMM_i$	Communication	CON_i Control
		$FEED_i$	Feedback	COM_i Communication

This table shows the regression models and related variables. Model (1) is employed to test H1a-H1d; top management support and each BSC attribute are independent and dependent variables, respectively. Therefore, there are four regression models in this determinant study. Model (2) is employed to test H2a-H2d; each BSC attribute and each aspect of perceived benefits are independent and dependent variables, respectively. Hence, there are 12 specific regression models in this consequence study.

RESULTS

This section is concerned with the main findings of this study. The descriptive statistics are shown in Table 3, which indicate the application of BSC attributes among sample firms. Tables 4 and 5 provide the outcomes of determinant and consequence studies, respectively.

Table 3: Data for Determinant and Perceived Benefit Studies

Variables		Avg.	Min	Max	SD	Cronbach's Alpha	N of Questions
Panel A: Data for determinant study (H1a-H1d) (all samples, n=81)							
Strategy	$STRAT_i$	71.64	3.13	100.00	17.66	0.938	8
Alignment	$ALIGN_i$	70.25	3.75	100.00	19.06	0.902	4
Communication	$COMM_i$	69.58	3.75	100.00	18.77	0.880	4
Feedback	$FEED_i$	73.04	5.63	100.00	18.30	0.961	8
Top management support	TOP_i	76.57	14.00	100.00	16.33	0.959	5
Panel B: Data for perceived benefit study (H2a-H2d) (BSC users, n=37)							
Strategy	$STRAT_i$	76.74	37.63	100.00	14.99	0.938	8
Alignment	$ALIGN_i$	73.05	30.00	100.00	18.96	0.948	4
Communication	$COMM_i$	73.71	30.00	100.00	16.28	0.842	4
Feedback	$FEED_i$	76.72	43.75	100.00	15.42	0.958	8
Top management support	TOP_i	79.43	50.00	100.00	11.58	0.939	5
Overall benefits	ALL_i	75.41	50.00	100.00	14.06	N.A.	1
Planning	$PLAN_i$	77.51	50.00	100.00	13.36	N.A.	1
Control	CON_i	77.03	50.00	100.00	13.72	N.A.	1
Communication	COM_i	73.38	10.00	100.00	17.99	N.A.	1

Panels A and B of this table show descriptive statistics for determinant and perceived benefit studies, respectively. Specifically, the basic descriptive statistics (average, minimum, maximum and standard deviation), cronbach's alpha and number of questions for each variable are shown.

Tables 4 and 5 show the estimated regressions of Models 1 and 2, each of which respectively indicates the determinant and the perceived benefits of each BSC attribute.

Table 4: The Results of the Determinant Study (n=81)

Dependent		STRAT _i		ALIGN _i		COMM _i		FEED _i	
Independent	TOP _i	0.856	***	0.996	***	1.001	***	0.869	***
Intercept		8.772		-6.051		-5.771		7.778	
Adj.R ²		42.1%		35.2%		49.3%		40.9%	
		H1a is supported		H1b is supported		H1c is supported		H1d is supported	

This table shows the regression estimates of the equation: $BSCATT_i = \beta_0 + \beta_1 TOP_i + \varepsilon_i$, where BSC ATT signifies each BSC attribute (Strategy, Alignment, Communication, and Feedback) and TOP denotes top management support. ***, **, and * indicate significance at the 1, 5 and 10 percent levels, respectively.

The findings indicated that top management support was positively and significantly associated with each BSC attribute at 0.01 significance level, ceteris paribus. Thus, H1a, H1b, H1c and H1d were all supported. Top management played an important role in supporting the implementation of each BSC attribute. The support from management facilitated translating strategy into operational terms along with aligning the corporate strategy to the strategies of various business units and supporting departments. Top management also enhanced employees’ understanding of the firm’s strategy such that employees could perform their tasks to accomplish the firm’s goals. Moreover, top management enabled the feedback and learning process for strategic review. This not merely supported Kaplan and Norton’s statement that top management support was as a key factor for the BSC implementation in an organization but also added to the existing body of research the discovery that top management support was an influencing factor vital to the implementation of each BSC attribute.

Table 5: The Results of Perceived Benefits Study (N=37)

Panel A		ALL _i		PLAN _i		CON _i		COM _i	
Independent	STRAT _i	0.621	***	0.662	***	0.641	***	0.663	*** H2a is supported.
Intercept		27.752	***	26.706	***	27.815	***	22.489	**
Adj.R ²		42.2%		53.9%		47.7%		28.6%	
Panel B		ALL _i		PLAN _i		CON _i		COM _i	
Independent	ALIGN _i	0.518	***	0.425	***	0.549	***	0.588	*** H2b is supported.
Intercept		37.560	***	46.463	***	36.928	***	30.451	***
Adj.R ²		47.3%		34.6%		56.4%		36.6%	
Panel C		ALL _i		PLAN _i		CON _i		COM _i	
Independent	COMM _i	0.634	***	0.637	***	0.676	***	0.801	*** H2c is supported.
Intercept		28.644	***	30.594	***	27.174	***	14.311	*
Adj.R ²		52.6%		59.0%		63.4%		51.2%	
Panel D		ALL _i		PLAN _i		CON _i		COM _i	
Independent	FEED _i	0.514	***	0.491	***	0.620	***	0.495	*** H2d is supported.
Intercept		35.978	***	39.823	***	29.435	***	35.356	***
Adj.R ²		29.8%		30.2%		47.2%		15.7%	

This table shows the regression estimates of the equation: $BENE_i = \beta_0 + \beta_1 BSCATT_i + \varepsilon_i$, where BSC ATT signifies each BSC attribute (Strategy, Alignment, Communication, and Feedback) and BENE denotes each aspect of perceived benefits. ***, **, and * indicate significance at the 1, 5 and 10 percent levels, respectively.

The results in Table 5 indicated that, among the BSC users, each BSC attribute was positively and significantly associated with each aspect of perceived benefits at 0.01 significance level, ceteris paribus. In particular, this study showed that each BSC attribute produced benefits in the areas of planning, control and communication. Not only did BSC help glean the relevant information for decision makers to properly operate the business but also strengthened the control systems through, for example, strategic goal setting, timeliness reports of variance information. BSC also facilitated the communication systems for both internal and external users. This supported the benefits of BSC implementation as well as contributed to the existing research works with the finding that each BSC attribute brought about such benefits.

CONCLUSIONS

This paper studied the application of each BSC attribute and revealed the important determinant and the positive effects of BSC implementation in various aspects. In particular, based on the 81 received questionnaires, this research examined the degree to which the sample firms implemented each BSC attribute. For the determinant study, the regression analysis results showed that top management support was a key influencing factor of the implementation of each BSC attribute. This upheld the common belief that the support from top management facilitated the implementation of BSC, especially of BSC attributes. Furthermore, for the consequence study, thirty-seven BSC users were analyzed employing regression analysis. It was found that all BSC attributes were the sources of perceived benefits in various aspects, i.e. overall benefits, planning, control and communication. These findings encouraged firms to implement BSC since the adoption of merely one BSC attribute was proved to improve the organization's performance. Regarding the limitation, self-response bias was common in survey research and each aspect of perceived benefits contained merely one question. In addition, the application of BSC was examined at the corporate level, not business unit level. Therefore, the results should be carefully interpreted. Other determinants and quantitative impacts of BSC implementation should be examined in future research works with greater emphasis given to each of the BSC attributes.

REFERENCES

- Atkinson, A. A., Balakrishnan, R., Booth, P., Cote, J. M., Grout, T. and Malmi, T., et al. (1997). New directions in management accounting research. *Journal of Management Accounting* , 70-108.
- Braam, G. M. and Nijssen, E. J. (2008). Exploring the antecedents of balanced scorecard adoption as a performance measurement and strategic management system. workingpaper.
- Chen, H., Duh, R. and Lin, J. C. (2006). The determinants of implementation stages of balanced scorecard. *International Journal of Management and Decision Making* , 356-376.
- Chenhall, R. H. (2003). Management control systems design within its organizational context: Findings from contingency-based research and directions for the future. *Accounting, Organizations and Society* , 127-168.
- De Geuser, F., Mooraj, S. and Oyon, D. (2009). Does the balanced scorecard add value? Empirical evidence on its effects on performance. *European Accounting Review* , 93-122.
- Debusk, G. K. and Crabtree, A. D. (2006). Does the Balanced scorecard improve performance? *Management Accounting Quarterly* , 44-47.
- Hoque, Z., & James, W. (2000). Linking balanced scorecard measures to size and market factors: impact on organizational performance. *Journal of Management Accounting Research* , 1-16.

Ittner, C. D., Larcker, D. F. and Randell, T. (2003). Performance implications of strategic performance measurement in financial services firms. *Accounting, Organizations and Society* , 715-741.

Kaplan, R. S. and Norton, D. P. (1992). *The Balanced scorecard - measures that drive performance*. Boston: Harvard Business School Press.

Kaplan, R. S. and Norton, D. P. (1996). *The Balanced scorecard: Translating strategy into actions*. Boston: Harvard Business School Press.

Kaplan, R. S. and Norton, D. P. (2001). *The strategy-focused organization: How balanced scorecard companies thrive in the new business environment*. Massachusetts: Harvard Business School Press.

Kaplan, R. S. and Norton, D. P. (2008). *The execution premium: Linking strategy to operations for competitive advantage*. Massachusetts: Harvard Business Press.

McWhorton, L. B. (2001). The balanced scorecard: An empirical analysis of its effect on managers' job satisfaction and performance evaluations. Doctoral Dissertation. University of Kentucky.

Roger, E. M. (2003). *Diffusion of innovations* (5 ed.). New York: The free press.

Simons, R. (2000). *Performance measurement & control systems for implementing strategy: Text & cases*. New Jersey: Prentice-Hall, Inc.

ACKNOWLEDGEMENTS

I would like to extend my gratitude and appreciation to Asso.Prof.Vorasak Toommanon, Ph.D. for his perpetual encouragement and guidance. I am also indebted to anonymous reviewers of this paper for their helpful comments and suggestions on the previous draft. Any errors or omissions remain my responsibility.

BIOGRAPHY

The author is a lecturer of Accounting Department at Chulalongkorn Business School, Chulalongkorn University, Thailand, and can be contacted at wasatorn@hotmail.com. Questions and comments are welcome.