

CHAPTER 1

INTRODUCTION

Prior to the 1980s, it is very common to evaluate a company's performance by the profit it makes. Financial measures, such as profit margin, return on investment, earnings per share, and etc., are the bottom-line results that are used to rate the performance of companies. However, many managers have learnt the hard way that the survival of a company does not depend on financial measures alone, since financial measures are 'lagging' (or after-the-fact) indicators of performance that already occur, so managers do not have any control at present. The major problem of relying only on financial measures is that managers disregard key elements in the corporation's strategic mission, which are the 'leading' measures (Kaplan and Norton, 1996). Many managers and academic researchers have tried to remedy the weakness of financial measures. Some even suggest disregarding financial measures and improving operational measures such as defect rate.

Kaplan and Norton strongly believe that managers do not have to choose between financial and operational measures. In 1992, Kaplan and Norton created the Balanced Scorecard (BSC) to enable managers to integrate and utilize nonfinancial and financial measures in evaluating the performance of subordinates. BSC becomes a popular performance measurement system that uses multiple measures, namely financial and nonfinancial measures, across the four hierarchical perspectives: customer, learning and growth, internal business processes, and financial. The customer perspective requires a company to know how it should create value for its customers in order to succeed. The key overall performance indicators for this perspective are customer satisfaction, customer retention, market share, and customer profitability. Customer dissatisfaction is a leading indicator of the future decline regardless of good current financial performance. The learning and growth perspective focuses on innovation, creativity, competence, and capability. The key performance indicators are employee satisfaction, employee retention, and employee productivity. Company should emphasize employee training and personal development by ways of providing funding, training courses, and mentoring for

employees. The internal process perspective is the most important perspective for the success of a company. It includes internal business processes which ensure highest quality of products and services. The key performance indicators are cycle time, quality performance, productivity, and after-sales service. The financial perspective concerns how the company appears to shareholders. Financial measures provide a common language to compare companies. The key performance indicators include growth, profit margin, return on investment, economic value added, and shareholder market value (Kaplan and Norton, 2005).

The integration of the four perspectives of the BSC will help managers understand the cross-functional relationships that will lead to improved problem solving and decision making (Kaplan and Norton 1992). Within each perspective, firms select both common and unique outcome measures. Common outcome measures are common across organizations, while unique outcome measures are tailored to the firm's competitive strategy and assist the manager in guiding the firm towards its mission. A major attraction of the BSC is that it is designed to provide a multidimensional view of organizational performance. BSC has been widely adopted by organizations (Silk, 1998). Research in management accounting has found that firms that compensate managers based only on financial measures do not realize the full benefits from innovative activities or improved customer relations as firms that used the BSC measures; i.e. both financial and nonfinancial measures (Bryant et al., 2004). Hoque and James (2000) suggests that greater BSC usage is associated with improved performance, not depending significantly on organization size, product life cycle, or market position.

This study focuses on exploring the managers' use of common and unique measures in evaluating performance of a business unit. Results of the prior research that explore the managers' use of common and unique measures are mixed. Lipe and Salterio (2000) examine the judgmental effects of the BSC by investigating how the common and unique measures affect superiors' evaluations of the unit's performance. Their results show that only the common measures affect the superiors' evaluations; i.e. that common measure bias exists. Many researchers had tried to debias the BSC by replicating Lipe and Salterio (2000). Libby et al. (2004), Roberts et al. (2004), and Dilla and Steinbart (2005) found successful ways to debias the BSC performance

evaluations, while Banker et al. (2004)'s results confirm the results of Lipe and Salterio (2000) that common measure bias exists if subjects have no knowledge of the linkage between strategies of the companies and BSC measures.

There are several reasons why I am motivated to study about the use of the BSC in performance evaluation. First, Kaplan and Norton's book *The Balanced Scorecard* was awarded a prize by the American Accounting Association as having "the best theoretical contribution in 1997" (Nørreklit, 2003). This suggests that the accounting profession accepts the BSC concept widely. Second, the BSC has been used widely in the business world by leading firms around the globe. By 2004, about 57% of global companies were working with the BSC (<http://balancedscorecard.org/BSCResources/ExamplesSuccessStories/tabid/57/Default.aspx> (June 28, 2008)). BSC has been implemented by government agencies, military units, business units and corporations, non-profit organizations, and schools. Examples of adopters of the BSC in the banking sector include Allfirst Bank, Bank of Tokyo Mitsubishi, Wells Fargo Bank, and Chemical Bank. Examples of adopters of the BSC in the manufacturing sector include Caterpillar, Inc., Daimler Chrysler, DuPont, and General Electric. Examples of adopters of the BSC in the energy sector include ExxonMobil, First Energy, and Northern States Power Company. Examples of adopters of the BSC in the higher education sector include California State University, Ohio State University, University of California, and University of Washington. Examples of adopters of the BSC in the governmental sector include UK Ministry of Defense, Royal Canadian Mounted Police, Defense Logistics Agency, and City of Charlotte (<http://balancedscorecard.org/BalancedScorecardAdopters/tabid/136/Default.aspx> (June 28, 2008)). Third, the communicative situation around the BSC is academically related to accounting. The research method used for the development of the BSC by Kaplan and Norton has been described in the *Journal of Management Accounting Research*. Many researchers in the management accounting area have done extensive research on the use of BSC in performance evaluation. Examples are Lipe and Salterio (2000, 2002), Banker et al. (2004), Roberts et al. (2004), Dilla and Steinbart (2005), who explore the common measure bias and ways to debias the use of the BSC. Wong-On-Wing et al. (2007) examines two types of related biases, which

affect the managers' evaluation of subordinates using the BSC: (1) the actor-observer bias and (2) the correspondence bias.

Managers' reliance on common measures, which are lagging measures, than on unique measures, which are leading measures, undermines the goals of the BSC, which was designed to incorporate such measures into managerial thought and decision making (Kaplan and Norton 1996). Thus, I am motivated to find an effective way to amend this problem. The focus of this paper is to explore whether "involvement" can improve the judgment and decision making of managers in using the BSC in evaluating performance of a business unit. There are several reasons why I choose to focus on involvement. First and foremost, Kaplan and Norton (1996) emphasizes that successfully implementing a strategy must begin by educating and involving the people who must execute it, and that the development of the BSC should begin with the executive team. Executive team building and commitment are an essential part of gaining benefits from the scorecard. Kaplan and Norton (1996) raise two instances where an excellent scorecard was built by a very senior executive without actively engaging the senior management team in the process. In one company, the scorecard was developed by the chief financial officer and in the other by a senior vice president of business development. Both scorecards accurately captured the strategy, customer focus, and critical internal processes of their companies. However, the implementation of the scorecard was not successful because of the lack of senior executive involvement in the process and a lack of consensus about the role for the BSC. Kaplan and Norton (1996) suggest that the project leader for the BSC should be the senior management team, who must be totally engaged in the development process, since they will assume ultimate ownership of the scorecard and will lead the management processes associated with using it.

Second, Lipe and Salterio (2000) raise as one of the limitations in their research that the experimental participants were not actually involved in the development of the business units' scorecards. Thus, they were unable to investigate the effect of such involvement, although greater involvement might increase reliance on all BSC measures, including the unique measures. Other researchers try to find ways to debias the judgmental effect of the BSC. Though Kaplan and Norton (1996)

emphasize the importance of having managers involved in the development of the BSC measures, none explores whether the use of managers' involvement in developing the BSC will have any effect on the judgmental effect of the BSC.

Third, involvement is an important realm both in psychology and in business. In psychology, involvement is important because it facilitates attitude change (Zimbardo, 1960) and often leads to commitment (Crosby and Taylor, 1979). The effects of involvement on attitude change depend on a person's self-concept that was activated to create an attitude. A person's self concept depends on his enduring values, his ability to attain desirable outcomes, or the impression he make on others. Involvement increases a person's motivation to engage in message-relevant thinking (Chaiken, 1980; Petty and Cacioppo, 1979). Thus, involvement often leads to commitment, since commitment results when values, self-images, or important attitudes become cognitively linked to a particular choice alternative. On the other hand, another line of psychology research found that involvement may not always lead to commitment due to "frustration effect" (Folger et al., 1979). Frustration effect occurs since involvement in an issue may not always enhance satisfaction with decision outcomes.

In business, involvement construct has been used widely in consumer behavior and marketing research (e.g. Beatty et. al., 1988; Celsi and Olson, 1988; Maikštėnienė and Auruškevičienė, 2008), information system research (Hunton and Price, 1997), and accounting research (Belkaoui, 1977; Schneiner and Kiger, 1982; Jeffrey, 1992; Whitecotton and Butler, 1998; and Tan, 1995). However, the construct is not being widely used in the management accounting research; especially no researcher has ever used this construct in investigating performance evaluation using the BSC.

For this dissertation, I conduct two experiments. Experiment I explores whether having involvement in the design process of the BSC has any effect on performance evaluations of managers using the BSC. Thus, the research question underlying Experiment I is: ***Can involvement in the design process of the BSC reduce common measure bias?*** Participants were M.B.A. students from a leading public university in Thailand. They participated in a 2 x 1 between-subjects design experiment. The independent variable indicates whether participants are involved in

the design process of the BSC. Thus, the first group of participants is not involved in the development of the BSC measures; whereas the second group of participants is involved in the development of the BSC measures. Participants have to evaluate the performance of managers from the two business units on a scale of 0 – 100, then they have to compare performance of the two managers to recommend one of the two managers for job promotion. The dependent variable is the difference in participants' evaluations of the two divisions. If involvement can reduce the common measure bias, the differences in participants' evaluations of the two business units should be reduced.

Without personal involvement in the development of the BSC measures, I find that performance evaluations of participants using BSC will be affected more by the common measures, which is consistent with the results founded by Lipe and Salterio (2000). However, when participants have personal involvement in the development of the BSC measures, I find that performance evaluation using the BSC will be affected by both common and unique measures. This is because managers who are involved with the development of the BSC measures are committed to using the BSC in the evaluation of subordinates.

Experiment II explores the condition when all participants are equally involved in the development process of the BSC, but differ in the levels of their choice of BSC being reflected in the final version of the BSC used by the company. Thus, the research question for this experiment is: ***Do different levels of managers' choice received affect performance evaluation of these managers using the BSC?*** Participants are M.B.A. students from a leading public university in Thailand. They participate in a 3 x 1 between-subjects design experiment. The independent variable indicates the different levels of managers' choice being reflected in the final version of the BSC used by the company for performance evaluation. More specifically, participants are to choose the set of BSC that they think are appropriate for each of the two business units. However, their choices are not equally reflected in the final version of the BSC used by the company. Participants are randomly divided into three groups. They are provided with two sets of complete 16-measure BSCs to choose from. The first group is the condition when participants receive the set of BSC that they choose. The second group is the condition when participants do not

receive the set of BSC that they choose. The third group is the condition when participants receive half of the BSC that they choose. Participants have to evaluate the performance of managers from the two business units on a scale of 0 – 100, then they have to compare performance of the two managers to recommend one of the two managers for job promotion. The dependent variable is the difference in participants' evaluations of the two business units. If different levels of choice received affect performance evaluations of managers, the difference in participants' evaluations of the two business units should be different for each of the three conditions.

I find that when managers receive all or some of the choices that they choose, they will use both common and unique measures. This is consistent with Salancik (1977), who found that increased commitment occurs under conditions of participation and choice. On the other hand, I find that when managers do not receive the choices that they choose, they will tend to base their evaluation more on common measures. This is consistent with Folger et al. (1979) who found that involvement has its limitations; i.e. that involvement does not always enhance satisfaction with decision outcomes. Besides, since common measures are easier to use under comparative evaluations (Slovic and MacPhillamy, 1974).

I believe my research has many contributions. First, this research is important to managers wishing to maximize the effectiveness of using BSC in evaluating performance of a business unit. Common measure bias found by prior research (Lipe and Salterio, 2000; Banker et al., 2004) undermines the usefulness of the BSC, since managers rely only on the common measures, which are usually lagging measures and financial indicators of performance, but which managers have no control of (Kaplan and Norton, 1996). Thus, if managers do not use unique measures, which are leading measures, in performance evaluation, companies will not get the full benefit from adopting the BSC.

Second, Kaplan and Norton (1996), who are creators of the BSC, suggest that senior managers must be totally engaged in the development process of the BSC to ensure success in implementing and using the BSC. Lipe and Salterio (2000) mentioned as a limitation to their paper that their experimental participants were not involved in the development of the business units' BSC, although they believe that greater involvement may increase reliance on all the BSC measures. However, no

prior literature that explores performance evaluations using the BSC has ever involved participants in the development stage of the BSC. Prior literature after Lipe and Salterio (2000) explores how to debias the BSC performance evaluations; i.e. to increase the use of the unique measures in performance evaluations. Researchers used different debiasing techniques, such as using participants that have training and experience in designing BSC (Dilla and Steinbart, 2005) and invoking process accountability and increasing the perceived quality of the BSC measures using an independent third-party assurance report (Libby et al., 2004). However, these techniques are ad hoc; i.e. they are ways to affect the cognitive processing of managers, but are not the real root of the problem.

This research is useful to firms, since finding as many methods as possible to debias the BSC evaluations will help firms choose the methods that are appropriate to their organization to successfully implement BSC. Besides, having managers involved in the development process of the BSC forces managers to understand the BSC measures and how the measures are linked to the firm's strategy, before they actually have to evaluate their subordinates using the BSC measures.

This research adds to the psychology literature on involvement. More specifically, this research links a business practice on performance evaluation using the BSC to a psychological concept of involvement. This research provides the first evidence that involvement of managers in designing the BSC measures influences managerial decision making, which, until today, is still an open research question (Lipe and Salterio, 2000; Libby et al., 2004). The evidence of this study suggests that psychology-based method of debiasing manager's decision making may be more relevant than business-based method in explaining and improving manager's performance evaluations of a business unit using the BSC.

The remainder of this dissertation is organized as follows. Chapter 2 presents a review of related literature from psychology and accounting. The literature combines to develop hypotheses and experimental methodology in Chapter 3. Chapter 4 presents the results and statistical analysis. Finally, Chapter 5 provides summary and concluding remarks.