

STRATEGIC BALANCED SCORECARD IMPLEMENTATION IN CONTROLLING BIAS AND CONFLICT

Handoko J., Wehartaty T.*

Abstract: Balanced Scorecard (BSc) is one of five management tools that most widely used in the business world. Recently, BSc research has developed significantly, not just considering it as performance measurement tool but also as a strategic management system. This research was adopted from Tayler (2010) with the aim of proving whether the involvement of management in the selection of strategic initiatives and selection of BSc measures will be able control motivated reasoning and / or conflict. A 2x2x2 between-subject design experiment is conducted and a hundred and thirty-two undergraduate and graduate students from Business Faculty in Surabaya participated in this research. There are three factors being manipulated in this research: BSc framing, BSc involvement and management role. Consistent with Tayler (2010), results of my study show that there were statistically significant results to prove the existence of motivated reasoning bias in strategic balanced scorecard implementation, but the type of BSc framing could not significantly reduce the bias. Adding to Tayler (2010) results, my study find the effectiveness of lower manager involvement in selecting strategic initiatives and BSc measures, which is increasing lower manager responsibility. Nonetheless, the effectiveness of the strategic BSc implementation is still be recognized if the lower management is being involvement in selecting strategic initiatives and BSc measures. Conflict controlling by enhancing management responsibility is main contribution of this experiment, including when considering causal chain framing.

Key words: BSc framing, BSc involvement, management role, motivated reasoning bias, conflict

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Introduction

Strielkowski et al. (2016) suggest that the modern business world today requires a new management that involves self-management, delegation of decision-making and participation in the company's governance. The key point in this new management is on employee commitment. From the statement Strielkowski et al. (2016) can be assumed there is less commitment or willingness to take responsibility for a given task delegation might lead to conflict. Beside conflict there also needs an awareness of the potential bias in participation (Tayler, 2010). These negative effects can be controlled by implementing Balanced Scorecard

* **Jesica Handoko, SE., M.Si., Ak.**, Widya Mandala Catholic University & Doctoral Student of Airlangga University Surabaya, **Tineke Wehartaty, SE., MM.**, Widya Mandala Catholic University

✉ Corresponding author: jесicahandoko@gmail.com

✉ tinekewm@yahoo.com

(BSc) because BSc is able to provide a richer and holistic perspective in creating a corporate synergy (Dechow, 2012). BSc superior and can be said has widely studied and implemented in modern organizations (Rigby and Bilodeau, 2013; Hoque, 2014). The research objective was to determine whether the strategic implementation of the BSc can control bias and conflict. According to Wong-On-Wing et al. (2007), BSc implementation is able to control the conflict between the rater and ratees (superior and subordinate) through a more holistic participatory approach when assessing performance. On the other hand, it needs awareness that a participatory approach could emerge motivated reasoning bias (Kunda, 1990, Tayler, 2010). With BSc being framed in a causal relationship and reflects the full participation in BSc implementation, bias and conflict is expected to be controlled. The results of this study are expected to also be able to answer calls to Hoque (2014) to conduct further study of the BSc in countries outside USA.

Literature Review

The weakness of traditional performance measures seemed to be answered with the introduction of the Balanced Business Scorecard, which eventually known as the BSc (Kaplan and Norton, 1996). The BSc model available today provide significant benefits although its implementation still has some obstacles (Wong-on-Wing et al., 2007). In behavioral study for example, Lipe and Salterio (2000) provide an early evidence that BSc implementation cause difficulties or cognitive biases when manager making judgment. These common measure bias arises because disability of individu to process a variety of different information in a very limited time and is consistent with the preliminary study of Slovic and MacPhillamy (1974) or post studies such as Banker et al. (2004), Roberts et al. (2004), Wong-On-Wing et al. (2007), Liedtka et al. (2008), etc. It prevents the organization get optimum benefit from the BSc information (Luft and Shields, 2007). Various advanced research carried out to find ways to reduce it and also to explore other potential difficulties.

Although also explore the role of decision-facilitating of management accounting information from the viewpoint of psychological theories (Birnberg et al., 2007; Sprinkle and Williamson, 2007), this research is focusing on the BSc as a strategic management tools that connect visually the various components of the company's strategy in strategy map. This strategy map based on several principles: (1) Strategy balances contradictory forces, (2) Strategy is based on a differentiated customer value proposition, (3) Value is created through internal business processes, (4) Strategy consists of simultaneous, complementary themes and (5) Strategic alignment determines the value of intangible assets (Kaplan and Norton, 2004).

Taylor (2010) described the BSc strategy map in the form of the causal chain framing and it will be compared with the presentation of the four perspectives BSc without visualization causal chain (four groups BSc only). Visualization of strategic initiatives linked to performance measures is expected to be effective

in reducing motivated reasoning bias. From the standpoint of the psychological theory of motivation, this motivation also cause bias in judgment arising because individuals tend to look for evidence, evaluate and interpret the data in a manner consistent with their preferences (Kunda, 1990; Tayler, 2010). If they do not agree with the evidence then they will tend to question the veracity of the evidence and try to doubt the validity of a bad news. Conversely, if he approved a proposition he will seek to validate the good news, or in other words, maintaining the "illusion of objectivity". In the context of BSc, if the manager participates in the selection of strategic initiatives and BSc performance measures then allegedly motivated reasoning that will arise when interpreting the results of BSc implementation; he would tend to indicate the success of the strategy. From this explanation will be tested the hypothesis:

H_{1a}: Managers who implement BSc will perceive such initiatives are more successful if they participate in the selection of strategic initiatives and BSc measures.

According Taylor (2010), a clear causal chain framing would limit the ability of evaluators to produce conclusions that are consistent with their preferences, or in other words able to reduce motivated reasoning. With the understanding that the relationship of cause and effect in the BSc began by connecting vision, mission and strategy to chosen performance measures, the evaluator expected to be less "imposing" personal success they desire. From this explanation will be tested the hypothesis:

H_{1b}: When BSc framed in a causal chain, managers who participated in selecting strategic initiatives and BSc measures will be less perceived success of BSc implementation in question.

According to Hopwood (1972) in the Wong-on-Wing et al. (2007), a performance measurement system that is only based on accounting numbers can cause a variety of dysfunctions include conflicts between raters and ratees, because many accounting measures is not directly related to ratees' operational performance. Chance of implementing strategic initiatives and performance measure would be the impetus to produce something better than when the top management who dictate what needs to be done (Strielkowski et al., 2016). Therefore, this full participation will create greater responsibility that made conflict from top management perspectives less appeared. Conversely, when not engaged, middle managers will feel less responsible than top management. From this explanation will be tested the hypothesis:

H_{2a}: Division manager who was not involved in selection of strategic initiatives and BSc measures will be less responsible for the company's performance in comparison with the responsibility of top management.

One way to overcome the biased use of the BSc is the provision of a strategy map (Banker et al., 2004; Tayler, 2010). If a middle manager or executive involved in the initiative and performance measures selection and it also being framed with causal chain strategy map he will understand the linkages between strategic initiatives and performance measures, then allegedly he will be most responsible. From this explanation will be tested the hypothesis:

H_{2b}: Division managers involved in the selection of strategic initiatives and BSc measures, as well as when the BSc is framed in a causal chain, it will be felt most responsible for the company's performance in comparison with the responsibility of top management.

Research Methodology

Current research is a quantitative research using experimental studies. Participants are undergraduate and graduate students of Faculty of Business of the University in Surabaya, the minimum has been taken and passed courses in Management Accounting. This sample is proxied as the management who already has the basics of adequate decision-making and has gained knowledge about BSc. This experimental design was developed from Tayler (2010) with 2x2x2 between-subjects design with approximately 30 minutes duration. There are three independent variables were manipulated in the present study are: (a) Framing BSc, (b) Involvement in BSc implementation and (c) Role. The third variable adopted from Wing-on-Wing et al. (2007).

Type of BSc framing differentiated into cells of Four groups (FG) or Causal Chain (CC) BSc framing; level of involvement in the BSc implementation include: a low-involvement (Low Inv) that participants are not involved in the selection of initiatives and BSc measures and the full involvement (High Inv) that participants involved in the initiatives selection and BSc measures; and the participants into two groups which act as members of the Top management or as a Division manager. It is a voluntary participate experiment and participants is assigned randomly into 1 of 8 cells. Two judgment for testing H1 and H2 were obtained from the following questions: (a) Whether participants would recommend (RECOM) for implementing strategic initiatives to the other company restaurants in the future (0 scale means it does not recommend and 100 means it is recommended)?; and (b) How responsible you feel for the company performance (0 scale means not feel responsible and 100 means very feel fully responsible for the performance)? In addition, there is also the manipulation checks question, demographics and closing questions. The pilot test was conducted to determine which scenario selected from Tayler (2010) and the results show that most participants choose cases with customers return as BSc measures, consistent with the experiments conducted. Before analyzing with analysis of variance, homogeneity of variance test is conducted to determine whether the variant populations are identical (Huck, 2000).

Results

A total of 132 Faculty of Business students participating in this experiment, but the processed data are 120 data (90.1%) of total participants (3 eliminated for the wrong material reason and 9 failed to answer the manipulation check). Participants demographics show: 41 male and 79 female students, 109 (90.8%) undergraduate students and 11 (9.2%) graduate students; mean (standard deviation) of age and work experience consecutively is 23.84 (6.046) years and 1.87 (4.46) years. Although there is a wide gap, but when testing education and gender as covariates showed no significant difference in outcome. The closing answers concludes: (a) realistic case scenario (mean 7.41); (b) difficulty level is quite high (mean 6.53); (c) the measure of customer satisfaction reflect actual customer satisfaction is considered good enough (mean 5.98), while (d) factors unrelated to the new initiative and the customer satisfaction measure affect performance is quite helpful (mean 3.05). Respondents consistent answer the level of weight in BSc performance category.

Table 1 shows mean value for low involvement cell is 59.06 which is lower than high involvement cell (mean 72.42). This results support H_{1a} (F-value 4.193, sig 0.043). In other words, these initiatives perceived to be more successful (more recommended) if managers are involved in full BSc implementation. Mean value is higher when the scorecard is framed as four group BSc framing (FG) than when the scorecard is framed as Causal Chain (CC) (72.42 versus 67.98), it indicates causal chain framing reduce motivated reasoning, but t-test did not statistically significant (did not support H_{1b}).

**Table 1. Mean comparisons for first hypotesting result
(Dependent variable: REKOM)**

	Estimate	t-statistic	p-value
H_{1a} : FG & Low Inv versus FG & High Inv (mean 59.06 (sd 19.93) versus 72.42 (sd 16.27))	13.36	-2.861	0.006
H_{1b} : FG & High Inv versus CC & High Inv (mean 72.42 (sd 72.42) versus 67.98 (sd 23.63))	-4.44	0.806	0.425

Results Lavene's test of equality of error variance for testing second hypotheses concluded that variants of the same sample (the significance level above 0.05 is 0.111). H_{2a} supported marginally (F-value 3,709, sig 0.057) with mean value of responsibility judgment for low involvement lower than high involvement (75.86 versus 80.25) and vice versa (mean 82.87 versus 77.26). H_{2b} also supported (F-value 564, sig 0.033). Result in Table 2 shows mean value in Low Inv & FG cell is 73.33 and increased in High Inv & CC cell (81.67).

**Table 2. Descriptive statistics of second hypotesting
(Dependent variable: TGG_JWB)**

<i>Statistic Descriptive</i>		
	SBU Manager	Top Management
Low Inv & FG: Mean 78.48 (sd 15.88)	Mean 73.33 (sd 18.29)	Mean 83.31 (sd 11.87)
High Inv & FG: Mean 78.35 (sd 14.52)	Mean 83.83 (sd 10.56)	Mean 72.87 (sd 16.16)
Low Inv & CC: Mean 77.65 (sd 15.36)	Mean 78.09 (sd 10.44)	Mean 77.19 (sd 19.66)
High Inv & CC: Mean 81.83 (sd 9.61)	Mean 81.67 (sd 9.37)	Mean 81.96 (sd 10.15)
Low Inv versus High Inv	75.86 vs 82.87	80.25 vs 77.26

Discussion

The study adopted from Tayler (2010) has the objective to test whether the involvement in the selection of strategic initiatives and BSc measures and also BSc framing will mitigate motivated reasoning and conflict. The findings in the present study (especially for H_{1a}) are consistent with Tayler (2010). The occurrence of motivated reasoning because people tend to evaluate and interpret the data in a manner consistent with their preferences is an early warning signal to control in modern business world which decentralization seems as a must (Strielkowski et al., 2016).

Although next findings are inconsistent with Tayler (2010) who find evidence that the BSc causal chain framing can control motivated reasoning but it cannot be concluded that strategy map is lack its powerfulness. It suggested that limited practical experience and knowledge of participants which causes them a less responsive judgment.

With Tayler's (2010) design it also being proven that conflict does happen in BSc implementation because participation does not always mean made individu more responsible than top management. The statistical result support the strategy map and participation function as factors that reduce conflict in BSc implementation. An interesting findings shows in Table 2 which shows similar mean value of the Top Manj and SBU manager (81.96 and 81,67) which assumed that there is a goal congruence between rater and ratees when there is full participation and both parties agree with the causal relationship reflected in the strategy map. Although not using the same dependent variable but this finding support-on-Wing Wong et al. (2007).

Conclusion

Based on the findings, it concludes: (1) This study proves motivated reasoning bias, but not yet found a statistically significant support that causal chain of BSc framing could reduce motivated reasoning; and (2) There is a statistically significant support that BSc implementation can mitigate conflicts which consistent with Wong-On-Wing et al. (2007) findings. There are some managerial implications from this study. First, based on Strielkowski et al. (2016) suggestion that employee is the cornerstone of the modern business world; the effective employee based management can be achieved by effective conflict management. Highly responsible employee or middle management that implied from this research result can reduced conflict or potential conflict because they committed to achieved better performance. Second, it's important to always motivate individuals in organization, one of which can be done by participating in strategic decision making. But it should be kept in mind that they have cognitive limitations as well as a tendency to act out of tune with the needs of the whole organization. Therefore it needs continuous efforts to foster their intrinsic motivation by clarifying their role in achieving the organizational wealth.

This study has several limitations that could affect the generalization of the study. First, this study prioritizes internal validity using student participants as a proxy for performance rater (because of theoretical knowledge reason) and dominated with undergraduate students, so for the next study it could be replicated on graduate students or practitioners. Second, research data was not obtained through simultaneous meetings, but in a series of class sessions (number of participant limitation). But, by collecting participant's identity or contact, it can be ensure that there were no duplicate participants. Future research can be done in a various settings place to determine the strength of research instruments. Last, this study adopted from Tayler (2010), uses slightly BSc performance measures which may not reflect BSc measures complexity. Future research with the same objective could be developed with a different scenario or perspective and/or a more varied BSc measures.

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IMPLEMENTACJA STRATEGICZNEJ ZRÓWNOWAŻONEJ KARTY WYNIKÓW W KONTROLI STRONNICZOŚCI I KONFLIKTÓW

Streszczenie: Zrównoważona karta wyników (ang. Balanced Scorecard, BSc) to jedno z pięciu narzędzi zarządzania, które są najczęściej stosowane w świecie biznesu. Ostatnie badania wykazały, że BSc to nie tylko narzędzie do pomiaru wyników, ale także strategiczny system zarządzania. Badania te zostały przeprowadzone przez Taylera (2010) w celu sprawdzenia, czy zaangażowanie kierownictwa w wybór inicjatyw strategicznych i wybór środków BSc będzie w stanie kontrolować uzasadnione rozumowanie i / lub konflikt. W międzyprzedmiotowym eksperymencie projektowym 2x2x2 uczestniczyło stu trzydziestu dwóch studentów pierwszego i drugiego stopnia Wydziału Biznesu w Surabaya. W tym badaniu zmieniano trzy czynniki: ramy BSc, zaangażowanie BSc i rolę zarządzania. Zgodnie z Taylerem (2010), wyniki mojego badania pokazują, że istnieją statystycznie istotne wyniki, pozwalające udowodnić istnienie stronniczości zmotywowanego rozumowania w strategicznie zrównoważonej implementacji karty wyników, ale typ ram BSc nie mógł znacząco obniżyć stronniczości. Rozszerzając wyniki Taylera (2010), w moim badaniu stwierdzono skuteczność zaangażowania niższego menedżera w wybór inicjatyw strategicznych i środków BSc, co zwiększa odpowiedzialność menedżera.

Niemniej jednak, skuteczność wdrożenia strategicznego BSc jest nadal uznawana, jeśli niższa kadra kierownicza jest zaangażowana w wybór inicjatyw strategicznych i środków BSc. Kontrola konfliktów poprzez podniesienie odpowiedzialności kadry kierowniczej za zarządzanie jest głównym udziałem tego eksperymentu, w tym przy rozważaniu ramowania przyczynowego.

Słowa kluczowe: ramy zrównoważonej karty wyników, zaangażowanie zrównoważonej karty wyników, rola zarządzania, stronniczości zmotywowanego rozumowania, konflikt

控制偏差和衝突的戰略平衡標準實施

摘要：平衡記分卡（BSc）是商業世界中最廣泛使用的五種管理工具之一。最近，理學學士研究發展顯著，不僅將其作為績效考核工具，而且也作為戰略管理體系。這項研究從Tayler（2010）採用，旨在證明管理層參與戰略舉措的選擇和選擇BSc措施是否能夠控制積極的推理和/或衝突。進行了2x2x2的題材設計實驗，泗水商學院的一百三十二名本科生和研究生參加了這項研究。本研究有三個因素被操縱：BSc框架，BSc參與和管理角色。與Tayler（2010）一致，我的研究結果表明，有統計學意義的結果證明了戰略平衡計分卡實施中動機推理偏見的存在，但BSc框架的類型不能顯著降低偏差。添加到Tayler（2010）的結果中，我的研究發現，低層管理者參與選擇戰略舉措和BSc措施的有效性，這是降低經理責任的因素。儘管如此，如果較低的管理層參與選擇戰略舉措和BSc措施，則仍然會認識到戰略理事會實施的有效性。加強管理責任的衝突控制是本實驗的主要貢獻，包括在考慮因果鏈框架時。

關鍵詞：BSc框架，BSc參與，管理角色，動機推理偏見，衝突。