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ADOPTION AND IMPLEMENTATION OF BALANCED SCORECARD IN MALAYSIA

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Abstract

This paper reports the results of an empirical study on the adoption and implementation of Balanced Scorecard in Malaysia. More specifically, it investigates the sequential dependency among the four balances Scorecard (BSC) perspectives, namely learning and growth, internal business process, customer value and financial performance. The findings indicate that organizations responded positively to BSC measures and believed the cause-and-effect relationship of BSC will lead to improved business efficiency and profitability.

Keywords: balanced scorecard, cause-and-effect, Malaysia

Introduction

The transformation of the commercial environment from industrial to information age is triggered by the globalization and liberalization of markets. Companies around the world strive to cope with the rapid changes in the business dynamics. In recognition of the increasingly sophisticated management control practices, several performance measurement frameworks have been introduced, widely debated and are evolved to fill the gap between operational budgeting and strategic planning. The multidimensional performances metrics have replaced the more traditional financial oriented metrics with non-financial measures with the aims of a more effective focus on the new managerial imperatives (Atkinson, 2006).

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The Balanced Scorecard (BSC) is introduced as a superior combination of financial and non-financial measures of performance (Kaplan and Norton, 1996). The use of BSC has gained increasing popularity and attention among industry practitioners and researchers over the years. Nevertheless, it has received strong criticism for its novelty and efficiency as the dominant framework in performance management (Marr and Schiuma, 2003; Smith, 2005). BSC bases its success on the grounds that all four perspectives (learning and growth, internal process, customer value and financial success) are linked to each other in a cause-and-effect relationship (Aidemark, 2001). In fact, the cause-and-effect logic has been described as the 'essence' of the BSC approach.

There is a wide range of management accounting literature that focuses on the fit between strategy, management control system and Balanced Scorecard. Despite the popularity of BSC model being researched in different contexts over the years, many companies which adopted the BSC model have prioritized the efforts in formulating and implementing strategies of pursuing the goals of maximizing profits, but rather paying attention to the interrelationships of the four perspectives in BSC model. When companies' ultimate aim is to achieve financial success which is at the top of the hierarchy of the objectives, they often overlooked the connections that provide opportunity for them to realize how an action classified in one perspective will influence, through chain effects, other dimensions ultimately leading to improved financial results (Atkinson, 2006).

Even though developing the causal model of the strategy is the central focus in BSC, Speckbacher et al (2003) found that about half of the German and Austrian companies did not have a causal model of their strategies. Davis and Albright (2004) found that 75 percent of the American companies did not develop a causal model of their strategy. Malmi's (2001) reported Finnish managers who were responsible for BSC initiatives were only able to give vague descriptions of the cause-effect relationship. Speckbacher et al. (2003) argued that this problem arises because there is no specific methodology offered by BSC to assist managers in developing a causal model of their strategy. As such, some organizations ignore this process. Additionally, Norreklit (2003) pointed out that emphasis on developing a cause-effect model of a strategy assumed that there was a stable structure within the system.

It has also been noted that in spite of the emphasis on the use of non-financial perspectives, many BSC programmes end up being overweighed with financial measures (Ittner and Larcker, 2003; Lttner et al., 2003). This situation arises because of the complexity in developing and measuring non-financial measures. As the information system of most companies is readily capturing the financial data, however, it is not the case for non-financial measures. The difficulty in developing non-financial measures is also partly due to the problem of causal ambiguity (Szulanski, 1996).

By understanding of the issues in BSC implementation above, the primary aim of this research is to develop a deeper conceptual understanding of BSC by investigating whether the theoretically grounded interrelationships among the non-financial and financial performance dimensions are valid in a real business setting among Malaysian companies. In order to achieve this aim, it is recognized that a research question and a number of objectives need to be addressed using a perception study as follows:

Research Question

How are the BSC perspectives (namely financial, customer, internal business process and learning and growth) linked together on a cause-and effect relationship?

Research Objectives

1. To identify whether the emphasis on learning and growth will contribute to effective internal business production process.
2. To examine whether the improved performance in internal business production process will meet the desired customers' expectations and satisfactions.
3. To study whether the stress on the importance of customers' satisfactions will eventually lead to the better financial performance of companies.

Overview of Balanced Scorecard

The Balanced Scorecard (BSC) philosophy has spread rapidly throughout the worldwide business community (Shneiderman, 1999). Over the decades, hundreds of organizations have implemented the BSC concept in one-way or another. The Balanced Scorecard, although deficient in empirical testing of its benefits (Bourguignon et al., 2004,) is arguably the dominant framework in performance management (Marr and Schiuma, 2003; Smith, 2005). It has been offered by its inventors, Kaplan and Norton (1996) as the cornerstone of a new strategic management control system which positively links an organization's long-term strategic intentions with its short-term operational actions.

Despite its global success, the BSC approach has received criticism for the lack of evidence concerning the reliability of the basic hypotheses of BSC. Norreklit (2003) questioned BSC's hypotheses by arguing that Kaplan and Norton (1996) do not provide a sufficient description of the assumed causal relationships.

Furthermore, another issue is that even though the definition of cause-and-effect relationship is the basis of BSC success, many organizations seem to use BSC as an aggregation of independent performance measures (Aidemark, 2001). Speckbacher et al. (2003) found that only half of the companies using BSC that were surveyed, were actually able to formulate cause-and-effect relationship among the different objectives and measures. In addition, a study conducted in Finnish companies showed that most companies appear to have scorecards in which the resulting measures and perspectives are fairly independent, lacking the claimed reciprocal interconnections (Malmi, 2001).

The Concept of Balanced Scorecard

According to the BSC model of Kaplan and Norton (1996), a cause-and-effect relationship exists among the perspectives of BSC in a sequential manner. The four perspectives of BSC refer to the learning and growth, internal business process, customer value and the financial performance perspective.

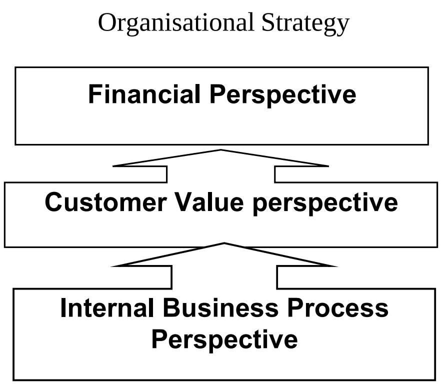

Figure 1: Cause-and-effect Concept in Balanced Scorecard (Adopted from Kaplan and Norton, 1996)

*** Every performance measure on a BSC attempts to address an aspect of a company's strategy.*

Learning and Growth Perspective

This perspective emphasized on innovation, creativity, competencies and capability. It refers to the most important intangible assets in strategy formulation and implementation. According to Cohen et al. (2008), the objectives of this perspective are to identify the human capital, information capital and the organizational climate required to support the internal processes. It also focuses on people and their attitude, knowledge, development and ability to learn and improve.

By emphasizing on activities that develop human capital, organizational learning and growth capability, Ulrich and Lake (1990) argued that the true source of competitive advantage is found in exploiting the capabilities of superior employees who can generate successful ideas for improving processes and the values delivered to customers. Johnson et al. (2005) insists that organizations will best serve customers by investing in employee capabilities through activities such as investments in employees through selective hiring and training, investments in information systems to support decision-making, employee motivation and empowerment. Furthermore, these activities are hypothesized to increase employee job satisfaction, which in turn affects employee retention and productivity.

Heskett et al (1994) found that employee satisfaction derives from high quality support services provided by the firm, for instance, human capital development. Employee training has been empirically linked with a number of other BSC measures. Studies have documented a positive association between skill development training and employee retention (Whitaker, 1999; Wah, 1998; Lynch and Black, 1998). Training has also been linked to innovation, process improvements and customer service quality (Lewis and Gabrielsen, 1998; Johnson, 1996). Brown, Gaitian and Hicks (1995) observed that developing technical competency was vital in producing innovations and tended to be more profitable than those firms that did not invest in strategic information systems.

In summary, the empirical evidence supports significant relations of learning and growth activities in contribution to the internal business process improvement. Nevertheless, the immensity of empirical evidence in support of significant links does not explicitly test the BSC. These literatures appear to be sufficient evidence to rely on learning and growth as a foundation for the BSC and as a starting point for the causal chain.

Internal Business Process Perspective

This perspective identifies the critical processes, skills, competencies and technologies that will deliver a value proposition to customers, current and future organizational success (Atkinson, 2006). Gartrell (1990) reported that investment on Research and Development (R&D) is a critical factor in contributing to superior economic performance. On the other hand, Aboody and Lev (1998) observed that capitalization on R&D is significantly positive associated with firm future earnings. Bhagat and Welch (1995) found a significant positive relation two-year lagged stock return and current R&D expenditures.

The majority of the process improvement studies attempted to associate quality management and firm performance. However, Ittner and Larcker (1997) opined that operation measures vary by industry and are not universally related to firm performance. Two case studies conducted by Gebgert et al (1996) and Krupnicki et al (1997) discovered that firms applying activity-based costing and management successfully monitor cost effectiveness and profitability of customers. Another finding from Jacobson and Aaker (1987) indicates that product quality is positively associated with higher market share.

According to Rust, Zahorik and Keiningham (1995), the level of service quality affects customer satisfaction, acquisition and retention. There is a positive relationship between customer service and customer retention documented by Friedman (1992), Zahorik and Keiningham (1995) and Ennew and Binks (1996). These studies presented empirical evidence of a positive relation between post-sales service quality and market share.

Overall, the review of the literatures above supports the notion that organizational learning and growth activities drive to improve internal business processes and appear to be directly related in contributing to greater customer value. Nonetheless, it is worth to highlight that as the findings are from small-scale and limited scope case studies, it does signify the causal relations of productive employees will increase the level of innovativeness, customer service and process improvement.

Customer Value Perspective

This perspective defines the value proposition used to generate sales and loyalty from targeted customers (Kaplan and Norton, 1996). It requires managers to identify the potential customers in the targeted segments and consequently choose the value parameters to deliver to the customers. The wide spectrum of marketing literatures have provided evidences that perceived customer value determines the level of customer satisfaction, which leads to customer acquisition, retention and ultimately customer profitability and market share (Malina, 2001).

Improving the level of innovativeness, product improvements and after-sales service may lead to improved customer satisfaction levels. Krishnan et al (1999) and Rust et al (1995) found that the level of service quality determine overall customer satisfaction in service industry.

Satisfied customers may be more likely to continue purchasing from the firm and spread the word-of-mouth to attract new customers. Perceptions of value perceived are hypothesized to drive customer satisfaction, which has been expressed as two related outcomes: customer acquisition and customer retention.

Several studies have found a significantly, positive relation between customer satisfaction and customer acquisition and retention (Anderson and Sullivan, 1993; Bolton and Lemon, 1999) while others have found no significant relation (Mittal and Tsiros, 1999). Some studies have found a significant, positive relation at certain levels of customer satisfaction. The contradictory findings suggest that satisfied customers may not be easily retained as they are exposed to large variety choices of products and services which are equally competitive before making any purchases. The switch in preferences may occur when new products or services are introduced to the market.

Many studies have demonstrated a positive relation between customer satisfaction and firm performance. It is reported that the firm performance in relation with profitability (Banker, Potter and Srinivasan, 2000), revenues (Rucci, Kirn and Quinn, 1998), return on investments (Anderson, Fornell and Lehmann, 1994) and stock returns (Ittner and Larcker, 1998) have shown evidence of a positive relation with customer satisfaction.

In summary, most marketing research supports the sequential effect of improved business activities that will lead to improve customer value. Though the empirical literature supports the links between customer satisfaction, acquisition and retention, it presents a challenge for firms to devise strategies in securing customer confidence in their products and services under an intense competitive environment.

Financial Performance Perspective

This perspective describes the tangible outcomes of the corporate strategy in traditional financial terms such as profitability, return on capital employed, residual income, economic value added, sales growth, market share etc (Atkinson, 2006). In other words, the financial objectives are retained as company goals but they represent the long-term aims of the organizations. Financial measures are considered the 'lagging' indicators in the sense that they are the results of other former actions mostly of qualitative nature (Cohen et al., 2008).

Empirical evidence on performance measures used in practice is sparse, particularly for the UK. However, the evidence shows that the most common measures of performance used are the rate of return on investment (ROI) and residual income (RI) (Fitzgerald, 2007).

Extensive research in the marketing, corporate strategy and management accounting literatures have studied the relation between market share and firm performance. Buzzel et al. (1975) found a strong and positive relation between market share and profitability. Hergert (1984) documented an average, positive relation between market share and profitability.

On the other hand, Markell et al. (1988) concluded that the link between market share and profitability is an occasional phenomenon rather than a universal law. Minor (1989) found that the strength of the relationship varies with market share level. Fraering and Minor (1994) documented a weak negative relation suggesting that the link is so tenuous that firms should be vigilant about formulating strategy of increasing market share.

In summary, there are minimal empirical support on the interrelationships between customer value and firm financial performance. These documented literatures are no doubt extensive yet inconclusive with both positive and negative findings. The discrepancy of the findings could probably due to the fact that values of financial ratios per se for a given firm are highly influenced by the characteristics of the industry which the firm operates within, its life-cycle phase, size, level of competitive pressures and the influence of economic environment.

Research Design

This research was undertaken by using an explanatory research methodology in examining the interrelationships of the BSC parameters. A questionnaire survey was used to collect the primary data from the target respondents. The questionnaire contains three sections with nine statements using a Five-Degree Likert scale in each section. The first section deals with the respondents level of agreement with regards to the causal relations of learning and growth and internal business process. In the second section, respondents are asked to rate the degree of their agreement pertaining to the causal relations of internal business process and customer values. The third section prompts to seek the extent of agreement from respondents pertinent to the cause-and-effect relationship of customer values and financial performance.

Pilot Test

The draft questionnaire was pretested by two senior lecturers and three PhD students to clarify the meaning of each question. The revised questionnaire is used in the main survey.

Population and Sample

The population of this research comprises of a group of respondents, mainly Chief Financial Officers, Finance Director, General Manager or equivalent positions, as they are well aware of the performance of the companies. Adoption of BSC is not a prerequisite for these targeted companies. For those firms that do not adopt BSC either wholly or partially, the use of key performance indicators (KPIs) usually contain some items of BSC measures. The sample size surveyed included 100 companies across the industries of manufacturing, service, trading and retail in Malaysia. 500 questionnaires were sent to the respondents and it took approximately two months for the distribution and collection of the questionnaires. Out of the 500 questionnaires sent, 120 were returned which is equivalent to 20% of the response rate. Out of the 120 questionnaires returned, 11 were found incomplete and 9 were found with errors. 100 completed questionnaires were used for data analysis.

Non-Response Test

Follow-up contact with a random sample of non-response organizations provided descriptive statistics of respondent profiles that when T-test is performed to test the non-response bias, the result revealed that no significant differences exist.

Operationalization of Research Variables

Each causal relations of the research framework is operationalised by using multi-items and each questionnaire item is measured by a five point Likert scale, ranging from 1 (Strongly agree) to 5 (Strongly disagree), see Table 1.

Table 1: Descriptive Statistics (before factor analysis)

Items	Mean	Standard Deviation
New technology speed up innovation	2.21	0.868
New technology improve internal process	2.06	0.763
New technology improve customer service	2.11	0.886
Speedy in innovation, produce innovative products	2.10	0.847
Innovative products meet customer demand	2.01	0.732
Innovative products improve customer service	2.20	0.752
Employees training improves innovation adoptions	2.07	0.832
Employee trainings improve employee productivity	2.12	0.820
Human capital development improve customer service	2.04	0.790
Technology innovation improve products quality	2.02	0.853
Technology innovation affects sales margin	2.07	0.796
Innovative products retains customers	2.06	0.851
Process improvement increases product quality	2.07	0.868
Process improvement increases sales margin	2.18	0.999
Internal process improvement retains customers	2.15	0.903
Improvement in customer services increases product quality	2.05	0.833

(Continued)

Table 1: *(continue)*

Items	Mean	Standard Deviation
Improvement in customer services increases product quality	2.05	0.833
Quality of customer affects sales margin	2.07	0.844
Pre and post purchase services influences customer retention	1.93	0.742
Product quality influences rate of return on Assets	2.09	0.954
Better quality results in greater market share	2.01	0.847
Better quality improves profit margin	2.25	2.081
Sales margin influences return on assets	2.10	0.847
Sales margin influences market share	2.14	0.865
High sales margins increases profit margins	2.17	0.853
Customer retention influences return on assets	2.03	0.969
High customer retention increases market share	2.13	0..861
High customer retention increases profit margin	2.13	0.939

Profile of the Respondents

The data distribution for gender reveals that the number of male respondents is slightly more than female respondents. The distribution, in terms of percentage, between male and female respondents is represented by 52% and 48% respectively. For the age of the respondents, the majority of the respondents are youths (below 40 years of age) as they accounted for 23% of the total respondents. This group of respondents also included the young executives who possess adequate years of experiences at managerial levels in the organizations. In terms of educational qualification, 38% of the total respondents in this study possessed at least a bachelor's degree. The respondents with master degree, doctorate degree and professional qualification are represented by 17%, 8% and 11% respectively.

Results and Findings

Factor Analysis

In order to group the 27 items in the questionnaire into meaningful classes, factor analysis was performed using principal component analysis. Only item with factor loading of 0.50 and above were considered significant in interpreting the factors, thus those items with factor loadings less than 0.50 were removed because they did not correlate with any factorial groups produced. Out of the 27 items, 4 factors that have eigenvalues greater than 1 are extracted. All the Cronbach alpha coefficients exceeded the lower limit of acceptability, which is usually considered to be 0.70 (refer Table 2).

Table 2: Summary Results of Factor Analysis of Cause and Effect Relationships

Factor	Items	Factor Loadings	Eigenvalue	Percentage of Variance Explained	Cronbach Alpha
1	Customer retention influences return on assets	0.810	5.32	18.63	0.8753
	High customer retention increases market share	0.776			
	High customer retention increases profit margin	0.750			
	Better quality results in greater market share	0.640			
	Better quality improves profit margin	0.562			
2	Process improvement increases product quality	0.786	2.32	16.23	0.9260
	Internal process improvement retains customers	0.730			
	Improvement in customer services increases product quality	0.654			
	Pre and post purchase services influences customer retention	0.563			
3	New technology speed up innovation	0.875	1.76	14.45	0.8655
	New technology improve internal process	0.840			
	Employees training improves innovation adoptions	0.712			
	Employee trainings improve employee productivity	0.513			
4	Product quality influences rate of return on Assets	0.738	1.23	12.56	0.8430
	Better quality results in greater market share	0.644			
	Better quality improves profit margin	0.508			

Notes: Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

Referring to Table 2 above, factor 1 is labeled as Causation 1 which shows cause and effect relationship between customer value and financial performance, factor 2 is labeled as Causation 2 which shows cause and effect relationship between customer value and internal business process, factor 3 is labeled as Causation 3 which shows cause and effect relationship between internal business process with learning and growth; factor 4 is labeled as Causation 4 which shows cause and effect relationship between overall performance.

Causation 1 indicates that customer values are one of the contributors to the financial performance of the company. Generally, the financial perspective appears to be the main indicators emphasizing maximizing shareholders' wealth and satisfactions, few key goals and measures are usually used namely return on assets, sales growth, gross and net profit margin, market share, residual income, revenue growth, market position etc (Atkinson, 2006). It implies that financial performance is subject to a broader set of measurements and not merely looking from the customer value perspective.

Causation 2 reveals the cause and effect relationship between the perspectives of internal business process contributing to an effect on customer value. This is in line with the study by Gartrell (1990) where the constant improvements and upgrading of internal business processes is a critical factor in contributing to superior economic performance of the company.

The finding also concurs with the argument put forward by Cohen, Thiraios and Kandilorou (2008) that within a prosperous internal business and production environment, that is categorized by effective handling of customer orders, good relations with suppliers and distribution channels as well as quick response to innovation adaptation is very likely that the end product of the company will satisfy customer needs and prospects. The actions of pursuing internal operations excellence and efficiency such as involvement in research and development activities and quality management, will positively lead to delivering high levels of service, product quality, value for money and brand loyalty towards the products and services offered by the company.

In this study, Causation 3, i.e. the cause and effect relationship reinforced the importance of investment in learning and growth dimension, such as investments in new technologies and development of innovative products and services will foster internal communication, shared values and common organizational objectives. This finding also reflects the fact that the improved performance in learning and growth perspective will result in a significant positive increase in the ameliorated performance of the internal business and production process perspective.

In comparison with the results of Othman (2006) in his study of BSC causal model development among the Malaysian companies, 52.9 percent of the companies that responded developed a causal model in their strategy formulation and implementation. In his finding, it is also reported that the presence of a causal model of the organization strategy may lead organizations to develop performance measures with unseen strategic issues of encountering a lack of enthusiasm among the employees in developing an action plan.

In general, the results of the Factor Analysis are highly consistent with the BSC literature in relation to the measures that are commonly encountered in the BSC perspectives. However, it is also essential to highlight that the factors identified do not exclusively cover all BSC parameters as a whole. The statements developed in the questionnaire were adopted from various sources of the literature and hence may deliberately be constrained to mainly for those of a generic nature for the causal relations analysis.

Conclusion

As a concluding remark, the overall findings verify that most of the BSC perspectives are correlated with each other at a statistically significant level in a sequential manner. The evidence found generally supports the theoretical foundations of BSC that there is a sequential dependency among the four BSC perspectives. The findings are in tandem with a wide range of the academic literature review earlier and provide ample additional evidence to the literature of strategic management control of interests to both academicians and industrial managers.

In addition, the findings have shown that the respondents who participated in the survey have at least responded positively to BSC measures. More significantly, they believe that the cause-and-effect relationship of BSC will lead them to improved business efficiency and profitability. The positive perception of the respondent reflects that they react favorably to the BSC as appropriate benchmarks for performance appraisal and useful for implementing changes as well as guiding for improvements in corporations. Therefore, conclusion can be drawn that those BSC believers and adopters are generally more performance driven and results oriented in nature.

The findings also revealed that the comprehensive framework of BSC provides a broader view of how an organization will convert its initiatives and resources, including intangible assets such as corporate culture and employees' skills and knowledge into tangible and predictable outcomes when the cause-and-effect links take place. The results of this study have also proven that the template of BSC articulated by Kaplan and Norton (1996) provides a common language and a generally accepted structure which can be used by managers for describing the corporate strategies. Therefore, it can be concluded that without a Balanced Scorecard, organizations will not be able to achieve internal consistency of vision and action in their attempts to implement changes and introduce new strategies and processes. The Balanced Scorecard provides a framework for managers in managing the implementation of strategy. It also, on the other hand, allows the corporate strategies to evolve in response to changes in the company's operating environment.

Despite the fact that the findings reported to be consistent with the academic literature, nonetheless, the relatively recent adoption of BSC among Malaysian companies limits the number of responses within the network of the researchers. Therefore, the finding of this study should be considered as indicative of the experience of the respondents only.

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Appendix

Questions Link with Literature

BSC Perspective	Related Question	Literatures Published
Learning and Growth	Investments in New technologies	Kaplan and Norton (1996)
	Innovative Products and Services	Evans (2004), Kaplan and Atkinso
	Human Capital Development	Malina, 2001
Internal Business Process	Speed of adopting Innovations	Pandey (2005), Evans (2004) and Kaplan and Norton (1996)
	Process Improvement	Gerbert et al (1996)
	Customer Service	Friedman (1992)
Customer Value	Perceived level of quality	Evans (2004)
	Sales Margin	Lipe and Salterio (2002) and Libby et al (2004)
	Customer Retention	Ittner and Larcker (1998)
Financial Performance	Return on Assets	Evans (2004) and Ittner et al (2003)
	Market Share	Evans (2004), Banker et al (2004), Kaplan and Atkinson (1998)
	Profit Margin	Reichheld & Sasser (1990)