

Performance Measurement System Design, Competitive Capability, and Performance Consequences - A Conceptual Like

Ibrahim Ali Abushaiba¹

Yuserrie Zainuddin²

Abstract

The recently days business environment requires management accounting information to provide relevant measures of performance, and reflect the strategic goals of a modern firms. The performance measurement system (PMS) developed as strategic orientation aimed at providing information to enhance the firm's strategic goals. It is interesting to introduce the PMS design which is externally and future oriented to overcome the weakness of traditional PMS and for strategic outcomes. Apparent gaps seem to be attributed to its various conceptualizations resulted from fragmented efforts on the development PMS. Furthermore, inherited by the scarcity of empirical studies, evidence had been exploratory and little is known about PMS design and its effects on strategic outcomes. The impact of PMS design on the performance is sparse significantly. In terms of essential characterization PMS, that might help to explain how the system has beneficial direct effects on firm's outcomes and indirect through the firm's competitiveness. Thus, based on in-depth review on existing literature on the PMS, this paper develops a proposed theoretical framework. Specifically, the objectives of this paper are three folds; Firstly, it attempts to unravel the various perspectives and define PMS design and suggest on how it might be further developed. Secondly, employing contingency theory as its underpinning theory this paper posits firm's competitiveness as Intervening variable to explain the relationship. Finally, its possible performance are put forth to legitimize the development as an important remedial to the traditional performance measurement system in aiding firm's long-term survival.

Keywords: *Performance Measurement System, Information Characteristics, competitive advantage, Performance. Field of Research: Strategic Management Accounting.*

Introduction

The modern business environment is characterized by radical changes due to technological developments, increase competition, and the developments of customer's needs. Recent studies in the management accounting systems have found that the formulation of a clear competitive strategy necessary, it must be supported by an appropriate organizational structure, and management accounting system, information systems to gain competitive advantages and ensure high performance (Chenhall & Langfield-Smith, 1998). Manufacturing firms were pressured to find ways to be more effectively balance between to objective; lower costs and high quality (Adler et al., 2000). Management accounting system is the provision of information to support strategic decisions in the long term, and performance by providing internal and external information for strategic purposes, i.e. it is defining the strategic position, formulating strategy and controlling the performance (Shank & Govindarajan, 1993).

Performance measurement system (PMS) described as an integral part of the management accounting system which provides information to encourage managers to think strategically about how their activities fit with other parts of the firms, and to assist them in managing their firm's operations (Lillis & Anne, 2002; Ittner, et al., 2003b; Malina & Selto, 2001; Fullerton & McWatters, 2002; Ullrich & Tuttle, 2004; Choe, 2003). The performance measurement process is focused now on managing intangible assets which are non-financial in nature, rather than managing tangible assets which are financial in nature (Kaplan & Norton, 2001). According to Jusoh (2006) the pressure from domestic and global competitors and customers, demands for quality and reliable products, a high expectation from the stakeholders and usage of new and advanced manufacturing technology. All of that contribute as major impetus for devising and designing a good performance measurement system for a firm which can provide what it requires in meeting its objectives.

¹PhD. Candidate, University Malaysia Pahang (UMP), On leave from Misurata University, Libya.

² Faculty at University Malaysia Pahang (UMP)

Further, the designing of PMS, which relies on short-run financial measures, is not adequate to reflect firm's effectiveness in recent business environments (Neely, 1999; Phillips, 1999). Wherever there are considerable innovations in this area to improving design the PMSs. The importance of performance measurement in the management processes in firms has been frequently mentioned. Many prior studies have focused upon Western approaches and classifications, with reliance upon case methods (see, for example: Dixon, et al., 1990; Neely, et al., 2001). A common understanding has developed that there exists a 'traditional' approach which exhibits reliance upon financial measures and a more contemporary approach, which acknowledges a wide range of non-financial and financial measures (Kaplan and Norton, 1992). Given recent changes in manufacturing away from more developed countries, towards newly industrialized and developing countries. In spite of similarities between developing countries in regard to their need to develop and make use of management accounting systems to further their development needs, this study has highlighted the fact that there are unique environmental factors that pertain to individual countries.

The evidence is mixed on whether the importance placed on PMS positively affects firm's performance (Wouters, et al., 1999), whereas a significant association between the importance of PMS and performance (Widener, 2006). Some researchers, argue that the gaining a competitive advantage might be led to achieve high performance, for example, (Raduan, et al., 2009; Bustinza, et al., 2010).

The firm's strategy must be supported by appropriate regulatory factors and the process of actual production of the organizational structure and accounting information systems (Jermias & Gani, 2004; Johnson & Kaplan, 1987). Chenhall (2005) examined the relationship between PMS and the achievement of competitive advantage as a strategic outcome as indicators of competitive strategy in the areas of product differentiation and low cost-price. On the other hand, in the long-term the competitive strategy should be reconsidered as a tool of firm's capability to meet the competitive environment through improve poor in the performance. Bustinza, Aranda and Gutierrez (2010) noted that, the organizational capability to adapt to changing market conditions is a mechanism for reducing uncertainty, making this capability a catalyst for obtaining competitive advantages that allow companies to achieve higher levels of performance. However, there is an ambiguity about the relationship between firm's competitiveness and its superior performance (Ma, 2000). Ma (2000) makes three observations regarding competitive advantage that, the competitive advantage does not equal to superior performance, but it is a relational term; and context-specific. Furthermore, the links between the different competitive strategies and different measures of performance, such as financial and non-financial, are still uncertain, in performance of the firm (Menguc, Auh, & Shih, 2007). There is little known about the attributes of PMS (Hall, 2008). Simon and Guilding (2008) mentioned that, the studies that develop and test hypotheses concerning factors relating to management accounting system adoption are still incomplete, and therefore, should be encouraged. Nevertheless, there are many studies, which have been done, but the finding of those studies was inconclusive as have noted there some researchers claim that their findings are conflicting, while others inappropriately claim that their observations are supported by prior studies.

There has been little consideration given to characterizing PMS in terms of information output and to identify underlying information characteristics (Marchand & Raymond, 2008). In addition, a few of researchers are focused on PMS information characteristics (e.g. Chenhall, 2005; Hall, 2008). Hence, little is known about the attributes of PMS. As such, the study also investigates empirically the organizational role of PMS information characteristics. Additionally, the PMS literature indicates that most empirical evidence has been collected in developed countries. On another hand, there is a need for ways of renewed conceptualization and better definition of PMS, in terms of their essential characterization as information systems, which might help explain how the systems have beneficial direct and indirect effects on organizational outcomes.

The PMS is designed to provide managers with the financial and non-financial measures, which covers four different perspectives: financial, customer, internal business process, and learning and growth perspective. As well as, provides a translation of strategy into a coherent set of performance measures. The nature of PMS is ranging from combinations of financial and non-financial measures, for integrative of long-term strategy and operational goals, and linking operations of different perspectives of performance and strategies. Further, from an information system perspective for characterizing PMS, this refers to a range of information available for managers, which is perceived as being useful. Drawing on these descriptions of PMS, it is argued that an information characteristic of PMS is comprehensiveness; where, it is defined here as the extent to which a PMS provides managers with comprehensive performance information.

Many authors agree about a range of characteristics, which enhance PMS comprehensiveness, relevance and, ultimately therefore, effectiveness, such as: Balanced measures such as financial and non-financial, internal and external, and linking to the business strategy, linking measures hierarchically from strategy through to operational detail (Dixon, et al., 1990; Lynch and Cross, 1991). Although the study of performance management has accumulated a great knowledge of the effects of the PMS on performance, the actual mechanism of these effects is not fully understood (Pavlov & Bourne, 2011). Motivated by the aforementioned background, proposed theoretical framework is that attempts to answer main objectives. Firstly, it attempts to unravel the various perspectives and define performance measurement system and suggest on how it could be further developed. Secondly, employing contingency theory as its underpinning theory this paper attempts to identify the extent of organization's firm's competitiveness is influenced by the extent of PMS design. Finally, the perceived possible performance consequences of the PMS design would be put forth to legitimize the development as an important remedial to the traditional performance measurement system in aiding organization's long-term survival.

The paper is organized as follows: the earliest section presents literature review relating to the development of the proposed theoretical framework, inherited by the paucity of PMS in the literature, development in management accounting that lead to PMS information requirements is briefly dwelt. It followed by conceptualization of PMS as an information system. Then, section presented the conceptual framework and propositions of the current paper. In the latest section, some implications in the theory and practice conclusion are presented.

Literature Review

Performance Measurement Systems Design:

The concept of PMS is defined from an information system perspective. It is conceptualized as a formal system design for providing information to managers. The literature has identified several important features of PMS. These include a comprehensive and diverse set of performance measures, the integration of measures with strategy and link to value outcomes, and the coverage of performance measures related to different parts of the firm (Malina & Selto, 2001; Ittner, et al, 2003b; Malmi, 2001; Neely, et al., 2005). A unique characteristic of strategic PMS is the explicit link established between performance measures and organization's strategy (Kaplan & Norton, 1996). In this study, the PMS specifically is defined as a system that has set of distinctive such as: (1) The integration of long-term strategy and operational goals ;(2) The provision of performance measures in the area of multiple perspectives ;(3) the provision of a sequence of goals/ metrics/ targets/ action plans for each perspective (Chenhall, 2005; Gimbert, et al, 2010).

Drawing on these descriptions of PMS, it is argued that an information characteristic of strategic PMS is comprehensiveness; It is defined the extent to which a PMS provides managers with comprehensive performance information. An information system (e.g. Gordon and Narayanan, 1984) suggest that the information need for decision making can be considered in terms of general information characteristics. These information requirements are the user specifications of information characteristics involved in information seeking, and refer to those qualities of information perceived by managers to be useful to facilitate their decision making. These researchers suggest that each item of information has a source (information may come from internal or external sources), scope (information may be narrow or wide in its representation), level of aggregation (information may be detailed or aggregated), time-horizon (data items may report what has happened, i.e. ex-post or what is expected to occur, i.e. ex-ante), currency (information may report on the most-recent events or be older), required accuracy (information may be high or low in its correctness) and frequency of use (information may be used very frequently or infrequently). Whilst, the general importance of these information characteristics for the design of accounting and management information systems is well documented in the literature (e.g., Gordon and Narayanan, 1984; Chenhall and Morris, 1986), they cannot be readily translated into implications for the PMS usage.

The conceptual draws on three key literature bases and illustrates three categories of antecedents of the usefulness of performance information characteristics: environmental uncertainty perceptions, decision-maker characteristics, and work environment factors (Chenhall & Morris, 1986). Environmental uncertainty perceptions are drawn from conceptual frameworks and empirical investigations in organizational design and behavioral decision-making; decision-maker factors are drawn from the personality and cognitive psychology literature; work environment factors are drawn from theories of managerial information processing.

Although the considerable emphasis has been placed on potential benefits of contingency theory applications to accounting research, relatively few empirical investigations, which are examining PMS design. The framework suggests that specifications of information characteristics may depend on the nature of the external environment, work conditions that decision-makers have to deal with, and the psychological disposition of the decision-maker. Specifically, the key premise, which underlies this study, are: (1). Perceptions of state, effect and response external environmental uncertainty is linked to the perceived usefulness of performance information characteristics. (2). Decision-makers with different behavioral and psychological profiles will perceive the usefulness of performance information characteristics differently. (3) The perceived usefulness of performance information characteristics is affected by a range of work environment factors, including : (a) the nature of managerial decision activity; (b) the importance of managerial decisions; (c) decision arrival time; (d) managerial task difficulty; and (e) managerial task is variability.

Many authors agree about a range of characteristics, which enhance PMS comprehensiveness, relevance and, ultimately therefore, effectiveness, such as: Balanced measures such as financial and non-financial and internal and external and linking to the business strategy, and linking measures hierarchically from strategy through to operational detail (Dixon, et al., 1990; Lynch and Cross, 1991). However, out of the dimensions being suggested by previous studies discussed above only broad scope and integration, which are being use by these companies. Thus, that is the justification for choosing the two dimensions instead of the full fledge characteristics' information of PMS. According to empirical work carried in the information systems, e.g. (Chenhall & Morris, 1986), and PMS literature (Kaplan & Norton, 1992; Chenhall, 2005; Hall, 2008; Gimbert, et al, 2010; Jusoh, 2008). In this paper, the nature of PMS design is described in terms of a key information characteristic, that of comprehensiveness. The characteristic of comprehensiveness within PMS design has two components. First, a generic aspect involving information that provides an understanding of cause-effect linkages between operations and strategy goals, and between various aspects of the value chain (Kaplan & Norton, 2001; Malina & Selto, 2001). Second, a measurement component concerning the provision of measures in the areas of financial, customers, business processes and long-term innovation (Kaplan & Norton 1996; Sharma, 2000; El-Shishini, 2001; Malmi, 2001). It is this characteristic of comprehensiveness that is seen to provide managers with information that potentially assists in developing competitive strategies.

Competitive Capability

In today's business, creating new forms of competitive advantage has become a main concern for management as the business environment continues to change rapidly and unpredictably (Boon-itt, 2009). Based on this challenge, an effective manufacturing strategy must take into account the competitive advantage of the firms over their competitors. In practice, the competitive advantage is usually reflected in its superiority in production and performance outcomes (Day & Wensley, 1988). The competitiveness must also be first identified and evaluated to achieve firm's strategic goals. In relation to operation management, the certain aspects of competitive advantage such as cost, quality, and time, which use as the competitive weapons. According to Porter (1985), competitive advantage is the extent to which a firm can create a defensible position over its competitors. Moreover, the capabilities are activities that a firm can do better than its competitors. The way a firm chooses to improve its competitive advantage should ideally create significant difficulties for others to imitate, which results in a long-term or sustainable competitive advantage.

Models of market globalizations maintain that business organizations operate within increasingly competitive, global environments (Bustinza, et al, 2010; Porter, 1990) .Porter (1985, 1990) suggests that businesses are compelled to compete by differentiating their products based on product's quality or low price. Others claim that organizations focusing strategies on product features must do so without a price premium. As Skinner (1985) mentioned that, Producing on a lower cost would only be possible with a decree in quality. This is because a plant that is supposed to provide a high level of all capabilities will suffer from a high level of complexity and confusion (Boon-itt, 2009).

Competitive advantage can be defined as a positional superiority, based on the provision of superior customer value or the achievement of lower relative costs, and the resulting market share and profitability performance (Day & Wensley, 1988). Competitiveness is the extent to which a firm can create a defensible position over its competitors, and it comprises capabilities that allow a firm to differentiate itself from its competitors and is an outcome of critical management decisions, (Porter, 1985). The strategic positioning of a firm reflects the organization's ability to generate competitive advantage (Kim, Song, & Koo, 2008).

According to Porter (1990) organization's performance is determined by industry structure and the firm's strategic position in the industry; strategic position is a function of business strategy (i.e., product differentiation or cost leadership). Such competencies should lead to the marketplace positional advantages through competitive strategies such as product differentiation and cost leadership, which considered as product characteristics. And the different strategic positioning will lead to different performance (Kim, et al., 2008).

Porter posits that such an attractive relative position is the result of one of two basic types of competitive advantages: lower costs than rivals or the ability to differentiate and command a premium price in excess of the extra cost of differentiating. In this view, "superior profitability can only logically arise from commanding a higher price than rivals or enjoying lower costs." Successful strategic outcomes are defined as being competitive on these strategic priorities. To sustain competitive advantage require administrative procedures that encourage invention and creativity, targeted on combinations of product features (Clark & Fujimoto, 1991). Furthermore, contemporary strategies place demands on production processes to provide a capacity to manufacture products with enhanced features but at low cost (Cooper, 2000). Once formulated, effective implementation is required to ensure that innovative product characteristics and technologies deliver product characteristics to customers in cost-effective ways (Shank & Govindarajan, 1993).

The concept of competitive advantage requires that given business strategies be viewed relative to its competitors with respect to three main areas (quality, cost and service). In other words, the competitive advantage from the dimension of value and quality, the main elements of which can be labeled: cost-based, product-based, and service-based. Meanwhile, various studies have suggested many different dimensions of competitive advantage (Boon-itt, 2009). Rondeau, et. al., (2000) focused on dimensions of competitiveness that are: competitive pricing, premium pricing, and value to customer quality, dependable delivery and product innovation. Rosenzweig, et. al., (2003) and, Kristal, el. al., (2010) focused on four dimensions of competitive advantage, which are: product quality, delivery reliability, process flexibility, cost leadership. Li, et. al., (2006) examined dimensions of competitive advantage, which focused on the following performance: price/cost, quality, delivery dependability, product innovation, and time to market. However, According to Lau, (1996; 1999) the increasing number of manufacturing firms recognizes that achieving low-cost and high quality are basic, priority for improve their competitive advantages (Boon-itt, 2009). Further, the result of exploratory study regarding to conceptualize of competitive advantage the firm's ability to achieve high level of production attributes.

In this paper, the competitive advantage is conceptualized based on the production attributes (product-based). The product attributes are manufacturing-based competitiveness. Whereas, it is used to differentiate it with the existing definition of basic of competitive ability, and they are more suitable and importantly for manufacturing industrial, particularly in transition economic. In addition to the empirical literature has been quite consistent in identifying attributes of product as important competitive advantage (Tracey, et al., 1999; Rosenzweig, et al., 2003; Li, Ragu-Nathan, et al., 2006; Rondeau, et al., 2000; Boon-itt, 2009). The competitive advantage is ability to providing a product with unique attributes for which customers are prepared to pay a premium price, this premium exceeding the additional costs of providing the unique attribute.

Performance Consequences

The concept of firm's performance is related to the survival and success of an organization. Even though literature on performance is very extensive but there is still a lack in consensus about the meaning of the term. However, the majority of the studies have used financial and non-financial indicators to measure performance (Johannessen, et al., 1999). The financial and non-financial measures can be used to operationalize firm's performance, but the use of financial measures is a more common, even, to some extent, extent in the certain firm. Examples of financial measures are return on investment, return on assets. Further, the financial reports have been produced a daily basis. Due to limitations of financial performance mentioned above and the impact of globalizations on today's business environment, firms could rethink their current performance measurement, which more is focusing on financial to a more balanced measurement which has both financial and non-financial dimensions (Atkinson & Brown, 2001). There is also a growing need to assess firm's performance through non-financial indicators. The reason is that financial measures only tell about a firm's past performance while non-financial measures reflect the health and wealth-creating potential of the firm (Kalafut & Low, 2001). Furthermore, Kaplan and Norton (1996) argue that measurement using only financial measures can damage an firm's capacities, and they recommend that a combination of financial and non-financial measures are better suited for evaluating performance.

Performance measurement system Design, competitive advantage and performance:

Performance-measurement systems can play a crucial role in strategy implementation by helping to translate firm's strategy into desired behaviors and results, communicate expectations, monitor progress, provide feedback, and motivate employees to improve firm's performance (Chenhall & Langfield-Smith, 1998; Kaplan & Norton, 2001; Ittner, et al., 2003b; Chenhall, 2003;). More specifically, and according to Hambrick (1983); Shrivastava (1983) strategy researchers have stressed that information acquisition provides potentially useful ideas related to external and internal opportunities and threats that are relevant to formulating innovative strategy to gain competitive advantage (Chenhall, 2005). According to Zhang and Lado (2001), the potential contributions of an information system to competitive advantage can be understood in terms of their impact on the development and utilization of distinctive organizational effectiveness. Roslender and Hart, (2002) report that, the recent history of attempts to generate accounting information to support the pursuit of sustainable competitive advantage by businesses. Further, the results Zhang's (2005) study suggested that information system can be a source of competitive advantage and superior economic performance if they are used to support the development of certain competitive advantage tied to sustainable competitive advantage.

The using of performance information assists managers in positioning their firm in the competitive market; a firm's proper positioning in the competitive market is crucial to its ability to subsequently sustain the package of product attributes it offers to customers and achieving a cost advantage over competitors is the basis for such a positioning (Bromwich & Bhimani, 1994). There are associations between information type and the development and implementation of strategy. Where, the appropriate information mix and balance of financial and non-financial information is important to support strategic processes and monitor the achievement of strategic goals (Bhimani & Langfield-Smith, 2007). Moreover, the finding of Malina and Selto's (2001) study has supported the role of PMS in providing an overall measure of firm's performance, which managers perceive as important availability and useful information for managing their firms. And the use of an information system for strategic purposes can provide a variety of competitive advantages (Choe, 2003) and supports for strategic flexibility positively related to sales growth and returns on sales (Zhang, 2005). PMS supports the competitive strategies (Rivard, et al., 2006). The management accounting systems are providing the information which, lead to reduce uncertainty and support the product development (Davila, 2000). In addition, numerous researchers claimed that strategic PMS plays an important role in assisting a firm to achieve high level of competitiveness (Fitzgerald, Johnston, et al., 1991; Kaplan & Norton, 1992; 1996; Simons, 2000; Chenhall R., 2005).

In the same time, the strategic positioning has affected on the firm's performance (Hawawini, et al., 2003; Porter, 2001; Kim, et al., 2008; Bustinza, et al., 2010). As well as, firm's competitiveness has a positive affected on the performance (Rosenzweig, et al., 2003; Kristal, et al., 2010). And as information systems can be the foundation for a strategic information systems and management system provided that certain development guidelines are followed, appropriate metrics is identified, and key implementation obstacles are overcome (Martinsons, et al., 1999). As well as, Campbell, et. al., (2006) find that the firm's strategically linked performance measures systematically reveal more timely information about problems with the strategy, and distinguish between problems with strategy formulation, implementation, and fit. Moreover, the PMS can play a key role in strategy implementation by helping to translate strategy into desired behavior and results, communicate expectations, monitor progress, provide feedback, and motivate employees to improve firm's performance (Chenhall & Langfield-Smith, 1998; Kaplan & Norton, 2001; Ittner, et al., 2003b; Chenhall, 2003; Malaguano, et al., 2010).

Proposed Teortical Framework

Based on the conceptualisation of the respective variables stated above , the propositions are developed and preseted below. The proposed theoretical framwork is depicted in figure 1.

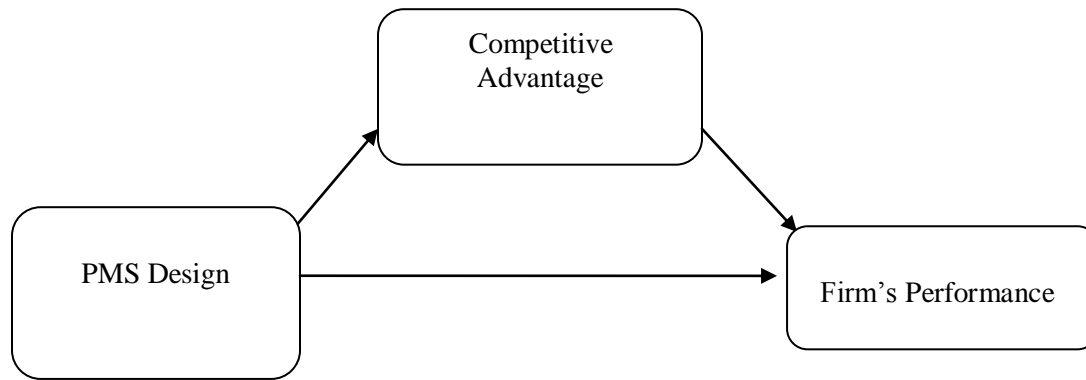


Figure 1 Proposed Theoretical Framework

Performance Measurement System Design and Competitive Advantage

The main role of management control systems in product development is to supply the information required to reduce uncertainty (Davila, 2000). Numerous researchers claimed that PMS played an important role in assisting a firm to gain competitive advantage (Fitzgerald, Johnston, et al., 1991; Kaplan & Norton, 1992; 1996; Simons, 2000; Malina & Selto, 2001; Chenhall R., 2005; Campbell, et al., 2006). According to Nicholls (1992) and supported by Ajibolade, Arowomole and Ojikutu (2010) the companies that are able to identify true product costs in a more strategic PMS sophistication would be capable of price their products more competitively and gain some advantage over their competitors that are unable to do so (Ajibolade, et al., 2010). Further, et. al., (2001) and Henri (2006) suggest that, MAS characteristics which support a certain strategic position may differ from the MAS characteristics that enable a move towards that strategic position. Use of the performance measurement system can help firms to build their competitive advantage (Mohamed, et al., 2008). PMS supports for competitive strategy and strategic position (Chenhall, 2005; Rivard, et al., 2006) Therefore, it is hypothesized that:

H1: There is appositve relationship between PMS design and competitive advantage.

Performance Measurement System Design and Performance

This aspect would appear an important aspect of effective PMS, as results of the association between organization's performance and its PMS, which have been ambiguous; the evidence is mixed at best on whether the importance placed on the performance measurement system positively affects performance (Kaplan & Norton, 1992; 1996; Ittner & Larcker, 1998a; Wouters, et al., 1999). Despite, some studies have provided support for the association (Anderson, et al., 1997; Pavlov & Bourne, 2011).

H2: There is appositve relationship between PMS design and performance.

Competitive Advantage and performance

The advantage of production attributes is main area of competitive advantage, and it is an important capability for a firm to survive and succeed in a competitive market, cope with the market competition (Porter, 1985) and to enhance organizational performance (Day & Wensley, 1988; Porter, 2001; Hawawini, et al., 2003; Kim, et al, 2008). The strategic positioning has affected on the performance (Hawawini, et al., 2003; Porter, 2001; Kim, Song, & Koo, 2008; Bustinza, et al., 2010). As well as, firm's competitiveness has a positive affected on the performance (Rosenzweig, et al., 2003; Kristal, et al., 2010).

H3: There is appositve relationship between competitive advantage and performance.

Expected contribution and Conclusion

This paper has advanced a proposed theoretical framework attempting to answer pertinent objectives. Inherited by its little progress to data, this paper unraveled PMS various conceptualization and its claimed information characteristics and subsequently, the extent of the PMS design. By investigating the level of PMS design in Malaysia it will shed lights on PMS development. It is assumed that high level of PMS design will indicate the high level of information that is provided.

Theoretically, it could infer how PMS design should be further developed and promoted, while practically it could assist companies in designing their PMS for particular improving their competitiveness and performance. This paper also attempts to identify the association of PMS design and performance by employing contingency theory as its underpinning theory. Theoretically, it will contribute further in MAS/MCS contingency-based researches. It is hoped that it will shed some lights in relation to the PMS information and performance. Finally, perceived possible performance consequence of PMS information has also put forth to legitimize the development as an important remedial to the traditional performance measurement system as an important means to achieve firm's long-term survival via improve its competitive advantage. By investigating on the strategic outcomes, it will reveal the implication of certain PMS information on the certain outcomes (performance). Theoretically, it could assist academic to develop PMS design for certain competitive advantage and the performance that intended to be improved. For companies in turn, it will imply that to address certain performance issues, they could focus on certain PMS information characteristics.

In summary, the proposed study attempts to enrich the current knowledge on PMS, MAS, MCS, and competitive advantage and strategy literatures from developing country's perspective generally. The PMS design is of value to firm, which intends to sustain their competitive advantage and consequently, to the long-term performance.

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