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International Conference on Accounting Studies (ICAS) 2016
15-18 August 2016, Langkawi, Kedah, Malaysia

A Contingency Model of the Association between Political Turbulence, Intensity of Competition and Balanced Scorecard: Impact on Firm Performance

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Abstract

Performance of manufacturing industry in Iraq has been declining over the last few decades. Worst still, many companies in the manufacturing sector in Iraq are yet to adopt Balanced Scorecard (BSC) to improve their performance despite its potency ensure to achieve competitive advantage and better performance. This study in view of this has conceptualized a framework that incorporates external factors of Political Turbulence and Intensity of Competition as predictors of Firm Performance through BSC. This paper is conceptual as its framework needs to be tested empirically by future researchers.

Keywords: BSC, Performance, Intensity of competition, Political Turbulence, Iraq

1. INTRODUCTION

Firm performance has become one of the essential concerns for the managers of all organizations (Acer & Acer, 2014; Pimentel & Major, 2014). It is considered as the basic driving force behind any powerful nation (Nickell, 1995). Indeed, several organizations worldwide continuously work to improve their performance through various techniques. The ability of the top management to set appropriate firm activities and strategies will determine the strength of the organization in maintaining its performance on the long term (Neely, Mills, Platts, Gregory, & Richards, 1994). For example, organizations should give sufficient attention to maintaining an effective performance measurement system (PMS), as this is critical for their survival (Chow & Van der Stede, 2006).

Within the Iraqi context, manufacturing sector has a crucial role in Iraqi's GDP. Over time, it has been placed in the second rank to support the national economy (Central Bank of Iraq Annual Report (CBIAR), 2013). However, manufacturing sector in Iraq has been under pressure and challenges since 1990, of which previous studies and annual reports have shown that the performance of manufacturing sector is weak as compared with other sectors, such as banking and service sectors (Bureihi, 2011; CBIAR, 2013) perhaps because of their inability to adopt appropriate PMS.

Evidently has experience has shown that majority of Iraq companies are still making use traditional PMS that are limited only to financial measures. A stream of previous management accounting research often have however criticizes the idea of relying only on traditional performance measures that are financial in nature, and stresses the importance of using a combination of performance measures. The main reason behind this is that the

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combination of financial and non-financial measures is considered as more effective in evaluating performance (Atkinson et al, 1997; Chenhall & Langfield-Smith, 2007; Hoque, Mia, & Alam, 2001; Kaplan & Norton, 1992; Pimentel & Major, 2014). The trend of using non-financial measures is increasing in order to integrate it with conventional performance measures that are only financial. Thus, this is amongst the key factors for the development of PMS (Elijido-Ten, 2010). One of the famous PMS models is the BSC (Pimentel & Major, 2014). This model was originated by Kaplan and Norton in 1992. BSC is widely accepted, and the Harvard Business Review declared it is amongst top 75 effective and influential ways of measuring performance in the last century (Niven, 2006). Moreover, BSC is considered as the most important technique in the area of strategic cost management (Malleret et al.2015) that provides information for strategic decision-making. Besides that, it includes three non-financial aspects like customers, learning and growth, and internal operations of businesses (Kaplan & Norton, 2001). Many authors mentioned the importance of the BSC as an important source to improve firm performance (Kaplan& Norton, 1992; Sandström & Toivanen, 2002).

Despite the importance of BSC, empirical literature that supports its veracity in improving firm performance is still very scarce as no conclusion has been reached (Jusoh, 2008). For instance, the studies of Hogue and James (2000), Sim and Koh (2001) have all empirically established that BSC measures are imperative for the performance of an organization. Furthermore, series of studies have equally examined the relationship between external environment factors with specific interest on perceived environment uncertainty (PEU) factors-political turbulence and intensity of competition and their impact on firm performance (e.g. Chenhall, 2007; Feurer & Chaharbaghi, 1995; Hwang, 2005; Kalagnanam & Lindsey, 1998; Wang & Chan, 1995). However, the findings on the relationship between these factors and firm performance are mixed and not conclusive. Also, there is no specific study has holistically examined the effect of performance measures such as BSC on the relationship between political turbulence, intensity of competition and firm performance. This study is not considering the dichotomy that exists between financial and non-financial measures (Widener, 2006); its focus or objective is rather on the holistic effect of these factors on the performance of organization through the BSC.

In view of the above, the rest part of this study is structured as follows: The next section discusses literature review, and conceptual framework and development of hypotheses. The section that follows concludes and makes future research recommendation.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1 Firm Performance

A very important question for all the researchers and practitioners is to identify the reason behind success and failure of organizations, that's why some businesses succeed while others fail. Performance of organizations is the most crucial issue for all organizations. For the management it is very important to know which factors significantly influence the performance of organizations. This identification will help them to take necessary steps that they should initiate to gain success. It should be kept in mind that defining, theorising, and calculating the performance of an organization is not an easy task. Different researchers have difference of opinion and do not have unanimity in defining the ways of measuring performance of organizations. The disagreement in definition of firm performance is a contentious issue among firm researchers (Barney, 1997). However, the core issue is linked with the appropriateness of different approaches regarding the concept utilization and measurement of performance of an organization (Abu-Jarad, Yusof & Nikbin, 2010).

Consequently, contingency theory supports that the design and use of performance measurement therefore depends upon organisational and environmental contexts (Hansen, Mowen, Senkow & Pollanen, 2004). Furthermore, organisational performance can be increased by configuring a better match between BSC and the contextual variables such as external environment, structure, technology, culture, and so on (Fisher, 1998; Sila, 2007). As proposed by a number of scholars, contingency theory posits that organisational performance is contingent on the 'fit' between an organisation's environment and use of performance measures in performance evaluation (for a review, in accounting, see Otley, 1980; Chapman, 1997). Thus, PEU is a concept that is associated with contingency theories (Donaldson, 2001; Miles & Snow, 1978).

Hoque (2005) stated that non-financial performance measures are more likely to positively affect performance in situations of higher environmental uncertainty. This is because non-financial measures are likely to facilitate firm decisions and actions that support strategies based on the needs of stakeholders, internal and external customers, regulatory bodies, managers, and employees (Atkinson et al, 1997; Hoque & James, 2000). It has also been suggested by Kaplan and Norton (1996, 2001) that non-financial performance measures help managers to assess changes in their business environments, determine and evaluate progress towards the

organization's goals, and afford firm achievement of performance. Similarly, Hoque and James (2000) used contingency theory to explore how firm performance can be affected by different uses of BSC in different settings, and they found that BSC is a main contributor to firm performance.

This study builds upon the contingency theory by investigating the relationship between the usage of management accounting system (MAS) information and firm performance. Otley (1980) considered MAS as part of the firm management control systems that will be contingent to the context within which an organization operates, consequently, the firm performance will be affected by the level of MAS information usage. The contingency theory also suggests that PEU affect management accounting practices (Abdel-Kader & Luther, 2008). Therefore, this study builds upon the contingency theory as previous studies Guidara and Khoufi (2014); Jusoh (2008); Hoque (2005); Hoque and James (2000) to examining the link between the stated variables as shown in figure 1 above. These previous studies have indicated that contingency is the best suited to understand the relationships between PEU, BSC as mediator and firm performance.

2.2 Balanced Scorecard (BSC)

In the contemporary, the BSC is regarded among the top most developments in the field of Management accounting. In fact several researchers and academicians have empirically recognized the need and importance of BSC towards enhancing the performance of an organization (Norreklit, Norreklit, Mitchell, & Bjomenak, 2012; Hoque, 2014). The importance of BSC implications can be judged by the arguments given in favour of BSC by Towers Perrin Consulting organizational (Hoque & James, 2000; Hoque et al. 2001; Widener, 2006). Indeed, generally it is accepted that companies that implement formal PMS that are balanced in terms of financial and non-financial indicators will stand ahead of their competitors (Kartalis, Velentzas & Broni, 2013). And BSC by its name shows the balanced considerations that are given to long term as well as short term financial and non-financial objectives of the organization. BSC cover four different perspectives including; perspective of innovation and learning, perspective of business, perspective of customer, and last but not the least the financial perspective (Kaplan & Norton, 1992). These perspectives are used as the holistic performance measures that are helping the organization to stay on course. Given the importance of BSC, there is a dire need of intense research in the field. Despite its dire need and importance, limited empirical support is available in the field, thereby indicating an on-going research in this perspective.

2.3 Political Turbulence, BSC and Firm Performance

One of the external factors affecting firm performance is environmental uncertainty. In line with literature, political turbulence is an important dimension of environment uncertainty. This therefore points to the fact that organizations in the contemporary face dramatic and sudden twists in their environment. When the environment becomes very dynamic, challenging and complex, traditional managerial orientations become inadequate (Hwang, 2005). In such environmental possibilities, organizations face the threat of losing position in the market, reduction in profitability, or in worst case scenario the failure of the business (Hwang, 2005). Chenhall (2007) introduced external environment as an environment that is most hostile and turbulent, which in result causes the higher level reliance over formal controls and focuses on traditional budgets (Chenhall, 2007).

For organizations to survive in the ever changing, growing, and volatile environment, managers must therefore study and strategically plan towards reducing the negative consequences, which usually emanate from poor, inadequate and sometimes contradictory information available from the changing environment. Moreover, managers exhibit entrepreneurial skills for a dynamic environment, because it is true that the estimates of asymmetric information available to the organization become obsolete very soon as the environment changes rapidly. In such environment taking calculated risk for facing the challenges of unpredictable environment is vigorous (Khandwalla, 1977).

Notably however, the opposite of a turbulent environment is a stable environment. In such an environment the organizations usually tries to take the calculated risks during the phase of uncertainty. While decision making regarding competitive, economic, political, technological, and global environment the top management must pay high level attention and complexities (Wang & Chan, 1995). Discontinuous and unfamiliar trends are the major consequences of a high volatile environment which are faced by top level management. Continuous change in the processes of environmental factors is called high level dynamism. The top management has to take the decisions in a low visibility. Low visibility means that the management has to take decisions with such information which is unclear and abstruse.

Importantly, the findings of Ansoff and McDonnell (1990) are consistent with Wang and Chan (1995) in respect of their notion about environmental turbulence. The researchers suggested that complexity, novelty, rapidly changing environment, and visibility of the future are the core environmental turbulence features. Explaining the four contexts, Ansoff and McDonnell (1990) referred complexity to the diversity of issues. The management must consider these diversities while decision making regarding restricting innovative strategies, which are developed for the challenging environment which the organizations face especially in the dynamic environment.

Based on foregoing issues, many phenomena can cause the environment to be perceived as turbulent (Khandwalla, 1972), political factors is one of them (Kattan et al, 2007). An environment, in which there are large cyclical or other swings of economic activity and a rapidly growing industry, is likely to be viewed as turbulent. Rapid sociocultural change, rapid change in the needs of the organization's clientele, or unpredictable shifts in government policies can also lead the decision makers to perceive the environment as turbulent (Khandawlla, 1972). According to Alawattage, Hooper and Wichramashinghe (2007) the study of management accounting in developing countries, should also focus on the implications of such issues as poverty, political instability and uncertainty, business culture and ethics, corruption and such other ills that affect performance of business.

H1a: Political Turbulence positively influences firm performance
H1b: Political Turbulence positively influences Balanced Scorecard

2.4 Intensity of Competition, BSC and Firm Performance

Many researchers have highlighted the need to conduct research on intensity of competition (e.g., Hwang, 2005; Huang, Tayles & Luther, 2010). Organizations compete for raw material, distribution channels, quality, product diversity, price, and selling (Khandwalla, 1977).Because of increasing competition all the organizations are stressing to gain competitive advantage to be strategic in their functioning (Kalagnanam & Lindsey, 1998). In consistency with the argument, Yasai-Ardekani and Haug (1997) highlighted that environment forecasting is compulsory in a highly competitive environment. In time information about environmental analysis is compulsory to compete in the market. In such situations, the speed of decision making is crucial to align organization with the environment (Yasai-Ardekani & Haug, 1997).

In this view, one possible determinant of quick decision making may be the use of multiple performance measures. Libby and Waterhouse (1996) suggested that organizations working in a highly competitive environment should be capable of modifying their control systems. Thus, it becomes compulsory for every organization to take issue of firm performance seriously to survive the keenly competitive environment. According to Neely (1999) increasing competition in businesses had a significant impact on PMS. The current focus of organizations is to differentiate their operations from their competitors for provision of quality services. This can be done by adopting innovative capabilities, customization, and instant responsiveness. In addition, organisations are shaping their PMS in order to meet the challenging and competitive business world (Libby & Waterhouse, 1996). In addition to that, it is suggested that organization with an aim of gaining market leadership should provide customers with value for money (Khandwalla, 1972).This ensures combined and synchronised efforts of organizations for sophisticated control systems to be effective.

Accordingly, Khandwalla (1972) and Feurer and Chaharbaghi (1995), rationalized that every organization control system is associated with competitive intensiveness. Based on this theoretical framework, Hoque and James (2000) suggested that organizations with a strong market position require internal communication, therefore, place greater stress on design and use of PMS. Thus, it is clear that organizations need to cater for a diversified range of market forces for gaining competitive edge. Organizations need such PMS that tracks financial and non-financial performance measures.

Invariably, many studies have argued that intensity of competition has significant influence on firm performance especially that the need for management accounting system is increasing due to intense competition, privatization, modern manufacturing facilities, and deregulation of economies (Bromwich, 1990). Due to changing environment the need for management accounting is increasing day by day (Bromwich, 1990; Mia & Clarke, 1999). Khandwalla's (1972) has considered only price, product, and marketing channels as determinants of firm profitability. Price, product, and marketing channels are not the only factors that trigger the competition but, competitors, technology, and regulations also have a significant impact. These factors actually influence simultaneously and should be studied collectively for understanding competition (Porter, 1979). Subjective evidences also support the nature of competition (Mia & Clarke, 1999). Based on the discussion mentioned above, the following hypothesis has been derived:

H2a: There is a positive relationship between intensity of competition and firm performance.
H2b: There is a positive relationship between intensity of competition and Balance Scorecard.

2.5 The mediating effect of Balanced Scorecard between Perceived Environmental Uncertainty and Firm Performance

Mia and Clarke (1999) argued that managers that use the information provided by the management accounting system (MAS) help organizations to implement benchmarking and monitoring information. So, organizations that use multiple measures usually face higher PEU as compared to those that use traditional measures of performance. This is because financial information is not broad, and it mainly focused only on financial aspects while ignoring many other important factors; thus financial measures many a times ignore several important success factors (Otley, 2001).

In response to this argument, the use of multiple performance measures provided by the BSC approach can play a significant role in providing internal and external broad-based information. Hence, BSC "translates an organization's mission and strategy into a comprehensive set of performance measures that provides the framework for a strategic measurement and management system" (Kaplan & Norton, 1996). Similarly, BSC integrates financial and non-financial measures into four perspectives: financial, customer, internal business process and innovation and learning.

Importantly, studies by Chong and Chong (1997), Mia and Clarke (1999), and Widener (2006) had examined the role of BSC measures usage as a mediating variable; and such studies provide evidence that in part, there could be the relationship between PEU and performance, and this could have indirect effect of the extent to which an organization uses multiple performance measures to evaluate its performance through BSC measures. Consequently, there are certain studies that have highlighted the relationship between changing environment of business and changes in performance measurement systems. Examples of this are organizations in America that were facing higher competitions use multiple measures for analyzing performance (Gordon, & Narayanan 1984).Also, a study on manufacturing organizations suggested that multiple performance measures are used for evaluating performance of businesses that face high level of PEU like competition. In highly competitive environment British industrial organizations use multiple performance measures covering all dimensions of firm performance (Abdel-Maksoud, Dugdale & Luther, 2005). BSC adoption in Korea is considered as the result of heterogeneity and dynamism in the environment (Sohn, You, Lee & Lee, 2003). Likewise, in New Zealand industrial units, managers use BSC to control dynamic environment for attaining sustainability (Hoque et al., 2001). Based on these arguments, the following hypothesis is hereby formulated:

H5a: BSC mediates between PEU and firm Performance
H5b: BSC mediates between political turbulence and firm performance
H5c: BSC mediates between intensity of competition and firm performance

3. CONCEPTUAL FRAMEWORK

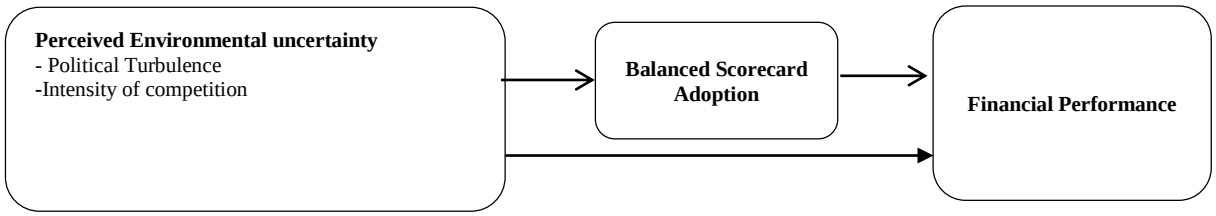

Figure 1: Conceptual Framework

4. CONCLUSION AND FUTURE RESEARCH RECOMMENDATION

The main objective of this paper is to contribute to the body of knowledge through examination of mediating role of BSC on the relationship between PEU factors such as political turbulence, intensity of competition and firm performance. Based on the literature review, this study has been able to establish that the performance of an organization is influenced by various factors and there is no conclusive evidence among the scholars about the specific factor influencing such performance. Based on this, this study has introduced the mediating role of BSC to resolve the conflict with the hope that such performance will be enhanced taking into consideration other factors that have been discussed in this study. Since this study is a conceptual review, we invite future

researchers to validate the research framework of our study by testing the mediating role of BSC through which the effect of PEU factors (political turbulence and intensity of competition) can be felt on the performance of organization.

REFERENCES

Abdel-Kader, M., & Luther, R. (2008). The impact of firm characteristics on management accounting practices: A UK-based empirical analysis. *The British Accounting Review, 40* (1), 2-27.

Abdel-Maksoud, A., Dugdale, D., & Luther, R. (2005). Non-financial performance measurement in manufacturing companies. *The British Accounting Review, 37*, 261-297.

Abu-Jarad, I. Y., Yusof, N., & Nikbin, D. (2010). A review paper on organizational culture and organizational performance. *International Journal of Business and Social Science, 1*(3), 26-46.

Acar, A. Z., & Acar, P. (2014). Organizational culture types and their effects on organizational performance in Turkish hospitals. *Emerging Markets Journal, 3*(3), 18-31.

Alawattage, C., Hopper, T., & Wickramasinghe, D. (2007). Introduction to management accounting in less developed countries. *Journal of Accounting & Organizational Change, 3*(3), 183-191.

Ansoff, H., & McDonnell, E. (1990). *Implanting strategic management* (2nd Ed.). Englewood Cliffs, NJ: Prentice-Hall.

Atkinson, A., Balakrishnan, R., Booth, P., Jeans, M., Cote, T., Grout, T., Mali, H., Roberts, E., Ulan, & Wu. A. (1997). New directions in management accounting

Barney, J. B. (1997). *Gaining and sustaining competitive advantage*. Addison–Wesley Publishing Company: Reading, MA.

Bureihi, F. (2011). Iraqi economy ... opportunities and challenges. *Baghdad College of Economic Sciences University Journal, 27*, 21-56.

Central Bank of Iraq, Annual Report, (2013). Statistics & Research Department. Retrieved from http://www.cbi.iq

Chapman, C. (1997). Reflections on a contingent view of accounting. *Accounting, Organizations and Society, 22*(2), 189-205.

Chenhall, R. (1997).Reliance on manufacturing performance measures, total quality management and organizational performance. *Management Accounting Research, 8*(2),187-206.

Chenhall, R. H., & Langfield-Smith, K. (2007). Multiple perspectives of performance measures. *European Management Journal, 25*(4), 266-282.

Chong, V., & Chong, K. (1997). Strategic choices, environmental uncertainty and SBU performance: A note on the intervening role of management accounting systems. *Accounting and Business Research, 27*(4), 268-276.

Chow, C., & Van der Stede, W. (2006). The use and usefulness of nonfinancial performance measures. *Management Accounting Quarterly, 7*(3), 1-8.

Donaldson, L. (2001). *The contingency theory of organizations*. Thousand Oaks, CA: Sage.

Elijido-Ten, E. (2010). Public disclosure of strategic performance measurement system: An Australian investigation. *International Handbook of Academic Research and Teaching*, 38.

Feurer, R., & Chaharbaghi. K. (1995). Performance measurement in strategic change. *Benchmarking for Quality Management and Technology, 2*(2), 64-83.

Fisher, J. (1998). Contingency theory, management control systems and firm outcomes: Past results and future directions. *Behavioral Research in Accounting, 10*, 47-64.

Gordon, L., & Narayanan, V. (1984). management accounting systems, perceived environmental uncertainty and organization structure: An empirical investigation. *Accounting, Organizations and Society, 9*(1), 33-47.

Guidara, R., & Walid, K. (2014). Balanced scorecard and performance in a competitive environment. *International Journal of Accounting and Economics Studies 2*(1), 40-45.

Hansen, D. R., Mowen, M. M., Senkow, D. W., & Pollanen, R. M. (2004). *Chapter 17 - Strategic performance evaluation and management*. Management Accounting, Canadian 6th Edition, Nelson Thompson.

Hoque, Z. (2005). Linking environmental uncertainty to non-financial performance measures and performance: A research note. *The British Accounting Review, 37*(4), 471-481.

Hoque, Z., & James, W. (2000). Linking balanced scorecard measures to size and market factors: Impact on organizational performance. *Journal of Management Accounting Research, 12*, 1-17

Hoque, Z., Mia, L., & Alam, M. (2001). Market competition, computer-aided manufacturing and use of multiple performance measures: An empirical study. *British Accounting Review, 33*(1), 23-45.

Huang, C., Tayles, M., & Luther, R. (2010). Contingency factors influencing the availability of internal intellectual capital information. *Journal of Financial Reporting and Accounting, 8*(1), 4-21.

Hwang, E. J. (2005). Strategic management and financial performance in South Korean apparel retail stores. Unpublished PhD Thesis, Virginia Polytechnic Institute and State University, US.

Jusoh, R. (2008). Environmental uncertainty, performance, and the mediating role of balanced scorecard measures use: Evidence from Malaysia. *International Review of Business Research Papers, 4*(2), 116-135.

Kalagnanam, S. S., & Lindsay, R. M. (1998). The use of organic models of control in JIT firms: Generalizing Woodward's findings to modern manufacturing practices. *Accounting, Organizations & Society,24*(1), 1-30.

Kaplan, R. S., & Norton D. P. (1996). *The balanced scorecard: Translating strategy into action*. Boston: Harvard Business School Press.

Kaplan, R. S., & Norton, D. P. (1992). The balanced scorecard-measures that drive performance. *Harvard Business Review, 70*(1), 71-79.

Kaplan, R. S., & Norton, D. P. (2001). Transforming the balanced scorecard from performance measurement to strategic management: Part 1. *Accounting Horizons, 15*(1), 87-104.

Kattan, F., Pike, R., & Tayles, M. (2007). Reliance of management accounting under environmental uncertainty: The case of Palestine. *Journal of Accounting and Organisational Change, 3* (3), 229-247.

Khandwalla, P. N. (1972). *The design of organization*. New York

Khandwalla, P. N. (1977). The Design of Organizations, New York: Harcourt Brace Jovanovich.

Libby, T., & Waterhouse, J. (1996). Predicting change in management accounting systems. *Journal of Management Accounting Research, 8*, 137-150.

Malleret, V., De La Villarmois, O., & Levant, Y. (2015). *Revisiting 30 years of SMA literature: What can we say, think and do?* HEC Paris Research Paper No. ACC-1081.

Mia, L., & Clarke, B. (1999). Market competition, management accounting systems and business unit performance. *Management Accounting Research, 10*(2), 137-158.

Miles, R. E., Snow, C. C., Meyer, A. D., & Coleman, H. J. (1978). Organizational strategy, structure, and process. *Academy of management review, 3*(3), 546-562

Neely, A. D. (1999). The performance measurement revolution: Why now and where next. *International Journal of Operations and Production Management 19*(2), 205-228.

Nickell, S. (1995). *The performance of companies-the relationship between the external environment, management strategies and corporate performance*. Oxford UK & Cambridge USA Blackwell.

Niven, P. R. (2006). *Balanced scorecard step-by-step: Maximizing performance and maintaining results*. New York: John Wiley & Sons.

Otley, D. (1980). The contingency theory of management accounting: Achievement and prognosis. *Accounting, Organizations and Society, 5*(4), 413-428.

Otley, D. (2001). Management control and performance management: Whence and whither? *The British Accounting Review, 35*, 309-326.

Pimentel, L., & Major, M. J. (2014). Quality management and a balanced scorecard as supporting frameworks for a new management model and organisational change. *Total Quality Management & Business Excellence, 25*(7-8), 763-775.

Sandström, J., & Toivanen, J. (2002). The problem of managing product development engineers: Can the balanced scorecard be an answer? *International Journal of Production Economics*, 78(1), 79-90.

Sila, I. (2007). Examining the effects of contextual factors on TQM and performance through the lens of organizational theories: An empirical study. *Journal of Operations Management, 25*(1), 83-109.

Sim, K. L., & Koh, H. C. (2001). Balanced scorecard: A rising trend in strategic performance measurement. *Measuring Business Excellence, 5* (2), 18-26.

Sohn, M. H., You, T., Lee, S. L., & Lee, H. (2003). Corporate strategies, environmental forces, and performance measures: A weighting decision support system using the K-nearest neighbor technique. *Expert Systems with Applications, 25*(3), 279-292.

Wang, P., & Chan, P. (1995). Top management perception of strategic information processing in a turbulent environment. *Leadership & Organization Development Journal, 16*, 33-43.

Widener, S. (2006). Associations between strategic resource importance and performance measure use: The impact on firm performance. *Management Accounting Research, 17*(4), 433-457.

Yasai-Ardekani, M., & Haug, R. (1997). Contextual determinants of strategic planning processes. *Journal of Management Studies, 34*, 729-767.