International Congress on Interdisciplinary Business and Social Science 2012 (ICIBSoS 2012)

Perceived Environment Uncertainty, Business Strategy, Performance Measurement Systems and Organizational Performance.

Elvin Bastian[a], Munawar Muchlish[a*]

[a]Faculty of Economic, University of Sultan Ageng Tirtayasa 42122, Serang, Banten, Indonesia

Abstract

The purpose of this study was to investigate the relationship of perceived environment uncertainty, business strategy on performance measurement systems (PMS) and organizational performance. The data is processed by using a Partial Least Square (PLS).
This study was conducted in Manufacturing West Java and Banten, Sample of this research is manager, using survey research with primary data collection with the questionnaires. Selection of the samples tested in this study using purposive sampling, 86 respondents was selected as sample of this study.
The results of this study are perceived environment uncertainty, business strategy and organizational performance significantly positively associated, non-financial performance measurement systems significantly associated, but the financial performance of the measurement system is not significantly associated

1. Introduction

Strategy are plans to achieve the goals of the organization, there is general agreement that the strategy describes the general direction you want to target an organization to achieve its goals (Anthony and Govindarajan, 2004). The company's main objective is concretely enhance shareholder value, through increased prosperity owners or shareholders (Brigham and Gapenski: 1996). Miles and Snow (1978) with four types of strategies: Prospector, defender, analyzer and reactor. Simons (1987). Henri (2006) looked at the strategy aspect of competitive advantage. Although there are differing views on the implementation of strategy and business environment, it is believed that the strategy is related to the long-term and

----

*[*] Corresponding author. Tel.: +628156219709.; +6285697337711
E-mail address: elvinbas69@gmail.com. (elvin bastian), muchlish_ak@yahoo.com . (munawar muchlish)

sometimes indirect impact to the organization. Strategy of a corporation associated with the decision about the type of business that will operate, including what business will be received and how well the structure and financial condition of the company (Johnson & Scholes, 1989).

Neely (1998) argue that a performance measurement system enables information decisions to be made and actions to be taken for quantifying the efficiency and effectiveness of past actions through a merger, separation, selection, analysis, interpretation and dissemination of appropriate data. much remains to be known about what PMS and strategies, such as the need for alignment of what and how the company achieve it (Chenhall and Langfield-Smith, 2003; Ittner, Larcker and Randall, 2003; Malina and selto, 2004; Chenhall, 2005). This suggests that the issue of performance measurement is still not finished, but only to the traditional measurement of profitability is considered 'disabled', because a lot of strategy and business opportunities are long term benefits to the exclusion of current profits (Roos, Westerfield and Jaffe, 1993). The interesting thing about some revelation is that many companies still using traditional performance measures, ie by just measuring the short-term profitability (Tangen, 2003; Ross, et al .1993), which suggests that the strategy and long-term business opportunities that sometimes override current gain. These two arguments above can be a motive in this study, the role of the strategy, PMS, financial and non-financial performance.

Ittner, Larcker, and Rajan (1997) examine the factors that affect the relative weights of the use of financial and nonfinancial measures in compensation contracts Chief Executive Officer (CEO) and found that companies using non-financial measures with strategic emphasis, resulting in a change and growth in company. Performance measurement systems play a vital role in the efficient and effective management of the organization, but still criticized and much debated (Kennerley and Neely, 2002). Environmental uncertainty is also a factor that affects the choice of style contingent performance evaluation (Govindarajan, 1984). The general conclusion from the above studies is that when environmental uncertainty is considered high, then information, such as performance benchmarks based on more extensive external and future oriented, non-financial aspects and the qualitative nature will manage uncertainty.

Ittner *et al* (2003) found that PMS has positive and significant effect on organizational performance. Henri (2006) states that the PMS has positive and significant effect on the performance, the results of this study are consistent and support the study of Ittner e*t al*. The use of a balanced and integrated PMS is an aspect that is often put it emphasized the non-financial performance measures, and previous studies have found that these measures lead to a good performance.

The research will be based on the central issue in the main role reexamine Performance Measurement System (PMS) on the organizational performance that combines aspects of financial and non-financial measures and to develop a research model direct and indirect relationships of uncertainty of the business environment and business strategy on organizational performance

2. Theoritical Framework and Hypothesis Development

2.1 Perceived Environment Uncertainty and Business Strategy

Association between Perceived Environment Uncertainty on Business Strategies numerous studies correlate the various aspects, for example: Oliver (1991) found that firms in the high competitive pressure to adopt growth-oriented in order to exploit the key resources and achieve excellence competitive. Therefore, the following hypotheses are proposed:
Hypothesis 1: There is a positive relationship between perceived environment uncertainty and business strategy.

2.2 Perceived Environment Uncertainty and Performance Measurement Systems

Chenhall and Morris (1986) suggests that when the level of uncertainty environment is high then the firm will tend to use non-financial information in greater proportion and would be effective in addressing the environmental uncertainty, formally stated:

Hypothesis 2: There is a positive relationship between perceived environment uncertainty and performance measurement systems.

2.3 Perceived Environment Uncertainty and Organizational Performance

The study of Isabela and Waddock (1994) found a positive relationship between organizational performance and top management assurance against Strategic environmental assessment and decision. Mia and Clarke (1999) found evidence that improved organizational performance under conditions of increased competition, and showed a positive relationship between the intensity of competition in the market with organizational performance. These arguments lead to the following hypothesis:

Hypothesis 3: There is a positive relationship between perceived environment uncertainty and organizational performance

2.4 Business Strategy and Performance Measurement System

The study of Hoque (2004) using the unit of analysis of business strategies Miles and Snow, argued that there is no direct relationship between the business unit strategy and organizational performance, but there is a significant positive relationship between the strategy and the use of non-financial measures in performance evaluations. The results are consistent with the view Hoque previous researchers (Simons 1987; Lynch and Cross 1991; Simons 1995; Ittner et al, 1997). Formally stated:

Hypothesis 4: There is a positive relationship between strategic use and performance measurement system

2.5 Performance Measurment Systems and Organizational Performance

Nash (1993) argued that profitability is the best indicator to identify whether the company is doing business well and be a success measure. Furthermore, Doyle (1994) emphasized that profitability is a common measure of performance for the company. The study of Hoque (2004) found significant positive results in the relationship between strategy and management's use of non-financial measures to evaluate the performance of the organization. Formally stated:

Hypothesis 5: There is a positive relationship between use of financial performance measurement systems and organizational performance

Hypothesis 6: There is a positive relationship between use of non financial performance measurement systems and organizational performance
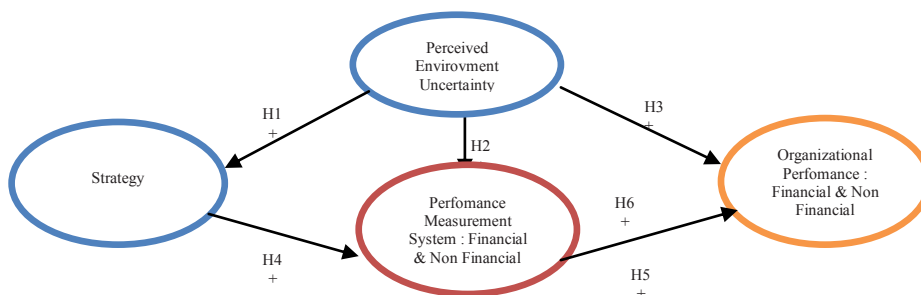

Figure 1. Theoretical Model

3. Methodology

The sample in this study is a manager at a manufacturing company in West Java and Banten province. Criteria for selection of the sample in the study is aimed at the sample (purposive sampling). To test the model and hypotheses used analysis of Structural Equation Modeling (SEM). In testing the model using SEM PLS (Partial Least Square). Selection of Indicators Business Strategy Miles and Snow (1978) is based on that indicator clearly describe the business strategy to adapt to the environment in which they exist in order to solve three major problems: entrepreneurship, technology, administration, and which organizations continuously adapt to their environment, Variabel perception of environmental uncertainty of the Lee (2009) who suggested indicators International Social Culture and Globalization. Variable perceived environmental uncertainty adopted from Hoque (2004). Lee (2009) who suggested indicators International Social Culture and Globalization. Constructs of performance measurement systems for the financial indicators measured. For non-financial performance measurement system was measured questions with a 7 point Likert scale, point 1 (strongly disagree) to 7 (strongly agree).

4. Result and Discussion

Testing the validity of the data in this study is to use the software PLS Model Outer Convergent validity is seen that the value of square root of average variance extracted (AVE) of each construct where the value must be greater than 0.5. Similarly, reliability testing, research using PLS software with Composite Reliability. A reliable if the data says, composite reliability of more than 0.7. Similarly, the reliability test, the authors use the software PLS Composite Reliability. A reliable if the data says, composite reliability of more than 0.7. (Ghozali, 2008)..

Table 1. Outer model, discriminat Validity and Composite Reliability

Variable	AVE	Composite Realibility	R Square
Predictor (PR)	0.788	0.971	0.934
Deffender (DR)	0.734	0.957	0.920
Perceived Env Uncert (PEU)	0.677	0.943	
Perf Meas. Sys Non Fin (PMSNF)	0.783	0.962	0.945
Perf Meas. Sys. Fin (PMSF)	0.657	0.884	0.951
Org Performance (OP)	0.782	0.970	0.937

Table 1. Explaining the value of AVE Predictor (PR), Deffender (DR), Perceived Environment Uncertainty (PEU), Non-Financial Performance Measurement System (PMSNF), Financial Performance Measurement System (PMSF) and Organizational Performance (OP). It can be seen that each construct (variable) has a value above 0.5 AVE. This indicates that each construct has good validity value of each indicator or the questionnaire used to determine the relationship of perceived environmnent uncertainty, business strategy, performance measurement systems and organizational performance be valid.

From table 1 see that every construct or latent variable has a value of composite reliability above 0.7 which indicates that the internal consistency of the independent variables (Business Strategy, Perceived Environment Uncertainty), the dependent variable (Performance Measurement Systems and Organzational Performance) had good reliability.

The significance of the estimated parameters provide very useful information about the relationship between the variables of the study. Limits to reject and accept the hypothesis is ± 1.96, which if the value of t statistic is greater than t table (1.96) then the hypothesis is accepted, otherwise if the value of t statistic is less than t table (1.96) then the hypothesis is rejected. Table 2 provides estimates of output for testing the structural model.

Tabel 2. result for inner weight

Variable	Original sample estimate	Mean of subsamples	Standard deviation	T-Statistic	Decision :
PEU -> PR	0.966	0.966	0.007	137.282	**H_{1a} Accepted**

PEU -> DF	0.959	0.961	0.008	122.323	**H$_{1b}$ Accepted**
PEU -> SPMF	1.003	0.987	0.109	9.225	**H$_{2a}$ Accepted**
PEU -> SPMNF	0.417	0.444	0.123	3.401	**H$_{2b}$ Accepted**
PEU -> OP	0.591	0.585	0.240	2.465	**H$_3$ Accepted**
PR -> SPMNF	0.638	0.599	0.155	4.119	**H$_{4a}$ Accepted**
PR -> SPMF	-0.029	-0.012	0.113	0.253	**H$_{4b}$ Rejected**
DF -> SPMNF	-0.076	-0.063	0.147	0.521	**H$_{4c}$ Rejected**
SPMF -> OP	0.034	0.054	0.185	0.185	**H$_5$ Rejected**
SPMNF -> OP	0.352	0.341	0.122	2.878	**H$_6$ Accepted**

From the table it appears that the relationship PEU to Business Strategy (PR) positive 0.966 and significant at 0.05 (137 282> 1.96), so the hypothesis H1a is accepted. For a variable relationship to the DF to PE positive and significant at the 0.05 0.959 (122 323> 1.96), so the hypothesis H1b is accepted. PEU relationship to PMSF positive 1.003 and significant at 0.05 (9225> 1.96), so the hypothesis H2a is accepted. PEU relationship to PMSNF positive 0.417 and significant at 0.05 (3401> 1.96), so the hypothesis H2b is accepted. PEU relationship to the OP positive 0.591 and significant at 0.05 (2.465 <1.96), so the hypothesis H3 is accepted. Relations PR to PMSNF positive 0.591 and significant at the 0.05 (4.119> 1.96), so the hypothesis H4A accepted. Relations PR to negative PMSF -0029 and not significant at 0.05 (0.253 <1.96), so the hypothesis H4B rejected. DF against negative relationship PMSNF -0.076 and not significant at 0.05 (0.521 <1.96), so the hypothesis H4c is rejected. OP to PMSF positive relationship to 0.034 and not significant at 0.05 (0.185 <1.96), so the hypothesis H5 is rejected. While the positive relationship PMSNF to OP 0.352, significant at 0.05 (2.878 <1.96), so the hypothesis H6 is accepted.

5. Conclusion, Limitation and Future Research

The results of this study received the first hypothesis is consistent with previous studies Oliver (1991) found that companies in the high competitive pressure to adopt growth-oriented in order to exploit the key resources and achieve competitive advantage. For the second hypothesis is consistent with previous research Chenhall and Morris (1986) suggests that when the level of uncertainty is high then the firm will tend to use non-financial information in greater proportion and would be effective in addressing the environmental uncertainty. Furthermore, the third hypothesis is consistent with previous studies that found a positive relationship between organizational performance. Mia and Clarke (1999) argued evidence that improved organizational performance under conditions of increased competition, and showed a positive relationship between the intensity of competition in the market with performance of the organization. The fourth hypothesis is consistent with previous research that suggested that by using the unit of analysis of business strategies Miles and Snow, argued that there is no direct relationship between the business unit strategy and organizational performance, but there is a significant positive relationship between the strategy and the use of non-financial measures in the evaluation performance (Hoque Research 2004). The fifth hypothesis is not consistent with the research Doyle (1994) emphasized that profitability is a common measure of performance for the company but it is consistent with the study of Itner. et al (2003) previously stated Typically, companies that make extensive use primarily to non-financial efforts with the same strategy will get high value stock returns. This result is even stronger when performance measurement systems do not significant changes in the last 3 years. Instead the study found little evidence that measuring performance by connecting with accounting measures (Return On Assets and sales growth) and the last hypothesis is consistent with research Hoque (2004) found significant positive results in the relationship between strategy and management's use of non-financial measures to evaluate organizational performance

Limitations of the study are indicators of each variable are still limited and many refer to previous research in this area (Hoque, 2004; Jusoh, 2008; Fleeming, 2009; Spencer 2009).

The future research agenda PEU indicators in accordance with the characteristics and conditions of business environment in Indonesia, which is different to that in Australia, New Zealand and China as the object of other studies as reference research. Adding moderating variables that are supposed to

strengthen/weaken the role of PMS as a measure of organizational performance, variables such as: organizational culture and management accounting systems.

References

Anthony, Robert N and Vijay Govindarajan (2004). *Management Control System*. Mcgraw-Hill. NewYork

Brigham, E.F And I.C Gapenski (1996). *Intermediate Financial Management*, Fith Edition. The Dryden Press. New York

Carol Lee (2009). *Environment-Strategy Relationship and Its Application To Performance: A Study of China's Pharmaceutical Companies In Transition*. Thesis Doctor Of Philosophy Faculty Of Businessand Enterprise . Swinburne University Of Technology.

Chenhall RH, Morris D (1986). The Impact of Structure, Environment and Interdependence on The Perceived Usefulness of Management Accounting Systems, *Acc. Rev.*, 61: 16-35.

Chenhall, R.H. and Langfield-Smith, K (2003). "Management Control Systems Design Withins Its Organizational Control Finding from Contigency Based Research and Directions for The Future." *Accounting Organization and Society*. Vol. 28, pp. 127-168.

Chenhall, R.H (2005). Intergrative Strategis Perfomance Measurement System, Strategic Aligment of Manufacturing Learning and Strategic Outcomes : an exploratory study. *Accounting Organization and Society*. Vol 30. P 395 – 422.

Doyle, Peter. F (1994). *Marketing Management and Strategy*. Prentice-Hal. New York

Fleming, Damon. Chow and Chen (2009). Strategy, Performance - Measurement Systems, and Performance: A Study of Chinese Firms. *The International Journal of Accounting*. 44 (2009).

Ghozali, Imam (2008). *Structural Equation Modeling, Metode Alternatif dengan Partial Least Square*. Badan Penerbit Universitas Diponegoro, Semarang

Henri, Jean F (2006). Management Control System and Strategy. A Resourced Base View Perspective. *Accounting Organization and Society*. Vol 31, No 6. p 529-588

Hoque, Zahirul (2004). A Contingency Model of The Association Between Strategy, Environmental Uncertainty and Performance Measurement: Impact on Organizational Performance. *International Business Review* 13 (2004) 485–502.

Isabella, L. A. & Waddock, S. A (1994). "Top Management Team Certainty: Environmental Assessments, Teamwork, and Performance Implications", *Journal of Management*, vol. 20, no. 4, pp. 835 – 858

Ittner, C.D., Larrcker, D.F and Rajan, M.V (1997). The Choice of Perfomance Measures in Annnual Bonus Contract. *The Accounting Review*. 2/2. April. P 231-256

Ittner, C., Larcker, D. and Randall, T (2003). "Performance Implications of Strategic Performance Measurement in Financial Service Firms", *Accounting, Organizations and Society*, Vol.28, No.7-8, pp.715-741.

Jusoh, Ruzita (2008). EU, Perfomance and The Mediating Role BSC Measures Use : Evidence from Malayasia. *International Review of Business Research Paper*. Vol. 4(2)

Jean-François Henri (2006). Management Control Systems and Strategy: A Resource-Based Perspective. *Accounting, Organizations and Society* 31 (2006)

Kaplan, R.S & Norton, D.P (2001). *The Strategy Focused Organization. How the BSC Company Thrive in The New Business Envirovment*. Boston, MA. Harvard Business School Press.

Kennerly M, Neely A (2002). A framework of The Factors Affecting The Evolution of Performance Measurement Systems, *Inter. J. Operations. Prod. Manage*., 22(11): 1222-1245

Kim Langfield-Smith (1997). Management Control Systems And Strategy: A Critical Review. *Accounting, Organizations and Society*, Vol. 22, No. 2, pp. 207-232, 1997

Malina, M. A. and Selto, F. H (2001). "Communicating and Controlling Strategy: An Empirical Study of The Effectiveness of The Balanced Scorecard." *Journal of Management Accounting Research*, Vol. 13, pp. 47-90.

Miles, R. E. & Snow, C. C (1978). *Organizational Strategy, Structure, and Process*, McGraw Hill, New York.

Mia, L. & Clarke, B (1999). "Market Competition, Management Accounting Systems and Business Unit Performance", *Management Accounting Research*, vol. 10, pp. 137-158.

Nash, L. Laura (1993). *A Manager's Guide to Resolving Ethical Problems*. Harvard Business Press, 1993 - 259

Neely, A.D (1998). *Measuring Business Performance: Why, What and How*, The Economist and Profile Books Ltd., London, UK.

Oliver, Christine (1991). Strategic Responses to Institutional Processes *The Academy of Management Review* Vol. 16, No. 1 (Jan., 1991), pp. 145-179

Ross, S.A.,Westerfield, R.W. and Jaffe, J.F (1993). *Corporate Finance*, 3rd ed., Irwin, Burr Ridge, IL.

Simons, Robert (1987).. Accounting Control Systems And Business Strategy: An Empirical Analysis. .*Accounting Organizations And Society*, Vol. 12, No. 4.

Spencer, Sarah Yang. Therese A J. Suzanne S (2009). Differentiation Strategy : Perfomance Measurement Systems and Organizational Perfomance : Evidence Prom Australia. *International Journal of Business*. 14(1). Page 83 – 201.

Tangen, Stefan (2004). Performance Measurement: from Philosophy to Practice. *International Journal of Productivity and Performance Management* Vol. 53 No. 8, 2004.