

ANALYSIS FACTORS RELATED TO MANAGEMENT ACCOUNTING AND CONTROL SYSTEMS CHANGES AT BANKING IN PALEMBANG

Asfeni Nurullah¹⁾

Rika Henda Safitri²⁾

Luk Luk Fuadah³⁾

^{1) 2) 3)} Faculty of Economic, Sriwijaya University

Abstract

The aim of this study is to investigate the relationship between intensity of competition, delegation of authority to changes of Management Accounting Control Systems (MACS). This study uses Contingency Theory. This study uses survey to several banking in Palembang. The respondents of this study are business managers, marketing managers, financial managers and operational managers. The questionnaires send about 145 respondents used purposive random sampling, but about 88 respondents were completed in this study. Data analysis technique used Structural Equation Model (SEM) with using Warp PLS. The research results indicate that intensity of competition and delegation of authority has significant relationship with changes of MACS. The suggestion for future research is to improve or review the questionnaires that are used in this study and do research for other sector.

Keywords: *intensity of competition, delegation of authority, competitive strategy management accounting control systems changes and organisational performance.*

INTRODUCTION

The relationship between intensity of competition and MACS changes showed positive and significant relationship (Libby dan Waterhouse, (1996), Williams and Seaman, (2001), Baines and Langfield Smith, (2003), Waweru, Hoque and Uliana (2004), Isa, Foong and Sambasivan (2005), Abdel-Kader and Luther (2008), Hoque, (2011), Hammad, Jusoh and Ghozali (2013), Mohamed (2013). However, several researchs also showed not significant between intensity of competition and MACS changes (Isa, 2007, 2009, and Tuanmat, Smith and Djajadikerta 2010).

¹ asfeninurullah@yahoo.co.id

² rikahenda@unsri.ac.id

³ lukluk_fuadah@unsri.ac.id

The previous studies also showed the positive relationship between delegation of authority and changes of MACS (Waweru 2008; Waweru dan Uliana, 2008; Soobaroyen dan Poorundersing , 2008; Chenhall, 2008; Abdel-Kader dan Luther, 2008; Verbeeten, 2010;. Ajibolade, Arowomole and Ojikutu, 2010; Hoque, 2011; Ismail and Isa, 2011; Hammad, Jusoh dan Ghozali, 2013; Ajibolade, 2013). Moreover, previous research also showed that the companies adopting this strategy seldom change their management accounting systems (Hyvonen, 2007; Waweru, 2008; Waweru dan Uliana, 2008).

The aim of this study is to investigate the relationship between intensity of competition, delegation of authority, and MACS changes at Banking sector in Palembang.

There are several research questions in the following:

1. How the relationship between intensity of competition and MACS changes?
2. How about the relationship between delegation of authority and MACS changes?

There are several sections in this paper. Next section describes about literature review including discuss about the theory and development of hypotheses in this study. Section three presents the research method of this study. Section four, presents the result research of this study. Finally, the last section describes conclusions from this research, explain about the limitations and future research from this study.

LITERATURE REVIEW

Contingency Theory

Contingency theory is the theory dominate organizational behaviour study, control system, performance and management strategy (Chenhall, 2003; 2007). General proposition of contingency theory is organizational performance should fit with other factors. These factors are external factor such as environment, organizational factor, control system factor, technology factor that all will come from organizational performance (Drazin and VandeVen, 1985).

Competition environment factor is one of environment variable that important in company to improve organizational performance beside other contingent factors that already discuss by (Chenhall, 2003) in the following:

“Researchers have attempted to explain the effectiveness of management control systems by examining designs that best suit the nature of the environment, technology, structure, strategy and national culture. In recent years, contingency-based research has maintained its popularity with studies including these variables but refining them in contemporary terms. The identification of contextual variables potentially implicated in the design of effective management control systems can be traced to the original structural contingency frameworks developed within organizational theory”.

“fit” of different organizational constructs were assumed based on organizational performance. This “fit” can increase for better organizational performance (Chenhall, 2003).

Contingency theory discuss about factors that assist in organizational effective to examine relationship and interaction between organization, environment, structure and adjusted design from management accounting control systems. Thus, research based on contingency theory to examine organizational structure and control system (Bhimani, 1999). General proposition from contingency theory is organizational performance depend on fit between contextual factors in one organization (Cadez and Guilding, 2008). Contingency theory also explain to adapt contingent structure such as environment, organizational size, business strategy, so organization can conduct well (Gerdin and Greve, 2004). Chenhall (2003) and Chenhall (2007) explained contextual factors impact on design of management control systems. The factors include environment, technology, organizational performance, strategy, organizational culture. These factor is well known as organizational contextual variables based on contingency approach. This factor also impact on performance in one organization. Contingency theory in management accounting showed that if company use management accounting control system that fit with organizational factor and environment better in perform (Chenhall, 2003), (Otley, 1980).

The specific circumstances influencing management accounting comprise a set of contingent variables which may include but are not limited to (1) the external environment, (2) the technology, (3) the organization structure, and (4) the firm’s competitive strategy. These contingencies are regarded as important determinants of the design of a management accounting system (Innes and Mitchell, 1990 and Fisher, 1995). This study used a contingency theory perspective to explain the relationship among these variables. A contingency perspective suggests that a good match between internal and external organizational factors will result in performance

improvement. The framework for this study is developed based on the structural contingency frameworks developed within organizational theory (Waterhouse and Tiessen, 1978).

The hypotheses development

The relationship between intensity competition MACS changes

The contingency theory explain that the more effective company if the design of management control systems fit with contextual variable such as environment for instance intensity of competition. Environment is one of factor to determine the design of MACS was used of company (Ezzamel, 1990). The previous Contingency researchs showed the company need to use MACS to give accurate, on time and relevant information (Libby dan Waterhouse, 1996). Kaplan (1995) also explain that competition environment, manager should have on time and accurate information to assist the process more efficient and focus on customers.

Libby dan Waterhouse, (1996), Williams and Seaman, (2001), Baines and Langfield Smith, (2003), Waweru, Hoque and Uliana (2004), Isa, Foong and Sambasivan (2005), Abdel-Kader and Luther (2008), Hoque, (2011), Hammad, Jusoh and Ghazali (2013), Mohamed (2013) showed the relationship between intensity of competition and changes of MACS have positive and significant relationship. However, several researchs also showed not significant (Isa, (2007), Isa (2009), dan Tuanmat, Smith dan Djajadikerta (2010). Therefore, the hypothesis is in the following:

H1: Intensity of competition has positive relate to changes of MACS.

The relationship between delegation of authority and changes of MACS

The contingency theory explain the proposition between organizational structure and management control system. Decentralization in the organization can provide greater control and responsibility for managers in the activities and require a larger type of information (Waterhouse and Tiessen, 1978). Moreover, delegation of authority creates the opportunity for lower-level managers to change their MACS (Abernethy and Bouwens, 2005). Furthermore, Kaplan and Atkinson (1998) revealed that managers need reliable information about their products and services so that appropriate decisions can be made to meet local needs.

Previous studies from Libby and Waterhouse (1996); Hoque (2011) states that there is no significant relationship between the delegation of authority and changes of MACS. However, researchs from Abernethy and Bouwens (2005); Waweru (2008) Waweru dan Uliana, (2008), Soobaroyen dan Poorundersing (2008), Abdel-Kader dan Luther (H2008), Verbeeten, (2010), Ajibolade (2013), Hammad, Jusoh dan Ghozali (2013) showed that a positive relationship between decentralization and MACS change. This idea is formally expressed by the hypothesis is as follows:

H2: Delegation of authority is positively associated with changes in Management Accounting Control System.

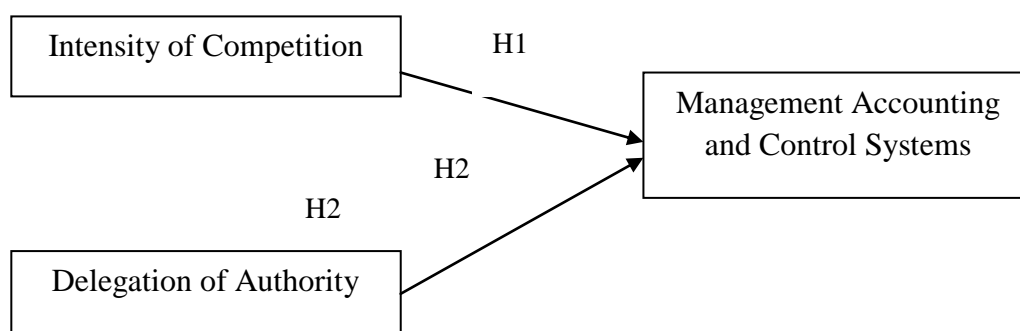


Figure 1: The Framework Research

RESEARCH METHODS

Population and Sample

The population of this research is managers at Banking in Palembang. Purposive Random Sampling is used in this research. This technique is relevant in this study. In random sampling, researchers make conditions for the sample as fit as goal research (Ikhsan, 2008). The total questionnaires distribute about 145 questionnaires for several banks in Palembang. However, 88 respondents were completed the questionnaires. It can process for analysis in this study.

Data Collective Technique

The data use in this research is primary data that get from mail survey and also contact person. The questionnaires distribute to several banks in Palembang. Survey method use is one of the most useful in social sciences. Van der Stede, Young dan

Chen, (2005) explain that mail survey is the most survey method use in management accounting researchs.

Variable Research and Instrument Research

a. Intensity of competition

This variable used Khandwalla (1972) measurement which has five categories such as raw materials, technical personnel, selling, and distribution, quality and variety of product and price. Several researchers used this measurement (Libby and Waterhouse, 1996; Hoque, 2011).

b. Delegation of Authority

Definition of decentralization of authority is refer to senior manager delegate to lower level managers (Libby and Waterhouse, 1996). Authority is act related to decision without confirmation from senior level managers (Hoque, 2011).

c. Changes of Management Accounting and Control Systems

Libby and Waterhouse (1996) developed management accounting and control system changes measurement. This measurement consist of twenty three items which divide into five categories of planning, controlling, costing, directing and decision making. This measurement was used by several studies (Libby and Waterhouse, 1996, Williams and Seaman, 2001, 2002; Isa, 2007, 2009, Verbeeten, 2010; Ajibolade, Arowomole and Ojikutu, 2010).

ANALYSIS AND DISCUSSION

Profile Respondents

It can be seen from table 1 the respondents most of them already work between 6 (six) years to 10 (ten) years. Most of respondent were bachelor degree and the majoring is quite similar between Accounting and Non Accounting.

Tabel 1. Profile Respondents (N=88)

	Keterangan	Total	Percentage (%)
Length of Work	< 5 years	23	26,14
	6- 10 years	49	55,68
	>10 years	16	18,18
Education	Bachelor	79	89,77
	Master	9	10,23
Majoring	Accounting	45	51,14
	Non Accounting	43	48,86

The Result Research

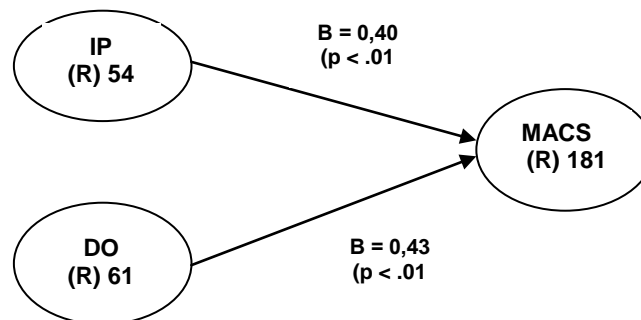
1. The Model of fit

This test was conducted to test the validity of variables in this research. Criteria for a good model (Model fit indices) is that if the value AVIF, greater than 0.5 (Ghozali, 2014). AVE value of the output of research are presented in Table 2 in the following:

Tabel 2. Model fit indices and P values

APC=0.431, P<0.001
ARS=0.369, P<0.001
AVIF=1.363, Good if < 5

Based on Table 2 above, the value Average Path Coefficient (APC), Average value of R-Square (ARS), Average value Block VIF (AVIF) for all variables in this research is greater than the required criteria so that it can be concluded that the study variables meet the test of validity.



Based on output result by using WarpPLS, so test of hypotheses show will explain in the following:

- H1 mention that intensity of competition has positive relate to changes of management accounting and control systems (MACS). The result research is supported. It can be seen from figure 2 show the estimation coefficient variable intensity of competition about 0,39 with P<0,01 show the significance.
- H2 said that delegation of authority positively associated with changes in Management Accounting and Control Systems. The figure 2 shows the

estimation coefficient variable change of MACS (Management Accounting and Control Systems) about 0,31 with significance around $P < 0,01$. It can be concluded that H2 is supported.

2. The relationship between intensity competition and MACS changes

The results of the study support the research that has been done by Hemmer, (1996), Khandwalla, (1972), Krishnan, (2005), Merchant, (1984), Hoque, et al., (2001), Mia and Chenhall, (1994), Libby and Waterhouse, (1996), Mia and Clarke, (1999), Williams and Seaman, (2001), Baines and Langfield Smith, (2003), Tuan Mat, et al., (2010); and Hoque, (2011). Previous studies showed that an increase in the intensity of competition will lead company to change in Management Accounting Control System increasingly. The result research also support contingency theory.

3. The relationship between delegation of authority and changes of MACS

This finding supports the contingency theory which states that decentralization is the delegation of authority related to the characteristics of management control systems (Chenhall, 2003). The result research also support researchs from Abernethy and Bouwens (2005); Waweru (2008) Waweru dan Uliana, (2008), Soobaroyen dan Poorundersing (2008), Abdel-Kader dan Luther (2008), Verbeeten, (2010), Ajibolade (2013), Hammad, Jusoh dan Ghozali (2013) showed that a positive relationship between decentralization and MACS change.

CONCLUSION AND LIMITATION

Conclusion

The results showed that the intensity of competition is positively associated with changes of MACS. This is consistent with previous research by Libby and Waterhouse (1996), Williams and Seaman (2001), Baines and Langfield Smith, (2003), Waweru, Hoque and Uliana (2004), Krishnan (2005), Isa, Foong and Sambasivan (2005), Agbejule and Burrower (2007), Abdel Kader and Luther

(2008), Tuanmat, Smith and Djajadikerta (2010), Hoque, (2011), Hammad, Jusoh and Ghozali (2013), Mohamed (2013).

This finding also support the previous studies from Hammad, Jusoh and Ghozali (2013), Abernethy and Bouwens (2005), Waweru (2008), Waweru and Uliana (2008), Soobaroyen and Poorundersing (2008), Chenhall (2008), Abdel-Kader and Luther (2008), Verbeeten (2010), Ajibolade (2013) also revealed that there is a positive relationship between decentralization and changes of MACS.

Limitation Research

This study just focus on survey on banking in Palembang. Other limitation is the measurement use in questionnaire. Suggestions for future research is research to other sector. Future research also increase the measurement for the questionnaires

REFERENCES

- Abdel-Kader, M., and 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.
- Abernethy, and Bouwens. (2005). Determinants of accounting innovation implementation. *Abacus* 41 (3):217-240.
- Ajibolade, Arowomole, S., and Ojikutu, R. (2010). Management accounting systems, perceived environmental Uncertainty and Companies' Performance in Nigeria. *International Journal of Academic Research* 2 (1):195-201.
- Ajibolade. (2013). Management accounting systems design and company performance in Nigerian manufacturing companies: A contingency theory perspective. *British Journal of Arts and Social Sciences* 14 (2):228-244.
- Ambe, dan Sartorius. (2002). Competition and the performance of strategic business units – A study of the South African beverage industry. *Meditari Accountancy Research* 10:1–23.
- Baines, A., dan Langfield-Smith, K. 2003. Antecedents to management accounting change: a structural equation approach. *Accounting, Organizations and Society* 28 (7-8):675-698.
- Bhimani. (1999). Mapping methodological frontiers in cross-national management control research. *Accounting, Organizations and Society*, 24, 413-440.
- Bromwich. (1990). The case for strategic management accounting: The role of accounting information for strategy in competitive market. *Accounting, Organizations and Society*, 12(1/2), 27–46.
- Bruggeman, and Slagmulder. (1995). The impact of technological change on management accounting. *Management Accounting Research*, 6, .241–252.
- Cadez, Simon, and Guilding, Chris. (2008). An exploratory investigation of an integrated contingency model of strategic management accounting. *Accounting, Organizations and Society*, 33(7-8), 836-863. doi: 10.1016/j.aos.2008.01.003.
- Cadez, S., and Guilding, C. (2008). An exploratory investigation of an integrated contingency model of strategic management accounting. *Accounting, Organizations and Society*, 33(7-8), 836-863. doi: 10.1016/j.aos.2008.01.003.
- Cavalluzzo, Ittner, C. D., and Larcker, D. F. . (1998). Competition, efficiency, dan cost allocation in government agencies: Evidence from the Federal Reserve System. *Journal of Accounting Research*, 36, 1-32.
- Chenhall, R. H. (2003). Management Control system design within its organizational contexts: findings from contingency based research and direction for the future. *Accounting Organizaion and Society*, 28, 127-168.

- Chenhall, (2007). Theorizing contingencies in management control systems research. dalam Chapman, Hopwood dan Shields, *Handbook of Management Accounting Research*, 163-205.
- Drazin, and VandeVen. (1985). Alternatif forms of fit in contingency theory. *administratif Science Quarterly*, 30, 514-539.
- Ezzamel. (1990). The impact of environmental uncertainty, managerial autonomy and size on budget characteristics. *Management Accounting Research*, 1, 181-197.
- Fisher, J. (1995). Contingency based research on management accounting control systems: Categorisation by level of complexity. *Journal of Accounting Literature*, 14, 24-53.
- Fuadah, Lukluk. Nasir, Muhammad And Isgiyarta, Jaka, (2014a), The Relationship between Intensity of Competition, Advanced Manufacturing Technology and Organizational Performance, *International Journal of Research in Business and Technology*, Vol. 5, No.1.
- Fuadah, Lukluk. Nasir, Muhammad And Isgiyarta, Jaka, (2014b), The Relationship between Intensity of Competition, Delegation of Authority, Management Accounting and Control Systems Changes and Organizational Performance (Empirical Study in Manufacturing Companies Listed in Indonesian Stock Exchange), *Malaysian Indonesian International Conference Economics, Management and Accounting - MIICEMA, UKM Bangi Malaysia*, 10-11 November 2014.
- Gerdin, Jonas, and Greve, Jan. (2004). Forms of contingency fit in management accounting research—a critical review. *Accounting, Organizations and Society*, 29(3-4), 303-326. doi: 10.1016/s0361-3682(02)00096-x.
- Ghozali, I. (2014), *Metode Alternatif dengan Menggunakan Partial Least Square (PLS)*, Badan Penerbit Universitas Diponegoro, Semarang.
- Gibson, J., Ivanisevic, J., Donnelly, J., dan Konopaske, R. (2003). *Organizations: Behavior, Structure, Process*. New Yprk: Mc Graw Hill.
- Gordon, and Miller, D. . (1976). A contingency framework for the design of accounting information systems. *Accounting, Organizations, and Society*, 1, 59-69.
- Govindarajan. (1984). Appropriatness of accounting data in performance evaluations: An empirical examination of environmental uncertainty as an intervening variable. *Accounting, Organizations and Society* 9 (2):125-135.
- Hammad, S. A., Jusoh, R., dan Ghozali. (2013). Decentralization, perceived environmental uncertainty, managerial performance and management

- accounting system information in Egyptian hospitals. *International Journal of Accounting and Information Management* 21 (4):314-330.
- Hemmer. (1996). On the design dan choice of “modern” management accounting measures. *Journal of Management Accounting Research*, 8, 87–116
- Hoque, (2011). The relations among competition, delegation, management accounting systems change and performance: A path model. *Advances in Accounting* 27 (2):266-277.
- Hoque, and Hopper, T. (1997). Political and industrial relations turbulence, competition dan budgeting in the nationalized jute mills of Bangladesh. *Accounting dan Business Research*, 27(2), 125–143.
- Hoque dan James, W. (2000). Lingking size and market factors to balanced scorecards: Impact on organizational performance. *Journal of Management Accounting Research* 12:1-17.
- Hyvönen, J. (2007). Strategy, performance measurement techniques and information technology of the firm and their links to organizational performance. *Management Accounting Research* 18 (3):343-366
- Ikhsan, Arfan. 2008. Metodologi Penelitian Akuntansi Keperilakuan. Graha Ilmu, Yogyakarta.
- Ikhsan, Arfan. (2008). Metodologi Penelitian Akuntansi Keperilakuan. Graha Ilmu, Yogyakarta.
- Innes, J., and Mitchell, F. (1990). The process of change in management accounting: some field study evidence. *Management Accounting Research*, 1(1), 3-19. doi: 10.1016/s1044-5005(90)70042-x.
- Ismail, and Isa. (2011). The Role of Management Accounting Systems In Advanced Manufacturing Environment. *Australian Journal of Basic and Applied Sciences* 5 (9):2196-2209.
- Isa, Foong, and Sambasivan. (2005). Roles of market competition and advanced manufacturing technology in predicting management accounting and control systems Change. *Asia Pacific Management Review* 10 (6):397-403.
- Isa. (2007). A note on market competition, advanced manufacturing technology and management accounting and control systems change. *Malaysian Accounting Review*, 6(2), 43-62.
- Isa. (2009). Management Accounting Change Among Local dan Foreign manufacturing Firms in Malaysia. *World Journal of Management*, 1(1), 1-12.
- Jermias, and Gani, Lindawati. (2002). *Linking Strategic Priorities, Organizational Configurations dan Management Accounting Systems with Business Unit Effectiveness: Experience from Indonesian Publicly Held Companies*. Paper presented at the Conference AAA, Nagoya Japan.

- Karahajan, Hanifah, Wiyantoro, (2013), Hubungan Antara Intensitas Persaingan Dengan Kinerja Organisasi Melalui Delegasi Wewenang dan Perubahan Dalam Management Accounting and Control Systems sebagai Variabel Intervening (Studi pada Perusahaan Manufaktur di Provinsi Banten), Simposium Nasional Akuntansi, Manado.
- Kaplan (1995). New roles for management accountants. *Journal of Cost Management*, 6–13.
- Kaplan dan Atkinson, A. A. (1998). *Advanced management accounting (3rd edition)*. Upper Saddle River, New Jersey: Prentice Hall.
- Khandwalla. (1972). The effects of different types of competition on the use of management controls. *Journal of Accounting Research*, 10, 275-285.
- Khandwalla. (1974). Mass output orientation of operations technology dan organizational structure. *Administrative Science Quarterly*, 74–97.
- Krishnan. (2005). The effect of changes in regulation dan competition on firms' demand for accounting information. *The Accounting Review*, 80(1), 269-287.
- Libby, Theresa, and Waterhouse, John H. (1996). Predicting change in management accounting systems. *Journal of Management Accounting Research*, 8, 137-150.
- Merchant. (1984). Influences on departmental budgeting: An empirical examination of a contingency model. *Accounting, Organizations and Society*, 9(3/4), 291–307.
- Miller, and O'Leary, T. (1990). Making accountancy practical. *Accounting, Organizations and Society*, 15(5), 479–498.
- Mohamed, F. A. (2013). Changes in the business environment and the level of management accounting practices in Egypt: a case study. *Journal of American Science* 9 (10):78-89.
- Otley, David T., and Berry, A.J. . (1980). Control, organization dan accounting. *Accounting, Organizations dan Society*, 5(2), 231-244.
- Porter, M.E. (1985) “Competitive advantage”, Free Press, New York
- Porter, M.E. (1980), “Competitive Strategy”, Free Press, New York
- Prasetyatoko. (2010). Bangkitnya bisnis 2010 via jejaring sosial. *warta ekonomi*.
- Seaman dan Williams, J. J. (2006). Management Accounting Systems Change and Sub-Unit Performance: The Moderating Effects of Perceived Environmental Uncertainty. *Journal of Applied Business Research* 22 (1):103-120.

- Soobaroyen, dan Poorundersing. (2008). The effectiveness of management accounting systems: Evidence from functional managers in a developing country. *Managerial Auditing Journal* 23 (2):187-219.
- TuanMat, Tuan Zainun, Smith, Malcom, and Djajadikerta, Hadrian. (2010). Management Accounting dan Organisational Change: An Exploratory Study in Malaysian Manufacturing Firms. *JAMAR*, 8(2), 51-80.
- Van der Stede, W. A., Young, S. M., and Chen, C. X. (2005). Assessing the quality of evidence in empirical management accounting research: The case of survey studies. *Accounting, Organizations and Society* 30 (7-8):655-684.
- Verbeeten, F. H. (2010). The Impact of Business Unit Strategy, Structure dan Technical Innovativeness on Change in Management Accounting dan Control Systems at Business Unit Level: An Empirical Analysis. *International Journal of Management* 27 (1):123-143.
- Waterhouse, and Tiessen. (1978). A Contingency Framework for Management Accounting Systems Research. *Accounting, Organizations and Society* 3 (1):65-76.
- Waweru Hoque, and Uliana. (2004). Management accounting change in South Africa Case studies from retail services. *Accounting, Auditing and Accountability Journal* 17 (5):675-704.
- Waweru and Uliana. (2008). Predicting Change in management accounting systems: A contingent Approach. *Problems and Perspectives in Management* 6 (2):108-121.
- Waweru. (2008). Predicting change in management accounting systems: the effect of competitive strategy. *Accounting, Auditing and Accountability Journal* 17 (5):25-41.
- Williams, J. J., dan Seaman, A. E. (2001). Predicting change in management accounting systems: national culture and industry effects. *Accounting, Organizations and Society* 26:443-460.
- Williams, J. J., dan Seaman, A. E. (2002). Management accounting systems change and departmental performance: the influence of managerial information and task uncertainty. *Management Accounting Research* 13 (4):419-445.