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The relationship between management control systems and corporate financial performance (a moderated regression analysis approach from mining companies in Indonesia)

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A B S T R A C T

This paper examines relationship between management control system (MCS) and corporate financial performance (CFP). This relationship is moderated by four moderator variables business environment, organization structure, business strategy and culture. The data were collected using questionnaires which were distributed to the respondents in accordance with the predetermined data collection procedure. There were 189 questionnaires-distributed to the respondents including 19 regions of mining companies in Indonesia. The result indicates that business environment moderates the relationship between MCS and CFP. Organization Structure cannot moderate the relationships between MCS and CFP. Business strategy moderates relationship between MCS and CFP. Culture cannot moderate the relationship between MCS and CFP.

A B S T R A K

Penelitian ini menganalisis hubungan antara sistem pengendalian manajemen (SPM) dan kinerja keuangan perusahaan (KKP). Hubungan ini dimoderasi oleh empat variabel yaitu lingkungan bisnis, struktur organisasi, strategi bisnis, dan budaya. Data peroleh menggunakan kuesioner yang dibagikan kepada responden sesuai dengan prosedur pengumpulan data yang telah ditentukan. Ada 189 kuesioner didistribusikan kepada responden pada 19 daerah dari perusahaan pertambangan di Indonesia. Hasil penelitian menunjukkan bahwa lingkungan bisnis memoderasi hubungan antara MCS dan KKP. Struktur organisasi tidak dapat memoderasi hubungan antara MCS dan KKP. Strategi bisnis memoderasi hubungan antara MCS dan KKP. Budaya tidak dapat memoderasi hubungan antara MCS dan KKP.

1. INTRODUCTION

Management Control System is designed to help an organization adapt to the environment in which it is set. This system also delivers the key results desired by stakeholder groups (Merchant and Otley 2007). In this case, there is an uncertainty which is one of the most widely aspects of the environment of organizations in Management Control contingency-based research (Chenhall 2003; Chapman 1997; Hartmann 2000). The current business environment is characterized by fast changes in customers, technologies, and competition. For that reason, organizations need to continuously renew themselves to survive and prosper (Danneels 2002). In the light of the financial or economic crisis 2008/09, however, uncertainty and risk rose enormously in many companies and hence forced them to adapt their management control systems (MCS) to the changing environment.

The previous research used subjective superior ratings as measures of performance to confirm the relationship between level of leader-member exchange, organization structure, culture, management accounting information and performance (e.g. Bauer & Green 1996; Deluga 1998; Deluga & Perry 1994, Duarte et al. 1994; Dunegan et al. 1992; Dunegan et al. 2002; Graen et al. 1982; Jansen & Van Yperen 2004; Lagace et al. 1993; Schreisheim

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et al. 1998; Varma & Stroh 2001; Vecchio & Gobdel,1984; Vecchio 1998; Wayne et al. 2002). These studies found that the quality of exchanges between leaders and their subordinates (high versus low quality) had an influence management accounting information on the leaders when assessing their subordinates' performance: subordinates who have a high-quality exchange tend to be rated higher than those with a low-quality exchange. Information holds the important key to improve corporate performance

In such a condition, information has an important role in the organization. This information can be both quantitative and qualitative. These play key role in managing an organization. In that case, accounting information, especially management accounting information, becomes a part of information systems, which significantly contributes to the effective functioning of management process. The essence of such functioning centers decision-making is planning, organizing, directing and controlling. In order to meet this need, management accounting provides management with information focuses on decision making (Horngren 2004). The domain of management accounting information includes management control dealing primarily with the use of management accounting information for planning and control activities. Prior research from Chenhall and Morris (1986) explain how some contextual variables effecting use of Management Information System.

In connection with such accounting information, it is imperative in the study to use three independent variables (external environment variable, organizational interdependency and organizational structure/decentralization and one dependent variable): management accounting system consisting of three characteristics (scope; timeliness; aggregation; and integration). Chenhall and Morris (1986) found that perceived environmental uncertainty significantly correlates with MAS characteristic of scope and timeliness; organizational interdependency with the MAS characteristic of scope, aggregation, and integration; and decentralization with the MAS characteristics of aggregation and integration. In addition, they also found the interaction effect of perceived environment uncertainty and decentralization on the MAS characteristics of scope and aggregation in one hand. On the other hand the interactional affect of organizational interdependency and decentralization on MAS characteristics of scope and integration. In recent work, Chenhall (2003), based on his deductive research approach, summarized that there are six contextual variables to be affecting the management control system design.

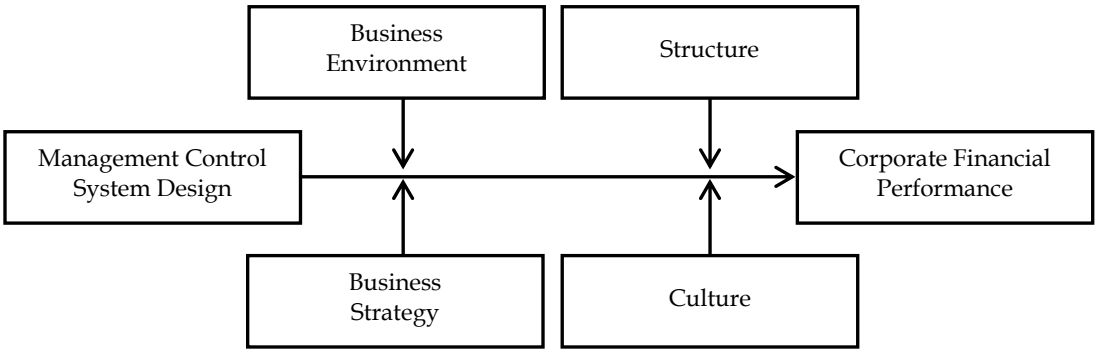
Up to the present, the contextual or contingency variables have been correlated only with the design of management accounting system perceived by its usefulness. Very few attempts were made to relate management accounting system directly to corporate performance. Woodward (1965) (in Azumi and Hage 1972) examined the relationship between perceived environment uncertainty and organizational structure on one variable and performance on the other variable. According to him there is a strong relationship between the variables. Using the result of Chenhall and Morris' (1986) study, Gul (1992) tried to find the effect of management accounting system (MAS) on managerial performance by moderating MAS with one contingency variable, perceived environment uncertainty. The result is that given high uncertainty, positive relationship between MAS and performance exists and the reversed result occurs under low uncertainty.

For example, Pant and Yuthas, (2000) explain the role of management control system to improve corporate competitive advantage, have stressed the importance of management control system to identify and build company's dynamic capabilities in order to improve its effectiveness. Wynn-Williams (2001) used public hospital setting in testing the role that management control systems have played in explaining the determinant of effectiveness in the hospitals. In his study on management control system design in new product development, Davila (2000) found the correlation between some variables of management control system and performance. Some other studies try to relate the management control system and company's performance, or say effectiveness (Marginson 2002; Haldma and Lääts 2002; Salmon and Joiner 2005; Sandino 2005; Coenders, Bisbe, Saris, and Batista-Foguet 2003; Liao 2005; and Alexander and Randolf 1985).

2. THEORETICAL FRAMEWORK AND HYPOTHESIS

Organizational performance is the main goal of organization. In addition, the introduction of contingency model from modern organization theory has contributed to the development of management accounting especially in explaining the factors affecting the organizational performance. Hayes (1977), quoting from Thomson's (1967) Lawrence and Lorsch's (1969) study, had introduced three factors as determinant of organiza-

Figure 1
Research Framework Model



tional performance: internal, interdependency, and environment. A better explanation of the previous researchers concerning the relationship between budgetary aspect and performance should be attained (Milani 1975; Ivancevich 1976; Kenis 1979; Merchant 1981) by adding other factors in their model as moderating variables (Dunk 1989; Imoisili 1989; Kren 1992, Indriantoro 1993, Sabramanian and Mia 2001). This research formulated how business environment, organization structure, business strategy and culture moderate the relationships between management control system design and Corporate Financial Performance as conceptualized in Figure 1.

Management Control System – Corporate Financial Performance

The second objective is to test the fit management control system and corporate financial performance. In this effort, Gul (1991) and Fauzi (1999) developed contingency on management accounting system design on performance. Some other contextual variables have also been modeled by Fauzi (1999) for structure, Alexander and Randolf (1985) for technology and structure, and Liao (2005) for strategy, Sandino (2005) for strategy and structure, Haldma and Lääts (2002) for business environment, technology, structure, and business strategy. Davila (2000) for business environment and business strategy, Kent Thorén & Terrence Brown (2005) for size, and Wynn-Williams (2001) for business uncertainty as the contingency fit on the corporate performance. Using the same analog, it is easily expected that culture follows the same pattern.

For explaining the role of management control system to improve corporate competitive advantage, Pant and Yuthas, (2000) have stressed the importance of management control system to identify and build company's dynamic capabilities in order to improve its effectiveness. Other proponents, Wynn-Williams (2001) used public hospital setting in testing the role that management control systems have played in explaining the determinant of effectiveness in the hospitals. For management control system design in new product development, Davila (2000) found the correlation between some variables of management control system and performance. Some other studies try to relate the management control system and company's performance, or say effectiveness (Marginson 2002; Haldma and Lääts 2002; Salmon and Joiner 2005; Sandino 2005; Coenders, Bisbe, Saris, and Batista-Foguet 2003; Liao 2005; and Alexander and Randolf 1985). Hypothesis for this research is formulated in alternative hypothesis form as follows:

H_1: Management Control System design affects the Corporate Financial Performance.

Business Environment-MCS Design Relationship and Corporate Financial Performance

In the condition of relatively stable environment, the use of control system is different from the one used in the uncertain condition. Since management control system is used to implement a company's strategy, the pattern of management control system design follows business environment the company is facing.

The first situation, the control system is simple while the complicated and sophisticated control system prevails on the latter. To cope with the uncertain condition, Simons (1995) suggest using a pattern of control of interactive control system. Using the pattern it is expected that the management control system will be effective. The relevant characteristic of environment to be affecting management control design are: degree of predictability, the extent of competition faced on the market place, the number of different product-markets faced by a degree of hostility (price, product, technological and distribution competition) (Emmanuel et al. 1990 in Haldma and Lääts 2002).

In mapping the contingency-based studies,

Fisher (1994) classified the studies in four level of analysis. In the first level, the relation between contingent factor and management control system was made without going further to see the impact of the organizational outcome (performance). In the second, third, and fourth level, the analysis of the relationship between contingent factor and management control system was conducted and related to the performance. The difference was placed on the choice of contingency factor and management control system. The second level dealt with one factor for contingency and one for management control system, while one factor for contingency and more than one dimensions of management control system was for the third level. The fourth level had more than one contingency factor and more than one dimensions of management control system.

Gul (1991) investigated the interaction effect (fit) between management accounting system and business environment on the company's performance and found that business environment was defined as perceived environment uncertainty (PEU) affected the relationship between management accounting system and company's performance. At the second level of analysis, Ginzberg (1980 in Fisher 1995) used formality and procedural as dimension of control system design that interacted with environment to affect the performance, while Govindarajan (1984 in Fisher 1995) study that focused on performance appraisal system as a dimension of management control system was affected the fit and both studies were supported by the Gul (1991) study.

Based on the findings from prior research, it is reasonable for this study to expect that business environment determines the management control system design; alternative hypothesis can be formulated as follows:

H_2: Business environment will moderate the relationship between management controls system design on corporate financial performance.

Organization Structure – MCS Design Relationship with Corporate Financial Performance

Pugh, Hickson, Hinings and Turner (1969 in Azumi and Hage 1972) argue that origination structure includes some the following dimension: integrations, formalization, specialization, and decentralization. In this case, Haldma and Laat (2000) had used decentralization dimension of organization structure in his case study approach in the Finland Company setting with the research finding leading to the support of the relationship between structure and management accounting system.

A study related to organization structure-MCS fit and performance was done by Sandino (2005). He found that interaction between control system and organization structure affected company's performance. In addition, the insight regarding this fit relation to the performance can be predicted based on the direct relationship between organization structure and job satisfaction variable (Ali and Alib 2005). If employees feel satisfied it can be expected to increase the company's performance.

However, Abernethy (2004), in his study in the public hospital setting, found that structure did not support the management control system choice. Chenhall (2003) in his deductive research based on the prior contingency-based studies on structure and control system design summarized some propositions on the contingency factor leading to concludes that management control system design will be contingent on structure. Hypotheses for that statement are as follows:

H_3: Structure will moderate the relationship between management control system designs on corporate financial performance.

Business Strategy – MCS Design Relationship and Corporate Financial Performance

Fisher (1995) classified the version strategy into three typologies: Porter, Miles and snow, and product life cycle. There were some studies on the relationship between strategy and control system summarized by Fisher (1994): Merchant (1981), Simons (1987, 1990), Govindarajan and Gupta (1981), Govindarajan (1988), Govindarajan and Fisher (1990) and Fisher and Govindarajan (1993). Except for the work of Simons (1987) with weak support and of Fisher and Govindarajan (1993) with conflict support, their studies with the use of one aspect of management control system designs contributed to the relationship between strategy and management control system design.

Govindarajan and Gupta (1985) used the product life cycle as contingency factor and performance appraisal system as dimension control, (Simons 1987) utilizing competitive strategy as contingency factor and budget flexibility as dimension of control system, Govindarajan and Fisher (1990) employing Porter typology as contingency factor and behavior and output control as dimension of control system, Govindarajan (1988) exploiting Porter typology as contingency factor and budget evaluation style and locus of control as dimension of control system, and Fisher and Govindarajan (1993) applying Porter typology and product life cycle as contingency factor and incentive compensation as dimension of control

system. Except for Fisher and Govindarajan (1993) proving with conflicting result, they supported the fit relationship to the performance.

In more recent studies, Liao (2005) and Sandino (2005) contributed to the same finding as the prior studies mentioned above. The same fit, but with different position for the contingency factor, Abernethy and Brownell (1999) also provided the fit relationship to the performance. Also supports of the relationship have also been provided by Shin and Yong (2001), and Marginson (2002) and Kober, Juliana and Paul (2007). Chenhall (2003), based on the prior studies, derived some proposition according to some strategy classifications leading to the conclusion to support the relationship.

Based the argument, it can be predicted that strategy will improve the relationship between management control system design and performance. The following is the hypotheses for this argument:

H_4: Strategy will moderate the relationship between management control system designs on corporate financial performance.

Culture – MCS Design Relationship and Corporate Financial Performance

The most frequently used typology of culture is the one developed by Hofstede (1991), often called national culture, including five dimensions: power distance, individualism and collectivism, masculinity and femininity, uncertainty avoidance, and Confucian dynamism.

Another is the library research by Harrison and McKinnon identified twenty studies, taken from the English language journals over past five ten years ago, relating culture and control system variable. They all have supported the important to culture in control system. Chow, Shields and Wu (1999) using the Hofstede typology of culture and seven dimensions of management control system found the importance of culture and management control system design. Again, two studies on the fit relationship of the performance can be identified (Indriantoro 1993) and (Subramaniam and Ashkanasym 2001). Both studies revealed that there was no interaction effect of culture and management control system on performance.

Based on the evidence above, this study expects that culture does not moderate the relationship between management control system design and performance. Formulation of hypotheses for these relationships is as follows:

H_5: Culture moderates the relationship between management control system designs and corporate financial performance.

3. RESEARCH METHOD

Data, Instrument, and Sample Selection

Data regarding moderating variables (including business environment, organizational structure, business strategy, and culture; management control system; and corporate financial performance) for this research is responses from managers using survey instrument (see appendix). Instrument for moderating variables used is the proven instrument used by (Chenhall and Moris 1986) for business environmental variables; Pugh, Hickson, Honings, and Turner (1968, in Azumi and Hage 1972) for organizational structure variables; Govindarajan and Fisher (1990, in Van der stede 2000) for business strategy variables, and Indriantoro (1993) for cultural variables.

The instrument for management control system variables is tailor-made based on the concept developed by Simons (1995 and 2000). This variable will include four dimensions: belief system, boundary system, diagnostic system, and interactive system. Instrument for performance uses the one developed by Liao (2005). Ideally, the data for performance is objective in nature, the one stated in financial statement, though, in practice, it is hard to get data. However, subjective data for performance will be utilized in the absence of objective measure (Dess and Robinson 1984).

The data for contingency factors, management control system, and corporate financial performance is taken from managers in two most competitive oil and gas mine industries (coal and oil & gas industries) in Indonesia. Sample (for mine industry) selection is focused on companies with Limited Company (Co. Ltd., or namely PT) type (companies with no PT status, like CV, Society Ownership, Family Ownership, Koperasi is excluded).

Measures

The variables which were measured include business environment (PBU), organizational structure (STR), business strategy (STG), culture (CUL), management control system (MCS), and performance (PFM). Orgagnization stucture, management control system and culture were sparated. They have different objectives, thus management needs highly sophisticated management control system in order to integrate with the differentiated activities of organization. Management control system of deliberately separated the context of organizational structure in an effort to find a specific method in the framework of the regulatory process in organization. Similarly, associated with the culture, there is a special purpose to analyzing more about the

culture, which are outside the context of the organizational structure.

Business Environment
Business environment (PBE) is defined as task uncertainty (Miles and Snow 1978 in Chenhall and Moris 1986) including the following factors: (1) competitors' action, (2) manufacturing technology, (3) product attributes/design, (4) market demand, (5) raw material availability, (6) raw material prices, (7) government regulation, and (8) labor union action. In this case, sampled managers should perceive their task according to those eight factors.

Organizational Structure
Organizational structure is measured based on the concept developed by Pugh et. al. (1969) including four dimensions: integration, formalization, specialization, and decentralization. There are 30 items for this construct and managers are asked to respond items using the six scale, 1 for extremely low and 6 for extremely high. All of organizational structure dimensions (integration, formalization, specialization, and decentralization) are indicated by a higher value.

Business Strategy
This construct is operationalzed by Govindarajan and Fisher (1990) based on a concept developed by Porter, breaking down the strategy in three categories: cost leadership, differentiation, and niches (focus). Items included in this construct include: pricing, Research and development cost, product quality, brand, and product feature. Using the six scales, 1 for extremely low and 6 for extremely high, respondents are asked to position their company relative to their competitor in terms of the items. All of organizational Business Strategy (pricing, Research and development cost, product quality, brand, and product feature) are indicated by a higher value.

Culture
This construct uses operationalization made by Indriantoro (1993 based on the typology developed Hofstede (1991) including: Power distance, individualism and collectivism, masculinity and femininity, and uncertainty avoidance. Using six scales (1 for extremely approve and 6 for extremely disapprove), the respondents are asked to respond 29 items as used by Indriantoro (1993) according to the situation they are facing. Among the dimenssions of culture have lower value include Power distance, individualism and collectivism, and uncertainty avoidance. However, only masculinity and femininity have high value.

Management Control System
MCS is defined as the perceived usefulness and the importance of management control system developed (based) on Simons (1995) typology of management control system including: (1) belief system, (2) boundary system, (3) diagnostic control system, and (4) interactive control system. Belief system refers to the types of management core value and company's objective statements used people in organization to inspire or search for some alternatives. This system leads to create better customer values by inovating some possible alternatives. There are main five items in the category. Using the six scales (1 for extremely low and 6 for extremely high), respondents are asked to respond the items according to the situation they face. All of organizational Management Control System (belief system, boundary system, diagnostic control system, and interactive control system) are indicated by a higher value.

Corporate Financial Performance
This construct is measured using profitability measures: ROI, absolute sales profit, and growth. However, as explained above, this measure uses the subjective approach in the absence of objective measure. Respondents are asked to respond the 6-scaled- four items (1 for extremely under the average of industry performance and 6 for extremely over the average of industry performance).

Data Analysis
There are two models for testing the hypotheses. The models are derived from the reviews of research-based studies conducted by Gerdin et al. (2003) and Gerdin (2004) classifying contingency fit into eight categories: difference in means, bivariate correlation, difference in bivariate coefficients, main effect regression coefficient, and multiplicative interaction coefficient.

Based on the mapping, this study uses two models to test the hypotheses. First Model representing main effect regression coefficient as classified by Gerdin et al. (2003) and Gerdin (2004) and used by Alexander and Randolph (1985) in their study on contingency factors of Management Control System and on performance, is used to test H_1. The model can be formulated as follows:

$$CFP = a_1 MCS + e. \quad (1)$$

Where:
CFP = Corporate financial performance.
MCS = Management Control system.

The second model represents difference in mean according to Gurdin classification and fit

Table 1
Distribution of questionnaires

No.	Region	Distributed		Returned		Eligible	
		Number	%	Number	%	Number	%
1	Samarinda	15	7.94%	12	9.68%	8	9.88%
2	Bontang	6	3.17%	4	3.23%	4	4.94%
3	Kukar	21	11.11%	15	12.10%	9	11.11%
4	Kubar	12	6.35%	9	7.26%	9	11.11%
5	Kutim	12	6.35%	8	6.45%	7	8.64%
6	Berau	9	4.76%	7	5.65%	5	6.17%
7	Tarakan	9	4.76%	6	4.84%	5	6.17%
8	Kota Baru	9	4.76%	4	3.23%	3	3.70%
9	Natuna	9	4.76%	4	3.23%	3	3.70%
10	Musi Rawas	9	4.76%	5	4.03%	5	6.17%
11	Sidoarjo	6	3.17%	4	3.23%	4	4.94%
12	Semarang	6	3.17%	4	3.23%	4	4.94%
13	Bangka	6	3.17%	2	1.61%	2	2.47%
14	Jayapura	9	4.76%	2	1.61%	2	2.47%
15	Aceh Utara	9	4.76%	7	5.65%	3	3.70%
16	Bangka	6	3.17%	3	2.42%	2	2.47%
17	Bengkalis	15	7.94%	10	8.06%	2	2.47%
18	Batam	12	6.35%	11	8.87%	2	2.47%
19	Musi Banyuasin	9	4.76%	7	5.65%	2	2.47%
		189		124		81	

as matching based on Vinkatraman (1989) is used to test hypotheses (H_1-H_6). The model is as follows:

$$CFP=\beta_1 MCS+\beta_1 BE+\beta_1 OST+\beta_1 STG+\beta_1 CUL+\beta_1(MCS*BE)+\beta_1(MCS*OST)+\beta_1(MCS*STG)+\beta_1(MCS*CUL)+e. \quad (2)$$

Where:
BE = Business Environment
OST = Organization Structure
STG = Business Strategy
CUL = Organization Culture

4. DATA ANALYSIS AND DISCUSSION

Statistic Descriptive

The data were collected using a questionnaire instrument distributed to the respondents in accordance with the predetermined data collection procedure. There were 189 questionnaires- distributed to the respondents including 19 regions selected based on the predetermined sample number and selection procedure. The sample companies were provided with three (3) envelops for general manager, marketing manager, and operational manager, respectively. Most of envelopes contain questionnaires were sent to the sample companies using couriers and some using regular mail service.

About 124 questionnaires (out of 189) were returned by respondents. The condition of 124 responses were as follows: 43 questionnaires are not eligible for analysis due to the blank (26) and incomplete (17) data. The eligible questionnaires for analysis are 81. The detailed questionnaires with explanation for condition per regions are indicated in Table 1.

The 81 questionnaires were eligible for analysis and can be broken down in term of the respondents positions as follows: general managers (25), marketing managers (18), and operational managers (38).

Validity and Reliability

Validity test was conducted for all variables to determine the appropriateness of research instrument. The result of test has indicated that, all variables consisting of 108 items for management control, 7 items for perceived business environment, 37 items for organization structure, 5 items for business strategy, 29 items for culture, and 4 item for performance are valid (significant at 5%). Based on the reliability test, the variables have a Cronbach's alpha of 0.884 for MCS, of 0.768 for perceived business environment, of 0.854 for organizational structure, of and 0.848 for business strategy.

Table 2
Result of Simple Regression

Variable	Coefficient	T-statistic	p-value
Management Control System Design	0.454	6.599	0,004
R-square: 0.338			
Durbin Watson : 1.569			
F-statistic : 16.998			

Dependent Variable: Corporate Financial Performance.

Hypothesis Testing

Effect of Management Control System Design on Corporate Financial Performance

As in Table 2, model to test the effect of contextual variable is management control system design on Corporate Financial Performance (that can be statistically accepted for prediction of factors affecting Corporate Financial Performance). It is advisable that Management Control System Design all have contributed to the design of Corporate Financial Performance. However, further analysis has clear insight about the variable that contributes to the design of Corporate Financial Performance.

As based on the result of simple regression statistic test in Table 2, it is known that management control system design has a positive and significant effect on corporate financial performance. Management control system design has coefficient as high as 0,454 by t-statistic value 6,599 (pv=0,004), so can be told first hypothesis (H_1) accepted Getting higher level of Management Control System, then Corporate Financial Performance will better.

This study is related to Pant and Yuthas, (2000) that explain the role of management control system improve the corporate competitive advantage. It has stressed on the importance of management control system to identify and build company's dynamic capabilities in order to improve its effectiveness. Wynn-Williams (2001) used public hospital setting in testing the role that management control systems have played in explaining the determinant of effectiveness in the hospitals.

This study is consistent with that by Davila (2000) proposes the contingency theory of MCS that different product development strategy must go together with different MCS interactive usages in order to maximize the project performance. Therefore, the contingency concept of the interactive use of MCS becomes the basis of planning and designing MCS for subsequent studies. Bisbe and Otley (2004) respond to this by investigating the interactive use of MCS as moderate variable and classify MCS into three categories which are budget system, BSC and project management system. The empirical results show that the relationship between product innovation and performance would be moderated by the extent to which MCS are used interactively.

Most of the literatures regarding the MCS focus on the effect of MCS on strategic change and performance (Bruining et al. 2004), or the relation between MCS design and performance in new product development (Davila 2000; Bisbe and Otley 2004). Few studies have investigated how the knowledge management (KM) types match with the interactive use of MCS to improve marketing project performance. Lee and Lai (2007) indicate that MCS is an effective management mechanism in implementing KM. In addition, Kotler (2003) also states that marketing is a social and managerial process that meets customers' desires or needs and further customizes for customers by applying innovation, supply, and exchange valuable products/service.

From the perspective of contingent theory, Mallin and Pullins (2008) suggest that compensation represents a performance contingent reward for a salesperson and that sales control systems may focus perceptions of these rewards as controlling or informative, thus impacting salesperson intrinsic motivation. However, the previous studies focus only on formal MCS and do not discuss the importance of informal MCS. Therefore, this study suggests that ideal MCS design needs to involve formal and informal MCS and coordinate with a company's management attributes like innovation or strategy and performance.

Moderating Effect on relationships of Management Control System Design and Corporate Financial Performance

The result in Table 3 indicates four interactions such as interaction between MCS and Business Environment, MCS – Organization Structure, MCS – Business Strategy and interaction between MCS – Culture. Second hypothesis (H_2) testing the interaction between MCS and Business Environment have significant positively coefficient 0,333 and t-statistic 4,554 (pv=0,009). Result indicate that Business Environment moderate relationships between MCS with Corporate Financial Performance. As well as Second hypothesis accepted.

Table 3
Result of Moderation Regression Analysis (MRA)

Variable	Coefficient	T-statistic	p-value
Management Control System	0.276	4.565	0.008
MCS*BE	0.336	4.554	0.009*)
MCS*OST	0.208	1.087	0.345
MCS*STG	0.258	3.533	0.024*)
MCS*CUL	0.122	0.543	0.645
R-square: 0.287			
F-statistic : 5.560			
Durbin Watson : 1.652			

Dependent Variable: Corporate Financial Performance *) sig = 5%

This result is consistent with the study from Simons (1995). Therefore, to cope with the uncertain condition, Simons (1995) suggest using a pattern of control of interactive control system. Using this pattern, it is expected that the management control system will be effective. The relevant characteristic of environment to be affecting management control design are: degree of predictability, the extent of competition faced on the market place, the number of different product-markets faced by a degree of hostility (price, product, technological and distribution competition) (Emmanuel et al. 1990 in Haldma and Lääts 2002). Fisher (1994) classified the studies in four-level of analysis. In the first level, it is the relation between contingent factor and management control system which was made without going further to see the impact of the organizational outcome (performance). In the second, third, and fourth level, analysis of the relationship between contingent factor and management control system which was conducted and related to the performance.

Third hypothesis (H_3) tests the interaction between MCS with Organization Structure have positively coefficient 0,208 and t-statistic 1,087 (pv=0,345), the coefficient has positively but not significant. Result indicates that Organization Structure cannot moderate relationships between MCS and Corporate Financial Performance. As well as third hypothesis rejected. This finding contradicts with Sandino (2005) that interaction between control system and organization structure affected company's performance. In addition, the insight regarding this fit relation to the performance can be predicted based on the direct relationship between organization structure and job satisfaction variable (Ali and Ali 2005). If employees feel satisfied it can be expected to increase the company's performance.

Fourth hypothesis (H_4) testing the interaction between MCS with business strategy have significant positively coefficient 0,258 and t-statistic 3,533 (pv=0,024). Result indicates that business strategy moderate relationships between MCS with Corporate Financial Performance. As well as fourth hypothesis accepted. This finding consist with (Simons 1987) that utilizing competitive strategy as contingency factor and budget flexibility as dimension of control system, Govindarajan and Fisher (1990) employing Porter typology as contingency factor and behaviour and output control as dimension of control system, Govindarajan (1988) exploiting Porter typology as contingency factor and budget evaluation style and locus of control as dimension of control system, and Fisher and Govindarajan. Liao (2005) and Sandino (2005) contributed to the same finding as the prior studies mentioned above. The same fit, but with different position for the contingency factor, Abernethy and Brownell (1999) also provided the fit relationship to the performance.

Last hypothesis (H_5) testing the interaction between MCS with culture have positively coefficient 0,122 and t-statistic 0,543 (pv=0,645), the coefficient has positively but not significant. Result indicates that culture cannot moderate relationships between MCS with Corporate Financial Performance. As well as fifth hypothesis rejected. This finding contradict with Harrison and McKinnon (1998) that identified twenty studies, taken from the English language journals over past five ten years ago, relating culture and control system variable. They all have supported the important to culture in control system. Chow, Shields and Wu (1999) using the Hofstede typology of culture and seven dimensions of management control system found the importance of culture and management control system design.

5. CONCLUSION, IMPLICATION, SUGGESTION AND LIMITATIONS

It can be concluded that business environment is essential because it moderates the relationship between MCS and corporate financial performance. Yet, organization structure is not as important as business environment because it cannot moderate

the relationship between MCS and corporate financial performance.

The third hypothesis is rejected. This finding is contradictory with Sandino (2005) who found the interaction between control system and organization structure and this affected company's performance. Another important factor is business strategy because it moderates the relationship between MCS and corporate financial performance.

Like organization structure, culture cannot moderate the relationship between MCS and corporate financial performance. The fifth hypothesis is accepted. This finding contradicts with Harrison and McKinnon (1998) that identified twenty studies and supported the important to culture in control system. Chow, Shields and Wu (1999) using the Hofstede typology of culture and seven dimensions of management control system found the importance of culture and management control system design.

The limitation can be due to the overall generalization; therefore, it needs to be further done for the same research in different situation and companies. It implies that business environment and business strategy are essential for the companies in relation to the corporate financial performance.

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