

## THE EFFECT OF INNOVATIVENESS ON THE RELATIONSHIP BETWEEN DIVERSIFICATION AND SLACK

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### ABSTRAK

Penelitian ini menguji mengenai mekanisme kesediaan manajer dalam bertindak sesuai dengan kepentingan perusahaan. Khususnya, penelitian ini menguji peran skema insentif untuk mengurangi senjangan anggaran unit bisnis. Pilot study dilakukan pada 34 responden yang mewakili sampel penelitian ini untuk menjamin kelayakan dan kejelasan kuesioner dan komentar yang diperoleh dari mereka. Dengan menggunakan Moderated Structural Equation Modeling, penelitian ini menunjukkan bahwa tingkat diversifikasi perusahaan tidak mampu mengontrol keberadaan senjangan anggaran. Penelitian ini juga menunjukkan bahwa hubungan signifikan antara diversifikasi dan senjangan anggaran dimoderasi oleh orientasi nilai perusahaan terhadap inovasi. Hasil penelitian juga mengungkapkan bahwa, dari tiga skema insentif, corporate-based incentive mampu mengurangi keberadaan senjangan anggaran. Penelitian ini menyarankan agar peneliti lain yang tertarik di bidang ini untuk menggunakan pengukuran insentif yang lain seperti insentif berbasis kelompok dibandingkan dengan insentif berbasis turnamen. Penelitian ini dapat disimpulkan bahwa perspektif keagenan mungkin tidak sesuai untuk menjelaskan keberadaan senjangan anggaran di unit bisnis ketika pengaruh yang tidak signifikan ditemukan pada hubungan antara skema insentif terhadap senjangan anggaran.

*Kata kunci: senjangan anggaran, skema insentif, diversifikasi, inovasi*

### ABSTRACT

The main purpose of this paper is to investigate the management's willingness to act in the best interest of the top corporate. Particularly, this study examines the role of incentive schemes to reduce the presence of budgetary slack in the business units budget. Pilot study was conducted to 34 respondents that represented the sample of this study to ensure the feasibility and clarity of questionnaires and collected comments from them. Using Moderated Structural Equation Modeling, this study found that diversified firms can not control the presence of budgetary slack. Moreover, this study found that the significance relationship between diversification and budgetary slack was moderated by the firms' value orientation towards innovation. The results also revealed that, out of three incentive schemes, only corporate-based incentive was able to reduce the presence of budgetary slack. This paper suggest interested researcher to use other measures of incentives such as group-based versus tournament-based incentive. This study can be concluded that agency perspectives may no longer be suitable to explain the presence of budgetary slack in their business units as the nonsignificant effect found on the relationship between incentive schemes on budgetary slack.

*Keywords: budgetary slack, incentive schemes, diversification, innovation*

### INTRODUCTION

Slack has been an important topic in management accounting domains that had been consensually defined as the intentional biasing of budgetary targets. However, the opposing streams of literature have led some confusion among the scholars and inconclusive findings that rarely provide

some meaningful contributions to the theory. For example, taking a positive view, accounting "behaviorists" have suggested the use of idle resources that may act as a buffer from environmental pressures (Martinez and Artz, 2006; Voss et al. 2008), or as a shock absorber (Hendrick 2006; Mellahi and Wilkinsion, 2010), and as a

cushion to engage in risk taking/innovative behavior (Herold et al., 2006; Love & Nohria, 2005). These "idle resources" are, therefore, important in providing organizations capabilities to act in ways that are not possible for other organizations poorer in resources (Kim et al. 2008). Natividad (2012) and George (2005) maintained that the presence of slack can be used as an enactment of strategies. Lawson (2001) insisted that attempts to reduce slack may be *ill-advised*; and in a more provoking position, Martinez and Artz (2006) even argued that "it is not possible for a firm to survive long without the presence of resources above and beyond its immediate needs".

On the other hand, economists such as Jensen and Meckling (1986) argued that slack diminishes incentives to innovate and promotes undisciplined investment in R&D activities that rarely yield economic benefits and reflects the self-serving interest of managers. Earliest theorists have also documented that slack may induce the presence of sub-optimal systems, processes, and structures that reduce a firm's aggressive explorations of new responses (e.g. innovation, creativity). In fact, as been noted by Cheng and Kesner (1997), the term slack itself conjures up a host of negative perceptions.

Current study argues that the justification for slack creation can be understood clearly by figuring out the determinants and reasons for creating such slack. Inspired by the works of Merchant and Stede (2007) and Stede (2000, 2001), this study emphasizes the roles of diversification strategy and the extent of incentive schemes on the slack creation in the business units' budget.

Diversification strategy has been argued to have a positive effect on the budgetary slack particularly due to its controlling and monitoring issues. Earlier researches (i.e. Yen and Andre, 2007) have also provided some reasonable arguments for negative correlations between diversification and control. They mainly implicitly implied that the higher the business units

may put the corporate parent at a disadvantage position to uncover slack. Two alternatives are possible for a way out of this control issues. First, the corporate parent may engage in daily monitoring activities. Second, the corporate can tighten the administrative system such as use of accounting information for performance evaluation to reduce slack. The later is deemed to be more beneficial however, but again, prior empirical results were inconclusive (Merchant et al., 2003).

In order to provide a way out of this debate, current study argues that the roles of value should be plays some important roles in the inconsistent findings. The design and development of accounting systems and controls may not be well implemented if not in-line with the firms' values. Firms' orientation towards innovation may affect the relationship between diversification and budgetary slack. Herold et al. (2006) have also agreed that slack is an important source of funding for innovation. Therefore, it can be expected that highly innovative managers coupled with highly diversified business units may have higher slack in their business units budget.

This study contributes to the management accounting literature in several ways. First, although the impact of organizational structure to slack creation had been widely examined, but how the innovation value affects such a relationship is left unexplored. Second, this study tested the impact of diversification on each incentive schemes that lead to budgetary slack independently that, based on the literature review, never been conducted previously.

The main objective of this research is to examine in detail the effect of diversification on manager's tendency in biasing his/her ability to attain the budget target directly/indirectly through incentive schemes. It also tests the effect of Firms' value orientation towards innovation on the relationship between diversification and budgetary slack on different schemes of incentive systems.

The next section of this paper draws on previous literature to develop the theoretical framework and hypotheses development for this study. Section 3 presents the sample, the data, and the measures of the variables. Section 4 discusses in detail the statistical methods used and their underlying assumptions. The following section presents the results and discusses the findings. Finally, conclusions, limitations and directions for future research are provided in section 6.

## THEORETICAL REVIEW

### Defining Budgetary Slack

Earlier work defined budgetary slack as the result of management's consciousness and intentional behavior during the budgetary process as an outcome of rigid budgetary evaluation (Schiff and Lewin, 1968). Recently, Douglas et al. (2007) defined budgetary slack as the variances of actual spending and budgeted spending and the difference between the expected and actual performance. On the other hand, Dunk (1993) referred the slack as the intentional behavior of managers to make the budget easier to attain by underestimating the expected revenues and overestimating the expected costs. Douglas and Wier (2000) claimed that budgetary biasing behavior is the difference between planned performance target and real performance capabilities. Leavin et al. (1995) insisted that budgetary slack exist due to the results of management conscious and intentional behavior during the budgetary process.

Waller (1988) argued that slack can be conceptualized as the difference between an individual's best estimate of performance and the standard chosen when participating in standard selection. Merchant (1985) on the other hand defined budgetary slack as the difference between real and budgeted amount embedded in the budgeting process. Similarly, Yuen (2004, 2006) conceptualized budgetary slack as the building of excess resources in a budget or understating pro-

ductive capability and thus will make the budget easier to attain.

For this study, budgetary slack is conceptualized as the extent of built idle resources during budgeting process by understimating revenue and overstating expenses in order to make the budget targets easier to achieve. This conceptualization may create some meaningful relationships between financial and budgetary slack, particularly regarding the use of buffer in order to hedge against unforeseen contingencies.

### Diversification

Corporate diversification is defined as the extent to which an organization is enrolling at several businesses simultaneously. Corporate diversification can be decomposed into two specific types: related and unrelated diversification. The two differs based on how the resource exploitation is conducted. Related diversification is defined as the extent of exploitation of operational inter-relationship between business units (Stede, 2001). Firms with unrelated diversification, on the other hand, do not share core competencies between business units. Rather, the connection between business units is solely based on financial connections attached on the consolidated financial report.

It is still confusing how diversification may affect overall performance. A seminar proposition of Anthony and Govindarajan (1998) that there is a linear relationship between performance and diversification seems to be obsolete. Recent researches found a non-linear prediction between diversification and performance. For instance, Palich et al. (2000) found that as related diversification may share some common core competencies between their business units, they may create the mutual operational synergies by creating a business portfolio that is mutually beneficial. However, when the relationship reaches its peak as soon as there is no sharing of core compe-

tencies between business units, the relationship turns to negative.

An alternative model (so called intermediate model) suggests that both related and unrelated diversified firms have the equal effect to the performance (Markides & Williamson, 1994). It means, therefore, diversification leads to increase on performance but it will go flat to the extent when there is no synergy among business units. These ambiguities occur perhaps due to a diverse, independent measures used in operationalizing diversification.

For instance, researches on corporate strategy (i.e. decision to embark on diversification, merger or acquisition decided by the corporate level) have changed into the use of more robust, financial data that can be used to precisely measure the extent of 'relatedness' (Li & Greenwood, 2004). However, management accounting-based research, particularly on the budgetary-based researches usually simply relies on the number of entities to measure the extent of diversification (e.g. Stede, 2001; Merchant, 1985). Due to its ease of use, this method is widely acceptable in management accounting area.

Based on literature review above, diversification is conceptualized as the corporate strategy in which a firm active in distinct businesses through firms' institutional investment. This conceptualization however, does not differentiate the nature of relatedness in the diversification as it is barely possible, as also been argued by Stede (2001), for this type of study to make clear distinction in the related vs unrelated diversification.

### **The Effect of Diversification on Budgetary Slack**

Simply stated, diversification can be identified as the extent to which the corporate can be concurrently active in two or more businesses, either related or unrelated. Palich et al. (2000) suggested that more diversified firms can employ a number of mechanisms to create and exploit market

power advantages, tools that are unavailable to their more focused counterparts. Losses in the organization can be offset by the gains from other business units. Diversified firms can also attract for external funding for expansion and shift other critical resources for the sake of goal congruence from one business units to another, and thus generating efficiencies that are unavailable to the single-business firms (Palich et al. 2000).

Budgetary slack has been conceptualized under many diverse terms. For instance, Douglas et al. (2007) defined budgetary slack as the difference between planned performance targets (e.g. budgeted spending) and actual firm performance (e.g. actual spending). Douglas and Wier (2000) claimed that budgetary biasing behavior is the difference between planned performance target and real performance capabilities. Yuen (2004) conceptualized budgetary slack as the extent of resources above the minimum required capacity attached into a budget. Douglas et al. (2007) expanded the concept in which they viewed budgetary slack as an ethical issue. They argued that when employees misrepresent their capabilities, they are using their superior knowledge to unfair advantage. The resource misallocation that results is dangerous for both organizations and their shareholders.

Diversification may have some positive impact to the presence of budgetary slack for several reasons. Firstly, corporate parent in the highly diversified state may be unfamiliar with the business units operations, and thus they are not in the favorable position to uncover slack (Stede 2001). Moreover, even if corporate can detect the presence of slack in the business units budget, they may tend to let the slack exist as a strategy to reduce information processing at the corporate parent. Therefore, it is expected that:

H<sub>1</sub> : More diversified firms will let the budgetary slack exist in their business unit.

### The Effect of Diversification on The Incentive Schemes

In relation with the effect of diversification on the incentive schemes, agency theory can be used to explain the relationship. The agency theory posits that agents are purely self-interest, rational and risk averse actors. The theory also argues that principals can motivate agents by manipulating their incentives schemes, with some extent of controls. An agency dilemma may occur, however, when a principal have little ability to monitor or assess an agent's behavior. Furthermore, although slack is inherently unobserved, but linking the incentives with the performance may reduce the slack creation in the business units budget as the incentives schemes can encourage the business units managers actions in line with the corporate objectives. Therefore, it is suggested to use internal compensation schemes to examine the agency relationships in the organization context.

On the other hand, according to agency theory, incentives should be optimum when business unit managers respond to them. Since the direct control from corporate parent in the diversified firms may lower, business unit managers in diversified firms are likely to have discretion about more aspects of their work, and hence, have greater marginal impact on performance. Agency theory suggests that formal monitoring of outcome-based performance and incentives are complementary when corporate do not familiar with the operation of distinct business (Stede 2001).

There is one dimension that consists of three types on how incentive was determined: first, the extent to which the incentive system that is based on total corporate performance, second, the bonus and incentive that is based on business unit performance, and third, a combination of both (hereafter formulae based incentive). The extent of diversification may also affect each type of incentive system determined by the corporate. However, since *apriori* relation-

ships between diversification and incentives schemes have not been previously established, the second hypotheses are stated in the null form:

H<sub>2a</sub> : Diversification does not affect the business unit performance-induced incentive systems.

H<sub>2b</sub> : Diversification does not affect the corporate performance-induced incentive systems.

H<sub>2c</sub> : Diversification does not affect the formulae-based incentive systems.

Using the fundamental lemma of agency theory, that is, the assumptions of opportunistic and self-serving actors (Ekanayake, 2004), corporate will emphasize more on the total corporate performance-based incentive. This study have also maintained that when a *total* goal congruence is emphasized by the corporate, individual and group (business units) rewards must be based on the corporate performance such as corporate profit. This option is more emphasized in order to help corporate in reducing opportunistic behavior of agents by limiting the opportunities and incentives for dysfunctional behavior and moral hazzard. Particularly, this study expect that:

H<sub>2d</sub> : The effect diversification on corporate performance-based incentive will be higher than business units' performance based incentive.

### The Effect of Incentive Schemes on Budgetary Slack

The old saying that "you can get anything if you are willing to pay for it" is, in part, true. Especially in a profit-oriented society such as the business world, where money and incentives can act as a compensation for any discomfort and unpleasant situation. By assuming that slack is "bad", as it reflects the inefficiency of the organizations, incentives and bonuses may be one of the most important accounting control to incentives or reward has become the most appropriate accounting control to stimulate

the managers to reduce any dysfunctional behaviors that may arise.

Behavioral scientists have long stated that in order to achieve the company goals, it is deemed as necessary to provide the executives with appropriate incentive schemes (e.g. Henri, 2010). Unfortunately, compensation packages intended to motivate executives sometimes do fail. Several reasons that can be blamed for the mis-congruence of goals are due to the flaws in the design of compensation systems and poor administration of rewards.

Reid (2002) maintained that budgetary slack is affected by the incentive systems because incentives may provide pressures to the business units managers and thus they may not have much incentives to create budgetary slack. The formulae-based incentives (at the corporate or business units level) may eliminate the subjectivity and performance fluctuations that are caused by other business units.

It is interesting therefore, to examine the hypothesis on whether budgetary slack is influenced by the extent, and the type of incentive schemes. Thus, this study proposes, that:

H<sub>3a</sub> : Higher corporate performance-based incentive system reduces the presence of budgetary slack in the business units.

H<sub>3b</sub> : Higher business unit performance-based incentive system reduces the presence of budgetary slack in the business units.

H<sub>3c</sub> : The combination of both incentives reduces the likelihood of biasing the budget target (budgetary slack) by business unit's managers.

These hypotheses may not identify what kind of incentive schemes that contribute most in reducing the budgetary slack. Use of "so-called quantitative" formulae that combined the corporate and business units incentives may reduce both the dependence of performance of other business units as well as alignment with the firm's goal congruence. Thus, in accordance with H<sub>2d</sub> above, This study propose that corporate performance-based incentive will eliminate the propensity of opportunistic behavior of managers by creating slack. Besides, putting more emphasis on formulae-based incentive makes total corporate goal congruence attainable and reduces the conflicts between business unit managers. Therefore,

H<sub>3d</sub> : The relationship between incentive and budgetary slack will be higher if incentive is tied to the total (formulae-based) corporate performance, rather than other incentives.

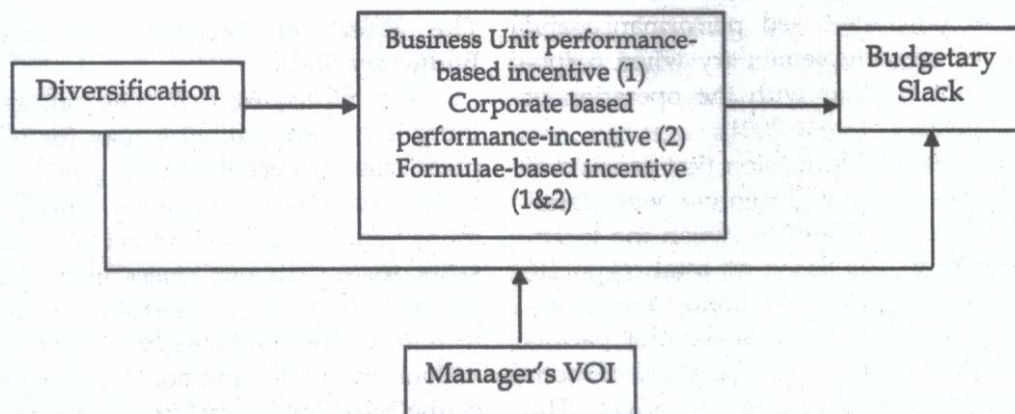


Figure 1  
Hypotheses Model

### The Effect of VOI on The Relationship Between Diversification and Budgetary Slack.

Current study proposes that a negative and weaker relationship exist between diversified firms and budgetary slack with higher value orientation towards innovation (VOI) than for firms with low VOI for the following two reasons: First, firms with high VOI tend to have higher uncertainty in their environment because they seek to innovate and create new ideas and projects. These kind of activities may reduce the predictability of income and returns. As the perceived level of uncertainty in the firms with high VOI tends to be high (Subramaniam and Mia, 2001), they would prefer higher autonomy in decision making because such autonomy will provide them greater flexibility to hedge against unforeseen contingencies in the future. Since the uncertainty is eliminated (or at least, reduced) then budgetary slack may also be decreased as slack creation is a way to hedge against unforeseen contingencies in the future.

Second, a company with more diversified firms will endanger the development of creative ideas and new projects. On the contrary, in less diversified ones, managers may insist that promising new, bright ideas can be scrutinized by top management. If performance is measured by how-good managers achieve the budget target, than they will set the target easier than his/her real capability. Therefore, This study expect that:

H<sub>4</sub> : A negative and weaker relationship exist between diversified firms and budgetary slack with high VOI than for firms with low VOI.

### RESEARCH METHOD

#### Variables Measurement Diversification

To measure the corporate diversification, This study used the number of separate entities in each company (entity) as a proxy for the degree of diversification at

the highest organizational level. Each business units must be one of two or more subsidiaries from a publicly trade manufacturing corporate with a 51% ownership.

#### Incentives Schemes

As previously stated, this study analyzed three schemes of incentive system (corporate performance, business unit performance incentive systems and a combination of both (formulae based incentive)). Corporate performance based incentives was measured by simply asking the percentage of incentive that the corporate received that was based on total corporate performance. While business unit performance based incentives was measured by the percentage of bonus/incentive that was based on the business unit performance. Finally, This study calculate the proportion of corporate vs business unit performance by using arithmetic average for two kinds of incentive systems (henceforth, formulae based incentive system).

#### Budgetary slack

Budgetary slack was assessed by managers' likelihood to set their budget target lower than their real performance capability in the future so that the budget becomes easier to achieve. This variable was measured by Stede's (2000; 2001) measurement that consists of 5 items. Examples of questions are "succeed to submit the budgets that are easily attainable" and "budget target have not caused me to be particularly concerned with improving efficiency in my business units". Answers to all statements (except item no 5) are based on the following rating scale: 1 (strongly disagree), 2 (disagree), 3 (neutral), 4 (agree) and 5 (strongly agree).

#### Value Orientation towards Innovation

The construct was measured using a six item instrument, which was adapted from Subramaniam and Mia (2001). Respondents were asked to indicate the extent to which

members of the organizations value the concept of innovation under each item in the instrument on a five point-scale ranging from 1 (not at all) to 5 (to a very great extent). They asked to indicate the values of innovation, opportunities, experimenting, risk-taking, being careful (reverse-coded), and rules-orientation (reverse-coded).

### Sample

Pilot study was conducted to 34 respondents that represented the sample of this study to ensure the feasibility and clarity of questionnaires and collected comments from them. After evaluated the results of pilot and made some minor revisions, 505 final questionnaires were mailed and 100 questionnaires were e-mailed to the manufacturing subsidiaries of manufacturing go public firms that were listed on their 2002's annual reports. However, it found very low response rate in the first stage of study; totally 43 responses for mailed questionnaires and 2 for e-mailed ones. The second stage of data gathering was conducted and allocated to the 200 respondents. This study, though,

found 56 usable responses (28 percent response rate), but the strict requirement was loosened; subsidiaries with go public corporate were not required; both subsidiaries from publicly or non publicly manufacturing corporate could be included as the sample. Nevertheless, each parent must have two subsidiaries minimum with common stock ownership more than 51%. Total usable responses in the full scale study were 101 which were accounted for 12.5 per cent (101 out of 805). Variance responses of these two different sets of data did not differ significantly based on Lavene's test for equality of variances (except for incentive schemes that differs significantly on 5% significance level). Non response bias test also found no significant differences between the late and early responses at 10% significance level.

The main activity of respondents were food and beverages, textile and mill products, lumber and wood products, plastics and glass products, metal and allied products, pharmaceuticals, and consumer goods (displayed in table 1).

**Table 1**  
**Distribution of Respondents by Activity Sectors**

Activity sectors	Respondents	Percents
Food and beverages	33	32.67
Textile mill products	20	19.80
Plastic and glass products	23	22.77
Metal and allied products	14	13.86
Consumer goods	11	10.90
<b>Total</b>	<b>101</b>	<b>100</b>

### Method of Analysis

The structural model was set up in LISREL 8.54. It is clearly stated that there are four observed variables (diversification and three schemes of incentive systems) and two constructs (budgetary slack and VOI) (Fuad and Sabeni, 2005). Nevertheless, budgetary slack and VOI were treated as the observed variables by an average scale. At least there are two reasons in using the manifest (observed) variables and not as latent with

multiple indicators for budgetary slack and VOI constructs. First, the number of estimated parameters will be reduced significantly (thus reducing the model's degrees of freedom), in order to find the best fit of the model. Second, budgetary slack was measured by 5 point Likert-typed scale data and can be categorized as ordinal data (Joreskog and Sorbom, 1993a). The variables with the ordinal data have no metric, means, variances and covariances are not meaning-



ful. As a consequence, subsequent analysis using SEM may result in biased estimates (Joreskog and Sorbom, 1993a; Byrne, 1998). Averaging the indicators will transform the ordinal data into continuous ones and eliminate the possibility of bias results.

This study employed *moderated structural equation approach* that was developed by Ping (1996) set up in LISREL. Nevertheless, because of the interrelatedness of the interaction term in MSEM analysis, it is quite possible for the degrees of freedom in the model to drop below +1 (Ghozali, and Fuad, 2005). For example, the interaction term (VOI \* Diversification) may load on VOI or Diversification; thus the interaction term may correlated with VOI and Diversification. This will cause *multicollinearity* problem in SEM (Fuad and Ghozali, 2005).

One strategy for minimizing these problems is to begin the analysis by centering all the observed variables as suggested by Cortina et al. (2001). In multivariate analysis, the use of mean-centered data (i.e. variables whose raw values have been replaced by deviation scores) removes nonessential ill conditioning; that is, centering variables prior to formation of interaction product minimizes the relationships between the variables and the product created from them.

## ANALYSIS AND DISCUSSION

The correlations, as displayed below the diagonal in table 2, suggest that diversification (as measured by the number of entities), is positively associated with budgetary slack. This indicates that as the number of entities controlled by corporate increases, than this also leads to increasing the manager's tendency to create budgetary slack. However, more diversified firms did not correlate with three different schemes of incentive. Three schemes of incentive sys-

tems, not surprisingly, correlated between one and another (Sohn, 2000).

Various measures of fit can be used to evaluate the fit between structural model equations and the data. Brief descriptions of the measures cited in table 3 are given here. The likelihood-ratio chi square measure of fit should be nonsignificant, demonstrating that there is no significant discrepancy between the observed and the predicted covariance matrices (Ghozali and Fuad, 2005). The ECVI (Expected Cross-Validation Index), the AIC (Akaike Information Criterion), and the CAIC (Corrected Akaike Information Criterion) compare models on the basis of criteria that take parsimony (the number of parameters) into account as well as fit. For these three indices, the model with the smallest value is considered to have the best fit. The GFI (Goodness of Fit Index) does not depend on sample size and measures how much better the model fits as compared to no model at all. This index should be 0.90 or higher for an adequate model. The NFI (Normed Fit Index), the CFI (Comparative Fit Index) and the IFI (Incremental Fit Index) measure how much better the model fits compared to a baseline model, but also take parsimony into account (Westwood and Low, 2003).

One should keep in mind that no index is superior to others (Ghozali and Fuad, 2005). Instead, all fit indices must be considered simultaneously and not make a "dulled"-final conclusion based on one (or two) fit index. The results above suggested that model A is the best model of all others, and model C is better than model B. Although  $\chi^2$  is not significant on model B indicates that model does not fit with the data, but other fit measures range from reasonable until superior fit. Besides, the  $\chi^2$  is sensitive and often results the poor model when the samples are large.

**Table 2**  
Correlation and Covariances Matrices and Standard Deviation

	<b>Divrst</b>	<b>Inccomb</b>	<b>Incunit</b>	<b>Inccor</b>	<b>Slack</b>	<b>Voi</b>	<b>Modvoi</b>
Divrst	26.428	0.042	0.030	0.055	1.858	0.331	12.883
Inccomb	<i>0.110</i>	0.006	0.006	0.005	-0.011	-0.007	0.062
Incunit	<i>0.064</i>	<b>0.860**</b>	0.008	0.003	-0.012	-0.011	0.074
Inccor	<i>0.125</i>	<b>0.843**</b>	<b>0.451**</b>	0.007	-0.010	-0.003	0.354
Slack	<i>0.384**</i>	<i>-0.158</i>	<i>-0.141</i>	<i>-0.128</i>	0.886	0.105	-1.146
Voi	<i>0.094</i>	<i>-0.141</i>	<i>-0.183</i>	<i>-0.053</i>	<i>0.164</i>	0.466	-0.213
Modvoi	<i>0.608**</i>	<i>0.201*</i>	<i>0.199*</i>	<i>0.173</i>	<i>-0.295**</i>	<i>-0.076</i>	17.016
Std.Dev.	5.141	0.075	0.090	0.086	0.941	0.683	4.125

Correlations, *in italics*, below the diagonal, level of significance: \*\*( $p < 0.01$ ), \*( $p < 0.05$ )  
Covariances were displayed above the diagonal; variances was marked with bold-typed

**Table 3**  
Goodness of Model Fit Based on Three Different Schemes of Incentive Systems

Index	Model A	Model B	Model C
	Corporate-based	Business unit-based	Formulae-based
$\chi^2, (df), p$	1.44, (2), 0.49	6.83, (2), 0.033	4.60, (2), 0.10
RMSEA	0.0	0.15	0.11
ECVI	0.29	0.34	0.31
AIC	27.43	32.61	30.49
CAIC	74.42	79.60	77.49
GFI	0.99	0.97	0.98
NFI	0.98	0.91	0.94
CFI	1.00	0.92	0.96
IFI	1.01	0.93	0.96
AGFI	0.96	0.81	0.87

**Table 4**  
Multivariate Structural Equation Models

Path	MODEL A		MODEL B		MODEL C	
	Corporate based		Business Unit-based		Formulae-based	
	Estimate	t-value	Estimate	t-value	Estimate	t-value
DIVRST→INCNTV	0.018	1.81**	0.0011	0.63	0.0016	1.09
INCNTV→SLACK	0.12	0.12	-0.32	-0.47	-1.13	-1.39
DIVRST→SLACK	0.16	10.55*	0.16	10.67*	0.16	10.76*
VOI→SLACK	0.015	0.16	0.016	0.18	0.0070	0.078
MODVOI→SLACK	-0.19	-10.19*	-0.19	-9.97*	-0.19	-9.93*

\* path is significant at 0.01 level

\*\*path is significant at 0.1 level

Table 4 supports H<sub>1</sub>, H<sub>2b</sub>, H<sub>2d</sub>, H<sub>3d</sub> and H<sub>4</sub> at conventional levels of significance. No significant relationships can be established in other relationships. Diversified corporate

parents seem to have more slack in their business unit budgets (H<sub>1</sub>). Diversified parents also provide more incentive for their business managers based on the total

corporate performance (H<sub>2b</sub>). Since only one hypothesis that is significant with respect to the effect of diversification on incentive schemes, and the significant result deals with total corporate performance; thus H<sub>2d</sub> is accepted.

It is interesting to find out that whatever incentive schemes offered to the business unit's managers, they can not reduce the likelihood of managers to biasing the budget target (H<sub>3a</sub>, H<sub>3b</sub>, H<sub>3c</sub>). Thus, H<sub>3d</sub>, the relationship between incentive and budgetary slack will be higher if incentive is tied to the total corporate performance, rather than other incentives, is also rejected. With respect to the moderating effect of manager's value orientation towards innovation in the relationship between diversification and budgetary slack is also exist. This is shown by the significant effect of the product variable (MODVOI = DIVRST\*VOI) to the budgetary slack (H<sub>4</sub>).

Further advanced results are displayed in table 5 informing the effect composition of the variables hypothesized. Nevertheless, there are no surprising differences with results previously stated.

**Discussion**

This study reveals that diversification positively affects the budgetary slack. The

result can be explained by the monitoring problem in the corporate level. Since corporate managers are more unlikely to be intimately familiar with the various activities of the business units, than detecting budgetary slack in the business units are difficult. Besides, following Galbraith model, the presence of budgetary slack is just a conscious strategy of the corporate to reduce information processing at the top. More budgetary slack reduces the chance of missing the budget target, and therefore less dispersions that need to be scrutinized (Yen and Andre, 2007).

Moreover, the results also suggest that more diversified parents tend to give more incentive to their subsidiaries. However, the incentive to the business unit's managers is tied to the total corporate performance rather than individual business unit performance alone. This result conflicts with the hypothesis, in which tying a business unit managers' bonus to corporate performance may be counter-productive because it makes the bonus dependent on things outside the control of business unit managers.

The logical reasoning for this phenomenon is because the reliance on budgetary performance measure is placed on the total corporate budget, and not on business unit performance (Cadez and Guilding, 2008).

**Table 5**  
**Indirect and Total Effects of Multivariate Structural Models**

	Indirect		Total Effects		
	Divrst	Divrst	VOI	Modvoi	Incntv
<b>Model A</b>					
Incntv		0.02(1.81)**			
Slack	0.00(0.87)	0.16(10.77)*	0.01(0.16)	-0.19(-10.19)*	0.12(1.00)
<b>Model B</b>					
Incntv		0.00(0.63)			
Slack	0.00(-0.38)	0.16(10.65)*	0.02(0.18)	-0.19(-9.97)*	-0.32(-0.47)
<b>Model C</b>					
Incntv		0.00(1.09)			
Slack	0.00(-0.86)	0.16(10.62)*	0.01(0.08)	-0.19(-9.93)*	-1.13(-1.39)

\* path is significant at 0.01 level

\*\* path is significant at 0.1 level

Thus manager's action will be dependent on other business unit performance. Therefore, making the business unit more "superior" than others is not beneficial and seem to prioritizing the business units' goal congruance. Further, the sample of this study is dominated by the related diversification. Since the success of diversification is determined by how well each business units share their core competencies to other business units, than the corporate will perceive that tying the incentive to the business unit performance will make one(s) business unit performs good while others look poor.

Nevertheless, this incentive does not reduce the propensity of manager's to create budgetary slack in their business units, as shown by nonsignificant effect of incentive schemes on budgetary slack. At least there are two plausible explanations why compensation packages intended to motivate executives frequently fail. One of the main reasons is the lack of proper compensation schemes and incentives administration (Reid, 2002). It has been argued by "classical" researchers that certain, unique conditions must be taken into account when designing such a system. For example, overall performance is may be more effective when the incentives systems is designed, among others, to include the balance of long term and short-term goals and acknowledge ones who take more risk.

Second, the stewardship relationship between principal and stewards may provide reasonable explanation why high incentive systems do not reduce manager's tendency to create budgetary slack. Since the sample of this study was mainly from higher-order level of management, than agency theory may not work well. Thus, the corporate may put more emphasis on higher order needs such as growth, achievement and self-actualization rather than lower order needs (e.g. incentive systems) to put the manager's interest in line with the corporate needs (Stede, 2001). Incentive, in this vein, may not act as a motivational

driver for their manager to act in the best interest of the corporate but rather as the "lipstick's" administrative control.

As expected, it is also found that value orientation towards innovation moderates the relationship between diversification on the presence of budgetary slack. In a more diversified firms, managers are provided with greater decision making autonomy for planning and control and operating their business as they are separated company from their corporate. Given that firms' with high VOI are highly dependent upon the degree of novelty or innovativeness in new ideas, products or projects, the value of innovation may affect the management control systems. Diversified firms on the other hand may act as a catalyst to create in these new ideas and to engage in more risk taking activities. Thus, the interaction between diversification and high (low) VOI is a perfect fit to reduce (enhance) the presence of budgetary slack in their business units (Subramaniam and Mia, 2001).

## CONCLUSION AND SUGGESTION

The main aim of this study is to analyze in detail the effect of antecedent and consequence of three different incentive schemes; corporate-based, business unit-based and formulae based incentive systems. This study can be concluded that agency perspectives may no longer be suitable to explain the presence of budgetary slack in their business units as the nonsignificant effect found on the relationship between incentive schemes on budgetary slack. Instead, stewardship perspective, grounded on the view of manager's motivational drivers, may provide a more reasonable argument why budgetary slack exist on the first place. On the other hand, high firms' VOI will reduce the presence of budgetary slack if, and only if, they exist in the diversified subsidiaries.

This study inherently has several limitations. First, incentive's total variances explained ( $R^2$ ) is very low, ranging from 0.02 until 0.21 (not shown). This means that

approximately 79 percent until 99.98 percent of incentive systems can be explained by factors except diversification. Incentive systems and budgetary slack may actually be influenced by other variables than those considered in this study. Therefore, conclusions can only be made with respect to the variables hypothesized. Second, the low response rate, 12.5 percent produce question arose as to whether the responses obtained were representative of the population. Efforts, although limited, have been conducted to minimize the destructive effects to the study's findings by conducting non-response bias test and Lavene's test for equality of variances between publicly and non-publicly traded companies.

This study suggest interested researcher to use other measures of incentives such as group-based vs tournament-based incentive. Interested researchers may incorporate reliance on accounting performance measures to examine the indirect effect of diversification on budgetary slack to provide more comprehensive relationships between firm's situational factor and administrative system on budgetary slack.

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