# ความเชื่อมโยงของส่วนเผื่องบประมาณกับรายการคงค้างที่ขึ้นกับดุลพินิจของฝ่ายบริหาร และการวัดค่าและปัจจัยที่มีผลกระทบต่อส่วนเผื่องบประมาณ: หลักฐานเชิงประจักษ์ของบริษัทจดทะเบียนในประเทศไทย

นางสาวพรพรรณ ดำรงค์สุขนิวัฒน์

วิทยานิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปริญญาบัญชีดุษฎีบัณฑิต
สาขาวิชาการบัญชี ภาควิชาการบัญชี
คณะพาณิชยศาสตร์และการบัญชี จุฬาลงกรณ์มหาวิทยาลัย
ปีการศึกษา 2554

# LINKAGE OF BUDGETARY SLACK TO DISCRETIONARY ACCRUALS AND THE MEASUREMENTS AND DETERMINANTS OF BUDGETARY SLACK: THE EMPIRICAL EVIDENCE OF LISTED COMPANIES IN THAILAND

Miss Pornpan Damrongsukniwat

A Dissertation Submitted in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy Program in Accountancy
Department of Accountancy
Faculty of Commerce and Accountancy
Chulalongkorn University
Academic Year 2011

| | |
|---|---|
| Thesis Title | LINKAGE OF BUDGETARY SLACK TO DISCRETIONARY ACCRUALS AND THE MEASUREMENTS AND DETERMINANTS OF BUDGETARY SLACK: THE EMPIRICAL EVIDENCE OF LISTED COMPANIES IN THAILAND |
| By | Miss Pornpan Damrongsukniwat |
| Field of Study | Accounting |
| Thesis Advisor | Associate Professor Danuja Kunpanitchakit, Ph.D. |
| Thesis Co-advisor | Associate Professor Supol Durongwatana, Ph.D. |

---

Accepted by the Faculty of Commerce and Accountancy, Chulalongkorn University in Partial Fulfillment of the Requirements for the Doctoral Degree

…… Dean of the Faculty of Commerce and Accountancy
(Associate Professor Pasu Decharin, Ph.D.)

THESIS COMMITTEE

……...…… Chairman
(Associate Professor Vorasak Toommanon, Ph.D.)

…… Thesis Advisor
(Associate Professor Danuja Kunpanitchakit, Ph.D.)

…… Thesis Co-advisor
(Associate Professor Supol Durongwatana, Ph.D.)

…… Examiner
(Associate Professor Supapon Lurkitikul, D.B.A.)

…… Examiner
(Assistant Professor Kriengkrai Boonlert-U-Thai, Ph.D.)

…… External Examiner
(Sansakrit Vichitlekarn, Ph.D.)

พรพรรณ ดำรงค์สุขนิวัฒน์ : ความเชื่อมโยงของส่วนเผื่องบประมาณกับรายการคงค้างที่ขึ้นกับดุลพินิจของฝ่ายบริหาร และการวัดค่าและปัจจัยที่มีผลกระทบต่อส่วนเผื่องบประมาณ: หลักฐานเชิงประจักษ์ของบริษัทจดทะเบียนในประเทศไทย (LINKAGE OF BUDGETARY SLACK TO DISCRETIONARY ACCRUALS AND THE MEASUREMENTS AND DETERMINANTS OF BUDGETARY SLACK: THE EMPIRICAL EVIDENCE OF LISTED COMPANIES IN THAILAND) อ.ที่ปรึกษาวิทยานิพนธ์หลัก : รศ. ดร.ดนุชา คุณพนิชกิจ, อ.ที่ปรึกษาวิทยานิพนธ์ร่วม : รศ. ดร.สุพล ดุรงค์วัฒนา, 133 หน้า.

งานวิจัยนี้มีวัตถุประสงค์ 3 ประการ ได้แก่ ศึกษาความเชื่อมโยงของส่วนเผื่องบประมาณกับรายการคงค้างที่ขึ้นกับดุลพินิจของฝ่ายบริหารอันเป็นผลมาจากการบริหารกำไร นำเสนอวิธีการวัดค่าส่วนเผื่องบประมาณโดยวัดจากผลสำเร็จตามงบประมาณของกิจการก่อนการตั้งรายการคงค้างที่ขึ้นกับดุลพินิจของฝ่ายบริหาร แทนการวัดค่าแบบเดิมที่ขึ้นอยู่กับความรู้สึกของผู้บริหาร และศึกษาความสัมพันธ์ของปัจจัยที่มีผลกระทบต่อส่วนเผื่องบประมาณภายใต้การวัดค่าส่วนเผื่องบประมาณด้วยวิธีต่างๆ งานวิจัยนี้ใช้ข้อมูลปฐมภูมิจากแบบสอบถาม และงบการเงินประจำปี 2552 ของบริษัทจดทะเบียนในตลาดหลักทรัพย์แห่งประเทศไทยที่ไม่ใช่บริษัทในภาคการเงินและไม่ใช่บริษัทที่อยู่ระหว่างการฟื้นฟูกิจการ ผู้ตอบแบบสอบถามเป็นผู้บริหารระดับจัดการองค์กร จำนวนประชากรทั้งสิ้น 387 บริษัท และมีแบบสอบถามที่ได้รับการตอบกลับและใช้ได้จำนวน 38 ฉบับ อัตราการตอบกลับคิดเป็นร้อยละ 10

ผลการศึกษาพบว่า กิจการมีการบริหารกำไรผ่านรายการคงค้างที่ขึ้นกับดุลพินิจของฝ่ายบริหารและสร้างส่วนเผื่องบประมาณ โดยที่ค่าเฉลี่ยของรายการคงค้างที่ขึ้นกับดุลพินิจของฝ่ายบริหารมีความแตกต่างกันอย่างมีนัยสำคัญในแต่ละกลุ่มของกิจการ แต่ไม่พบความแตกต่างทางสถิติของค่าเฉลี่ยของส่วนเผื่องบประมาณในแต่ละกลุ่มของกิจการ ส่วนเผื่องบประมาณมีความเชื่อมโยงกับรายการคงค้างที่ขึ้นกับดุลพินิจของฝ่ายบริหาร คือกลุ่มกิจการที่สร้างส่วนเผื่องบประมาณและสามารถบรรลุผลสำเร็จตามงบประมาณแล้วมีแนวโน้มจะเลือกบริหารกำไรให้ลดลงเพื่อต้องการสำรองกำไรส่วนเกินไว้ และ/หรือไม่ต้องการบรรลุผลสำเร็จตามงบประมาณมากเกินไปซึ่งจะมีผลต่อการกำหนดงบประมาณในงวดถัดไป แม้ว่าการวัดค่าส่วนเผื่องบประมาณโดยวิธีที่นำเสนอใหม่โดยใช้วิธีการวัดค่าจากผลสำเร็จตามงบประมาณของกิจการก่อนการตั้งรายการคงค้างที่ขึ้นกับดุลพินิจของฝ่ายบริหารจะมีความสัมพันธ์เชิงบวกทางสถิติกับวิธีการวัดค่าส่วนเผื่องบประมาณแบบเดิมที่ขึ้นอยู่กับความรู้สึกของผู้บริหาร จากการพิจารณาแล้ว พบว่าการวัดค่าส่วนเผื่องบประมาณวิธีที่นำเสนอใหม่ดีกว่าวิธีการวัดค่าแบบเดิม นอกจากนั้น ความสัมพันธ์ของปัจจัยที่มีผลกระทบต่อส่วนเผื่องบประมาณมีความไวต่อวิธีการวัดค่าส่วนเผื่องบประมาณ

ภาควิชา : การบัญชี ลายมือชื่อนิสิต.....

สาขาวิชา : การบัญชี ลายมือชื่อ อ.ที่ปรึกษาวิทยานิพนธ์หลัก.....

ปีการศึกษา : 2554 ลายมือชื่อ อ.ที่ปรึกษาวิทยานิพนธ์ร่วม.....

# # 508 31557 26 : MAJOR ACCOUNTING

KEYWORDS : BUDGETARY SLACK / DISCRETIONARY ACCRUALS / ENVIRONMENTAL FACTOR / ORGANIZATIONAL FACTORS / INDIVIDUAL FACTORS

PORNPAN DAMRONGSUKNIWAT : LINKAGE OF BUDGETARY SLACK TO DISCRETIONARY ACCRUALS AND THE MEASUREMENTS AND DETERMINANTS OF BUDGETARY SLACK: THE EMPIRICAL EVIDENCE OF LISTED COMPANIES IN THAILAND. ADVISOR : ASSOC. PROF. DANUJA KUNPANITCHAKIT, Ph.D., CO-ADVISOR : ASSOC. PROF. SUPOL DURONGWATANA, Ph.D., 133 pp.

This study firstly, investigates the linkage of budgetary slack to discretionary accruals as a result of earnings management; secondly, introduces an objective measurement of budgetary slack based on *ex post* measure of firm's annual budget achievability with the exclusion of earnings management through discretionary accruals rather than the traditional subjective measurement based on management's perceptions; and thirdly, empirically examines the association between budgetary slack and its determinants under various budgetary slack measurements. This study uses primary data from survey questionnaires and data from the annual financial statements for the year ended 2009 of listed non-financial and non-rehabilitation companies in Thailand. The respondents are those who are at the corporate level. The population covers 387 firms and there are 38 returned and usable questionnaires which is 10% response rate.

The results reveal that firms choose to manipulate earnings through discretionary accruals and create slack into budgets. The means of discretionary accruals are significantly different among groups. However, there is no statistical evidence that the means of budgetary slack of each subsample group are different. There is a linkage of budgetary slack to discretionary accruals. Firms that incorporated slack into budgets and already achieved their annual earnings targets are more likely to manipulate earnings downward in order to reserve the excess earnings and/or not to exceed the targets by too much which will affect the budget setting in the next period. Although the objective measurement of budgetary slack is statistically found to be positively related to the traditional subjective measurement, the suggested objective measurement is considered to be a superior one. Moreover, the association between budgetary slack and its determinants is relatively sensitive to the measurements of budgetary slack.

Department : Accountancy Student's Signature……

Field of Study : Accounting Advisor's Signature.....

Academic Year : 2011 Co-advisor's Signature.....

# ACKNOWLEDGEMENTS

I would like to take this opportunity to express my sincere gratitude to everyone who contributed significantly to my dissertation as well as my doctoral education. First of all, I am greatly appreciative and thankful to my dissertation advisor, Associate Professor Danuja Kunpanitchakit and my co-advisor, Associate Professor Supol Durongwatana for their commitment, insightful suggestions, support, encouragement, generosity and patience through the entire process of this dissertation.

I am very much thankful to my dissertation committee members, Associate Professor Vorasak Toommanon, Associate Professor Supapon Lurkitikul, Assistant Professor Kriengkrai Boonlert-U-Thai, and Dr. Sansakrit Vichitlekarn for their valuable time, helpful comments and suggestions. I would like to thank Professor Victor Vroom and Professor Philip Yetton, and the Center for the Study of Ethical Development at the University of Alabama for their permission to use the Vroom-Yetton (1973) model, and the DIT-1 manual and cases, respectively, as part of my questionnaire. I would also like to thank the other accounting faculty members, staffs, and my fellow students at Chulalongkorn University, my relatives, friends and colleagues for their knowledge, encouragement, generosity, support and assistance.

I am truly and deeply grateful to my family. Without their love, care, support, encouragement, motivation, devotion, patience, and understanding, I would not be able to complete this dissertation as well as my entire doctoral education. Finally, I would like to dedicate this dissertation to Grandfather Monk Khan Thanavaro who inspired me to do a doctoral degree and whom I do faithfully respect.

**CONTENTS**

**Page**

**Page**

**Page**

# LIST OF TABLES

**Page**

## LIST OF FIGURE

**Page**

# CHAPTER I

# INTRODUCTION

## *1.1 BACKGROUND AND STATEMENT OF THE PROBLEMS*

Budget is a formal quantitative expression of management plan and a key management control system. Budgeting process includes management planning, control, and performance evaluation of various management hierarchies. The fact that budget information can be used to evaluate management performance is instrumental in driving the evaluated managers to take actions in congruence with organizational objectives and policies. The budgeting process covers broad functions from where budgets are prepared up to where budget information contained therein are used for management control purpose.

Although budgeting is the cornerstone of the management planning and control processes in nearly all organizations and is widely used, it is far from perfect. When organizations use budgets for performance evaluation, traditional budget-based compensation plans provide economic incentives for subordinates to misrepresent their productivity and build slack into the budgets. The slack then creates budget bias and can reduce firms' profits due to costly planning errors and greater compensation or perquisite consumption for subordinates.

Budgetary slack is created by managers who can manage to conceal some private information from their supervisors and deliberately misrepresent that information in order to maximize their own utility through the introduction of slack. Budgetary slack in this paper is defined as the subordinates' intentional biasing of

performance targets below their expected levels which is consistent with Chow et al. (1991). Managers who misrepresent private information regarding resource needed or production capacity may receive excess resources that can be diverted to perquisite consumption (Waller and Bishop, 1990).

Empirical evidence suggests that, in most entities, significant amounts of budgetary slack exist. Pongsak Sumpunsirichareon (2003) and Piyaporn Chankaew (2005) examine the determinants of budgetary slack and also report that, on average, manufacturing companies in Thailand have moderate level of budgetary slack.

To mitigate budgetary slack, truth-inducing compensation scheme is developed to explicitly reward subordinates for the truthful revelation of their private information (e.g., Weitzman, 1976). Empirical research also documents that the new scheme does reduce subordinates' misrepresentations of productivity and budgetary slack. However, it is rarely used in practice. Other three mechanisms that have been suggested by prior literature (e.g., Fisher et al., 2002) to reduce budgetary slack creation behavior when firms use traditional budgets for performance evaluation are (*i*) the budget negotiation by subordinates, (*ii*) the use of budgets to allocate scarce resource, and (*iii*) the reduction of horizontal information asymmetry among subordinates.

Although traditional budget is deficient, it is still used universally which implies that its benefits are perceived to exceed the possible dysfunctional effects. Apparently, either the benefits of using traditional budget-based compensation plans outweigh the costs of budgetary slack, or other mechanisms in the budgeting process

counteract the negative effects of these traditional plans on subordinates' propensity to build slack in their budgets (Fisher et al., 2002).

Budgetary slack is viewed as one form of opportunistic behavior in attempting to achieve budget easily by biasing performance target below the expected level. Earnings management; however, involves the intention of management to alter financial reports (i.e., to mislead about the company's performance) for their purposes through choices in the accounting procedures and/or structuring transactions. Taken together, both budgetary slack and earnings management are management's intentional interventions to produce some private gains at the expense of others. The former is biasing of performance targets and the latter is biasing the financial reporting. If budget achievability is management's goal, two possible interventions to achieve the budget are building slack into the budget (i.e., set earnings target less than the best estimate) and managing earnings through discretionary accruals. A large body of archival research presents substantial evidence that both budgetary slack and earnings management exist in most entities. Prior literature suggests various incentives for earnings management, which can be both upward and downward management. Therefore, this study intends to investigate whether and how budgetary slack associates with discretionary accruals.

Traditional budgetary slack measurements are subjective measures based on respondents' subjective view, i.e., "managers' perception of the target achievability". These types of measurements have long been proposed and utilized in most budgetary slack studies even though they possess drawback, e.g., respondents may have different perceptions under the same environment. As such, an objective

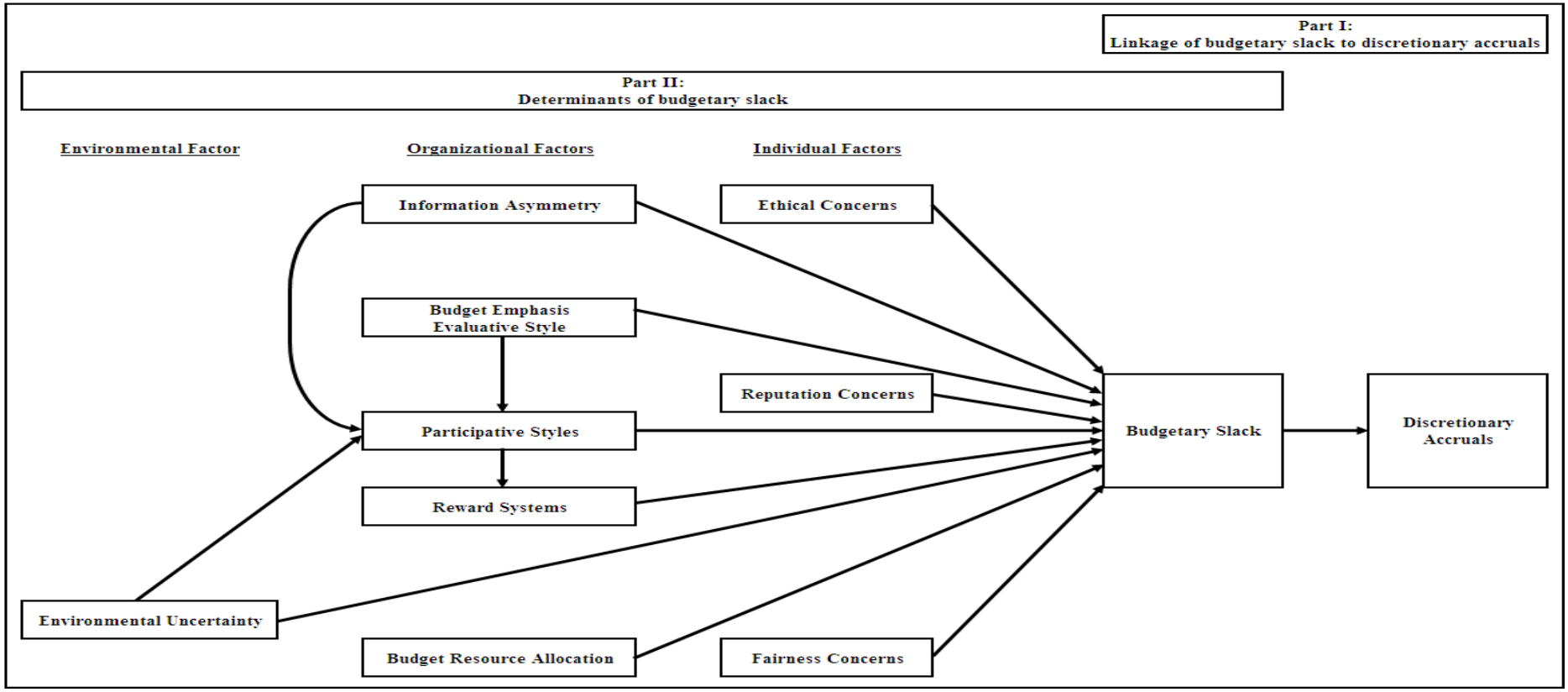
measurement of budgetary slack based on numerically measurable and insensitive to each respondent's perception is sought to ensure its reliability. Nevertheless, budgetary slack is not directly observable. Thus, this study intends to propose an objective measurement of budgetary slack in the hope to improve the reliability and the quality of such.

### *1.2 RESEARCH OBJECTIVES*

This study aims at broadly examining budgetary slack since it is the deficiency of widely used traditional budget plans. According to the conceptual model presented in Figure 1, this study consists of two parts:

- The first part is to empirically investigate the linkage of budgetary slack to discretionary accruals so as to examine management's intervention behaviors both in forms of budgetary slack creation based on subjective measurements and discretionary accruals.
- The second part is to introduce a new approach of budgetary slack measurement which is an objective one, and empirically examine the association between this objective budgetary slack measurement and its determinants. The associations between subjective and objective measurements of budgetary slack and their determinants are also compared and investigated which include both direct and indirect effects. This will provide the insight information of how sensitive the associations between factors affecting budgetary slack are to the measurements of budgetary slack.

**FIGURE 1**
**Conceptual model**




Part I: Budgetary Slack is measured by two traditional subjective measurements (perceived ease of budget achievability and reversed score of perceived difficulty of budget achievability).

Part II: Budgetary Slack is measured by two traditional subjective measurements (perceived ease of budget achievability and reversed score of perceived difficulty of budget achievability) and the new objective measurement ([budget achievability – discretionary accruals] / original budget figure).

## *1.3 TERMS AND DEFINITIONS*

### *1.3.1 BUDGETARY SLACK*

The definition of budgetary slack is the subordinates' *intentional biasing of performance targets* below their expected levels (Chow et al., 1991).

### *1.3.2 EARNINGS MANAGEMENT*

Earnings management is defined as non-neutral financial reporting in which managers *intervene intentionally in the financial reporting process* to produce some private gains (Schipper, 1989).

### *1.3.3 DETERMINANT VARIABLES*

#### *1.3.3.1 ENVIRONMENTAL FACTOR*

Environmental uncertainty is classified as environmental factor since it is an external factor influencing the performance of an organization.

#### *1.3.3.2 ORGANIZATIONAL FACTORS*

Information asymmetry, budget emphasis evaluative style, participative styles, reward systems, and budget-based resource allocation are classified as organizational factors since they are all related to policies, procedures, or systems designed by an organization to fit its nature and environment.

#### *1.3.3.3 INDIVIDUAL FACTORS*

Ethical concerns, reputation concerns, and fairness concerns are classified as individual factors since they are all human factors that influence individuals to decide and react differently in certain situations.

## *1.4 RESEARCH QUESTIONS*

The research questions of this study are as follows:

- Whether and how do budgetary slack associate with discretionary accruals?
- Whether and how do environmental factor, organizational factors, and individual factors associate with budgetary slack?
- Whether the associations between factors affecting budgetary slack are sensitive to the measurements of budgetary slack?

## *1.5 SUMMARY OF HYPOTHESES*

### *PART I: LINKAGE OF BUDGETARY SLACK TO DISCRETIONARY ACCRUALS*

Both budgetary slack and earnings management are management's intentional interventions to produce some private gains at the expense of others. The former is biasing performance targets and the latter is biasing the financial reporting. If budget achievability is the management's target, there are two possible interventions which are building slack into budget and/or managing earnings (through discretionary accruals). This leads to the hypothesis stated as follow:

$H_1$: Budgetary slack is associated with discretionary accruals.

### *PART II: THE DETERMINANTS OF BUDGETARY SLACK*

#### *DIRECT EFFECTS*

Prior literature suggests the direct association of certain factors with budgetary slack. This study classifies those key factors into environmental factor, organizational factors, and individual factors. Hence, the hypotheses stated as follows:

$H_2$: Environmental factor is associated with budgetary slack.

$H_{2.1}$: Environmental uncertainty is positively associated with budgetary slack.

$H_3$: Organizational factors are associated with budgetary slack.

$H_{3.1}$: Information asymmetry is positively associated with budgetary slack.

$H_{3.2}$: Budget emphasis evaluative style is associated with budgetary slack.

$H_{3.3}$: Participative styles are associated with budgetary slack.

$H_{3.4}$: Reward systems are associated with budgetary slack.

$H_{3.5}$: Budget-based resource allocation is negatively associated with budgetary slack.

$H_4$: Individual factors are associated with budgetary slack.

$H_{4.1}$: Ethical concerns are negatively associated with budgetary slack.

$H_{4.2}$: Reputation concerns are negatively associated with budgetary slack.

$H_{4.3}$: Fairness concerns are negatively associated with budgetary slack.

*INDIRECT EFFECTS*

There is also an association among determinant factors and budgetary slack. Therefore, the indirect association of certain determinant factors with budgetary slack is empirically examined and the hypotheses stated as follows:

$H_5$: Environmental factor and organizational factors are indirectly associated with budgetary slack.

$H_{5.1}$: Environmental uncertainty is indirectly associated with budgetary slack through participative styles and reward systems.

$H_{5.2}$: Information asymmetry is indirectly associated with budgetary slack through participative styles and reward systems.

$H_{5.3}$: Budget emphasis evaluative style is indirectly associated with budgetary slack through participative styles and reward systems.

### *1.6 SCOPE OF THE RESEARCH*

This study uses both primary data from mailed survey questionnaires and secondary data from the annual financial statements in analysis. The sample is companies listed on the Stock Exchange of Thailand (SET) and the Market for Alternative Investment (MAI) as of the year ended 2009, all of which use budget for performance evaluation. This study excludes companies in financial industry and companies under rehabilitation for the reason that their financial reporting requirements and their characteristics of business operation are different.

Survey data on budget figures of the year 2009, perceived budget achievability, and all determinant factors are gleaned from the management at the corporate level of the listed companies to match their companies' annual financial statements. Corporate managers are selected to be the respondents in this study as it aims at measuring budgetary slack from subordinate side (this study defines corporate managers as agents and their superiors as principals). Multiple regression, simple correlation and partial correlation techniques are used for cross-sectional data analyses.

*1.7 RESEARCH CONTRIBUTIONS*

This study contributes to accounting literature, combining managerial and financial accounting research.

- The results in this study suggest new evidence of organizational level on the linkage of budgetary slack to discretionary accruals.
- This study adds prior literature an objective measurement of budgetary slack. Prior survey studies usually measure slack from a subjective view, although it is a perceptual dependent variable.
- This study empirically examines the association between budgetary slack and its determinants (both direct and indirect effects) by comparing the objective and the subjective slack measurements which the results reveal that the association between budgetary slack and its determinants is sensitive to the measurements of slack, i.e., subjective and objective measurements or even between the two subjective measurements. The differences in measurements of budgetary slack might be the cause of inconclusive results of the association between budgetary slack and its determinants in prior research.
- The respondents in this study are corporate managers who involve extensively in budgeting process and are accountable for firms' performance. The results in this study may suggest new evidence of organizational level, while prior survey studies usually employ sales or production managers as respondents, which represent departmental level.
- This study also gathers a number of determinants of budgetary slack from prior literature and classifies them into three categories: environmental factor, organizational factors, and individual factors.

- This study also introduces new measurements of certain determinants, i.e., participative styles and ethical concerns, to budgetary slack literature with the aim to improve the quality and reliability of the proxies, and finally the validity of the results.

The findings from this study should be of interest to both practitioners, and academicians because the possible dysfunctional effects (budgetary slack creation behavior and earnings management) that are detrimental to the firms, shareholders, and possibly creditors, are better understood and, finally, can be minimized.

### *1.8 STRUCTURE OF THE RESEARCH*

The dissertation is divided into five chapters. Chapter I introduces the research overview. Chapter II presents theoretical concepts, literature review, and hypothesis developments. Chapter III presents the research methodology, providing detail about the data collection process, the survey instrument development, variable measurements, the data analysis methodology and model specifications. Chapter IV presents empirical results. Chapter V presents conclusions, limitations and suggestions for future research.

# CHAPTER II

# THEORETICAL CONCEPTS, LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENTS

From the research overview in chapter I, this chapter presents (*i*) the related theoretical concepts, (*ii*) the related literature review, and (*iii*) the hypothesis developments, respectively.

## *2.1 THEORETICAL CONCEPTS*

The related theoretical concepts include (*i*) agency theory, (*ii*) positive accounting theory, (*iii*) level of participation, (*iv*) moral reasoning, and (*v*) organizational justice theory.

### *2.1.1 AGENCY THEORY*

Agency theory, a traditional economic theory, postulates that firms can be viewed as a nexus of contracts between resource holders. Jensen and Mecking (1976) define that the separation of principals and agents causes the agency problems and information asymmetry. They define the theory as agency relationship as a contract under which one or more persons (principal(s)) engage another person (the agent) to perform some service on their behalf which involves delegating some decision making authority to that person, then the agent will get incentives or rewards, in return. If both parties of the relationship are utility maximizers, there is a good reason to believe that the agent will not always act in the best interests of the principal. As such, an organizational control issue arises if there is information asymmetry between principal and agent, and principal relies on agent to communicate

his private information since an agent may misrepresent his private information in order to reap the maximum available financial benefits.

From the corporation's perspective, the agent is the manager and the principal is the shareholders. There is an agency problem caused by the divergence between manager's and shareholders' interests in any corporation. The manager may not act in the best interest of the principal by transferring wealth from the shareholders to himself. The implication is that the divergence arises from the conflicts of interest and the information asymmetry between outside shareholders and corporate managers which imply that there is an incentive and opportunity for managers to manage the reported earnings for their self-interest. Budgetary slack creation by agents is another form of increasing agency costs because decisions regarding resource allocations can become suboptimal since these decisions are based on incorrect information (Maiga and Jacobs, 2007).

According to agency theory, it is convinced that budgetary slack creation and earnings management exist as managers, who prefer wealth-maximization, try to produce some private gains at the expenses of shareholders.

### *2.1.2 POSITIVE ACCOUNTING THEORY*

Positive accounting theory provides an explanation and prediction for accounting and auditing practice (Watt and Zimmerman, 1986).

There are three hypotheses most frequently tested as incentives for managers to choose accounting methods. Those are the bonus plan hypothesis, the

debt to equity hypothesis, and the political cost hypothesis. Firstly, the bonus plan hypothesis states that where bonus plans exist, managers are more likely to choose accounting procedures that increase current period reported income in an attempt to maximize their utility related to their compensation. Generally, management compensation is likely to be positively related to accounting earnings. Therefore, the managers are more likely to inflate reported income to increase their compensation. Secondly, the debt to equity hypothesis states that the higher the firm's debt to equity ratio, the more likely the firm's manager to select accounting procedures that increase reported income. This is because the higher the firm's debt to equity ratio means the closer (i.e., tighter) the firms is to the constraints in the debt covenants. Therefore, firms with a higher debt to equity ratio are more likely to inflate reported earnings to reduce the debt covenants' constraints. Lastly, the political costs (size) hypothesis states that the larger the firm, the more likely the manager is to choose accounting procedures that deflate reported earnings. This is because large firms are more politically sensitive and have relatively larger wealth transfers imposed on them (political costs) than smaller firms, so they are more likely to deflate reported income to evade political attention.

Positive accounting theory suggests that there is opportunistic behavior by managers choosing the optimal accounting procedures for a given purpose. Self-interest managers may attempt to maximize their utility related to their compensation and normally management compensation is likely to be positively related to accounting earnings. Therefore, the managers tend to choose accounting policies which maximize or increase their compensation.

In conclusion, positive accounting theory explains that managers will choose the optimal accounting procedures to alter the reported earnings for a number of incentives.

### *2.1.3 LEVEL OF PARTICIPATION*

Participation in budgeting is a process in which individuals, whose performance will be evaluated and possibly rewarded on the basis of their achievement of budgeted targets, are involved in and have influenced on the setting of these targets (Brownell, 1982).

Research in organizational behavior indicates that subordinate participation in decision making may improve the quality of the decision through the additional inputs offered by subordinates and facilitate implementation by increasing the subordinates' acceptance of the decision (Maier, 1963). In addition, participative budgeting may increase subordinates' acceptance and satisfaction, and finally improve firm-wide performance. The level of subordinates' participation in budgeting has a relation to job performance; however, the appropriate level of participation is subject to a number of factors, e.g., the budgetary situations.

Vroom and Yetton (1973) develop a contingency model to assist managers in selecting the appropriate level of participation. The Vroom-Yetton model identifies five participative styles, ranked from lowest to highest participation level, as follows:

- Autocratic style – AI: The superior prepares the budget himself, using information available to him at the time.

- Autocratic style – AII: The superior prepares the budget himself, obtaining the necessary information from the subordinates. The superior may or may not describe the budgeting decisions to the subordinates when asking for the information.

  *(AII differs from AI by the greater amount of information gathered from subordinates)*

- Consultative style – CI: The superior shares the budgeting decision with the relevant subordinates individually, getting their ideas and suggestions without bringing them together as a group. Then the superior makes the budgeting decision, which may or may not reflect the subordinates' influence.

- Consultative style – CII: The superior shares the budgeting decision with the subordinates as a group, obtaining their collective ideas and suggestions. Then the superior makes the budgeting decision, which may or may not reflect the subordinates' influence.

  *(These two consultative styles differ by whether the problem is shared on a subordinate-by-subordinate basis (CI) or as group (CII)).*

- Group decision-making style – GII: The superior shares the budgeting decision with the subordinates and seeks consensus and accepts any solution that has the support of the group.

Budgetary participation is the process whereby individuals are involved in, and have influence on, budgeting decisions. Participation in budgeting process may influence the individuals' motivation to meet budget, while there may

also be an opportunity for individuals to bias their standards of performance via slack creation behavior.

### *2.1.4 MORAL REASONING*

The model of moral reasoning is initiated by Kohlberg (1969), who developed the model from the earlier study of Piaget (1932). The theory indicates that all individuals move upward through three cognitive levels of moral development. A series of three cognitive levels are presented as follows:

- The pre-conventional level: the focus is on the self and actions are primarily motivated by a cost/benefit analysis that involves avoiding punishment and acquiring individual benefits.
- The conventional level: an individual identifies self in relation to others, and actions are motivated more by a sense of duty and fulfillment of social obligations.
- The post-conventional level: individuals' actions are motivated by principles of justice, such that the fairness of a law would be evaluated by the due process of its passage (a reasoned societal consensus).

The theory of moral development explains the human decision-making process. The moral reasoning research suggests the link between moral reasoning capacity and attitudes or behavior is contingent on the degree in utilize in decision making (Kaplan et al., 1997).

Contrary to the agency theory which assumes that managers' preferences are for wealth-maximization, the moral reasoning theory suggests that agents whose moral reasoning level is high (i.e., at the post-conventional level) will display actions that are usually aligned with principles of justice (i.e., avoiding misreporting behavior if they perceive that it is unethical). In other words, managers do not always seek to produce some private gains at the expenses of others since they have utility for factors other than wealth (e.g., honesty, reputation and fairness). Thus, they choose to report more honestly than what the agency theory postulates.

### *2.1.5 ORGANIZATIONAL JUSTICE THEORY*

Organizational justice theory is developed to explain how perceptions of fairness, or fairness judgments, affect individuals' reactions to resource allocation, performance measurement, and compensation decisions made in the organizational context. In other words, it is the study of people's perception of fairness in organizations.

Organizational literature tends to focus on three specific forms of justice perceptions (Folger and Cropanzano, 1998):

- Distributive fairness (fairness of outcomes) reflects how fair employees in an organization perceive the actual allocation of outcomes they receive to be. Problems with distributive justice may arise if employees feel something negative cannot be avoided, when everyone cannot receive the same thing or what they each want, and when valuable resources or outcomes are scarce.

- Procedural justice (fairness of the methods or procedures used) is characterized by the fairness of the processes that are used to determine what outcomes are used, how they are distributed, and to whom the outcomes are given. Suggested attributes of organizational procedural justice include freedom from bias, accuracy, consistency, representation by stakeholders, correction of errors and ethical consistency.
- Interactional justice (fairness of the interpersonal treatment received) concerns the perception of fairness in procedural treatment of others. Issues with interactional justice can arise when employees are lied to, judged unfairly, and denied privacy or respect.

The basic premise of organizational justice theory is that fair treatment is of great importance to people and is a major determinant of their reaction to allocation decisions (Korsgaard et al., 1995). Fairness judgments are based on individual perceptions and are consequently "in the eye of the beholder."

Fairness is defined as "a free and reasonable conformity to accepted standards of natural right, law, and justice without prejudice, favoritism, or fraud..." (Leventhal, 1980: 29). Leventhal et al. (1980) describe a fairness judgment as a type of moral judgment occurring when a problem of allocation is involved. A fairness judgment involves a comparison of the difference in allocation between two or more parties and an evaluation of the "rightness" of the size of the difference and the allocative process that determined the difference. Although fairness is difficult to

define in more specific terms due to its reliance on accepted social norms, the concept of fairness lies at the root of the theory of organizational justice.

Leventhal (1976), a pioneer in organizational justice research, suggests that managers may use equitable rules in the distribution of rewards and resources in organizations not necessarily only because they are committed to abstract ideals of equity and justice, but also in order to conform to business norms, attract superior employees, motivate employees, and avoid conflict.

In organizational settings where resources are scarce, it is unable to favor all subordinates in allocations of scarce resources. Organizational justice research has demonstrated that when individuals receive less than expected allocations, they often feel they have been unfairly treated and the perception of unfair treatment can result in negative organizational consequences. Subordinates' perception of being fairly treated by their superiors and their organizations could be a non-monetary motivational force which could give rise to increased performance and reduced willingness to create budgetary slack (Libby, 1996).

According to the organizational justice theory, individuals who perceive the budgeting environment in their firms is fair enough will create less budgetary slack, relative to those who perceive unfair (Libby, 1996).

## *2.2 LITERATURE REVIEW*

### *2.2.1 BUDGETARY SLACK*

Budgetary slack has been defined in the literature under a variety of ways, e.g., it can be defined as the consumption of organizational resources by employees in excess of what is required (Cyert and March, 1963); the amount by which managers overstate their needs for resources to complete a task or understate their productive capability when given the opportunity to influence the standard against which their performance will be evaluated (Schiff and Lewin, 1968); the intentional biasing of performance targets below their expected levels (Chow et al., 1991); and the difference between the subjects' expected performance and chosen budget (Stevens, 2002).

Consistent with Chow et al. (1991), the definition of budgetary slack in this study is the subordinates' intentional biasing of performance targets below their expected levels.

Budgetary slack creation often takes place when tight results controls are in use. That is, when employees, mostly at management levels, are evaluated primarily on whether or not they achieve their budget targets (Van der Stede, 2000). Managers who miss their target face the prospect of interventions in their jobs, the loss of organizational resources, the loss of annual bonuses and pay raises, and sometimes even the loss of their job (Merchant and Manzoni, 1989). So they may look for ways to protect themselves from the downside risks of missing budget targets and the stigma attached to underachievers (Lukka, 1988). Possible ways of protection

can be obtained by negotiating for highly achievable targets (i.e., budgetary slack creation).

Theoretically, budgetary slack is feasible only where there is information asymmetry, where superiors have less than complete knowledge about what can be accomplished in a given area, and where subordinates are allowed to participate in setting the performance targets for that area (Dunk, 1993). Thus, where performance can be accurately forecasted, or be set in a top-down manner, it should be possible to prevent or at least to mitigate budgetary slack behavior. But these conditions exist only in rare situations (i.e., highly stable environments). If accountability controls are used in other situations, budgetary slack must be considered to be almost inevitable (Merchant, 1985). In most situations, budgetary slack is nearly impossible to prevent.

A large body of archival research presents substantial evidence that significant amounts of budgetary slack exist in most business organizations, as estimated by the magnitude of slack to be as high as 20% - 25% of budgeted operating expenses (Schiff and Lewin, 1968), as well as by the prevalence of managers willing to admit that they engage in budgetary slack creation to be as high as 80% of the managers interviewed (Onsi, 1973). In Thailand, Pongsak Sumpunsirichareon (2003) and Piyaporn Chankaew (2005) perform survey research and also report that, on average, Thai manufacturing companies have moderate level (level four of seven-point Likert scale) of budgetary slack.

On the positive side, budgetary slack protects the managers against unforeseen contingencies and improves the probability that the budget target will be met and thus, increase the likelihood of receiving a favorable evaluation and associated performance-dependent rewards (Merchant and Van der Stede, 2007). Also, Bourgeois (1981) suggests that budgetary slack can reduce manager tension, increase organizational resiliency to change, and make available some resources that can be used for innovation.

On the negative side, budgetary slack obscures true underlying performance and hence, distorts the decisions based on the obscured information, such as performance evaluations and resource allocation decisions (Merchant and Van der Stede, 2007).

When employees create budgetary slack, they are exploiting their position of superior knowledge about business possibilities. They are failing to disclose to their supervisors all of their information and informed insights and are actually presenting a distorted picture of the possibilities (Lukka, 1988). The integrity standard requires management accountants to communicate information fairly and objectively. Thus, creating budgetary slack can be interpreted to be in violation of integrity standard (Merchant and Van der Stede, 2007).

Budgetary slack creation constitutes an ethical issue. Typically, employees creating budgetary slack will benefit personally from their act. Budgetary slack protects employees against unforeseen bad luck, such as economic downturn or an increase in costs, thus increasing the probability that the employees will meet their

performance targets and earn performance-dependent rewards. If the reward-performance function is continuous, as is typical, budgetary slack increases the size of rewards that will be earned (Merchant and Van der Stede, 2007).

An ethical issue is raised because budgetary slack creation is often costly to some stakeholders, especially the firm, its owners, and possibly creditors. Budgets containing slack are often less than optimally motivating. When achievement of an organization's goals is assured, the effort of the employees in the organization may decline. Managers know they do not want to exceed their target by too much because that might cause them to be given a higher, more difficult target in the following period. They may not work as hard, they may make unnecessary expenditures to consume the excess, or they may be motivated to play games to save profit not needed in the current period (Merchant and Van der Stede, 2007). In sum, budgetary slack has the undesirable consequence of encouraging waste.

Budgetary slack creation appears less than fair to the superiors. The superiors will rely on the information in the budget to make investment, resource allocation, and performance evaluation decisions that will become distorted (Merchant and Van der Stede, 2007). In other words, budgetary slack creates a bias in budgets and can reduce firm profits due to costly planning errors and greater compensation or perquisite consumption for subordinate managers (Fisher et al., 2002).

This study intends to examine budgetary slack only on the negative side as it appears that the negative effect makes firm worse off. It is motivated from

the weakness of traditional-budgeted compensation schemes that have been long and widely used in most organizations. Then, if those weak points can be minimized, it would be largely contributed.

### *2.2.2 PAY SCHEMES*

#### *2.2.2.1 TRADITIONAL BUDGET-BASED COMPENSATION SCHEMES*

Prior research has documented both benefits and costs associated with the budget-based contract. Specifically, relative to fixed-wage or pure profit-sharing (piece-rate) contracts, traditional budget-based contracts increase subordinate effort and performance (Bonner et al., 2000). This occurs because a traditional budget-based contract explicitly links pay to performance (Chow, 1983) and delineates precise goals for subordinates (Locke and Latham, 1990), both of which are motivational mechanisms (Bonner and Sprinkle, 2002).

However, traditional budget-based contracts provide a strong incentive for subordinates to use their private information to create budgetary slack to misrepresent, by understating, their expected productivity and build budgetary slack in budget proposals (Horngren et al., 2000). Budgetary slack represents the discrepancy between a subordinate's best estimate of performance based on his private information and the budgeted level of performance (Young, 1985; Chow et al., 1988; Waller, 1988). Budgetary slack increases subordinates' compensation at the expense of shareholders.

A number of empirical research studies indicate that subordinates build significant amounts of slack under traditional budget-based compensation schemes (e.g., Young, 1985; Chow et al., 1988).

#### *2.2.2.2 TRUTH-INDUCING COMPENSATION SCHEMES*

Truth-inducing compensation schemes are developed by researchers (e.g., Weitzman, 1976) to mitigate, at least to minimize, budgetary slack. Truth-inducing systems explicitly reward subordinates both for the truthful revelation of their private information and for minimizing the variance between actual performance and performance targets. With such a system, managers are motivated to set high performance targets and to achieve them, thus overcoming the common tendency toward conservatism in target setting (Merchant and Van der Stede, 2007).

In practice, firms rarely use truth-inducing schemes (Waller, 1994; Atkinson et al., 1997) and widely use traditional schemes. Empirical research indicates that truth-inducing budget-based compensation schemes provide limited benefits, they reduce slack but typically do not eliminate it (Chow et al., 1988; Waller, 1988).

Chow et al. (1988) perform a laboratory experiment in which subjects (40 college students) act as subordinates who perform a production task. The results show that, in participative budgeting contexts, when the information asymmetry is absent, budgetary slack does not differ significantly between the pay schemes. However, when the information asymmetry is present, budgetary slack is significantly lower under the truth-inducing schemes. Young and Lewis (1995)

indicate that truth-inducing compensation schemes do reduce subordinates' misrepresentations of productivity and budgetary slack.

This study intends to examine budgetary slack only on traditional budget-based compensation plan as prior literature suggests that truth-inducing compensation schemes are rarely used in practice. In addition, prior literature also suggests that traditional budget-based contracts provide an incentive for subordinates to create slack into budget.

### *2.2.3 EARNINGS MANAGEMENT*

In accordance with General Accepted Accounting Principles (GAAP), financial accounting information is prepared based on the accrual basis. In the accrual basis, the effects of transactions and events are reported in the financial statements of the period to which they occur, rather than when cash or cash equivalent is received or paid. Accruals play an important role in financial reporting. There are two aspects of accruals' role. In the first aspect, accruals play a role in producing a reliable and more timely measure of firm performance, so earnings are able to reflect firm performance better than cash flows and the discretionary component of accruals helps improve such ability. By contrast, in the second aspect, some studies find that earnings play a central role in measuring the enterprise's performance while accruals play an important role in obscuring true underlying firm performance via an introduction of discretionary accruals, which is commonly known as earnings management.

Earnings management can be defined as non-neutral financial reporting in which managers intervene intentionally in the financial reporting process to

produce some private gains (Schipper, 1989). It occurs when managers use judgment in financial reporting and in structuring transactions to alter financial reports either to mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers (Healy and Wahlen, 1999). In other words, earnings management is a strategy used by company's management to deliberately manipulate the company's earnings so that the figures match a pre-determined target.

Existing literature demonstrates that executives engage in earnings manipulation both upward and downward management through accruals for a number of incentives, e.g., to maximize their compensation, to avoid debt-covenant violation, to meet and beat earnings benchmarks, and to reduce political visibility (e.g., Healy, 1985; DeFond and Jiambalvo, 1994; Burgstahler and Dichev, 1997; Key, 1997).

## *CONTROL VARIABLES FOR EARNINGS MANAGEMENT*

Earnings management literature suggests controlling for the potential effects on the level of discretionary accruals as follow:

- Relative weight on budget-based performance measures is included to control for earnings management incentive to achieve the performance evaluation and bonus incentive that based on the budget targets.
- Leverage is included to control for the constraint from the debt covenant. According to the positive accounting theory, the debt to equity hypothesis proposes that a higher

debt covenant is an incentive for firm's managers to manage earnings (Watts and Zimmerman, 1986; 1990).

- Financial performance is included since both the Jones and the Modified Jones Models have misspecification biases against financial performance which may lead to a misspecified test of earnings management for firms with extreme financial performances (Dechow et al., 1995).
- Growth opportunity is included since high growth firms have incentives to manage earnings to avoid earnings disappointments and the literature also reports that high growth firms have higher discretionary accruals even after controlling for financial performance (McNichols, 2000).
- Size is included to control for the political cost. According to the positive accounting theory, the political cost (size) hypothesis advocates that larger firms are more likely to manage earnings (Watts and Zimmerman, 1986; 1990).
- Auditor is included as Big 4 auditors are less likely to allow earnings management than non-Big 4 auditors due to their high reputation cost (Becker et al., 1998).
- Stock exchange of the firm listing is included as the potential effects on earnings management level may be different between the firms listed on the SET and MAI.
- Type of financial statements which has been evaluated managers' performance and compensation is included as the potential effects on earnings management level may be

different between firms that evaluate performances based on consolidated- and company-level financial statements.

### *2.2.4 ENVIRONMENTAL FACTOR*

Dunk and Nouri (1998) review literature on the antecedents of budgetary slack and classify environmental uncertainty as environmental variable.

In this study, environmental uncertainty is classified as environmental factor since it is an external factor influencing the performance of an organization, consistent with Dunk and Nouri (1998).

#### *2.2.4.1 ENVIRONMENTAL UNCERTAINTY*

Environmental uncertainty refers to the broad set of factors, individually and collectively, which make it difficult or impossible to predict the future in a given area. Uncertainty can stem from changes (or potential changes) in natural conditions, the political and economic climate, or the actions of competitors, customers, suppliers (including labors), and regulators. Uncertainty is higher where the pace of technological change is higher and it is generally higher the farther one tries to look into the future. Thus, uncertainty is higher in organizations where natural business cycle, the lag between investment and the payoff from that investment, is longer (Merchant and Van der Stede, 2007).

In uncertain situations, it is almost unpredictable that target will be too easy, appropriated, or too difficult. Moreover, the targets will include many uncontrollables caused by forecasting errors regarding the state of the economy,

competitors' actions, and source and prices of supplies (Merchant and Van der Stede, 2007).

Merchant (1985) performs a survey, sends questionnaires to 201 manufacturing managers of 19 organizations in the electronics industry with a response rate of 85%, to investigate managers' propensities to create budgetary slack. The results show that the propensities to create budgetary slack is low when there is low level of uncertainty (technologies are relatively predictable).

Dunk et al. (1996) replicate Merchant's (1985) study, using the same instruments but employing random sampling technique and conducting in New Zealand (121 manufacturing companies with a response rate of 69%), the results are consistent with the literature. The propensity to create budgetary slack is positively associated with level of uncertainty.

Linn (1997) examines the propensity to create budgetary slack by sending survey questionnaires to managers and reports that managers would increase the amount of budgetary slack if they perceived high environmental uncertainty.

In sum, environmental uncertainty tends to positively associate with budgetary slack.

### *2.2.5 ORGANIZATIONAL FACTORS*

Dunk and Nouri (1998) review literature on the antecedents of budgetary slack and classify information asymmetry, truth-inducing pay schemes, task uncertainty, superiors' evaluative styles and superiors' ability to detect slack as organizational level variables.

In addition to Dunk and Nouri (1998), information asymmetry, budget emphasis evaluative style, participative styles, reward systems, and budget-based resource allocation are classified, in this study, as organizational factors since they are all related to policies, procedures, or systems designed by an organization to fit its nature and environment.

#### *2.2.5.1 INFORMATION ASYMMETRY*

Information asymmetry is the differences in information between a superior and a subordinate. It exists when subordinates' information exceed that of their superiors (Dunk, 1993) and generally would be most severe in firms which are extremely large, and geographically dispersed with diverse products and technologies (Shields and Young, 1993). If there is information asymmetry between principal and agent, and principal relies on agent to communicate his private information, an organizational control issue would arise since an agent may misrepresent his private information to reap the maximum available financial benefits.

Agents may misrepresent or withhold from their principals some or all of their locally-based information, which could lead to budget containing slack (Dunk and Nouri, 1998). When information asymmetry between superiors and

subordinates tend to be relatively high, subordinates can create slack to their budget relatively easily (Merchant and Van der Stede, 2007).

Young (1985) uses an experimental design and 43 MBA students to examine the impact of factors, including information asymmetry, on the propensity to create budgetary slack. He concludes that information asymmetry leads to slack produced behavior.

Indjejikian and Matejka (2006) examine the determinants of organizational slack, including information asymmetry, in large decentralized firms by survey method and find that budgetary slack is greater when there is a high level of information asymmetry.

For empirical study in Thailand, Piyaporn Chankaew (2005) investigates the relationship between budgetary slack and eight certain factors influencing the creation of budgetary slack (including information asymmetry, budget emphasis evaluative style, budget participation, influencing power of managers on budget, positive budgetary feedback, negative budgetary feedback, intrinsic reward system, and extrinsic reward system) by administering survey questionnaires to sales managers of manufacturing companies listed on the SET with a response rate of 60%. However, she reports that the association between information asymmetry and budgetary slack is statistically insignificant.

In sum, vertical information asymmetry, between superiors and subordinates, tends to positively associate with budgetary slack.

### *2.2.5.2 BUDGET EMPHASIS EVALUATIVE STYLE*

Budget emphasis (budget-constrained) is one form of superiors' evaluative styles, among others are budget-profit, profit-conscious, and non-accounting. Superiors who place importance only on meeting the budget, when evaluate subordinates' performance, is defined as budget-constrained style. Budget-constrained style promotes subordinates' incentive to build more slack into the budgeted targets in order to avoid unfavorable variances as slack increases the chances of making the budget, and thus avoids interventions by upper management, reduces the risk of being fired, etc. (Merchant and Manzoni, 1989).

Budgetary slack creation, as a means of protection from the downside potential of an uncertain future, is particularly valuable in firms that treat the budget as a strong commitment from the manager to the corporation and use the budget as a primary, if not exclusive, tool to evaluate management performance (Van der Stede, 2000). Indeed, rigid budgetary controls (budget emphasis) imply that salary, resources, and career prospects become highly dependent on the ability to meet the budget. Therefore, a positive relationship between emphasis on meeting the budget and the propensity of managers to build slack is expected.

The primary argument for agents' efforts to build slack in their budgets is to enhance their compensation prospects. If subordinates perceive their rewards depend on budget attainment, they may try to build slack into their budget (Schiff and Lewin, 1968; Waller, 1988; Linn, 1997). Thus, budget emphasis in performance evaluation induces substantial bias in the budget process and result in slack (Baiman and Lewis, 1989).

For empirical study in Thailand, Piyaporn Chankaew (2005) reveals that there is a positive association between budget emphasis evaluative style and budgetary slack.

However, the literature has not produced conclusive evidence with respect to the effect of budgetary control style on slack. Merchant (1985), Dunk (1993), and Van der Stede (2000) generally find that slack is low when budget emphasis is high. This finding is in line with economic theory, as opposed to behavioral theory, firms which maintain rigid budgetary controls should increase the likelihood that slack gets detected and; therefore, curtailed (Williamson, 1964).

Merchant (1985) finds that two out of three components that measure the importance placed on meeting the budget (budget emphasis) are significantly and negatively related to the propensity to create budgetary slack. While the other component of budget emphasis, “reactions to budget overruns”, is positively related to budgetary slack.

Dunk's (1993) findings involved a three-way interaction of budget emphasis, budget participation, and information asymmetry on slack. His results show that slack is low when participation, information asymmetry and budget emphasis are all high, contrary to the expectation from the literature. From a three-way interaction, it is difficult to infer anything about the main effect of budget emphasis on slack in isolation. However, across all levels of information asymmetry (from low to high) and across all levels of budget participation (from low to high), slack is lower when budget emphasis is high rather than low.

Van der Stede (2000) performs survey and shows that there is a negative relationship between budget control rigidity (budget emphasis) and budgetary slack.

In sum, the empirical association between budget emphasis evaluative style and budgetary slack is mixed.

#### *2.2.5.3 PARTICIPATION*

Brownell (1982) defines participation as an organizational process whereby individuals are involved in, and have influence on, decisions that have direct effects on those individuals. Specifically, participation in budgeting is a process by which individuals, whose performance will be evaluated and possibly rewarded on the basis of their achievement of budgeted targets, are involved in and have influenced on the setting of those targets

The propensity to create budgetary slack is inversely related to the extent of participation allowed in budgeting processes, which can be attributed to the positive communication between managers such that subordinates feel less pressured to create slack into budget (Onsi, 1973; Merchant, 1985; Dunk, 1993; Dunk et al., 1996).

However, the literature has not produced conclusive evidence with respect to the effect of participation level on budgetary slack. Lukka (1988) argues that a high degree of participation gives subordinate managers the opportunity to contribute directly to the creation of slack, and vice versa. In other words, when

participation is low, the prospects for subordinates' building slack into their budgets are restricted.

For empirical studies in Thailand, Pongsak Sumpunsirichareon (2003) examines the relationship between budgetary participation and budgetary slack and managerial performance. He administers survey questionnaires to sales managers and production managers of manufacturing companies listed in the 1000 largest companies in Thailand directory with a response rate of 21%. The results reveal that there is a positive association between budgetary participation and budgetary slack. Piyaporn Chankaew (2005) also reports that budget participation is positively related to budgetary slack.

In sum, the association between participation level and budgetary slack is mixed.

All above research studies measure participation by using certain questions adapted from Onsi (1973) and Milani (1975). All questions employ five- or seven-point Likert scale. However, the Vroom-Yetton (1973) model, that has been effective for organizational behavior researchers in analyzing the effects of participation level in decision making, has not been employed to measure level of participation in budgetary slack literature.

**The Vroom-Yetton Model**

The Vroom-Yetton model is particularly suited for investigating the effect of participation in a budgeting context. First, the model is

designed for universal application in managerial decision making. Second, the model furnishes the descriptive constructs to classify budgetary decisions contextually according to the attributes of the decision, decision-making styles that might be employed by managers, and the dimensions of decision quality and subordinate acceptance. Third, the model provides a validated standard for evaluating the participative decision environment in budgeting (Pasewark and Welker, 1990).

The Vroom and Yetton (1973) assign the following point values to each of the decision style: AI = 0.000, AII = 0.625, CI = 5.000, CII = 8.125, and GII = 10.000. Subsequently, Pasewark and Welker (1990) use round figures: AI = 0, AII = 1, CI = 5, CII = 8, and GII = 10, to compare levels of participation for successful and unsuccessful decisions and the results are identical to the original scales.

**Environmental uncertainty and level of participation**

High uncertainty is more likely to have some broad effects on organization structures and decision-making and communication patterns, and these effects increase the complexity of the management task. Organizations facing relatively high uncertainty will tend to decentralize their operations, have more participative, relatively bottom-up planning and budgeting processes, and make important decisions only after relatively intensive consultations among larger groups of managers (Merchant and Van der Stede, 2007). Shields and Young (1993) state that the demand for participative budgeting arises because various parties engaged in the budgeting process possess differential information about uncertainty.

In sum, environmental uncertainty tends to positively associate with level of participation.

**Information asymmetry and level of participation**

In decentralize organizations, if there is information asymmetry between superiors and subordinates, high level of participation is needed as to mitigate information asymmetry, improve quality of decision and increase motivation. Shields and Young (1993) empirically examine the antecedents and consequences of participative budgeting on the effects of asymmetrical information and find that there is a positive association between the extent of information asymmetry and the use of participative budgeting.

In sum, information asymmetry tends to positively associate with level of participation.

**Budget emphasis evaluative style and level of participation**

Lau and Buckland (2001) propose that when budget goals are used to evaluate and; therefore reward subordinates, subordinates seek to participate in the budget setting process to influence the budget goals. They note two possibilities for the link between budget participation and budget emphasis evaluative style: (*i*) desire of subordinates to influence the budget goals that are used to evaluate them, and (*ii*) desire of the superiors to be just or fair in the eye of their subordinates by allowing their subordinates to participate actively in budgeting.

In sum, use of budget emphasis evaluative style is expected to positively associate with level of participation.

#### *2.2.5.4 REWARD SYSTEMS*

Reward systems are procedures, rules and standards associated with allocation of benefits and compensation to employees. Prior studies usually examine only traditional budget-based and/or truth-inducing compensation schemes to investigate budgetary slack creation and report that the traditional budget-based contract induces slack into budget while truth-inducing does reduce slack as mentioned in section 2.2.2. There are certain forms of performance measures used in compensation plans with the aim to reduce agency conflict and motivate individuals to improve their performance as witnessed in a great deal of literature (e.g., Ittner and Larcker, 1998; 2002), i.e., objective (formula-based) and subjective, financial and non-financial, budget- and non-budget- based, and control and uncontrollable performance measures.

This study intends to include certain forms of performance measures used in incentive plans to investigate whether and how they affect budgetary slack creation as each form of performance measures used in compensation plans may induce different degree of slack.

**Level of participation and reward systems**

Shields and Young (1993) explain that superiors usually gain subordinates' information from participative budgeting with the aim to improve the efficiency of resource allocation among operating units (and; hence, to increase

firm-wide performance), and to use the information to design more effective compensation systems (to increase motivation). They predict and find that the use of participative budgeting is positively associated with the use of budget-based incentives (reward systems). In other words, firms design reward systems to motivate subordinates to share information effectively through budget participation.

In sum, level of participation is expected to associate with reward systems.

#### *2.2.5.5 BUDGET-BASED RESOURCE ALLOCATION*

When firms use traditional budgets for performance evaluation, the use of budgets to allocate scarce resource is one of certain mechanisms to reduce slack creation behavior. As when firm uses budgets to allocate scarce resources, subordinates have incentives to overstate their productivity to acquire a greater share of fixed resources and such motivations will counterbalance subordinates' incentives to understate their productivity in budget-based evaluation plans (Fisher et al., 2002).

Fisher et al. (2002) report the empirical results, from their experiment, to confirm that the use of budgets both for planning (i.e., to allocate scarce resources) and control (i.e., for performance evaluation) purposes do reduce slack creation behavior and also increase subordinates' effort and task performance.

In sum, the use of budget-based resource allocation (together with budget-based evaluation plans) tends to negatively associate with budgetary slack.

### *2.2.6 INDIVIDUAL FACTORS*

Dunk and Nouri (1998) review literature on the antecedents of budgetary slack, they classify only risk preferences as individual level variables.

In addition to Dunk and Nouri (1998), ethical concerns, reputation concerns, and fairness concerns are classified, in this study, as individual factors since they are all human factors that influence individuals to decide and react differently in certain situations.

#### *2.2.6.1 ETHICAL CONCERNS*

DeGeorge (1992) asserts that ethically motivated agents exercise effective self-control that no amount of external control can match, and that agency theorists should utilize, promote, and incorporate such motivation. Ethical concerns are determined by the individual's value system, which evolves from internalized social norms (Dees, 1992). Ethical concerns typically arise in situations where self-interest conflicts with a moral duty to others (Bowie and Duska, 1990). In a budgeting setting, ethical concerns represent the individual's contemplation to do the right thing (Stevens, 2002).

Douglas and Wier (2000) survey managers who involved in the budget setting process to investigate the effect of their ethical positions (idealism and relativism) on budgetary slack creation behavior. The results support the hypothesized relationship, managers who have high relativism ethical position would create significant amount of slack, conversely, those who have high idealism ethical position would generate less slack. They describe that because relativists believe an

ethical judgment regarding a particular situation cannot be made based on a predetermined set of moral dictates (situational and individual factors can and should be considered) while idealists feel that harming others is always avoidable. They use the Ethics Position Questionnaire (EPQ) developed by Forsyth (1980) to measure those two ethical positions.

Harvey (2000) and Douglas et al. (2007) subsequently employ the EPQ to measure ethical positions and investigate the relationship between ethical positions and budgetary slack. The results are consistent with the literature.

Stevens (2002) performs a computerized experimental study (52 students from upper-division accounting courses, play the role of a subordinate who set budgets and engages in production for an experimenter manager) to test the effects of ethics and reputation concerns on budgetary slack. The production task was a computerized version of the manual tasks in Chow et al. (1988, 1991). The results indicate that subordinate's ethical and reputation concerns are negatively associated with the amount of budgetary slack under a slack-inducing pay scheme. Stevens (2002) employs only one question "To have set the budget significantly below the forecast of production would have been unethical" (seven-point Likert scale) to measure ethical concerns.

Maiga and Jacobs (2007) employ the four scenarios developed by the IMA Resources Center to measure ethical judgment in three dimensions. Those are moral equity (base on morality and fairness), relativism (base on culture and social norms), and contractualism (base on stockholder theory which holds that

managers in a corporation have a normative obligation to maximize profits since this provides the greatest long term value to the stockholders). The results indicate that only moral equity ethical judgment shows negative relationship with budgetary slack while relativism and contractualism show positive relationship.

In sum, the subordinates' ethical concerns (idealism and moral equity) tend to negatively associate with budgetary slack.

This study chooses to employ the DIT questionnaire to measure level of moral reasoning (ethical concerns) which is equivalent to idealism (in Douglas and Wier, 2000; Harvey, 2000; Douglas et al., 2007) and moral equity (in Maiga and Jacobs, 2007).

A large body of empirical research in moral reasoning has been facilitated by the Defining Issues Test (DIT) which is developed by Rest (1979a, b) to measure moral reasoning posited in the Kohlberg model.

**DIT questionnaire**

The DIT is a self-administered multiple choices questionnaire that extracts the subject's level of ethical reasoning in terms of a distribution of ethical capacities (instead of a single-stage score). The DIT questionnaire has been used extensively in accounting ethics research. It includes six ethical dilemmas and provides for a variety of related issues and responses. Subjects are asked to select and rank order those issues having, in their opinion, the most significant influence on the resolution of each presented dilemma.

The DIT has been assessed over 400 published articles to validate its validity and reliability (Rest et al., 1999). It has been proven to be an objective measure with very high statistical reliability and validity scores. Cronbach's alpha usually over 0.70. An implicit assumption in all studies using the DIT is a higher DIT score is better (higher ethical concerns level).

There is a revision of DIT questionnaire, the DIT-2 is subsequently developed in 1999. The DIT-2 consists of five dilemmas (a shorter version) and has been claimed by developers (Rest, Narváez, Bebeau, and Thoma) that the DIT-2 is an improvement over DIT-1 (in validity). However, the DIT-2 has not been widely used and its validity and reliability has not been effectively assessed and guaranteed by third party researchers. Therefore, its improvement over the original version is still skeptical.

Prior empirical studies (e.g., Ponemon, 1988, 1990, 1992; Ponemon and Gabhart, 1990) suggest that individuals that are more morally developed are less likely to engage in unethical behavior.

Ponemon and Gabhart (1990) experimentally investigate the influence of ethical reasoning, as measured by the DIT-1, on auditor's independence judgments. The results indicate that auditors at lower levels of ethical reasoning are sensitive to factors relating to penalty (personal harm) resulting from misconduct when forming an independence judgment. Auditors at higher levels of ethical reasoning; however, are sensitive to affiliation (harm to others) when framing their judgment.

Ponemon (1992) examines the influence of ethical reasoning upon auditor's underreporting behavior. The results indicate that the auditor's level of ethical reasoning, as measured by the DIT-1, is negatively related to underreporting.

In Thailand, Junyaporn Techamontrikul (2006) examines whether individual level factors, e.g., ethical reasoning, have an incremental explanatory power over firm level factors in affecting quality of audited financial statements. Although the short form of the DIT-1 is relatively lower reliable (comparing to the full version), her study chooses to employ a shortened version of the DIT-1, only three out of six cases, in order to assure a high response rate from the professional auditors, uses audit partners in Thailand as participants. The results show that females have higher DIT score than males, while education and experience have no relation with DIT. The results are consistent with prior findings of Shaub (1994) who states that higher moral reasoning levels are found in women, while age and education are not significantly associated with level of moral reasoning (Shaub also employs a shortened version of the DIT-1 by using auditors and senior auditing students from U.S. as participants).

#### *2.2.6.2 REPUTATION CONCERNS*

Reputation is a characteristic or attribute ascribed to one person by another (Wilson, 1985) and is based on an individual's performance and actions over a period of time (De Jong et al., 1985; Kreps and Wilson, 1982). Reputation concerns represent the subordinates' desire to appear honest and fair to their superiors (Stevens, 2002).

Both ethical and reputation concerns are viewed as individual's value system (internal factors). However, reputation concerns are different from ethical concerns in that reputation concerns are social concerns while ethical concerns are internal concerns.

Stevens (2002) suggests that subordinate's reputation concerns are negatively related to budgetary slack amount under a slack-inducing pay scheme.

Webb (2002) performs a laboratory experiment (90 participants enroll in an undergraduate business program take part in the study: 55 from a senior level auditing course and 35 from an intermediate accounting course, assume the role of an employee working for a company that engages in financial analysis) to investigate the impact of reputation and variance investigations on the creation of budgetary slack. The results show that concern for maintaining a favorable reputation leads to lower budgetary slack under a slack-inducing pay scheme.

In sum, the subordinates' reputation concerns tend to negatively associate with budgetary slack.

#### *2.2.6.3 FAIRNESS CONCERNS*

Libby (1996) experimentally examines the effectiveness of fair budgeting processes and procedures in motivating increases in performance and decreases in budgetary slack creation. The theory of organizational justice, in particular the procedural justice component, is used to define fair budgeting

processes. The results indicate that increases in perceived procedural fairness are related to increases in performance and decreases in slack creation behavior.

Follow Greenberg and Folger (1983), procedural fairness is the subordinates' judgments about the fairness of the rules and processes that are used by superiors to evaluate their performance.

In sum, subordinates' perceived procedural fairness tends to negatively associate with budgetary slack.

*CONTROL VARIABLES FOR BUDGETARY SLACK*

To control for the potential effects on the level of budgetary slack, following factors are included:

- Size is included to control for the potential political cost as the budgetary slack incentives may be different between the large and small firms.
- Stock exchange of the firm listing is included as the budgetary slack incentives may be different between the companies listed on the SET and MAI.
- Type of financial statements which has been evaluated managers' performance and compensation is included as the budgetary slack incentives may be different between the firms that evaluate performances based on consolidated- and company-level financial statements.

## *2.3 HYPOTHESIS DEVELOPMENTS*

### *PART I: LINKAGE OF BUDGETARY SLACK TO DISCRETIONARY ACCRUALS*

#### *2.3.1 BUDGETARY SLACK AND DISCRETIONARY ACCRUALS*

If budget achievability is management's goal, there are two possible interventions to accomplish a desired level of budget achievability: (*i*) to build slack into budget (i.e., set budget less than the best estimate) for easily attainable target, and (*ii*) to manage earnings (through discretionary accruals) for manipulation of reported earnings, which managers can choose either or both methods. If managers decide to add slack into budget, they should do this when they prepare the budget during the planning process. However, for earnings management, the discretionary accruals can be managed throughout the year. In other words, budgetary slack and earnings management are the sequential decisions. No matter slack is added when managers set the budget, they can also manage earnings through discretionary accruals either in case the actual performance did not reach the target or to maximize earnings.

According to the agency theory, the positive accounting theory, and prior literature on budgetary slack and earnings management as mentioned in section 2.2.1 and 2.2.3, respectively, there is a high probability that self-interest and wealth-maximization managers would opportunistically build slack into the budget and/or introduce earnings manipulation via discretionary accruals to manage a desired level of budget achievability. Although slack is introduced into annual earnings targets, if the actual performance before earnings manipulation is still under performed, managers are more likely to manipulate the reported earnings, and they may choose to manage earnings upward via positive discretionary accruals as protection against

their missing the target or, a contrary view, they may possibly decide to manage earnings downward through negative discretionary accruals so as to take a big bath. On the other hand, if slack is added into the budget and resulted in the achievability of annual earnings targets, managers are less likely to manage the reported earnings, or there still has an incentive to manage earnings upward to increase the likelihood of budget achievability to maximize rewards (e.g., compensation, promotion) or, an opposite view, there may be an incentive to manage earnings downward in order to reserve the excess earnings for the next period or not to exceed the target by too much which will affect the budget setting in the next period. In sum, it is expected that there is a linkage of budgetary slack to discretionary accruals but the direction of the association is inconclusive. Therefore, this study does not predict the direction of the association. This leads to the first hypothesis stated as follow:

$H_1$: Budgetary slack is associated with discretionary accruals.

## *PART II: THE MEASUREMENTS AND DETERMINANTS OF BUDGETARY SLACK DIRECT EFFECTS*

### *2.3.2 ENVIRONMENTAL FACTOR AND BUDGETARY SLACK*

According to the agency theory and prior empirical research studies as mentioned in section 2.2.4, different environmental situations promote different level of budgetary slack in decentralized organizations. Thus, this study predicts that there is an association between environmental factor and budgetary slack, ceteris paribus. This leads to the second hypothesis stated as follow:

$H_2$: Environmental factor is associated with budgetary slack.

In this study, only environmental uncertainty is classified as environmental factor.

#### *2.3.2.1 ENVIRONMENTAL UNCERTAINTY AND BUDGETARY SLACK*

The agency theory predicts that, normally, self-interest agents prefer wealth-maximization. Also, prior studies as mentioned in section 2.2.4.1 suggest a positive association between environmental uncertainty and budgetary slack for the reason that in high environmental uncertainty situations, it is difficult to judge whether budget target is set too easy, appropriate, or too difficult to be achieved. Hence, there is a high probability that self-interest subordinates would build slack into the budget as a protection against their missing the target while increasing the likelihood of budget achievability to gain rewards (e.g., compensation, promotion). Thus, this study predicts that increasing in environmental uncertainty is positively associated with budgetary slack, ceteris paribus. This leads to the sub-hypothesis for environmental factor stated as follow:

$H_{2.1}$: Environmental uncertainty is positively associated with budgetary slack.

### *2.3.3 ORGANIZATIONAL FACTORS AND BUDGETARY SLACK*

According to the agency theory, level of participation, and empirical prior research studies as mentioned in section 2.2.5, various organizational situations promote different level of budgetary slack in decentralized firms. Thus, this study predicts that there is an association between organizational factors and budgetary slack, ceteris paribus. This leads to the third hypothesis stated as follow:

$H_3$: Organizational factors are associated with budgetary slack.

In this study, organizational factors comprise of information asymmetry, budget emphasis evaluative style, participative styles, reward systems, and budget-based resource allocation.

*2.3.3.1 INFORMATION ASYMMETRY AND BUDGETARY SLACK*

According to the agency theory which assumes that agents are motivated by self-interest and are utility maximizers; hence, if there are a conflict of interest and information asymmetry between principals and agents, the latter might not act in the best interests of the principals by creating slack into budget. Besides, prior research studies as mentioned in section 2.2.5.1 suggest that if there is a high level of asymmetric information between superiors and subordinates, the self-interest subordinates would fairly easily create as much slack into their budget. Thus, this study hypothesizes that increasing in asymmetric information is positively associated with budgetary slack, ceteris paribus. This leads to the sub-hypothesis for organizational factors stated as follow:

$H_{3.1}$: Information asymmetry is positively associated with budgetary slack.

*2.3.3.2 BUDGET EMPHASIS EVALUATIVE STYLE AND BUDGETARY SLACK*

Behavioral theory suggests that subordinates in organizations which promote budget-constrained evaluative style would feel more pressured and likely to create slack in their budget so as to prevent unfavorable variance. In budget

emphasis evaluative style, budget achievability is only one criterion used by superiors to evaluate performance of subordinates. Therefore, a positive association between budget emphasis evaluative style and the propensity of managers to build slack is expected. However, economic theory and some prior studies as mentioned in section 2.2.5.2 suggest the contrary view, firms which maintain that rigid budgetary controls should increase the likelihood that slack gets detected and; therefore, curtailed. In sum, it is expected that there is an association between budget emphasis evaluative style and budgetary slack but the direction of the association is inconclusive. Therefore, this study does not predict the direction of the association. This leads to the sub-hypothesis for organizational factors stated as follow:

$H_{3.2}$: Budget emphasis evaluative style is associated with budgetary slack.

#### *2.3.3.3 PARTICIPATIVE STYLES AND BUDGETARY SLACK*

Level of participation and prior research as mentioned in section 2.2.5.3, show mixed evidence on the association between participation level and budgetary slack. The positive association – the more participation, the high propensity to create slack into budget, is explained by opportunistic behavior. While the negative association – the more participation, the less propensity to build slack, is explained as because managers can negotiate for an attainable budget so they feel less pressured. In sum, it is expected that there is an association between participative styles and budgetary slack but the direction of the association is inconclusive. Therefore, this study does not predict the direction of the association. This leads to the sub-hypothesis for organizational factors stated as follow:

$H_{3.3}$: Participative styles are associated with budgetary slack.

#### *2.3.3.4 REWARD SYSTEMS AND BUDGETARY SLACK*

As performance measures are linked to compensation, budget-based measures could induce subordinates to opportunistically behave, such as introducing slack into budget to maximize compensation. However, it is unrealistic to expect that compensation will be based entirely on the budget. Rather, there would be more than one type of performance measures in incentive plans so as to reduce gaming behavior; however, the budget-based measure is still included in compensation plan to ensure the alignment of the goals of management and firm. Empirical evidence suggests that in most organizations significant amounts of slack exist, which is probably because of it being a general practice, there being an opportunity to do so, and/or other types of performance measures being more difficult to manage compared to the budget-based measure. In sum, it is expected that there is an association between performance measures used in reward systems and budgetary slack but the direction of the association is inconclusive. Therefore, this study does not predict the direction of an association. This leads to the sub-hypothesis for organizational factors stated as follow:

$H_{3.4}$: Reward systems are associated with budgetary slack.

#### *2.3.3.5 BUDGET-BASED RESOURCE ALLOCATION AND BUDGETARY SLACK*

Prior research as mentioned in section 2.2.5.5 introduces that the use of budgets to allocate scarce resource is one of certain mechanisms to reduce slack creation behavior when firms use traditional budgets for performance evaluation. The use of budget both for planning and control purposes would counterbalance subordinates' incentive to understate their productivity in budget-

based evaluation plans. Thus, this study predicts that the use of budget for resource allocation is negatively associated with budgetary slack, ceteris paribus. This leads to the sub-hypothesis for organizational factors stated as follow:

$H_{3.5}$: Budget-based resource allocation is negatively associated with budgetary slack.

### *2.3.4 INDIVIDUAL FACTORS AND BUDGETARY SLACK*

According to the moral reasoning, organizational justice theory and empirical research as mentioned in section 2.2.6, individual factors promote different level of budgetary slack in decentralized organizations. In other words, individuals have different utilities (e.g., wealth, honesty, reputation, fairness) so that they decide and react differently in certain situations. Thus, this study predicts that there is an association between individual factors and budgetary slack, ceteris paribus. This leads to the fourth hypothesis stated as follow:

$H_4$: Individual factors are associated with budgetary slack.

In this study, individual factors comprise of ethical concerns, reputation concerns, and fairness concerns.

#### *2.3.4.1 ETHICAL CONCERNS AND BUDGETARY SLACK*

The moral reasoning and prior research studies as mentioned in section 2.2.6.1 indicate that individuals, who have different levels of cognitive moral reasoning, decide and react differently in unethical situations. Subordinates who have high moral reasoning (ethical concerns) level would not build slack, or less if so, in their budgets, if they perceive that budgetary slack creation behavior is

unethical. Thus, this study hypothesizes that increasing in ethical concerns is negatively associated with budgetary slack, ceteris paribus. This leads to the sub-hypothesis for individual factors stated as follow:

$H_{4.1}$: Ethical concerns are negatively associated with budgetary slack.

#### *2.3.4.2 REPUTATION CONCERNS AND BUDGETARY SLACK*

Prior studies as mentioned in section 2.2.6.2 indicate that under slack-inducing compensation scheme, the participants who have higher reputation concerns (social concerns) would generate lower budgetary slack as they desire to appear honest and fair to others. Thus, this study hypothesizes that increasing in reputation concerns is negatively associated with budgetary slack, ceteris paribus. This leads to the sub-hypothesis for individual factors stated as follow:

$H_{4.2}$: Reputation concerns are negatively associated with budgetary slack.

#### *2.3.4.3 FAIRNESS CONCERNS AND BUDGETARY SLACK*

Organizational justice theory and prior study as mentioned in section 2.2.6.3 suggest that subordinates who perceive the budgeting environment (procedural fairness) in their firms is fair enough would have less propensity to create slack than those who perceive as unfair. Thus, this study predicts that increasing in fairness concerns is negatively associated with budgetary slack, ceteris paribus. This leads to the sub-hypothesis for individual factors stated as follow:

$H_{4.3}$: Fairness concerns are negatively associated with budgetary slack.

*INDIRECT EFFECTS*

*2.3.5 ENVIRONMENTAL FACTOR, ORGANIZATIONAL FACTORS, AND BUDGETARY SLACK*

Prior literature suggests certain association among environmental factor and organizational factors, e.g., environmental uncertainty, information asymmetry, and superiors' evaluative styles are the antecedents of participation level, and participation level is also determined reward systems. Moreover, each variable also has a direct association with budgetary slack. Therefore, the indirect association between certain variables and budgetary slack is expected. Thus, this study predicts that there is an indirect association between environmental factor and organizational factors, and budgetary slack, ceteris paribus. This leads to the fifth hypothesis stated as follow:

$H_5$: Environmental factor and organizational factors are indirectly associated with budgetary slack.

*2.3.5.1 ENVIRONMENTAL UNCERTAINTY, PARTICIPATIVE STYLES, REWARD SYSTEMS, AND BUDGETARY SLACK*

Level of participation and prior studies as mentioned in section 2.2.5.3, indicate that there is a positive association between environmental uncertainty and participation level. In decentralize firms, under high environmental uncertainty, the higher subordinates' participation level is required as the complexity of management task is expected to increase. Also, gaining private information from subordinates help improve quality of decision in uncertain situation. Prior study as mentioned in section 2.2.5.4 indicates that there is a positive association between the use of participative budgeting and the use of budget-based incentives (which is one

type of reward systems) as superiors desire to gain subordinates' private information from participative budgeting so that they design effective incentive systems that can be used to increase motivation. In other words, the design of reward systems depends on certain organizational factors (participative styles). In addition, reward systems are expected to associate with budgetary slack as mentioned in section 2.3.3.4. Taken together, this study predicts that the effect of environmental uncertainty on budgetary slack is indirect through participative styles and reward systems, ceteris paribus. This leads to the sub-hypothesis stated as follow:

$H_{5.1}$: Environmental uncertainty is indirectly associated with budgetary slack through participative styles and reward systems.

*2.3.5.2 INFORMATION ASYMMETRY, PARTICIPATIVE STYLES, REWARD SYSTEMS, AND BUDGETARY SLACK*

Level of participation and prior study as mentioned in section 2.2.5.3, indicate that there is a positive association between information asymmetry and participation level. In decentralize organizations, if the asymmetric information is high, the higher subordinates' participation level is required as to mitigate information asymmetry and improve quality of decision. Prior study as mentioned in section 2.2.5.4 also indicates that there is a positive association between the use of participative budgeting and the use of budget-based incentives (which is one type of reward systems). In addition, reward systems are expected to associate with budgetary slack as mentioned in section 2.3.3.4. Taken together, this study predicts that the effect of information asymmetry on budgetary slack is indirect through

participative styles and reward systems, ceteris paribus. This leads to the sub-hypothesis stated as follow:

$H_{5.2}$: Information asymmetry is indirectly associated with budgetary slack through participative styles and reward systems.

*2.3.5.3 BUDGET EMPHASIS EVALUATIVE STYLE, PARTICIPATIVE STYLES, REWARD SYSTEMS, AND BUDGETARY SLACK*

Level of participation and prior study as mentioned in section 2.2.5.3 indicate that there is a positive association between budget emphasis evaluative style and participative styles. When budget goals are used to evaluate and; therefore reward subordinates, subordinates seek to participate in the budget setting process with the aim to influence the budget goals that are used to evaluate them. Moreover, superiors also allow subordinates to participate actively in budgeting as they desire to be fair in the eye of their subordinates. Prior study as mentioned in section 2.2.5.4 also indicates that there is a positive association between the use of participative budgeting and the use of budget-based incentives (which is one type of reward systems). In addition, reward systems are expected to associate with budgetary slack as mentioned in section 2.3.3.4. Taken together, this study predicts that the effect of budget emphasis evaluative style on budgetary slack is indirect through participative styles and reward systems, ceteris paribus. This leads to the sub-hypothesis stated as follow:

$H_{5.3}$: Budget emphasis evaluative style is indirectly associated with budgetary slack through participative styles and reward systems.

# CHAPTER III

# RESEARCH METHODOLOGY

This research study is based on both primary and secondary data. The primary data are gathered from mailed survey questionnaires, and the secondary data are gathered from companies' annual financial statements. This chapter presents (*i*) the data collection process, (*ii*) the survey instrument development, (*iii*) the measurement of variables, and (*iv*) the data analysis methodology and model specifications.

## *3.1 THE DATA COLLECTION PROCESS*

The sample used in this study consists of the companies listed[1] on the Stock Exchange of Thailand (SET) and the Market for Alternative Investment (MAI) as of the year ended 2009, and all of them use budget for performance evaluation. The companies in financial industry and companies under rehabilitation are excluded since their financial reporting requirements and their characteristics of business operation are different. Also, this study chooses to employ the cross-sectional modified Jones (1995) model that is not applicable to measure discretionary accruals of the companies in financial industry. Besides, the companies must have been listed on the SET or MAI for at least 1 year before the end of 2009 since it is presumed that the listed companies usually use budget more effectively in planning, control, and performance evaluation than the non-listed companies. The population covers 387 firms and there are 38 returned and usable questionnaires which is 10% response rate.

---

[1] There are two types of exchanges for listed firms in Thailand: SET (Stock Exchange of Thailand) and MAI (Market for Alternative Investment). SET provides a market for large companies with more than THB 300 million in paid-up capital after IPO to raise long- term funds. MAI, on the other hand, is a source of funding for small- and medium-sized enterprises, having over THB 20 million in paid-up capital after IPO.

Detail of population and final sample firm breakdown by industry is presented in Part I of Appendix A and detail of returned questionnaires is presented in Part II.

### *3.1.1 PRIMARY DATA*

The survey questionnaires (Thai version) are administered and sent to the firms' management who held one of the following titles: Chief Financial Officer, Controller, Vice President, Managing Director, or Manager. These respondents have to work with the firms since or prior to 2009, involve extensively in budgeting process, and are accountable for the firms' performance.

### *3.1.2 SECONDARY DATA*

The annual financial statements are retrieved from the *SET Market Analysis and Reporting Tool* ("SETSMART").

## *3.2 THE SURVEY INSTRUMENT DEVELOPMENT*

The mailed survey questionnaire has been utilized in this study. Final survey questionnaire is presented in Appendix B.

The draft questionnaire is initially developed based on the literature review. Then, it is circulated to a group of knowledgeable academicians, both managerial accounting and organizational behavior experts, in order to review the instrument for clarity and meaning, and finally it will be revised based on their suggestions. Then, a pretest is conducted among 20 respondents (20 firms' management – not included in final sample) in order to assess the validity and reliability of the instrument.

A questionnaire with cover letter (explaining objectives of this study and confirming confidentiality of respondent's information), and a postage-paid, self-addressed envelope for its return, is mailed out to each respondent. A follow-up letter is sent two weeks later and another questionnaire is sent four weeks after the initial mail out. Non-respondents are called on phone in attempt to increase the response rate and to know why they have not responded to the survey. An assessment for the potential for non-response bias is performed by comparing data of late to on-time respondents.

387 mailed survey questionnaires are distributed during May–June 2011 and designed to elicit information on budget figures of the year 2009, respondents' perceptions of the achievability of their annual earnings targets and all determinant factors. From the initial sample set, the firms with no or invalid data on actual or budgeted earnings are excluded. The final sample set comprises 38 firms (equivalent to 10% of total population). The small sample size is due to the difficulty in obtaining the firms' internal and confidential data and yet the sample available for some analyses is smaller due to missing values for some variables. Demographic profile of respondents is presented in Appendix C.

### *3.3 VARIABLE MEASUREMENTS*

The variables in this study comprise of (*i*) budgetary slack, (*ii*) discretionary accruals, and (*iii*) the determinants of budgetary slack: environmental factor, organizational factors, and individual factors.

*3.3.1 BUDGETARY SLACK:*

As budgetary slack is not directly observable, prior survey studies usually measure budgetary slack subjectively, i.e., "the achievability of performance targets as perceived by managers". Although it is a perceptual dependent variable, prior survey studies usually measure budgetary slack in this manner.

In this study, the *ex post* measure of annual firms' budget achievability has been introduced to objectively measure budgetary slack. The rationale behind using the achievability of annual performance targets (variances between actual and budget amounts) to proxy for budgetary slack is that the more the slack build into budget, the higher the propensity to easily achieve the budget.

When subordinates create slack into budget, they choose more easily attainable standard. The subordinates engage in this behavior in the hope that the standard or budget which their performance is evaluated would be more easily achieved. In other words, if the subordinates set the easily attainable budgets, they would generate the favorable variances. Hence, it could be said that the more favorable the variances, the more the budgetary slack.

Merchant and Manzoni (1989) measure budget achievability by comparing past and current-year performances with budget targets. Besides, Indjejikian and Matejka (2006) use prior year's performance relative to its target as a proxy for a prior period's organizational slack.

*The development of the proxy of budgetary slack in this study is as follows:*

Net Income (Per FS) = Cash Flow from Operations + Total Accruals[2]

Net Income (Per FS) = CFO + (Nondiscretionary Accruals+Discretionary Accruals[3])

Budget achievability (including EM, if any) = Actual NI – Budgeted NI

= (CFO + NDA + DA) – Budgeted NI

*Exclude DA from both sides,*

Budget achievability - DA = (CFO + NDA + DA) – DA – Budgeted NI

*Hence,*

Budget achievability (excluding EM, if any) = (CFO + NDA) – Budgeted NI

Budget achievability (excluding EM, if any) is introduced in this study to proxy budgetary slack as it shows budget achievability before discretionary accruals in managing earnings. Next, dividing the budget achievability (excluding EM, if any) level by the original budget figure to obtain a percentage of budget achievability before earnings management. Then, rescaling the percentage values to be all positive numbers (for the reason of simple computation and reasonable value of

---

[2] Total Accruals = Net Income – Cash Flow from Operations

Measuring total accruals from the cash flows statement have less error than from the balance sheet account. Hribar and Collins (2002) show an evidence of error and bias introduced by the balance sheet approach in estimated accruals to test for earnings management, particularly when non-operating events such as mergers and acquisitions or discontinuing operations occur. Therefore, measuring accruals directly from the statement of cash flows is a more appropriate measure.

Total accruals consist of two parts, nondiscretionary and discretionary accruals.

Total Accruals = Nondiscretionary Accruals + Discretionary Accruals (or TA = NDA + DA)

[3] Discretionary Accruals is identified as Earnings Management, EM. The cross-sectional modified Jones (1995) model is employed to measure discretionary accruals. See more detail of earnings management models to estimate NDA and DA in section *3.3.2 Discretionary accruals*.

slack; however, there is no effect on statistical analysis) to determine the objective measurement of budgetary slack (*SLACKNEW*).

For traditional subjective slack measurements, this study employs the survey questions used in prior studies to subjectively measure budgetary slack.

The first subjective measurement (*SLACK1*) is "perceived ease of budget achievability". The survey question is "the annual budget targets are generally (*i*) very easy to attain; (*ii*) attainable with reasonable effort; (*iii*) attainable with considerable effort; (*iv*) practically unattainable; or (*v*) impossible to attain". Each respondent is asked to specify the percentage of, rather than the five- or seven-point Likert scale, the level of perceived ease in achieving budget.

The second subjective measurement (*SLACK2*) is "perceived difficulty of budget achievability". The survey questions are (*i*) "annual budget targets induce high productivity in your business unit", and (*ii*) "budget targets require costs to be managed carefully in your business unit", both of which are reverse coded. Similar to *SLACK1*, each respondent is asked to specify the percentage of, rather than the five- or seven-point Likert scale, the level of perceived difficulty in achieving budget.

*CONTROL VARIABLES FOR BUDGETARY SLACK*

To control for differences in budgetary slack incentives, certain factors are included in the regression models.

- Size (*Ln_size*) is measured by natural log of total assets at the beginning of the year;

- Stock exchange of the firm listing (*LISTED*) is measured by indicator variable for company listed on MAI;
- Type of financial statements which has been evaluated managers' performance and compensation (*CONSOL*) is measured by indicator variable for consolidated financial statements.

*3.3.2 DISCRETIONARY ACCRUALS:*

In this study, the cross-sectional modified Jones (1995) model is employed to measure discretionary accruals. Begin by estimating a cross-sectional variant of the Jones (1991), expected accruals model for all firms *i* in industry *j* (the industry classification based on that by the Stock Exchange of Thailand),

$$TA_{ij} = \alpha_j + \delta_j(\Delta Rev_i) + \gamma_j(PPE_i) + \varepsilon \qquad (1)$$

Where $TA_{ij}$ is total accruals for firm *i* in industry *j* (Net Income before extraordinary items minus Cash Flow from Operations before extraordinary items);

$\Delta Rev_i$ is the change in revenues between year t and year t-1 for firm *i*;

$PPE_i$ is gross property, plant and equipment for firm *i*.

Next, for each firm *ij* in the sample, calculate the abnormal accruals, i.e., discretionary accruals (DA) which is defined as:

$$DA_{ij} = TA_{ij} - [\alpha_j + \delta_j(\Delta Rev_i) + \gamma_j(PPE_i)] \qquad (2)$$

Where $\alpha_j$, $\delta_j$, and $\gamma_j$ are the fitted coefficients from Eq.*(1)*.

Secondly, Dechow et al. (1995) propose the modified Jones model in which

$$DA_{ij} = TA_{ij} - [\alpha_j + \delta_j(\Delta Rev_i - \Delta Rec_i) + \gamma_j(PPE_i)] \quad (3)$$

The modification is that in the expected accruals model, revenue changes are adjusted for $\Delta Rec_i$, the change in receivables between year t and year t-1. Dechow et al. (1995) calculate $\alpha_j$, $\delta_j$, and $\gamma_j$ from the original Jones (1991) model, by modifying Eq.*(1)* to include the adjustment for receivables. All variables in Eq.*(3)* are scaled by total assets at the beginning of the year. The resulting value of the modified Jones (1995) model quantifies discretionary accruals.

In this study, the absolute value of discretionary accruals is used to measure the combined effects of income-increasing and income-decreasing earnings management decisions (e.g., Warfield et al., 1995; Becker et al., 1998; Reynolds and Francis, 2000).

*CONTROL VARIABLES FOR EARNINGS MANAGEMENT*

To control differences in earnings management incentives, certain factors are included in the regression model.

- Budget-based performance measures (*BUD*) is measured by the relative weight on budget-based performance measures;
- Leverage (*LEV*) is measured by total debts to total assets ratio;
- Financial performance (*ROA*) is measured by return on assets;

- Growth opportunity (*GROWTH*) is measured by percentage change in sales;
- Size (*Ln_size*) is measured by natural log of total assets at the beginning of the year;
- Auditor (*BIG4*) is measured by indicator variable for Big 4 audit firms;
- Stock exchange of the firm listing (*LISTED*) is measured by indicator variable for company listed on MAI;
- Type of financial statements which has been evaluated managers' performance and compensation (*CONSOL*) is measured by indicator variable for consolidated financial statements.

### *3.3.3 DETERMINANTS OF BUDGETARY SLACK:*

Almost all measures of determinant variables in this study are based on prior literature. To improve the quality of scale of measurement for regression analysis, in this study, each respondent is asked to specify the percentage (0% - 100%), rather than the five- or seven-point Likert scale, for each item. The score is then equally weighted in generating a composite score for each construct to obtain a proxy in an interval scale which enhances the scale of measurement for regression analysis than the Likert (ordinal) scale.

*3.3.3.1 ENVIRONMENTAL FACTOR*

In this study, environmental uncertainty is classified as environmental factor since it is an external factor influencing the performance of an organization.

**Environmental Uncertainty**

Following Indjejikian and Matejka (2006), this study measures environmental uncertainty with the six questions employed by Gul and Chia (1994) by asking respondents to indicate their perceived predictability of firms' economic environment.

*3.3.3.2 ORGANIZATIONAL FACTORS*

In this study, information asymmetry, budget emphasis evaluative style, participative styles, reward systems, and budget-based resource allocation are classified as organizational factors since they are all related to policies, procedures, or systems designed by an organization to fit its nature and environment.

**Information Asymmetry**

Dunk (1993) develops a six-item instrument to measure level of information asymmetry based on its definition as well as suggestions in prior literature. This study employs Dunk's instrument to assess information asymmetry level between respondents and their superiors.

### Budget Emphasis Evaluative Style

Following Kyj and Parker (2008), this study utilizes the survey questions developed by Abernethy and Stoelwinder (1991) to assess level of the emphasis placed on meeting the budget for which respondents are evaluated by their superiors.

### Participative Styles

Vroom and Yetton (1973) identify five participative styles (AI, AII, CI, CII, and GII) with participation scores of AI = 0.000, AII = 0.625, CI = 5.000, CII = 8.125, and GII = 10.000.

The Vroom and Yetton's model (1973) has been employed to measure participation levels. The respondents are asked to indicate which type of the participative styles (description of each style is provided) they had allowed when they set the budget in their organizations. This study chooses to employ the Vroom and Yetton model to measure participation levels since it is well-known and extensively used by several organizational behavior researchers in analyzing the effects of participation levels in decision making. Prior budgetary slack literature usually employs certain questions adapted from Onsi (1973) and Milani (1975) to measure participation levels.

Participative styles also take a role of mediator in the indirect effect testing. It is a mediating variable to link the association between certain determinant variables and budgetary slack.

**Reward Systems**

This study determines four types of reward systems comprising (*i*) Objective and Subjective, (*ii*) Financial and Non-financial, (*iii*) Budget- and Non-budget- based, and (*iv*) Control and Uncontrollable performance measures. Each respondent is asked to specify the relative weight (a percentage) to total compensation for each type of performance measures used in their incentive plans.

Reward systems also take a role of mediator in the indirect effect testing. It is a mediating variable to link the association between certain determinant variables and budgetary slack.

**Budget-Based Resource Allocation**

Each respondent is asked to identify the purposes of using budget in his/her firm. There are two choices: planning and control. The response to both planning, i.e., "your firm uses budgets for scarce resources allocation purpose"; and control, i.e., "your firm uses budgets for performance evaluation purpose" is used to measure the indicator variable of budget-based resource allocation.

*3.3.3.3 INDIVIDUAL FACTORS*

In this study, ethical concerns, reputation concerns, and fairness concerns are classified as individual factors since they are all human factors that influence individuals to decide and react differently in certain situations.

**Ethical Concerns**

The Defining Issues Test (DIT) developed by Rest (1979a, b) is employed to measure level of ethical reasoning. Following Junyaporn Techamontrikul (2006), a short version (three out of six dilemmas) of DIT-1 (the original version) has been selected so as to obtain a high response rate from the respondents. Even though the short form of the DIT is relatively lower in reliability than the full version. In scoring, the raw scores will be converted to percentages to generate a DIT P score. The higher DIT P score indicates the higher level of ethical concerns.

There is an internal check for the reliability of each respondent's questionnaire, "M" score. "M" items are written by the researchers to sound lofty and pretentious but not mean anything. If respondents consistently rate and rank the "M" items high, then it cannot be sure that the respondent has the proper test taking set. Therefore, if the reliability check is not passed the criteria (raw "M" score should be less than 4 for the short version of DIT-1), the questionnaire is invalidated.

This study prefers to utilize the DIT to measure level of ethical concerns since it is well-known and extensively used, especially in financial accounting and auditing research. The DIT is a more reliable psychometric instrument in assessing an individual's level of ethical reasoning (Jones and Ponemon, 1993) than other instruments used in prior budgetary slack literature, for instance, the Ethics Position Questionnaire (EPQ) and the scenarios developed by the IMA Resource Center.

### Reputation Concerns

Following Stevens (2002), reputation concerns are measured by questions that represent the respondents' desire to appear honest and fair to their superiors.

### Fairness Concerns

Following Libby (1996), this study employs the four questions based on the measures reported in Tyler and Lind's (1992) to assess respondents' perceptions of fairness of the budgeting environment (procedural fairness).

## *3.4 DATA ANALYSIS METHODOLOGY*

According to the conceptual model presented in Figure 1, this study employs regression, simple correlation and partial correlation analytical techniques for cross-sectional data analyses to substantiate whether and how budgetary slack associate with discretionary accruals, whether and how environmental factor, organizational factors, and individual factors associate with budgetary slack, and whether the associations between factors affecting budgetary slack are sensitive to the measurements of budgetary slack. The final sample in this study is partitioned into (*i*) firms that achieved their annual earnings targets and firms that did not (for robustness test, this study also partitions the sample into firms that achieved their annual earnings targets before managing earnings and the firms that did not), and (*ii*) firms that chose income-increasing and income-decreasing earnings management, to separately examine the linkage of budgetary slack to discretionary accruals and to compare

whether the results are dissimilar. The following regression model specifications are used for hypothesis testing:

### *3.4.1 MODEL SPECIFICATION FOR THE LINKAGE OF BUDGETARY SLACK TO DISCRETIONARY ACCRUALS*

$$DA_i = \alpha_0 + \alpha_1 SLACK_i + \alpha_2 BUD_i + \alpha_3 LEV_i + \alpha_4 ROA_i + \alpha_5 GROWTH_i + \alpha_6 Ln\_size_i + \alpha_7 BIG4_i + \alpha_8 LISTED_i + \alpha_9 CONSOL_i + \varepsilon \quad (1)$$

where:

DA = Discretionary accruals

SLACK = Budgetary slack

BUD = Relative weight on budget-based performance measures

LEV = Total debts to total assets ratio

ROA = Return on assets

GROWTH = Percentage change in sales

Ln_size = Natural log of total assets at the beginning of the year

BIG4 = Indicator variable for Big 4 audit firms

LISTED = Indicator variable for company listed on MAI

CONSOL = Indicator variable for consolidated financial statements

### *3.4.2 MODEL SPECIFICATIONS FOR THE DETERMINANTS OF BUDGETARY SLACK*

*DIRECT EFFECTS*

$$SLACK_i = \varphi_0 + \varphi_1 ENVI_i + \varphi_2 Ln\_size_i + \varphi_3 LISTED_i + \varphi_4 CONSOL_i + \varepsilon \quad (2.1)$$

$$SLACK_i = \beta_0 + \beta_1 INFO_i + \beta_2 Ln\_size_i + \beta_3 LISTED_i + \beta_4 CONSOL_i + \varepsilon \quad (3.1)$$

$$SLACK_i = \delta_0 + \delta_1 BUD_i + \delta_2 Ln\_size_i + \delta_3 LISTED_i + \delta_4 CONSOL_i + \varepsilon \quad (3.2)$$

$$SLACK_i = \lambda_0 + \lambda_1 PARTI_i + \lambda_2 Ln\_size_i + \lambda_3 LISTED_i + \lambda_4 CONSOL_i + \varepsilon \quad (3.3)$$

$$SLACK_i = \gamma_0 + \gamma_1 REWA_i + \gamma_2 Ln\_size_i + \gamma_3 LISTED_i + \gamma_4 CONSOL_i + \varepsilon \quad (3.4)$$

$$SLACK_i = \psi_0 + \psi_1 ALLO_i + \psi_2 Ln\_size_i + \psi_3 LISTED_i + \psi_4 CONSOL_i + \varepsilon \quad (3.5)$$

$$SLACK_i = \theta_0 + \theta_1 ETHICS_i + \theta_2 Ln\_size_i + \theta_3 LISTED_i + \theta_4 CONSOL_i + \varepsilon \quad (4.1)$$

$$SLACK_i = \zeta_0 + \zeta_1 REPU_i + \zeta_2 Ln\_size_i + \zeta_3 LISTED_i + \zeta_4 CONSOL_i + \varepsilon \quad (4.2)$$

$$SLACK_i = \xi_0 + \xi_1 FAIR_i + \xi_2 Ln\_size_i + \xi_3 LISTED_i + \xi_4 CONSOL_i + \varepsilon \quad (4.3)$$

*INDIRECT EFFECTS*

*For path ENVI → PARTI → REWA → SLACK*

$$SLACK_i = \gamma_0 + \gamma_1 REWA_i + \gamma_2 Ln\_size_i + \gamma_3 LISTED_i + \gamma_4 CONSOL_i + \varepsilon \quad (3.4)$$

$$REWA_i = \kappa_0 + \kappa_1 PARTI_i + \varepsilon \quad (5.1)$$

$$PARTI_i = \eta_0 + \eta_1 ENVI_i + \varepsilon \quad (5.2)$$

*For path INFO → PART → REWA → SLACK*

$$SLACK_i = \gamma_0 + \gamma_1 REWA_i + \gamma_2 Ln\_size_i + \gamma_3 LISTED_i + \gamma_4 CONSOL_i + \varepsilon \quad (3.4)$$

$$REWA_i = \kappa_0 + \kappa_1 PARTI_i + \varepsilon \quad (5.1)$$

$$PARTI_i = \pi_0 + \pi_1 INFO_i + \varepsilon \quad (5.3)$$

*For path BUD → PART → REWA → SLACK*

$$SLACK_i = \gamma_0 + \gamma_1 REWA_i + \gamma_2 Ln\_size_i + \gamma_3 LISTED_i + \gamma_4 CONSOL_i + \varepsilon \quad (3.4)$$

$$REWA_i = \kappa_0 + \kappa_1 PARTI_i + \varepsilon \quad (5.1)$$

$$PARTI_i = \omega_0 + \omega_1 BUD_i + \varepsilon \quad (5.4)$$

The standardized coefficients in (2.1), (3.1), (3.2), respectively, will be compared to the multiple of standardized coefficients of direct effect on each path in (3.4), (5.1) and (5.2), (5.3), (5.4), respectively, to test whether there is an indirect effect of environmental uncertainty, information asymmetry, and budget emphasis evaluative style, respectively, to budgetary slack *through* participative styles and reward systems.

where:

SLACK = Budgetary slack

ENVI = Environmental uncertainty

INFO = Information asymmetry

BUDEM = Budget emphasis evaluative style

PARTI = Participative styles

REWA = Reward systems (Objective and Subjective, Financial and Non-financial, Budget- and Non-budget- based, and Control and Uncontrollable performance measures)

ALLO = Budget-based resource allocation

ETHICS = Ethical concerns

REPU = Reputation concerns

FAIR = Fairness concerns

Ln_size = Natural log of total assets at the beginning of the year

LISTED = Indicator variable for company listed on MAI

CONSOL = Indicator variable for consolidated financial statements

# CHAPTER IV

# EMPIRICAL RESULTS

The results consist of two parts. The first part is the empirical results of the linkage of budgetary slack to discretionary accruals. The second part is the empirical results of the association between budgetary slacks measured subjectively and objectively and their determinants. This chapter presents (*i*) descriptive statistics, (*ii*) inferential statistics: correlation and regression results.

## *PART I: LINKAGE OF BUDGETARY SLACK TO DISCRETIONARY ACCRUALS*

### *4.1 DESCRIPTIVE STATISTICS*

#### *4.1.1 DISCRETIONARY ACCRUALS*

Table 1 presents descriptive statistics of the final sample entities. In comparison of each subsample group, Panel A to Panel E, the mean (median) of absolute value of discretionary accruals, *DA*, of the full sample in Panel A is 5.07 (0.72), while that of the firms that achieved their annual earnings targets in Panel B is 2.22 (0.66), that of the firms that did not achieve their annual earnings targets in Panel C is 8.24 (0.97), that of the firms that chose to manage earnings upward (income-increasing earnings management) in Panel D is 9.56 (1.41), and that of the firms that chose to manage earnings downward (income-decreasing earnings management) in Panel E is 2.15 (0.65). From the above information, the mean of absolute value of discretionary accruals of the full sample is moderate, that of the firms that chose to manage earnings upward is the highest, and that of the firms that chose to manage earnings downward is the lowest.

**T A B L E 1**
**Descriptive Statistics**

**Panel A: Full Sample (n=38)**

| Variables | n | Mean | Median | SD | Min | Max |
|---|---|---|---|---|---|---|
| *DA* | 38 | 5.07 | 0.72 | 14.25 | 0.01 | 66.16 |
| *SLACK1* | 38 | 61.71 | 65.00 | 13.37 | 35.00 | 85.00 |
| *SLACK2* | 38 | 25.64 | 20.00 | 15.72 | 0.00 | 80.00 |
| *BUD* | 38 | 66.45 | 70.00 | 27.15 | 0.00 | 100.00 |
| *LEV* | 38 | 0.41 | 0.45 | 0.21 | 0.03 | 0.81 |
| *ROA* | 38 | 0.06 | 0.06 | 0.12 | -0.56 | 0.26 |
| *GROWTH* | 38 | -0.07 | -0.08 | 0.14 | -0.42 | 0.22 |
| *Ln_size* | 38 | 15.08 | 14.83 | 1.58 | 13.12 | 19.37 |
| *BIG4* | 38 | 0.50 | 0.50 | 0.51 | 0 | 1 |
| *LISTED* | 38 | 0.08 | 0.00 | 0.27 | 0 | 1 |
| *CONSOL* | 38 | 0.29 | 0.00 | 0.46 | 0 | 1 |

**Panel B: Achieved Target (n=20)**

| Variable | n | Mean | Median | SD | Min | Max |
|---|---|---|---|---|---|---|
| *DA* | 20 | 2.22 | 0.66 | 5.17 | 0.01 | 23.26 |
| *SLACK1* | 20 | 61.75 | 65.00 | 11.84 | 40.00 | 85.00 |
| *SLACK2* | 20 | 27.85 | 25.00 | 18.38 | 2.00 | 80.00 |
| *BUD* | 20 | 71.18 | 80.00 | 29.34 | 0.00 | 100.00 |
| *LEV* | 20 | 0.40 | 0.40 | 0.23 | 0.03 | 0.81 |
| *ROA* | 20 | 0.10 | 0.09 | 0.07 | 0.01 | 0.26 |
| *GROWTH* | 20 | -0.06 | -0.10 | 0.15 | -0.42 | 0.16 |
| *Ln_size* | 20 | 15.43 | 15.08 | 1.68 | 13.12 | 19.37 |
| *BIG4* | 20 | 0.65 | 1.00 | 0.49 | 0 | 1 |
| *LISTED* | 20 | 0.05 | 0.00 | 0.22 | 0 | 1 |
| *CONSOL* | 20 | 0.30 | 0.00 | 0.47 | 0 | 1 |

**Panel C: Not Achieved Target (n=18)**

| Variable | n | Mean | Median | SD | Min | Max |
|---|---|---|---|---|---|---|
| *DA* | 18 | 8.24 | 0.97 | 19.80 | 0.02 | 66.16 |
| *SLACK1* | 18 | 61.67 | 67.50 | 15.24 | 35.00 | 80.00 |
| *SLACK2* | 18 | 23.19 | 20.00 | 12.18 | 0.00 | 50.00 |
| *BUD* | 18 | 60.71 | 60.00 | 24.01 | 0.00 | 100.00 |
| *LEV* | 18 | 0.43 | 0.45 | 0.19 | 0.08 | 0.79 |
| *ROA* | 18 | 0.02 | 0.05 | 0.15 | -0.56 | 0.14 |
| *GROWTH* | 18 | -0.07 | -0.07 | 0.14 | -0.26 | 0.22 |
| *Ln_size* | 18 | 14.70 | 14.34 | 1.40 | 13.15 | 17.86 |
| *BIG4* | 18 | 0.33 | 0.00 | 0.49 | 0 | 1 |
| *LISTED* | 18 | 0.11 | 0.00 | 0.32 | 0 | 1 |
| *CONSOL* | 18 | 0.28 | 0.00 | 0.46 | 0 | 1 |

**TABLE 1 *(Continued)***

**Panel D: EM - Income-Increasing (n=15)**

| Variable | n | Mean | Median | SD | Min | Max |
|---|---|---|---|---|---|---|
| *DA* | 15 | 9.56 | 1.41 | 21.54 | 0.02 | 66.16 |
| *SLACK1* | 15 | 65.00 | 70.00 | 12.54 | 50.00 | 80.00 |
| *SLACK2* | 15 | 22.20 | 20.00 | 13.19 | 0.00 | 50.00 |
| *BUD* | 15 | 57.27 | 60.00 | 26.87 | 0.00 | 100.00 |
| *LEV* | 15 | 0.46 | 0.52 | 0.22 | 0.08 | 0.81 |
| *ROA* | 15 | 0.07 | 0.06 | 0.06 | -0.01 | 0.18 |
| *GROWTH* | 15 | -0.09 | -0.16 | 0.12 | -0.24 | 0.15 |
| *Ln_size* | 15 | 15.26 | 14.73 | 1.76 | 13.20 | 19.37 |
| *BIG4* | 15 | 0.40 | 0.00 | 0.51 | 0 | 1 |
| *LISTED* | 15 | 0.07 | 0.00 | 0.26 | 0 | 1 |
| *CONSOL* | 15 | 0.20 | 0.00 | 0.41 | 0 | 1 |

**Panel E: EM - Income-Decreasing (n=23)**

| Variable | n | Mean | Median | SD | Min | Max |
|---|---|---|---|---|---|---|
| *DA* | 23 | 2.15 | 0.65 | 4.86 | 0.01 | 23.26 |
| *SLACK1* | 23 | 59.57 | 65.00 | 13.73 | 35.00 | 85.00 |
| *SLACK2* | 23 | 27.91 | 25.00 | 17.10 | 2.00 | 80.00 |
| *BUD* | 23 | 71.50 | 75.00 | 26.61 | 0.00 | 100.00 |
| *LEV* | 23 | 0.38 | 0.38 | 0.20 | 0.03 | 0.79 |
| *ROA* | 23 | 0.06 | 0.06 | 0.15 | -0.56 | 0.26 |
| *GROWTH* | 23 | -0.06 | -0.08 | 0.15 | -0.42 | 0.22 |
| *Ln_size* | 23 | 14.96 | 14.85 | 1.48 | 13.12 | 18.06 |
| *BIG4* | 23 | 0.57 | 1.00 | 0.51 | 0 | 1 |
| *LISTED* | 23 | 0.09 | 0.00 | 0.29 | 0 | 1 |
| *CONSOL* | 23 | 0.35 | 0.00 | 0.49 | 0 | 1 |

*DA*—Absolute value of discretionary accruals estimated by using the modified-Jones model and scaled by net profit of the year;

*SLACK1*—Traditional subjective measurement of slack (perceived ease of budget achievability, measured by the question number 38 in Appendix B); *SLACK2*—Traditional subjective measurement of slack (reversed score of perceived difficulty of budget achievability, measured by the question numbers 35-36 in Appendix B, with Cronbach's Alpha of 0.87);

*BUD*—Relative weight on budget-based performance measures; *LEV*—Leverage measured by total debts to total assets ratio; *ROA*—Return on assets measured by net profit to total assets at the beginning of the year; *GROWTH*—Firm's growth measured by percentage change in sales; *Ln_size*—Natural log of total assets at the beginning of the year; *BIG4*—Indicator variable for Big 4 audit firms; *LISTED*—Indicator variable for company listed on MAI; *CONSOL*—Indicator variable for consolidated financial statements.

Table 2 presents t-statistics of the descriptive statistics. The empirical evidence shows that, on average, firms in every subsample group choose to manage earnings through discretionary accruals as the t-statistics in Panel A indicate that the means of *DA* of all groups are significantly greater than zero ($p < 0.05$). In addition, the t-statistics in Panel B indicate that the firms that did not achieve their annual earnings targets are more likely to manipulate earnings than the firms that already achieved their annual earnings targets as the mean of *DA* of the firms that did not achieve their annual earnings targets is significantly greater than that of the firms that already achieved their annual earnings targets ($p < 0.10$). Moreover, the results in Panel B also indicate that the firms that chose income-increasing earnings management tend to manage earnings more than the firms that chose income-decreasing earnings management as the mean of *DA* of the firms that chose income-increasing earnings management is significantly greater than that of the firms that chose income-decreasing earnings management ($p < 0.10$).

### *4.1.2 BUDGETARY SLACK*

From Table 1, the mean (median) of the first subjective budgetary slack measurement, *SLACK1*, of the full sample is 61.71% (65%), that of the firms that achieved their annual earnings targets is 61.75% (65%), that of the firms that did not achieve their annual earnings targets is 61.67% (67.50%), while that of the firms that chose income-increasing earnings management is 65% (70%), and that of the firms that chose income-decreasing earnings management is 59.57% (65%). With respect to the second subjective budgetary slack measurement, *SLACK2*, the mean (median) of the full sample is 25.64% (20%), while that of the firms that achieved

# TABLE 2
## t-statistics of the Descriptive Statistics

**Panel A: One-Sample Test for DA**

| Description | Test Value = 0 t-statistics | df | p-value | Mean Difference |
|---|---|---|---|---|
| *DA_Full Sample* | 2.19** | 37 | 0.02 | 5.07 |
| *DA_Achieved Target* | 1.92** | 19 | 0.03 | 2.22 |
| *DA_Not Achieved Target* | 1.77** | 17 | 0.05 | 8.24 |
| *DA_Income-Increasing EM* | 1.72** | 14 | 0.05 | 9.56 |
| *DA_Income-Decreasing EM* | 2.12** | 22 | 0.02 | 2.15 |

**Panel B: t-test for Equality of Means of DA**

| Description | n | Mean | SD | SE |
|---|---|---|---|---|
| *DA_Achieved Target* | 20 | 2.22 | 5.17 | 1.16 |
| *DA_Not Achieved Target* | 18 | 8.24 | 19.80 | 4.67 |
| **t-statistics = -1.31* (0.10)** | | | | |
| *DA_Income-Increasing EM* | 15 | 9.56 | 21.54 | 5.56 |
| *DA_Income-Decreasing EM* | 23 | 2.15 | 4.86 | 1.01 |
| **T-statistics = 1.31* (0.10)** | | | | |

**Panel C: One-Sample Test for SLACK**

| Description | Test Value = 0 t-statistics | df | p-value | Mean Difference |
|---|---|---|---|---|
| *SLACK1_Full Sample* | 28.45*** | 37 | 0.00 | 61.71 |
| *SLACK1_Achieved Target* | 23.32*** | 19 | 0.00 | 61.75 |
| *SLACK1_Not Achieved Target* | 17.16*** | 17 | 0.00 | 61.67 |
| *SLACK1_Income-Increasing EM* | 20.08*** | 14 | 0.00 | 65.00 |
| *SLACK1_Income-Decreasing EM* | 20.81*** | 22 | 0.00 | 59.57 |
| *SLACK2_Full Sample* | 10.06*** | 37 | 0.00 | 25.64 |
| *SLACK2_Achieved Target* | 6.78*** | 19 | 0.00 | 27.85 |
| *SLACK2_Not Achieved Target* | 8.08*** | 17 | 0.00 | 23.19 |
| *SLACK2_Income-Increasing EM* | 6.52*** | 14 | 0.00 | 22.20 |
| *SLACK2_Income-Decreasing EM* | 7.83*** | 22 | 0.00 | 27.91 |

**Panel D: t-test for Equality of Means of SLACK**

| Description | n | Mean | SD | SE |
|---|---|---|---|---|
| *SLACK1_Achieved Target* | 20 | 61.75 | 11.84 | 2.65 |
| *SLACK1_Not Achieved Target* | 18 | 61.67 | 15.24 | 3.59 |
| **t-statistics = 0.02 (0.49)** | | | | |
| *SLACK1_Income-Increasing EM* | 15 | 65.00 | 12.54 | 3.24 |
| *SLACK1_Income-Decreasing EM* | 23 | 59.57 | 13.73 | 2.86 |
| **t-statistics = 1.23 (0.11)** | | | | |
| *SLACK2_Achieved Target* | 20 | 27.85 | 18.38 | 4.11 |
| *SLACK2_Not Achieved Target* | 18 | 23.19 | 12.18 | 2.87 |
| **t-statistics = 0.91 (0.18)** | | | | |
| *SLACK2_Income-Increasing EM* | 15 | 22.20 | 13.19 | 3.41 |
| *SLACK2_Income-Decreasing EM* | 23 | 27.91 | 17.10 | 3.57 |
| **t-statistics = -1.10 (0.14)** | | | | |

Corresponding two-tailed *p*-values are reported in parentheses.

***,**,* indicate significance at the 1%, 5% and 10% levels, respectively.

their annual earnings targets is 27.85% (25%), that of the firms that did not achieve their annual earnings targets is 23.19% (20%), that of the firms that chose income-increasing earnings management is 22.20% (20%), and that of the firms that chose income-decreasing earnings management is 27.91% (25%).

From Table 2, the t-statistics in Panel C indicate that, on average, firms in every subsample group also choose to create slack into budget as the means of both subjective budgetary slack measurements, *SLACK1* and *SLACK2,* of all groups are significantly greater than zero ($p < 0.01$). However, there is no statistical evidence that the means of both measurements, *SLACK1* and *SLACK2*, of the firms that already achieved their annual earnings targets are different from those of the firms that did not achieve their annual earnings targets, also there is no statistical evidence that the means of both measurements of the firms that chose income-increasing earnings management are different from those of the firms that chose income-decreasing earnings management as the t-statistics in Panel D are insignificant ($p > 0.10$).

In sum, the results in Table 2 indicate that, on average, firms in every subsample group choose to manipulate earnings through discretionary accruals and create slack into budget. The means of discretionary accruals are significantly different among groups; however, the means of budgetary slack of each subsample group are insignificantly different.

### *4.1.3 CONTROL VARIABLES*

From Table 1, with respect to the control variables, the means of relative weight on budget-based performance measures (*BUD*) fall between 57.27% -

71.50%, indicating that the performance measures of respondents are heavily weighted on budget. The means of the firms' leverage (*LEV*) fall between 0.38 - 0.46, indicating that roughly 38% to 46% of the sampled firms' assets are financed by debts and around 54% to 62% of the firms' assets are financed by shareholders' equities. The means of the firms' performance (*ROA*) fall between 0.02 - 0.10, indicating that the sampled firms generate positive returns at approximately 2% to 10% on total assets. The means of the firms' growth (*GROWTH*) fall between -0.06 and -0.09, indicating that sales of the sampled firms drop by 6% to 9% from prior year. The means of natural log of total assets (*Ln_size*) at the beginning of the year of the full sample, firms that achieved their targets, firms that chose to manage earnings upward, firms that chose to manage earnings downward, and firms that did not achieve their targets are 15.08, 15.43, 15.26, 14.96 and 14.70, respectively, indicating that sizes of the firms that achieved their targets and the firms that chose to manage earnings upward are drastically larger than those of the firms that chose to manage earnings downward and the firms that did not achieve their targets. Indicator variables of big 4 auditor (*BIG4*), stock exchange of the firm listing (*LISTED*), consolidated financial statements (*CONSOL*) for the full sample present means of 0.50, 0.08, and 0.29, respectively, indicating that 50% of the sampled firms are audited by big 4 auditors, 8% of them are listed on MAI, 29% of them evaluate respondents' performance based on the consolidated financial statements.

## *4.2 INFERENTIAL STATISTICS*

### *4.2.1 CORRELATION RESULTS*

Table 3 shows correlations among variables in this study. The Pearson's correlation coefficients between *DA* and *SLACK1* and *DA* and *SLACK2* are

## TABLE 3
## Correlation Matrix

| Variables | | *DA* | *SLACK1* | *SLACK2* | *BUD* | *LEV* | *ROA* | *GROWTH* | *Ln_size* | *BIG4* | *LISTED* | *CONSOL* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***DA*** | **Correlation** | 1.00 | 0.10 | 0.03 | -0.16 | 0.21 | -0.16 | **-0.29*** | -0.08 | **-0.31*** | 0.02 | -0.17 |
| | **p-value** | - | (0.56) | (0.88) | (0.38) | (0.21) | (0.34) | **(0.07)** | (0.63) | **(0.06)** | (0.90) | (0.32) |
| | **n** | 38 | 38 | 38 | 31 | 38 | 38 | 38 | 38 | 38 | 38 | 38 |
| ***SLACK1*** | **Correlation** | | 1 | 0.11 | 0.06 | **-0.38**** | 0.04 | 0.00 | -0.16 | -0.15 | 0.11 | -0.08 |
| | **p-value** | | - | (0.50) | (0.74) | **(0.02)** | (0.82) | (0.98) | (0.33) | (0.37) | (0.51) | (0.62) |
| | **n** | | 38 | 38 | 31 | 38 | 38 | 38 | 38 | 38 | 38 | 38 |
| ***SLACK2*** | **Correlation** | | | 1.00 | -0.17 | -0.16 | -0.15 | 0.07 | -0.08 | -0.08 | 0.11 | -0.12 |
| | **p-value** | | | - | (0.37) | (0.35) | (0.38) | (0.66) | (0.63) | (0.65) | (0.50) | (0.47) |
| | **n** | | | 38 | 31 | 38 | 38 | 38 | 38 | 38 | 38 | 38 |
| ***BUD*** | **Correlation** | | | | 1.00 | -0.15 | -0.19 | -0.06 | -0.27 | **0.32*** | -0.08 | -0.21 |
| | **p-value** | | | | - | (0.43) | (0.30) | (0.76) | (0.14) | **(0.08)** | (0.67) | (0.26) |
| | **n** | | | | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 |
| ***LEV*** | **Correlation** | | | | | 1.00 | **-0.27*** | -0.05 | **0.42***** | -0.02 | 0.09 | 0.27 |
| | **p-value** | | | | | - | **(0.10)** | (0.77) | **(0.01)** | (0.92) | (0.59) | (0.11) |
| | **n** | | | | | 38 | 38 | 38 | 38 | 38 | 38 | 38 |
| ***ROA*** | **Correlation** | | | | | | 1.00 | **0.28*** | 0.17 | **0.29*** | -0.17 | 0.13 |
| | **p-value** | | | | | | - | **(0.08)** | (0.29) | **(0.08)** | (0.30) | (0.44) |
| | **n** | | | | | | 38 | 38 | 38 | 38 | 38 | 38 |
| ***GROWTH*** | **Correlation** | | | | | | | 1.00 | -0.06 | -0.08 | -0.09 | 0.25 |
| | **p-value** | | | | | | | - | (0.71) | (0.62) | (0.60) | (0.13) |
| | **n** | | | | | | | 38 | 38 | 38 | 38 | 38 |
| ***Ln_size*** | **Correlation** | | | | | | | | 1.00 | **0.31**** | **-0.36**** | **0.44***** |
| | **p-value** | | | | | | | | - | **(0.05)** | **(0.03)** | **(0.01)** |
| | **n** | | | | | | | | 38 | 38 | 38 | 38 |
| ***BIG4*** | **Correlation** | | | | | | | | | 1.00 | **-0.29*** | 0.17 |
| | **p-value** | | | | | | | | | - | **(0.07)** | (0.30) |
| | **n** | | | | | | | | | 38 | 38 | 38 |
| ***LISTED*** | **Correlation** | | | | | | | | | | 1.00 | 0.03 |
| | **p-value** | | | | | | | | | | - | (0.87) |
| | **n** | | | | | | | | | | 38 | 38 |
| ***CONSOL*** | **Correlation** | | | | | | | | | | | 1.00 |
| | **p-value** | | | | | | | | | | | - |
| | **n** | | | | | | | | | | | 38 |

Corresponding two-tailed *p*-values are reported in parentheses. ***,**,* indicate significance at the 1%, 5% and 10% levels (two-tailed), respectively.

insignificantly correlated (r = 0.10, $p$ = 0.56 and r = 0.03, $p$ = 0.88, respectively, so $H_1$ is not supported). For the control variables, there are significant positive correlations between *BUD* and *BIG4*, *LEV* and *Ln_size*, *ROA* and *GROWTH*, *ROA* and *BIG4*, *Ln_size* and *BIG4*, and *Ln_size* and *CONSOL*, while the correlations between *DA* and *GROWTH*, *DA* and *BIG4*, *SLACK1* and *LEV*, *LEV* and *ROA*, *Ln_size* and *LISTED*, and *BIG4* and *LISTED* are negative. Correlations; however, do not provide insightful results. Therefore, regression analysis is performed to further dissect the association.

### *4.2.2 REGRESSION RESULTS*

Table 4 presents the regression results of discretionary accruals on budgetary slack. Panel A presents the regression results of *DA* on *SLACK1*. The F-statistics of all regression models are insignificant, indicating that the models are invalid. Therefore, this study makes no further analysis on the association of *SLACK1* and the independent variables with discretionary accruals.

Panel B presents the regression results of *DA* on *SLACK2*. The F-statistics of the regression models, except the income-increasing earnings management, are significant at the conventional levels, indicating that these models are statistically valid. Since the F-statistics of regression model for the subsample group of firms that chose income-increasing earnings management is insignificant, this study makes no further analysis on this subsample group. The adjusted $R^2$ for the full sample, the firms that achieved their targets, the firms that did not achieve their targets and income-decreasing earnings management are 44%, 69%, 79% and 66%, respectively, which mean that explanatory variables are more able to explain and predict the dependent variable when partitioning the firms regarding their targets achievability and earnings management pattern than the full sample is. The first two columns

## TABLE 4
## Summary Regressions of Discretionary Accruals on Budgetary Slack

**Panel A: Regressions of DA on SLACK1**

| Variables | Full Sample | | Budget Achievability | | | | Earning Management | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Achieved Target | | Not Achieved Target | | Income-Increasing | | Income-Decreasing | |
| | Coefficient | p-value | Coefficient | p-value | Coefficient | p-value | Coefficient | p-value | Coefficient | p-value |
| ***Constant*** | 3.98 | (0.91) | 31.79 | (0.33) | 2.41 | (0.99) | -62.07 | (0.78) | -1.00 | (0.97) |
| ***SLACK1*** | 0.20 | (0.25) | -0.03 | (0.86) | 0.43 | (0.45) | 0.33 | (0.85) | 0.00 | (0.99) |
| ***BUD*** | -0.03 | (0.72) | -0.09 | (0.23) | 0.42 | (0.25) | -0.15 | (0.80) | **-0.11*** | **(0.10)** |
| ***LEV*** | **28.76**** | **(0.05)** | 5.00 | (0.68) | 87.31 | (0.17) | 93.84 | (0.46) | 3.68 | (0.74) |
| ***ROA*** | 12.11 | (0.52) | -26.88 | (0.32) | 75.21 | (0.22) | 480.84 | (0.57) | -3.75 | (0.72) |
| ***GROWTH*** | -21.03 | (0.25) | -13.04 | (0.28) | -27.97 | (0.84) | -246.17 | (0.47) | 4.27 | (0.72) |
| ***Ln_size*** | -1.25 | (0.59) | -1.21 | (0.53) | -5.42 | (0.52) | -1.25 | (0.95) | 0.87 | (0.61) |
| ***BIG4*** | -6.25 | (0.27) | -3.75 | (0.40) | -13.20 | (0.41) | -51.42 | (0.43) | -0.40 | (0.91) |
| ***LISTED*** | -7.79 | (0.36) | -3.04 | (0.69) | -26.20 | (0.31) | 54.53 | (0.65) | 0.86 | (0.87) |
| ***CONSOL*** | -3.05 | (0.63) | 0.81 | (0.87) | -0.39 | (0.99) | -48.29 | (0.55) | -6.71 | (0.18) |
| **F-statistics** | **1.68** | | **0.87** | | **1.25** | | **0.71** | | **1.26** | |
| **p-value** | **(0.15)** | | **(0.56)** | | **(0.38)** | | **(0.68)** | | **(0.38)** | |
| **Adj $R^2$** | **13%** | | **0%** | | **11%** | | **0%** | | **11%** | |

## TABLE 4 *(Continued)*

**Panel B: Regressions of DA on SLACK2**

| Variables | Full Sample | | Budget Achievability | | | | Earning Management | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Achieved Target | | Not Achieved Target | | Income-Increasing | | Income-Decreasing | |
| | Coefficient | p-value | Coefficient | p-value | Coefficient | p-value | Coefficient | p-value | Coefficient | p-value |
| ***Constant*** | 7.84 | (0.46) | 15.93 | (0.38) | 5.22 | (0.17) | -95.83 | (0.65) | 16.02 | (0.26) |
| ***SLACK2*** | **0.18*** ** | **(0.00)** | **0.26*** ** | **(0.01)** | 0.00 | (0.85) | 0.51 | (0.66) | **0.26*** ** | **(0.00)** |
| ***BUD*** | -0.03 | (0.35) | -0.05 | (0.23) | 0.02 | (0.18) | -0.10 | (0.86) | -0.06 | (0.13) |
| ***LEV*** | **9.17** ** | **(0.03)** | **12.67** ** | **(0.04)** | **3.54*** | **(0.10)** | 71.50 | (0.46) | **16.18** ** | **(0.02)** |
| ***ROA*** | 4.27 | (0.47) | -4.31 | (0.78) | 3.47 | (0.19) | 205.25 | (0.78) | 7.65 | (0.25) |
| ***GROWTH*** | -5.28 | (0.35) | -7.38 | (0.29) | -6.28 | (0.13) | -195.27 | (0.52) | -3.18 | (0.64) |
| ***Ln_size*** | -0.85 | (0.25) | -1.46 | (0.20) | -0.51 | (0.12) | 3.80 | (0.78) | -1.62 | (0.17) |
| ***BIG4*** | -0.29 | (0.87) | 0.38 | (0.89) | -0.31 | (0.53) | -48.24 | (0.41) | 2.92 | (0.18) |
| ***LISTED*** | 0.17 | (0.95) | -5.31 | (0.22) | **2.87** ** | **(0.04)** | 30.93 | (0.79) | -2.55 | (0.40) |
| ***CONSOL*** | 0.80 | (0.69) | 2.29 | (0.44) | **1.89*** | **(0.10)** | -33.61 | (0.66) | 0.20 | (0.95) |
| **F-statistics** | **3.55*** ** | | **4.95** ** | | **19.21** ** | | **0.62** | | **5.13*** ** | |
| **p-value** | **(0.00)** | | **(0.02)** | | **(0.02)** | | **(0.76)** | | **(0.01)** | |
| **Adj $R^2$** | **44%** | | **69%** | | **79%** | | **0%** | | **66%** | |

## TABLE 4 *(Continued)*

**Panel C: Regressions of DA on SLACK1 & SLACK2**

| | Firms that Achieved Target and chose Income-Decreasing EM | | | |
|---|---|---|---|---|
| **Variables** | **SLACK1** | | **SLACK2** | |
| | **Coefficient** | **p-value** | **Coefficient** | **p-value** |
| ***Constant*** | 4.85 | (0.83) | 6.96 | (0.63) |
| ***SLACK*** | 0.01 | (0.94) | **0.17*** | **(0.09)** |
| ***BUD*** | **-0.22**** | **(0.02)** | **-0.14*** | **(0.07)** |
| ***LEV*** | 8.80 | (0.42) | **15.70*** | **(0.06)** |
| ***ROA*** | -0.17 | (0.99) | 8.27 | (0.55) |
| ***GROWTH*** | 3.02 | (0.75) | -2.54 | (0.72) |
| ***Ln_size*** | 1.09 | (0.47) | -0.23 | (0.84) |
| ***BIG4*** | -3.39 | (0.28) | -0.48 | (0.84) |
| ***LISTED*** | -0.29 | (0.96) | -2.63 | (0.46) |
| ***CONSOL*** | -7.66 | (0.14) | -2.97 | (0.44) |
| **F-statistics** | **4.03*** | | **9.46**** | |
| **p-value** | **(0.10)** | | **(0.02)** | |
| **Adj $R^2$** | **68%** | | **85%** | |

Corresponding two-tailed *p*-values are reported in parentheses. ***,**,* indicate significance at the 1%, 5% and 10% levels (two-tailed), respectively.

show the regression results of the full sample and the firms that achieved their targets. The main results are qualitatively similar and consistent with the results of the firms that chose income-decreasing earnings management shown in the last column. The coefficients of *SLACK2* of the full sample and those two subsample groups, the firms that already achieved their targets and the firms that chose income-decreasing earnings management, are significantly positive at 1% level. So $H_1$ is partially supported. These results exhibit that there is a significantly positive association between budgetary slack and discretionary accruals, especially for the subsample groups of firms that already achieved their annual earnings targets and firms that chose income-decreasing earnings management. It is possible that those firms use discretionary accruals to adjust the previously built budgetary slack. The third column presents the regression results of the firms that did not achieve their earnings targets, the coefficients of *SLACK2* are insignificant, so $H_1$ is not supported for this group. This is not consistent with the regression results of the full sample, the firms that achieved their targets and the firms that chose income-decreasing earnings management. With respect to the control variables, only the coefficients of firms' leverage (*LEV*) are significantly positive, indicating that the firms with high leverage are more likely to manage reported earnings.

Panel C presents the regression results of *DA* on *SLACK1* and *DA* on *SLACK2* for the firms that already achieved their annual earnings targets *and* chose to manage earnings downward (income-decreasing earnings management). The results in the first column indicate that there is no association between *DA* and *SLACK1*. The results in the second column are consistent with the results in Panel B that the coefficient of *SLACK2* is significantly positive. The results show that the firms that

incorporated slack into the budget and already achieved their annual earnings targets are more likely to manipulate earnings downward. It is possible that those firms use earnings management to adjust the previously built budgetary slack and prefer to manage earnings downward in order to reserve the excess earnings and/or not to exceed the target by too much which will affect the budget setting in the next period.

The results in Table 4 (Panel A, B and C) show evidence that the results of the linkage of budgetary slack to discretionary accruals are sensitive to the measurements of slack. That is, the association between discretionary accruals and budgetary slack exists only if measure slack from a reversed score of the two survey questions about managers' perceived difficulty of budget achievability (*SLACK2*), but not for the other traditional subjective slack measurement (simply a survey question about managers' perceived ease of budget achievability, *SLACK1*).

For robustness test, the cross-sectional Jones (1991) model is also utilized in estimating discretionary accruals and this study also partitions the sample into firms that achieved their annual earnings targets before managing earnings and the firms that did not, the results (not tabulated) are qualitatively similar.

As the response rate is not high, non-response analysis is performed to ensure that respondents do not systematically differ from non-respondents. The data of on-time respondents is compared to late respondents and finds no significant difference which suggests no response bias.

*PART II: THE MEASUREMENTS AND DETERMINANTS OF BUDGETARY SLACK*

*4.3 DESCRIPTIVE STATISTICS*

Table 5 presents descriptive statistics of final sample entities and list number of the questions used to measure each variable. Cronbach's Alpha of all certain variables exceeds the conventional value of 0.7 (Nunnally, 1978) so that the reliability of measurements is ensured. Among the three measures of budgetary slack, the mean (median) of subjective budgetary slack measurements, *SLACK1*, is the highest at 61.71% (65%) and *SLACK2*'s is reasonably low at 25.64% (20%), while that of the objective measurement, *SLACKNEW*, is the lowest at 8.49% (7.40%).

With respect to environmental factor, the mean (median) of environmental uncertainty (*ENVI*) at 36.32% (33.33%) implies that, on average, the respondents perceive high predictability of firms' economic environment. For organizational factors, the mean (median) of information asymmetry (*INFO*) at 35.68% (34%) indicates moderate level of asymmetric information between respondents and their superiors, while those of budget emphasis evaluative style (*BUDEM*) and participative styles (*PARTI*) at 63.33% (62.50%) and 7.37 (8.13) of 10, respectively, reveal that superiors place considerably high emphasis on meeting the budget and they also allow their subordinates to actively participate in budgeting process. For reward systems (*REWA*), the mean (median) of objective performance measures (*OBJ*) is 39.55% (50%), indicating that respondents' compensation is roughly equally weighted between objective and subjective measures, while those of financial (*FIN*), budget-based (*BUD*), and controllable (*CON*) performance measures are 67.42% (70%), 66.45% (70%), and 69.64% (70%), respectively, indicating that those performance measures are heavily weighted to respondents' total compensation. The

# TABLE 5

## Descriptive Statistics

| Variables | No. of questions | Question numbers in questionnaire[a] | Alpha | Mean | Median | SD | Min | Max |
|---|---|---|---|---|---|---|---|---|
| **Budgetary Slack** | | | | | | | | |
| *SLACK1* | 1 | 38 | NA | 61.71 | 65.00 | 13.37 | 35 | 85 |
| *SLACK2* | 2 | 35-36 | 0.87 | 25.64 | 20.00 | 15.72 | 0 | 80 |
| *SLACKNEW* | 2 | 13-14 | NA | 8.49 | 7.40 | 8.42 | 0 | 54 |
| **Environmental Factor** | | | | | | | | |
| Environmental Uncertainty (*ENVI*) | 6 | 15-20 | 0.77 | 36.32 | 33.33 | 18.66 | 5 | 100 |
| **Organizational Factors** | | | | | | | | |
| Information Asymmetry (*INFO*) | 5 | 22-26 | 0.85 | 35.68 | 34.00 | 15.80 | 4 | 67 |
| Budget Emphasis Evaluative Style (*BUDEM*) | 3 | 39-41 | 0.70 | 63.33 | 62.50 | 21.40 | 5 | 100 |
| Participative Styles (*PARTI*) | 1 | 12 | NA | 7.37 | 8.13 | 3.60 | 0 | 10 |
| Reward Systems (*REWA*) | | | | | | | | |
| Objective Performance Measures (*OBJ*) | 1 | 49 | NA | 39.55 | 50.00 | 32.02 | 0 | 100 |
| Financial Performance Measures (*FIN*) | 1 | 49 | NA | 67.42 | 70.00 | 20.81 | 20 | 100 |
| Budget-based Performance Measures (*BUD*) | 1 | 49 | NA | 66.45 | 70.00 | 27.15 | 0 | 100 |
| Controllable Performance Measures (*CON*) | 1 | 49 | NA | 69.64 | 70.00 | 23.49 | 10 | 100 |
| Budget-based Resource Allocation (*ALLO*) | 2 | 9-10 | NA | 0.95 | 1.00 | 0.23 | 0 | 1 |
| **Individual Factors** | | | | | | | | |
| Ethical Concerns (*ETHICS*) | | Part VI | NA | 29.85 | 28.33 | 11.43 | 7 | 50 |
| Reputation Concerns (*REPU*) | 4 | 31-34 | 0.85 | 76.41 | 80.00 | 15.67 | 30 | 95 |
| Fairness Concerns (*FAIR*) | 4 | 42-45 | 0.94 | 36.09 | 35.00 | 16.37 | 10 | 88 |
| **Control Variables** | | | | | | | | |
| *Ln_size* | | | | 15.08 | 14.83 | 1.58 | 13.12 | 19.37 |
| *LISTED* | | | | 0.08 | 0.00 | 0.27 | 0 | 1 |
| *CONSOL* | | | | 0.29 | 0.00 | 0.46 | 0 | 1 |

[a] The final survey questionnaire is presented in Appendix B.

*SLACK1*—Traditional subjective measurement of slack (perceived ease of budget achievability); *SLACK2*—Traditional subjective measurement of slack (reversed score of perceived difficulty of budget achievability); *SLACKNEW*—Objective measurement of slack ([budget achievability - discretionary accruals] / original budget figure);

*ENVI*—Reversed score of perceived predictability of firms' economic environment; *INFO*—Level of information asymmetry between respondents and their superiors; *BUDEM*—Level of budget emphasis which respondents are evaluated by their superiors; *PARTI*—Level of participation in which respondents are allowed in budgeting process; *REWA*—Relative weight on each type of reward systems which are based on (*i*) Objective performance measures (*OBJ*), (*ii*) Financial performance measures (*FIN*), (*iii*) Budget-based performance measures (*BUD*), and (*iv*) Controllable performance measures (*CON*); *ALLO*—Indicator variable for firms that use budget for both planning and control purposes; *ETHICS*—Respondents' ethical concerns level; *REPU*—Respondents' desire to appear honest and fair to their superiors; *FAIR*—Perceived fairness of the budgeting environment;

*Ln_size*—Natural log of total assets at the beginning of the year; *LISTED*—Indicator variable for company listed on MAI; *CONSOL*— Indicator variable for consolidated financial statements.

indicating variable of budget-based resource allocation (*ALLO*) shows a mean of 0.95, indicating that 95% of the sample firms use budget for both planning and control purposes. With respect to individual factors, the mean (median) of ethical concerns (*ETHICS*) is 29.85% (28.33%) which implies that the respondents' ethical reasoning is moderately low, and that of reputation concerns (*REPU*) at 76.41% (80%) suggests respondents' obvious desire to appear honest and fair to their superiors. The mean (median) of fairness concerns (*FAIR*) at 36.09% (35%) shows respondents' perceived inconsiderable fairness of the budgeting environment.

With respect to control variables, the mean of natural log of total assets at the beginning of the year (*Ln_size*) of the sample firms is 15.08 (THB 15,746 million, not tabulated), while indicating variables of stock exchange of the firm listing (*LISTED*) and consolidated financial statements (*CONSOL*) present a mean of 0.08 and 0.29, respectively, indicating that 8% of the sample firms are listed on MAI and 29% of them evaluate respondents' performance based on the consolidated financial statements.

## *4.4 INFERENTIAL STATISTICS*

### *4.4.1 CORRELATION RESULTS*

Table 6 shows correlations among variables in this study. The Pearson's correlation coefficient between *SLACK2* and *SLACKNEW* is significantly positive ($r = 0.58$, $p < 0.01$) as expected, but the correlation coefficients between *SLACK1* and *SLACKNEW* and between *SLACK1* and *SLACK2* are insignificant.

# TABLE 6
## Correlation Matrix

| Variables | | SLACK1 | SLACK2 | SLACK NEW | ENVI | INFO | BUDEM | PARTI | OBJ | FIN | BUD | CON | ALLO | ETHICS | REPU | FAIR | Ln_size | LISTED | CONSOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SLACK1 | Correlation | 1.00 | 0.11 | -0.17 | 0.16 | **0.38**** | 0.12 | -0.22 | 0.17 | 0.23 | 0.06 | 0.27 | -0.15 | -0.08 | -0.05 | -0.11 | -0.16 | 0.11 | -0.08 |
| | p-value | - | (0.50) | (0.31) | (0.34) | **(0.02)** | (0.48) | (0.18) | (0.35) | (0.21) | (0.74) | (0.16) | (0.37) | (0.68) | (0.78) | (0.50) | (0.33) | (0.51) | (0.62) |
| | n | 38 | 38 | 38 | 38 | 37 | 38 | 38 | 33 | 31 | 31 | 28 | 38 | 31 | 38 | 38 | 38 | 38 | 38 |
| SLACK2 | Correlation | | 1.00 | **0.58***** | **0.39**** | 0.12 | **-0.34**** | -0.14 | 0.16 | 0.07 | -0.17 | -0.08 | 0.01 | **-0.31*** | **-0.50***** | 0.05 | -0.08 | 0.11 | -0.12 |
| | p-value | | - | **(0.00)** | **(0.02)** | (0.48) | **(0.04)** | (0.42) | (0.38) | (0.71) | (0.37) | (0.68) | (0.95) | **(0.09)** | **(0.00)** | (0.78) | (0.63) | (0.50) | (0.47) |
| | n | | 38 | 38 | 38 | 37 | 38 | 38 | 33 | 31 | 31 | 28 | 38 | 31 | 38 | 38 | 38 | 38 | 38 |
| SLACKNEW | Correlation | | | 1.00 | 0.11 | 0.01 | **-0.28*** | -0.24 | 0.21 | -0.13 | -0.30 | -0.19 | 0.03 | -0.11 | -0.14 | -0.03 | -0.11 | 0.17 | -0.09 |
| | p-value | | | - | (0.50) | (0.97) | **(0.08)** | (0.14) | (0.25) | (0.47) | (0.11) | (0.33) | (0.86) | (0.56) | (0.39) | (0.84) | (0.52) | (0.31) | (0.58) |
| | n | | | 38 | 38 | 37 | 38 | 38 | 33 | 31 | 31 | 28 | 38 | 31 | 38 | 38 | 38 | 38 | 38 |
| ENVI | Correlation | | | | 1.00 | 0.23 | -0.02 | -0.07 | 0.07 | -0.08 | -0.11 | -0.08 | -0.01 | 0.03 | 0.03 | -0.08 | 0.27 | -0.25 | 0.14 |
| | p-value | | | | - | (0.18) | (0.90) | (0.67) | (0.71) | (0.66) | (0.55) | (0.68) | (0.96) | (0.86) | (0.87) | (0.64) | (0.11) | (0.13) | (0.40) |
| | n | | | | 38 | 37 | 38 | 38 | 33 | 31 | 31 | 28 | 38 | 31 | 38 | 38 | 38 | 38 | 38 |
| INFO | Correlation | | | | | 1.00 | -0.13 | -0.11 | **0.47***** | 0.06 | 0.00 | 0.01 | 0.10 | 0.12 | -0.21 | -0.14 | -0.15 | 0.06 | -0.12 |
| | p-value | | | | | - | (0.44) | (0.51) | **(0.01)** | (0.75) | (0.99) | (0.95) | (0.55) | (0.53) | (0.22) | (0.40) | (0.37) | (0.74) | (0.47) |
| | n | | | | | 37 | 37 | 37 | 32 | 30 | 30 | 27 | 37 | 30 | 37 | 37 | 37 | 37 | 37 |
| BUDEM | Correlation | | | | | | 1.00 | 0.12 | -0.13 | -0.13 | 0.21 | -0.09 | 0.01 | 0.03 | **0.42***** | **-0.62***** | **-0.33**** | 0.12 | 0.23 |
| | p-value | | | | | | - | (0.46) | (0.48) | (0.47) | (0.25) | (0.64) | (0.96) | (0.86) | **(0.01)** | **(0.00)** | **(0.04)** | (0.49) | (0.16) |
| | n | | | | | | 38 | 38 | 33 | 31 | 31 | 28 | 38 | 31 | 38 | 38 | 38 | 38 | 38 |
| PARTI | Correlation | | | | | | | 1.00 | **-0.41**** | -0.15 | 0.06 | -0.22 | 0.16 | 0.04 | 0.17 | 0.07 | **0.27*** | 0.11 | 0.04 |
| | p-value | | | | | | | - | **(0.02)** | (0.43) | (0.75) | (0.26) | (0.35) | (0.84) | (0.31) | (0.67) | **(0.10)** | (0.50) | (0.79) |
| | n | | | | | | | 38 | 33 | 31 | 31 | 28 | 38 | 31 | 38 | 38 | 38 | 38 | 38 |
| OBJ | Correlation | | | | | | | | 1.00 | 0.20 | 0.22 | -0.07 | 0.28 | 0.18 | -0.26 | -0.22 | -0.25 | -0.23 | -0.06 |
| | p-value | | | | | | | | - | (0.30) | (0.24) | (0.71) | (0.12) | (0.36) | (0.15) | (0.23) | (0.16) | (0.20) | (0.76) |
| | n | | | | | | | | 33 | 30 | 30 | 28 | 33 | 28 | 33 | 33 | 33 | 33 | 33 |
| FIN | Correlation | | | | | | | | | 1.00 | **0.57***** | 0.19 | -0.02 | 0.04 | -0.05 | **0.30*** | -0.12 | -0.17 | -0.20 |
| | p-value | | | | | | | | | - | **(0.00)** | (0.33) | (0.90) | (0.83) | (0.77) | **(0.10)** | (0.54) | (0.36) | (0.29) |
| | n | | | | | | | | | 31 | 30 | 28 | 31 | 27 | 31 | 31 | 31 | 31 | 31 |
| BUD | Correlation | | | | | | | | | | 1.00 | 0.09 | **0.65***** | 0.13 | -0.12 | 0.01 | -0.27 | -0.08 | -0.21 |
| | p-value | | | | | | | | | | - | (0.66) | **(0.00)** | (0.51) | (0.52) | (0.96) | (0.14) | (0.67) | (0.26) |
| | n | | | | | | | | | | 31 | 28 | 31 | 27 | 31 | 31 | 31 | 31 | 31 |
| CON | Correlation | | | | | | | | | | | 1.00 | -0.25 | 0.08 | -0.19 | -0.07 | 0.19 | -0.04 | -0.06 |
| | p-value | | | | | | | | | | | - | (0.19) | (0.69) | (0.33) | (0.71) | (0.33) | (0.82) | (0.77) |
| | n | | | | | | | | | | | 28 | 28 | 25 | 28 | 28 | 28 | 28 | 28 |
| ALLO | Correlation | | | | | | | | | | | | 1.00 | 0.08 | -0.19 | -0.04 | -0.13 | 0.07 | -0.11 |
| | p-value | | | | | | | | | | | | - | (0.67) | (0.26) | (0.81) | (0.44) | (0.68) | (0.51) |
| | n | | | | | | | | | | | | 38 | 31 | 38 | 38 | 38 | 38 | 38 |
| ETHICS | Correlation | | | | | | | | | | | | | 1.00 | 0.24 | 0.19 | 0.11 | -0.05 | 0.13 |
| | p-value | | | | | | | | | | | | | - | (0.20) | (0.32) | (0.56) | (0.80) | (0.47) |
| | n | | | | | | | | | | | | | 31 | 31 | 31 | 31 | 31 | 31 |
| REPU | Correlation | | | | | | | | | | | | | | 1.00 | -0.18 | -0.03 | -0.12 | 0.14 |
| | p-value | | | | | | | | | | | | | | - | (0.28) | (0.86) | (0.48) | (0.40) |
| | n | | | | | | | | | | | | | | 38 | 38 | 38 | 38 | 38 |
| FAIR | Correlation | | | | | | | | | | | | | | | 1.00 | **0.34**** | 0.03 | -0.16 |
| | p-value | | | | | | | | | | | | | | | - | **(0.04)** | (0.88) | (0.32) |
| | n | | | | | | | | | | | | | | | 38 | 38 | 38 | 38 |
| Ln_size | Correlation | | | | | | | | | | | | | | | | 1.00 | **-0.36**** | **0.44***** |
| | p-value | | | | | | | | | | | | | | | | - | **(0.03)** | **(0.01)** |
| | n | | | | | | | | | | | | | | | | 38 | 38 | 38 |
| LISTED | Correlation | | | | | | | | | | | | | | | | | 1.00 | 0.03 |
| | p-value | | | | | | | | | | | | | | | | | - | (0.87) |
| | n | | | | | | | | | | | | | | | | | 38 | 38 |
| CONSOL | Correlation | | | | | | | | | | | | | | | | | | 1.00 |
| | p-value | | | | | | | | | | | | | | | | | | - |
| | n | | | | | | | | | | | | | | | | | | 38 |

Corresponding two-tailed *p*-values are reported in parentheses. ***,**,* indicate significance at the 1%, 5% and 10% levels (two-tailed), respectively.

For *SLACK1*, there is a significant positive correlation between *SLACK1* and information asymmetry (*INFO*) ($H_{3.1}$, $p < 0.05$). For *SLACK2*, there is a significant positive correlation between *SLACK2* and environmental uncertainty (*ENVI*) ($H_{2.1}$, $p < 0.05$), while the correlations between *SLACK2* and budget emphasis evaluative style (*BUDEM*), ethical concerns (*ETHICS*), and reputation concerns (*REPU*), are negative ($H_{3.2}$, $p < 0.05$), ($H_{4.1}$, $p < 0.10$), and ($H_{4.2}$, $p < 0.01$), respectively. For *SLACKNEW*, there is a significant negative correlation between *SLACKNEW* and budget emphasis evaluative style (*BUDEM*) ($H_{3.2}$, $p < 0.10$). In brief, the correlations seem to be in line with the hypothesized association at the conventional levels of significance. Correlations; however, do not provide insightful results. Therefore, regression analysis is performed to further dissect the association.

### *4.4.2 REGRESSION RESULTS*

#### *4.4.2.1 DIRECT EFFECTS*

Table 7 presents the regression results of the association between each budgetary slack measurement and its determinants. For *SLACK1*, the adjusted $R^2$ in general falls between 0% - 11%, which is slightly less than that of *SLACK2* which is in range of 1% - 21%. The highest adjusted $R^2$ belongs to *SLACKNEW* which falls between 2% - 24%. In sum, the adjusted $R^2$ of *SLACKNEW* in nearly all models are far greater than those of both *SLACK1* and *SLACK2*, and the adjusted $R^2$ of *SLACK2* in several models are more than those of *SLACK1*, which mean that explanatory variables are able to explain and predict the objective measurement of budgetary slack (*SLACKNEW*) better than those two traditional subjective measurements (*SLACK1* and *SLACK2*) and among the two subjective measurements, *SLACK2* is more superior than *SLACK1*.

## TABLE 7
## Summary Regressions of Budgetary Slack Measurements on Various Determinants

| Interesting Variables | *SLACK1* | | | | | | *SLACK2* | | | | | | *SLACKNEW* | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Control Variables | | | | | | Control Variables | | | | | | Control Variables | | | |
| | Constant | Coeff. | *Ln_size* | *LISTED* | *CONSOL* | Adj $R^2$ | Constant | Coeff. | *Ln_size* | *LISTED* | *CONSOL* | Adj $R^2$ | Constant | Coeff. | *Ln_size* | *LISTED* | *CONSOL* | Adj $R^2$ |
| ***ENVI*** | **111.58*** ** | **0.23*** | -4.06 | 2.34 | 4.54 | **1%** | 19.78 | **0.40*** ** | -0.54 | 12.58 | -5.84 | **14%** | 0.20 | **0.05*** | -0.14 | **6.52*** ** | 0.37 | **24%** |
| | **(0.00)** | **(0.06)** | (0.13) | (0.81) | (0.51) | | (0.48) | **(0.00)** | (0.78) | (0.21) | (0.34) | | (0.97) | **(0.08)** | (0.71) | **(0.00)** | (0.77) | |
| ***INFO*** | **61.22** ** | **0.31** ** | -0.68 | 2.66 | -0.58 | **6%** | 19.19 | **0.23*** | -0.19 | 15.06 | 0.05 | **1%** | 2.18 | -0.01 | -0.16 | **6.16*** ** | 0.15 | **17%** |
| | **(0.02)** | **(0.02)** | (0.69) | (0.76) | (0.92) | | (0.46) | **(0.08)** | (0.91) | (0.14) | (0.99) | | (0.74) | (0.43) | (0.70) | **(0.01)** | (0.91) | |
| ***BUDEM*** | **66.47*** | 0.07 | -0.57 | 3.73 | -2.32 | **4%** | **81.29** ** | **-0.33** ** | -2.39 | 4.43 | 3.03 | **7%** | 20.64 | **-0.17** ** | -0.59 | 5.17 | 0.61 | **7%** |
| | **(0.06)** | (0.61) | (0.78) | (0.69) | (0.72) | | **(0.04)** | **(0.02)** | (0.29) | (0.66) | (0.67) | | (0.35) | **(0.03)** | (0.67) | (0.36) | (0.88) | |
| ***PARTI*** | **58.44** ** | **-1.25*** | 0.90 | 7.80 | -1.75 | **11%** | -34.77 | -1.18 | **4.88*** | 17.06 | **-13.99*** | **3%** | -12.15 | **-0.72*** | 1.28 | 8.85 | -3.81 | **2%** |
| | **(0.03)** | **(0.07)** | (0.62) | (0.38) | (0.75) | | (0.39) | (0.17) | **(0.10)** | (0.14) | **(0.08)** | | (0.55) | **(0.09)** | (0.37) | (0.14) | (0.33) | |
| ***OBJ*** | **67.61** ** | 0.07 | -0.59 | 6.50 | -2.63 | **7%** | -20.86 | 0.05 | 2.97 | **16.78*** | **-12.89** ** | **6%** | -1.19 | 0.01 | 0.03 | **6.91*** ** | -0.88 | **22%** |
| | **(0.04)** | (0.39) | (0.77) | (0.53) | (0.67) | | (0.54) | (0.52) | (0.19) | **(0.08)** | **(0.05)** | | (0.87) | (0.51) | (0.95) | **(0.01)** | (0.53) | |
| ***FIN*** | **76.72*** | 0.16 | -1.77 | 4.25 | 0.78 | **10%** | 4.76 | 0.16 | 0.55 | 13.15 | -7.24 | **7%** | -3.52 | 0.02 | 0.14 | **6.98*** ** | -0.98 | **21%** |
| | **(0.06)** | (0.24) | (0.49) | (0.68) | (0.92) | | (0.89) | (0.17) | (0.81) | (0.13) | (0.26) | | (0.69) | (0.53) | (0.81) | **(0.01)** | (0.57) | |
| ***BUD*** | **82.06** ** | 0.01 | -1.44 | 3.24 | -0.98 | **5%** | 24.48 | -0.12 | 0.76 | 8.52 | -13.00 | **2%** | 9.09 | **-0.11*** | 0.06 | 4.27 | -4.49 | **2%** |
| | **(0.05)** | (0.92) | (0.58) | (0.75) | (0.89) | | (0.59) | (0.31) | (0.80) | (0.45) | (0.12) | | (0.71) | **(0.10)** | (0.97) | (0.50) | (0.33) | |
| ***CON*** | **86.98** ** | 0.20 | -2.78 | 1.66 | 3.40 | **0%** | -5.80 | 0.05 | 1.90 | 12.74 | -10.20 | **3%** | -2.87 | -0.02 | 0.29 | **6.86*** ** | -1.69 | **19%** |
| | **(0.03)** | (0.11) | (0.32) | (0.87) | (0.66) | | (0.86) | (0.67) | (0.41) | (0.13) | (0.13) | | (0.79) | (0.56) | (0.71) | **(0.01)** | (0.43) | |
| ***ALLO*** | **89.84*** ** | -10.39 | -1.21 | 3.54 | -1.19 | **6%** | 25.45 | -2.05 | 0.05 | 8.45 | -2.38 | **4%** | 2.81 | -0.83 | -0.17 | **6.20*** ** | 0.18 | **17%** |
| | **(0.00)** | (0.16) | (0.50) | (0.70) | (0.83) | | (0.37) | (0.42) | (0.98) | (0.35) | (0.67) | | (0.68) | (0.36) | (0.69) | **(0.01)** | (0.89) | |
| ***ETHICS*** | 57.52 | -0.09 | 0.43 | 5.49 | 1.32 | **3%** | -7.88 | **-0.41*** | 3.15 | 12.75 | -11.49 | **6%** | -7.12 | 0.07 | 0.34 | **6.96*** ** | -0.59 | **22%** |
| | (0.11) | (0.34) | (0.86) | (0.56) | (0.84) | | (0.85) | **(0.06)** | (0.26) | (0.25) | (0.15) | | (0.40) | (0.11) | (0.55) | **(0.00)** | (0.72) | |
| ***REPU*** | **81.88*** ** | -0.04 | -1.16 | 2.77 | -0.51 | **3%** | **69.41*** ** | **-0.44*** ** | -0.81 | 3.30 | 1.04 | **21%** | 1.64 | -0.02 | -0.06 | **6.09*** ** | 0.59 | **18%** |
| | **(0.01)** | (0.41) | (0.52) | (0.77) | (0.93) | | **(0.01)** | **(0.00)** | (0.60) | (0.68) | (0.83) | | (0.82) | (0.34) | (0.88) | **(0.01)** | (0.66) | |
| ***FAIR*** | **72.83*** ** | -0.09 | -0.51 | 4.58 | -2.23 | **4%** | 23.75 | 0.02 | 0.13 | 6.98 | -4.35 | **3%** | -2.09 | **-0.07** ** | 0.28 | **7.22*** ** | -0.85 | **24%** |
| | **(0.01)** | (0.30) | (0.81) | (0.64) | (0.73) | | (0.48) | (0.47) | (0.96) | (0.54) | (0.56) | | (0.74) | **(0.04)** | (0.55) | **(0.00)** | (0.55) | |

Corresponding *p*-values are reported in parentheses. The *p*-values reported in this table are based on two-tailed test, *except p*-values of the coefficients between each slack measurement and following variables; *ENVI*, *INFO*, *ALLO*, *ETHICS*, *REPU*, *FAIR*; are reported based on one-tailed test.

***,**,* indicate significance at the 1%, 5% and 10% levels, respectively.

The first column shows the regression results of *SLACK1*, which depict greater significant variables than the correlation results. The correlation results merely show a significantly positive coefficient of information asymmetry (*INFO*), which is in accordance with the regression results. The coefficient of information asymmetry (*INFO*) is significantly positive at 5% level (one-tailed), so $H_{3.1}$ is supported. Consistent with the agency theory (Jensen and Meckling, 1976) and prior literature (Dunk and Nouri, 1998; Merchant and Van der Stede, 2007; Young, 1985; Indjejikian and Matejka, 2006), the self-interest agents are more likely to create slack into budget when the asymmetric information between them and their subordinates exists. The coefficient of environmental uncertainty (*ENVI*) is significantly positive at 10% level (one-tailed), so $H_{2.1}$ is supported and it is consistent with the studies by Merchant and Van der Stede (2007), Merchant (1985), Dunk et al. (1996), and Linn (1997) who suggest that managers tend to build in high amount of slack to shield themselves from uncertainty situations. In addition, the coefficient of participative styles *(PARTI)* is significantly negative at 10% level, supporting $H_{3.3}$. The results support the prior literature indicating negative association in that the propensity to create budgetary slack is inversely related to the extent of participation allowed in budgeting processes, which can be attributed to the positive communication between managers such that subordinates feel less pressured to create slack into budget (Onsi, 1973; Merchant, 1985; Dunk ,1993; Dunk et al., 1996).

The second column presents the regression results of *SLACK2*, which also depict greater significant variables than the correlation results. The coefficient of information asymmetry (*INFO*) is significantly positive at 10% level (one-tailed), which is the greater significant variable than the correlation results, so

$H_{3.1}$ is supported and it is consistent with the results of *SLACK1*. Besides, the coefficient of environmental uncertainty (*ENVI*) is significantly positive at 1% level (one-tailed), so $H_{2.1}$ is supported and it is consistent with the correlation results and the results of *SLACK1* as well. The coefficient of budget emphasis evaluative style (*BUDEM*) is significantly negative at 5% level, supporting $H_{3.2}$ and it is also in accordance with the correlation results. The results are in line with the economic theory (Williamson, 1994) and prior literature (Merchant, 1985; Dunk, 1993; Van der Stede, 2000) which suggest that rigid budgetary controls increase the likelihood that slack gets detected and; therefore, curtailed. Next, the coefficients of ethical concerns (*ETHICS*) and reputation concerns (*REPU*) are significantly negative at 10% and 1% levels (one-tailed), respectively, so $H_{4.1}$ and $H_{4.2}$ are supported and both are in accordance with the correlation results. The moral reasoning theory (Kohlberg, 1969) and prior studies (Stevens, 2002; Douglas et al., 2007; Maiga and Jacobs, 2007) suggest that subordinates who have high level of ethical concerns would not build slack, or less if so, into their budgets if they perceived that budgetary slack creation behavior is unethical. With respect to reputation concerns, the result is consistent with Stevens (2002) and Webb (2002), who document that concerns for maintaining a favorable reputation leads to lower budgetary slack.

The third column presents the regression results of *SLACKNEW*, which depict greater significant variables than the correlation results. The correlation results merely show a significantly negative coefficient of budget emphasis evaluative style (*BUDEM*), which is in accordance with the regression results. The coefficient of budget emphasis evaluative style (*BUDEM*) is significantly negative at 5% level, so $H_{3.2}$ is supported; thereby consistent with the results of

*SLACK2*. Besides, consistent with the results of *SLACK1* and *SLACK2*, the coefficient of environmental uncertainty (*ENVI*) is significantly positive at 10% level (one-tailed) as per the hypothesized association, thus supporting $H_{2.1}$. Consistent with the results of *SLACK1*, the coefficient of participative styles (*PARTI*) is significantly negative at 10% level as per the hypothesized association, thus supporting $H_{3.3}$. The coefficient of budget-based performance measures (*BUD*) is significantly negative at 10% level, so $H_{3.4}$ is partially supported, in this manner consistent with the results of budget emphasis evaluative style (*BUDEM*) which reveals that tight budgetary controls enhance the possibility that slack gets restricted. Furthermore, the coefficient of fairness concerns (*FAIR*) is significantly negative at 5% level (one-tailed); hence supporting $H_{4.3}$, which in turn is consistent with the organizational justice theory (Leventhal, 1976) and Libby's work (1996) which indicates that individuals who perceive the budgeting environment in their firms as fair enough tend to create less budgetary slack than those who perceive as unfair.

For robustness test, the cross-sectional Jones (1991) model is also utilized in calculations of *SLACKNEW* in which the results (not tabulated) are qualitatively similar.

The data of on-time respondents is compared to late respondents and finds no significant difference which suggests no response bias.

In summary, the determinant factor that significantly associates with all three measurements of budgetary slack is environmental uncertainty. In other words, the association between environmental uncertainty and budgetary slack is

insensitive to the measurements of slack. The determinant factors that significantly associate with two (of three) measurements of budgetary slack are information asymmetry, budget emphasis evaluative style and participative styles. It could be said that the association between those factors and budgetary slack are relatively sensitive to the measurements of slack. Moreover, this study also reports that budget-based resource allocation (*ALLO*) is insignificant regardless of budgetary slack measurements. For reward systems, only budget-based performance measure (*BUD*) is significantly associated with the objective measurement of budgetary slack (*SLACKNEW*). The determinant factors that significantly associate with only one measurement of budgetary slack are ethical concerns, reputation concerns and fairness concerns. It could be said that the association between those factors and budgetary slack are very sensitive to the measurements of slack. Overall, the association between budgetary slack and its determinants is sensitive to the measurements of slack, i.e., objective or subjective measurements or even between the two subjective measurements. However, the objective measurement of budgetary slack suggested in this study generates higher adjusted $R^2$ than the two subjective measurements do. This may imply that the objective measurement suggested in this study is a better measurement of slack, and among those two subjective measurements, *SLACK2* is more superior than *SLACK1* seeing that *SLACK2* generally produce higher adjusted $R^2$.

#### *4.4.2.2 INDIRECT EFFECTS*

Table 8 presents the direct and indirect effect coefficients of the association between each budgetary slack measurement and its determinants. The direct effect coefficients of the association between environmental factor and

## TABLE 8
## Summary Direct and Indirect Effect Coefficients of the Association between Budgetary Slack and its Determinants

**Panel A: Direct Effect of the Association between Environmental Factor and Organizational Factors**

| Paths | Standardized Coefficients | p-value |
|---|---|---|
| ***ENVI --> PARTI*** | -0.07 | (0.67) |
| ***INFO --> PARTI*** | -0.11 | (0.51) |
| ***BUDEM --> PARTI*** | 0.12 | (0.46) |
| ***PARTI --> OBJ*** | **-0.41**** | **(0.02)** |
| ***PARTI --> FIN*** | -0.15 | (0.43) |
| ***PARTI --> BUD*** | 0.06 | (0.75) |
| ***PARTI --> CON*** | -0.22 | (0.26) |

**Panel B: Direct Effect of the Association between Environmental Factor, Organizational Factors and Budgetary Slack**

| | ***SLACK1*** | | ***SLACK2*** | | ***SLACKNEW*** | |
|---|---|---|---|---|---|---|
| **Paths** | **Standardized Coefficients** | **p-value** | **Standardized Coefficients** | **p-value** | **Standardized Coefficients** | **p-value** |
| ***ENVI --> SLACK*** | **0.32*** | **(0.06)** | **0.48***** | **(0.00)** | **0.23*** | **(0.08)** |
| ***INFO --> SLACK*** | **0.36**** | **(0.02)** | **0.26*** | **(0.08)** | -0.03 | (0.43) |
| ***BUDEM --> SLACK*** | 0.11 | (0.61) | **-0.45**** | **(0.02)** | **-0.39**** | **(0.03)** |
| ***PARTI --> SLACK*** | **-0.34*** | **(0.07)** | -0.26 | (0.17) | **-0.31*** | **(0.09)** |
| ***OBJ --> SLACK*** | 0.18 | (0.39) | 0.13 | (0.52) | 0.12 | (0.51) |
| ***FIN --> SLACK*** | 0.23 | (0.24) | 0.27 | (0.17) | 0.11 | (0.53) |
| ***BUD --> SLACK*** | 0.02 | (0.92) | -0.20 | (0.31) | **-0.33*** | **(0.10)** |
| ***CON --> SLACK*** | 0.33 | (0.11) | 0.09 | (0.67) | -0.11 | (0.56) |

## TABLE 8 *(Continued)*

**Panel C: Direct and Indirect Effects of the Association between Environmental Factor, Organizational Factors and Budgetary Slack**

| Paths | *SLACK1* | | *SLACK2* | | *SLACKNEW* | |
|---|---|---|---|---|---|---|
| | *Direct Effect* | *Indirect Effect* | *Direct Effect* | *Indirect Effect* | *Direct Effect* | *Indirect Effect* |
| | *Std. Coeff.* | *Std. Coeff.* [a] | *Std. Coeff.* | *Std. Coeff.* [a] | *Std. Coeff.* | *Std. Coeff.* [a] |
| *ENVI* --> *PARTI* --> *OBJ* --> *SLACK* | **0.32*** | 0.01 | **0.48***** | 0.00 | **0.23*** | 0.00 |
| *ENVI* --> *PARTI* --> FIN --> *SLACK* | **0.32*** | 0.00 | **0.48***** | 0.00 | **0.23*** | 0.00 |
| *ENVI* --> *PARTI* --> BUD --> *SLACK* | **0.32*** | 0.00 | **0.48***** | 0.00 | **0.23*** | 0.00 |
| *ENVI* --> *PARTI* --> CON --> *SLACK* | **0.32*** | 0.01 | **0.48***** | 0.00 | **0.23*** | 0.00 |
| *INFO* --> *PARTI* --> *OBJ* --> *SLACK* | **0.36**** | 0.01 | **0.26*** | 0.01 | -0.03 | 0.01 |
| *INFO* --> *PARTI* --> FIN --> *SLACK* | **0.36**** | 0.00 | **0.26*** | 0.00 | -0.03 | 0.00 |
| *INFO* --> *PARTI* --> BUD --> *SLACK* | **0.36**** | 0.00 | **0.26*** | 0.00 | -0.03 | 0.00 |
| *INFO* --> *PARTI* --> CON --> *SLACK* | **0.36**** | 0.01 | **0.26*** | 0.00 | -0.03 | 0.00 |
| *BUDEM* --> *PARTI* --> *OBJ* --> *SLACK* | 0.11 | -0.01 | **-0.45**** | -0.01 | **-0.39**** | -0.01 |
| *BUDEM* --> *PARTI* --> FIN --> *SLACK* | 0.11 | 0.00 | **-0.45**** | 0.00 | **-0.39**** | 0.00 |
| *BUDEM* --> *PARTI* --> BUD --> *SLACK* | 0.11 | 0.00 | **-0.45**** | 0.00 | **-0.39**** | 0.00 |
| *BUDEM* --> *PARTI* --> CON --> *SLACK* | 0.11 | -0.01 | **-0.45**** | 0.00 | **-0.39**** | 0.00 |
| *ENVI* --> *PARTI* --> *SLACK* | **0.32*** | 0.02 | **0.48***** | 0.02 | **0.23*** | 0.02 |
| *INFO* --> *PARTI* --> *SLACK* | **0.36**** | 0.04 | **0.26*** | 0.03 | -0.03 | 0.03 |
| *BUDEM* --> *PARTI* --> *SLACK* | 0.11 | -0.04 | **-0.45**** | -0.03 | **-0.39**** | -0.04 |
| *PARTI* --> *OBJ* --> *SLACK* | **-0.34*** | -0.07 | -0.26 | -0.05 | **-0.31*** | -0.05 |
| *PARTI* --> FIN --> *SLACK* | **-0.34*** | -0.03 | -0.26 | -0.04 | **-0.31*** | -0.02 |
| *PARTI* --> BUD --> *SLACK* | **-0.34*** | 0.00 | -0.26 | -0.01 | **-0.31*** | -0.02 |
| *PARTI* --> CON --> *SLACK* | **-0.34*** | -0.07 | -0.26 | -0.02 | **-0.31*** | 0.03 |

[a] The indirect effect coefficients are calculated from the multiple of standardized coefficients of direct effect on each path *(as presented in Panel A and Panel B)*.

Corresponding *p*-values are reported in parentheses. The *p*-values reported in this table are based on two-tailed test, *except p*-values of the coefficients between each slack measurement and following variables; *ENVI*, *INFO*; are reported based on one-tailed test.

***,**,* indicate significance at the 1%, 5% and 10% levels, respectively.

organizational factors are presented in Panel A, only standardized coefficient of the association between participative styles and objective performance measure is statistically significantly negative at 5% level. Panel B illustrates the direct effects of the association between environmental factor, organizational factors and each budgetary slack measurement, the results are in line with the regression results in the previous section as mentioned in section 4.4.2.1 and Table 7. In Panel C, the indirect effects of the association between environmental factor, organizational factors and each measurement of budgetary slack are calculated and compared to the direct effects. There is no evidence of indirect association of environmental uncertainty, information asymmetry, and budget emphasis evaluative style, respectively, to each budgetary slack measurement *through* participative styles and reward systems, so $H_5$, $H_{5.1}$, $H_{5.2}$ and $H_{5.3}$ are not supported. In addition, this study also tests the indirect association of environmental uncertainty, information asymmetry, and budget emphasis evaluative style, respectively, to each budgetary slack measurement *through* participative styles and the indirect association of participative styles to each budgetary slack measurement *through* reward systems; however, no indirect effects are found as well.

# CHAPTER V

# CONCLUSIONS

This research study bridges opportunistic behaviors in budgeting and external financial reporting by empirically investigate the linkage of budgetary slack to discretionary accruals. Both budgetary slack creation and earnings management are management's intentional intervention behaviors to produce some private gains, e.g., managers may choose to add slack into budget and/or manipulate earnings, through discretionary accruals, in order to report the achievability of budget as they expected. Collectively, the results reveal that there is a linkage of budgetary slack to discretionary accruals, only if measure slack from a reversed score of the two survey questions about managers' perceived difficulty of budget achievability (*SLACK2*), but not for the other subjective slack measurement (merely a survey question about managers' perceived ease of budget achievability, *SLACK1*). These corroborate evidence that the results are sensitive to the measurements of slack. In particular, the firms that already achieved their annual earnings targets *and* chose to manage earnings downward exhibit significantly positive association between budgetary slack and the magnitude of discretionary accruals. The results imply that the firms that succeed in building slack into budget to increase the propensity of budget achievability use discretionary accruals to adjust the previously built slack and prefer to manage earnings downward so as to reserve the excess earnings and/or not to exceed the target by too much which will affect the budget setting in the next period. On the contrary, there is no linkage of budgetary slack to discretionary accruals in the firms that did not achieve their annual earnings targets.

As prior survey studies usually measure budgetary slack from a subjective view which considered as a problematic measurement as it is sensitive to the respondents' judgment. Therefore, this study introduces an objective approach to measure budgetary slack, i.e., the *ex post* measure of firm's annual budget achievability with the exclusion of discretionary accruals, given that the first part of this study evidences the association between budgetary slack and discretionary accruals. The results show that the objective measurement and the subjective measurement (reversed score of perceived difficulty of budget achievability) of budgetary slack are statistically positively correlated ($r = 0.58$, $p < 0.01$). Even though the objective and the subjective measurement of budgetary slack are significantly and positively correlated, it still considers that the suggested objective approach of budgetary slack measurement proposed in this study makes available another objective measurement of slack. However, the other subjective measurement (perceived ease of budget achievability) is insignificantly correlated. The differences in measurements of budgetary slack might be the cause of inconclusive results of the association between budgetary slack and its determinants in prior research. This study; therefore, empirically investigates the association between budgetary slack and its determinants by comparing the objective and the subjective slack measurements. The results advocate that the association between budgetary slack and its determinants is sensitive to the measurements of slack, i.e., objective or subjective measurements or even between the two subjective measurements. However, the objective measurement of budgetary slack suggested in this study generates higher adjusted $R^2$, in nearly all models, than the two subjective measurements do. These results indicate that the explanatory variables could explain and predict the objective measurement of budgetary slack better than the two subjective measurements. The results imply that

the objective measurement, i.e., the *ex post* measure of firm's annual budget achievability with the exclusion of discretionary accruals, suggested in this study is a better measurement of budgetary slack than the traditional subjective measurements utilize in prior studies. Among the two subjective measurements of budgetary slack, *SLACK2* (reversed score of the two questions about perceived difficulty of budget achievability) produces higher adjusted $R^2$ than *SLACK1* (simple question about perceived ease of budget achievability), these empirical results not only again reveal that the results are sensitive to the measurements of slack but also point out that number or attribute of the questions (simple or reverse questions) might be the cause of sensitivity and inconclusiveness. Finally, this study finds no indirect association among environmental factor, organizational factors and all budgetary slack measurements.

The implications of this study are that managers manipulate the level of budget achievability by both building slack into budget and managing earnings (through discretionary accruals). Hence, in performance evaluation, both budgetary slack and earnings management should be adjusted to get "pure performance measurement". The associations between budgetary slack and discretionary accruals and budgetary slack and its determinants are sensitive to the measurements of budgetary slack. Therefore, the measurements (e.g., subjective/objective, number of questions, attributes) of budgetary slack should be concerned.

The empirical results in this study are generated from both primary and secondary data of 38 firms in Thailand. The data on the budget figures of the year 2009, perceived budget achievability and budgetary slack's determinants are garnered

from corporate executives of the listed non-financial firms in Thailand to match their firms' annual financial statements. In assessing discretionary accruals, the cross-sectional modified Jones (1995) model is employed, and for robustness test, the cross-sectional Jones (1991) model is utilized.

Nevertheless, this empirical study is subject to a number of limitations. First, this study covers only the non-financial institutions listed in Thailand and the final set of samples is merely 38 firms due to the difficulty in obtaining the firms' internal and confidential data; hence, limiting generalizability of the results. Second, implicit assumptions in this study are that the *ex post* measure of annual firms' budget achievability with the exclusion of discretionary accruals is a good proxy for budgetary slack as the more the slack build into budget, the higher the propensity to easily achieve the budget, and the cross-sectional Modified Jones (1995) model accurately partitions accruals into its discretionary and nondiscretionary components. Third, measurement errors, model misspecifications and omitted variables may limit the reliability of results. Fourth, by the very nature of the survey data, this study relies primarily on self-reported responses to the survey questions in which the respondents are asked to recall their perceptions on budget achievability from the past to measure budgetary slack. Despite the limitations, it still believes that this study provides new important evidence on the linkage of budgetary slack to discretionary accruals, also this study adds prior literature an objective measurement of budgetary slack and reveals that the associations of budgetary slack are sensitive to the measurements of budgetary slack.

Future research should endeavor to increase the sample size to improve generalizability of the results. Rather than a subjective measurement of budgetary slack, an objective measurement should be employed for further investigation in future studies. Multiple regression of the objective budgetary slack measurement on its significant determinants should be employed to estimate budgetary slack in term of currency, then use it to adjust subordinates' performance to get "pure performance", i.e., actual performance – budget – discretionary accruals – budgetary slack, for performance evaluation. For robustness test, other earnings management categories and approaches, i.e., real earnings management and other accruals models, should be employed in estimating discretionary accruals.

## REFERENCES


Atkinson, A. A., R. D. Banker, R. S. Kaplan, and S. M. Young. 1997. Management Accounting. Upper Saddle River, NJ: Prentice Hall.

Baiman. S., and B. Lewis. 1989. An experiment testing the behavioral equivalence of strategically equivalent employment contracts. Journal of Accounting Research 27: 1-20.

Becker, C. L., M. L. DeFond, J. Jiambalvo, and K. R. Subramanyam. 1998. The effect of audit quality on earnings management. Contemporary Accounting Research 15: 1-24.

Bonner, S. E., R. Hastie, G. B. Sprinkle, and S. M. Young. 2000. A review of the effects of financial incentives on performance in laboratory tasks: Implications for management accounting. Journal of Management Accounting Research 12: 19-64.

Bonner, S. E., and G. B. Sprinkle. 2002. The effects of monetary incentives on effort and task performance: Theories, evidence, and a framework for research. Accounting, Organizations and Society 27: 303-345.

Bourgeois, L. 1981. On the measurement of organizational slack. Academy of Management Review 6 (1): 29-39.

Bowie, N., and R. Duska. 1990. Business Ethics. 2nd ed. Englewood Cliffs, NJ: Prentice Hall.

Brownell, P. 1982. Participation in the budgeting process: When it works and when it doesn't. Journal of Accounting Literature 1: 124-150.

Burgstahler, D., and I. Dichev. 1997. Earnings management to avoid earnings decreases and losses. Journal of Accounting and Economics 24: 99-126.

Chow, C. W. 1983. The effects of job standard tightness and compensation scheme on performance: An exploration of linkages. The Accounting Review 58: 667-685.

Chow, C. W., J. C. Cooper, and K. Haddad. 1991. The effects of pay schemes and ratchets on budgetary slack and performance: A multiperiod experiment. Accounting, Organizations and Society 47-60.

Chow, C. W., J. C. Cooper, and W. S. Waller. 1988. Participative budgeting: Effects of a truth-inducing pay scheme and information asymmetry on slack and performance. The Accounting Review 1: 111-122.

Cyert, R. M., and J. C. March. 1963. A behavioral theory of the firm. Englewood Cliffs, NJ: Prentice Hall.

Dechow, P. M., R. Sloan, A. Sweeney. 1995. Detecting earnings management. The Accounting Review 70: 193–225.

Dees, J. 1992. Principals, agents, and ethics. In Ethics and Agency Theory: An Introduction, edited by N. E. Bowie, and R. E. Freeman: 25-58. New York, NY: Oxford University Press.

DeFond, M. L., and J. Jiambalvo. 1994. Debt covenant effects and the manipulation of accruals. Journal of Accounting and Economics 17: 145-176.

DeGeorge, R. 1992. Agency theory and the ethics of agency. In Ethics and Agency Theory: An Introduction, edited by N. E. Bowie, and R. E. Freeman: 59-72. New York, NY: Oxford University Press.

De Jong, D., R. Forsythe, and R. Lundholm. 1985. Ripoffs, lemons, and reputation formation in agency relationships: A laboratory market study. The Journal of Finance XL (July): 809–820.

Douglas, P. C., H. HassabElnaby, C. S. Norman, and B. Wier. 2007. An investigation of ethical position and budgeting systems: Egyptian managers in US and Egyptian firms. Journal of International Accounting, Auditing and Taxation 16: 90-109.

Douglas, P. C., and B. Wier. 2000. Integrating ethical dimensions into a model of budgetary slack creation. Journal of Business Ethics 28 (3): 267-277.

Dunk, A. S. 1993. The effect of budget emphasis and information asymmetry on the relation between budgetary participation and slack. The Accounting Review 68 (2): 400-410.

Dunk, A. S., M. Lal, and Smith G. D. 1996. The propensity to create budgetary slack: A cross-national re-examination using random sampling. The International Journal of Accounting 31 (4): 483-496.

Dunk, A. S., and H. Nouri. 1998. Antecedent of budgetary slack: A literature review and synthesis. Journal of Accounting Literature 17: 72-96.

Fisher, J. G., L. A. Maines, S. A. Peffer, and G. B. Sprinkle. 2002. Using budgets for performance evaluation: Effects of resource allocation and horizontal information asymmetry on budget proposals, budget slack, and performance. The Accounting Review 77 (4): 847-865.

Folger, R., and R. Cropanzano. 1998. Organizational Justice and Human Resource Management. California: Sage.

Forsyth, D. R. 1980. A taxonomy of ethical ideologies. Journal of Personality and Social Psychology 39 (1): 175-184.

Greenberg, J. and R. Folger. 1983. Procedural justice, participation, and the fair process effect in groups and organizations. In Basic Group Processes, edited by Paulus, P. B.: 235-256. NY: Springer-Verlag.

Harvey, M. E. 2000. The impact of organizational ethical climate and ethical ideology on the propensity to create budgetary slack and job satisfaction. Doctoral dissertation. Wayne Huizenga Graduate School of Business and Entrepreneurship, Nova Southeastern University.

Healy, P.M. 1985. The effect of bonus schemes on accounting decisions. Journal of Accounting and Economics 7: 85–107.

Healy, P. M., and J. M. Wahlen. 1999. A review of the earnings management literature and its implications for standard setting. Accounting Horizons 13: 365–383.

Hribar, P., and D. Collins. 2002. Errors in estimating accruals: Implications for empirical research. Journal of Accounting Research 40: 105-134.

Horngren, C. T., G. Foster, and S. M. Datar. 2000. Cost accounting: A managerial emphasis. Upper Saddle River, NJ: Prentice Hall.

Indjejikian, R. J., and M. Matejka. 2006. Organizational slack in decentralized firms: The role of business unit controllers. The Accounting Review 81 (4): 849-872.

Ittner, C. D., and D. F. Larcker. 1998. Innovations in performance measurement: Trends and research implications. Journal of Management Accounting Research 10: 205-238.

Ittner, C. D., and D. F. Larcker. 2002. Determinants of performance measure choices in worker incentive plans. Journal of Labor Economics 20 (2): S58-S90.

Jensen, M. C., and W. H. Meckling. 1976. Theory of the firm: Managerial behavior, agency costs and ownership structure. Journal of Financial Economics 3: 305-360.

Jones, J. 1991. Earnings management during import relief investigations. Journal of Accounting Research 29: 193-228.

Jones, S. K., and L. A. Ponemon. 1993. A comment on "A multidimensional analysis of selected ethical issues in accounting." The Accounting Review 68 (April): 411-416.

Junyaporn Techamontrikul. 2006. Incremental explanatory power of individual auditor's judgment over audit firm level factors on quality of audited financial statements of companies listed in the stock exchange of Thailand. Doctoral dissertation. Department of Accountancy, Faculty of Commerce and Accountancy, Chulalongkorn University.

Kaplan, S. E., K. J. Newberry, P. M. J. Reckers. 1997. The effect of moral reasoning and educational communications on tax evasion intentions. The Journal of the American Taxation Association 19 (2) 38-54.

Key, K. G. 1997. Political cost incentives for earnings management in the cable television industry. Journal of Accounting and Economics 23: 309-337.

Kohlberg, L. 1969. Stage and consequences: The cognitive developmental approach to socialization. In Handbook of Socialization Theory and Research, edited by D. Goslin. Chicago, IL: Rand McNally.

Korsgaard, M. A., D. M. Schweiger, and H. J. Sapienza. 1995. Building commitment, attachment, and trust in strategic decision-making teams: The role of procedural justice. Academy of Management Journal 38: 60-84.

Kreps, D., and R. Wilson. 1982. Reputation and imperfect information. Journal of Economic Theory 27: 253–279.

Kyj, L., and R. J. Parker. 2008. Antecedents of budget participation: Leadership style, information asymmetry, and evaluative use of budget. Abacus 44 (4): 423-442.

Lau, C. M., and C. Buckland. 2001. Budgeting – role of trust and participation: A research note. Abacus 37: 369-388.

Leventhal, G. S. 1976. The distribution of rewards and resources in groups and organizations. In Advances in Experimental Social Psychology, edited by L. Berkowitz and E. Walster: (9) 91-131. NY: Academic Press.

Leventhal, G. S. 1980. What should be done with equity theory? New approaches to the study of fairness in social relationships. In Social Exchange: Advances in Theory and Research, edited by K. J. Gergen, M. S. Greenberg, and R. H. Willis: 27-55. New York: Plenum Press.

Leventhal, G. S. J. Karuza, and W. R. Fry. 1980. Beyond fairness: A theory of allocation preferences. In Justice and Social Interaction, edited by Mikula, G.: 168-218. NY: Springer-Verlag.

Libby, T. 1996. The incentive effects of fairness: A study of effect of perceived fairness on budgetary slack and performance. Doctoral dissertation. University of Waterloo.

Linn, G. 1997. A study of the influence of broadscope managerial accounting systems on the propensity to create slack. Doctoral dissertation. College of Administration and business, Lousiana Tech University.

Locke, E. A., and G. P. Latham. 1990. A theory of goal setting and task performance. Englewood Cliffs, NJ: Prentice Hall.

Lukka, K. 1988. Budgetary biasing in organizations: Theoretical framework and empirical evidence. Accounting, Organization and Society 13 (3): 281-302.

Maier, N. R. F. 1963. Problem solving discussion and conferences: Leadership methods and skills. New York: McGraw-Hill.

Maiga, A. S. and F. A. Jacobs. 2007. The moderating effect of manager's ethical judgment on the relationship between budget participation and budget slack. Advances in Accounting 23: 113-145.

McNichols, M. 2000. Research design issues in earnings management studies. Journal of Accounting and Public Policy 19: 313-345.

Merchant, K. A. 1985. Budgeting and the propensity to create budgetary slack. Accounting, Organizations and Society 10(2): 201-210.

Merchant, K. A., and J. F. Manzoni. 1989. The achievability of budget targets in profit centers: A field study. The Accounting Review 64 (3): 539-558.

Merchant, K. A., and W. A. Van der Stede. 2007. Management control systems: performance measurement, evaluation and incentives. 2nd ed. Prentice Hall/Financial Times.

Milani, K. 1975. The relationship of participation in budget setting to industrial supervisor performance and attitudes: A field study. The Accounting Review 274-284.

Nunnally, J. C. 1978. Psychometric theory 2nd ed. New York: McGraw-Hill.

Onsi, M. 1973. Factor analysis of behavioral variables affecting budgetary slack. The Accounting Review 48 (3): 535-548.

Pasewark, W. R., and R. B. Welker. 1990. A Vroom-Yetton evaluation of subordinate participation in budgetary decision making. Journal of Management Accounting Research Fall: 113-126.

Piyaporn Chankaew. 2005. Factors influencing budgetary slack. Master's Thesis. Department of Accountancy, Faculty of Commerce and Accountancy, Chulalongkorn University.

Ponemon, L. 1988. A cognitive-development approach to the analysis of Certified Public Accountants' ethical judgments. Doctoral dissertation. Union College of Union University.

Ponemon, L. 1990. Ethical judgments in accounting: A cognitive-development perspective. Critical Perspectives on Accounting 1: 191-215.

Ponemon, L., and D. Gabhart. 1990. Auditor independence judgments: A cognitive-development model and experiment evidence. Contemporary Accounting Research 7: 227-251.

Ponemon, L. 1992. Auditor underreporting of time and moral reasoning: An experimental lab study. Contemporary Accounting Research 9 (1): 171-189.

Pongsak Sumpunsirichareon. 2003. The relationship between budgetary participation and budgeting effectiveness. Master's Thesis. Department of Accountancy, Faculty of Commerce and Accountancy, Chulalongkorn University.

Rest, J. 1979a. Development in judging moral issues. Minneapolis, MN: University of Minnesota Press.

Rest, J. 1979b. Revised manual for the Defining Issues Test. MMRP technical Report, University of Minnesota, Minneapolis.

Rest, J., D. Narváez, M. Bebeau, and S. Thoma. 1999. Postconventional Moral Thinking: A Neo-Kohlbergian Approach. Mahwah, NJ: Lawrence Erlbaum Associates.

Reynolds, J. K., and J. R. Francis. 2000. Does size matter? The influence of large clients on office-level auditor reporting decisions. Journal of Accounting and Economics 30: 375–400.

Schiff, M., and A. Y. Lewin. 1968. Where traditional budgeting fails. Financial Executive 281-301.

Schipper, K. 1989. Commentary on earnings management. Accounting Horizons 3 (4): 91-102.

Shaub, M. 1994. An analysis of the association of traditional demographic variables with the moral reasoning of auditing students and auditors. Journal of Accounting Education 12 (1): 1-26.

Shields, M. D., and S. M. Young. 1993. Antecedents and consequences of participative budgeting: Evidence on the effects of asymmetrical information. Journal of Management Accounting Research Fall: 265-280.

Stevens, D. E. 2002. The effects of reputation and ethics on budgetary slack. Journal of Management Accounting Research 14: 153-171.

Van der Stede, W. A. 2000. The relationship between two consequences of budget control: Budgetary slack creation and managerial short-term orientation. Accounting, Organization and Society 25 (6): 609-622.

Vroom, V. H., and Yetton, P. W. 1973. Leadership and decision making. Pittsburgh, University of Pittsburgh Press.

Waller, W. S. 1994. Discussion of: Motivating truthful subordinate reporting: An experimental investigation in a two-subordinate context. Contemporary Accounting Research 10: 721-734.

Waller, W. S. 1988. Slack in participative budgeting: The joint effect of truth-inducing pay scheme and risk preference. Accounting, Organization and Society 13: 87-98.

Waller, W. S. and R. A. Bishop. 1990. An experimental study of incentive pay schemes, communication, and intrafirm resource allocation. The Accounting Review (October): 812-836.

Warfield, T. D., J. J. Wild, K. L. Wild. 1995. Managerial ownership, accounting choices, and informativeness of earnings. Journal of Accounting and Economics 20: 61–91.

Watts, R., and J. Zimmerman. 1986. Positive Accounting Theory. New Jersey: Prentice-Hall.

Watts, R., and J. Zimmerman. 1990. Positive Accounting Theory: A Ten-Year Perspective. The Accounting Review 65: 131-156.

Webb, R. A. 2002. The impact of reputation and variance investigations on the creation of budget slack. Accounting, Organizations and Society 27: 361-378.

Weitzman, M. L. 1976. The new Soviet incentive model. Bell Journal of Economics 1 (Spring): 251-257.

Williamson, O. E. 1964. The economics of discretionary behavior: Managerial objectives in a theory of the firm. Englewood Cliffs, NJ: Prentice Hall.

Wilson, R. 1985. Reputations in games and markets. In Game-theoretic models of bargaining, edited by Roth, A.: 27–62. Cambridge: Cambridge University Press.

Young, S. M. 1985. Participative budgeting: The effects of risk aversion and asymmetric information on budgetary slack. Journal of Accounting Research 23 (Autumn): 829-842.

Young, S. M., and B. Lewis. 1995. Experimental incentive-contracting research in management accounting. In Judgment and Decision-Making Research in Accounting and Auditing, edited by R. H. Ashton, and A. A. Ashton: 55-75. Cambridge, U.K.: Cambridge University Press.

# APPENDICES

# APPENDIX A

**Part I:** Detail of population and final sample firms breakdown by industry

| Industry | Population | % | Final Sample | % |
|---|---|---|---|---|
| **SET** | | | | |
| Agribusiness and Food | 37 | 10% | 5 | 14% |
| Consumer Products | 32 | 8% | 3 | 9% |
| Industrials | 66 | 17% | 5 | 8% |
| Property and Construction | 74 | 19% | 8 | 11% |
| Resources | 23 | 6% | 3 | 13% |
| Services | 80 | 21% | 5 | 6% |
| Technology | 33 | 9% | 6 | 18% |
| **MAI** | 42 | 11% | 3 | 7% |
| **Total** | **387** | **100%** | **38** | **10%** |

**Part II:** Detail of returned questionnaires

| | | |
|---|---|---|
| **Number of initially returned questionnaires** | | 84 |
| Less: | New joiners (Respondents who work in company after year 2009) | -11 |
| | Respondents who do not participate in budgeting process | -7 |
| | Respondents who do not provide budget figures of 2009 | -16 |
| | Companies that start to use budget less than 3 years | -4 |
| | Budget figure of year 2009 is not the data in financial statement | -8 |
| **Number of final questionnaires** | | **38** |

# APPENDIX B

แบบสอบถาม

ปัจจัยที่มีผลกระทบต่อการจัดทำงบประมาณ

---

**ส่วนที่ 1:** ข้อมูลทั่วไป

โปรดกรอกข้อความลงในช่องว่างหรือทำเครื่องหมาย **X** ในช่องที่ท่านคิดว่าเหมาะสมที่สุด

1. เพศ ☐ ชาย ☐ หญิง 2. อายุ.....ปี
3. ระดับการศึกษา ☐ ปริญญาตรี ☐ ปริญญาโท ☐ อื่น ๆ (โปรดระบุ).....
4. ตำแหน่งปัจจุบันของท่าน.....
5. อายุงานในตำแหน่งปัจจุบัน.....ปี .....เดือน 6. อายุงานในบริษัทปัจจุบัน.....ปี .....เดือน
7. ท่านมีส่วนร่วมในกระบวนการจัดทำงบประมาณขององค์กรใช่หรือไม่

   ☐ ใช่ ☐ ไม่ใช่ (ไม่ต้องทำต่อและส่งแบบสอบถามคืน)
8. องค์กรของท่านเริ่มมีการจัดทำและนำงบประมาณมาใช้เป็นระยะเวลากี่ปีแล้ว

   ☐ ต่ำกว่า 3 ปี (ไม่ต้องทำต่อและส่งแบบสอบถามคืน) ☐ 3-6 ปี ☐ 7-10 ปี ☐ มากกว่า 10 ปี

***ในการตอบคำถามข้อ 9 ถึง ข้อ 49 ให้ท่านตอบโดยใช้ข้อมูลปี พ.ศ. 2552 (ค.ศ. 2009)***

9. องค์กรของท่านใช้งบประมาณเพื่อการวางแผน (เช่น ใช้งบประมาณในการจัดสรรทรัพยากรขององค์กร) ใช่หรือไม่

   ☐ ใช่ ☐ ไม่ใช่
10. องค์กรของท่านใช้งบประมาณเพื่อการควบคุม (เช่น ใช้งบประมาณในการประเมินผลการปฏิบัติงาน) ใช่หรือไม่

    ☐ ใช่ ☐ ไม่ใช่
11. องค์กรของท่านใช้งบประมาณเพื่อเป็นเกณฑ์ในการให้ผลตอบแทน (เช่น ผลตอบแทนที่ท่านได้รับ มีส่วนที่อิงกับการบรรลุผลสำเร็จตามงบประมาณ) ใช่หรือไม่ ☐ ใช่ ☐ ไม่ใช่

---

**ส่วนที่ 2:** การมีส่วนร่วมในการจัดทำงบประมาณ

โปรดทำเครื่องหมาย **X** ในช่องที่ท่านคิดว่าเหมาะสมที่สุด *(กรุณาเลือกตอบเพียงสถานการณ์เดียว)*

12. การจัดทำงบประมาณในองค์กรของท่าน เป็นไปตามสถานการณ์ใดดังต่อไปนี้

**A:** ผู้บริหารระดับสูงจะจัดหาข้อมูลที่มีอยู่ เพื่อใช้ในการตัดสินใจจัดทำงบประมาณด้วยตนเอง

**B:** ผู้บริหารระดับสูงจะได้รับข้อมูลที่จำเป็นในการตัดสินใจจัดทำงบประมาณจากผู้ใต้บังคับบัญชา แล้วนำมาจัดทำงบประมาณด้วยตนเอง ทั้งนี้ผู้บริหารระดับสูงอาจจะอธิบายการตัดสินใจในการดำเนินการให้แก่ผู้ใต้บังคับบัญชาทราบหากผู้ใต้บังคับบัญชาต้องการทราบ

**C:** ผู้บริหารระดับสูงตัดสินใจในการจัดทำงบประมาณ โดยให้ผู้ใต้บังคับบัญชาแต่ละท่านมีโอกาสแสดงความคิดเห็นและคำแนะนำ ซึ่งไม่ได้ดำเนินการเป็นลักษณะกลุ่ม หลังจากนั้นผู้บังคับบัญชาจะตัดสินใจโดยอาจจะใช้หรือไม่ใช้ความคิดเห็นเหล่านั้นก็ได้ และไม่ได้ใช้ความคิดเห็นโดยรวมของกลุ่ม

**D:** ผู้บริหารระดับสูงตัดสินใจในการจัดทำงบประมาณ โดยให้ผู้ใต้บังคับบัญชามีโอกาสแสดงความคิดเห็นและคำแนะนำ ซึ่งดำเนินการเป็นลักษณะกลุ่ม หลังจากนั้นผู้บังคับบัญชาจะตัดสินใจโดยอาจจะใช้หรือไม่ใช้ความคิดเห็นเหล่านั้นก็ได้ และไม่ได้ใช้ความคิดเห็นโดยรวมของกลุ่ม

**E:** ผู้บริหารระดับสูงตัดสินใจในการจัดทำงบประมาณ โดยให้ผู้ใต้บังคับบัญชามีโอกาสแสดงความคิดเห็นและคำแนะนำ ซึ่งดำเนินการเป็นลักษณะกลุ่ม หลังจากนั้นผู้บังคับบัญชาจะตัดสินใจโดยใช้ความคิดเห็นโดยรวมของกลุ่ม

☐ **A** ☐ **B** ☐ **C** ☐ **D** ☐ **E**

**<u>ส่วนที่ 3:</u> ผลการดำเนินงานและตัววัดผลการปฏิบัติงานทางการเงิน**

**โปรดทำเครื่องหมาย X หรือกรอกข้อความลงในช่องว่างตามที่ท่านคิดว่าเหมาะสมที่สุด *(สามารถเลือกตอบได้มากกว่า 1 ข้อ)***

13. <u>ในรอบปีบัญชี พ.ศ. 2552 (ค.ศ. 2009)</u> ท่านถูกประเมินผลงานโดยใช้ตัววัดผลการปฏิบัติงานทางการเงินตัวใดดังต่อไปนี้

☐ กำไรก่อนดอกเบี้ย ภาษี ค่าเสื่อมราคา และรายการตัดจำหน่าย (EBITDA)

☐ กำไรก่อนดอกเบี้ย และภาษี (EBIT)

☐ กำไรก่อนภาษี (EBT)

☐ กำไรสุทธิ (Net Profit)

☐ อื่น ๆ (โปรดระบุ) .....

14. <u>จากคำถามข้อ 13</u> โปรดระบุตัวเลขผลการปฏิบัติงานทางการเงินที่ท่านถูกประเมินตามที่ระบุไว้ข้างต้น พร้อมทั้งระบุตัวเลขงบประมาณที่ตั้งไว้

| ตัววัดผลการปฏิบัติงานทางการเงิน | ผลการดำเนินงานจริง (Actual) (พันบาท) | ผลการดำเนินงานเป้าหมายตามงบประมาณ (Budget) (พันบาท) |
|---|---|---|
| 1. กำไรก่อนดอกเบี้ย ภาษี ค่าเสื่อมราคา และรายการตัดจำหน่าย (EBITDA) | | |
| 2. กำไรก่อนดอกเบี้ย และภาษี (EBIT) | | |
| 3. กำไรก่อนภาษี (EBT) | | |
| 4. กำไรสุทธิ (Net Profit) | | |
| 5. อื่น ๆ (โปรดระบุ) ..... | | |
| ..... | | |
| ..... | | |

***<u>ในส่วนที่ 4 และส่วนที่ 5 ขอให้ท่านตอบคำถามต่าง ๆ ที่เกี่ยวข้องกับเรื่องเป้าหมายกำไรตามงบประมาณ โดยอิงกับตัววัดผลการปฏิบัติงานที่ท่านระบุในส่วนที่ 3</u>***

**<u>ส่วนที่ 4:</u>** ปัจจัยต่าง ๆ ที่มีผลกระทบต่อการจัดทำงบประมาณ

โปรดระบุตัวเลขร้อยละหรือทำเครื่องหมาย **X** เพียงหนึ่งค่าในรายการต่าง ๆ ต่อไปนี้ตามที่ท่านรู้สึก

*(รายการใดไม่มี หรือไม่เกี่ยวข้องกับท่านและ/หรือองค์กรของท่าน โปรดระบุ 0%)*

| ปัจจัยที่มีผลกระทบต่อการจัดทำงบประมาณ | ระดับที่ท่านสามารถพยากรณ์เรื่องต่าง ๆ<br>น้อยที่สุด <------> น้อย <------> ปานกลาง <------> มาก <------> มากที่สุด |
|---|---|
| ความไม่แน่นอนของสภาพแวดล้อมภายนอกองค์กร | |
| 15. ปฏิกิริยาของคู่แข่ง | 0 10 20 30 40 50 60 70 80 90 100<br>\|----\|----\|----\|----\|----\|----\|----\|----\|----\|----\| |
| 16. ความต้องการของตลาด | 0 10 20 30 40 50 60 70 80 90 100<br>\|----\|----\|----\|----\|----\|----\|----\|----\|----\|----\| |
| 17. เทคโนโลยีในการผลิตสินค้า / ให้บริการ | 0 10 20 30 40 50 60 70 80 90 100<br>\|----\|----\|----\|----\|----\|----\|----\|----\|----\|----\| |
| 18. รูปแบบของสินค้า / บริการ | 0 10 20 30 40 50 60 70 80 90 100<br>\|----\|----\|----\|----\|----\|----\|----\|----\|----\|----\| |
| 19. การจัดซื้อ / จัดหาวัตถุดิบ | 0 10 20 30 40 50 60 70 80 90 100<br>\|----\|----\|----\|----\|----\|----\|----\|----\|----\|----\| |
| 20. การกำกับดูแลของหน่วยงานภาครัฐ | 0 10 20 30 40 50 60 70 80 90 100<br>\|----\|----\|----\|----\|----\|----\|----\|----\|----\|----\| |
| 21. อื่น ๆ โปรดระบุ..... | 0 10 20 30 40 50 60 70 80 90 100<br>\|----\|----\|----\|----\|----\|----\|----\|----\|----\|----\| |

| ปัจจัยที่มีผลกระทบต่อการจัดทำงบประมาณ | ระดับความคิดเห็น<br>เห็นด้วยน้อยที่สุด <-------> เห็นด้วยปานกลาง <-------> เห็นด้วยมากที่สุด |
|---|---|
| ความไม่เท่าเทียมกันของข้อมูล<br>*เมื่อเปรียบเทียบกับผู้บังคับบัญชาของท่าน ในหน้าที่งานที่ท่านรับผิดชอบ* | |
| 22. ท่านมีข้อมูลเกี่ยวกับกิจกรรมที่อยู่ภายใต้การควบคุมของท่านมากกว่า | 0 10 20 30 40 50 60 70 80 90 100<br>\|----\|----\|----\|----\|----\|----\|----\|----\|----\|----\| |
| 23. ท่านมีความเข้าใจเกี่ยวกับความสัมพันธ์ของขั้นตอนในกระบวนการทำงานมากกว่า | 0 10 20 30 40 50 60 70 80 90 100<br>\|----\|----\|----\|----\|----\|----\|----\|----\|----\|----\| |
| 24. ท่านมีความสามารถในการประเมินความเป็นไปได้ในเรื่องศักยภาพการปฏิบัติงานมากกว่า | 0 10 20 30 40 50 60 70 80 90 100<br>\|----\|----\|----\|----\|----\|----\|----\|----\|----\|----\| |
| 25. ท่านมีความเข้าใจและคุ้นเคยเกี่ยวกับวิธีการปฏิบัติงานโดยละเอียดมากกว่า | 0 10 20 30 40 50 60 70 80 90 100<br>\|----\|----\|----\|----\|----\|----\|----\|----\|----\|----\| |
| 26. ท่านมีความสามารถในการประเมินผลกระทบจากปัจจัยภายนอก (เช่น คู่แข่ง ภาวการณ์แข่งขัน การเมือง เป็นต้น) ที่อาจจะเกิดขึ้นได้ดีกว่า | 0 10 20 30 40 50 60 70 80 90 100<br>\|----\|----\|----\|----\|----\|----\|----\|----\|----\|----\| |

**ส่วนที่ 4:** ปัจจัยต่าง ๆ ที่มีผลกระทบต่อการจัดทำงบประมาณ *(ต่อ)*

| ปัจจัยที่มีผลกระทบต่อการจัดทำงบประมาณ | ระดับความคิดเห็น<br>เห็นด้วยน้อยที่สุด <-------> เห็นด้วยปานกลาง <-------> เห็นด้วยมากที่สุด |
|---|---|
| อิทธิพลที่ท่านมีต่อการกำหนดเป้าหมายกำไรตามงบประมาณ *ที่เป็นตัววัดผลการปฏิบัติงานของท่าน (ตามที่ท่านระบุในส่วนที่ 3)* | |
| 27. ท่านมีอิทธิพลต่อการกำหนดเป้าหมายกำไรตามงบประมาณขององค์กร | 0 10 20 30 40 50 60 70 80 90 100<br>\|----\|----\|----\|----\|----\|----\|----\|----\|----\|----\| |
| 28. เป้าหมายกำไรตามงบประมาณขององค์กรเป็นตัวเลขที่ท่านพอใจ | 0 10 20 30 40 50 60 70 80 90 100<br>\|----\|----\|----\|----\|----\|----\|----\|----\|----\|----\| |
| 29. การเปลี่ยนแปลงตัวเลขเป้าหมายกำไรตามงบประมาณขององค์กร มักเกิดจากการแนะนำของท่าน | 0 10 20 30 40 50 60 70 80 90 100<br>\|----\|----\|----\|----\|----\|----\|----\|----\|----\|----\| |
| 30. ท่านมีอำนาจต่อรองเพียง<u>เล็กน้อย</u>ในการกำหนดตัวเลขเป้าหมายกำไรตามงบประมาณขององค์กร | 0 10 20 30 40 50 60 70 80 90 100<br>\|----\|----\|----\|----\|----\|----\|----\|----\|----\|----\| |
| การคำนึงถึงภาพลักษณ์ | |
| 31. ท่านคิดว่าการนำเสนองบประมาณที่น่าเชื่อถือและเหมาะสมกับศักยภาพของท่าน มีผลต่อภาพลักษณ์ของท่าน | 0 10 20 30 40 50 60 70 80 90 100<br>\|----\|----\|----\|----\|----\|----\|----\|----\|----\|----\| |
| 32. ท่านคิดว่าผู้บังคับบัญชาเห็นว่างบประมาณที่ท่านนำเสนอมีความน่าเชื่อถือ | 0 10 20 30 40 50 60 70 80 90 100<br>\|----\|----\|----\|----\|----\|----\|----\|----\|----\|----\| |
| 33. ท่านคิดว่าผู้บังคับบัญชาเห็นว่างบประมาณที่ท่านนำเสนออยู่ในระดับที่เหมาะสมกับศักยภาพของท่าน | 0 10 20 30 40 50 60 70 80 90 100<br>\|----\|----\|----\|----\|----\|----\|----\|----\|----\|----\| |
| 34. ท่านต้องการให้ผู้บังคับบัญชาเห็นว่าท่านมีความซื่อสัตย์และยุติธรรม | 0 10 20 30 40 50 60 70 80 90 100<br>\|----\|----\|----\|----\|----\|----\|----\|----\|----\|----\| |
| การปฏิบัติงานภายใต้เป้าหมายกำไรตามงบประมาณ *ที่เป็นตัววัดผลการปฏิบัติงานของท่าน (ตามที่ท่านระบุในส่วนที่ 3)* | |
| 35. เป้าหมายกำไรตามงบประมาณขององค์กร ส่งผลให้ผลิตภาพในการปฏิบัติงานภายใต้การควบคุมของท่านสูงขึ้น | 0 10 20 30 40 50 60 70 80 90 100<br>\|----\|----\|----\|----\|----\|----\|----\|----\|----\|----\| |
| 36. เป้าหมายกำไรตามงบประมาณขององค์กร ส่งผลให้ท่านต้องใช้ความระมัดระวังในการควบคุมผลการปฏิบัติงานมากยิ่งขึ้น | 0 10 20 30 40 50 60 70 80 90 100<br>\|----\|----\|----\|----\|----\|----\|----\|----\|----\|----\| |
| 37. ท่าน<u>ไม่จำเป็น</u>ต้องใช้ความพยายามและเวลาในการทำงานมากเป็นพิเศษ ก็สามารถบรรลุเป้าหมายกำไรตามงบประมาณขององค์กรได้ | 0 10 20 30 40 50 60 70 80 90 100<br>\|----\|----\|----\|----\|----\|----\|----\|----\|----\|----\| |

**ส่วนที่ 4:** ปัจจัยต่าง ๆ ที่มีผลกระทบต่อการจัดทำงบประมาณ *(ต่อ)*

| ปัจจัยที่มีผลกระทบต่อการจัดทำงบประมาณ | ระดับความคิดเห็น<br>เห็นด้วยน้อยที่สุด <-------> เห็นด้วยปานกลาง <-------> เห็นด้วยมากที่สุด |
|---|---|
| การปฏิบัติงานภายใต้เป้าหมายกำไรตามงบประมาณ *ที่เป็นตัววัดผลการปฏิบัติงานของท่าน (ตามที่ท่านระบุในส่วนที่ 3) (ต่อ)* | |
| 38. โดยปกติแล้ว เป้าหมายกำไรตามงบประมาณขององค์กรอยู่ในระดับที่ | 0 10 20 30 40 50 60 70 80 90 100<br>\|----\|----\|----\|----\|----\|----\|----\|----\|----\|----\|<br>ไม่สามารถบรรลุผลได้อย่างแน่นอน / โดยปกติแล้วไม่สามารถบรรลุผลได้ / สามารถบรรลุผลได้โดยต้องใช้ความพยายามอย่างมาก / สามารถบรรลุผลได้โดยต้องใช้ความพยายามตามสมควร / สามารถบรรลุผลได้โดยง่าย |
| รูปแบบที่ผู้บังคับบัญชาใช้ในการประเมินผลการปฏิบัติงาน *โดยอิงกับเป้าหมายกำไรตามงบประมาณที่เป็นตัววัดผลการปฏิบัติงานของท่าน (ตามที่ท่านระบุในส่วนที่ 3)* | |
| 39. ท่านคิดว่าผู้บังคับบัญชาของท่านให้ความสำคัญกับการบรรลุผลสำเร็จของเป้าหมายกำไรตามงบประมาณขององค์กร | 0 10 20 30 40 50 60 70 80 90 100<br>\|----\|----\|----\|----\|----\|----\|----\|----\|----\|----\| |
| 40. ท่านต้องหาสาเหตุและให้คำอธิบายสำหรับรายการที่แตกต่างไปจากเป้าหมายกำไรตามงบประมาณขององค์กร | 0 10 20 30 40 50 60 70 80 90 100<br>\|----\|----\|----\|----\|----\|----\|----\|----\|----\|----\| |
| 41. ท่านคิดว่าการไม่สามารถบรรลุผลสำเร็จตามเป้าหมายกำไรตามงบประมาณขององค์กรสะท้อนถึงผลการปฏิบัติงานที่ไม่ดี | 0 10 20 30 40 50 60 70 80 90 100<br>\|----\|----\|----\|----\|----\|----\|----\|----\|----\|----\| |
| 42. ท่านคิดว่าองค์กรและ/หรือผู้บังคับบัญชาของท่านมีเกณฑ์มาตรฐานในการประเมินผลการปฏิบัติงานอย่างเป็นระบบและยุติธรรม | 0 10 20 30 40 50 60 70 80 90 100<br>\|----\|----\|----\|----\|----\|----\|----\|----\|----\|----\| |
| การรับรู้ผลตอบแทน | |
| 43. ท่านคิดว่าองค์กรและ/หรือผู้บังคับบัญชาของท่านมีเกณฑ์มาตรฐานในการกำหนดผลตอบแทนให้กับพนักงานอย่างเป็นระบบและยุติธรรม | 0 10 20 30 40 50 60 70 80 90 100<br>\|----\|----\|----\|----\|----\|----\|----\|----\|----\|----\| |
| 44. ท่านคิดว่าองค์กรของท่านมีกระบวนการในการกำหนดเป้าหมายกำไรตามงบประมาณ เพื่อใช้เป็นเกณฑ์ในการคำนวณผลตอบแทนอย่างเป็นระบบและยุติธรรม | 0 10 20 30 40 50 60 70 80 90 100<br>\|----\|----\|----\|----\|----\|----\|----\|----\|----\|----\| |
| 45. ท่านคิดว่าเป้าหมายกำไรตามงบประมาณที่องค์กรและ/หรือผู้บังคับบัญชาของท่านใช้เป็นเกณฑ์ในการคำนวณผลตอบแทนมีความเหมาะสมและยุติธรรม | 0 10 20 30 40 50 60 70 80 90 100<br>\|----\|----\|----\|----\|----\|----\|----\|----\|----\|----\| |

**<u>ส่วนที่ 4:</u>** ปัจจัยต่าง ๆ ที่มีผลกระทบต่อการจัดทำงบประมาณ *(ต่อ)*

| ปัจจัยที่มีผลกระทบต่อการจัดทำงบประมาณ | ระดับความคิดเห็น<br>เห็นด้วยน้อยที่สุด <-------> เห็นด้วยปานกลาง <-------> เห็นด้วยมากที่สุด |
|---|---|
| การรับรู้ผลตอบแทน *(ต่อ)* | |
| 46. ท่านมักได้รับคำชมเชย เมื่อสามารถบรรลุเป้าหมายกำไรตามงบประมาณขององค์กร | 0 10 20 30 40 50 60 70 80 90 100<br>\|----\|----\|----\|----\|----\|----\|----\|----\|----\|----\| |
| 47. ท่านมักได้รับผลตอบแทนพิเศษที่เป็นตัวเงิน (เช่น การขึ้นเงินเดือน โบนัส) ในระดับสูง เมื่อสามารถบรรลุเป้าหมายกำไรตามงบประมาณขององค์กร | 0 10 20 30 40 50 60 70 80 90 100<br>\|----\|----\|----\|----\|----\|----\|----\|----\|----\|----\| |
| 48. การพิจารณาเลื่อนตำแหน่งของท่าน ส่วนหนึ่งขึ้นอยู่กับความสามารถในการบรรลุผลสำเร็จของเป้าหมายกำไรตามงบประมาณขององค์กร | 0 10 20 30 40 50 60 70 80 90 100<br>\|----\|----\|----\|----\|----\|----\|----\|----\|----\|----\| |

**<u>ส่วนที่ 5:</u>** รูปแบบของระบบการให้ผลตอบแทน

โปรดระบุตัวเลขร้อยละของรายการดังต่อไปนี้ *(รายการใดไม่มี หรือไม่เกี่ยวข้องกับท่านและ/หรือองค์กรของท่าน โปรดระบุ 0%)*

49. ผลตอบแทนแต่ละประเภท<u>ที่ท่านได้รับ</u> เปรียบเทียบกับผลตอบแทนที่ท่านได้รับทั้งหมด มีสัดส่วนอย่างไร

| รูปแบบ | สัดส่วน (ร้อยละ) |
|---|---|
| ผลตอบแทนที่คำนวณจากสูตรที่กำหนดไว้อย่างชัดเจน | |
| ผลตอบแทนที่ขึ้นอยู่กับวิจารณญาณของผู้ประเมิน | |
| รวม | **100** |

| รูปแบบ | สัดส่วน (ร้อยละ) |
|---|---|
| ผลตอบแทนที่คำนึงถึงตัววัดผลที่เป็นตัวเงิน | |
| ผลตอบแทนที่<u>ไม่</u>คำนึงถึงตัววัดผลที่เป็นตัวเงิน | |
| รวม | **100** |

| รูปแบบ | สัดส่วน (ร้อยละ) |
|---|---|
| ผลตอบแทนที่เป็นตัวเงินที่อิงกับเป้าหมายกำไรตามงบประมาณ *(ตามที่ระบุในส่วนที่ 3)* | |
| ผลตอบแทนที่เป็นตัวเงินที่<u>ไม่</u>อิงกับเป้าหมายกำไรตามงบประมาณ | |
| รวม | **100** |

| รูปแบบ | สัดส่วน (ร้อยละ) |
|---|---|
| ผลตอบแทนที่เชื่อมโยงกับตัววัดผลการปฏิบัติงานที่สามารถควบคุมได้ *(เช่น ท่านมีส่วนร่วมในการตัดสินใจและ/หรือจัดการในเรื่องที่เกี่ยวข้องกับตัววัดผลการปฏิบัติงานนั้น ๆ เป็นต้น)* | |
| ผลตอบแทนที่เชื่อมโยงกับตัววัดผลการปฏิบัติงานที่<u>ไม่</u>สามารถควบคุมได้ | |
| รวม | **100** |

**<u>ส่วนที่ 6:</u>** คำถามเพิ่มเติมเพื่อประเมินข้อมูลเชิงคุณภาพ
แบบสอบถามส่วนนี้จัดทำขึ้นเพื่อสำรวจความคิดเห็นของท่านเกี่ยวกับปัญหาด้านสังคม แต่ละบุคคลมักมีความคิดเห็นที่แตกต่างกันเกี่ยวกับปัญหาเรื่องความถูกต้องและความไม่ถูกต้อง ปัญหาบางเรื่องไม่มีคำตอบใด "ถูกต้อง" ไม่เหมือนปัญหาทางคณิตศาสตร์ซึ่งต้องมีคำตอบที่ถูกต้อง ขอให้ท่านตอบว่าท่านมีความคิดเห็นอย่างไรเกี่ยวกับเรื่องราวเหล่านี้

ประจักษ์กับยารักษาโรค

วนิดากำลังจะเสียชีวิตด้วยโรคมะเร็งรักษายากชนิดหนึ่ง มียาอยู่ขนานหนึ่งที่แพทย์คิดว่าอาจช่วยชีวิตเธอได้ ยาขนานนี้ทำจากธาตุกัมมันตรังสีเรเดียม ซึ่งเภสัชกรคนหนึ่งเพิ่งค้นพบเมื่อเร็ว ๆ นี้ การผลิตยาขนานนี้มีต้นทุนสูงมากก็จริง แต่เภสัชกรเองก็คิดค่ายาถึง 10 เท่าของต้นทุนการผลิต เภสัชกรจ่ายค่าธาตุกัมมันตรังสีเป็นเงิน 6,000 บาท และคิดค่ายา 60,000 บาท ต่อยา 1 โดส (Dose) ประจักษ์ซึ่งเป็นสามีของวนิดา ได้ไปพบทุก ๆ คนที่เขารู้จักเพื่อขอยืมเงิน แต่สามารถรวบรวมเงินได้ทั้งหมดเพียง 30,000 บาทเท่านั้น ซึ่งเป็นจำนวนเพียงครึ่งเดียวของราคายา ประจักษ์จึงไปพบเภสัชกรและบอกว่าภรรยาของเขากำลังจะเสียชีวิต พร้อมขอร้องให้เภสัชกรขายยาให้เขาถูกกว่านี้ หรือไม่ก็ยอมให้เขาจ่ายค่ายาในภายหลัง แต่เภสัชกรกลับตอบว่า "ไม่ได้ ผมค้นพบตัวยานี้ และผมจะต้องทำเงินจากการค้นพบของผม" ประจักษ์รู้สึกท้อแท้และหมดหนทาง เขาเริ่มมีความคิดที่จะบุกเข้าไปขโมยยาจากร้านของเภสัชกร เพื่อนำยามารักษาภรรยาของเขา

ประจักษ์ควรจะขโมยยาหรือไม่ *(กรุณาเลือกเพียงข้อเดียว)*

_____ควรขโมย _____ตัดสินใจไม่ได้ _____ไม่ควรขโมย

ให้ท่านวิเคราะห์ความสำคัญของประเด็นคำถามต่อไปนี้ แล้วเลือก 4 ข้อที่มีผลต่อการตัดสินใจของท่านมากที่สุด เรียงตามลำดับความสำคัญ **1-4** *(โดยที่ 1 หมายถึง สำคัญมากเป็นลำดับแรก และ 4 หมายถึง สำคัญมากเป็นลำดับที่สี่)*

_____1. ควรรักษากฎหมายของบ้านเมืองหรือไม่

_____2. เป็นเรื่องแสนธรรมดามิใช่หรือ ที่สามีผู้รักภรรยาจะต้องดูแลเธออย่างดี เสียจนกระทั่งต้องขโมยของเพื่อเธอ

_____3.ประจักษ์เต็มใจหรือไม่ที่จะเสี่ยงต่อการถูกยิงหรือเสี่ยงต่อการติดคุกเพื่อแลกกับการบุกเข้าไปขโมยยาที่อาจจะช่วยชีวิตภรรยาของเขาได้

_____4. ประจักษ์เป็นนักหยิบฉวยมืออาชีพ หรือได้รับอิทธิพลอย่างมากจากนักหยิบฉวยมืออาชีพหรือไม่

_____5. ประจักษ์ขโมยเพื่อตัวเองหรือขโมยเพื่อช่วยเหลือคนอื่น

_____6. ทรัพย์สินทางปัญญาในการคิดค้นยาของเภสัชกรควรได้รับการเคารพหรือไม่

_____7. การใช้ชีวิตอย่างไรนั้น มีสาระสำคัญมากกว่าการยุติความตาย ทั้งในเชิงสังคมและเชิงปัจเจกบุคคลหรือไม่

_____8. ค่านิยมอะไรบ้างที่ควรจะเป็นเกณฑ์ในการกำหนดว่าบุคคลควรปฏิบัติต่อกันและกันอย่างไร

_____9.เภสัชกรจะได้รับการคุ้มครองภายใต้กฎหมายที่มีก็เหมือนกับไม่มี เพราะอย่างไรก็จะปกป้องเฉพาะคนร่ำรวยเท่านั้นหรือไม่

_____10. กฎหมายในกรณีนี้กำลังจะกลายเป็นอุปสรรคต่อการอ้างสิทธิขั้นพื้นฐานของสมาชิกในสังคมใช่หรือไม่

_____11. เภสัชกรสมควรจะถูกขโมยยา เพราะเขาเป็นคนโลภและมีจิตใจโหดร้ายใช่หรือไม่

_____12. การขโมยในกรณีเช่นนี้ จะก่อให้เกิดประโยชน์มากขึ้นต่อสังคมโดยรวมหรือไม่

**นักโทษแหกคุก**

อานนท์ถูกตัดสินจำคุกเป็นเวลา 10 ปี อย่างไรก็ตามหลังติดคุกได้เพียงปีเดียว เขาก็แหกคุกและหลบหนีไปอยู่ที่ใหม่ โดยใช้ชื่อใหม่ว่าธีรภัทร ตลอดระยะเวลา 8 ปี ธีรภัทรทำงานหนักและค่อย ๆ สะสมเงินที่หามาได้จนสามารถมีธุรกิจเป็นของตนเอง ธีรภัทรไม่เอาเปรียบลูกค้า จ้างงานลูกจ้างในอัตราเงินเดือนสูง ทั้งยังบริจาคเงินกำไรส่วนใหญ่ของเขาให้สาธารณกุศล แต่แล้ววันหนึ่ง การะเกดผู้เป็นเพื่อนบ้านเก่าแก่ของธีรภัทร จำได้ว่าธีรภัทรคือนักโทษที่แหกคุกเมื่อ 8 ปีก่อนและยังเป็นบุคคลที่ตำรวจกำลังติดตามตัวอยู่

**การะเกดควรแจ้งตำรวจให้มาจับตัวธีรภัทรกลับไปเข้าคุกหรือไม่** ***(กรุณาเลือกเพียงข้อเดียว)***

_____ควรแจ้งตำรวจ _____ตัดสินใจไม่ได้ _____ไม่ควรแจ้งตำรวจ

**ให้ท่านวิเคราะห์ความสำคัญของประเด็นคำถามต่อไปนี้ แล้วเลือก 4 ข้อที่มีผลต่อการตัดสินใจของท่านมากที่สุด เรียงตามลำดับความสำคัญ 1-4** ***(โดยที่ 1 หมายถึง สำคัญมากเป็นลำดับแรก และ 4 หมายถึง สำคัญมากเป็นลำดับที่สี่)***

_____1. การที่ธีรภัทรประพฤติตัวดีมาตลอดเป็นระยะเวลานาน ยังพิสูจน์ไม่ได้อีกหรือว่าเขาไม่ใช่คนเลว

_____2.ทุกครั้งที่มีคนรอดพ้นการถูกลงโทษจากอาชญากรรมที่ตนก่อ ก็จะยิ่งเป็นการกระตุ้นให้เกิดอาชญากรรมเพิ่มขึ้นหรือไม่

_____3. สังคมจะดีขึ้นถ้าปราศจากคุกและการกดขี่ของระบบกฎหมายมิใช่หรือ

_____4. ธีรภัทรได้ชดใช้หนี้กรรมที่เขาก่อให้กับสังคมแล้วจริง ๆ หรือ

_____5. สังคมไม่ได้ให้ความยุติธรรมแก่ธีรภัทรตามที่เขาควรจะได้รับหรือไม่

_____6. ถ้าไม่นับประโยชน์ที่คุกมีต่อสังคมแล้ว คุกมีประโยชน์อะไรบ้าง โดยเฉพาะต่อผู้ที่มีใจบุญสุนทาน

_____7. ใครจะโหดร้ายและใจร้ายพอที่จะส่งธีรภัทรกลับไปเข้าคุกได้

_____8. หากธีรภัทรได้รับการปล่อยตัว จะเป็นการยุติธรรมต่อนักโทษทุกคนที่ต้องติดคุกตามระยะเวลาที่ศาลพิพากษาหรือไม่

_____9. การะเกดเป็นเพื่อนที่ดีของธีรภัทรหรือไม่

_____10.การแจ้งให้เจ้าหน้าที่ตำรวจทราบเมื่อพบเห็นอาชญากรหลบหนีถือเป็นหน้าที่ของพลเมืองดี ไม่ว่าสถานการณ์แวดล้อมจะเป็นอย่างไรก็ตามมิใช่หรือ

_____11. ทำอย่างไรจึงจะสามารถสนองตอบเจตนารมณ์ของประชาชน และผลประโยชน์ของสังคมได้อย่างสูงสุด

_____12. การกลับเข้าไปในคุก จะมีประโยชน์อะไรกับตัวธีรภัทร หรือจะช่วยปกป้องผู้อื่นได้อย่างไร

**หนังสือพิมพ์**

ปกรณ์เป็นนักเรียนชั้นมัธยมศึกษาปีที่ 6 เขาต้องการออกหนังสือพิมพ์โรเนียวสำหรับนักเรียน เพื่อที่จะได้นำเสนอความคิดเห็นหลาย ๆ เรื่องของเขา ปกรณ์ต้องการแสดงความคิดเห็นต่อต้านการใช้กำลังทหารเมื่อเกิดข้อขัดแย้งระหว่างประเทศ และต่อต้านกฎระเบียบบางข้อของโรงเรียน เช่น การห้ามนักเรียนชายไว้ผมยาว เป็นต้น

เมื่อปกรณ์เริ่มต้นทำหนังสือพิมพ์ เขาขออนุญาตจากอาจารย์ใหญ่ของโรงเรียน ซึ่งอาจารย์ใหญ่อนุญาตโดยมีเงื่อนไขว่าปกรณ์ต้องส่งบทความทุกเรื่องที่จะตีพิมพ์ในหนังสือพิมพ์ให้อาจารย์ใหญ่ได้อ่านและพิจารณาอนุมัติก่อน ปกรณ์ตกลงตามข้อเสนอและได้ส่งบทความหลายเรื่องให้อาจารย์ใหญ่ตรวจและอนุมัติ อาจารย์ใหญ่ได้อ่านและอนุมัติบทความทุกเรื่องที่ปกรณ์ส่งมาให้ ปกรณ์จึงออกหนังสือพิมพ์ 2 ฉบับในสองสัปดาห์ถัดมา

ทว่าอาจารย์ใหญ่ไม่คาดคิดว่าหนังสือพิมพ์ของปกรณ์จะได้รับความสนใจอย่างมากจากบรรดานักเรียน นักเรียนทั้งหลายต่างตื่นเต้นกับหนังสือพิมพ์นี้มากและเริ่มประท้วงกฎของโรงเรียนที่ห้ามไว้ผมยาว รวมทั้งกฎระเบียบอื่น ๆ ของโรงเรียนด้วย ผู้ปกครองบางกลุ่มโกรธและไม่เห็นด้วยกับความคิดเห็นของปกรณ์ ผู้ปกครองกลุ่มนี้ต่างโทรศัพท์ไปหาอาจารย์ใหญ่ และบอกว่าหนังสือพิมพ์นี้แสดงถึงความไม่รักชาติและไม่สมควรจะได้รับการพิมพ์เผยแพร่ เมื่อเหตุการณ์ทวีความรุนแรงขึ้นเช่นนี้ อาจารย์ใหญ่จึงออกคำสั่งให้ปกรณ์หยุดการพิมพ์เผยแพร่หนังสือพิมพ์โดยให้เหตุผลว่า การกระทำของปกรณ์ก่อให้เกิดความวุ่นวายต่อการดำเนินงานของโรงเรียน

**อาจารย์ใหญ่ควรจะออกคำสั่งหยุดการพิมพ์เผยแพร่หนังสือพิมพ์หรือไม่** ***(กรุณาเลือกเพียงข้อเดียว)***

_____ ควรสั่งหยุด _____ตัดสินใจไม่ได้ _____ไม่ควรสั่งหยุด

**ให้ท่านวิเคราะห์ความสำคัญของประเด็นคำถามต่อไปนี้ แล้วเลือก 4 ข้อที่มีผลต่อการตัดสินใจของท่านมากที่สุด เรียงตามลำดับความสำคัญ 1-4** ***(โดยที่ 1 หมายถึง สำคัญมากเป็นลำดับแรก และ 4 หมายถึง สำคัญมากเป็นลำดับที่สี่)***

_____1. อาจารย์ใหญ่มีความรับผิดชอบต่อนักเรียนหรือต่อผู้ปกครองมากกว่ากัน

_____2.อาจารย์ใหญ่อนุญาตให้ปกรณ์พิมพ์เผยแพร่หนังสือพิมพ์ได้ในระยะยาว หรืออนุญาตให้พิมพ์เป็นครั้ง ๆ ไปตามการพิจารณาบทความในแต่ละครั้ง

_____3. นักเรียนจะยิ่งประท้วงมากขึ้นหรือไม่ หากอาจารย์ใหญ่ออกคำสั่งให้หยุดการพิมพ์เผยแพร่หนังสือพิมพ์

_____4. ในภาวะที่ความสงบสุขของโรงเรียนถูกคุกคาม อาจารย์ใหญ่มีสิทธิที่จะออกคำสั่งแก่นักเรียนหรือไม่

_____5. อาจารย์ใหญ่มีเสรีภาพในการที่จะบอกว่า “ไม่อนุญาต” ในกรณีเช่นนี้หรือไม่

_____6. หากอาจารย์ใหญ่สั่งให้หยุดการพิมพ์เผยแพร่หนังสือพิมพ์ การกระทำดังกล่าวจะเป็นการห้ามการอภิปรายเรื่องปัญหาสำคัญอื่น ๆ ต่อไปหรือไม่

_____7. การออกคำสั่งของอาจารย์ใหญ่จะทำให้ปกรณ์สูญเสียศรัทธาในตัวอาจารย์ใหญ่หรือไม่

_____8. ปกรณ์มีความซื่อสัตย์ต่อโรงเรียนของเขาและมีความรักชาติจริงหรือไม่

_____9.การหยุดพิมพ์เผยแพร่หนังสือพิมพ์จะมีผลอย่างไรต่อการศึกษาของนักเรียน ในด้านความคิดเห็นและดุลยพินิจในการวิพากษ์วิจารณ์

_____10. ปกรณ์ละเมิดสิทธิของผู้อื่นในการพิมพ์เผยแพร่ความคิดเห็นของตนเองหรือไม่

_____11.ในเมื่ออาจารย์ใหญ่เป็นผู้รู้เรื่องเหตุการณ์ต่าง ๆ ที่เกิดขึ้นในโรงเรียนของตนเองดีที่สุด อาจารย์ใหญ่ควรจะถูกผู้ปกครองที่มีความโกรธเคืองชักจูงหรือไม่

_____12. ปกรณ์กำลังใช้หนังสือพิมพ์เป็นเครื่องมือในการก่อให้เกิดความเกลียดชัง และความไม่พอใจหรือไม่

**ข้อเสนอแนะเพิ่มเติม**

**หากท่านมีข้อเสนอแนะใด ๆ เกี่ยวกับเรื่องปัจจัยที่มีผลกระทบต่อการจัดทำงบประมาณของบริษัทจดทะเบียนในประเทศไทย หรือเกี่ยวกับแบบสอบถามฉบับนี้ โปรดระบุเพิ่มเติม เพื่อที่ผู้วิจัยจะได้นำไปปรับปรุงในการทำงานวิจัยต่อไป**

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

**ขอขอบพระคุณในความร่วมมือ**

# APPENDIX C

Demographic profile of respondents

| Description | | n | % | Mean | Median | SD | Min | Max |
|---|---|---|---|---|---|---|---|---|
| **Sex** | | | | | | | | |
| | Male | 18 | 47% | | | | | |
| | Female | 20 | 53% | | | | | |
| **Age** | | | | | | | | |
| | Average (years) | | | 46 | 46 | 7.85 | 27 | 61 |
| **Education level** | | | | | | | | |
| | Bachalor | 8 | 21% | | | | | |
| | Master | 29 | 76% | | | | | |
| | Doctor | 1 | 3% | | | | | |
| **Experience** | | | | | | | | |
| Current position | Average (years) | | | 7 | 5 | 5.91 | 3 | 23 |
| Current company | Average (years) | | | 12 | 10 | 7.86 | 3 | 30 |
| **Number of years that the company use budget** | | | | | | | | |
| | 3-6 years | 5 | 13% | | | | | |
| | 7-10 years | 6 | 16% | | | | | |
| | more than 10 years | 27 | 71% | | | | | |
| **The company use budget for resource allocation** | | | | | | | | |
| | Yes | 36 | 95% | | | | | |
| | No | 2 | 5% | | | | | |
| **The company link budget to reward systems** | | | | | | | | |
| | Yes | 25 | 66% | | | | | |
| | No | 13 | 34% | | | | | |

# BIOGRAPHY

Pornpan Damrongsukniwat was born in Udonthani, Thailand, on December 17, 1978. She spent two and a half years to receive her bachelor's degree in business administration majoring in accounting (Second-Class Honors) from Ramkhamhaeng University, Bangkok, Thailand, in 1998. After completing her master's degree in accounting from Chulalongkorn University, Bangkok, Thailand, in 2002, she received the Certified Public Accountant (CPA) license from the Institute of Certified Accountants and Auditors of Thailand (ICAAT) in 2004. And she also received her bachelor's degree in laws from Sukhothai Thammathirat University, Bangkok, Thailand, in 2005.

She had 5 years experience with Pricewaterhouse Coopers ABAS, Bangkok office, Thailand, in the audit and advisory profession.

Currently, she is a candidate for the Doctor of Philosophy degree from Chulalongkorn University with a major in Accounting.