THE EFFECT OF MANAGEMENT CONTROL SYSTEM ON THE RELATIONSHIP BETWEEN BUDGET PARTICIPATION AND BUDGET SLACK

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By

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ABSTRACT

The research objective of this research is to examine the effect of budget participation on budget slack in Indonesian manufacturing firms. In addition, this study investigates the moderating effect of the management control system on the relationship between budget participation and budget slack. The population of the study is manufacturing firms listed on the Jakarta Stock Exchange. Questionnaires were distributed to finance managers, production managers and marketing managers.The respondents of the study are functional managers which represents 34.22 percent of the response rate. Factor analysis, reliability analysis and hierarchical regression analysis are used to analyze the data. The findings are as follows: (a) there is a negative relationship between budget participation and budget slack; (b) there is a negative relationship between budget participation and each of the management control system elements (which are interactive control system, boundary control system, diagnostic control system and beliefs control system) on budget slack; and (c) the management control system package negatively moderates the relationship between budget participation and budget slack. The results of this study suggest that the use of management control system package can reduce the dysfunctional behaviour of managers. The results of the study are also expected to have implications on the manufacturing sector on the importance of managers to participate in the budgeting process and integrate it with management control system to reduce budget slack.

Keywords: budget participation, budget slack, management control system package, management control system elements.

ABSTRAK

Objektif kajian ini adalah untuk mengkaji kesan penyertaan belanjawan ke atas regangan belanjawan di firma perkilangan di Indonesia. Di samping itu, kajian ini mengkaji kesan sistem kawalan pengurusan terhadap hubungan antara penyertaan belanjawan dan regangan belanjawan. Populasi kajian ini adalah firma perkilangan yang disenaraikan di Bursa Saham Jakarta. Borang soal selidik telah diedarkan kepada pengurus kewangan, pengurus pengeluaran dan pengurus pemasaran. Responden kajian adalah 140 *functional managers* yang mewakili 34.22 peratus kadar maklum balas. Analisis faktor, analisis kebolehpercayaan dan analisis regresi berhierarki digunakan untuk menganalisis data. Dapatan kajian ini adalah seperti berikut: (a) terdapat hubungan yang negatif di antara penyertaaan belanjawan dan regangan belanjawan; (b) terdapat hubungan yang negatif antara penyertaan belanjawan dan setiap elemen dalam sistem kawalan pengurusan (iaitu sistem kawalan interaktif, sistem kawalan sempadan, sistem kawalan diagnostik dan sistem kawalan kepercayaan) ke atas regangan belanjawan; dan (c) pakej sistem kawalan pengurusan menunjukkan kesan yang negatif terhadap hubungan antara penyertaan belanjawan dan regangan belanjawan. Dapatan kajian ini mencadangkan bahawa penggunaan pakej sistem kawalan pengurusan boleh mengurangkan gelagat salah laku pengurus. Dapatan kajian ini juga dijangka mempunyai implikasi terhadap sektor perkilangan tentang kepentingan pengurus mengambil bahagian di dalam proses penyediaan belanjawan dan mengintegrasikan penyertaan belanjawaan dengan sistem kawalan pengurusan untuk mengurangkan regangan belanjawan.

Kata kunci: penyertaan belanjawan, regangan belanjawan, pakej sistem kawalan pengurusan, elemen sistem kawalan pengurusan.

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BS	Budget Slack
BP	Budget Participation
ICS	Interactive Control system
BCS	Boundary Control System
DCS	Diagnostic Control System
BLFCS	Belief Control System
MCS	Management Control System
MCSP	Management Control System Package

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Budgets are tools that managers can use to assist them in carrying out their activities (Tanase, 2013). For achieving the goals of a firm, budgets are necessary for providing information for planning, controlling and determining strategies (Triana & Yuliusman 2012; Maksum, 2009; Ramdeen, Santos, & Chatfiel 2007; Baiman, 1982); as well as for forecasting events (Onsi, 1973). In the increasingly competitive global market, budgets are becoming more and more significant to facilitate the implementation and achievement of business goals (Huang & Chen 2009).

Many employees' participate in budget preparation, known as budget participation (hereafter called BP). It can involve junior employees (Sholihin, Pike, Mangena & Li, 2011), up to all levels of management, and is considered to be the best method for budget preparation (Garrison; Eric, Peter, Chesley & Ray 2006).

Generally, BP has a direct relationship with employees' performance. They drive for success and subordinates' attitude towards their superiors, jobs and firms. According to Nur (1993), the participation of employees in budget preparation has a noticeable effect on the effectiveness of the organization. The process of preparing a BP a proposal by managers. The lower level employees are responsible for the allocation of resources considering the goals of the proposal. In order to receive a large amount of funds for BP, managers are more likely to use a number of action plans. According to Van der Stede, Hansen, and Otley (2003), creating budget slack (hereafter called BS) is one of

the strategies, and for the realization of the objectives of the budget, eighty per cent of managers agree to use slack in their budgets (Onsi, 1973). Hobson, Mellon, and Stevens (2011) stated that the creation of BS is associated with the ability of the subordinates to underestimate their business ability. BS is the dissimilarity between the performance a subordinate plans to do and their actual ability (Chow, Cooper, & Haddad, 1991; Douglas & Wier, 2000). In general, BS are also created when the expenses are overstated and revenue forecasts are under estimated, and, sometimes, managers tend to understate their revenues and overestimate their costs to produce slack in their budget (Schiff & Lewin 1970). Kren (2003) and Waller (1988) reported that the slack in the budget for the financial and other resources that are controlled by managers which exceed their targets to achieve the optimal amount. Hence, BS is a process by which managers intentionally make targets that are easily achievable (Lukka, 1988). It is also for protection against unexpected uncertainties and for increasing the possibility of meeting the targets of the budget (Van der Stede, 2000).

Theoretically, BP has two opposite effects on the level of budget slack. It increases the level of involvement in the process of budget making, while, at the same time, it gives managers an increased chance of making easily achievable budget targets so that the BS could be increased. This means that BP has a positive influence on BS (Schiff & Lewin, 1968; Lukka, 1988). However, participation in the process of budget making can have an inverse impact on the process of budget making because it provides employees increased information, through which they can make more accurate estimates about the budget (Onsi, 1973; Cammann, 1976; Magner, Walker, & Campbell, 1996). This can also increase managerial commitment towards the achievement of the goals of the budget (Parker & Kyj, 2006). Merchant (1985), and

Lal, Dunk and Smith (1996) also supported the negative opposing impacts of participation in the budget making process.

According to Schiff and Lewin (1968), Lowe and Shaw (1968), and Lukka (1988), participation in the process of budget making can lead to the creation of BS. However, Merchant (1985) presented the argument that a manager's participation in the process of budget making can decrease the intention of the manager to create slack in the budget. He is of the view that with the subordinate's participation in the process of budget making, slack can be reduced, most probably in cases where the abilities of the employees can be estimated beforehand.

The study of Anthony and Govindarajan (2001) presented the argument that the goals of the budget can have a strong influence on the behaviour of superior and subordinates. Depending upon the use of the budget, both subordinates and superiors can act either in a positive or a negative manner. They behave in a positive manner if the goals of both the superior and the subordinates are aligned with the organizational goals. On the other hand, in case the budget is not well managed, subordinates will behave in a negative way and their objectives will differ from the targets of the organization. Hansen and Mowen (1997) argued that when the behaviour of subordinates is different from the targets of the organization, it might result in dysfunctional behaviour. By considering human behaviour, Soebaroyen (2005) argued that if managers participate in the budgeting and evaluation process, and decision-making at different levels of management, participative budgeting may have dysfunctional effects, and that one such dysfunctional behaviour in the process of budget making is BS.

However, the relationship between BP and BS is possibly more complicated than it appears. Dunk and Nouri (1998) argued that BP would not have a direct impact on BS; instead it has an indirect impact through intervening variables and specific predictors. Horngren, Bhimani, Datar and Foster (2008) argued that the behaviour of managers can be influenced by the management control system (hereafter called MCS) in order to achieve organizational goals simultaneously. Furthermore, a MCS can reduce dysfunctional behaviour.

Soebaroyen (2005) mentioned that a MCS is a tool to control management, which has been put in place to guide the achievement of the company goals and efficiency. The behaviours that are related to orientation in the design of a MCS could support, monitor and inspire management to make decisions in order to control the activities that happen within the firm (Merchant, 1998). Cammann (1976) found that in the creation of budget slack, many subordinates defend their actions. According to Merchant and Van der Stede (2003), budgetary slack includes employees' response strategies who are stimulated to be free from the MCS that affect them. However, there is no need to use a MCS when all the employees of the organization work in the best interests of the organization. This is because, in many cases, employees do not want to do what is in the best interests of their organization. Hence, the management has to look for an alternative way to provide directions to the employees in order to stimulate the desired behaviour and prevent unwanted behaviour.

Simons (1995) defined a MCS as a system comprising procedures that are based on information that is used by managers to conserve or change the routine activities of the organization. The four levers of control implemented by Simons (1995) are: (1)

interactive control systems (hereafter called ICS) for the stimulation of organizational learning and to help in the creation of new approaches and action plans; (2) boundary control systems (hereafter called BCS), used for allocating boundaries on opportunity-seeking behaviour; (3) diagnostic control systems (hereafter called DCS) used for the control, investigation, motivation and reward of the achievement of specific pre-set targets; and (4) belief control systems (hereafter called BLFCS) used for encouraging the search for new opportunities.

According to the argument presented by Dunk and Parera (1997), managers have a common view that the association between the employees' participation in the process of budget setting and budget slack is the outcome of complicated procedures and a variety of factors. While testing the relationship between the participation of employees in the budget setting process and budget slack, they used budget emphasis, personal factors and information asymmetry as moderating variables. According to Baron and Kenny (1986), a moderating variable is one that impacts the intensity of the relationship between two variables. The major aim of this research is to examine the implementation of a MCS as a moderating variable and then to examine the direction and/or strength of the relationship between BP and BS.

Many management accounting studies have analysed the control system, most of these studies have considered a single control system (Ittner & Lucker, 1998). Nevertheless, Otley (1980) adduced that the management control system package (hereafter called MCSP) is composed generally of multiple control systems that work together. When the various elements of a MCS work together to achieve targeted objectives of an organization it means that the MCS is a MCSP (Bedford, 2006).

Malmi and Brown (2008) presented three reasons why studies on MCSs are important. Firstly, they do not work alone; secondly, learning a MCS individually can influence any conclusion drawn if the use and impact of the new elements of the MCS are related to the operation of the whole existing MCSP. Thirdly, the focus of the MCS theory is the arrangement of the MCS to obtain the desired results.

In this research, the MCS is applied as a package using Simons' levers of control in the budgeting process. The reason behind the use of Simons' (1995) levers of control framework is that it prescribes information-based control practices, and can be applied in the investigation of how a MCS can be used to decrease budget slack. Rapiah (2011) contended that the strength of Simons' levers would not reside in each or only one element, but in how each individual element works efficiently with other elements when they are used collectively. Therefore, the objective of this study is to examine the relationship between BP and BS and the moderating effect of MCS on such relationship.

1.1.1 Budget Scenario in Indonesian Manufacturing Firms

In the era of globalization, along with the progress of science and technology, the business world is progressing rapidly, triggering a struggle for competitive manufacturing firms to survive. The manufacturing sector in Indonesia, which is the leading economic sector, is also affected. Manufacturing firms in Indonesia play a significant role in this development due to their significant contribution to the economy (Badan Kebijakan Fiskal Indonesia, 2010).

In the last five years (2009-2013) manufacturing firms in Indonesia contributed an average of 25.5 per cent to the Indonesian economy growth making them the first ranking contributor (Nota Keuangan dan Rencana Anggaran Pendapatan dan Belanja Negara, 2014).

The growth of the Indonesian economy in 2009, 2010, 2011, 2012 and 2013 culminated in 4.6 per cent, 6.2 per cent, 6.5 per cent, 6.2 per cent and 6.3 per cent, respectively, and the manufacturing industry experienced growth at the rate of 2.2 per cent, 4.7 per cent, 6.1 per cent, 5.7 per cent and 6.1 per cent (Nota Keuangan dan Rencana Anggaran Pendapatan dan Belanja Negara, 2014).

According to the Badan Kebijakan Fiscal (2010), the simplification of the budget slack that affects the overrun production cost is the main reason behind the inability of the product to gain a competitive edge. The overhead cost of 33.4 per cent and raw material cost of 58.35 per cent, poses a substantial risk to the manufacturing sector, particularly when compared to other countries, such as China, where the overhead cost is only 17.1 per cent and the material cost is 39.9 per cent. In other words, the problem is the inability of manufacturing firms to decrease their cost of production to compete with their counterparts in China and other emerging countries. The other problem is the decreasing in production of technology, lack of export growth and poor labour-intensive. The third reason is the non-existence of support centres to help in the use of new technology and also to help local workers to produce products that are technologically advanced. Finally, because of the lack of human resources and the inability of the industry to apply foreign technology in the local industry, products and production scales. It can be inferred from the information above that manufacturing

firms in Indonesia have been unable to compete. If management accounting techniques (e.g., budgeting process) is not well managed in the manufacturing industries in Indonesia, it would lead to the possibility of the creation of budget slack by the managers or subordinates. In Indonesia, manufacturing firms use the dimensions of power distance on the organization's culture. The superior has absolutely authority to set the goals more subjectively, which is likely to lead to the superior interest in this particular situation. In addition, the dimension of power distance on the organization's culture is also implemented by manufacturing firms in the country (Hofstede 1980). Hence, absolute authority rests with the superior employees and they set the goals that are less objective and which are in their best interests.

A study by Ghozali (2005) shows the nature of the relationship between a principal (director) and an agent (manager) among 151 manufacturing firms listed on Bursa Efek Jakarta (Jakarta Stock Exchange). The study shows that in conditions where the goals set by the principal are less objective and are of interests of the principal, the principal push the managers to work hard until achievement of those goals. This pressure on the managers by the principal causes the managers to set a budget of greater value as compared to the employees' ability to achieve the objectives of the budget.

A number of researchers (i.e., Supanto 2008; Falikhatun 2007; Latuheru 2005; Gamal 2001) have studied the relationship between BP and BS in the Indonesian context. Their studies employed motivation and organizational culture, information asymmetry, environmental uncertainty, group cohesiveness, organizational commitment, budget emphasis, as moderating variables. According to Gamal (2001), the association among BP, information asymmetry and budget emphasis has a negative relationship to BS,

which seems to suggest that high levels of BP, information asymmetry and budget emphasis indicate decreased levels of BS.

Contrary to this, Falikhatun (2007) suggested that there is a positive and significant effect on the relationship between BP and BS, but that group cohesiveness and environmental uncertainty do not moderate the relationship between BP and BS. Latuheru (2005) used organizational commitment as a moderating variable in such a relationship and discovered that budget participation is linked to a reduced level of budget slack and increased the level of budget slack to managers with low organizational commitment.

1.2 Problem Statement

The concept of budgetary slack can be explained using the agency theory approach, where the agency theory approach stated that the practice of budgetary slack influenced by a conflict of interest between the superior and the subordinate. The conflict arises when each party seeks to achieve or maintain the level of prosperity that they needed. The agency theory explained that the phenomenon that occurs when superiors delegate authority to subordinates to perform tasks or authority to make decisions (Anthony & Govindrajan, 1988). An agent (subordinate) acting in self intersts, is capable of engaging in dysfunctional behavour. Since the agent attaches disutility to effort, the subordinates will attempt to create budget slack. Budget Slack is played in the area of uncertainty that lies between a superior's knowledge of specific situation and that possessed by his subordinate. According to Simons (1995) MCS defined as the concentrates on the formal procedures that will maintain and change the firms'

activities, where the changes will influence how individuals and groups in the firm behave towards their objectives. MCS can be used by superior to influence subordinate behavior (Birnberg, Tuvolic & Young, 1983). Thus, MCS is expected to moderate relationship between BP and BS.

Studies regarding the impact of BP on BS have shown a variety of results (i.e., Rachman, 2012; Nouri, 1994; Kristianto 2012; Kren, 1993; Sujana 2010; Merchant, 1985; Onsi, 1973). They found that managers have the opportunity to decrease the BS through BP in the budget setting process. Another studies by Ramdeen et al., (2007) and Maiga et al., (2007) examine the relationship between BP and BS. They pointed out that thre is an insignificant relationship between and managers' creation of slack. In contrast, other studies (Triana *et al.*, 2012; Lukka, 1988; Young, 1985; Afiani, 2010; Apriantini *et al.*, 2014; Maksum 2009; Chow *et al.*, 1988; Kim 1992) found that BP helps the managers to create budget slack. Similarly, Aprila Hidayani (2012), Onsi (1973), Camman (1976) and Magner et al., (1996) examine the relationship between BP and BS. They found that participation of the leaders provides them with an opportunity to participate in the budget process and leads to an increase in the BS.

These opposing findings indicate that the relationship between BP and BS cannot be a simple or straightforward relationship because of its dependence on a variety of other factors (Macintosh, 1985). A number of factors in the literature related to budgeting have emphasized the relationship between BP and BS. For instance, Young (1985) was more anxious about the role of risk aversion and asymmetry information; Macintosh (1985) and Nouri (1994) paid attention to organizational commitment and individual aspiration; Dunk (1993); Dunk and Parera (1997); Afiani (2010); and Kristianto (2012)

studied budget emphasis, information asymmetry and personal factors; Davila and Wouters (2005) stressed budget emphasis, Maiga *et al.,* (2007) examined fairness perception, trust and goal commitment; Adnan and Sulaiman (2007) researched the concepts of culture and religion; Maksum (2009) studied environmental uncertainty and personal character; Sujana (2010) focused on budget emphasis, organizational commitment, information asymmetry and environmental uncertainty; Rahman (2012) studied the part played by organizational fairness, managerial trust and budget goal commitment, and, more recently, Soenarno and Oktorino (2013) focused on budget emphasis, fairness perception and managerial trustworthy behaviour. The emphasis on a variety factors on the relationship between BP and BS has led to inconsistent results. Some of the reasons given for the contradictory findings are as follows: Schiff and Lewin (1968); Brownell (1982); and Young (1985), and Lukka (1988) reached the conclusion that a greater level of participation can become the reason for pressure from the society that provides subordinates a chance and the drive for the creation of budgetary slack. Onsi (1973) presented the argument that BP causes a decrease in the willingness of managers for the creation of BS. Cammann (1976) stated that BP has a significant impact on the reduction of dysfunctional behaviours, including BS. Govindarajan (2007) suggested that the conflicts in the previous studies could be resolved by environmental uncertainty. He found that higher involvement decreases the probability of the creation of budget slack in situations where environmental uncertainty is high. Cyert and March (1992) stated that budget slack has the capability of tolerating ups and downs in conditions of environmental uncertainty.

Another conflict in prior studies is on the role of privately held information. For example, Baiman and Lewis (1989), Chow *et al.,* (1988), and Dunk and Perera (1997)

argued that with high levels of information asymmetry and budget emphasis, subordinates attempt to negotiate BS. However, Young (1985) found no significant differences in the amount of budgetary slack between subordinates with private information and those without. Dunk and Nouri (1998) argued that BS creation depends on a complex set of variables and relationships, and that budgetary participation is one of the factors.

The inconsistent evidence from the previous studies became a source of motivation for Van der Stede (2000) who discovered that strategic units, which make use of differentiation strategy, or those that had been more profitable in recent years, were less rigid in budgetary controls, which increased the chances of the creation of slack. Stevens (2002) found that the creation of BS might be influenced by ethical and reputational concerns, and Huang and Chen (2009) concluded that the BS might be created by the attitude of managers towards the budget making process.

In attempting to reconcile the inconsistent results this study revisits the relationship between BP and BS and suggests that if MCSs are considered as a package, it might resolve the conflicts among the findings of the previous studies. In previous studies, the elements of MCSs are used individually as a variable in the relationship between BP and BS. Many studies on management accounting that investigate control systems focus on only one control system (Ittner and Lucker, 1998). However, it is well accepted in the literature that control systems are interdependent (Merchant & Otley, 2007; Otley, 1999). Consistent with this, Simons (2000) stated that an effective control system will be attained if all four control systems (ICS, DCS, BCS and BLFCS) are working together as a MCSP. Based on these arguments, the current study predicted that a MCSP

can help to solve the inconsistent results of the relationship between BP and BS. Finally, it is hoped that a MCSP would reduce the dysfunctional behaviour of managers. BS is a dysfunctional behaviour and is a negative paradigm (Soebaroyen, 2005, Harris & Elmasari, 2011). In addition, Davila and Wouters (2005) stated that in BS, the managers must not engage in dysfunctional behaviour.

In Indonesia manufacturing firms contributed an average of 25.5 percent to the Indonesian economy growth (years 2009-2013). Product of Indonesian manufacturing firms unable to compete with international market due to several factors. The simplication of the budget slack that affects the overrun production cost is the main reason behind the inability of the product to gain a competitive edge (Badan Kebijakan Fiskal Indonesia, 2010). Manufacturing firms in Indonesia use dimensions of power distance where the superior has absolutely set the goals that are less objective and in their best interests. The hight level managers stresses the low level managers to work for the achievement of the goals. This pressure causes the managers to set a budget of greater value (Ghozali, 2005). So there is a need to have a system to cater the possibility of the creation of budget slack.

To cater the possibility of the creation of budget slack some researchers such as Chong and Ferdiansah (2011) suggested that MCSs could help a firm to reduce BS as dysfunctional behaviour. This is consistent with Hongren (2008) and Van der Stede (2003), who stated that dysfunctional behaviour could be reduced by implementing a MCS. In addition, MCSs can be used to manage behaviour (Langfield & Smith, 2007). The elements of a MCS as a package that consists of ICS, BCS, DCS and BLFCS (Simon, 1995; Widener, 2007), provide a comprehensive package to reduce the

dysfunctional behaviour of the managers. Thus, based on the agency theory the current study examines the moderating effect of a MCSP on the relationship between BP and BS.

1.3 Research Questions

The research questions of this study are as follows:

1. What is the relationship between budget participation and budget slack
2. What is the moderating effect of MCS elements (ICS, BCS, DCS and BLFCS) on the relationship between budget participation and budget slack?
3. What is the moderating effect of MCSP on the relationship between budget participation and budget slack?

1.4 Research Objectives

Generally, the objective of this study is to assess the role of MCS on the relationship between BP and BS. This study seeks to identify whether the MCS and each of its elements moderate the relationship between BP and BS. The moderating effect occurs when the level of a third variable influences or affects the degree of the relationship between two variables. Four elements of MCS, i.e., ICS, BCS, DCS and BLFCS, are examined to determine whether they have a significant influence on the relationship between BP and BS in the manufacturing sector.

Specifically, the research objectives are:

1. To examine the the relationship between budget participation and budget black.

2. To examine the moderating effect of MCS elements (ICS, BCS, DCS and BLFCS) on the relationship between budget participation and budget slack.
3. To examine the moderating effect of MCSP on the relationship between budget participation and budget slack.

1.5 Significance of the Study

The significance of the study is justified based on its significance to its theoretical, and practical contribution. From the literary point of view, a number of studies have researched the effect of BP in the budget setting process on BS but the results are not consistent. As contended earlier, other factors could be responsible for the relationship between BS and BP. In an attempt to understand the relationship between the technical nature of the budgeting system and various other factors, the BS theory is largely based on behavioural accounting. The budget activity carried out in the organization involves many managers from various contexts, such as education, culture, religion, experience and behaviour. For the attainment of the organizational objectives and a reduction in dysfunctional behaviours, a MCS can be used to impact on the behaviours (Hongren *et al.*, 2008). From another perspective, employees try to ignore a MCS that will affect their performance (Merchant & Van der Stede, 2003).

This study, from the practical point of view, can help manufacturing organizations to reduce the dysfunctional behaviour of their managers in the budget making process through the implementation of MCSP. Specifically, in the case of manufacturing companies in Indonesia, this study involves a package control system to show the

efficiency of MCSP in the reduction of dysfunctional behaviour of the managers, more precisely, manufacturing firm managers in Indonesia.

1.6 Scope of the Study

The focus of the study is on the moderating effect of MCS as a package and each element on the relationship between BP and BS. The four elements of MCSP, as discussed earlier, are ICS, DCS, BCS, and BLFCS.

The study focuses on all Indonesian listed manufacturing firms on the Main Board of the Jakarta Stock Exchange in Indonesia with complete information provided by functional managers, i.e., the financial and accounting managers, production managers and marketing managers, as respondents of the study. This research choose functional managers belong to three different areas of operations because all them are involved in the budget making process. In addition, most of the manufacturing firms have all of three functional managers.

The main foundation of this research is the information gathered from mail surveys. The data for the study are based on 140 usable responses from the survey. The data are cross-sectionally based on the year 2011, which was chosen as it was the last year in which all published yearly reports were available at the time of collection.

In the investigation of the direct relationship between BP and BS, the agency theory is used to hypothesize and explain the relationship.

1.7 Definition of Key Terms

Below is a list of the terms used in this research:

1. *Budget Participation (BP)*: the involvement of top managers and subordinates in the preparation of the budget, which has an impact on the objectives of the budget (Milani, 1975).
2. *Budget Slack (BS):* can be described as underestimating the revenues and the abilities for maximum production and intentionally overestimating the costs (Dunk 1993; Dunk & Nouri, 1998).
3. *Management Control System Package (MCSP*): a system by which management uses various controls as a package to protect the employees' behaviour in order to make sure that employees are giving the best possible performance for their organization (Simons, 1995; Widener, 2007).
4. *Interactive Control System (ICS):* is a system that addresses the needs of all employees so that attention can be given to the issues highlighted by the interaction system, which helps the organization to integrate several employees with different sets of information related to the practices of the organization (Simons, 2000; Widener, 2007).
5. *Boundary Control System (BCS)*: a system that communicates the code of business conduct for the prevention of wastage of resources by the employees and from seeking continual improvement beyond optimal and timely solutions (Simons, 2000; Widener, 2007).
6. *Diagnostic Control System (DCS):* a system that allows management to oversee and appreciate the target that has been set before by reviewing the actual performance (Simons, 2000; Widener, 2007).

7. *Belief Control System (BLFCS):* a system to communicate formal core values in order to inspire employees to search and discover new opportunities and to match their behaviour to the desired outcomes (Simons, 2000; Widener, 2007).

1.8 Organization of the thesis

The main focus is the examination of the relationship between budget participation and budget slack by introducing MCSP as a moderator to explain the relationship.

Chapter One starts with the background of the study and budget scenario in Indonesia. The discussion elaborates on the need to include a moderator in the relationship to further understand why such a relationship exists. This discussion then leads to the problem statement, research questions, research objective, significance of the study, scope of the study, definition of key terms and organization of the study.

All the important theories related to this study are included in the literature review in Chapter Two. This chapter explains various models of MCS and dimensions of MCSP. This chapter also reviews some empirical studies on BP and BS; BP, ICS and BS; BP, BCS and BS; BP, DCS and BS; and BP, BLFCS and BS.

Chapter Three explains the theoretical framework of the study. It gives a detailed description of the dimensions of MCSP on the relationship between BP and BS, followed by the hypotheses to establish the relationship.

The focus of Chapter Four is the research methodology and design used in this research. It also describes the design of the questionnaire, the operational definitions of each variable, and the analyses used to empirically test the model.

The outcomes of the research are presented in Chapter Five, which is divided into two distinct and important parts. The first part contains factor analysis, validity, reliability, response rate and non-response bias test, while the second part explains the results of regression analysis to examine, the relationship between BP and BS and the moderating effect of MCSP and each element on the relationship between BP and BS.

Chapter Six discusses the results of the study. Then it continues with the implications of the research, limitations of the research, avenues for future research and the conclusion.

Chapter Seven draws conclusions about the study's results.The chapter also discusses contributions and limitations of the research. In addition, opportunities for further research are also outlined in this final chapter.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

In this chapter, the theoretical and fact-based literature are reviewed, as well as the basic concepts on which the relationship between budget participation (BP) and budget slack (BS) is drawn. The literature reviewed in this chapter is based primarily on the relationship between BP and BS by the moderating effect of the management control system (MCS), and comprises six main sections. The introduction is presented in section one. BP is described in section two. In section three, BS is explained. Section four includes a discussion on BP and BS. Section five concerns the characteristics of MCSs. Section six concludes with a brief summary of the relevant literature reviewed in this chapter.

2.2 Budget Participation

A budget is a management tool, which is acknowledged for its capability to provide support for economic entities in terms of efficiency, appropriateness and economy (Tănase, 2013). It is used to create favourable conditions for firms to enable them to achieve their objectives and goals in the way they want to in the global dynamic environment (Huang *et al.*, 2009).

In general, the term 'participation' can be explained as a process that takes place inside an organization that encourages individual participation and impacts directly on the employees (Dakhli, 2009; Shield & Shield, 1998; and Brownell, 1982). Young (1985)

argued that participation is a process in which the type of reward is selected by the manager, and the value for each and every indicator in the agreement is allocated by the employee himself.

Participation in budgeting is valuable because it allows superiors to elicit managers' private information. At the same time, participative budgeting also provides managers with economic incentives to build in budgetary slack during budgeting to increase their resource allocations. As a result, organizations often implement budgeting that limits managers' influence on their approved budgets to constrain built-in budgetary slack (Gallani, Marinich, Krishnan and Shields, 2015)

According to the accounting literature, BP in a budget setting is important. Two gains stem from the participation of middle and lower level managers in the budget process. Firstly, it promotes the exploitation of the knowledge of subordinates in their field of specialization into the decision-making process, which eventually leads to decisions of high quality. Secondly, it helps to make necessary information available to middle and lower managers to facilitate cooperation with their superiors and other departments (Eker, 2008).

In the context of the budgeting process, the best approach to BP is the preparation approach in which all levels of management in the company are involved in budget preparation (Anthony & Govindarajan, 1998; Gerrisons *et al.,* 2006). However, empirical evidence shows both positive and negative features that are linked to BP. Some studies, such as that of Krishnan, Marinich and Shields (2012), found that the impact of literature that is based on logic and facts is either beneficial or detrimental to

organizations. In addition, the theory-based models and logical research on participation in decision-making suggest that a greater level of participation is preferable compared to a lower level of participation (Leach-Lopez *et al.*, 2007). In other words, BP concerns the involvement of the top managers and subordinates in the process of determining resources for their jobs and is significant in accounting literature. There is a concern about determining the effects of BP on the performance of the subordinates (Eker, 2006).

Several studies, like Milani (1975), Anthony and Govindaranjan (1995), Kenis (1979), and Shields & Shields (1998), acknowledged that BP is centred on the managers' involvement in the process of drawing up a budget and its impact on the process of decision-making. Two dimensions of participation are shown: the ability for the provision of input in budgeting, and the ability to impact on the final budget. The demand for participative budgeting is fully supported by the needs to have adequate budgetary support need (Nouri & Parker, 1998). In order to encourage information sharing within the organization, BP can be used (Agbejule & Saarikoski, 2006; Parker & Kyi, 2006; Lau & Tan, 2006) as well as for good returns (Charlos & Haka, 1989).

BP is expected to increase the performance of managers. It is based on the premise that when a goal or standard is designed in a participatory manner, the employee will internalize the goals or standards established, and have a sense of personal responsibility to achieve it. Internalization of organizational goals by managers will increase the effectiveness of the organization, thus the potential conflict between individual goals and organizational goals can be reduced or even eliminated.

BP is a process that can be used for planning and goal setting when there is environmental uncertainty, for motivating subordinates when there is task uncertainty, and for coordinating interdependence when there is task interdependence (Shields & Shields, 1998). BP is the main solution to the dysfunctional effects of budgeting (Argyris, 1952). Facilitating communication between managers and superiors is one of the most important reasons why companies use BP (Parker & Kyj, 2006; Shields & Shields, 1998). Research carried out by Parker and Kyj (2006) found that upward communication (from managers to superiors) during the budgeting process has a positive and significant association with BP.

Ahmad (2005) claimed that there are five advantages to BP when the subordinate managers participate in those aspects of the budget that are relevant to their duties. These include: (a) motivation for the achievement of objectives, (b) reduction of information asymmetry, (c) improving control and communication, (d) reduction of dysfunctional behaviour, and (e) better reward management.

When this classification is taken into consideration, motivational and informational dimensions of budgetary participation are observed. In achieving targets, management that rewards and decreases dysfunctional behaviour is related to the motivational dimension while management that decreases information asymmetry and improves communication and control is related to the information dimension. Through these advantages, budgetary participation helps improve performance by assisting managers not only in ensuring organizational motivation but also in enabling better communication and control (Shield & Shield, 1998). Although this method offers many

advantages, it also contains weaknesses. The disadvantage lies mainly in the possibility of BS.

2.3 Budget Slack

Even though the notion of budgetary slack had been discussed since 1953 by Aygris, the issue of budgetary slack is still of researchers' interest and being debated in the literature. (e.g. Church, 2012;Yang et al., 2009; Maiga & Jacobs, 2008). Definitions of BS are multiple, but they all share common ground. BS is the tendency of the managers to under-estimate profits and abilities to perform productively and/or overestimate the resources that would be required for the completion of a particular task of the budget (Dunk & Nouri, 1998; Harvey and Ellen, 2012; Hobson *et al.,* 2011; Kilfoyle & Richardson, 2011; Tay Su & Ling Lin, 2002; Schiff & Lewin, 1970). Therefore, BS is the unjustified resources and efforts invested in activities with respect to their actual role that influences the achievement of organizational goals (March 1988).

According to Merchant (1985), BS is an exorbitant value in the budget required for a certain field. He claimed that managers use slack for arbitrary goals or as a shield against future difficult situations. He also drew attention to the fact that the creation of BS by managers can be done through the budgeting system of the organization. A well-known kind of slack takes place when managers 'seek to achieve high targets'. In other words, targets that are intentionally less when compared to their best future prediction (Merchant & Van der Stede, 2007; Lukka, 1988).

BS is the situation in which the achievement of revenue, budgeted cost or volume of production is easier than their estimated future outcomes and operating situations

(Anthony & Govindarajan, 2001; Little *et al.,* 2002; Nouri, 1994). Anthony and Govindarajan (2001) stated that decision-makers within an organization are usually requested to present estimates to be implemented in the budget process. Superiors can put forward overestimates and have an advantage when creating slack within their unit's budget. This indicates the superiors' self-interest. They try to sustain their department's performance outcome that is relevant to the budget, making their compensation lean towards sustaining the budget. Therefore, their expectation of compensation is to receive a bonus (Dunk, 1993; Merchant, 1985; Nouri, 1994; Onsi, 1973).

Otley (1985) stated that BS has either a positive or negative effect. If managers underestimate the income or overestimate the expenditure, there will be a positive slack. Negative slack, on the other hand, takes place when managers overestimate the income or underestimate the expenditure. Positive slack usually occurs in harmony with the nature of BS; hence, positive slack is more common compared to negative slack. Different justifications stand behind positive slack, including managers who work with a kind of reward ground, so the availability of positive slack in their actual budget can lead to easier achievement of objectives.

The debate on whether BS is positive or negative in nature is ongoing. Dunk and Parera (1997) are of the view that positive slack has a favourable impact because it makes the managers flexible so that they can deal with uncertain conditions in the environment and unexpected costs in the financial year. In addition, positive slack causes the creation of a more stable budget in times of economic downturn because the average value of the underestimated income can be compensated by the average cost of the sudden decrease in revenue (Rodgers & Joyce, 1996).

Schiff and Lewin (1970) presented an argument that managers will follow a process of overestimation of revenues in order to create a budget compared to the amount they spend in a bid, and present revenue less than the amount that could be obtained to ensure easy attainment of the budget goals. Over time, the amount of slack changes and alters between firms. Schiff and Lewin (1970) argued that slack might be responsible for 20–25% of the operational expenses allocated to a division's budget. Schiff and Lewin also argued that the kind and level of slack rely on the implementation of the type of MCS. They concluded that most organizations, whether centralized or decentralized, practise BS.

Welsch, Hilton and Gordon (1988) demonstrated examples of BS and the causes of its occurrence, as follows:

1. The expectations of budget revenue are underestimated. Therefore, managers can be sure to surpass the sales; there is no way to find fault with the budget.

2. Overestimating expenses. In this case, managers have extra money in hand and disburse a reduced amount compared to the budget so that it looks more appealing to the management.

3. Asking for more cash than required. Hence, certain losses will go unaffected for the managers and they will not be asking for more cash in order to compensate for those losses.

4. Prior to the end of the budget period, and if there is a surplus of funds, managers obtain approval for unnecessary expenditure because if managers do not dispose of this surplus, it will not be allowed in the next period.

Some researchers concluded that motivations for managers to build slack in their budgets are: (a) to absorb uncertainty because it provides a freedom from short-term commitment that can be useful in dealing with a lack of predictability (Merchant, 1985); (b) to provide more (operational) flexibility: the creation of more slack resources supports the exploitation of market opportunities and is a source of funds to experiment with product innovations (Van der Stede, 2000; Lukka, 1988); and (c) to make sure budgets will be achieved and related targets will be met (Merchant & Van der Stede, 2003) to simplify performance achievement (Lukka, 1988).

Budgets are usually cut during higher-level reviews, which is why budget makers create slack. Hence, it should be noted here that a rational circular situation gives rise to BS. BS is usually reduced due to the fact that slack has been included and various managers also tend to create BS to satisfy personal aspirations in 'good years', and, subsequently, convert it into profit during the 'bad years'. Hence, BS provides managers with a hedge against unexpected adverse circumstances.

Soebaroyen (2005) asserted that BS is one of several dysfunctional behaviours in the budget process. BS is a negative paradigm and is usually associated with dysfunctional behaviours, achievement of budget targets without much effort, unethical behaviour, ineffective resource allocation and unreliable information. In more precise terms, dysfunctional behaviour leads to managers experiencing negative feelings towards their

superiors, due to their perceptions of the uselessness and inadequacy of the budgeting process (Soebaroyen, 2005). Consequently, dysfunctional behaviour appears to have been conceptualized in a restricted way that is principally associated with BS (Brownell, 1981). Onsi (1973) stated that the dysfunctional behaviour of BS depends on the factors contributing to it, and that, by knowing these factors, control could be established to reduce the dysfunctional behaviour of BS.

2.4 Management Control Systems

MCSs provide information to managers to assist them in making decisions according to their plans and objectives. There are several definitions of MCSs given by previous authors, such as Anthony (1965), Simons (1987, 1990 and 1995), and Anthony and Govindarajan (2001). All definitions are discussed below.

2.4.1 Definitions

Control is a very ambiguous term, which has a different meaning in different contexts and is very difficult to define precisely (Schaltegger *et al.*, 2003). Prior research, such as Anthony (1965), found systematic differences between control at the corporate level, management level and operational level. However, according to Simons (1987, 1990), the control system is vital for both the structure of the firm and for strategy implementation.

MCSs are a process by which managers ensure that resources are obtained and used effectively and efficiently in the accomplishment of the firm's objectives (Anthony, 1965). However, Anthony's perception is questionable and outdated because it is too

restrictive concerning the procedure meeting the objectives. He visualizes the method used to control the process as being highly dependent on specific technology, while he ignores behavioural issues (Otley *et al.*, 1995).

The main objective of MCSs is to ensure the provision of information in a useful manner that can be used for decision-making, planning and evaluation (Widener, 2007; Merchant & Otley, 2007). However, the definition has been criticized as being incomplete because it disconnects operational and strategic control from management control.

Flamholtz (1983) focused on the aspects related to the behaviour of MCSs. He claimed that individuals and firms only share limited compatible goals that eventually result in an urgent need for control. Support for this behavioural viewpoint can be made by engaging managers in management control acting in order to ensure that employees do the best for the firm (Merchant & Van der Stede, 2003). Flamholtz *et al.*, (1985) defined MCSs as a behavioural process. They assumed that people at the individual and group levels in the firm would exhibit a particular behaviour that would lead to the achievement of objectives through four core control mechanisms, i.e. planning, measurement, feedback and validation reward. In other words, the management control's objective is to influence people in firms (such as employees) to function more efficiently to achieve the objectives of the firm.

The definition of MCSs by Simons (1987, 1990 and 1995) seems to be in line with the definition of Flamholtz *et al.*, (1985). Simons' definition focuses on procedures and systems that are more formal. His definition concentrates on the formal procedures that

will maintain and change the firms' activities, where the changes will influence how individuals and groups in the firm behave towards their objectives. The definition by Simons (1987, 1990 and 1995) is in line with Flamholtz *et al.,* (1985) because both emphasize how MCSs can enable individuals in a company to be more efficient in achieving the goals of the firm.

Simons (1995) defined a MCS as 'a prescribed and information-based system used by the management to maintain or modify routine organizational activities' (p 5). Simons (1995) introduced four key variables that must be used for controlling business strategy: belief control systems (BLFCSs), interactive control systems (ICSs), boundary control systems (BCSs) and diagnostic control systems (DCSs). Table 2.1 summarizes the characteristics of the four levers of Simons' (1995) control system.

Table 2.1
Characteristics of Four Levers of Simons' (1995) Control System

Lever of control system	**Objective**	**Characteristics**
Belief control system	Adapting to competitive environment	. Top management communicates through document, vision and mission statement. To inspire and guide searching and discovery for new opportunities . e.g., cultural controls
Boundary control system	Adapting to competitive environment	. Gives guidelines to limit the action . Based on business risk and opportunity seeking . e.g., procedure, policy

Table 2.1, continued

Lever of control system	Objective	Characteristics
Diagnostic control system	Implementing intended strategies	. Ability to monitor output . Performance measurement to compare standards and actual result . Ability to correct deviation from the standards. e.g., use budgeting as a control system
Interactive Control System	Adapting to competitive environment	. Enforcement of search and learning and emergence of new action plans. . Managers become part of the decision making activities of the junior employees both personally and regularly. . e.g., top management and personnel involvement

Source: Simons (1995)

Simons (1997) argued that on the basis of these viewpoints, any theory of management control can be investigated:

1. The degree of inclusion of variables in the theory that are of potential importance;

2. The degree of clarity of the relationship between control system variables and the achievement of organizational strategies; and

3. The degree to which the evidence is reliable and valid.

Almost all aspects in an organization belong to the overall control system (Simons, 2000; Merchant & Otley, 2007). Malmi and Brown (2008) introduced another definition for MCSs, namely, all such devices and systems are practised by managers

to ensure that the employees of the firm are following the goals and action plans of the organization; however, they prohibited the inclusion of decision-making systems. They also claimed that any system could be put in the category of MCSs, including budget or strategy scorecard. This definition of MCSs is more comprehensive than the definition given by Anthony (1965). They attributed this to the fact that the operation-based and strategy-based controls aimed at administering employees are included within the scope.

In a more comprehensive definition, Horngren *et al.,* (2008) defined MCSs as a tool that can be implemented by the management to impact on the behaviour of the managers so that the goals and strategies of the organization can be achieved effectively. They also presented the argument that MCSs can be implemented for the achievement of organizational objectives and for the reduction of dysfunctional behaviour.

Chong and Ferdiansah (2011), and Langfield and Smith (2007) suggested that MCSs can be used to help firms reduce dysfunctional behaviour, such as BS; they have an impact on the behaviour of management with reference to organizational resources and in implementing organizational strategies. On the basis of the above discussion, the current study uses the definition of MCSs inspired by Flamholtz *et al.,* (1985), Simons (1987, 1990, 1995), Horngren *et al.,* (2008), Chong and Ferdiansah (2011), and Langfield and Smith (2007).

Sandelin (2008) argued that earlier literature is rich in conceptual models for studying MCSs as a package. Thus, various points of view are available with respect to the fact that one conceptualization gives a better model for the study of MCS packages

(MCSPs) than another. Many researchers and theorists have increasingly admitted that in order to comprehend the design and implementation of MCSPs, MCSPs have to be regarded as operating together (Fisher, 1998; Langfield-Smith, 2007; Otley, 1999; Malmi & Brown, 2008). Bedford (2006) presented the argument that the organizational objectives can be met by making use of MCSPs. In light of this argument, Fisher (1998) stated that if the interactions between the control system elements are not appropriate, then a MCSP may not fulfil its expected functions, i.e. the MCSP might not be able to impact on the behaviour as intended.

There are three reasons why MCSPs are important according to Malmi and Brown (2008). Firstly, MCSPs do not function alone; secondly, the learning of MCSPs at the individual level can have an impact on any inference drawn, most especially if the use and impact of the new elements of the MCSP are associated with the operation of all existing MCSPs; and, thirdly, the MCSP theory pays more attention to the design and implementation of MCSPs to obtain the desired results.

2.4.2 Various Models of Management Control System Packages

There are three pioneering models in earlier literature on MCSPs. The first is Simons' model (2000) in which the control elements consist of an ICS, BCS, DCS and BLFCS. Merchant and Van der Stede (2003) developed the second model in which control elements include results control, action control, personel control and cultural control. The third model is by Malmi and Brown (2008) in which the control elements consist of planning, cybernetic, reward and compensation, administrative and cultural controls.

Following the three models, the outline of each control element and its key systems are prepared. Since this study is based upon the typology presented by Simons (1995), the limitations and problems of the abandoned frameworks as well as the advantages of the selected ones are discussed.

2.4.2.1 Merchant and Van der Stede's Model Framework.

The group of control practices consists of results controls, action controls, personel controls and cultural controls (Merchant & Van der Stede, 2003). Results controls are an unintended form of control because they impact on the practices of the employees by creating a link between the rewards and the desired results. Merchant and Van der Stede (2003) consider that results controls are an essential resource for empowering the employees because they provide authority to the employees. The main reason for the allocation of authority is that employees should be considered responsible for the results produced by themselves instead of the actions taken by themselves. Hence, it can be said that results controls have no effect on the actions taken by employees; instead employees pay more attention to the results they produce as a consequence of those actions. In this way, results controls provide motivation to employees to take actions that produce desirable results.

The basic purpose of action controls is to make sure that employees perform in a way that is most desirable for the organization. The extent of the effectiveness of the managers' actions depends on how much information the managers have about the desired actions and how much they make sure that they practise those actions. For the implementation of action controls, managers should have knowledge about the actions

that are beneficial to the organization and which help in the achievement of organizational objectives.

There are three basic purposes of personnel controls along with three major methods of implementation. Firstly, personnel controls make the expectations of the organization clear to the employees. Secondly, they make sure that each and every employee has the capability (such as experience and intelligence) and resources (such as information, time) to perform the job well. Thirdly, they increase the probability of self-monitoring by the employees (Merchant & Van der Stede, 2003).

Merchant and Van der Stede (2003) also presented the argument that while self-controls increase the probability of self-monitoring by the employees, cultural controls promote mutual monitoring. Because an organisation's culture is based on shared traditions, norms, beliefs, values, ideologies, attitudes and ways of behaving, a strong group pressure is exerted on the employees who do not perform accordingly. It is proposed that to shape the culture of the organization, a proper tone is needed from the top, which can be easily observed from the statements and behaviours of managers.

2.4.2.2 Malmi and Brown's Framework

The framework of Malmi and Brown (2008) includes five types of control: (1) planning, (2) cybernetic, (3) reward and compensation, (4) administrative, and (5) cultural controls.

Malmi and Brown (2008) divided planning controls into two domains: action planning and long-range planning. Action planning gives more attention to tactics and plays its role in the determination of goals and actions for the future (usually a twelve-month

period). Long-range planning pays more attention to strategies and its focus is more inclined towards a medium and long-term period.

Malmi and Brown (2008) also emphasized that depending upon the kind of use; a cybernetic system can either be a decision support system or a control system. Hence, they are of the view that a cybernetic system can be considered as an information system to support decisions because of its ability to link behaviour with the achievement of targets and the establishment of accountability for performance variations.

Reward and compensation controls have the basic purpose of motivating the individuals and groups within the organization so that a link can be created between the rewards and the achievement of goals. The argument is that the reward and compensation systems can be used to control employees' efforts and direction, effort duration and effort intensity.

There are several reasons why organizations provide rewards and compensation, i.e. not all rewards and compensation are related to cybernetic controls. Organizations might want to use rewards for employee retention. Hence, the consideration of 'alternative reward and compensation schemes, their intended purposes, and their links to various controls' is important.

Accordingly, in providing direction for employee behaviour, there are three groups of administrative control systems that are considered important; organizational design and structure, governance structure as well as procedures and policies. Organisational design and structure also act as control systems through the organisation of individuals and groups in such a way that particular contacts and relationships are encouraged by both of them; they provide an enabling environment to the employees to behave in a

certain way. They also emphasized that since it is possible to modify the structure and design of the organization from the perspective of the managers, they can be classified as control systems rather than contextual variables.

Three aspects of cultural controls are suggested: (1) value-based controls, (2) symbol-based controls, and (3) clan controls. Value-based controls have their foundation in Simons' (1995) belief systems, whose intention is to communicate core values, which are derived from the company's business strategy. Accordingly, behaviour is affected by values through a three-way process. The first level is related to the intentional recruitment of those individuals who have brought their values in line with the company's values. The second level is about individuals who are socialized so that their values can be changed and made to comply with organizational values. In the third level, values are overtly communicated and employees behave according to them even if they do not believe in them personally.

2.4.2.3 Simon's Framework

In the present literature on management accounting, the control framework of Simons (1990, 1991, 1995, and 2000) is a widely used framework. Four control systems comprise the framework: (1) interactive, (2) boundary, (3) diagnostic, and (4) belief systems. Simons (2000) emphasized that the achievement of an effective control environment is related to the integration of all four levers of control, since the strength of these levers lies in the way they work together and not in the way they work individually. A dynamic tension is created as a result of the interplay of these four levers. Tension is created by four levers in that two of the levers (the belief and ICS) are responsible for the creation of positive energy, while the remaining two levers are

involved in the creation of negative energy (Simons, 1995). In other words, in order to address the organizational need for innovation, belief and interactive systems are used and for the achievement of organizational objectives, diagnostic and boundary control systems are used (Simons, 1990, 1991, 1995, 2000). These levers of control are extensively discussed in the following section.

2.4.3 Discussion on the Presented Framework

The objective of control framework proposed by Merchant and Van der Stede (2003) is relatively similar to the typology of Malmi and Brown (2008). However, there are three main differences that deserve consideration.

Firstly, planning is considered by Malmi and Brown (2008) as a separate type of management control, while Merchant and Van der Stede (2003) classified planning (as well as budgeting) as a subtype of financial result control. Malmi and Brown (2008) argued that planning is independent of any link with finance as an MCS; they considered strategic and operational planning as part of management controls, since they are effective enough in providing direction for the actions of people. Irrespective of this difference, none of these frameworks considers planning as a way to provide direction for the behaviour of employees, which is in contrast to Fisher (1998), who argued that control can be separated from the aspect of planning. Simons (1995), on the other hand, presented the argument that strategic planning can never be considered as part of an ICS because its main focus is on strategy implementation, which is rather integral to DCS.

Secondly, a broader conceptualization of administrative controls is available to managers, including organizational structure, which has usually been considered as a contingent variable by previous research on MCSs (Rapiah, 2011). In addition, only one of third of Malmi and Brown's (2008) available administrative controls is represented by Merchant and Van der Stede's (2003) action controls (namely behavioural constraints, pre-action reviews and action accountability).

Thirdly, the structures organize the control systems of an equivalent nature under different groups of controls. Personnel controls are a separate group of controls (Malmi & Brown, 2008). Depending on the aim of training, these would include selection under cultural controls; placement and job design under administrative controls; and training under both cultural and administrative controls.

It should be noted that the framework of Simons (1990, 1991, 1995, and 2000) places more emphasis on the distribution of management attention among the control systems and the different types of control system available for senior management. The difference between diagnostic and interactive systems is related to the way the control systems are implemented by senior management. Simons is of the view that the use of a particular MCS can be made either diagnostically or interactively. Since one of the major aims of this thesis is to examine the forms in which MCSPs are implemented in practice, a wide conceptualization in terms of various management control devices and systems is provided by Simons. When addressing the reduction in BS, Simons' framework is most suitable for MCSP studies.

This study based the MCS package on the study of Simons' levers of control. The present study adapted Simons' levers of control framework (1995) because:

1. The framework concentrates more attention on the prescribed, information-based control practices and could be useful in the reduction of BS under the effect of a MCS.
2. Allow more than a single form of control to be evaluated.
3. Simos' instrume4nt covers a broader range of documents and forms of controls than other available instruments such as Merchant and Van der Stede (2003) and Malmi and Brown (2008).
4. The strength of Simons' levers does not lie in each individual element and one could say it depends on the complementary working of all the components (Rapiah, 2011).

2.5 Dimensions of Management Control System Packages

A brief introduction of Simons' (2000) levers of control and their integral systems is presented below.

2.5.1 Interactive Control Systems

Simons (1995) defined an ICS as a system that the managers implement for the personal involvement of the junior employees in the decision-making process. ICSs are different from DCSs in four ways. Firstly, they give more attention to the inconsistent information, which is considered by the senior managers to be strategically important. Secondly, the information could be considered as important enough to receive orderly attention from functional managers at entire levels of an organization. Thirdly, the data

from the interactive system can be best described and discussed during the meeting among supervisors, subordinates, and peers in the organization. Fourthly, the current debate about the essential data, hypotheses and action plans considers ICSs as a driver. Simons (1990) argued that top management would share their knowledge to motivate firms to learn and to create new strategies and new ideas.

Hence, the use of new knowledge can assist managers to become active participants and monitors in the decision-making activities of the junior employees and will make the MCSs more interactive. Thus, this study argues that information asymmetry is represented by an ICS, in which managers participate in the decision-making activities of the subordinates, both personally and continuously.

Simons (1990, 1991, 1995, and 2000) claimed that managers usually focus on ICSs, and, therefore, are personally engaged in them. This marks the necessity for all managers to pay more attention to matters targeted by the interactive system, i.e. matters of strategic importance. This procedure is more likely to reinforce active, positive and continual dialogue and discussion of strategic doubts. Hence, ICSs are vigorous in managerial culture and, ultimately, the evolution of new strategies.

A MCS is a 'system' that typically provides feedback to managers at various stages so that appropriate action can be taken based on the data or information provided to meet the objectives. Information sharing between superiors and subordinates is one of the major purposes of BP (Shields & Shields, 1998). This entails subordinates to disclose information in their possession.

Certain accounting researchers are of the view that some subordinates have private knowledge with respect to their functional areas (Baiman, 1990; Shields & Shields, 1998). The knowledge is considered to be confidential and the superiors can only gain access to this knowledge by having information about some important expenses. The space of private information is linked to information asymmetry between the superior and the functioning area of the subordinate. Through BP, this private knowledge might be disclosed by the junior employees, which, in turn, will increase the performance and economic gains of both the employees and the organization (Cristensen, 1982; Baiman & Evans, 1983; Penno, 1984; Young, 1985; and Nouri & Parker, 1998).

When information asymmetry between superiors and subordinates is high, it is expected that the organization will encourage BP in an attempt to obtain private information about subordinates (Shields & Young, 1993). In their sample of controllers at large organizations, they pointed out the important correlation between information asymmetry and BP. The following material elaborates upon the work of Shields and Young (1993) that promotes the correlation between a high imbalance of information and BP. This tendency is promoted by senior managers to obtain information kept by the juniors.

According to the agency theory, information asymmetry may alter the influence of participation in creating slack in budgets. Baiman and Evans (1983), Penno (1984), and Coughland and Smith (1985) argued that information asymmetry arises when subordinates keep information that has an influence on the decision-making between superiors and subordinates. Baiman (1982), Chow *et al.*, (1988), Blanchard and Chow (1983), and Waller (1988) stated that in certain organizations, more reliable information

related to performance measurement is kept by the junior employees as compared to their seniors. Therefore, Baiman and Evans (1983) proposed that when subordinates in some organizations keep such information, participation-oriented MCSs allow the junior employees to reveal that information or transfer it; later on, this information is used to make standards to monitor their performance.

Merchant (1997) argued that personal control permits firms to ensure that personnel can commit and direct their behaviour towards the firms' objectives and thus lead to improved performance. BS is used in the meetings between managers and top management to create an alignment between rewards and budget. One reason behind the setting of high budgetary targets is that rewards are attached to the achievement of those objectives (Merchant & Anzoni, 1989). If the advantage of information lies with the manager then he can make use of that information for the negotiation of goals and creation of BS (Kirby *et al.*, 1991).

Furthermore, improving the performance reward and compensation systems can help firms to motivate managers or employees to achieve the goals of the organization (Bonner & Spinkle, 2002). Bonner and Spinkle (2002) also argued that increased efforts are related to the existence of rewards and benefits compared to the situations where rewards are absent. They reviewed the research and literature on incentives and performance and reached a conclusion that monetary incentives can lead to an increase in the efforts of individuals. Therefore, developing an incentives system can facilitate managers' commitment and involvement towards more interactive budget processing.

2.5.2 Boundary Control Systems

Simons (1999, 2000) explained that purpose of boundary system is to communicate specific risks to be avoided. The most basic business conduct boundaries are those that define and communicate codes of business conduct for all employees. Setting limitations for restricting opportunity-seeking behaviour is a well-known feature of MCSs. The boundary lever of control is an overt representation, in negative terms, of the organization's standards and definitions (Simons, 1995). The boundary process helps the exploitation of the resources of the organization by the employees by openly informing permissible and non-permissible practices. In addition, the boundary system informs the employees about things that they cannot practice (Simons, 2000). The objective behind this is to give freedom to employees to innovate, explore, create and achieve certain standards. The BCS is a system that contains the rules, restrictions and prohibitions, the code of ethics of the organization, strategic planning systems and budgeting systems.

Moreover, boundary processes seek to deter workers from misusing the organization's assets. They can restrict the employees' consistent demands for development away from ideal and good timing solutions; any MCS stipulates minimal criteria or guidelines for behaviour, and then the managers can utilize them as a boundary lever of control.

Other kinds of boundary, for example, can be organized by financial data to keep financial risk away from an organization. Non-financial data, on the other hand, refers to the strategic boundaries inside which managers are allowed to move (Tuomela, 2005). Because the efficiency of boundary processes rely beforehand on the

classification of agreeable and disagreeable activities, boundary processes act as 'the structure of last resort' (Speklé, 2001).

According to Simons (1995), the important role of BCS is to communicate risks to be avoided, enforce codes of business behaviour on employees and function as strategic boundaries outlining managers' search for innovative thoughts.

A boundary system outlines the agreed-upon rules of activity that are strategy-based for organizational participants (Simons, 1995). Simons also presented the argument that the basis of communication of boundaries is usually on codes of business conduct. The definition of budget emphasis by Hofstede (1968) is that it is the pressure exercised by superiors to acquire the stipulated budget figures before an accounting period. In other words, budget emphasis is a manager's tool to evaluate subordinates' performance (Ross, 1994). Lowe and Shaw (1968), in Linn *et al.*, (2001), claimed to have evidence that superiors would modify the forecasts of their sales budget so that the probability of achieving the budget can be increased and their personal interests can also be met. Subordinates create slack when high-ranking managers put pressure to achieve budget objectives; the slack is incorporated in the budget and reflected in both the cost and revenue amounts, the basis of communication of boundaries is usually on codes of business conduct.

Superiors attempt to ensure that subordinates are not involved in activities that could be a danger to the integrity of an organization or waste resources by means of projects or businesses that go against business strategy. This can be achieved by dictating codes

of conduct of a disciplinary nature as well as with rewards, hence BCSs are strongly related to budget emphasis.

Table 2.1 shows that BCSs (1) give guidelines to limit the action, and (2) are based on business risk and opportunity seeking. Examples of the two characteristics above are procedure and policy (Simons, 1995). Budget emphasis can be explained as a manager's tool to evaluate the performance of subordinates and to exert pressure to acquire the stipulated budget figures before an accounting deadline. When the budget is used as a measure of performance of subordinates in an organization, then the subordinates will try to improve their performance with two possibilities: Firstly, improve performance with the realization the budget is higher than previously targeted. Secondly, loosen the budget during the budget preparation. By loosening the budget, the managers of responsibility centres can generate BS. This means that budget emphasis is included as one of the elements of BCSs that are used to set standards for improving efficiency and creativity.

2.5.3 Diagnostic Control Systems

A DCS is a system based on information feedback whose goals have been set forth earlier (Anthony & Govindarajan, 2005). These previously determined goals are compared to the outputs; a significant variation is referred to the managers so that appropriate action can be taken. The diagnostic use of MCSs refers to an assessment of how many preset goals have been achieved (Abernethy & Brownell, 1999; Simons, 1995, 1999). Accordingly, MCSs are employed diagnostically to specify exceptions and diversions from plans.

Diagnostic procedures reflect the conventional use of MCSs, in which remedial procedures are followed due to the feedback obtained about performance (Fisher, 1995). The application of diagnostic actions is more than a compelling impact on the behaviour of managers, because the checking process brings problems into light and stimulates managers to attain their objectives, and, occasionally, through innovative means (Emsley, 2001; Ittner & Larcker, 1998; Kato, Boer & Chow, 1995; Norman, 2001). Simons (1995, 2000) suggested that a diagnostic system is used to achieve the expected objectives and to attain the expected action plans. In addition, DCSs help managers to analyse the critical performance variables, and compensate and monitor the achievement of the objectives that have been pre-determined. Furthermore, DCSs work together with BCSs to restrain employees' behaviour. According to Simons (1995), budget control systems are one of the characteristics of DCSs. Stede (2000) claimed that dysfunctional behaviour is influenced by restrictive budget control. Therefore, this study represents budgetary control system by DCSs.

A strict budget control has an impact on the incidental occurrence of dysfunctional behaviour. A strict budgetary control system is a setting where managers are basically assessed on the grounds of the attainment of their budget targets (Stede, 2002). Stede (2000) also reported that increases in the tightness of budgetary control decreases budgetary slack. Lau (1999) argued that a control system gives more information to superiors and that it increases the ability of top managers to detect slack, and, if managers realize the ability of superiors to detect budgetary slack, they will have fewer propensities to create BS. Kren (2003) found that the control system has less impact on slack creation when the probability of BS creation is low. There are two ways by which the efficacy of a budgetary control system affects the creation of budgetary slack:

firstly, managers will be less prone to create BS due to their concern about the detection of slack by superiors, and, secondly, effective budgetary control will increase the superiors' ability to detect slack, leading to less BS.

2.5.4 Belief Control Systems

Simons (1995) defined BLFCS as a prescribed system that is used by the management to define the organization, share information in a prescribed manner and strengthen the basic values, purposes and orientation of the organization on a daily basis. BLFCS allows the employees to have a stable environment; however, it also challenges the organizational laziness and political processes by communicating value and assumptions (Simons, 1995). Employees convey the objectives and values to managers; these objectives might not be mirrored in the routine MCS, and may avoid deviation from the expectations of routine. Therefore, a BLFCS exchanges and circulates key values relevant to business strategy to motivate and help employees involved in the search for new opportunities. Simons (1995) presented the argument that the culture of the organization can either promote or create obstacles for the performance; hence, MCS should be considered by the management to modify the culture of the firm. The firm's culture consists of the form of values, norms and beliefs that involve all the members of a firm, and, consequently, have a tendency to affect the ideas, behaviour and activities in their daily work. Simons (1995) asserted that firm culture could boost the firm output or interfere with it; thus, the management has a duty to consider the design of MCS that can give rise to changes in the culture of the firm.

Henri (2006) defined culture on the basis of value structure. This value will lead to the creation of a shared meaning among people in the firm and thus will result in the

production of similar behavioural norms. Rousseau (1990), as cited in Henri (2006), stated that through subjectivity and accessibility, a firm's culture could be captured. These two ranges provide dissimilar measurements as to whether assessing a culture could be seen as quantitative or qualitative.

Firm culture and its effect on various work related outcomes have been studied using several models, which classify culture based on the definition of different elements or indicators. Cameron and Quinn's (1999) competing value framework, which uses organizations' flexibility/control and internal/external focus as the bases for categorizing culture, is considered more relevant to the study of MCS. This is because the competing values of flexibility versus control are related to the very essence of MCS, which is the management of tension between creative innovation and predictable goal achievement, and the balancing of the firm's dilemma between control and flexibility (Henri, 2006).

Therefore, a BLFCS exchanges and circulates key values relevant to business strategy to motivate and help the employees involved in the search for new opportunities. Philosophies and mission messages usually circulate and communicate the beliefs. Thus, this study uses firm culture represented by a belief control system because firm culture consists of the form of values, norms and beliefs that are common among members of a firm, and, consequently, affect the ideas, behaviour and actions in their daily work. Hence, the culture of the organization can either promote performance or impede it, and MCSs should be considered by the management to modify the culture of the firm (Simons, 1995).

Flamholtz (1983) suggested that resistance to control systems could be a cause of the management's failure to design a control system that is in accordance with the culture of the organization. This type of resistance could be a cause for the failure of the control system that will become an obstacle to the achievement of a firm's goals and objectives. Many firms get to the top because their culture is very hard to copy and develop. Therefore, firms that possess good culture will often achieve and sustain competitive advantage (O'Reilly & Chatman 1996).

According to O'Reilly and Chatman (1996), the reason behind the success of many firms is that it is very difficult to replicate their culture. Hence, firms with a good culture have sustainable competitive advantage. O'Reilly and Chatman (1996) also suggested that many features are associated with good performing firms, such as:

1. a flat structure and decentralization,
2. increased employee participation,
3. possession of high levels of staff motivation and worker initiative,
4. allows creativity in problem solving,
5. standards of rewards for achievement,
6. company's values support efficiency and effectiveness,
7. a pro-active culture and better attitude when dealing with new ideas,
8. pro-active planning by employees,
9. reduction of uncertainty and minimization of risk, and
10. steering the implementation of quality initiatives by teamwork and the use of committees.

Firms with a control culture will place emphasis on the strict control of operations, medium of communication that is highly organized and flow of information that is limited. Firms with a focus on flexibility, on the other hand, focus on adaptability, spontaneity and teamwork. Henri (2006) promotes employees' participation, loose and informal controls, open and lateral channels of communication and free flow of information.

Henri's (2006, pg. 80) definition of culture is the definition employed by the present study, which describes culture as 'the shared values that interact with the firm's structure and management control system, and lead to behavioural changes'. Hence, this means that culture leads to the sharing of the same information and the same values within a particular firm. The firm culture represented by a BLFCS is used in this research because a firm's culture consists of the values, beliefs and norms that are shared by the members of a firm, and, consequently, have an impact on the ideas, behaviour and actions in their routine work (Henri, 2006).

2.6 Empirical Related Studies

The relationship among BP, ICS, BCS, DCS, BLFCS and BS is reviewed in this section. This study used MCSP and its' element by Simon (1995, 2000), since the measurements of each elements of MCSP (ICS, BCS, DCS and BLFCS) used Widener (2007). This measured was selected because of its closed relationship between value and norms with dysfunctional behavior of managers to create budget slack.

2.6.1 Budget Participation and Budget Slack

Studies on BP and BS are critically reviewed, primarily to examine the aspects of behaviour of subordinates in determining the standard budget. This behavioural aspect concerns the extent to which satisfaction and subordinate performance are to be achieved. In this case, the subordinate wants any information provided to the superior to be used to achieve the level of satisfaction and higher performance (Young, 1985). BS is usually associated with dysfunctional behaviour, i.e. achievement of budget target without much effort, unethical behaviour, ineffective resource allocation and unreliable information (Soebaroyen, 2000).

Soebaroyen (2005) and Harris and Elmassri (2011) stated that BS is dysfunctional behaviour and is in a negative paradigm. Davila and Wouters (2005) said that managers must not engage in dysfunctional behaviour because slack creation is associated with the self-interest behaviour of managers.

From the behavioural accounting perspective, BP motivates managers to disclose their private information into the budget. This argument is based on the premise that the intention to create BS can be reduced by positive communication between superiors and subordinates (Schift & Lewin, 1970).

The organization's economic interest may receive positive exposure by a purposeful relationship between the budget process participation and BS creation abilities. Nouri *et al.,* (1996) showed that the less or more the involvement and adherence to organizational goals, the less or the more the manager's participation in BS creation tendencies.

BS that participants build during budgeting is in the opposite direction of their economic incentives to build budget slack in budgeting process, although participants have the strongest economic incentives to build budget slack under participative budgeting, they find that built-in budget slack is significantly lower under participative than authoritative or consultative budgeting under which participants have weaker economic incentives to build in budget slack (Shields *et al*, 2015).

BP has a positive or negative effect on the level of BS. The manager can get the opportunity for slack creation more easily through a high level of participation. This means that BP has a positive influence on BS (Schiff & Lewin, 1968; Lukka, 1988).

Some studies have shown a positive relationship between BP and BS such as Triana *et al.,* (2012), Apriantini *et al.,* (2014), Aprila Hidayani (2012). Triana *et al.,* (2012) studied the effect of BP, budget emphasis and locus of control on budgetary slack. Data were collected from 47 managers in two, three and four star hotels in Jambi, Indonesia. The result of this study showed a significant relationship between BP and BS. In other words, the result demonstrated that increased involvement in BP can increase BS. Triana *et al.,* (2012) suggested that BS occurs when there is manager participation in the budget process and measurement of performance based on achievement of the budget. The manager seeks to achieve budget targets in order to earn more income, promotion, or other rewards. BS also occurs when the manager is faced with a budget that is difficult to achieve.

Apriantini *et al.,* (2014) identified the effect of BP on BS using budget emphasis and organizational commitment as moderating variables. Primary data were collected

through a survey. The result of the study showed that budgetary participation significantly and positively affects budgetary slack. They claimed that higher-level managers must actively participate in the budget process, because the lower-level managers tend to perform dysfunctional actions to create budgetary slack that can cause an imbalance of information owned by lower-level managers because they are the managers more directly involved in the day-to-day activities and know more about what exactly is needed within a specific responsibility. Another reason for slack is the expectation that the reward should be obtained in the achievement of budget and budgeting.

Aprila and Hidayani (2012) investigated the effect of budgetary participation, information asymmetry, budget emphasis and organizational commitment on BS. They used data from the government of Bengkulu city in Indonesia. The data were collected through a questionnaire. The result showed that budgetary participation has a positive effect on budgetary slack. They suggested that the positive effect on BS occurs either through individual participation or management consultation in preparation of the budget, which will increase the BS. The results indicate that the participation of the leaders provides them with an opportunity to participate in the budget process and leads to an increase in the BS.

On the other hand, according to Onsi (1973), Cammann (1976), and Magner *et al.*, (1996), the level of BS is inversely affected by BP because the level of information sharing between the managers and the top management is increased by BP, which improves the efficiency of the budget estimates. BP was also found to have a direct impact on the commitment of the managers in achieving the budget goals (Parker &

Kyj, 2006). The empirical evidence of the negative effects of BP on BS is also supported by Merchant (1985), Onsi (1973), Ramden *et al.,* (2007), Kristianto (2012), Rahman (2012), Dunk and Parera (1997), Dunk (1993) and Latuheru (2005).

Onsi (1973) studied the variables affecting BS whereby 32 senior managers from seven firms were interviewed. The interviewees consisted of budget directors, production vice-presidents, managers, controllers and sellers. He noticed the presence of BS in the costs of manufacturing and management, and in sale prices and volumes. The interviewees justified that the slack was due to pressure from their superiors to attain budget amounts so as to highlight annual growth. He also found that in the event whereby subordinates are allowed in the planning process of their budgets, reduced slack is created in their budget requests because of the existence of a positive atmosphere between superiors and subordinates under BP conditions.

Ramdeen *et al.*, (2007) examined the effect of BP, budget emphasis and information asymmetry on BS in the USA. The result of the study showed that BS is lowest when BP is high. Another research conducted by Maiga *et al.,* (2007), examined the relationship between BP and BS under the moderating effect of a manager's ethical judgment. Data were collected by using survey methods from managers in manufacturing firms in the USA. They used the measurements for BS adopted from Hughes and Kwon (1990) and BP measurements adopted from Milani (1975). They pointed out that there is an insignificant relationship between BP and managers' creation of slack.

Rahman (2012) studied the impact of BP on BS focusing on the role of organizational fairness, managerial trust and budget goal commitment in five, four and three star hotels in Bandung, West Java, Indonesia. Data were collected from accounting managers through questionnaires. The results are consistent with Onsi (1973), Camman C. (1976), and Merchant K.A (1985) in which BP has a negative relationship with BS. The results also show that BP influences organizational fairness, and, in turn, managerial trust, thereby affecting the budget goal commitment, and, finally, reducing managers' propensity to create BS.

Latuheru (2005) investigated the effect of BP on BS with organizational commitment as a moderating variable and found that BP with highly committed managers will decrease BS and poorly committed managers will increase BS. He claimed that managers who have high organizational commitment have an inner urge to support the success of the organization. Similarly, Merchant (1985) presented the argument that managers' intentions for the creation of BS can be reduced by BP. He is of the opinion that in cases where productive capabilities of the subordinates are known, the intention to create BS can be reduced by making employees participate in the budget making process. Dunk (1993) studied the effect of budget emphasis and information asymmetry on the relationship between budgetary participation and slack. The sample of the study was managers from manufacturing firms in Sydney, Australia. The result of this study showed a significant and negative relationship between BP and BS. It appears that slack is low when participation, information asymmetry and budget emphasis are high. The result provides evidence for BP. Although BP may induce subordinates to incorporate slack in budgets, the results suggest that participation alone may not be sufficient.

Dunk and Parera (1997) argued that a high degree of participation is inversely related to slack creation. He concluded that even when managers are given the opportunity to build more BS into their budget drafts by BP, it is not confirmed that they do so. Managers justify this behaviour by moral factors and their expectation of career development. Dunk and Parer (1997) claimed that the call for participation in the budget process might enhance the managers' trust in their superiors. This trust might lead to a lower level of slack than they could actually incorporate.

From the above discussion, it can be concluded that all of the previously mentioned studies found a relationship between BP and BS. Even though there are still inconsistent results, the current study argues that BS can be reduced by BP. This argument is due to many studies that have been carried out on the issue of BP and BS, which confirm the relationship (for example Dunk & Parera 1997; Ramdeen *et al.*, 2007; Rahman, 2012).

2.6.2 Budget Participation, Interactive Control System and Budget Slack

Simons (1995) stated that ICS is a system by which managers implement the personal involvement of junior employees in the decision-making process. According to the viewpoint of Widener (2007), an ICS has a future perspective. Widener (2007) called for continuous communication between the senior and the junior managers for any control system that they wish to apply in an interactive manner. In this regard, Chenhall and Morris (1995) argued that by using support systems, an ICS could be effective. Simons (1990) argued that top management would share their knowledge to motivate firms to learn and to create new strategies and new ideas. Hence, the use of new

knowledge to assist managers to actively intervene and monitor the continuous decision-making activities of subordinates will make the MCS more interactive.

Information asymmetry is represented by an ICS in which managers involve themselves regularly and on a personal level in the decision-making activities of subordinates. In addition, benefits will arise from the transfer of information from subordinates to superiors, namely, superiors who can develop new and better strategies that can be delivered to subordinates in addition to the information provided from subordinates, so that performance will be increased and superiors will obtain a better budget for the firm (Murray, 1990).

Elizabeth (2014) conducted research on the relationship between BP and BS under the moderating effects of information asymmetry and locus of control. Data were collected through a questionnaire survey of 128 middle managers in 49 five star hotels in Bandung. She found that information asymmetry has a significantly negative correlation with BS. Information asymmetry occurs very little in the hospitality industry due to the management of the company having an internal independent party (i.e. internal auditor) to provide assurance that the reports used for decision-making are accurate and precise. Elizabeth (2014) stated that, generally, the higher-level managers know more information about the activities of the firm than the lower-level managers. Therefore, the higher-level managers have more chance of obtaining information asymmetry compared to the lower-level managers. This research is supported by the research of Dwi K.S and Agustina (2010) on the impact of budgeting, information asymmetry and job relevant information to BS. Based on data from 30 structural staff of Maranatha University, the result showed that participation budgeting, as a

moderating variable, has a positive effect on information asymmetry, and that BP and information asymmetry have a negative effect on BS. In other words, increased participation in budgeting and information asymmetry have a decreasing effect on BS.

Ramdeen *et al.,* (2007) investigated BS under the effects of BP, budget emphasis and information asymmetry in the hotel industry in the USA. Based on the data gathered from questionnaires to managers, they found that BS is low under high levels of budget emphasis and information asymmetry. In addition, BS is at the lowest level, when the predictors are at the highest level.

Apriantini *et al.,* (2014) investigated the impact of BP, information asymmetry and budget emphasis on BS in Indonesia and used officials of the local government as respondents. They noted that there is a significantly positive interactional impact of budget emphasis on the relationship between BP and BS. The research of Aprila and Hidayani (2012) concerning the effect of BP, information asymmetry and budget emphasis and organizational commitment to BS showed that information asymmetry has a positive effect on budgetary slack. This means that higher information asymmetry increases the budgetary slack. The results of this study support the previous research undertaken by Anissarahma (2008) who examined the effect of information asymmetry on the incidence of budgetary slack. Another study, conducted by Afiani (2010), found a direct relationship between information asymmetry on BS. From the above studies, it can be concluded that the moderating effect of ICS on the relationship between BP and BS has mixed results.

2.6.3 Budget Participation, Boundary Control System and Budget Slack

Simons (1995) described BCS as a formal system applied by the management that aims to create rules that must be appreciated by the workers. According to Widener (2007), the aim of the BCS is to provide freedom to employees to innovate and develop within specific pre-determined fields. In the same context, Simons (1995) stated that for the establishment of rules that must be followed by the employees a BCS should be applied by the management.

According to Otley (1978), the budget estimates reflected the minimum standard of performance when the superiors' managerial style places more emphasis on the budgeted numbers. Otley described this behaviour as the managers' own wish to be careful and to keep themselves safe against unpredictable conditions. On the basis of budget standards, the probability to create BS could have been increased (Baiman & Lewis, 1989). Under conditions of budget emphasis along with participation, Lowe and Shaw (1968) found that sales staff employed this participation to favour sales forecasts and to create slack. Based on Otley (1978), Baiman and Lewis (1989) and Lowe and Shaw (1968) which explained that budget emphasis is pressure from superior on subordinates to reach the established budget targets, and according to Simons (1995) and Widener (2007) which stated that BCS is a rules that must be followed by the employees, therefore budget emphasis reflected of boundary control system.

Dunk (1993) studied the effect of budget emphasis and information asymmetry on the relationship between BP and BS. The findings of this research showed that BS is low with high BP and information asymmetry and vice versa. He revealed that the relationship between participation and slack is contingent upon budget emphasis and

information asymmetry, but in a direction contrary to expectations. The results provide evidence for the utility of participative budgeting, and little support for the view that high participation may cause increased BS when information asymmetry and budget emphasis are high. Although participation may induce subordinates to incorporate slack in budgets, the results suggested that participation alone may not be sufficient and that BS reduction results from participation, except when budget emphasis is low.

Gamal (2001) studied the effect of BP, information asymmetry and budget emphasis on BS in Indonesia. Questionnaires were sent to 173 managers and BS was measured using an instrument developed by Dunk (1993). The result showed a negative significant relationship between BP, information asymmetry and budget emphasis, meaning that the level of BS is low when the BP, information asymmetry and budget emphasis are high.

Similarly, Ramdeen *et al.,* (2007) analysed the impact of BP, budget emphasis and information asymmetry on BS. The sample of the study comprised managers of the hotel industry in the USA. They suggested that when BP and budget emphasis increase, BS decreases, and that when BP and budget emphasis are low, then BS is high. Ramdeen *et al.,* (2007) claimed that the attitude towards creating BS stemmed from the high participation of subordinates in respect of budget emphasis. It has also been suggested that the creation of slack relies on the pattern of the budget system and its execution. Once subordinates participate in the process of developing the budget there is less need to create slack, particularly when productivity is anticipated and certain. Nevertheless, the propensity towards creating BS could be great if the emphasis on achieving the target is important, and the subordinates are rewarded accordingly.

Apriantini *et al.,* (2014) identified the effect of BP on BS using budget emphasis and organizational commitment as moderating variables. They noted that there is a positive and significant impact of budget emphasis on the relationship between BP and BS. They also claimed that high budget emphasis would increase BS. If subordinates believe that the reward is given based on the achievement of budget targets, subordinates will tend to create slack in the budgeting process even if the proposed budget target is easy to achieve. This is done to relieve the pressure in an effort to achieve the budget target due to a tight budget. They suggested that if the performance of subordinates is measured based on the budget target that can be achieved, the superiors should search other aspects that can support the performance of subordinates and not only the results of the budget target.

Aprila and Hidayani (2012) studied the effects of BP, information asymmetry, budget emphasis and organization commitment to BS. The results indicated that there is a positive effect of BP on BS. This result is supported by Oktorina and Sunarno (2013), concerning the effect of BP, budget emphasis and the perception of fairness on BS under the moderating effect of trustworthy managerial behaviour. Data were collected from 108 managers from companies in Jakarta. The results showed that BP and budget emphasis affect BS. The results suggested that when the head of department feels pressure to achieve the budget target, and, at the same time, he or she perceives high trustworthy managerial behaviour, then the tendency to have BS is minimal. Thus, trust is an important factor in decreasing BS in relation to budget emphasis.

Afiani (2010) investigated the impact of BP, budget emphasis and information asymmetry on BS at governmental institutions of Semarang Regency. Questionnaires

were used to collect data, while respondents of the questionnaires were managers from the structural functionary governmental institutions of Semarang Regency, who participated in the process of budget making. The result showed that budgetary participation has a positive relationship on BS. If BP, budget emphasis and information asymmetry are high, BS is also high.

One of the major reasons behind the drive for the creation of BS by the managers is pressure by the management to achieve the targets of the budget, growth and profit (Onsi, 1973). A study by Schiff and Lewin (1968) using division presidents, vice presidents of marketing and production, and controllers at three Fortune 100 corporations supported the claim and revealed that managers built slack into both the spending and outcome setting of their budgets when their senior managers pressured them to achieve budget goals.

Merchant's (1985) study revealed that as a result of managers' reaction to the pressure to meet the BS, the probability of slack creation increased. Hopwood (1972) suggested that taking part in BP could alleviate the negative psychological impact of strong budget emphasis. This is supported by Merchant (1981), who discovered that budget emphasis along with participation and budget size have a high and positive relationship.

Brownell (1982) used managers belonging to a large manufacturing corporation in California from eight different areas of operation. Every one of them belonged to at least one area, either production or delivery. All participants were responsible for a cost centre. He proposed that a leadership style based on budget focus would be more effective in an environment where BP was high, instead of in an environment where

BP was low. He showed that BP reduced the effects of budget emphasis by high level employees, and that an increased level of BP should be in synchronization with an increased level of budget emphasis. Brownell (1985) discovered that the area of operation and budget emphasis did not work in harmonization to have a mutual impact on the performance of the manager. He also arrived at the same result with regards to participation and functional area.

2.6.4 Budget Participation, Diagnostic Control System and Budget Slack

Widener (2007) claimed that a DCS aims to bring the behaviour of employees in line with organisational goals. In the view of Simons (1995), budgetary control system is one of the elements of the DCS. Dunk (1993) and Merchant (1985b) justified that budget slack can be reduced using budget control system. For that reason, DCS is closely associated with budgetary control system. Onsi (1973) stated that close monitoring could have an inverse impact on the way slack is discovered; senior employees stress the achievement of the budget targets, which, eventually, results in an inverse capability of budget making and a positive impact on the process of slack creation. Hence, a problematic relationship among participation, budget control (by senior managers) and BS is proposed. Onsi's research found that in the process of correcting the tendency towards BS, the relationship between senior and junior employees was vital.

The above-investigated relationship was also dealt with by Nouri (1994) who investigated two important types of motivation in budget making. He analysed the relationship between BP and BS and organizational commitment and individual

aspirations. Nouri found a relationship between organizational commitment and job involvement. If the subordinate were willing to work for the organization, they would possess that desire and belief in the principles of the organization. If the employee were too absorbed in the job, they would care more about their reputation and achievement of objectives than anything else. It was discovered that the amount ordered in the budget was a result of the discussion between the lower- and the higher-level employees, who usually exceeded the corporation's immediate future and took into consideration personal motivations. The organization has a negative propensity for the creation of slack, because the subordinates realize the negative aspects of creating slack for the organization. More involvement in the job leads to increased propensity to create slack, because subordinates seek to safeguard their own interests. With less involvement in the job, subordinates are more inclined to be interested in their own image, and, therefore, subordinates are more inclined to create slack. Nouri found that the reasons for the creation of BS are a blend of increased level of commitment to the organization and low level of job engagement.

Kren (1997) suggested that with the help of the information that is obtained from the control system about the performance capability of the managers, there could be a reduction in BS, and that the manager's view about the ability of the superiors to do a particular task is inversely affected by formal control tools. Similarly, Lau (1999) presented the argument that the control system enhances the ability of the top managers to detect slack and also provide a greater amount of information to superiors.

Merchant (1985), however, claimed that the attitude towards creating slack is a result of the high participation of the employees. He also suggested that the creation of BS is

dependent on the budget system's pattern and its implementation. There is less need to create slack upon the subordinates' active participation in the process of building the budget, particularly when productivity is expected. However, if the emphasis on achieving the target is important, and the subordinates are rewarded accordingly, the propensity towards creating BS is great.

Yilma and Ozer (2011) studied the effects of environmental uncertainty and budget control effectiveness on the probability to create BS. The data were collected from 460 public firm managers using a questionnaire. According to the results of the analysis, the effectiveness of budget control has a negative effect on BS. In other words, when the effectiveness of budget control increases, the BS reduces. This study found that, in organizations operating in an environment with high uncertainty, the effectiveness of budgetary control is becoming more and more important due to the prevention of managers to create BS.

DCS does not only influence the behavior of managers; it is used to highlight the problem of monitoring and motivation by managers to achieve their objectives (Emsley, 2001; Ittner & Larcker, 1998; Kato, Boer & Chow, 1995; Norman, 2001). Hence, an assumption can be made in the light of the above discussion that in the relationship between BP and BS, DCS (budget control system) acts as a moderating variable.

To summarize, DCS moderate the relationship between BP and BS based on premise that the more effective the budget control system, the less likely managers are to create BS. Van der Stede (2000) reported that the increased tightness of budget control causes a decrease in BS.

2.6.5 Budget Participation, Belief Control System and Budget Slack

In order to encourage employees to make themselves busy in appropriate and innovative practices, core values are communicated to them through a belief system (Widener, 2007). Firm culture comprises the pattern of value, beliefs and norms which are shared by the members of a firm, and which consequently tend to influence the ideas, behavior actions in their everyday work. Firm culture can boots or hinder firm performance, therefore, management should consider management control system design which changes the culture of the firm Simons (1995). He also stated that management uses a belief system to understand an organization, respond in a prescribed manner and implement the goals, orientation and core values of the organization in an organized manner. Hence, to communicate core values that are related to the business strategy and which help employees who are searching for new opportunities, a BLFCS is used. The beliefs of the organization are communicated with the help of the organization's mission and vision. Simons (1995, 2000) claimed that these ways can only be considered as a system of communication of beliefs if they are based on information, they have prescribed beliefs and are used by managers to alter the ongoing organizational patterns. Based on the discussion above, this study uses firm culture represented by BLFCS. Firm culture means that people in the firm share the information responsible for the creation of common values within the firm. While, Douthit and Steven (2015) found that social norms constrain budget slack and increase the value of budget participation to the firm.

Omobola, (2013) studied the influence of organizational culture and BP on the propensity to create BS. Data were collected from 272 officials in ten federal

government-owned universities in Nigeria using a questionnaire survey. The results showed that organizational culture has a significant relationship with BS through the partial mediating influence of participation. Organizations with flexible organizational culture were found to exhibit high BP and high BS; while organizations with a control type of culture were found to exhibit low participation and low slack. The majority of the universities studied exhibited a control culture in conformity with findings in other studies that public sector organizations exhibit a traditional bureaucratic culture. At a broad level, the results appear to support a resource dependence view that high dependence on one or more view of resource providers may result in coping strategies, such as the creation of BS.

Sri Utami (2013) studied the effect of the interaction of organizational culture and group cohesiveness in the relationship between BP and BS in Indonesia. The results indicated that the relationship between BP and BS is not affected by the organizational culture with employee orientation.

2.7 Summary studies of budget participation and budget slack

Tabel 2.2
Summary of studies on Budget Participation and Budget Slack

Year	Author	Variables	Methodology	Result
				POSITIF RESULTS
1985	Young	1. Risk Averson 2. Information asymmetry (ICS)	1. Respondents are students 2. Experiment Method	1. Participation in the budgetary process lead to building slack into the budget 2. The amount of slack is positively associated with risk aversion. 3. Increasing social pressure decreases the amount of slack. 4. There is a functional relationship between private knowledge and propensity to create BS.
1988	Chow, Cooper and Waller	1. Truth-inducing 2. Information Asymmetry (ICS)	Data collection using laboratory method.	Positive relationship between a subordinate's participation in the budgeting process and propensity to

Tabel 2.2, Continued

Year	Author	Variables	Methodology	
				create BS could be moderated with truth-inducing scheme even if private knowledge was present.
2012	Aprila & Hidayani	1. Information asymmetry (ICS) 2. Budget Emphasis (BCS) 3. Organizational Commitment	1. Respondent were government 2. Data collected by using questionnaires	1. BP has a positive affect on BS 2. Participation of the leaders provides them to increase the BS
2013	Octorina & Sumarno	1. Budget Emphasis (BCS) 2. Fairness perception	1. Respondent were managers firms. 2. Data collected using a questionnaires survey method.	1. Budget emphasis has a positively significant on the relationship between BP and BS. 2. Fairness perception does not significantly affect BS.
2013	UKEssays.com	Budget Emphasis (BCS)	Data collected using a survey method.	Budget emphasis occurs when managers are stressed for the achievment of budget goal; in such cases, the chance of BS creation increases.
2013	Omobola	Organizational Culture (BLFCS)	1. Respondents were 272 in ten federal government universities in Nigeria. 2. Data collected using a questionnaires survey	1. BP has a significant positive influence on BS. 2. Through budget participation, BS is significantly affected by organizational culture
2014	Apriantini *et al.,*	1. Budget Emphasis (BCS) 2. Organizational Commitment	1. Respondents were managers. 2. Data were collected through a survey	1. BP significantly and positively affect BS 2. Positive and significant interactional impact between the budget emphasis and the relationship between BP and BS. 3. Negative and significant impact of interaction between the organizational commitment BP on the relationship between BP and BS.
				NEGATIVE RESULTS
1968	Lowe and Show	Private Knowledge (Information Asymmetry)	1. Field study 2. Data collection by using questionnaires 3. Respondents are managers.	1. Superior inability to effectively mitigate unreasonable budget proposal 2. Subordinates actually did know more than superiors about what was needed to perform their assigned managerial duties.
1968	Schiff & Lewin	Budgetary Performance	1. Respondents were managers 2. Data collected by using questionnaires.	1. The nature of reward systems within an organization was one of the primary causes of budgetary slack. 2. When the reward system depends heavily on "coming in under the budget" the creation of budgetary slack in budget increases. 3. The type of control system employed affect how slack is created within division and how it is managed: in decentralized company slack is concentrated at divisional management level while in centralized company slack is diffused through all management levels.

Table 2.2, continued

Year	Author	Variables	Methodology	Result
1970		Reward Systems		
1973	Onsi	1. Environment 2. Attitude	1. Respondents were senior managers firms 2. Data collected by interviewed.	1. When subordinate managers are allowed to participate in setting their budgets, they actually incorporate less BSk in their budget requests. 2. There was a positive environment between superiors and subordinates under conditions of BP. 3. There is a relationship between BS and manager's attitude toward an authoritarian top management budgetary control system. 4. Budgetary slack is created as a results of pressure and the use of budgeted profit attainment as a basic criterion in evaluating performance.
1985	Merchant	Budget Control System (DCS)	1. Respondents were managers firms 2. Data collection using a survey method.	1. Budgeting system for control purposes does not increase manager's propensity to create slack significantly except where budget is tight. 2. Participation in budgeting process reduces slack. 3. Technological predictability has a minor negative effect on slack creation. 4. Superiors' ability to detect slack reduces managers' propensity to create slack.
1993	Dunk	1. Budget emphasis (BCS) 2. Information Asymmetry (ICS)	1. Respondents were Managers manufacturing firms in Sydney. 2. Data collection used questionnaires	1. When information asymmetry and budget emphasis were high, BP led to reduction BS. 2. BS was low (high) when information asymmentry BP and budget emphasis were all high (low).
1994	Nouri	1. Organizational Commitment 2. Job Involment	1. Respondents were Managers firms. 2. Data collected by using questionnaires	1. An inverse relationship between a manager's level of commitment to the organization's goal or value and manager's propensity to create BS. 2. The higher/lower the level of commitment to the organization, the lower/Higher the propensity to create BS.
1996	Nouri & Parker	Level of Commitment to Organization	1. Respondents were managers. 2. Data collction used questionnaires	When organizational commitment is high/low, managers who participate in budget setting exhibit lower/higer levels of propen-sity to create budget slack.

Table 2.2, continued

Year	Author	Variables	Methodology	Result
1997	Dunk & Parera	1. Budget emphasis (BCS) 2. Information Asymmetry (ICS) 3. Personal Factor	1. Respondents were managers. 2. Data collected using survey method.	1. The association between participation and slack is dependent on the levels of both budget emphasis and information asymmetry, and personal factors like moral, ethical and career advancement considerations. 2. Managers are aware that participation provides them with the opportunity to build slack into their budgets.
2000	Van der Stede	Budgetary Control System (DCS)	Data were collected from managers using a questionnaires suvey.	1. Budgetary Control System has a negative effect on the relationship between BP and BS. 2. Corporate diversification is positively associated with slack in business unit budget. 3.Tight budgetary control and high-powered incentives effectively curtail BS 4. Business units that pursue a differentiation strategy and/or have been more profitable enjoy ore BS.
2000	Douglas & Wier	Ethical Dimention (BLFCS)		Ethical position, given opportunity and other incentives to create budgetary slack help to explain individual slack creation behavior.
2002	Tay Su & Lin	1. Budget emphasis 2. Information Asymmetry		The intervening effect of BP to reduce slack by way of information symmetry will be stronger when budget emphasis is high; and there exists no such effect when budget emphasis is low.
2002	Steven	Reputation and ethics		Reputation and ethic are negatively associated with the BS.
2006	Ramden *et al.,*	1. Budget emphasis (BCS) 2. Information Asymmetry (ICS)		1. There was a link between participation and budgetary slack dependent on information asymmetry and budget emphasis. 2. Budgetary slack was lowest when information asymmetry, Participation, and budget emphasis were high, and that budgetary slack was highest when the predictors were low.
2007	Maiga *et al.,*	1. Fairness Perceptions 2. Trust 3. Goal commitment		1. The direct relationship between budget participation and managers' propensity to create slack was insignificant. 2. Fairness perception and goal commitment mediate the relationship between BP and BS. 3. Budget participation impacts both procedural fairness and distributive fairness which, in turn, affect trust.

Table 2.2, continued

Year	Author	Variables	Methodology	Result
2011	Yilma, E. & Ozer, G.	1. Procedural Justice Perception 2. Budgetary Control Effectiveness 3. Ethical Work Climate (BLFCS)	1. Respondents were 460 managers public firms. 2. Data collected using questionnaires	Budgetary Control, ethical work climate and procedural justice perception of managers have a significant and negative impact on BS.
2013	Utami	Organizational Culture (BLFCS)	1.Respondents were goverment in indonesia. 2. Data collection using survey method	Organizational culture has no impact on the relationship between BP and BS

2.8 Research Gap

The literature review reveals that MCS play an important role on the relationship between budget prticipation and budget slack and various knowledge gaps have been identified.

First, earlier studies looked into the relationship between budget participation and budget slack. Even though prior literature found there is a relationship between budget participation and budget slack, the relationship is not consistent. According to Macintosh (1985) the inconsistent results indicate that the relationship between BP and BS can not be a simple relationship because of its dependence on a variety of other factors. A number of factors in the literature related have emphasized the relationship (Macintosh, 1985).

Second, previous studies focused the elements of MCSs are used individually as a moderating variable on the relationship between BP and BS. According to Ittner and Lucker (1998), many studies on management accounting that investigate control systems focus on only one control system (i.e., Rachman, 2012; Nouri, 1994; Kristianto 2012; Kren, 1993; Sujana 2010; Merchant, 1985; Onsi, 1973; Dunk, 1993). How ever it is well accepted in the literatur that control systems are interdependent (Merchan &

Otley, 2007). Consistent with this, Simons (2000) stated that an effective control system will be attained if all four of control (ICS, BCS, DCS and BLFCS) are working together as a MCSP. Thus, the current study predicted that MCSP can help to solve the inconsistent results of the relationship between BP and BS and finally would reduce the dysfunctional behaviour of managers.

Third, little empirical research have been done on the relationship between BP and BS using the agency theory. Until today, only a few studies, such as Dunk (1993), Rachman (2012) and Nouri (1994), have used agency theory. Thus, this study uses agency theory because it is the most precise and widely accepted theory in managerial accounting and agency theory has been usefully employeed in many studies of participative budgeting (e.g., Evans et al, 2001; Rankin et., al, 2003, 2008; Douthit & Stevens, 2015). Agency theory focuses primarily on the areas of relationships, in particular, where people become dependent on another agent. Agents acts on behalf of the principal which is beneficial for both parties (Bergen *et al.*, 1992; Eisenhardt, 1989). An agency relationship hence includes any type of employment relationship (Harris & Raviv, 1978).

2.9 Related Theories on Buget Participation

Much of what we know about human thought and behavior has emerged thanks to various psychology theories. For example, behavioral theories demonstrated how conditioning can be used to learn new information and behavior. Some theories have fallen out favor, while others remain widely accepted, but all have contributed tremendously to our understanding of human thought and behavior.

2.9.1 Under Pinning Theory

2.9.1.1 Agency Theory

Agency theory is a situation where two parties support each other in an organization e.g., owners vs. managers or senior managers vs. lower-level managers who have contrasting goals (Jensen and Meckling, 1976),

Tiessen and Waterhouse (1983) presented the argument that the foundation of the agency theory lies in the contractual relationship between the objectives of two parties. Since each party gains motivation from distinctive goals, hence occasionally, dysfunctional behavior will develop and cause conflicts. The aim of the agency theory is to provide a mechanism for the contractual relationship between the two groups, i.e., the principals and agents so that the well-being of principals can be maximized by the actions of the agents (Tiessen & Waterhouse, 1983).

Budget has specific information about local conditions, which allows subordinates to provide information in the interests of the company. According to Brown *et al.*, (2009), there are three reasons that make agency theory influential in the process of budget participation. Firstly, in human behavior, the most widely accepted and applied theory is agency theory, which is also given much importance in managerial accounting. Secondly, agency theory gives a more concise viewpoint for the evaluation of the impacts of various contracts of incentives on reporting as compared to other theories. Thirdly, agency theory compares reporting behavior with incentive contracts which are derived, keeping into consideration the benefits of both the principal and the agent who agree to the contract.

Simons (1951) contributed to the development of the agency theory by modeling a principal-to-employee relationship. Baiman (1982) demonstrated that in managerial accounting research, many perspectives of agency theory have made their way into budget and control systems.

This study uses agency theory because it is the most precise and widely accepted theory in managerial accounting and agency theory has been usefully employeed in many studies of participative budgeting (e.g., Evans et al, 2001; Rankin et., al, 2003, 2008; Douthit & Stevens, 2015). Agency theory focuses primarily on the areas of relationships, in particular, where people become dependent on another agent. Agents acts on behalf of the principal which is beneficial for both parties (Bergen *et al.,* 1992; Eisenhardt, 1989). An agency relationship hence includes any type of employment relationship (Harris & Raviv, 1978).

2.9.2 Others Related Theories

2.9.2.1 Behavioral Theory

Behavioral theory also known as behaviorism, is a theory based upon the idea that all behavior are acquired through conditioning. Behavioral theory is guided by three kinds of considerations: belief about the likely consequences of the behavior (behavioral beliefs), beliefs about the normative expectations of others (normative beliefs), and beliefs about the presence of factors that may facilitate or impede performance of the behavior (control beliefs). In their respective aggregates, behavioral beliefs produce a favorable and unfavorable attitude toward the behavior, normative beliefs result in perceived social pressure or subjective norms; and control beliefs give rise to perceived

behavioral control. In combination, attitude toward the behavior, subjective norm, and perception of behavioral control lead to the formation of a behavioral intention (Ajzen, 2006).

Dysfunctional behavior is closely related to behavior theory, and there are various forms of dysfunctional behaviors that can occur in an organization, but with one common and underlying objective: to use the rules and procedures to one's advantage (Jaworski & Young, 1992). Dysfunctional behavior may be caused by information manipulation, gaming and inappropriate use of performance measures, although there are various forms of dysfunctional behaviors, these practices actually operate in isolation of one another Bimberg et al, (1983). Dysfunctional behaviors could be occur in budget process and one of the dysfunctional behavior is budget slack, dysfunctional behaviour leads to managers experiencing negative feelings towards their superiors, due to their perceptions of the uselessness and inadequacy of the budgeting process (Soebaroyen, 2005). Consequently, dysfunctional behavior appears to have been conceptualized in a restricted way that is principally associated with BS (Brownell, 1981). Onsi (1973) stated that the dysfunctional behaviour of BS depends on the factors contributing to it, and that, by knowing these factors, control could be established to reduce the dysfunctional behaviour of BS.

Previous study, some researchers merging budget slack and behavioral theory such as Onsi (1973) studied the effect of behavioral variables on attitude towards budgetary slack (propensities to create budget slack) and found that attitude is one of the factors was significant in explaining about budget slack.. According to Tay Su (2002) behavioral theory researchers have proposed that budgetary participation allows

positive communication between superiors and subordinates, reducing the pressure to create slack. Therefore, behavioral theory predicts a negative relation between budgetary participation and budget slack. While, Onsi (1973) stated that behavioral accounting theorists view budget participation as a way to motivate managers to reveal their private information in their budgets. The process of sharing information between subordinates and superiors creates an opportunity for positive exchange of information, thereby reducing the pressure to create budget slack.

2.9.2.2 Goal-Setting Theory

Goal-Setting theory is the process of identifying something that you want to accomplish and establishing measurable goals and timeframes (http://www.yourdictionary.com). Goal-setting theory predict that people will channel effort toward accomplishing their goals, which will turn affect performance (Locke & Latham, 1990). The decision to set a goal results from dissatisfaction with current performance level, setting a goal should include setting a structure that direct action and behaviors which improve the unsatisfactory performance and setting a goal will change a person's behavior in order to work towards achieving the set goal (Redmond & Padgett, 2014). Locke and Latham (2002) found a direct linear relationship between goal difficulty, level of performance, and effort involved. This relationship will stay positive, as long as the person is committed to the goal, has the requisite ability to attain it, and doesn't have conflicting goals (Locke & Latham, 2006).

The goal-setting theory is based on the assumption that behavior reflects an employee's conscious goals and intentions. Consequently, the expectation is that employee efforts and performance within an organization will be influenced by the goals assigned to or

selected by these employees (Redmond & Padgett, 2014). In the workplace, successful managers use the goal setting theory to clarify expectations, improve performance, and develop employees into stronger workers, which in turn makes the company stronger (Fried & Slowik, 2004). Furthermore, goal setting can function as a contract between the employer, creating greater opportunities for accountability and growth (Oracle, 2012).

Goal setting can be used effectively on any domain in which an individual or group has some control over the outcomes (Locke & Latham, 2006), but goals that are too high and difficult are perceived as unattainable, which will lead to create a culture of corruption and dishonest behavior in order to achieve the goal (Bennet, 2009). Douma et. Al., (2004) found that people with unmet goals were more likely to engage in unethical behavior than people attempting to do their best and the relationship between goal setting and unethical behavior was particularly strong when people fell just short of reaching their goals. Unethical behavior or dishonest behavior or dysfunctional behavior can occur in goal setting like in setting budget goal in budgeting process. While dysfunctional behavior can create a budget slack in budgeting process or in the other word budget slack is dysfunctional behavior. The organization often implement budgeting that limits managers' influence on their approved budgets to constrain built-in budgetary slack (Shield et al., 2015). Organization need to treat the budgetary slack as something to be managed instead of simply avoided (Frezatti et. al., 2013) .Based on premised above, goal-setting theory could be merging in budget slack, managers' goal setting budget under participative budgeting have influence on their approved budgets and consequently, managers have the strongest economic incentives to build in budgetary slack (Shield *et al.,* 2015).

2.9.2.3 Motivational Theory

Motivational theories are seeking to explain the driving force(s) that convert our thoughts into behavior. John Ball (2003) states that motivational theory explain the factors that motivate individuals through identifying and satisfying their individual needs, desires and the aims pursued to satisfy these desires. There are numerous theories of motivation (such as Herzberg's motivation theory, Reversal theory of motivation, Instinct theory of motivation and Self determination theory), where each are either explaining the same motivational concept with a different verbiage or they are offering a new motivational theory. The most important of theory motivation is that the main motivating factors are not in the environment but in the intrinsic value and satisfaction gained from the job itself and it follow therefore that to motivate an individual, a job itself must be challenging, have scope for enrichment and be of interest to jobholder (John Ball, 2003).

Motivation has been defined as: the psychological process that gives behavior purpose and direction (Kreitner, 1995); a predisposition to behave in a purposive manner to achieve specific, unmet needs (Buford, Bedein, & Lindner, 1995); an internal drive to satisfy an unsatisfied need (Higgins, 1994); and the will to achieve (Bedeian, 1993); the inner force that drives individual to accomplish personal and organizational goals (Lindner, 1998).

The role of motivation of employees are to rapidly changing workplaces, to help organizations survive and to more productive. To be effective, managers need to understand what motivates employees within the context of the roles they perform (Smith, 1994). This is due, in part, to the fact that what motivates employees changes

contantly (Bowen & Radhakrishna, 1991). For example, research suggests that as employees' income increases, money becomes less of a motivator (Kovach, 1987). Also, as employees get older, interesting work become more of a motivator (Lindner, 1998).

Motivators are those factors directly concerned with the satisfaction gained from a job, such as the sense of achievement and the intrinsic value from the job itself, the level of recognition by both colleagues and management, the level of responsibility, opportunities for advancement and the status provided (Herzberg, 1966). Motivators lead to satisfaction because of the need for growth and a sense of self-achievement, a lack of motivators leads to over-concentration on hygiene factors, which are those negative factors which can be seen and therefore from the basis of complaint and concern. Hygiene factors (often referred to as maintenance factors) lead to dissatisfaction with a job because of the need to avoid unpleasantness (John Ball, 2003).

2.10 Summary of Chapter

To sum up, the chapter covers the relevant theoretical background and reviews the empirical research. This review serves as the major basis for the present study. The beginning of the chapter tackles the definitions of participation, budget participation, and budget slack, management control system, interactive control system, boundary control system, diagnostic control system and belief control system. Other than the absence of unanimous agreement, the literature shows evidence that there is a relationship between BP and BS. Moreover, the impacts of the many variables studied earlier on these relationships are investigated from different perspectives. In brief, the relationship between participation in the budget process and BS remains inconclusive.

The present research based on agency theory revisits the relationship between BP and BS and suggests that MCS considered as a package (Simons' levers of control) with moderating variables, might resolve the conflicts between the findings of previous studies and how well managers' dysfunctional behaviour can be reduced. The next chapter discusses the research framework of this study.

CHAPTER THREE

THEORETICAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

3.1 Introduction

The concepts of budget participation, budget slack, MCS and Simon's levers of control, which include ICS, BCS, DCS and BLFCS, have been explained extensively by the researcher in the previous chapter.

This chapter will discuss the research framework and hypotheses development. The examination of the MCS effect on the relationship between budget participation and budget slack, the research framework is explained in section 3.2, the agency theory is explain in section 3.3, followed by an explanation on the conceptual model and development of the hypotheses for the examination of the relationship between budget participation and budget slack under the impact of MCS in section 3.4. The summary of the discussion is included in section 3.5.

3.2 Theoretical Framework

The basic aim of a theoretical framework is to explain the research concept and constructs (Clarkson, 1995). In managerial accounting research, especially in budget and control systems, a theory that is frequently and widely used is the agency theory.

3.3 Agency Theory

This study uses agency theory because it is the most precise and widely accepted theory in managerial accounting. Agency theory focuses primarily on the areas of

relationships, in particular, where people become dependent on another agent. Agents acts on behalf of the principal which is beneficial for both parties (Bergen *et al.,* 1992; Eisenhardt, 1989). An agency relationship hence includes any type of employment relationship (Harris & Raviv, 1978).

Tiessen and Waterhouse (1983) presented the argument that the foundation of the agency theory lies in the contractual relationship between the objectives of two parties. It is also supported by Jensen and Meckling (1976), who defined agency theory as a situation where two parties support each other in an organization (e.g., owners vs. managers or senior managers vs. lower-level managers who have contrasting goals). Since each party gains motivation from distinctive goals, hence occasionally, dysfunctional behavior will develop and cause conflicts. The aim of the agency theory is to provide a mechanism for the contractual relationship between the two groups, i.e., the principals and agents so that the well-being of principals can be maximized by the actions of the agents (Tiessen & Waterhouse, 1983).

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derived, keeping into consideration the benefits of both the principal and the agent who agree to the contract.

Simons (1951) contributed to the development of the agency theory by modeling a principal-to-employee relationship. Baiman (1982) demonstrated that in managerial accounting research, many perspectives of agency theory have made their way into budget and control systems.

3.1.1 Budget Slack and Agency Theory

In international studies, budgets and agency theory are related to each other (Parker & Kyt, 2006; Kilfoyle & Richardson, 2011; Nouri & Parker, 1998). The principal (who delegates the authority) tries to obtain important information from the agents (information that only they have) and make sure that the interests of the agents are not in contrast to the interests of the entity (Klifoyle & Richardson, 2011). In other words, budget participation creates harmony between the objectives of the superiors and the subordinates in order to ensure that all parties view the budget to be fair.

Budget slack can be explained using the agency theory approach. Kilfoyle and Richardson (2011) argued that in the agency theory, budget is seen as an intervention between principal and agent which reveals that the practice of budget slack is influenced by a conflict of interest between agent and principal that arises when each party tries to achieve or maintain a level of prosperity that pleases each party. Kilfoyle and Richardson (2011) argued that in the agency theory, budget is seen as an intervention between principal and agent. The agency theory explains that this phenomenon occurs when the principal delegates authority to subordinates to perform tasks or authority to

make decisions (Anthony & Govindrajan, 1998). If subordinates (agents) are involved in the preparation of the budget, they actually provide information to help the interests of the company.

Tay Su (2002) stated that budget participation is a way adopted by the junior employees for the creation of budget slack. On the basis of the agency theory, a positive relationship is expected between budget slack and budget participation. Sulaiman (2006) presented the same argument from the viewpoint of the agency theory, i.e., the self-centered behavior of managers is the reason behind the creation of slack in the budget.

Baiman (1982) presented the argument that the practice of information sharing with subordinates (e.g., agents), especially related to budget process is good in the sense that it would improve productivity and efficiency. Stevens (2002) showed that the reputation of the institution and ethical standards help explain the behavior of budget participants. Agents that care of the personal image and have concerns about ethics, have more capability to create slack.

Evans *et al.*, (2001) discovered that participants in budget reported a decision about how to divide the surplus incentive contracts between managers and agents. They also explained that if the manager's own payoff is kept fixed, than the honesty of the manager will be reduced if under the contract, he is given less share of the payoff in comparison to another contract with a larger share of the payoff. This fact is also supported by Zhang (2008) who discovered that in a multi-agent setting, the expected

loyalty or fairness of the principal is an important indicator for the determination of the truthfulness of the agent.

3.4 Conceptual Model and Hypotheses

3.4.1 The Conceptual Framework Model

According to Sakaran (2010), a research model is the theoretical framework that conceptualizes how one theorizes the relationship between the various factors that are considered important to the issues. This study pays more attention to the relationship between budget participation and budget slack by exemaining the moderating effect of MCS on such relationship. Baron and Kenny (1986) presented the argument that there exists a moderating effect when the relationship between two variables (for example: budget participation and budget slack) is affected by a third variable (MCS) (refer to Figure 3.1). Kim *et al.*, (2001) stated that a moderator will reduce or enhance the direction of the relationship between a predictor (budget participation) and dependent variable (budget slack).

The relationship between variables can be explained by the agency theory. It is important to study MCS as a collection of various control systems under Simons' levers of control. Therefore, this study employs both MCS as a package and as an individual component under Simons' Levers of Control. Examine individual components of MCS would provide more information of each component.

The conceptual model is as in Figure 3.1 below.

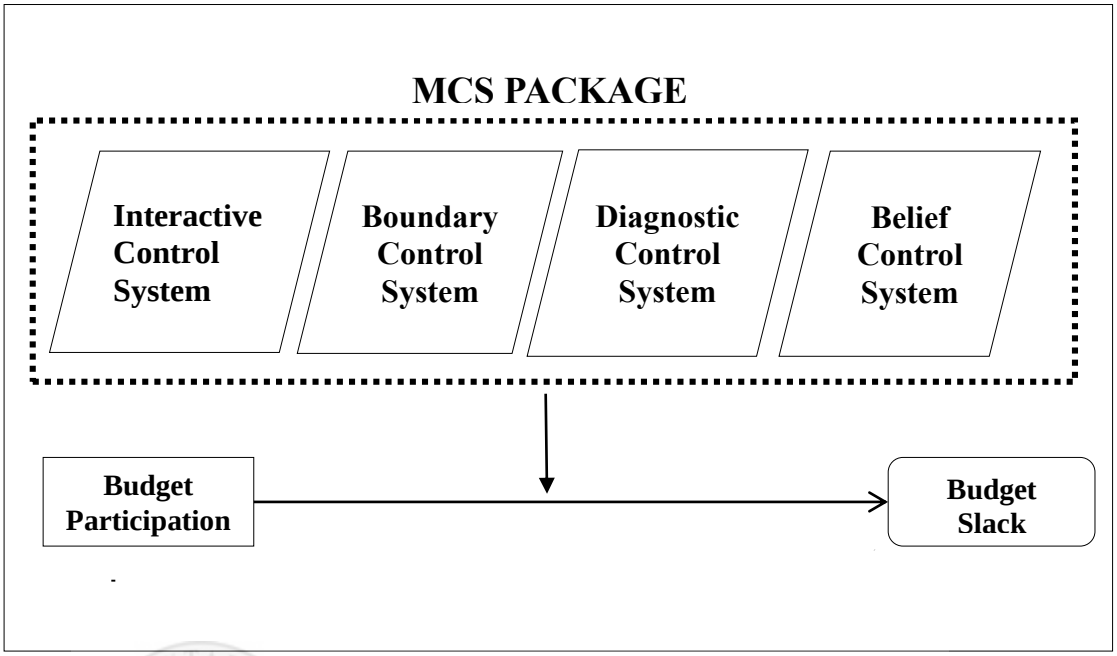


Figure 3.1
The Conceptual Model

The above conceptual model consists of three variables: (1) budget participation as independent variable; (2) budget slack as dependent variable; and (3) MCS as moderating variable. The relationship between budget participation and budget slack is as shown under the moderating effect of MCS, which consists of ICS, BCS, DCS and BLFCS.

3.4.2 Hypotheses Development

In this study, agency theory is employed in the development of hypotheses to study the relationship between budget participation and budget slack under the moderating effect of MCS. In the development of the hypotheses, the influence of the agency theory is discussed and hypothesized directions are determined based on empirical evidence from previous studies.

3.4.2.1 Budget Participation and Budget Slack

Budget participation is a decision making process in which two or more sections in an organization are involved and the decision impacts all those who are involved (Siegel *et al.,* 1989). Participation means involvement of every level of management in the compilation of budget so that targets can be set. Participation increases togetherness, belongingness and idea stimulation so that the decisions made are accepted by everyone. Young (1985) stated that creation of budget slack is caused by communication of distorted information by the staff members. The main cause behind this is the unwillingness to reach the targets of the budget.

Brownell (1982) found that budget participation is a process that allows individuals to participate in the process of budget making. When the target of the budget is achieved, the distribution of reward is considered to be important. However, when the subordinates are given full access to budget processing, the chance of creation of budget slack becomes greater.

Walker and Johnson (1999) and Douglas and Wier (2000) reported that budget participation is used to oversee the process of slack creation. In this particular situation, managers are inclined towards the creation of slack because of the desire to achieve the objectives associated with the targets of the budget. Contrary to this, mere occurrence of budget participation does not lead to budget slack proposed by other researchers (e.g., Onsi, 1973; Camman, 1976; Lal *et al.,* 1996).

Triana *et al.*, (2012) studied the impact of budget participation, budget emphasis and locus of control on budgetary slack. The result showed a significant relationship

between budget participation and budget slack. In other words, the more the managers' involvement in budget participation, the more the budget slack. Apriantini *et al.,* (2014) and Aprila and Hidayani (2012) found a significant and positive effect on the relationship between budget participation and budget slack. Budget slack will be increased if the manager gets the benefit of information, the creation of budget slack and negotiation of goals becomes easy (Kirby *et al.,* 1991), whenever the participants have opportunity to participate in budget process. This suggests that the higher the participation in the organization's budget was setting, the more the budget slack. Hence, on the basis of the above discussion, the following assumption can be made that budget participation has a positive relationship with budget slack.

If the manager gets the benefit of information, the creation of budget slack and negotiation of goals becomes easy (Kirby *et al.*, 1991). Accordingly, the first hypothesis is stated as follows:

H1: Budget participation has positive and significant relationship with budget slack.

3.4.2.2 Moderating Effect of Interactive Control System (ICS) on Budget Participation and Budget Slack

Simon (1995) stated that an ICS is a prescribed system employed by the top management to personally engage them in the process of decision making taken at the level of junior level employees. He also discovered that with the help of ICS, the individuals within the firm can find new directions and follow new action plans to make their performance better. Because of this, ICS is included and plays an important role in ensuring subordinates' involvement in budget preparation.

Shield and Shield (1998) presented the argument that the give-and-take of personal information between the senior and the junior employees is among the major reasons for budget participation. Various researchers in the field of accounting have stated that junior employees possess confidential information related to their areas of responsibility (Dunk, 1993; Ramden *et al.,* 2007).

Merchant (1985) and Young (1995) discovered very strong proof that private information has direct relationship with creation of budget slack. Dunk (1997) presented the argument that the level of participation of the junior employees in budget slack relies upon the extent of information asymmetry.

Private knowledge or information asymmetry is included in the communication mode in ICS. The communication mode is a face-to-face interactive process (Simons, 1995). The basic aim of the interactive process is to provide support to the practices of the organization by either discussing or challenging the existing assumptions. It allows the organization to assemble individual with a variety of information on the organization activities (Abernethy & Lillis, 1995; Speklé, 2001). According to Bisbe and Otley (2004), Naranjo-Gil and Hartmann (2007), and Simons (1995), the managers convey the preferences of the organization to enforce the occurrence of new strategic. Managers have the opportunity to reach the new information that is used for the development of strategic plans (Ahrens & Chapman, 2004; Wilderom & Wouters, 2008). Therefore, MCS facilitate employ in the company which formal discussion process can be made interactively. For instance, employees, which include executive and middle level management who involved in the budget process may likely to motivate themselves to exchange information and to reduce knowledge gaps (Abernethy & Brownell, 1999; Shields & Shields, 1998).

Interactive processes recognize to be up dated about the activities of the employees but they are also involved in open discussions in a way that is not undesirable for the organisation (Bisbe *et al.,* 2006). Processes, such as the days of strategy and face to face can be used to discuss problem solving instead of playing a blame game (Frow *et al.,* 2005; Marginson, 2002; Roberts, 1990). Simons (1995) stated that managers involve themselves in the decision making process of the junior level employees through ICS. They depend on information provided by other systems in order to make sure that the information becomes an inportant and recurring part of the managers along with the oranization,

Therefore, on the basis of the above debate, this research assumes that ICS acts as a moderating variable in the relationship between budget participation and budget slack. The above discussion leads to the following hypothesis:

H2: Interactive control system moderates the relationship between budget participation and budget slack.

3.4.2.3 Moderating Effect of Boundary Control System (BCS) on Budget Participation and Budget Slack

Simons (1995) asserts that a BCS is a prescribed system which the management uses to set rules to be followed by the employees. The system is developed through code of business conducts, strategic planning system and operating directives that are commonly of minimum standards when a company develops strategic planning and operational systems in order to safeguard the company from risks.

Boundary communication is often accomplished by business ethics. With the introduction of codes of conduct, leaders ensure that junior employees are not engaged in activities that might be against the principle of the organization, will not waste the resources of the organization, or be involved in activities that are against the organization's action plans. BCS is closely associated with budget emphasis.

According to Merchant (1985), because of the pressure on managers to achieve targets of the budget, they will tend to create slack in the budget. Lowe and Shaw (1968) stated that the more the attention paid to the objectives, the possibility of relying on the company's budget increases.

Schiff and Lewin (1970) suggested that subordinates look at their compensation which depends on the achievement of budget goals. They view budget slack as being beneficial to them. Schiff and Lewin (1968; 1970) argued that the criteria for assessing the implementation of the budget are generally used in the organization. Manager tries to influence the criteria to achieve what they perceive as a feasible budget.

Budget emphasis is the level of emphasis on meeting budget targets (Hopwood, 1972; 1974; Brownell, 1985). According to Dunk (1997), budget emphasis has a negatively significant impact on the relationship between budget participation and budget slack. Ramden *et al.,* (2007) supported this result in their study on the effect of budget participation, budget emphasis and information asymmetry on budget slack. However, Oktorina (2013) discovered that budget emphasis has a positively significant relationship between budget participation and budget slack. Budget emphasis occurs when managers are stressed for the achievement of budget goals, in such cases, the

chance of budget slack creation increases (UKEssays.com, 2013) and budget emphasis is one of elements of BCS (Simons, 1995).

The boundary lever of control is an overt set of organizational definitions and parameters, indicated in negative or minimum terms (Simons, 1995). Through the communication of these acceptable and off-limit activities, the boundary processes prevent employees from wasting organizational resources. They help by taking charge of the activities up to a certain point only in order to prevent employees from seeking timely and optimal solutions to issues. For boundary levers of controls, any MCS standards and guidelines for the behavior of managers can be used. To safeguard the organizations against financial risks, boundaries are set by the financial data, while the boundary within which managers can work is established by non-financial data (Tuomela, 2005).

Therefore, the BCS acts as a moderating variable in the relationship between budget participation and budget slack. The above discussion leads to the following hypothesis:

H3: Boundary control system moderates the relationship between budget participation and budget slack.

3.4.2.4 Moderating Effect of Diagnostic Control System (DCS) on Budget Participation and Budget Slack

According to Simons (1995, 2000), DCS is designed to make sure that expected goals have been achieved and strategies have been implemented. Also, managers are allowed by the system to monitor and reward the achievement of the objectives set by the critical performance variables. In the view of Simons (1995), budgetary control system is one

of the elements of the DCS. Frow *et al.,* (2005) mentioned that budget control is an organizational imperative, but the way in which it is implemented presupposes stability, certainty and individual level controllability (Ezzamel & Hart, 1987).

Van der Stede (2000) and Yilma and Ozer (2011) found that budgetary control system has a negative effect on budget slack. According to Lukka (1988), when the managers of the business units create slack, they use their superior position in the knowledge of business opportunities for enterprise management performance targets less than their best calculation. Dunk (1993) and Merchant (1985b) justified that budget slack can be reduced using budget control system.

According to financial data, once the objective is achieved, managers are allowed by non-financial firms to oversee and reulate the critical success aspects (Abernethy and Lillis, 2001; Perera & Harrison, 1997; Tuomela, 2005). The traditional use of MCS is explained by diagnostic procedure which includes the remedies in response to comments on the performance (Fisher, 1995). However, DCS does not only influence the behavior of managers; it is used to highlight the problem of monitoring and motivation by managers to achieve their objectives (Emsley, 2001; Ittner & Larcker, 1998; Kato, Boer & Chow, 1995; Norman, 2001).

Hence, an assumption can be made in the light of the above discussion that in the relationship between BP and BS where DCS (budgetary control system) acts as a moderating variable. The above discussion leads to the formulation of the following hypothesis:

H4: Diagnostic Control System moderates the relationship between budget participation and budget slack.

3.4.2.5 Moderating Effect of Belief Control System (BLFCS) on Budget Participation and Budget Slack

Simons (1995) described that BLFCS is a prescribed system that uses by the management to determine an organization, formally communicate, systematically reinforce the basic values and purpose and provide future aspirations for the organization. It is also stated that one of the elements of BLFCS is culture control system. The previous studies used culture control system as a moderating variable in the relationship between budget participation and budget slack, For example, Utami (2013) found that organisational culture has no impact on the relationship between budget participation and budget slack. On the contrary, Omobola, (2013) concluded that through budget participation, budget slack is significantly affected by firm's culture.

BLFCS are responsible for the provision of a stable environment to the employees. It also challenges the organization's status quo and political processes by transferring the beliefs and norms (Simons, 1995). BLFCS is very important for firms when they change their management and their values and it perform a major role in the organization in the context of knowledge sharing (Bruining *et al.,* 2004; Roberts, 1990). The company's success depends on the provision of information related to the company's objectives to its employees so that they can work in synchronization with each other (Abernethy & Vagnoni, 2004). BLFCSs are also used by managers who are used to to indicate

dangerous conditions for members of the strategic goals of the organization to adapt their behavior to the desired result (Speklé, 2001).

Hence, an assumption can be made in the light of the above discussion that in the relationship between budget participation and budget slack, BLFCS can act as a moderating variable. Accordingly, the above discussion leads to the following hypothesis:

H5: Belief Control System moderates the relationship between budget participation and budget slack.

3.4.2.6 Moderating Effect of MCS Package (MCSP) on Budget Participation and Budget Slack

Firms can employ the MCSPs in fulfilling the need for information. These packages are actually illustrations of prescribed control systems as noted by Chenhall (2003). MCSPs create value by producing information for decision-making, resource allocation, performance evaluation, control and cost management. MCSP consists of ICS, DCS, BCS and BLFCS (Simons, 1990; Widener, 2007).

Horngren *et al.,* (2008) argued that in order to have an impact on behavior of managers in the attainment of organizational goals, management can use MCS, which can also reduce the dysfunctional behavior among managers. Dunk (1993), Ramden *et al.,* (2007), and Elizabeth (2014) found that an inverse impact occurs in the relationship between information asymmetry, budget participation and budget slack. Information asymmetry acts as moderating variable in that relationship.

Dunk (1993), Gamal (2001), Ramden *et al.,* (2007), and Kristianto (2009) used budget emphasis as moderating variable and concluded that budget emphasis has a negatively significant relationship between budget participation and budget slack. On the contrary, Octorina and Sumarno (2013), found a positively significant relationship. Van der stede (2000) and Yilma, E. and Ozer, G. (2011) studied the impact of budget control on budget slack and concluded that the effectiveness of budgetary control has a negative impact on budget slack. Utami (2013) studied the impact of culture of the organization in the relationship between budget participation and budget slack and showed that a firm's culture has no impact on the relationship.

As stated in the last chapter, information asymmetry is represented by ICS; budget emphasis by BCS; budget control system by DCS; and firm culture by BLFCS. Based on these representations, empirical studies show that each element of the MCSP has been used as moderating variable in the relationship between budget participation and budget slack. For example, Dunk (1993), Ramden *et al.,* (2007), and Elizabeth (2014) used ICS; Dunk (1993), Gamal (2001); Ramden *et al.* (2007), and Kristianto (2009) used BCS; Van der stede (2000) and Yilma and Ozer (2011) used DCS; and Utami (2013) used BLFCS.

MCS is used partially by the researcher as moderating variable on the relationship between budget participation and budget slack. Hence, on this basis, it can be supposed that MCSP moderates the relationship between budget participation and budget slack. This discussion leads to the following hypothesis:

H6: MCSP moderates the relationship between budget participation and budget slack.

3.5 Summary of Chapter

This chapter has discribed the conceptualization of the theoretical framework and the hypotheses development. The hypotheses are developed based on the agency theory and empirical evidence from previous studies in emerging countries. When there is mixed evidence from previous studies, the development of hypotheses are based on specific theory to determine the directions of hypotheses. The next chapter discusses in detail the research methodology of this study.

CHAPTER FOUR

RESEARCH METHODOLOGY

4.1 Introduction

This chapter includes the details of research methodology. In this chapter, the complete process of research carried out by the researcher is explained. In the beginning, it explains the sources of information, population sample and method of data collection. Later, it explains the steps that were followed in the formulation of the questionnaire. It also explains the definitions of the constructs and the methods by which those constructs were measured. In the end, this chapter explains the methods used for the analysis of the data.

4.2 Research Design

Research design is very important in the research process, because the design provides direction to the researcher of what techniques will be used to collect data, what type of sampling will be used, and how will time and cost constraints be dealt with (Cooper & Schlinder, 2003). According to Oppenheim (1992), research design refers to the basic plan or strategy of the research, and the logic behind it, which will make it possible and valid to draw more general conclusions from it. The research design should tell us how our sample will be drawn, what sub-groups, it must contain, what comparisons will be made, whether or not we shall need control groups, what variables will need to be measured (when and what intervals) and how this measure will be related to external events (Oppenheim, 1992). Based on suggestion Cooper and Schindler (2003) and Oppenheim (1992), the research design for this study is illustrated in figure 4.1

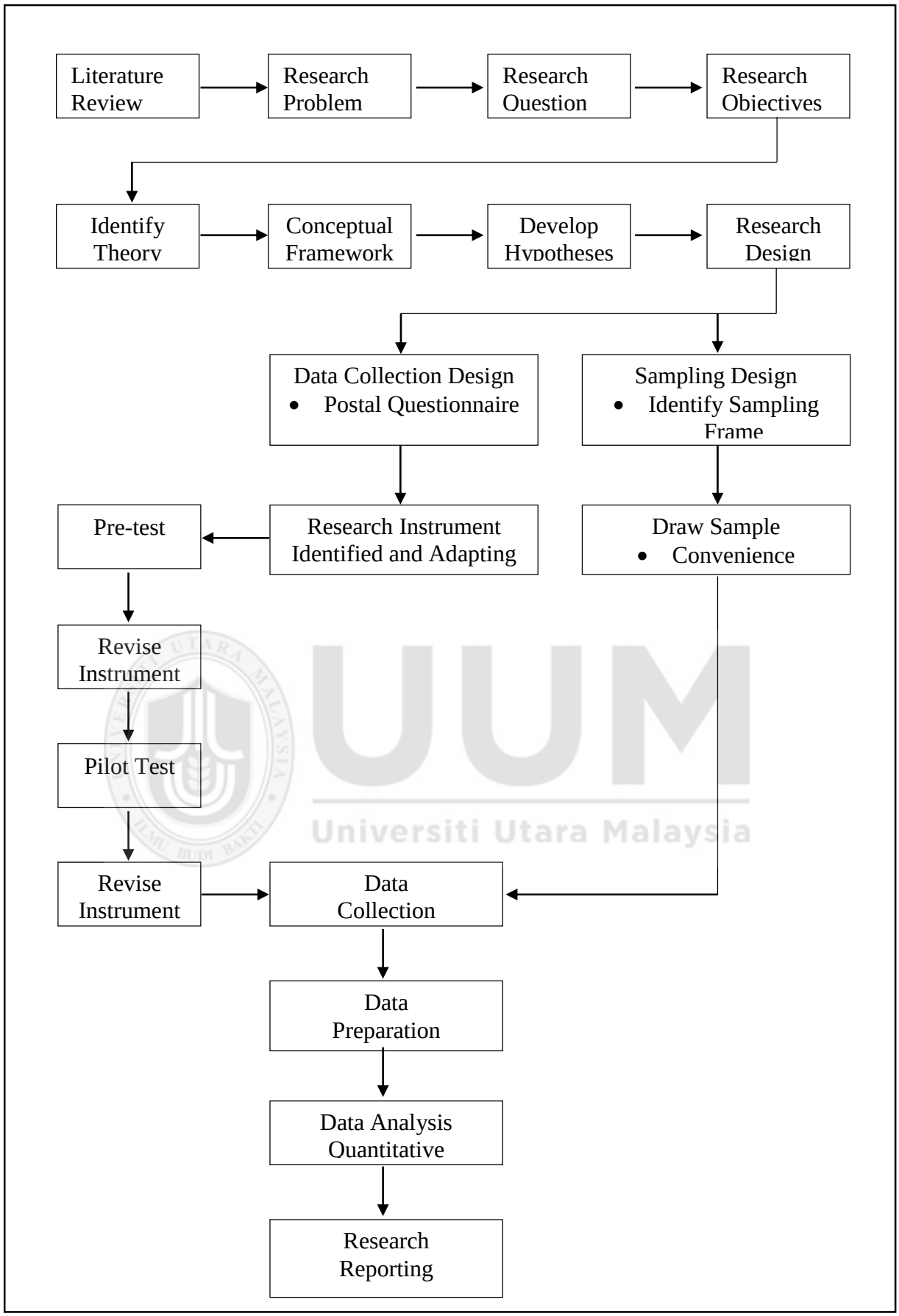


Figure 4.1
Research Design

4.3 Information Sources

For the determination of the list of companies on the mainboard of the Jakarta Stock Exchange in Indonesia (JSEI), with all manufacturing firms for the year 2011, was acquired from the Indonesian Capital Market Directory (ICDM, 2011). Information related to the modification in the name of the company was also analyzed. This information can also be found on the JSEI. Once the list was finalized for mailing the questionnaires, the addresses of the firms, contact numbers and the names of the secretaries of the firms were searched

4.4 Population and Data Collection

In this research, the populations are managers as the unit of analysis, who are involved in the functioning of the manufacturing firms (i.e production manager, marketing manager and accounting/finance manager). The total number of organizations listed was 151 firms. Sample in this study from all the population of 453 managers is drawn from 151 firms.

Manufacturing firms are selected because of the following reasons: the manufacturing industry is the main driver of economic growth in Indonesia which contributes to the country's GDP by 25.5 %. Hence, the practice of MCS in the process of budget making will help in the reduction of dysfunctional behavior by the managers which will make the performance of the firms better (Badan Kebijakan Fiskal, 2010). Horngren *et al.*, (2008) supported this by stating that management can make use of MCS to improve the behavior of the employees so that they can be motivated towards the achievement of organizational goals. Hence, a better performance by the manufacturing industry can

make the whole economy better. The manufacturing industry can be used for the homogenization of the samples.

For the identification of all the sample units in the population, a sampling frame is used (Alreck & Settle, 1995). Roscoe (1975) postulated that for multivariate regression, the size of the sample should range from one to 10 (or more) for each and every variable that is being tested. For this particular research, a sample size on the basis of Rescoe's (1975) recommendation is adopted because of the assumption that survey studies generally produce a decreased rate of response.

According to Henri (2003) there are several issues must be considered to determine the sample size; (1) The response rate that would determine the final number of usable cases; (2) the statistical requirements; and (3) manageability of the administration of survey and cost. Sekaran (2004) suggests that for determining sample size; (1) sample size larger than 30 and less than 500 are appropriate for most research; and (2) for regression purposes, the sample size is determined of the number of variables in the study, preferably ten times or more of the variables. Smaller samples have lower reliability and more sampling error (Alreck & Settle, 1995). In general, less than 30 respondents of a sample will provide too little certainty to be practical. Alreck and Settle (1995) also suggested a minimum sample size of 100 respondents for large population and for a sample is about 1,000 respondents for the maximum practical.

For this research, the population is all manufacturing firms in Indonesia and the sample consists of 453 managers from 151 manufacturing firms listed in JSEI. Bearing in mind of the poor response rate generally obtained in survey studies conducted in Indonesia,

which is about 15% to 20%, the questionnaires were sent to all 453 managers. The respondents (production, marketing and accounting/finance managers) for this research belong to different areas of operations, all of whom are part of the budget making process.

For the collection of data, A mail survey method was used to collect data from functional managers. For the agreement of each company to participate in the research process, the company secretary from each organization was contacted. After getting the confirmation, the questionnaire and a cover letter were sent to the secretaries of the companies. For distribution to the functional managers, three sets of questionnaires were sent to each secretary. The secretary was asked to distribute the questionnaires to the company's functional managers. The instructions about how to fill the questionnaires were included in the cover letter. A period of two weeks was given to the secretary to return the completed questionnaires. Two follow–ups were conducted to remind the respondents who had not replied the questionnaires through secretaries. The first reminder together with a replacement of questionnaires after two weeks time. The second reminder was also sent to those who still did not reply after the deadline, together with a replacement questionnaire, was sent to respondent through secretaries who had still not replied (see Appendix A).

4.5 Operational Definition and Measurement of Variables

The instruments adopted in this research have already been checked for their reliability and validity in the western countries. The following instruments are used in this study: budget participation measures developed by Milani (1975); budget slack measures

developed by Dunk (1993); ICS measures; BCS measures; DCS measures; and BLFCS measures all developed by Widener (2007). All variables in the study use 7- point scale because these scale more precise in description of the responses. This scale has been used by previous studies such as by Milani (1975) using scale ranging from 1 (Strongly Disagree) to 7 (Strongly Agree) for budget participation variable; Dunk (1993) using scale scale ranging from 1 (Strongly Disagree) to 7 (Strongly Agree) for budget slack variable; ICS and BCS scale ranging from 1 (Strongly Disagree) to 7 (Strongly Agree) used by Widener (2007), DCS scale ranging from1 (Small Extent) to 7 (Large Extent) is used by Widener (2007) and BLFCS scale ranging from 1 (Not Descriptive) to 7 (Very Descriptive) used by Widener (2007), for MCS variable is used by Widener (2007) scale ranging from 1 (Not Descriptive) to 7 (Very Descriptive).

According to Otley (2012), in the literature, control are often classified as either social (i.e. value and norms) or technical (i.e. procedures, rules) and Otley (2012) stated that belief control system are primarily social. This is implicitly acknowledged by Widener (2007) who argues that belief system play a role on all three other levers of control. Based on argument above, Widener (2007) more likely classified the levers of control into social which tend to value and norms. While present study discussed about MCSP in the relationship between BP and BS. MCSP was measured using the Widener (2007). This measured was selected because of its closed relationship between value and norms with dysfunctional behavior of managers to create budget slack.

In order to refine the questions and for the classification of the questions and items in the questionnaire with reference to their meaning, clarification of every comment, applicability of items and problems come across in finalizing the questionnaire, a pilot

test was carried out. The pilot study was conducted using a sample of 30 managers from 10 manufacturing firms at the Kawasan Industri Makassar (KIMA). The pilot test tested the reliability and validity of the questionnaire items. The Cronbach's alpha reliability coefficients for the constructs used in the pilot study were all more than 0.7, according to Nunnally (1978), reliability coefficient of 0.7 or more is acceptable for most behavioral research applications.

4.5.1 Budget Participation

Based on Milani (1975), BP is defined as involvement of top managers and subordinates in the preparation of budget estimates and which influences the target budget that can be achieved. According to Eker (2006), the involvement of the managers and subordinate in the process of budget making, including the process of resource allocation for their personal activities and the participation of subordinates in the budget process have positively effect on managerial performance.

The current study, BP is a concept in which individuals are involved in an organizational process to determine the use of resources for their own activities and operations. BP in this study is based on Milani's (1975) definition and six items are used to measure the level and participation of employees in the process of budget setting. This study adopts budget participation based on Milani (1975) because of its multi-item nature, and the measurement has been widely used. Also important was its previously demonstrated validity (Brownell, 1982). A seven-point Likert scaled ranging from 1 (Strongly Disagree) to 7 (Strongly Agree) was used as provided answers

for the respondents in this study. These six items measure the viewpoints of managers with regards to:

1. Which category below best describes your activity when the budget is being set?
2. Which category below best describes the reasoning provided by your superior when budget revisions are made?
3. How often do you state your requests, opinion and/or suggestions about the budget to your superior without being asked?
4. How much influence do you feel you have on the final budget?
5. How do you view your contribution to the budget? My contribution is :
6. How often does your superior seek your requests, opinion and/or suggestions when the budget is being set?

4.5.2 Budget Slack

Definitions of BS are many but they all share common ground. Harvey (2012) stated that budget slack is created when managers want to allocate more than required resources for the creation of budget or they underestimate the revenue generating practices. Besides that, Kilfoyle and Richardson (2011) stated that the creation of budget slack depends on the capability of the junior employees to under estimate the abilities of their respective business units.

Actually, budget slack is the result of the process of undermining the profits and overestimating the costs that are actually incurred in the completion of a task related to the budget (Dunk & Nouri, 1998). In this research, the definition of budget slack is based on Dunk (1993) definition and refers to increased requirement of resources or

undermining the ability which is intentionally done by the functional managers. The items in the instruments are based on Dunk (1993) because the instruments are focused on the ease with which budgetary targets can be achieved.

The instruments based on Dunk (1993) have six items from 1 (Strongly Disagree) to 7 (Strongly Agree). Summaries of the instruments included in the questionnaires are as follows:

1. Standards set in the budget induce high productivity in my area of responsibility.
2. Budget set for manager functional area of responsibility are safely attainable.
3. I have to carefully monitor costs in my area of responsibility because of budgetary constraints.
4. Budget for my area of responsibility is not particularly demanding.
5. Budgetary targets have not caused me to be particularly concerned with improving efficiency in manager's area of responsibility.
6. Targets incorporated in the budget area difficult to reach.

4.5.3 Interactive control System (ICS)

According to Bisbe and Otley (2004), the ICS is a formal control system where managers are personally involved in decision making; this system acts as a basis of interaction between organizational members. In this study, the ICS involves the participation of managers in decision making which will stimulate the firm to learn and new ideas and strategies can emerge (Simons, 1995).

The ICS is measured by adapting an instrument developed by Widener (2007) containing six items scaled from 1 (Strongly Disagree) to 7 (Strongly Agree). The questions were slightly changed to suit the objectives of the study. The word "top management" was changed to "manager" and "performance measure" to "budget system" for all items in each variable (ICS, BCS, DCS, and BLFCS). The study adapt instrument by Milani (1975) for BP variable and by Dunk (1993) for BS variable.

The questions included in the questionnaire are as below:

1. Manager pays little day-to-day attention on the budget system.
2. Manager relies heavily on staff specialist in preparing and interpreting information from the budget system.
3. Operating managers are involved infrequently and on an exception basis with the budget system.
4. Manager pay day-to-day attention to the budget system.
5. Manager interprets information from the budget system.
6. Operating managers are frequently involved with the budget system.

4.5.4 Boundary Control System (BCS)

The BCS is defined as a system that communicates code of business conducts to prevent employees from wasting organizational resources and from seeking constant betterment beyond optimal and timely solutions (Simons, 1995).

The BCS is measured by four items based on the instrument of Widener (2007). In this questionnaires, the word "work-force" has been changed to "managers" to suit the objectives of the study.

This study uses a seven-point Likert scale from 1 (Strongly Disagree) to 7 (Strongly Agree) as follows:

1. Our firm relies on a code of business conduct to define appropriate behavior for our managers.
2. Our code of business conduct informs our managers about behaviors that are off-limits.
3. Our firm has a system that communicates to our managers' risks that should be avoided.
4. Managers are aware of the firm's code of business conduct.

4.5.5 Diagnostic Control System (DCS)

In this study, DCS is a system that allows management to evaluate and encourage the attainment of targets that were set beforehand through the review of critical performance variables.

BLFCS is checked by four items adopted from Widener (2007), using a seven-point Likert scale ranging from 1 (Not Descriptive) to 7 (Very Descriptive) as follows:

DCS is checked by eleven items, adapted from Widener (2007). A Likert scale from 1 (Small Extent) to 7 (Large Extent) is used.

The questionnaire contains the following items:

1. Track progress towards goals.
2. Monitor results.
3. Compare outcomes to expectation.

4. Review key measures.
5. Enable discussion in meeting of superiors, subordinates and peers.
6. Enable continual challenge and debate of underlying data, assumption, and action plans.
7. Provide a common view of the organization.
8. Tie the organization together.
9. Enable the organization to focus on common issues.
10. Enable the organization to focus on critical success factors.
11. Develop a common vocabulary in the organization.

4.5.6 Belief Control System (BLFCS)

BLFCS is important for firms in transition when managers change to new beliefs and preferences (Bruining *et al.*, 2004; Roberts, 1990).

In this study, BLFCS communicates the mission statement, core value and awareness of this value to the workforce (Simons, 1995). The questionnaires of BLFCS the word "work-force" changed to "manager" to suit the objectives of the study

BLFCS is checked by four items adopted from Widener (2007), using a seven-point Likert scale ranging from 1 (Not Descriptive) to 7 (Very Descriptive) as follows:

1. Our mission statement clearly communicates the firm's core values to our managers.
2. Top managers communicate core values to our managers.
3. Our managers are aware of the firm's core values.
4. Our mission statement inspires our managers,

4.5.7 Summary of Measurement

The summary of measurements of BP, BS, ICS, BCS, DCS and BLFCS is reported in Table 4.1

Table 4.1
Summary of measurements of Independent Variable (IV) and Dependent Variable (DV) and Moderating Variables.

Variables	Definition	No. of Items	Sources of measures
Budget slack	Is effort to degrading revenue budget and raise expenditure budget that should be able to achieve, with the aim that revenue budget is easy to achieve and expenditure budget is not exceeded, so that managers can show better performance and avoid the risk of failure to achieve the target.	6	Milani (1975)
Budget participation	An involvement of senior managers and subordinates A in the process of budget creation for the determination of the process of allocation of resources within their own activities doings and operations,, and to avoid the dysfunctional behavior.	6	Dunk (1993) and Dunk and Nouri (1998)
Management control system (MCS) as a Package	A process by which management uses various controls (ICS, BCS, DCS, and BLFCS) as a package to prevent undesirable behavior and make sure that employees' performance is in the organisation's best interests.		Simons (1995)
Interactive control system (ICS)	A system that highlights the need those employees should focus on the issue addressed by interaction system, which can help the organization to gather employees with different information about the organization's activities.	6	Simons (1995) Widener (2007)

Table 4.1, Continued

Variables	Definition	No. of Items	Sources of measures
Boundary control system (BCS)	A system that is involved in the communication of code of business conduct and also to prevent employees from wasting organization's resources so that appropriate improvement can be brought in an appropriate time frame.	4	Simons (1995) Widener (2007)
Diagnostic Control System (DCS)	A system with the help of which the management rewards the employees who have successfully achieved pre-set targets through the review of critical performance.	11	Simons (1995) Widener (2007)
Belief Control System (BLFCS)	A system to communicate mission statement, core value and awareness of this value to the workforce	4	Simons (1995) Widener (2007)

4.6 Data Analysis

4.6.1 Factor Analysis

According to Hayes (2013, p. 211) "Factorial analysis of variance is used to ascertain whether the effect of one variable on a dependent varible of interest differs across levels of the second variables. If so, then it is said that two variables inter-act in ther influence on the dependent variable." The correlation between each attribute and each score in the interpretation of the factor matrix indicated by the greater the value of the factor loading, the more important that attribute is (Hair *et al.*, 2010).

In order to identify the factors, principal component analysis (PCA) is used. Cronbach's alpha is used to determine the value of internal consistency. To make a decision on the number of factors, the following steps must be analyzed according to Hair *et al.*, (2010). First, the Kaiser Meyer Olkin (KMO) test must be more than 0.6 and the Barlett's test

of Sphericity must be significant. As KMO is concious to sample size, thus, a sample size of 100 and more is desireable. Second, the measure of sampling adequacy (MSA) must be greater than 0.5. When the MSA is less than 0.5, the item must be deleted and the factor analysis rerun until the items have a MSA value of more than 0.5. Third, in the communalities section, all items should have communalities more than 0.5. If they have a value less than 0.5, the item should be deleted one-by-one until all items have communalities more than 0.5.

Varimax rotation method is used because it is the most used method for the reduction of data. The total percentage of variance explained by the factors should be more than or equal to 60%. The collective percentage of total variance extracted by the successive factors is shown by the percentage of variance explained. Only factors with eigenvalue more than 1.0 must be selected.

The number of items in the questionnaire should be around 20 to 50, for the application of this method. When the questionnaire has more than 50 items, more factors must be withdrawn. On the contrary, if items are less than 20, the opposite would occur. Hence, in this research, 37 items are considered to be relevant for the use of eigenvalue of more than 1.0. The research made use of loading of 0.50 and above as suggested by Hair *et al.,* (2010). The correlation of the variable and the factor is referred to as factor loading. Higher factor loading means the more important the variable is in interpreting the factor. With a sample size of 140, the factor loading suggested should be between 0.45 and 0.50. In addition, factor loading of 0.45 and more is relevant for practical significance (Hair *et al.,* 2010).

In deciding which items should be made part of a factor, items that have high cross-loading in two or more variables must be excluded. According to Hair *et al.,* (2010), if a factor loading is 0.50 and above, then the exclusion is made of an item which has cross-loading of 0.50 and above. In addition, an item which has a difference of less than 0.10 in the cross-loading is also omitted (Snell & Dean, 1992).

In order to conduct factor analysis, PCA and varimax rotation with Kaiser Normalization are used (Hair *et al.,* 2010). The criterion of varimax rotation depends on simplification of the columns of the factor matrix and provides assistance in making the items' patterns that correlated with a more divergent given factor (Kim, 1975). As a general rule, according to Hair *et al.*, (2010), the PCA is concerned with determination of the number of factors to be accountable for the maximum variance in the data.

Everitt and Dunn (1983) stated that PCA with an eigenvalue of greater than 1.0, is regarded as significant and can be employed for the determination of the factors to be omitted. In this study, the results of the test revealed that there is one factor with an more than 1 of eigeneivalue.

4.6.2 Reliability Analysis

Reliability analysis is conducted to assess the level of consistency between the variables. This study tested for internal consistency, which is more commonly used to measure the reliability of a factor. There should be high level of correlation between the items in a variable. According to Hair *et al.,* (2010), the assessment of internal consistency should consider the following series of diagnostic measures:

1. Cronbach's alpha of 0.70 is generally agreed for lower limit, but for exploratory research, the Cronbach's alpha may be decreased to 0.60. For this study, the reliability coefficient (Cronbach's alpha) is 0.70;
2. inter-item correlation (correlation among items) should be more than 0.30; and
3. Item-to-total correlation (correlation of an item to the summated scale score) should be more than 0.5.

4.6.3 Regression Analysis

Before regression analysis can be conducted, the assumptions of regression analysis must be checked for all the variables. The assumptions are linearity, homoskedasticity, normality, multicolinearity and outliers.

4.6.3.1 Assumptions in Regression Analysis

4.5.3.1.1 Linearity

Linearity between the dependent variable and the independent variable, can be checked by comparing the standard deviation of the dependent variable with the standard deviation of the residuals. According to Hair *et al.*, (2010), non-linearity does not remain an issue when the standard deviation of the dependent variable is more than the standard deviation of the residual value.

4.5.3.1.2 Homoscedasticity

Homoscedasticity of variance refers to the fact that the residual variance must be constant. There is random dispersion of the residuals over the entire range of the estimated dependent variable. Heteroscedasticity is also the result of a non-normal

variable. Statistically, the residual is deemed homogeneous if the value is greater than 0.05.

4.5.3.1.3 Multicollinearity

According to Hair *et al.,* (2010), the amount of variation in a chosen independent variable which is unexplained by other independent variables, is called tolerance. Multicolinearity is the inter-correlation of the independent variables. It decreases the capability for the prediction of the dependent variable and also helps in the determination of the significance of the independent variable. Multicolinearity is also checked using the following two steps: first, checking the correlation matrix (r) for bivariate analyses among the independent variables. According to Gujarati and Porter (2009), the r should not be more than 0.80. Second, if the correlation is greater than 0.80, then variance inflation factor (VIF) is checked.

4.5.3.1.4 Outliers

Outliers refer to observations with extreme values which are substantially different from other observations. To check outliers, there are several methods available. This study checked for any outliers using standardized residuals. The presence of an outlier can be checked by referring to the scatter plot and standardized residual plot. Accordingly, outliers occur when the standardized residuals are more than +3.3 and less than -3.3 (Tabachnick & Fidel, 2007).

4.5.3.2 Regression Functions

A standard regression model was used to examine the influence of the moderating variable on the relationship between BP and BS. Baron and Kenny (1986) said that a moderating variable is the one which determines the direction or strength of the relationship between two variables and is qualitative or quantitative in nature. As the most reliable technique, this study used regression analysis (Hair *et al.,* 2010).

The research model for testing the hypotheses is shown below:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 [(X_1 * X_2)] + \beta_7 [(X_1 * X_3)] + \beta_8 [(X_1 * X_4)] + \beta_9 [(X_1 * X_5)] + \beta_{10} [(X_1 * X_2 * X_3 * X_4 * X_5)] + e$$

Where:

Y - budget slack

X_1 - budget participation

X_2 - interactive control systems

X_3 - diagnostic control systems

X_4 - boundary control system

X_5 - belief control system

$[(X_1 * X_2)]$ = two-way interaction of budget participation and interactive control system

$[(X_1 * X_3)]$ = two-way interaction of budget participation and diagnostic control system

$[(X_1 * X_4)]$ = two-way interaction of budget participation and boundary control system

$[(X_1 * X_5)]$ = two-way interaction of budget participation and belief control system

$[(X_1*X_2*X_3*X_4*X_5)]$ = two-way interaction of budget participation and interactive control system and diagnostic control system and boundary control system and belief control system

β_0 = intercept

β_1 through β_{10} = are slopes of the population regression line

e = error term or residual

4.6 Summary of Chapter

This chapter includes description of the research design and research methodology used in this study, such as information sources, data collection, study sample, the measurement of variables and data analysis. For the collection of data from functional managers from various manufacturing organizations, a mail survey method was implemented.

The data was analyzed by using factor analysis and regression analysis. The regression analysis was used to examine the hypotheses. Before running the regression analysis, assumptions, such as linearity, homoscedasticity, normality, multi-collinearity and outliers were checked. The following chapter presents the results of the study.

CHAPTER FIVE

ANALYSIS AND FINDINGS

5.1 Introduction

The basic purpose of this chapter is to perform an analysis of the relationship between budget participation (BP) and budget slack (BS). The research findings in this chapter are based on the data collected from the respondents. In order to gain an insight into the characteristics of the variables, descriptive analysis was first used for analyzing the data. For all the variables, factor analysis and reliability analysis were regulated. To analyze the impact of management control system on the relationship between budget participation and budget slack, correlation and regressions analysis were conducted.

In this research, the term 'Management Control System' is referred to the Management Control System Package, which includes Interactive Control System, Boundary Control System, Diagnostic Control System and Belief Control System.

5.2 Criterion Validity

According to Pallant (2004), criterion validity is regarded as the relationship between scale scores and some specified, measurable criterion. Validity for a pilot study is the extent to which the scale or set of measures accurately represents the concept of interest (Hair et al., 2010). To check on validity, this study used two methods which are content validity and construct validity. In the content validity the instrument was pre-tested on managers and academicians. A preliminary study was conducted to refine and clarify questions and items in the instrument with regards to their meaning, clarity, of each

statement, relevantce of items and problems encountered in completing the questionnaire.

Another method used to determine the validity is construct validity, where all the items constructed in the questionnaire are tested for convergent validity. Construct validity is the extent to which a set of measured items actually reflects the theoretical validity is about the accuracy of measurement and it can help to provide confidence that items mesures taken from a sample represent the actual true score that exist in the population. A pilot study was conducted amongst 30 managers, In the questionnaire, thirteen (13) demographic questions, six (6) items on ICS, four (4) items on BCS, eleven (11) items on DCS and four (4) items on BLFCS, six (6) items on BP, and six (6) items on BS.

5.3 Factor Analysis

The discussion of the results of factor analysis conducted on all variables to determine whether they could be regarded as a single measure is included in this section. The PCA and varimax rotation with Kaiser Normalization test was conducted for this purpose. The detailed of Factor Analysis results are in Appendix C.

5.3.1 Budget Participation (BP)

In analyzing whether factor analysis is suitable for BP, KMO and Barlett's test were first conducted. The results are shown in Table 5.1 The KMO measure (0.914) and Bartlett's test of sphericity results (545.218 and significant at 0.000) indicate that the items used to measure BP clearly meet the conditions of factor analysis. Thus, factor analysis could be applied for BP items. According to Norusis (1992), factor loading can

be defined as the correlation between an item and the given factor. As a general rule of thumb, Hair *et al.*, (2010) determine a rule to interpret factor loading, i.e., factor loadings with value +0.50 or above are considered very significant; loadings of +0.40 are considered more important; and loadings of +0.30 are considered significant.

The factor loading for all six BP items exhibited factor loadings ranging from 0.802 to 0.891, indicating that the items very significantly correspond to the factor itself. Similar to Dahli (2009) and Eker (2006), this analysis supports that the six items of BP measured the same single variable.

Table 5.1
Factor Analysis for Budget Participation (BP)

No.	Budget Participation items	Factor loading
1	Which category below best describes your activity when the budget is being set?	0.857
2	Which category below best describes the reasoning provided by your superior when budget revisions are made?	0.867
3	How often do you state your requests, opinion and/or suggestions about the budget to your superior without being asked?	0.802
4	How much influence do you feel you have on the final budget?	0.822
5	How do you view your contribution to the budget?	0.814
6	How often does your superior seek your requests, opinion and/or suggestions when the budget is being set?	0.891

Percentage of variance explained (%)	**71.033**
Kaiser-Meyer-Olkin	0.914
Bartlett's test of sphericity approx. chi square	545.218
df	15
Sig.	0.000

5.3.2 Budget Slack (BS)

For the six items that measured the BS construct, factor analysis was conducted. Firstly, KMO and Bartlett's tests were administered. The results are shown in Table 5.2 below:

Table 5.2
Factor Analysis for Budget Slack (BS)

No	Budget slack items	Factor loading
1	Standards set in the budget induce high productivity in manager area of responsibility	0.937
2	Budget set for manager functional area of responsibility are safely attainable	0.958
3	Managers have to carefully monitor costs in my area of responsibility because of budgetary constraints	0.946
4	Budget for manager of responsibility are not particularly demanding	0.937
5	Budgetary target have not caused me to be particularly concerned with improving efficiency in manager's area of responsibility	0.937
6	Target incorporated in the budget area difficult to reach	0.949
Percentage of variance explained (%)		**89.086**
Kaiser-Meyer-Olkin		0.924
Bartlett's test of sphericity approx. chi square		1204.212
Df		15
Sig.		0.000

The results in Table 5.2 show that the KMO measure for BS items is 0.924 which illustrates a 'marvellous' sufficiency, and thus the use of factor analysis is applicable (Hair *et al.,* 2010). The examined value of Bartlett's test of sphericity is also very large (1204.212) while its associated significance level is very low (0.000). Both the KMO measure and Bartlett's test of sphericity results indicate that the items used in BS measures are according to the conditions for factor analysis. This implies that for BS items, factor analysis is applicable. The six BS items showed factor loading of more than 0.50.

In this study, most items have more than 0.50 of a factor loading, implying that the items and the factor itself were very significantly correlated with factor loadings ranging from 0.937 to 0.958. It is confirmed by this analysis that one dimension was measured by used in the measurement one set of items.

5.3.3 Interactive Control System (ICS)

Factor analysis was administered in order to examine whether all six items which were used to measure ICS could be measured as a single variable. The test was conducted using PCA and varimax rotation with Kaiser Normalization. The result is shown in Table 5.3.

Table 5.3
Factor Analysis for Interactive Control System

No	Interactive Control System items	Factor loading
1	Manager pays little day-to-day attention on the budget system	0.947
2	Manager relies heavily on staff specialist in preparing and interpreting information from the budget system	0.942
3	Operating managers are involved infrequently and on an exception basis with the budget system	0.940
4	Manager pays day-to-day attention to the budget system	0.961
5	Manager interprets information from the budget system	0.930
6	Operating managers are frequently involved with the budget system.	0.942

Percentage of variance explained (%)	**89.041**
Kaiser-Meyer-Olkin	0.900
Bartlett's test of sphericity approx. chi	1244.422
Df	15
Sig.	0.000

The results in Table 5.3 indicate that a value of 0.900 is shown by the KMO measure for ICS items, suggesting a 'marvellous' adequacy, thus using factor analysis is applicable (Hair *et al.,* 2010).

The value of Bartlett's test of sphericity is also large (1244.422) while its associated significance level is very low (0.000). KMO measure and Bartlett's test of sphericity results show that the items used for the measurement of ICS are definitely according to the conditions for factor analysis.

The results of the test suggest that one factor with an eigenvalue of more than 1 is present. The result also shows that six ICS items indicate a factor loading of more than 0.50, suggesting that they correlate significantly to the factor itself with factor loadings ranging from 0.930 to 0.961. This analysis confirms the fact that the same variable is measured by six items of ICS. Thus, no item was deleted. Six factors are extracted and considered which explain about 89.041 percent of the variance. The result of factor analysis can be applied for the ICS items. The detailed of the output from the factor analysis of ICS is presented in Appendix C.

5.3.4 Boundary Control System (BCS)

In order to check the appropriateness of factor analysis for BCS, PCA and varimax rotation with KMO and Bartlett's test were conducted and the results are shown in Table 5.4 below :

Table 5.4
Factor Analysis for Boundary Control System

No.	Boundary Control System items	Factor loading
1	Our firm relies on a code of business conduct to define appropriate behavior for our managers.	0.956
2	Our code of business conduct informs our managers about behaviors that are off-limits	0.950
3	Our firm has a system that communicates to our managers risks that should be avoided	0.952
4	Managers are aware of the firm's code of business conduct	0.945

Percentage of variance explained (%)	**90.393**
Kaiser-Meyer-Olkin	0.866
Bartlett's test of sphericity approx. chi	678.572
df	6
Sig.	0.000

The results in Table 5.4 show that the KMO value for BCS items is 0.866 which indicates a 'metorius' adequacy (Hair *et al.*, 2010). The observed value of Bartlett's test of sphericity is also large (678.572) and its associated significance level is very low (0.000). KMO measure and Bartlett's test of sphericity results show that the items used for the measurement of BCS are obviously according to the conditions for factor analysis and for the BCS items, factor analysis can be applied. The results of factor analysis also indicate that there is one factor with an eigenvalue of more than 1.

The factor loading for individual items are ranging from 0.945 to 0.956. The communalities of item are all more than 0.50, thus no item was deleted. The four factors considered which explain about 90.393 percent of the variance. The result shows that the BCS items correlate very significantly to the factor itself with factor loading ranging

from 0.945 to 0.956. The result indicates that factor analysis can be applied for the BCS items. The output from factor analysis of BCS detailed is presented in Appendix C.

5.3.5 Diagnostic Control System (DCS)

A factor analysis was also administered for all eleven (11) items in the measurement of diagnostic control system to assess whether they could be measured as a single variable. PCA and varimax rotation with Kaiser Normalization test was used. The result is shown in Table 5.5

Table 5.5
Factor Analysis for Diagnostic Control System

No.	Diagnostic Control System items	Factor Loading
1	Track progress towards goals	0.880
2	Monitor Tresults	0.872
3	Compare outcomes to expectation	0.876
4	Review key measures	0.840
5	Enable discussion in meeting of superiors, subordinates and peers.	0.840
6	Enable continual challenge and debate of underlying data, assumption, and action plans.	0.859
7	Provide a common view of the organization.	0.902
8	Tie the organization together.	0.874
9	Enable the organization to focus on common issues.	0.826
10	Enable the organization to focus on critical success factors.	0.800
11	Develop a common vocabulary in the organization.	0.751

Percentage of variance explained (%)	**71.988**
Kaiser-Meyer-Olkin	0.947
Bartlett's test of sphericity approx. chi	1509.873
df	55
Sig.	0.000

From Table 5.5 the KMO measure for DCS items shows a value of 0.947 which indicates a 'marvellous' adequacy, and Bartlett's test of sphericity is significant (0.000) (Hair *et al.,* 2010). The KMO measure and Bartlett tests of sphericity results show that all the DCS items are according to the criteria of factor analysis and that the application of factor analysis is relevant. The results of factor analysis also indicate that there is one factor with an eigenvalue of more than 1.

For eleven items of DCS, no item was deleted based on the factor loading ranging from 0.751 to 0.902 and the greatest of all factor loading more than 0.50. It is confirmed from the analysis that the same variable is measured by all the DCS items. The result shows that the elevent factors of DCS are considered explain about 71.988 percent of the variance. Thus, the result indicates that the correlation of the factor itself with factor loading ranging from 0.751 to 0.902 is very significant and the factor analysis can be applied for DCS items. The detailed output of DCS factor analysis presented in Appndix C.

5.3.6 Belief Control System (BLFCS)

In order to investigate, whether all four items of BLFCS measure the same variable, a factor analysis was conducted. KMO and Bartlett's test were administered and the results are shown in Table 5.6.

Table 5.6
Factor Analysis for Belief Control System

No	Belief Control System items	Factor loading
1	Our mission statement clearly communicates the firm's core values to our managers	0.948
2	Top managers communicate core values to our managers	0.935
3	Our managers are aware of the firm's core values.	0.951
4	Our mission statement inspires our managers,	0.946

Percentage of variance explained (%)	**89.275**
Kaiser-Meyer-Olkin	0.861
Bartlett's test of sphericity approx. chi square	634.533
df	6
Sig.	0.000

In Table 5.6, the KMO measure for BLFCS items is 0.861 which suggests a 'metorius' adequacy and appropriate for the implementation factor analysis (Hair *et al.,* 2010). Additionally, the value of Bartlett's test of sphericity is also large (634.533) while its associated significance level is very low (0.000) which indicates that BLFCS has visibly met the necessary conditions for factor analysis. The results of factor analysis also show that there is one factor with an eigenvalue of more than 1.

The factor loading of four BLFCS items are ranging from 0.935 to 0.951 and the communalities of items are all more than 0.50, thus no item was deleted. The four items of BLFCS have a percentage of variance explained of 89.275. The result of analysis indicated that the relation of the factor itself with factor loading is very significant and the factor analysis can be applied for BLFCS items. Similar to Widener (2007), this analysis confirms that the four items of BLFCS measured as a single variable not in four separate dimensions as measured in the original study by Simon (2000).

5.4 Reliability Test

Reliability means the level of establishment and stability in which the instrument is measuring the concepts and helps in the assessment of the goodness of a measure (Sekaran, 1992). In this research, internal consistency is used to assess the level of inter-

correlation among items (Sekaran, 2003). There are many methods for the measurement of internal consistency but the most widely used is Cronbach's alpha coefficients which indicate the average correlation among all items that make up the scale (Pallant, 2004). In order to test the reliability of the instruments of the questionnaire, an internal consistency analysis was conducted. Nunnally (1978) asserted that 0.6 of an alpha value is commonly regarded as sufficient and acceptable in exploratory studies, even though a Cronbach's alpha of 0.70 is commonly regarded good. Table 5.7 presents the results of the reliability test for each variable. The detailed of factor analysis results are in appendix D.

Table 5.7
Reliability Analysis

Reliability Analysis Factor	**Cronbach's Alpha**
Budget Participation	0.918
Interactive Control System	0.975
Diagnostic Control System	0.960
Boundary Control System	0.964
Belief Control System	0.960
Budget Slack	0.975

As shown in Table 5.7, the value of Cronbach's alpha for each variable ranges from 0.918 to 0.975, suggesting a high reliability for the study's variables (Hair *et al.*, 2010). The results support the appropriateness of the variables for further analysis.

5.5 Response Rate

The study is based on survey method where questionnaires were distributed to functional managers of manufacturing companies in Indonesia listed on the Jakarta Stock Exchange Indonesia (JSEI) in year 2011. The questionnaires consisted of

criterion variables adopted from previous studies. All data were collected within five (5) months, starting in March 2012 and ending in July 2012.

As defined by Jobber (1989), response rate can be explained as the total percentage of the questionnaires that were returned or mailed back by the respondents. To increase the rate, respondents were reminded through telephone calls and also personal visits. Of the returned questionnaires, fifteen questionnaires were rejected because they were not filled completely. Hence, the response rate was actually 30.90% because only 140 questionnaires were analyzed. It is a good response rate because 30% response rate is considered sufficient for surveys (Sekaran, 2010). Table 5.8 shows the response rate and the usable questionnaires for this study.

Table 5.8
Response Rate of the Questionnaires

Response	Frequency/Rate
Total number of distributed questionnaires	453
Questionnaires received back	155
Questionnaires that were sent back and could be used in research	140
Questionnaires that were sent back but could not be used in research	15
Response rate	34.22 %
Usable response rate	30.90 %

5.6 Test of Non-Response Bias

Since this study involved voluntary participation by the respondents, there is a chance that there will be distinction in some significant manners between the respondents and non-respondents (Matteson, Ivancevich & Smith, 1984). Because of the complexity in the description of the features of the non-respondents, a non-response bias test was

done. In line with Armstrong and Overton (1977), the characteristics between the late respondents are similar to early respondents. Pallant (2004) proposed that independent sample t-test can be employed for the comparison of mean scores. For the comparison of features of both early and late respondents, the researcher divided the sample into two groups: early responses - received before the reminder letter; and late responses - subsequently received after the reminder letter.

On the basis of the response time (early and late responses) discussed above, a classification of the respondents was made, 100 early responses and 40 late responses.

The result of non-response bias test is provided in Table 5.9. No statistically significant differences between variables were indicated by the p values of the analysis because the p values ranged from 0.064 to 0.975 (significant $p > 0.05$). According to Pallant (2001), a significance level of the Levene's test above 0.05 ($p > 0.05$) means that the violation of the assumption of equal variances between the early responses and late responses has not been met.

Table 5.9 shows the significance levels of BS ($p = 0.064$), BP ($p = 0.390$), ICS ($p = 0.155$), DCS ($p = 0.067$), BCS ($p = 0.975$), and BLFCS ($p = 0.341$), which indicate a p value for all of them larger than 0.05. This indicates that there is no violation of the assumption of equal variances. Hence, analysis was carried out for all the 140 responses. The detailed of Test of Non-Response Bias results are in Appendix B.

Table 5.9
Test of Non-Response Bias

Variables	Mean Value (Early=100)	(Late=40)	t - value	p – value
BS	4.306	4.137	1.545	0.064
BP	6.309	6.100	0.042	0.390
ICS	3.345	3.275	0.627	0.155
DCS	5.988	6.072	0.570	0.067
BCS	6.195	6.081	1.013	0.975
BLFCS	6.285	6.206	0.593	0.341

5.7 Testing the Assumptions of Multiple Regression

In order to make sure that certain assumptions under the concept of regression models are met, some tests were performed before making use of the regression results. The important assumptions include: (1) normality; (2) linearity; and (3) multicollinearity.

5.7.1 Normality

The normal distribution of the residuals is one of the assumptions of linear regression analysis. It is crucial for the p-values for t-test (of the regression results) to be valid. According to Hair *et al.,* (2010), when the ratio of skewness and standard error and the ratio of kurtosis and standard error occur between ± 1.96 at an alpha value of 0.05; and ± 2.58 at an alpha value of 0.01, it is assumed that normality exists.

As shown in Table 5.10, both ratios of skewness / standard error and kurtosis/standard error fall within this rule of thumb. Hence, the assumption of normality is met. In addition, Zimmerman (1998) contended that nonparametric test can suffer as much, or more, than parametric test when normality assumption is violated. Based on the reasons above, the normality assumption of the variables entered in the regression models is met.

Table 5.10
Statistic Values of Skewness and Kurtosis Ratios

Variables	Skewness		Kurtosis	
	Statistic	Std. Error	Statistic	Std. Error
Budget participation	-1.463	0.205	2.001	0.407
Interactive control system	0.334	0.205	-.469	0.407
Diagnostic control system	-1.472	0.205	2.231	0.407
Boundary control system	-1.375	0.205	0.528	0.407
Belief control system	-1.306	0.205	0.556	0.407
Budget slack	-0.003	0.205	0.205	0.407

Histogram of the distribution of the residuals is another test which is used to investigate the normality assumption of the regression model. Figure 5.1 shows that the distribution is approximated to a normal curve which asserts the normality assumption.

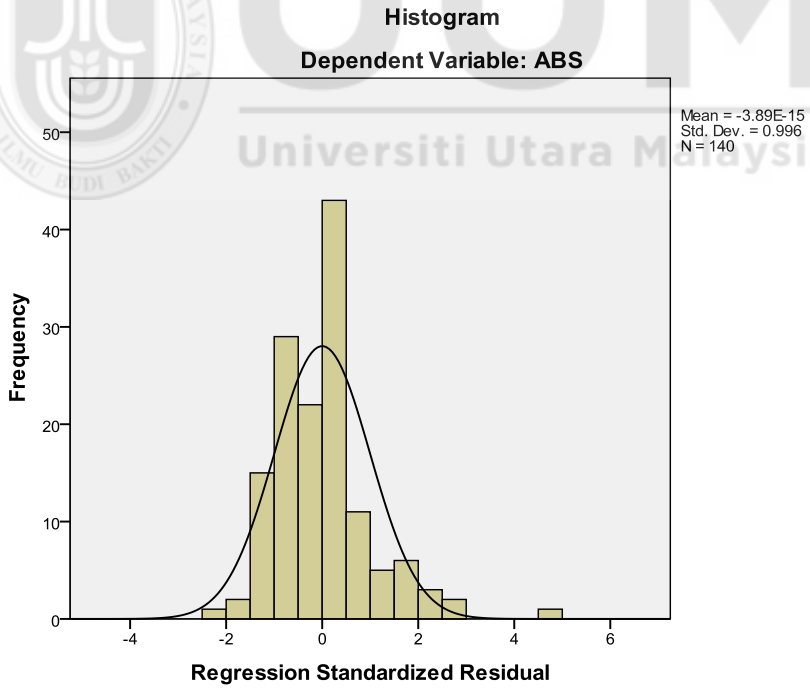


Figure 5.1
Histogram Normality Test

5.7.2 Linearity

According to the previous section, in order to use regression analysis, the relationship should be linear between the dependent and the independent variables. The result of testing for linearity by making use of simple regression analysis is shown in Table 5.11 below.

Table 5.11 shows that all the variables have linear relationship. In interpretation of the result based on the assumption of a linear relationship between BP and BS, MCSP elements and BS, care should be taken into consideration.

Table 5.11
Linearity Test

Pair of variables	df	F	Sig.F
Budget Participation - Budget Slack	1	412.725	0.000**
Interactive Control System - Budget Slack	1	876.264	0.000**
Diagnostic Control System - Budget Slack	1	417.916	0.000**
Boundary Control System - Budget Slack	1	69.609	0.000**
Belief Control System - Budget Slack	1	70.398	0.000**

*** significant at 0.05 level*

5.7.3 Multicollinearity

For the examination of the chance of the occurance of multicolinearity problems in the model, collinearity diagnostic test was used. To detect the rigorousness of multicollinearity, the VIF procedure was used in the collinearity diagnostic.

Table 5.12 below shows the result of testing for colinearity diagnostic by using simple regression analysis.

Table 5.12
Collinearity Diagnostic Test

Variable	Tolerance Value	VIFs Value
Budget Participation (BP)	0.109	9.215
Interactive Control System (ICS)	0.334	2.992
Diagnostic Control System (DCS)	0.100	9.982
Boundary Control System (BCS)	0.447	2.235
Belief Control System (BLFCS)	0.710	1.409

Based on Baba (2004), the VIFs will ensure the co-linearity problems will not harm the accuracy and stability of the model's parameter estimates. Pallant (2004) also mentioned that if the tolerance value is very low (near 0), the higher the values of multiple correlations with other variables and there is a possibility of multicollinearity.

However, according to Hair *et al.,* (2010), if the tolerance value is more than 0.10 or the VIF value is less than 10; acceptable values of colinearity for analysis of regression can be considered. According to Belsley *et al.,* (1980), a common rule of this assumption is that, VIF of the variables must not reach a value higher than 10.

As shown in Table 5.12, there is no appearrance of the existence of severe multicollinearity in the relationships between each construct in the model. In the model, all the variables have more than 0.10 tolerance values and the VIF value is considerably less than 10. Therefore, as suggested by the figures, colinearity is not a severe problem.

5.8 Profile of Respondents

The questionnaires were targeted towards accounting/finance, production and marketing managers of the sample firms. The reason was that managers have impact on the relationship between BP and BS (Dunk & Parera, 1997).

Respondents were requested to specify demographic information such as gender, age, education level, work experience, religion, ethnicity and job function. Some information about the company the respondent is working for was also required, such as type of the industry and number of employees in the company.

Table 5.13
Profile of Respondents

	Frequency	Percentage (%)
A. Gender		
Male	89	63.57
Female	51	36.43
Total	**140**	**100.0**
B. Age		
20 - 30 years	37	26.4
31 - 40 years	60	42.8
41 - 50 years	40	28.6
> 50 years	3	2.2
Total	**140**	**100**
C.Education level		
Diploma	8	5.7
Bachelor's degree	106	75.7
Master's degree	22	15.7
Ph.D	0	0
Others	4	2.9
Total	**140**	**100.0**
D.Tenure / years in current position		
1-2 years	17	12.1
3-4 years	52	37.1
5-6 years	50	35.8
More than 7 years	21	15
Total	**140**	**100.0**
E. Reporting Level of Respondent		
Directly to director	99	70.7
One level below the director	40	28.6
Two levels below the director	1	0.4
Total	**140**	**100.0**
F. Religion		
Muslim	103	73.6
Non-Muslim	37	26.4
Total	**140**	**100.0**
G. Ethnicity		
Java	87	62.1

Table 5.13, continued

	Frequency	Percentage (%)
Sulawesi	29	20.8
Sumatra	22	15.7
Kalimantan	1	0.7
Maluku	1	0.7
Total	**140**	**100.0**
H. Job Function		
Finance/Accounting manager	49	35.50
Production manager	50	35.7
Marketing manager	41	29.3
Total	**140**	**100.0**
I. Industry Type		
Food and Beverages	25	17.9
Tobacco Manufactures	3	2.1
Textile Mill Products	8	5.7
Apparel and other Textile Products	3	2.1
Lumber and wood Products	12	8.4
Paper and Allied Products	10	7.1
Chemical and Allied Products	5	3.6
Adhesives	2	1.4
Plastic and Glass Products	9	6.4
Metal and Allied Products	13	7.9
Fabricated Metal Products	6	4.2
Stone, Clay and Glass Products	12	8.4
Cables	3	2.1
Electronic and Office Equipment	3	2.1
Photographic Equipment	3	2.1
Pharmaceuticals	2	1.4
Consumer Goods	6	4.2
Others	15	10.7
Total	**140**	**100.0**
J. Number of Employees		
Less than 25 employees	0	0
26 – 100 employees	55	39.3
101 – 1,000 employees	85	60.7
1,001 – 10,000 employees	0	0
10,001 -50,000 employees	0	0
More than 50,000 employees	0	0
Total	**140**	**100**

Table 5.13 shows that the majority of the respondents are male (63.57 percent) and female (36.43 percent). This result indicates that male managers in the sampled manufacturing sector in Indonesia are dominant.

In terms of age, 42.8 percent or almost half of the respondents are between 31 and 40 years old; 26.4 percent are below 30 years old and the remaining of 30.8 percent are 41

years old and above. This indicates that the majority of the respondents have had considerable working experience.

In terms of educational background, almost three-quarters of the respondents have a bachelor's degree (75.7 percent), 15.7 percent have a master's degree, 5.7 percent have a diploma and the remaining 2.9 percent have other academic qualifications. In terms of years of employment at the company, most of the respondents have been working in the company for more three years (72.9 percent). Thus, it can be considered that almost all respondents have adequate experience in understanding their role in the firm.

The experience level of the managers is reflected by the number of years the respondents have served in a particular position. In this study, majority of the respondents have been in a similar position for more than five years (50.8 percent), which shows that they have the necessary experience. The more time they spend in their company, the more they can contribute to the achievement of the objectives of the company through their input in a variety of activities, for example preparation of budget and reduction of slack.

In terms of reporting responsibility, nearly two-thirds of the respondents directly report to the director (70.7 percent), and 28.5 percent report to one level below the director. This indicate that the majority of the report directly to director.

Based on religion, 73.6 percent of the respondents are muslim and non-muslims are 26.4 percent. The result indicates that the majority of managers in manufacturing company in Indonesia are muslim. In terms of ethnicity, almost 62 percent of the

respondents are Java and the remaining 37.9 percent are non-Java. It shows that almost managers of the manufacturing firms in Indonesia are Java.

The job functions of the respondents are 35.5 percent finance/accounting managers, 35.7 percent production managers and 29.3 percent marketing managers. Hence, an equal proportion is indicated for all three functional managers.

In the last section of the questionnaire, the respondents were asked to show which industry sector their company belongs to and the number of employees in the company. Accordingly, food and beverage industry is 17.9 percent, lumber and wood products (8.4 percent), stone, clay, glass and concentrate products (8.4 percent), metal and allied products (7.9 percent), paper and allied products (7.1 percent) and other industries (49.4 percent).

This study characterizes the size of company according to the number of employee. Small-size firm is having 5 to 19 staff members, medium-sized firm is having 20-99 staff members, while large-sized firm is having more than 100 staff members. In term of company size, more than half (60.7 percent) of the manufacturing firms in Indonesia have more than 100 employees, classified as large-size firms and the remaining 39.3 percent have less than 100 employees, classified as medium-size firms.

5.9 Descriptive Statistics Analysis

This section presents a discussion on descriptive analysis of each variable based on mean, standard deviation, minimum and maximum values from the 140 respondents. Based on mean categories scores from 1 – 5 low and 6 – 10 high.

5.9.1 Dependent Variable – Budget Slack (BS)

Table 5.14 displays the result of descriptive statistic for BS. Overall respondents rated low adoption of BS whereby the mean for all items are from 2.74 to 3.99.

Specifically, BS item of "managers have to carefully monitor costs in my area of responsibility because of budgetary constraints (BS3)" has the highest mean of 3.99, followed by "standards set in the budget induce high productivity in manager area of responsibility (BS1)" with mean of 3.58, "target incorporated in the budget area difficult to reach (BS6)" with mean of 2.74, "budget for manager of responsibility are not particularly demanding (BS4)" and "budgetary target have not caused me to particularly concerned with improving efficiency in manager's area of responsibility (BS5)" have same mean of 2.69 and "budget set for manager functional area of responsibility are safely attainable (BS2)" has the lowest mean of 2.68.

Table 5.14
Descriptive statistics for BS

Variables	N	Mean	Standard Deviation	Min	Max
Standards set in the budget induce high productivity in manager area of responsibility (BS1)	140	3.58	0.769	2	6
Budget set for manager functional area of responsibility are safely attainable (BS2)	140	2.68	0.513	2	4
Managers have to carefully monitor costs in my area of responsibility because of budgetary constraints (BS3)	140	3.99	0.749	3	6
Budget for manager of responsibility are not particularly demanding (BS4)	140	2.69	0.507	2	4
Budgetary target have not caused me to particularly concerned with improving efficiency in manager's area of responsibility (BS5)	140	2.69	0.510	2	4
Target incorporated in the budget area difficult to reach (BS6)	140	2.74	0.672	2	6

5.9.2 Independent Variable – Budget Participation (BP)

BP, as the independent variable, consists of six items. Table 5.15 displays the result of analysis of BP. "The kind of reasoning provided to the manager by superior when the budget is revised (BP2)" has the highest mean of 6.30 and the lowest standard deviation of 0.854. The other five items for BP are quite similar in mean and standard deviation. The mean is between 5.87 and 6.20, and the standard deviations range from 0.957 to 1.319. These five items – "the portion of the budget influenced by the manager's involvement (BP1)", "the frequency of budget related discussed initiated by the manager (BP3)", "the amount of influence the manager feels he has on the final budget (BP4)", "the importance of the manager's contribution to the budget (BP5)" and "the frequency of budget-related discussion initiated by the manager's superior when budgets are being considered (BP6)" has a large variability as shown by mean and standard deviation. "The frequency of budget related discussion initiated by the manager's superior when budget are being considered (BP6)" has the lowest mean of 5.87 and the highest standard deviation of 1.319 and "the frequency of budget related discussed initiated by the manager (BP3)" has the lowest mean of 5.91 and the largest standard deviation of 1.294 is for "the portion of the budget influenced by the manager's involvemeent (BP1)". Overall, the application of BP measure is between 5.87 and 6.30, indicating that respondents are higher adoption of BP.

Table 5.15
Descriptive Statistics for BP

	N	Mean	Standard Deviation	Min	Max
Which category below best describes your activity when the budget is being set? (BP1)	140	6.10	1.294	2	7
Which category below best describes the reasoning provided by your superior when budget revisions are made? (BP2)	140	6.30	0.854	2	7
How often do you state your requests, opinion and/or suggestions about the budget to your superior without being asked? (BP3)	140	5.91	1.255	2	7
How much influence do you feel you have on the final budget (BP4)	140	6.20	0.961	2	7
How do you view your contribution to the budget? (BP5)	140	6.19	0.957	3	7
How often does your superior seek your requests, opinion and/or suggestions when the budget is being set? (BP6	140	5.87	1.319	1	7

5.9.3 Moderating Variable – Interactive Control System (ICS)

The first moderating variable is ICS (see Table 5.16). ‘’manager interprets information from the budget system (ICS5)” has the highest mean of 5.95 and the lowest standard deviation of 0.771, while “manager pays little day to day on the budget system (ICS1)” has the lowest mean of 1.74 and the lower standard deviation of 0.999. Another four items that have highest standard deviation are “manager relies heavily on staff specialist in preparing and interpreting information from the budget system (ICS2)” has the highest standard deviation of 1.581 followed by “operating manager are involved infrequently and on an exception basis with the budget system (ICS3)” has the highest standard deviation of 1.414, “operating managers are frequently involved with the budget system (ICS6)” has the highest standard deviation of 1.312 and standars deviation of 1.061 is for “manager pays-to-pays attention to budget system (ICS4)”. All

ICS items have a mean score between 1.74 and 5.95 which indicate that respondents have a mean score less than 6 indicates that low adoption of ICS

Table 5.16
Descriptive Statistics for ICS

Variables	N	Mean	Standard Deviation	Min	Max
Manager pays little day-to-day attention on the budget system (ICS1)	140	1.74	0.999	1	6
Manager relies heavily on staff specialist in preparing and interpreting information from the budget system (ICS2)	140	2.39	1.581	1	7
Operating managers are involved infrequently and on an exception basis with the budget system (ICS3)	140	2.17	1.414	1	7
Manager pays day-to-day attention to the budget system (ICS4)	140	1.80	1.061	1	6
Manager interprets information from the budget system (ICS5)	140	5.95	0.771	4	7
Operating managers are frequently involved with the budget system. (ICS6)	140	5.89	1.312	1	7

5.9.4 Moderating Variable – Boundary Control System (BCS)

The respondents have high adoption of BCS as the means range from 6.03 to 6.24 (refer Table 5.17). "Managers are aware of firm's code of business conduct (BCS4)" has the highest mean of 6.24, followed by "firm relies on code of business conduct to define managers' appropriate behavior (BCS1), "firm has a system communicating managers risk that should be avoided" (BCS3), and "code of business conduct informs managers' behavior that are off-limits"(BCS2).

Table 5.17
Descriptive Statistics for BCS

Variables	N	Mean	Standard Deviation	Min	Max
Our firm relies on code of business conduct to define appropriate behavior for our manager (BCS1)	140	6.23	0.984	1	7

Table 5.17, continued

Variables	N	Mean	Standard Deviation	Min	Max
Our code of business conduct informs our managers' about behaviors that are off-limits (BCS2)	140	6.03	0.913	2	7
Our firm has a system communicates to our managers risk that should be avoided (BCS3)	140	6.16	0.798	2	7
Our managers are aware of the firm 's code of business conduct (BCS4)	140	6.24	0.774	4	7

5.9.5 Moderating Variable – Diagnostic Control System (DCS)

The third moderating variable is DCS and the description statistics are in Table 5.18 For DCS, "enable discussion in meeting of superior, subordinate and peers (DCS5)" has the highest mean of 6.22 and the lowest standard deviation of 0.906. The second highest mean with a score of 6.19 consists of three items of DCS, they are "track progress towards goals (DCS1)", "monitor results (DCS2)", and "provide a common view of the organization (DCS7)". The other seven items for DCS are quite similar in mean and standard deviation. The mean is between 5.64 and 6.16, and the standard deviation range from 1.023 to 1.364. These seven items; "compare outcomes to expectation (DCS3)", "review key measures (DCS4)", "enable continual challenge and debate of underlying data, assumption, and action plans (DCS6)", "tie the organization together (DCS8)", "enable the organization to focus on common issues (DCS9)", "enable the organization to focus on critical success factors (DCS10)" and "develop a common vocabulary in the organization (DCS11)". The total average mean score DCS is 6.22 and 5.64 respectively, indicating that overall respondents have high adoption of DCS.

Table 5.18
Descriptive Statistic for DCS

Variables	N	Mean	Standard Deviation	Min	Max
Track progress towards goals (DCS1)	140	6.19	1.043	1	7
Monitor results (DCS2)	140	6.19	1.086	2	7
Compare outcomes to expectation (DCS3)	140	6.05	1.102	2	7
Review key measures (DCS4)	140	6.06	1.023	2	7
Enable discussion in meeting of superiors, subordinates and peers (DCS5)	140	6.22	0.906	2	7
Enable continual challenge and debate of underlying data, assumption, and action plans (DCS6)	140	5.86	1.412	1	7
Provide a common view of the organization (DCS7)	140	6.19	0.881	3	7
Tie the organization together (DCS8)	140	6.16	1.123	2	7
Enable the organization to focus on common issues. (DCS9)	140	5.72	1.292	1	7
Enable the organization to focus on critical success factors (DCS10)	140	5.89	1.151	1	7
Develop a common vocabulary in the organization. (DCS11)	140	5.64	1.364	2	7

5.9.6 Moderating Variable – Belief Control System (BLFCS)

The last moderating variable is BLFCS, which will be tested as a moderator variable in the regression analysis. Table 5.19 display the descriptive statistic for all items in BLFCS. “Manager is highly aware of the firm core value (BLFCS3)” has the highest mean of 6.30. “Top manager communicates core value to manager (BLFCS2)” has the lowest mean of 6.15. The standard deviation for all items range from 0.789 to 1.038 with “manager is highly aware of the firm care value (BLFCS3)” having the smallest score of 0.789 and “top manager communicates care value to manager (BLFCS2)” has the largest score of 1.038. Overall, all items have a mean above 6.0. Thus the results show that BLFCS indicating that overall respondents have high adoption of BLFCS.

Table 5.19
Descriptive Statistics for BLFCS

Variables	N	Mean	Standard Deviation	Min	Max
Our mission statemen t clearly communicates the firm's core value to manager (BLFCS1)	140	6.28	0.882	2	7
Top managers communicate core values to managers (BLFCS2)	140	6.15	1.038	2	7
Our Managers are highly aware of the firm's core values. (BLFCS3)	140	6.36	0.789	2	7
Our mission statement inspires our managers. (BLFCS4)	140	6.30	0.903	2	7

5.9.7 Moderating Variable – MCSP

Table 5.20 highlights the summary of the descriptive statistics for BS, BP and all elements of MCSP, i.e., ICS, DCS, BCS and BLFCS. This analysis is based on mean, median and standard deviation, minimum and maximum values for the total of 140 samples of manufacturing firms in presenting the distribution of each variable. One independent variable (BP), one dependent variable (BS) and four moderating variables (i.e., ICS, BCS, DCS and BLFCS) are measured in this descriptive analysis.

Table 5.20
Summary of Descriptive Statistics of All Variables

Variables	N	Mean	Median	Standard Deviation	Min	Max
Budget Slack (BS)	140	3,53	4.00	1.106	1	7
Budget Participation (BP)	140	5.86	6.00	0.945	2	7
Interactive Control System (ICS)	140	3.32	2.67	1.716	1	6
Diagnostic Control System (DCS)	140	5.86	6.09	0.960	3	7
Boundary Control System (BCS)	140	5.66	6.25	1.418	2	7
Belief Control System (BLFCS)	140	5.49	6.00	1.502	2	7

Table 5.20 shows that the highest variability with mean score of 5.86 consists of two variables, which are BP and DCS, indicating that the sampled manufacturing firms in Indonesia engage in BP and DCS. The Table also highlights that mean BCS is 5.66 and

median BCS is 6.25. This result indicates that managers of manufacturing firms in Indonesia might be becoming concerned with the use of BCS to ensure the probability of reduced BS.

The Table also highlights that mean BLFCS is about 5.49 and median BLFCS is 6.00. This result indicates that managers of the sampled manufacturing firms in Indonesia are also concerned with using BLFCS to reduce BS.

The mean of ICS is about 3.32 and median of ICS is 2.67. This result reveals that managers of the sample manufacturing firms in Indonesia are not too concerned with the use of ICS to reduce BS.

5.10 Summary of Chapter

The researcher succeded in getting a good response rate (30.90 percent). The test of non-response bias for the survey also indicated that there are no important differences in terms of statistic between the early and late responses. As a result, the generalization of the findings of this study remains unaffected by the issue of non response bias. For the investigation of the construct validity of all interval scale variables to determine the extent to which they do not contain random error. Furthermore, the assumption of normality, linearity and homoscedasticity were tested by the researcher, indicated that most of the aasumptions are met.

For the investigation of the relationship between BP and BS under the moderating effect of MCS, standard multiple regression was conducted. MCSP and contextual variables (ICS, DCS and BLFCS) were found to contribute significantly of the relationship

between BP and BS, but BCS was found to make no significant contributionto the relationship between BP and BS. The next chapter discusses in detail the findings of the study and makes a comparation with the relevant literature and includes a conclution of the study, as well as the assumptions, limitations, implications and suggestions for future research.

CHAPTER SIX

FINDINGS AND DISCUSSION

6.1 Introduction

This chapter presents the results of multiple regression analysis. Generally, three types of analysis are used to determine the relationship between budget participation, budget slack and management control system. The analyses are descriptive analysis, correlation analysis and multiple regression analysis. The descriptive analysis has been presented in chapter 5, therefore, this chapter will only discuss the results of the correlation and regression analysis.

This chapter is divided into six sections. The first section is an overview of the chapter. Section 2 highlighs the analysis of the Person Correlation Statistics, followed by results of the regression analysisin section 3. Section 4 displays the regression analysis for moderation variables. Section 5 discusses the findings in relation to relavant literature. Finally, the conclusion of the chapter is presented in Section 6.

6.2 Correlation Analysis

The purpose of conducting the correlation analysis is to meet three objectives. First, this analysis is important to show the individual relationships between two variables.

Usually, there are a variety of ways for the measurement of criterion validity or colinearity between the independent variables, such as Pearson correlation, Tolerance Value and Variance Inflation Factor (VIF). The importance of multicollinearity lies in

the fact that it can harm the results of multiple regressions if it exists between two or more variables.

The correlation between two or more independent variables in which the correlation is significant at 0.0l level or at 0.05 levels can be measured by Pearson correlation. According to Ghozali (2001), the correlation among independent variables will lead to multicollinearity problem if the correlation values are more than 0.90. As shown in Table 6.1, all the correlation values among independent variables are less than 0.90, except for BP-DCS, which correlates at 0.939.

Table 6.1
Pearson Correlation

	BP	ICS	DCS	BCS	BLFS
Budget Participation (BP)	1	.778*	.939*	.694*	.515*
Interactive Control System (ICS)		1	.781**	.444**	.499**
Diagnostic Control System (DCS)			1	.713**	.504**
Boundary Control System (BCS)				1	.344**
Belief Control System (BLFS)					1

*Note: **. Correlation is significant at the 0.01 level (2-tailed).*
**. Correlation is significant at the 0.05 level (2-tailed).*

As stated before, in order to test the multicollinearity between the independent variables, there are a variety of tests, such as Tolerance Value and VIF. According to Hair *et al.,* (2010), the common cut-off threshold is a tolerance value of 0.10, which correspond to a VIF value less than 10.

6.3 Multiple Regression

Multiple regressions are a technique that can be used for the examination of the relationship between one continuous dependent variable and many independent variables. Usually, there are many methods of multiple regression analysis, such as standard regression, hierarchical or sequential regression and stepwise regression (Palant, 2004). The standard multiple regressions involve simultaneous entry of all the independent variables into the equation (Pallant, 2004) which are assumed to be of equal importance (Tabachnick & Fidell, 2007)

Standard Multiple Regression is used for simultaneous examination of several independent variables on a single dependent variable. Three models of regression analysis were run.

The first model examined the impact of direct relationship between BP and BS. The second model examined the main effect of the individual predictors BP, (MCS and each of its items) on BS (dependent variable). The third model investigated MCSP as moderating variable on the relationship between BP and BS. All independent variables are assumed to be of equal importance.

The first model is as follows:

$$BS = a + \beta_1 BP + e$$

The second model is :

$$BS = a + \beta_1 BP + \beta_2 ICS + \beta_3 BCS + \beta_4 DCS + \beta_5 BLFCS + e$$

$$BS = a + \beta_1 BP + \beta_2 MCSP + e$$

The third model is :

$$BS = a + \beta_1 BP + \beta_2 ICS + \beta_3 BP*ICS + e$$

$$BS = a + \beta_1 BP + \beta_2 BCS + \beta_3 BP*BCS + e$$

$$BS = a + \beta_1 BP + \beta_2 DCS + \beta_3 BP*DCS + e$$

$$BS = a + \beta_1 BP + \beta_2 BLFCS + \beta_3 BP*BLFCS + e$$

$$BS = a + \beta_1 BP + \beta_2 MCSP + \beta_3 BP*MCSP + e$$

Where:

BS	=	Budget slack
BP	=	Budget participation
ICS	=	Interactive control system
DCS	=	Diagnostic control system
BCS	=	Boundary control system
BLFCS	=	Belief control system
MCSP	=	Management control system package
a	=	Constant
β_1 through β_6	=	are slopes of the population regression line
e	=	error term, or residual

6.4 Moderating Effect

The moderating effect occurs when the level of the third variable (in this case the management control system) affects the degree of the relationship between two variables (in this case budget participation and budget slack).

Baron and Kenny (1986) suggested that in order to test the moderating effect, moderated hierarchical multiple regression analysis should be used. This suggestion was supported by Bisbe and Otley (2004) and Harrington and Kendal (2006) who argued that the moderated multiple regression analysis allow the relationship between the independent variables and independent variables count on the other independent variables (i.e. moderator).

6.5 Regression Result

Table 6.3 shows the results of moderated regression analysis. Test 1 refers to the direct relationship between BP and BS. Test 2 up to Test 5 refers to the direct relationship between MSC as individual elements: ICS, BCS, DCS and BLFCS and BS. Test 6 refers to the moderating effect of MCSP on the relationship between BP and. The detailed of Regression results is in Appendix E.

Table 6.2
Moderated Multiple Regression Analysis : Budget Slack

Variable	Model 1	Model 2	Model 3
Test 1			
BP	-0.866*** *(0.05)*		
R^2	0.750***		
R^2 Change	0.750***		
F Change	**413.500*** **		
Test 2			
BP	-0.866*** *(0.05)*	-0.363 *(0.046)*	-0.792 *(0.100)***
ICS		*-0.647**** *(0.025)*	-0.294 *(0.047)***
BP*ICS			-0.298 *(0.006)***
R^2	0.750***	0.916***	0.931
R^2 Change	0.750***	0.166	0.016
F Change	**413.500*** **	**269.332*** **	**30.768****
Test 3			
BP	-0.866*** *(0.05)*	-0.894 (0.069)	-1.028 *(0.076)***
BCS		0.41*** *(0.069)*	*-0.005(0.067)*
BP*BCS			*-0.238(0.007)****
R^2	0.750***	0.751	0.779
R^2 Change	0.750***	0.001	0.028
F Change	**413.500*** **	0.470***	**17.317*** **
Test 4			
BP	-0.866*** *(0.05)*	-0.439 (0.139)	-0.565 *(0.123)****
DCS		-0.454*** *(0.074)*	*-0.583(0.066)****
BP*DCS			*-0.345(0.003)****
R^2	0.750***	0.774	0.830
R^2 Change	0.750***	0.024	0.056
F Change	**413.500*** **	**14.685*** **	**45.305*** **
Test 5			
BP	-0.866*** *(0.05)*	-0.771 (0.055)	-0.864 *(0.060)****
BLFCS		-0.185*** *(0.052)*	*-0.198(0.050)****
BP*BLFCS			*-0.180(0.007)****
R^2	0.750***	0.775	0.797
R^2 Change	0.750***	0.025	0.022
F Change	**413.500*** **	**15.296*** **	**14,865*** **
Test 6			
BP	-0.866*** *(0.05)*	-0.052 (0.087)	-0.310 *(0.095)****
MCSP		-0.889*** *(0.018)*	*-0.769(0.017)****
BP*MCSP			*-0.219(0.001)****
R^2	0.750***	0.877	0.901
R^2 Change	0.750***	0.127	0.024
F Change	**413.500*** **	**141.705*** **	**32.507*** **

**p<0.05 **p<0.01 ***p<0.001 All betas are standardized.*
Figure in bracket indicates the standard errors. Bold figure highlights the significance of the relationship.

The result of Test 1 shows that the beta coefficient (standard beta) is -0.886 with significance level of 1 percent (p=0.000), level of R^2 is 0.750, and R^2 change is 0.750.

This means that there is no increase of R^2 of the model 1 indicating that BP has an inverse significant effect on BS.

The analysis was replicated for each of the individual elements of MCSP chosen in this study. The result of Test 2 displayed in Table 5.23 shows that when using the ICS as a moderator variable, the R^2 of the model increases slightly from 0.916 without interaction to 0.931 with interaction term. The interaction coefficient (standardized beta -0.298) of ICS has negatively significant impact on BS (R^2 change = 0.016, $p>0.05$). Thus, BS can be reduced when a firm has adequate adoption ICS.

Table 6.2 also reveals that when using the BCS as a moderator, the interaction coefficient is significant. In Test 3, the interaction coefficient (-0.238) and the R^2 increase from R^2 = 0.751 without interaction to R^2 = 0.779 with interaction. The increase of R^2 (2.8 percent) to the explanation power to explain the variance in BS, indicating that BCS as moderator has a negatively significant impact on BS. The result shows that the effect of relationship between BP and BS can be enhanced when BCS is used as the moderating variable.

Test 4 highlights that when using DCS as a moderator, the interaction coefficient is negatively significant (-0.345) at $p<0.05$. The R^2 = 0.774 before interaction and 0.830 after interaction, increase 5.6 percent to the explanation power to explain the variance in BS. The result suggests that the extensive use of a DCS has a moderating effect on the relationship between BP and BS.

Test 5 (Table 6.2) also makes it clear that when using BLFCS as a moderator, the interaction coefficient (-0.180) is negatively significant. The R^2 = 0.775 without interaction and R^2 = 0.797 with interaction. The interaction term adds 2.2 percent to the explanation power to explain the variance in BS. The result shows that the adoption of BLFCS in a firm can reduce BS.

The result of Test 6 shows that the R^2 of the model increases 2.40 percent from 0.877 to 0.901. The interaction coefficient (standardized beta) of MCSP is significant (R^2 Change = 0.024, p=0.000) and this indicates that MCSP has a negative significantly effect on the relationship between BP and BS.

All R^2 values in the model are 0.931, 0.779, 0.830, 0.797, and 0.901 from Test 2 to Test 5, respectively. In line with Chin (1998), all the R^2 values are found to be above the recommended threshold. Chin (1998) recommended 0.67, 0.33 and 0.19, as substantial, median and weak values. This result indicates that BS can be reduced when the MCSP as a package is adopted in a firm.

6.6 Hypothesis Testing

This section presents in detail the result of the hypothesis testing using regression analysis. Multiple regressions can be used to explore the relationship between one continuous dependent variable and a number of independent variables (Pallant, 2004).

6.6.1 Hypothesis 1: Budget Participation has Positive and Significant Relationshi with Budget Slack.

The first hypothesis testing used simple regression model and the result indicates that BP has negative effect on BS. The detail result of the relationship is reported in Table 6.3 below.

Table 6.3
Result of Examination of Hypothesis 1

Variables	Coeficients	Standard	t-value	P-value	Remark
	Beta	Error			
Constant	21.200	0.281	75.323	0.000*	S
Budget Participation	-0.866	0.050	-20.335	0.000*	S
$R^2 = 0.750$	F = 413.500		P =0.000		n = 140
Adjusted $R^2 = 0.748$					

**p<0.001 All betas are standardized.*
Note: S is significant

Table 6.3 shows that a 75 percent change in BS can be explained by changes in the BP with a significance level of 1 percent (p= 0.000). This means that the model proves that BP may affect BS.

The next beta coefficient (standardized β coefficient) for the variable of BP is -0.886 with a significance level of 1 percent. This means that an increase of 1 in BP is related to a decrease of 0.8 in BS. A conclusion can be drawn that BP statistically has an opposite effect on BS. In other words, Hypothesis 1 that predicts a positive relationship is rejected.

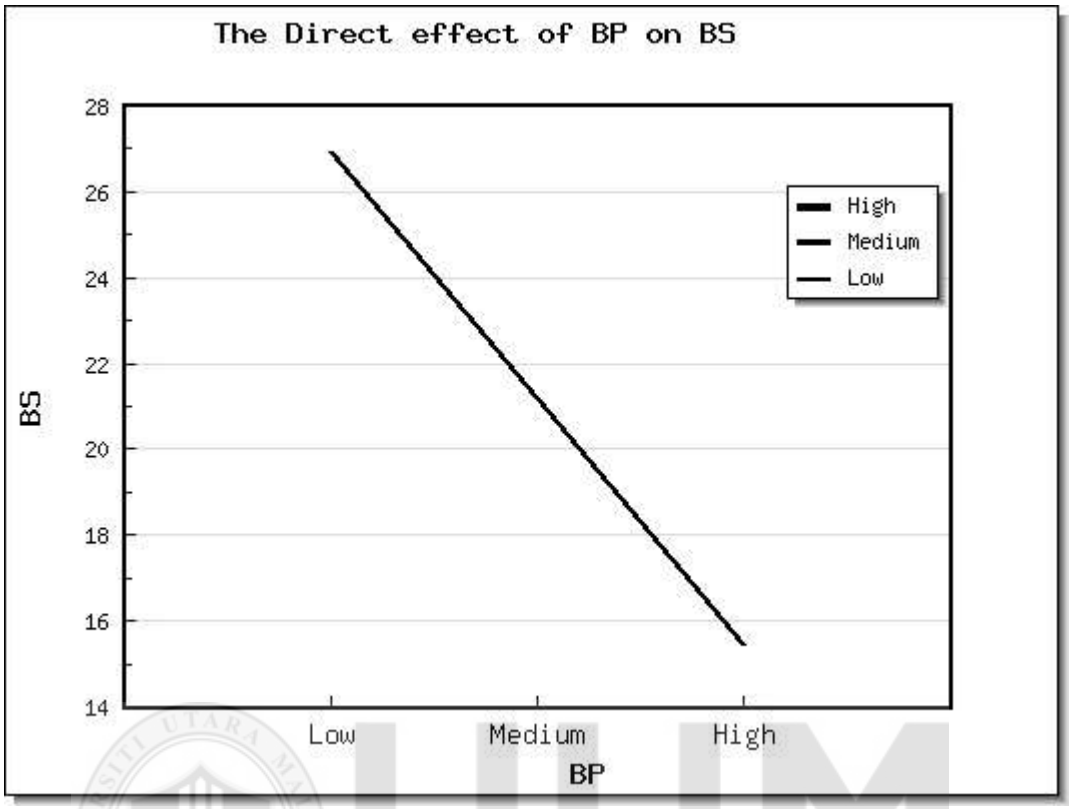


Figure 6.1
The Effect of Direct Relationship between Budget Participation and Budget Slack.

The Figure 6.1 shows that greater levels of BP indicate lower levels of BS. The result suggests that there is a negative impact on the direct relationship between BP and BS. When BP is low, BS will be high; if BP is medium, BS is also medium; and when BP is high, BS will be low. This result is consistent with Rachman (2012); Kristanto (2012); and Maiga *et al.*, (2007), but contrary to Triana *et al.*, (2012); Putranto (2012); Kim (1992); and Lukka (1988).

6.6.2 Hypothesis 2: ICS Moderates the Relationship between Budget Participation and Budget Slack

According to the second hypothesis, the effect of BP on BS can be moderated by ICS. The hypothesis testing was conducted by using multiple regression models with

interaction test called moderated regression analysis. Results can be seen in Table 6.4 below.

Table 6.4
Result of Examination of Hypothesis 2

Variables	Coefficients Beta	Standard Error	t-value	P	Remark
Constant	22.817	0.327	69.722	0.000*	S
BP	-0.792	0.100	-9.303	0.000*	S
ICS	-0.294	0.047	-4.039	0.000*	S
Interaction (BPxICS)	-0.298	0.006	-5.547	0.000*	S
R^2= 0.931	F = 613.565		p = 0.000		n = 140
Adjusted R^2 = 0.930					

**p<0.001 All betas are standardized.*
Note: S is significant

The result shows that the value of R^2 of 0.931 which is a 93.1 percent change in BS can be explained by the adjustment in the interaction between BP and ICS with a 0.000 significance level. Anova F test illustrates that the F value of 613.565 with 0.000 significance level smaller than 0.05 which suggest that the regression model can be applied for the prediction of BS or BP and ICS. The interaction of both signifies that the beta coefficient of the ICS variable has a value of - 0.294 with a significance level of 0.000, which suggests that the ICS variables have a significant impact on BS. However, the interaction between BP and ICS shows the beta coefficient of -0.298 with a significance level of 0.000 (significant). Thus, it can be assumed that the ICS variable acts as a moderating variable. Thus, Hypothesis 2 can be affirmed that, if the ICS is high, then BP will reduce BS. Conversely, if ICS is low, BP will increase the BS.

The moderating effect of ICS (low, median, high) on the relationship between BP and BS is demonstrated in Figure 6.2.

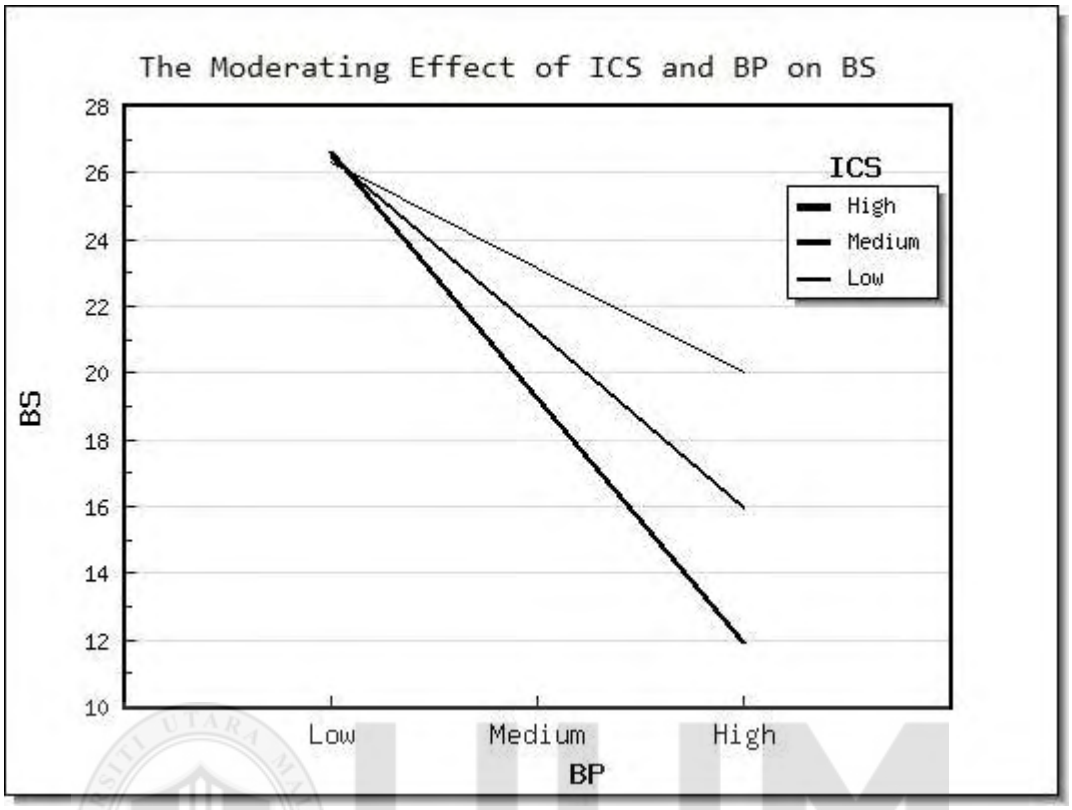


Figure 6.2
The Moderating Effect of Interactive Control system on the Relationship between Budget Participation and Budget Slack.

Figure 6.2 indicates that overall, the greater the BP, the lower the overall BS. Whatever the level of ICS emphasis on BP, BS appears to be lower.

6.6.3 Hypothesis 3: BCS Moderates the Relationship between Budget Participation and Budget Slack

The third hypothesis, BCS, was examined to test its role as moderating variable on the relationship between BP and BS. The third hypothesis testing was done by using multiple regressions model to test the interaction. The results are summarized in Table 6.5 below.

Table 6.5
Result of Examination of Hypothesis 3

Variables	Coefficients	Standard	t-value	P	Remark
	Beta	Error			
Constant	21.871	0.312	70.202	0.000*	S
BP	-1.028	0.076	-15.919	0.000*	S
BCS	-0.005	0.067	-0.094	0.925	NS
Interaction (BPxBCS)	-0.238	0.007	-4.161	0.000*	S
R^2= 0.779	F = 159.606		p = 0.000		n = 140
Adjusted R^2 R = 0.774					

**p<0.001 All betas are standardized*
Note: NS is not significant
S is significant

The result shows the value of R^2 is 0.779 which is that 77.9 percent change in BS can be explained by changes in the in teraction between BP and BCS with a significance level of (p = 0.000). Anova F test shows F value of 159.606 with significance level of 0.00, or much smaller than 0.05, which indicates that the regression model can be used for the prediction of BS or BP variables and BCS, and the interaction of both have an impact on BS.

In the statistical test or test of significance of individual parameters, it appears that the beta coefficient for the variable of BCS has a value of -0.41 (refer to table 6.2 model 2) is significant when test the direct relationship between BCS and BS. However, while enter the interaction between BP and BCS, it illustrates that the beta coefficient of -0.238 is significant (significance level of 0.000). Hence, the conclusion can be drawn that the BCS variable does act as a moderating variable, but the effect is negatively significant.

Hence, Hypothesis 3 can be accepted, i.e., if the BCS is implemented in the company, then BP will reduce BS. On the contrary, if the BCS is not implemented in the company, then BP will increase BS.

The impact of BCS on the relationship between BP and BS is illustrated in Figure 6.3:

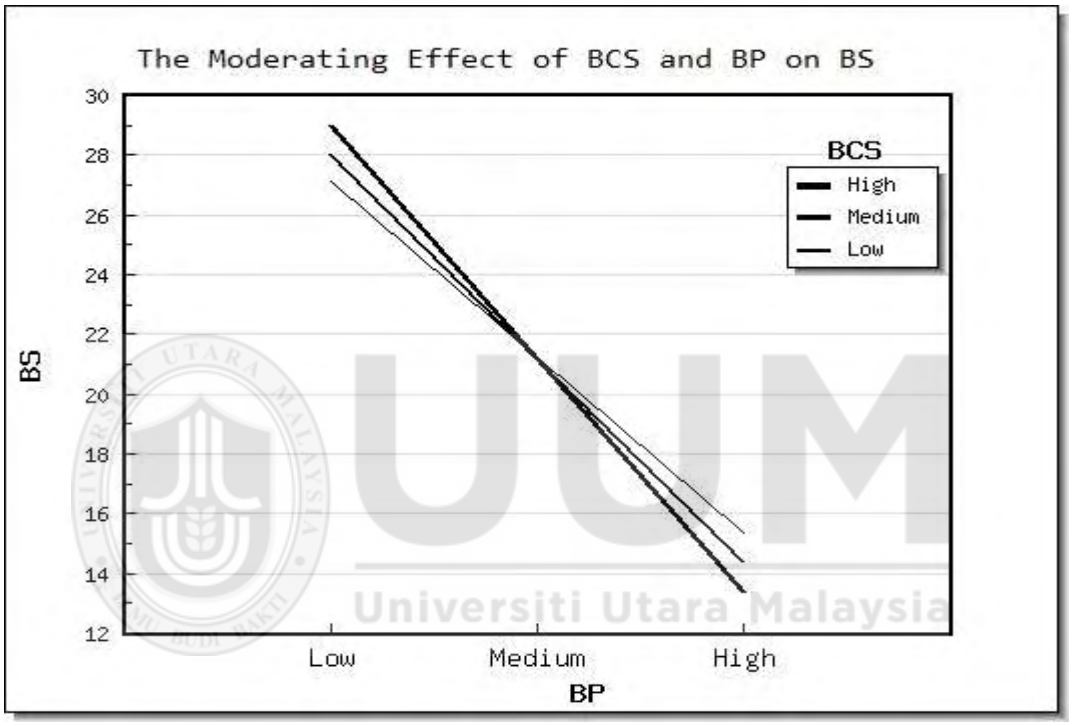


Figure 6.3
The Moderating Effect of Boundary control System on the Relationship between Budget Participation and Budget Slack.

As seen from Figure 6.3, there is a relationship between BP and BS regardless of low, medium and high BCS. There is an insignificant differential impact between low, medium and high levels of BCS when the level of BP is low to moderate and moderate to high. The lowest overall BS is achieved when the level of BP is high while adopting greater emphasis on BCS.

6.6.4 Hypothesis 4: DCS Moderates the Relationship between Budget Participation and Budget Slack

The fourth hypothesis states that the effect of BP on BS can be moderated by the DCS. The hypothesis testing was conducted by using multiple regression models with interaction test called moderated regression analysis. Results can be seen in Table 6.6 below.

Table 6.6
Result of Examination of Hypothesis 4

Variables	Coefficients	Standard	t-value	P	Remark
	Beta	Error			
Constant	22.323	0.287	77.821	0.000*	S
BP	-0.565	0.123	-5.392	0.000*	S
DCS	0583	0.066	-5.562	0.000*	S
Interaction (BPxDCS)	-0.345	0.003	-6.731	0.000*	S
R^2= 0.830	F = 222.077		p =0.000		n = 140
Adjusted R Square = 0.827					

**p<0.001 All betas are standardized*
Note: S is significant

The result shows the value of R^2 of 0.830 which is 83.0 percent change in BS can be explained by changes in the interaction between BP and DCS with a significance level of 0.000. Anova F test shows the F value of 222.077 with 0.000 significance level smaller than 0.05, which indicates that the regression model can be used for the prediction of BS or BP and DCS. The interaction of both shows that the beta coefficient for the DCS variable has a value of -0.583 with a significance level of 0.000, which suggests that, the DCS variable significantly impacts BS. However, the interaction between BP and DCS illustrates the beta coefficient of -0.345 with a significance level of 0.000 (significant). Hence, it can be asumed that the DCS variable acts as a moderating variable. Thus, hypothesis 4 can be aknowledged which states that, if the DCS is high, then BP will cause a reduction in the amount of BS. Contrary to this, with

a low DCS, the BP will increase the BS. Figure 6.4 describes the moderating effect of DCS on the relationship between BP and BS.

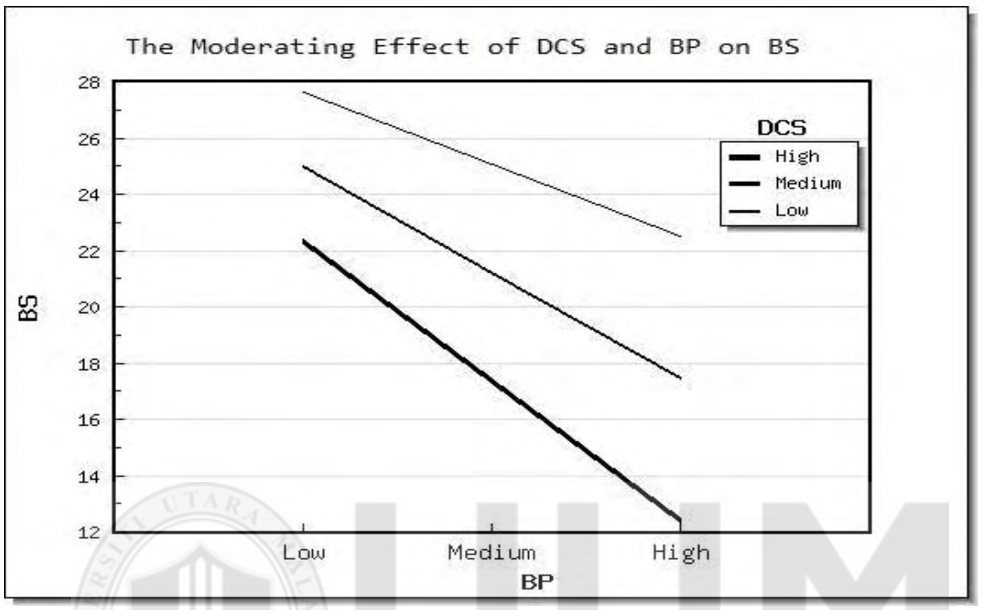


Figure 6.4
The Moderating Effect of Diagnostic Control System on the Relationship between Budget Participation and Budget Slack.

Figure 6.4 depicts the moderating role of DCS on the relationship between BP and BS. When the level of BP is high and the DCS emphasis is high, the level of BS is at its lowest. When the level of BP is low and DCS emphasis is low, the level of BS is at its highest.

6.6.5 Hypothesis 5: BLFCS Moderates the Relationship between Budget Participation and Budget Slack

In the fifth hypothesis, the BLFCS variable is tested as the moderating variable between BP and BS. Multiple regression models are used to check the interaction in the fifth hypothesis. The results are summarized in Table 6.7 below.

Table 6.7
Result of Examination of Hypothesis 5

Variables	Coefficients	Standard	t-value	P	Remark
	Beta	Error			
Constant	21.648	0.280	77.238	0.000*	S
BP	-0.864	0.060	-16.891	0.000*	S
Belief Control System (BLFCS)	-0.198	0.050	-4.389	0.000*	S
Interaction (BPxBLFCS)	-0.180	0.007	-3.856	0.000*	S
R^2 = 0.797	F = 178.077		p =0.000		n = 140
Adjusted R^2= 0.793					

**p<0.001 All betas are standardized*
Note: S is significant

The result shows a value of R^2 of 0.797, that 79.7 percent change in BS can be explained by changes in the interaction between BP and BLFCS with a significance level of 1 percent (p = 0.000). Anova F test shows F value of 178.077 with significance level of 0.00 or much smaller than 0.05, which indicates that the regression model can be used for the prediction of BS or BP variables and BLFCS; the interaction of both affect BS.

In the statistical T test or test of significance of individual parameters, it appears that the beta coefficient for the BLFCS variable shows the value of -0.005 with a significance level of 0.000 (significant), which proves that the BLFCS variable itself has no significant effect on BS. However, the interaction between BP and BLFCS shows a beta coefficient of -0.180 with a significance level of 0.000 (significant). Hence, it can be concluded that the BLFCS variable acts as a moderating variable, but the effect is significant.

Thus, hypothesis 5 can be accepted which states that if the BLFCS is implemented in the company, then BP will cause reduction in the amount of BS. Conversely, if the BLFCS is not implemented in the company, then it will increase BS.

The impact of BLFCS on the relationship between BP and BS is illustrated in Figure 6.5.

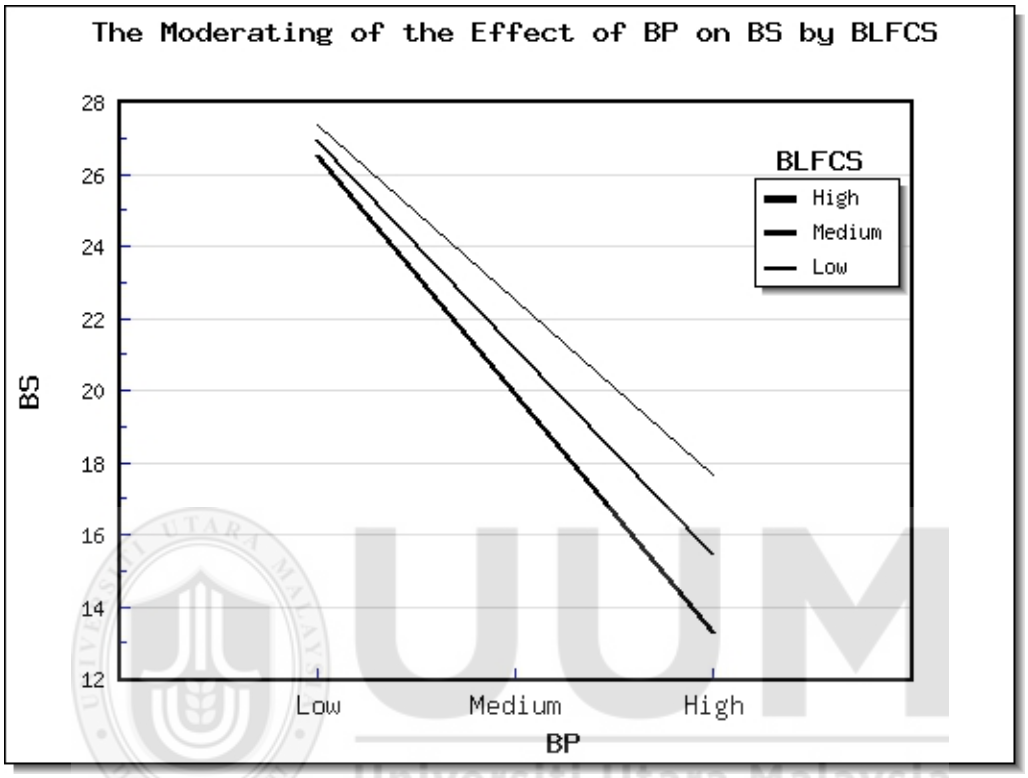


Figure 6.5
The Moderating Effect of Belief Control System on the Relationship between Budget Participation and Budget Slack.

In general, Figure 6.5 illustrates that there exists a negative relationship between BP and BS. Those with a high focus on BLFCS perform better than those with less focus on it. A lower BS is attained when the level of BP is high and when high emphasis is placed on BLFCS.

6.6.6 Hypothesis 6: MCSP Moderates the Relationship between Budget Participation and Budget Slack

In the sixth hypothesis, the MCSP variable is examined as the moderating variable between BP and BS. In order to test the hypothesis 6, multiple regression models were

used so that interaction can be checked. This hypothesis testing results are summarized in Table 6.8 below.

Table 6.8
Result of Examination of Hypothesis 6

Variables	**Coefficients**	**Standard**	**t-value**	**P**	**Remark**
	Beta	Error			
Constant	22.001	0.227	96.845	0.000*	S
BP	-0.310	0.095	-3.823	0.000*	S
Management Control System	-0.769	0.017	-10.900	0.000*	S
Interaction (BPxMCS)	-0.219	0.001	-5.701	0.000*	S
R^2= 0.901	F = 411.320		p =0.000		n = 140
Adjusted R^2 = 0.899					

**p<0.001 All betas are standardized*
Note: S is significant

According to the results, the value of R^2 of 0.901 indicates that 90.1 percent change in BS can be explained by variations in the interaction between BP and MCS with a significance level of 1 percent (p = 0.000). Anova F test shows F value of 411.320 with significance level of 0.00 or much smaller than 0.05, which indicates that the regression model can be used for the prediction of BS or BP variables and MCS; the interaction of both affect BS.

In the statistical T test or test of significance of individual parameters, it appears that the beta coefficient for the MCS variable shows a value of -0.769 with a significance level of 0.000 (significant), which proves that the MCSP itself does not have a significant impact on BS. However, the interaction between BP and MCSP shows a beta coefficient of -0.219 with a significance level of 0.000 (significant). Hence, it can be concluded that the MCS variable acts as a moderating variable, and is very significant.

Hypothesis 6 can be accepted which states that if the MCSP is implemented in the company, then BP will reduce BS. Conversely, if MCSP is not implemented in the company, then it will increase the BS.

The moderating effect of MCSP on the relationship between BP and BS is demonstrated in Figure 6.6.

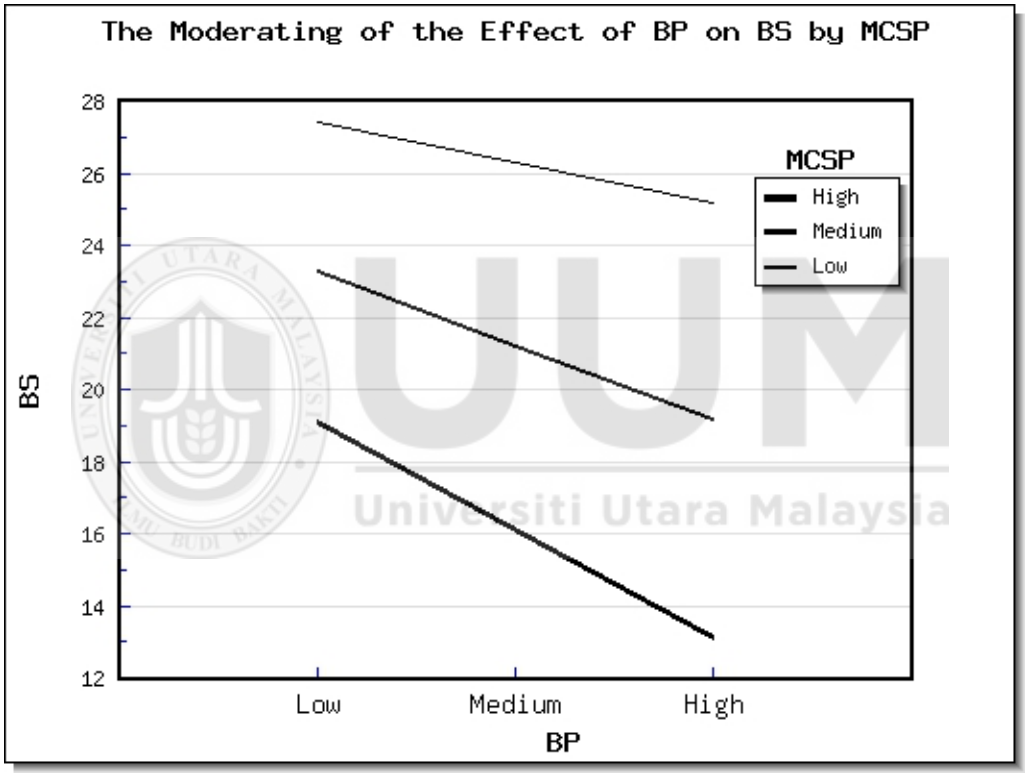


Figure 6.6
The Moderating Effect of Management Control System Package on the Relationship between Budget Participation and Budget Slack

Figure 6.6 shows the moderating role of MCSP on the relationship between BP and BS. In general, Figure 6.6 shows that there exists a negative relationship between BP and BS. When the level of BP is low, the level of BS is high for those organizations that have less emphasis on MCSP. Furthermore, the lowest BS is achieved when the organization places high priority on MCSP, while adopting a high level of BP.

Table 6.9 outlines the results of research findings in relation to the strength of the relationships and the assumptions of the hypotheses.

Table 6.9
Summary of results

Hypothesis	Significant	Findings Of Hypotheses
H1	Yes	Not Supported
H2	Yes	Supported
H3	Yes	Supported
H4	Yes	Supported
H5	Yes	Supported
H6	Yes	Supported

Results of the tests show that BP has negative relationship with BS, when the elements of MCS are tested separately; the results show that ICS, BCS, DCS and BLFCS have a negatively significant influence on the relationship between BP and BS. When MCS is tested as a package, the results also show a negatively significant influence on the relationship between BP and BS. Thus, consistency of results is shown, both when using MCS separately or as a package.

6.7 Discussion of Results

The aim of this section is to discuss the findings of the questionnaire survey, making a comparison with relevant literature. The discussion about the questionnaire survey findings is mostly related to hypotheses testing. This section begins with a summary of the study along with the hypotheses of the study.

The discussion of the research findings is divided into three subsections. Firstly, the discussion is centred on the direct relationship between BP and BS. This addresses the

first research objective. Secondly, the discussion focuses on the effect of each element of the MCSP on the relationship between BP and BS. This addresses the second research objective. Thirdly, the moderating effect of MCSP on the relationship between BP and BS is discussed.

6.7.1 Hypothesis 1: Budget Participation has Positive and Significant Relationship with Budget Slack.

The findings discussed in Chapter Five and Table 6.2 reveal that there is a negative relationship between BP and BS in manufacturing firms in Indonesia. However, the findings do not support the idea that BP influenced the increasing in BS. The result suggests that when the people in the firm actively participate in the budget preparation, the creation of BS will be reduced. This result may likely due to the influence of the culture in Indonesia.

In Indonesia, the power distance culture is widely implemented in manufacturing firms (Hopstede, 1980; Ghozali, 2005). Ghozali (2005) stated that the power distance in Indonesia has an insignificant effect on increasing manager participation and budget goals, because managers in manufacturing firms in Indonesia are not fully responsible for budget goals and have no satisfaction with the budget goals that will be achieved. The impact of power distance on the behaviour of managers of manufacturing firms in Indonesia pushes managers to create BS because superiors are very dominant resulting in pressure on managers to achieve the budget goals that their superiors have set. For that reason, managers tend to create BS by incorporating a greater value in their budgets that contrasts with their capability to reach the budget goals. This condition indicates that the budget process in Indonesia is developed from top down. Kenis (1979) stated

that without participation, if the budget process is developed top-down, the discussion about slack makes no sense.

The results of this study show that the relationship between BP and BS is significantly negative. They indicate that the influence of the power distance culture in Indonesian manufacturing firms has decreased. The budget process is developed from bottom up, because increased participation of managers in the budget process can reduce BS. If subordinates (managers) in the manufacturing firms who are involved in the preparation of the budget have specific information on the local conditions, it will allow them to promote the interests of the company. Schift and Lewin (1970) mentioned that, generally, in behavioural accounting, BP will motivate managers to include their private information in the budget. This argument is based on the premise that participation allows for positive communication between superiors and managers in order to reduce the pressure to create BS.

These findings are consistent with the findings of the studies carried out by Kristianto (2012), Maiga (2007), and Onsi (1973), which reported a negative and significant relationship between BP and BS. All these scholars examined the relationship between BP and BS in a manufacturing setting. The similar findings may be due to examination of the same sector as the current study. The findings may also be similar due to the way BP is measured by researchers in the manufacturing sector, or the concepts used. The result is also consistent with Dunk (1997) who discovered that the higher the level of BP, the lower the level of BS. A comparable result was also indicated by other scholars (Ramdeen *et al.,* 2007; Soebaroyen, 2005; Schiff and Lewin, 1968; Lowe and Shaw,

1968; and Lukka, 1988) who suggested an inversely significant relationship between BP and BS; in other words, BP has a negative impact on BS.

These findings contradict the research outcomes of the studies by Apriantini *et al.,* (2014) and Triana *et al.,* (2012), which reported a positive and significant effect of BP on BS. The contradictory findings may be because Apriantini *et al.,* (2014) used the local government office at Buleleng Regency in Indonesia, and Triana *et al.,* (2012) used the hotel sector as the object of study, whereas, based on the sample used, this study used the manufacturing firms as the object of study. Apriantini *et al.,* (2014) used 75 samples comprising officials from the local government of Buleleng Regency, and Triana *et al.*, (2012) used 45 sample managers of two-, three- and four-star hotels in Jambi Regency, whereas this study used a sample of 140 managers of manufacturing firms. The variables used by Apriantini *et al.,* (2014) were BP as an independent variable, budget emphasis and organization commitment as moderating variables, and BS as a dependent variable. Triana *et al.,* (2012) independent variables comprised BP, budget emphasis and locus of control, and the dependent variable was BS. Meanwhile, this study used BP as an independent variable, MCSP as a moderating variable and BS as a dependent variable.

6.7.2 Budget Participation, Elements of Management Control System Package and Budget Slack

A separate test was conducted for each of the management control system (MCS) elements. As far as the specific MCS elements are concerned, a negative coefficient was expected for all elements of the MCSP (interactive control system, ICS; boundary control system, BCS; diagnostic control system, DCS; and belief control system, BLFCS).

6.7.2.1 Hypothesis 2: Budget Participation, Interactive Control System and Budget Slack (H2)

The findings from Table 6.2 and Table 6.4 indicate that the ICS moderates the relationship between BP and BS and has negative significance. When managers participate directly and interactively in budget setting, it is likely to prevent them from being involved in the creation of BS. These findings contrast with Aprila and Hidayani's (2012) study in that they found a positive relationship. There are some factors that may cause the contradictory findings. Aprila and Hidayani (2012) used the local government as the domain of study, while the domain of the present study is manufacturing firms. Based on the chosen sample, Aprila and Hidayani (2012) used a sample comprising 29 officials of the local government of Bengkulu Regency, whereas the sample of this study consists of 140 managers of manufacturing firms, and are based on a construct of variables. Aprila and Hidayani (2012) used BP, information asymmetry, budget emphasis and organization commitment as independent variables, and the dependent variable was BS, whereas this study used BS as a dependent variable, BP as an independent variable and MCSP as a moderating variable. From the point of view of entity orientation, Aprila and Hidayani (2012) used local government, which is a non-profit entity as their object of study, while this study used manufacturing firms, which are profit-oriented entities, as its object of study.

The result of the present study is consistent with Widener (2007) and Dunk (1993) who stated that an ICS is actively and frequently used by top managers to disseminate information concerning the budgeting process and to reduce BS. An interactive system is progressive and characterized by active and frequent dialogue among top managers. Since managers are more inclined towards a budgeting process that is participative in

nature, they are personally involved in it. It can be argued that the budgeting process is an ICS within business units.

In an organization, the subordinates may have information that is more accurate compared to their superiors about factors that affect performance (Waller & Chow, 1995). The difference between the information possessed by superiors and subordinates is called information asymmetry (Dunk, 1993). It is argued here that information asymmetry represents an ICS. Simons (1995) stated that the information asymmetry contained in an ICS must be simple to understand and everyone must have faith in its accuracy. Elizabeth (2014) found that information asymmetry, acting as an ICS, has a significantly negative correlation between BP and BS.

The difference between the information possessed by superiors and subordinates is called information asymmetry (Dunk, 1993). It is argued here that information asymmetry represents an ICS. Simons (1995) stated that the information asymmetry contained in an ICS must be simple to understand and everyone must have faith in its accuracy. Elizabeth (2014) found that information asymmetry, acting as an ICS, has a significantly negative correlation between BP and B.

These findings suggest that the interaction between budget participation and the ICS will reduce BS if the top management and managers involved in budget processing are adequately equipped with the relevant knowledge and skills. Simons (1995) suggested that the interactive control system could help the firm to get a strategically important position in the dynamic market place, motivate firms to search for new strategies and adapt to the new strategies and practices to enhance performance. If top management and managers are involved personally and interactively in budget processing and

decision-making but do not have the sound skills and knowledge base regarding the budget processing matters in question, their decision-making ability may be limited. This result could indicate that a lack of budget processing expertise and resources lead to difficulty in achieving budget objectives.

Improving the performance reward and compensation system can help firms to motivate managers or employees to achieve the goals of the organization. Rewards and compensation can lead to an increased amount of effort compared to an absence of explicit rewards and compensation. Bonner and Spinkle (2002) reviewed the research literature on incentives and performance; they argued that money-based incentives increase effort and performance by paying attention to individuals' efforts on the task. Therefore, developing an incentive system is one of the systems that can facilitate managers' commitment and involvement in becoming more interactive in budget processing.

Thus, the incentive and reward system could also be related to these findings. For example, even though in some cases top management and employees had sufficient knowledge and skills regarding budget processing, without a proper incentive and reward system, they would not transfer this into action in the day-to-day management of the manufacturing firms. They might make a decision that would benefit them through the reward system regardless as to whether the decision made would harm their firm. In other words, the existence of reward and incentive systems can provide important information for budget processing so as to prevent BS. The incentive system may explain the effect of the ICS on BS. As Epstein (1996) and Merchant (1997) mentioned, the right incentives will encourage people to take responsibility for what they do, and, therefore, they can be motivated to achieve the desired objectives.

Although some manufacturing firms have a budgeting process practice, without a good reward system, managers are not motivated to achieve the objectives set by the management. Thus, if managers knew the incentives available to them and if they implemented proper budgeting process practices, they would possibly improve and reduce BS.

These findings may also be related to several other factors. Firstly, the setting of the organization may influence the results. The MCS should be designed in accordance with the nature of the organization (Simons, 1990). Secondly, top management and managers are more likely to be motivated by an incentive system that is designed to help them to achieve the objectives.

Managers use an ICS to provide direction for organizational priorities and to enforce the development of new strategies (Bisbe & Otley, 2004; Naranjo-Gil & Hartmann, 2007; Simons, 1995). Therefore, the findings of the present study suggest that Indonesian manufacturing firms should increase their level of involvement in ICS for decision-making and budget preparation in order to reduce BS.

The study concludes that although BS is influenced by ICS, the ICS may possibly be used as a control system tool to reduce BS if:

1. There is an active involvement of top management and employees and
2. There is an adequate level of skills and knowledge.
3. There is an adequate incentive system. And,
4. There is a continued effort to adapt the new management accounting practices.

Therefore, this study suggests that the following factors might influence the intent to create BS:

1. The managers of manufacturing firms should have the adequate skills and knowledge by undergoing regular awareness and training sessions to prepare a comprehensive budget.
2. Implementation of a substantial bonus and reward scheme for managers that rewards them for improving the budget process.
3. Training of managers to accept new information technology and advanced technical management accounting practices, e.g. budgeting process techniques.

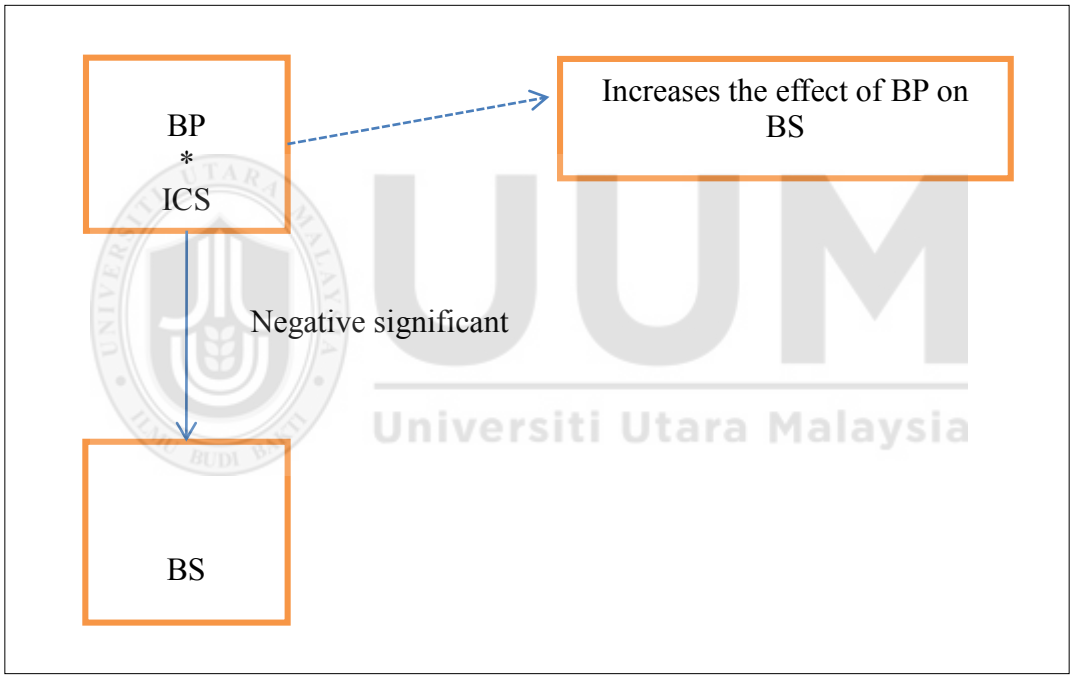


Figure 6.7
Summary of the Moderating Effect of ICS on the Relationship between Budget Participation and Budget Slack

Figure 6.7 summarizes the effects of the interaction of BP and ICS (BP*ICS) on BS. The result shows that the interaction has a negatively significant effect on BS. This result indicates that the more firms integrate and use an ICS in the budgeting process the greater the reduction of BS. The results also show that the ICS has a negative effect on BS, with or without interaction. The results imply that if an ICS is present, the

relationship becomes stronger. Therefore, the manufacturing firms in Indonesia that are committed to BP and apply an ICS may be more likely to reduce BS.

6.7.2.2 Hypothesis 3: Budget Participation, Boundary Control System and Budget Slack (H3)

With regards to the result in Table 6.2 and Table 6.5 the study found that the moderating effect of BCS on the relationship between BP and BS is negatively significant. According to this research, firms using more BCS will have a greater reduction of BS.

Budget emphasis is pressure from superiors on subordinates to reach the established budget targets. The existence of a budget emphasis will encourage subordinates to reduce slack in order to increase the prospect of compensation and avoidance of sanctions. It is argued here that budget emphasis represents a BCS.

This result is supported by the results in previous studies, such as Ramdeen *et al.,* (2007), which suggested that BS is lowest when participation and budget emphasis are highest and vice versa. Dunk (1993) and Gamal (2001) found that in the environment of increased levels of budget emphasis, BP could lead to decreased levels of BS. Tuomela (2005) suggested that the basic aim of the BCS is to reduce the wastage of organizational resources by the employees. Spekle (2001) presented the argument that the structure of last resort is represented by BCS because their effectiveness depends on the ex ante cataloguing of acceptable and unacceptable activities. Oktorina and Sunarno (2013), in their study, investigated the effect of BP, budget emphasis and fairness perception on BS. They found that budget emphasis has a positive effect on BS. Other studies, such as Aprila and Hidayani (2012), and Afiani (2010), which used local government as the unit of analysis, concluded that, if BP, budget emphasis and information asymmetry are higher, BS is also high. These contradictory findings may

be due to the unit of analysis used, measurements and may also differ due to the concepts used.

As explained in the previous chapter, a BCS (1) gives guidelines to limit actions and (2) is based on business risk and opportunity seeking. A BCS communicates what actions should be avoided by employees. Its purpose is to allow employees freedom to innovate and achieve within certain predefined areas. Examples of the two criteria above are procedure and policy (Simons, 1995). Budget emphasis can be explained as a manager's tool to evaluate subordinates' performance and to pressurize superiors to reach the stipulated budget figures before an accounting deadline. This means that budget emphasis can be included as one of the elements of a BCS, while the BCS should be used to set standards for improving efficiency and creativity. A BCS does not help to reduce BS if manufacturing firms do not use a set of minimum standards or behavioural guidelines to prevent employees from wasting organization's resources and seeking continual improvements beyond optimal and timely solutions.

In manufacturing firms, a BCS could attempt to reduce dysfunctional behaviour and dysfunctional behaviour could be controlled by the budgetary style through focusing on outcomes. From the participation perspective, the dysfunctional behaviour of managers arises when targets are set, which, once approved, need to be pursued, achieved and rewarded. The role of the BCS in manufacturing firms in Indonesia is to support specific types of work, and relationships, and to encourage employees' reliable and foreseeable behaviour. In addition, it is worth noting that a BCS encourages employees to innovate and challenge outdated traditions and practices. In a BCS, the human relationships in manufacturing firms in Indonesia focus on analysing the impact

on the behaviour of individuals in the control system, since this behaviour is considered as being conditioned, among other factors, by individual objectives, by the relationship that each individual has with the job he performs in the organization, by the encouragement and participation of each individual, and, in short, by all the human relationships that occur within the organization. Within this trend, it is deemed that the employee no longer has merely financial needs but also follows their own personal satisfaction in the organization. These findings suggest that Indonesian managers of manufacturing firms should be well advised to use a BCS for controlling the behaviour of managers and reducing BS. Therefore, this study suggests that Indonesian manufacturing firms increase their use of a BCS to reduce BS. The summary of the moderating effect of a BCS on the relationship between BP and BS is demonstrated in Figure 6.8.

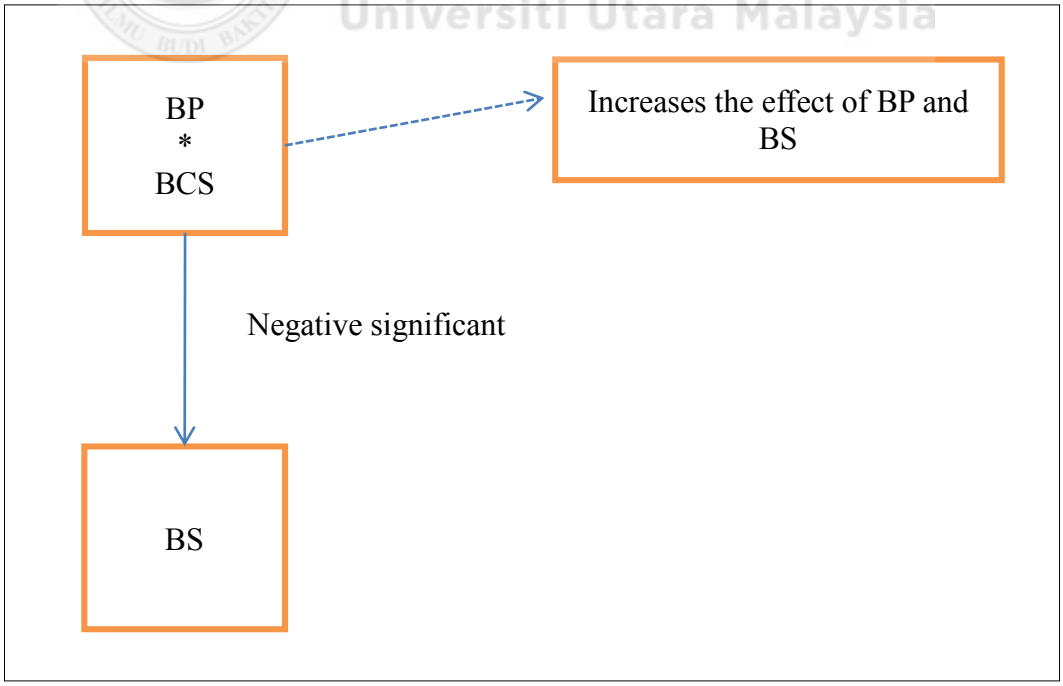


Figure 6.8
Summary of the Moderating Effect of BCS on the Relationship between Budget Participation and Budget Slack

Figure 6.8 summarizes the effect of interaction between BP and a BCS on BS. The investigation revealed that the interaction between BP and a BCS has a significantly negative effect on BS. A negative coefficient of interaction effect of BP and BS suggests that the more the firms use a BCS the lower the effect on BS.

Furthermore, the results also show that with or without interaction, a BCS has a negative significant effect on BS. The results suggest that the relationship between BP and BS becomes stronger if there is a BCS.

6.7.2.3 Hypothesis 4: Budget Participation, Diagnostic Control System and Budget Slack (H4)

Table 6.2 and Table 6.6 presents the result of the hypotheses testing related to the moderating effect of a DCS on the relationship between BP and BS. It was implied that there is a negatively significant effect on the relationship between BP and BS. The findings suggest that BS will experience more reduction whenever firms intensively use a DCS.

This result is consistent with Kren (1997), Van der Stede (2000), and Yilma E. and Ozer G. (2011) who suggested that BS, can be reduced through a DCS, but contradicts Onsi (1973), who concluded that there is a positive attitude to slack creation. Widener (2007) stated that a DCS is involved in the provision of structure by delineating the areas that are beyond the designated limits of employees. A DCS allows maximum self-sufficiency in which subordinates are considered responsible for results but have the freedom in the selection of the way they want to gain the desired ends.

The main actors of this system are critical functionaries and gatekeepers (such as accountants, sales planners and quality control experts). They have a significant impact on these systems. As they have the ability to correct deviations from the standard, a DCS is only appropriate for processes that are impacted by organizational participants. Moreover, participation by subordinates can allow more sensible goals as well as the perception of sensible goals. In addition, a DCS could be used to compare actual performance against preset targets, thus leading to reduced BS.

Simons (1995) argued that a budgeting control system is one of the elements of a DCS. The more extensively a budgeting control system is used in the manufacturing sector, the greater the effect of reducing dysfunctional behaviour might be and the tendency to create BS will be lessened. Langevin and Mendoza (2010) said that a fair budgeting system would cause a reduction in unethical behaviour; if managers' perception about the budgeting process is entirely fair, they will have less inclination towards the creation of BS and the manipulation of data. By using a budgeting control system, manufacturing firms will have proper plans to control their costs and revenues, such as cost of production and operational costs. As mentioned in the previous chapter, the production and overhead costs of manufacturing firms in Indonesia are particularly risky because these costs are increasing (Badan Kebijakan Fiscal, 2010). The findings suggest that if the manufacturing firms integrate expenses and revenues more efficiently and effectively in the budget system, the system can be used to control and manage budgeting problems, thus leading to reduced BS. This is due to all the activities in manufacturing firms being carried out in accordance with the budget, and, therefore, expenses are less likely to exceed those that have been planned. Thus, goal congruence

is promoted and people are motivated to work according to the budget goals so that dysfunctional behaviours are reduced and performance improved.

Therefore, these findings suggest that to reduce BS, the Indonesian manufacturing firms should use a budgetary control system that acts as a DCS. The summary of the moderating effect of a DCS on the relationship between BP and BS is demonstrated in Figure 6.9.

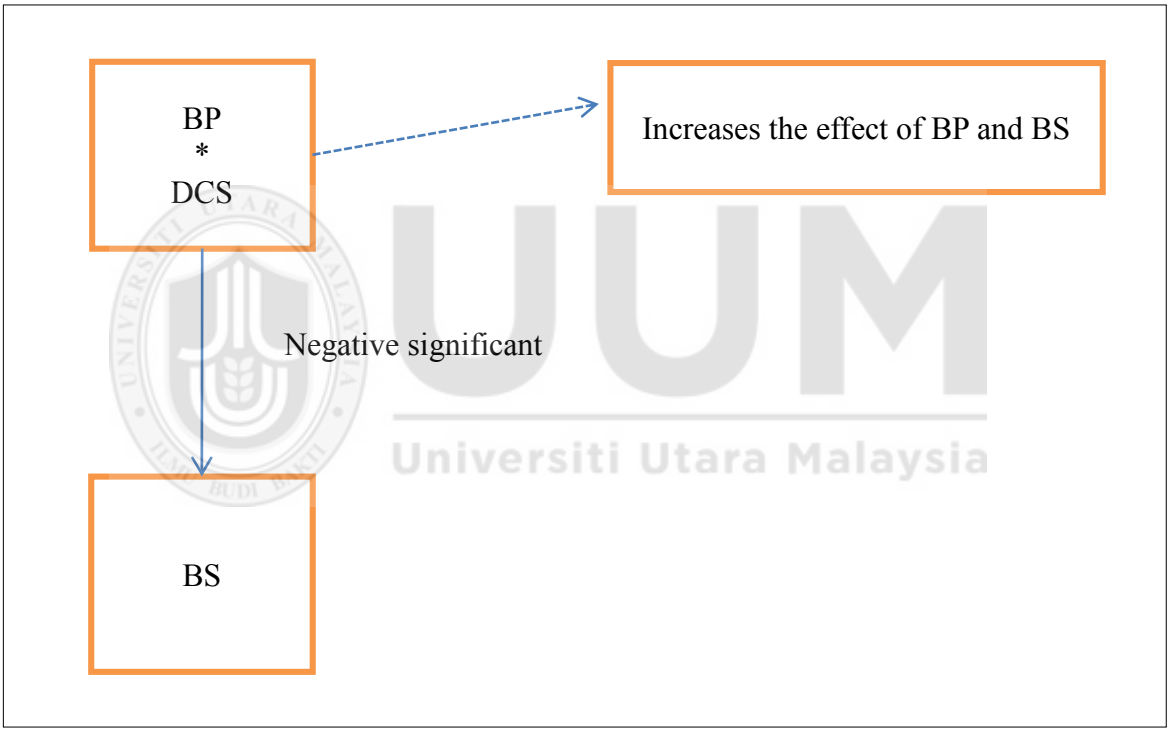


Figure 6.9
Summary of the Moderating Effect of DCS on the Relationship between Budget Participation and Budget Slack

Figure 6.9 illustrates the effect of interaction between BP*DCS on BS. The result shows that the interaction between BP and a DCS has a negatively significant impact on BS. The interaction also determines the effect of BP by enhancing the explanatory power of the model. The negative coefficient of the interaction effect of BP and a DCS implies

that the more manufacturing firms incorporate and apply a DCS, the greater the effect on reducing BS. The results also show that with or without interaction, a DCS has a negative significant effect on BS. The findings imply that the relationship between BP and BS becomes stronger if there is a DCS.

6.7.2.4 Hypothesis 5: Budget Participation, Belief Control System and Budget Slack (H5)

The results in Table 6.2 and Table 6.7 show that by using a BLFCS as a moderating variable in the relationship between BP and BS, the relationship is negatively significant. This is consistent with Sri Utami (2013) in whose study the interaction of firm culture and group cohesiveness on the relationship between BP and BS was studied; the conclusion reached was that the relationship is negatively significant. The results demonstrated by previous research support her result (Widener, 2007; Pearce and David, 1987) in that all other systems are positively supported by a BLFCS, which is the basis of the firm's integrity and value systems. Bruining *et al.*, (2004) and Roberts (1990) presented the argument that a BLFCS has a great role when managers make a choice between selecting or modifying the introduction of new values and priorities in organizations going through the process of change.

Abernethy and Vagnoni (2004) stated that an important role is played by the BLFCS in the provision of the environment in which employees can work collectively towards the achievement of organizational goals. Spekle (2001) stated that in order to signal the strategic goals to the organization and to let the behaviour be in conformity with the desired outcomes, managers make use of the BLFCS. Simons (1995) presented the argument that a vital role is played by the BLFCS in the provision of a secure

environment and in stimulating organizational inertia and processes of political importance through the communication of values and assumptions.

Omobola (2013) studied the influence of firm culture and budgetary participation on the propensity to create BS. Data were collected from federal government universities in Nigeria and he concluded that there is a positively significant relationship. These contradictory findings may be due to the use of the public sector, as the current study examined the manufacturing sector. The findings may also differ due to the way BS is measured by the researchers in the manufacturing sector and/or due to the way the concepts are used.

One of the external adaptation problems that organizations face is the pressure of ensuring the inflow of resources. Creating BS has been noted as an adaptation mechanism that enables organizations to deal with such pressures. Simons (1995) suggested that firm culture promotes performance so the management of firms should consider a MCS design that can modify the culture. Organizations with tight controls are expected to have a reduced level of BS because the control system gives more information to superiors and increases managers' ability to detect slack.

As mentioned in Chapter One, the manufacturing firms in Indonesia have relatively low human resources, which is mainly because of the inability of the industry to apply foreign technology to the local industry, products and product scales. If subordinates in manufacturing firms are not attentive, then the knowledge and skills will not cascade and will not be shared in the proper manner. Therefore, new values and beliefs cannot be established, and the attitude of subordinates towards BS will remain the same.

The results imply that in order to reduce BS, the management and subordinates should be prepared for and flexible towards the acceptance of new ideas and assign a belief system that will lead them towards new ideas. Even though the manufacturing firms can establish and employ extensively a new culture and beliefs, without eagerness to comply with the new environment, the manufacturing firms will not meet their objective to reduce BS.

Hence, it is recommended in this research that manufacturing firms in Indonesia should increase their use of a BLFCS for the reduction of BS. The summary of the relationship between BP and BS under the moderating effect of a BLFCS is demonstrated in Figure 6.10:

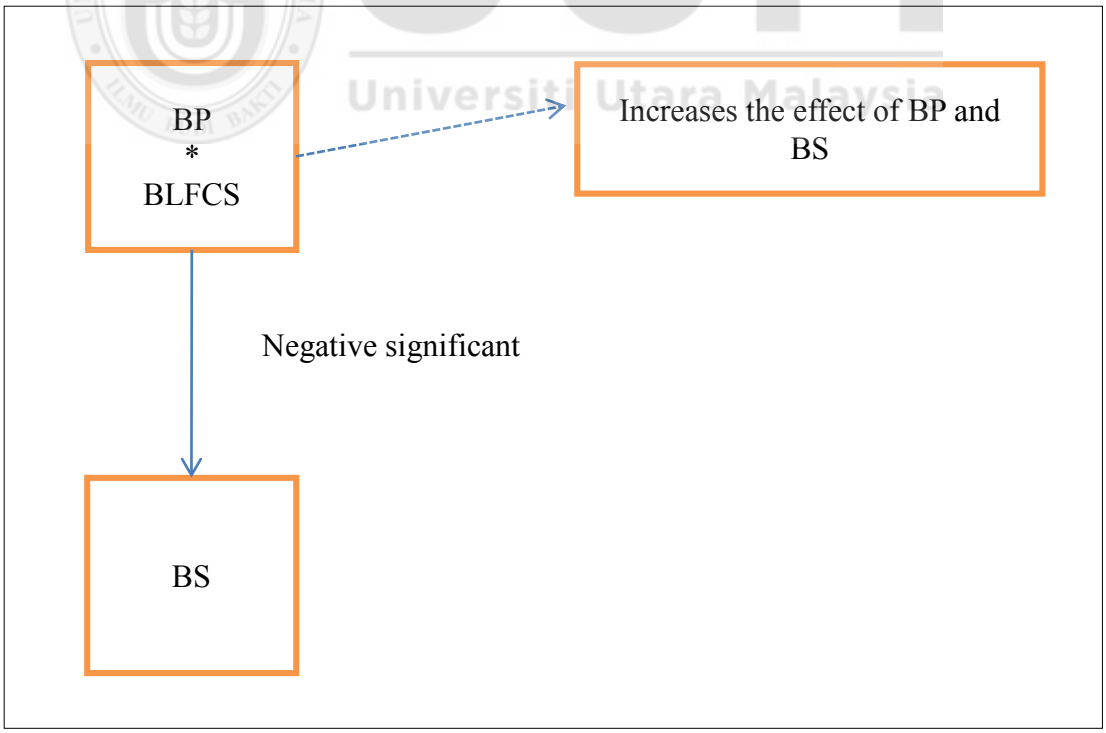


Figure 6.10
Summary of the Moderating Effect of BLFCS on Relationship between Budget Participation and Budget Slack

Figure 6.10 above summarizes the result of the interaction effect of BP and a BLFCS (BP*BLFCS) on BS. The results indicate that the interaction has a negative significant effect on BS. The negative coefficient of interaction effect of BP and a BLFCS suggests that the more the firms accommodate a BLFCS, the less the effect on BS. The results also illustrate that the BLFCS has a negative significant effect on BS, with or without interaction, and imply that the relationship between BP and BS becomes stronger if there is a BLFCS.

Therefore, the manufacturing firms in Indonesia that are committed to BP and apply a BLFCS may be more able to reduce BS.

6.7.2.5 Hypothesis 6: Budget Participation, Management Control Systems Package and Budget Slack (H6)

In this study, a MCSP was chosen as a moderating variable in the relationship between BP and BS. An MCSP comprises an ICS, a BCS, a DCS and a BLFCS. The result from Table 6.2 and Table 6.8 shows that in the examination of the hypothesis related to the relationship between BP and BS under the moderating effect of an MCSP, it was found that there is a negatively significant relationship between BP and BS.

The result indicates that firms that make use of an MCSP, such as an ICS, a BCS, a DCS and a BLFCS could reduce BS. This finding is supported by Chong and Ferdiansah (2011) who suggested that using MCSP could help the firms to reduce dysfunctional behaviour. BS is one of the dysfunctional behaviours (Soebaroyen, 2005). Dysfunctional behaviour occurs when a subordinate makes an attempt to operate elements of an established control system for his own purposes (Jaworski & Young, 1992).

Based on Table 6.8, the result shows that in Indonesia, MCSP has a negatively significant impact on BS. This means that if MCSP increases, BS would decrease. This is consistent with Ghozali (2005) who found that in manufacturing firms in Indonesia, the superior prevails and tends to put pressure on the managers (subordinates) for the achievement of goals, if those goals are very subjective in nature, and of concern to the superior. Some government agencies in Indonesia have conducted a study and they concluded that the top management in Indonesia is often unwilling to share information with subordinates due to fear of manipulation and distortion of information by their subordinates. This is because many senior managers are politically inclined and they like to maintain power distance with their subordinates and management openly treats employees unfairly due to the lack of recognition or protection of human rights and high unemployment rates. (Hanifah, 2013). According to Badan Kebijakan Fiscal (2010), the basic reason behind the decline in competitiveness and performance of the manufacturing sector is because of the easing of BS, which, in turn, has an impact on revenue and production costs. Because of the pressure put on the managers by the superiors, the manufacturing firms in Indonesia determine a greater value of the budget in terms of their ability to meet the budget goal.

Thus, all elements of MCSP could be implemented together to reduce dysfunctional behaviour and BS. As mentioned by Rapiah (2011), the strength of MCSP does not exist in each individual element, but rather in how they supplement each other when they are applied simultaneously. Similarly, Malmi and Brown (2008) argued that MCSP elements should occur together and be linked to each other. Previous studies also supported this result, such as Widener (2007), who found that an important role is played by MCSP on the performance of the firm. Simons (2000) also discovered that

through organizational learning and proper management focus, MCSP could influence the organization.

Soebaroyen (2005) also showed similar results when he identified a positive and significant relationship between MCSP and firm performance. Bedford (2006) also suggested that MCSP could help in the achievement of organizational outcomes. In this vein, it is suggested by the current study that Indonesian manufacturing firms increase their use of MCSP to reduce BS.

The present study suggests that for applying MCSP in Indonesian manufacturing firms, the following is required:

1. Local culture should be given more attention and integrated into MCSP. In Indonesia, the power distance culture has a very strong effect on firm culture, where the superior prevails and tends to pressurize the managers (subordinates) to achieve the goals. This is consistent with Simons (1995) who said that the local culture is inseparable from the organizational environment, and that it should be accommodated by the MCSP.

2. Control systems should be implemented by two approaches: firstly, use formal systems that have financial and non-financial indicators. Secondly, use informal systems to create a control package. The use of two systems (formal and informal) should be combined because it is believed that through the solitary use of systems, it is not possible to control the relevant variables for an organization to achieve its objectives.

The summary of the moderating effect of MCSP on the relationship between BP and BS is demonstrated in Figure 6.11:

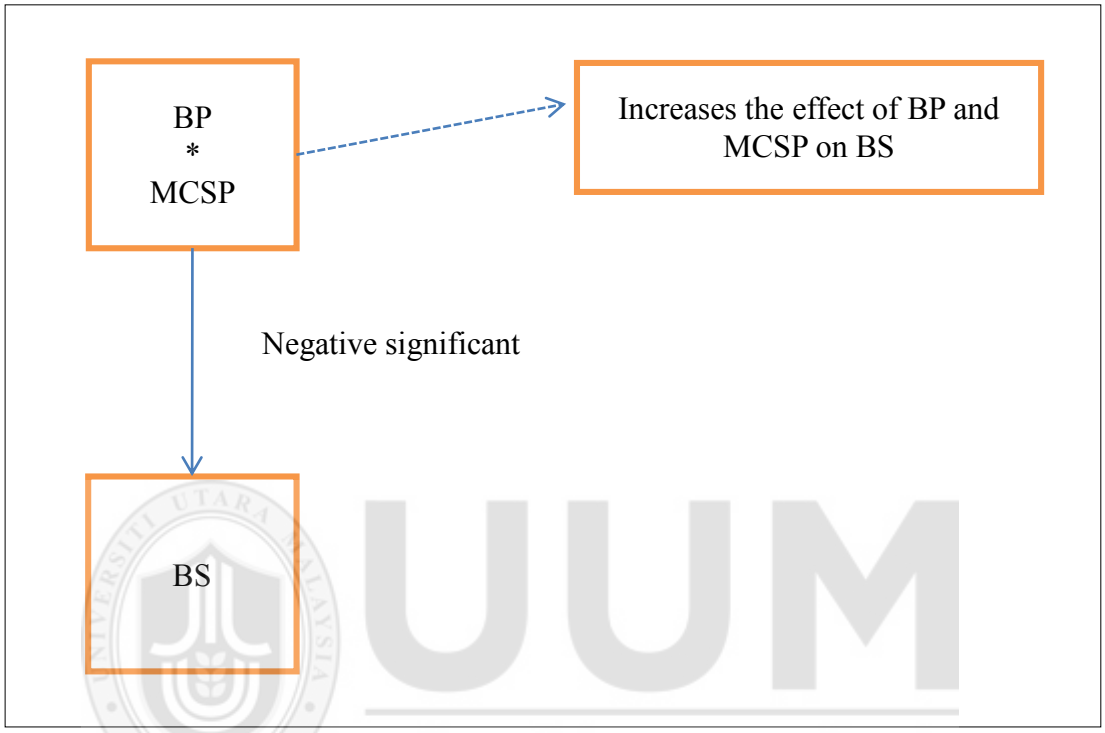


Figure 6.11
Summary of the Moderating Effect of MCS Package on the Relationship between Budget Participation and Budget Slack

Figure 6.11 above summarizes the findings of the interaction effect of BP and an MCSP (BP*MCSP) on BS. The results show that the interaction has a negative significant effect on BS. This interaction also regulates the effect of BP on BS by enhancing the explanatory power of the model. The BP and MCSP have a negative coefficient of interaction effect suggesting that the more frequently firms accommodate and apply an MCSP, the less the effect on BS, while the lesser the firms apply an MCSP the greater the effect of BS. The results also show that an MCSP has a significant effect on BS, with or without interaction. Therefore, the manufacturing firms in Indonesia that are committed to BP and apply an MCSP may be more likely to reduce BS.

6.8 Summary of Chapter

This chapter presents the results of the multiple regression analysis and discussion of the results. The discussion of the results is based on comments in the questionnaire. The findings are also compared to the results of relevant prior studies. The results of the study can be concluded as follows:

First, budget participation has a negative significantly influence on budget slack. The result suggests that when the people in the firm actively participate in the budget preparation, the creation of budget slack will be reduced.

Second, the findings from Table 6.2 indicate that the ICS moderates the relationship between BP and BS and has negative significance. When managers participate directly and interactively in budget setting, it is likely to prevent them from being involved in the creation of BS.

Third, the results support the hypothesis that the moderating effect of BCS on the relationship between BP and BS is negatively significant. According to this research, firms using more BCS will have a greater reduction of BS.

Fourth, the moderating effect of a DCS on the relationship between BP and BS implied that there is a negatively significant effect on the relationship between BP and BS. The findings suggest that BS will experience more reduction whenever firms intensively use a DCS.

Fifth, by using a BLFCS as a moderating variable in the relationship between BP and BS, the relationship is negatively significant. The findings suggests that the more the firms accommodate a BLFCS, the less the effect on BS.

Sixth, the result indicates that firms that make use of an MCSP, such as an ICS, a BCS, a DCS and a BLFCS could reduce BS. A summary of the entire study, including assumptions and limitation, implications of the results and suggestions for future research is presented in the final chapter.

CHAPTER SEVEN

CONCLUSIONS

7.1 Introduction

This chapter provides a summary of the results and discusses their implications and contributions of the study, limitations of the study and several potential areas for the future research are suggested.

7.2 Summary of the Study

The main objective of this study is to examine the effect of MCSP on the relationship between BP and BS. Previous study, some researchers using one or two elements of MCS as moderating variable in the relationship between BP and BS. The extensive literature review in Chapter 2 shows the relationship between BP and BS has been studied extensively in the management and accounting literature but results are inconclusive. Despite the inconsistent results, this study revisit the relationship between BP and BS. The conceptual framework in Chapter 3 shows that this study focuses on the relationship between BP and BS. This study examines the effect of MCSP and its elements as moderator on the relationship between BP and BS. The conceptual framework is based on the levers of control framework and the agency theory as explained in Chapter 3. This section summarizes the results of the test on the hypothesized relationship.

7.2.1 Budget Participation and Budget Slack

With respect to question 1 “what is the relationship between BP and BS”, the study found that the relationship between BP and BS is negatively and significantly related. The results suggest that BP have a negative and significant contribution to reduce BS. The results of this study show that the relationship between BP and BS is significantly negative, they indicate that the influence of the power distance culture in Indonesian manufacturing firms has decreased. The budget process is developed from bottom up, because increased participation of managers in the budget process can reduce BS. The result also apparent that the managers in the manufacturing firms who are involved in the preparation of the budget have specific information on the local conditions, it will allow them to promote the interests of the company. BP will motivate managers to include their private information in the budget (Schift & Lewin, 1970). This argument is based on the premise that participation allows for positive communication between superiors and managers in order to reduce the pressure to create BS.

7.2.2 Budget Participation, Elements of Management Control System Package and Budget Slack

A separate test was conducted for each of the management control system (MCS) elements. As far as the specific MCS elements are concerned, a negative coefficient was expected for all elements of the MCSP (interactive control system, ICS; boundary control system, BCS; diagnostic control system, DCS; and belief control system, BLFCS).

7.2.2.1 Budget Participation, Interactive Control System and Budget Slack

With respect to research question 2: "What is the moderating effect of ICS on the relationship between BP and BS", this study provides evidence that ICS has a negative and statistically significant on the relationship between BP and BS. When managers participate directly and interactively in budget setting, it is likely to prevent them from being involved in the creation of BS. The difference between the information possessed by superiors and subordinates is called information asymmetry (Dunk, 1993). It is argued here that information asymmetry represents an ICS. Simons (1995) stated that the information asymmetry contained in an ICS must be simple to understand and everyone must have faith in its accuracy. The result of the present study is consistent with Widener (2007) and Dunk (1993) who stated that an ICS is actively and frequently used by top managers to disseminate information concerning the budgeting process and to reduce BS. Thus, the incentive and reward system could also be related to these findings. The existence of reward and incentive systems can provide important information for budget processing so as to prevent BS. The incentive system may explain the effect of the ICS on BS. As Epstein (1996) and Merchant (1997) mentioned, the right incentives will encourage people to take responsibility for what they do, and, therefore, they can be motivated to achieve the desired objectives.

7.2.2.2 Budget Participation, Boundary Control System and Budget Slack

With respect to research question 2: "What is the moderating effect of BCS on the relationship between BP and BS", this study found that the moderating effect of BCS on the relationship between BP and BS is negatively significant. According to this research, firms using more BCS will have a greater reduction of BS. A BCS help to

reduce BS if manufacturing firms use a set of minimum standards or behavioural guidelines to prevent employees from wasting organization's resources and seeking continual improvements beyond optimal and timely solutions. In manufacturing firms, a BCS could attempt to reduce dysfunctional behaviour and dysfunctional behaviour could be controlled by the budgetary style through focusing on outcomes. From the participation perspective, the dysfunctional behaviour of managers arises when targets are set, which, once approved, need to be pursued, achieved and rewarded. The findings of this research suggest that Indonesian managers of manufacturing firms should be well advised to use a BCS for controlling the behaviour of managers and reducing BS.

7.2.2.3 Budget Participation, Diagnostic Control System and Budget Slack

With respect to research question 2: "What is the moderating effect of DCS on the relationship between BP and BS", this study found that that there is a negatively significant effect on the relationship between BP and BS. According to this research that BS will experience more reduction whenever firms intensively use a DCS. Participation by subordinates can allow more sensible goals as well as the perception of sensible goals. In addition, a DCS could be used to compare actual performance against preset targets, thus leading to reduced BS.

A budgeting control system is one of the elements of a DCS (Simons, 1995). The more extensively a budgeting control system is used in the manufacturing sector, the greater the effect of reducing dysfunctional behaviour might be and the tendency to create BS will be lessened. Budgeting system would cause a reduction in unethical behaviour (Langevin and Mendoza, 2010). The findings of the research suggest that if the

manufacturing firms integrate expenses and revenues more efficiently and effectively in the budget system, the system can be used to control and manage budgeting problems, thus leading to reduced BS.

7.2.2.4 Budget Participation, Belief Control System and Budget Slack

With respect to research question 2: "What is the moderating effect of BLFCS on the relationship between BP and BS", this research found that there is a negatively significant relationship between BP and BS. This research provides evidence that ICS has a negative and statistically significant on the relationship between BP and BS. Meaning that the BLFCS is able to increase the contributions and used in companies to reduce budget slack.

The purpose of BLFCS is to inspire and direct the search for new opportunities and is related to the core values. While the purpose for the BLFCS is a way to set limits on opportunity-seeking behaviour and is related to the risks to be avoided (Simons, 1999). Simons (1995) suggested that firm culture promotes performance so the management of firms should consider a MCS design that can modify the culture. Organizations with tight controls are expected to have a reduced level of BS because the control system gives more information to superiors and increases managers' ability to detect slack.

The results of this study imply that in order to reduce BS, the management and subordinates should be prepared for and flexible towards the acceptance of new ideas and assign a belief system that will lead them towards new ideas. Even though the manufacturing firms can establish and employ extensively a new culture and beliefs,

without eagerness to comply with the new environment, the manufacturing firms will not meet their objective to reduce BS.

7.3 Contribution of The Study

This study makes several contributions to knowledge particularly to both accounting literature and the strategic management literature. The contributions of the study are divided into – theoretical and methodological contributions.

7.3.1 Theoretical Contributions

The present study examines the influence of MCSP on the relationship between BP and BS. The findings of this study thus contribute to filling the gap in empirical knowledge on BP, MCSP and BS.

The present study also establishes a framework that shows the link between BP, MCSP and BS. Although previous studies, such as Simons (1995), Widener (2007), and Malmi and Brown (2008), looked at the relationship between strategy, MCSP and performance, none discriminated between the roles played by the MCSP within the relationship. Prior literature investigated the impact of MCS in isolation focusing on one or two elements of MCS, whereas this study attempts to fill this gap by examining this issue by looking MCS each element and as a package.

The present study's results show that elements of MCSP, such as ICS, BCS, DCS and BLFCS play a moderating role in the relationship between BP and BS. Thus, the present study contributes to the enhancement of the understanding of MCSP as contingent factors on the relationship between BP and BS. Furthermore, to the researcher's

knowledge, this study has advanced the attempt to investigate the moderating effect of MCS alone and as a package on the relationship between BP and BS in Indonesian manufacturing firms. Most of the previous studies (Simons, 1995; Widener, 2007; Malmi and Brown, 2008) concentrated on manufacturing firms in Western countries, while this study concentrates on manufacturing firms in Indonesia, as a developing country. Therefore, this study contributes to the firm culture and MCS literature.

Prior research has examined the impact of elements of MCS on the relationship between budget BP and BS. However, not many researchers have examined the impact based on the levers of control framework. This study is among the few studies that adopted the four elements of levers of control to determine the impact of MCS on the relationship between BP and BS. This contributes to the accounting literature by showing how ICS, BCS, DCS, BLFCS and MCSP can affect the relationship between BP and BS.

From the theoretical perspective, the findings of the study indicate that the relationship between BP and BS requires the agency theory to explain the phenomena. Also, when the moderating variables of MCSP, such as ICS, BCS, DCS and BLFCS, are introduced as moderating variables in the relationship, the result supports the agency theory. Numerous studies have investigated the effect of the agency theory in the relationship between BP and BS. However, there is very little information available about how MCSP acts as a moderating variable in the relationship between BP and BS.

The agency theory pays attention to the relationship between one entity (principal) and another entity (agent) where the agent engages in actions on behalf of the principal, which is beneficial to both parties. According to this theory, BP can be regarded as one

of the factors that can impact on BS. The reason is that in the process of allocating resources used in the activities and functions, BS can be reduced by the participation of top managers and subordinates.

This study has integrated the agency theory to conceptualize the roles of MCSP in the relationship between BP and BS. The findings of this study highlight the fact that the moderating effect of MCS on the relationship between BP and BS can be explained and predicted by the agency theory. For the relationship between BP and BS, the result shows that BP has a negatively significant relationship with BS. This finding indicates that the more subordinates participate in the budget process, the more the BS can be reduced.

7.3.2 Methodological Contributions

From methodology perspective, the use of MCS either as a package or a separate element shows a reduction in budget slack which indicate the importance of MCS to control the dysfunctional behaviours of managers. The use of multi-control systems of MCSP and a relatively large sample that could reduce measurement and sampling error, respectively, adds to the study's contribution to the literature.

7.4 Implications of The Study

The implication of the study are divided into two; theoretical implications and practical implications.

7.4.1 Theoretical Implications

This study gives important implications to theory. Theoretically, the findings of this study are consistent with agency theory which underlies the conceptual model of this study. The agency theory pays attention to the relationship between one entity (principal) and another entity (agent) where the agent engages in actions on behalf of the principal, which is beneficial to both parties. According to this theory, BP can be regarded as one of the factors that can impact on BS. The reason is that in the process of allocating resources used in the activities and functions, BS can be reduced by the participation of top managers and subordinates.

The main implication of the study to theory is the moderating effect of the MCSP, such as ICS, BCS, DCS and BLFCS, in explaining the relationship between BP and BS. ICS, BCS, DCS and BLFCS moderate the relationship between BP and BS. Moreover, MCSP appears more important than BP in reducing BS. BS is one of the dysfunctional behaviours (Soebaroyen, 2005). Dysfunctional behaviour comprises actions of a subordinate to manipulate elements of an established control system for their own purposes (Jaworski & Young, 1992). These findings support Chong and Ferdiansah (2011) who suggested that using MCSP could help firms to reduce dysfunctional behaviour.

7.4.2 Practical Implications

The results of the study can help practitioners to understand what the manufacturing firms are actually doing in terms of their BP. The findings of the study can contribute to solving the conflict between superiors and subordinates. According to this study,

firms that value BP more tend to reduce more BS. Firms need to provide managers and subordinates with preferences in interactive communication, perceived fairness, reputation, attitude, reward, ethical consideration and discipline to reduce BS. Firms with a decreased level of BP have a reduced level of BS.

According to this research, firms that make use of MCSP are more likely to reduce BS. The reason is probably due to the MCSP increasing the benefits from a variety of control systems that work together, such as ICS, BCS, DCS and BLFCS. This then makes the superiors reduce BS. In other words, those firms that make use of various elements of MCSP for the achievement of the targets of the firm have a greater tendency to have a reduced level of BS. As suggested by Rapiah (2011), the power of a MCSP does not exist in individual elements, but rather in how they reinforce each other when they are used simultaneously. Moreover, Widener (2007) stated that multiple interdependent and complementary relationships among the control systems in a MCSP are present. Simons (2000) asserted that in order to benefit a firm, these four control systems (ICS, BCS, DCS and BLFCS) must work together. Hence, BS can be reduced for all firms that use a MCSP.

In conclusion, this study makes a recommendation that to implement MCSPs are a vital element in reducing BS. Therefore, these findings may be considered as a suggestion for the firms in Indonesia to consider the effectiveness of MCSPs in the reduction of BS.

7.5 Limitations

In evaluating the results of this study, it is crucial to throw some light on the findings paying attention to the following limitations. For future research, the following limitations should be kept in mind.

First, the sample of this study cannot be generalized for all the manufacturing firms operating in Indonesia because it only contains firms listed on the JSEI (2011). Moreover, the generalization of the findings might be affected by the fact that the sample consisted of only 151 firms. Nevertheless, the response rate, which is 34.22%, is considered to be good. The results of this study support the results of all previous studies comprising large samples. This type of consistency indicates that the size of the sample does not inversely affect the validity and reliability of the research, and, hence, there is no threat to the generalization of this research. Still, it is recommended that future research should include more firms in addition to those listed on the JSEI and that it should also include firms other than manufacturing firms so that the generalization can be increased. Moreover, future studies might want to include foreign firms that are not incorporated in this study. In addition, future studies could test the applicability of the relationship presented in this study to other developing countries.

Second, the sample in this study was not random but selected from functional managers, i.e. finance managers, production managers and marketing managers. Hence, some caution should be used when the findings of this study are generalized.

Third, this study also includes the examination of the relationship between BP and BS under the moderating effect of a MCSP by making use of Simons' (2000) and

Widener's (2007) concept of a MCSP, which comprises multiple control systems (ICS, BCS, DCS and BLFCS). Future research should pay attention to other concepts of MCSPs, which might affect the relationship between BP and BS, mainly in the Indonesian context, for instance, the framework of MCSP by Malmi and Brown (2008) with control elements consisting of planning, cybernetic, reward and compensation, administrative and cultural controls.

The fourth, limitation concerns the potential 'self-reporting bias', when collecting confidential data from firms about their production, finances and marketing, it is a common issue. The difficulty also lies in identifying the level of appropriateness and benefits of MCSP on the reduction of BS because it can be regarded as a methodological problem in determining how to establish the dysfunctional behaviour concept. Hirst (1983) and Merchant (1990) noted that bearing in mind the illicit nature of dysfunctional behaviour, it is very difficult to obtain responses that are honest. The findings of this study may be affected by this limitation because it is based on survey data and may be subject to the exposure of a desirability bias.

The researcher is of the view that considering the effect of MCSPs on the relationship between BP and BS, there are greater avenues for future research. Even in the presence of limitations, such as single-period data and a relatively small sample, the results of this study have provided useful insights into the evaluation of the effect of MCSPs on the relationship between BP and BS in the Indonesian context. It offers a basis for future research. This study provides deeper insights into the relationship between BP and BS under the moderating effect of MCSPs, followed by its limitations. Nevertheless, it

opens new avenues for future research in the areas of management accounting. Some relevant issues are on the waiting list to be considered for future research.

7.6 Suggestions for Future Research

Prospective research in the field of management accounting can be expanded in various directions. First, it can consider other frameworks of MCSP that can impact on the extent to which MCSP influences the relationship between BP and BS in the context of firms in Indonesia and other countries. Second, it might consider other factors that have an impact on BS. Third, in order to gain deeper insight into the issues of this study, it would be an interesting challenge to conduct the research using both field research and case study approaches.

Moreover, carrying out this research in other countries would be an interesting thing to do. A longitudinal approach is also important as the perception and management of benefits and constraints is likely to evolve over time. In addition, to examine the effect of MCSPs on BS, this study can be replicated in other countries after a few years in other types of firm. Finally, in order to conduct a thorough exploration of the effect of MCSP on the relationship between BP and BS, a coordinated effort is needed among all researchers.

7.7 Concluding Comment and Summary

Six hypotheses are investigated in this thesis focusing on the study of the effect of MCSPs on the relationship between BP and BS in manufacturing firms in Indonesia. This has made a meaningful contribution by presenting a deep insight into the effect of

MCSPs on the relationship between BP and BS, which, hitherto, has not obtained much attention in the literature. Multiple regressions to test the six hypotheses related to the effect of MCSP on the relationship between BP and BS have been used. The study discovered that MCSPs have a negative and significant effect on the relationship between BP and BS.

Overall, the evidence proposes that MCSPs constitute a crucial factor that impact on the reduction of BS, although the evidence supports the hypothesis that other factors (BP, ICS, BCS, DCS and BLFCS) identified in the present study can influence the reduction of BS.

REFERENCES

Abernethy, M. A., & Brownell, P. (1999). The role of budgets in organizations facing strategic change: an exploratory study. *Accounting, organizations and society*, 24(3), 189-204.

Abernethy, M. A., & Lillis, A. M. (1995). The impact of manufacturing flexibility on management control system design. *Accounting, Organizations and Society*, 20(4), 241-258.

Abernethy, M. A., & Lillis, A. M. (2001). Interdependencies in organization design: a test in hospitals. *Journal of Management Accounting Research*, 13(1), 107-129.

Abernethy, M.A, & Vagnoni. (2004). Power organization design and managerial behavior. A Interdependencies in organization design. *Accounting Organization and Society*, 29, 207-225.

Adnan & Sulaiman. (2007). Organizational, cultural and religious factors of budgetary slack creation: Empirical Evidence from Malaysia. *International Review of Business Research Papers*: 3 (3), 17-34.

Afiani, D, N. (2010). Effect of budget participation, budget emphasis and information asymmetry against budget slack. *E-Jurnal Binar Akuntansi*, 1 (1).

Agbejule, A., & Saarikoski, L. (2006). The effect of cost management knowledge on the relationship between budgetary participation and managerial performance. *The British Accounting Review*, 38(4), 427-440.

Ahmad, Z.U. (2005). Implementing participating budgeting approach in Least Developed Countries (LDC): Myth and reality, the cost and management 33(4), 75-84.

Ahrens, T., & Chapman, C. S. (2004). Accounting for flexibility and efficiency: A Field Study of Management Control Systems in a Restaurant Chain. *Contemporary Accounting Research*, 21(2), 271-301.

Ajibolade, S. O., & Akinniyi, O. K. (2013). The influence of organisational culture and budgetary participation on propensity to create budgetary slack in public sector organisations. *British Journal of Arts & Social Sciences*, 13 (1).

Alreck, P. L., & Settle, R. B. (1995). The Survey Research Handbook: Guidelines and Strategies for Conducting a Survey, 2E.

Annissarahma, Dinni. (2008). Effect of budgety participation, information asymmetry, budget emphasis, and organizational commitment against budget slack. Thesis UII. Yogyakarta.

Anthony, Robert N, & V. Govindarajan. (1965). Planning and control system: A framework for analysis. Boston, Harvard University.

Anthony, R. N., & Govindarajan, V. (1995). Management Control Systems (eight ed.). Richard D. Irwin.

Anthony, R.N. & Govindarajan, V. (1998). Management control systems. Boston *et al.*,: IrwinMc Graw-Hill.

Anthony, Robert N. & V. Govindarajan. (2001). Service organizations in management control systems, (10th ed.) New York: McGraw-Hill/Irwin.

Anthony, Robert N, & V. Govindarajan. (2007). MCS. 12, New York. NY: Mc Grow-Hill. Chicago: Richard D, Irwin, Inc.

Apriantini,N.K.E., Adiputra, I.M.P & Sujana E. (2014) Pengaruh partisipasi anggaran terhadap senjangan anggaran dengan penekanan anggaran dan komitmen organisasi sebagai variable moderating. *E-Journal S1 Ak Universitas Pendidikan Gamnesha,* 2 (1).

Aprila, N. & Hidayani, S. (2012). The Effect of budgetary participation, Information asymmetry, budget emphasis and commitment organization to budgetary slack. Proceeding the 13 th Malaysia Indonesia Conference on Economic, Management and Accounting MIICEMA.

Argyris, C. (1952). The impact of budget on people. The Controllership Foundation, Inc., Cornell University, Ithaca, NY.

Armstrong, J. S., & Overton, T. S. (1977). Estimating nonresponse bias in mail surveys. *Journal of Marketing Research*, 14, 396-402.

Baba, H.N. (2004*). Corporate social responsiveness and environmental performance of Small Medium Enterprise: An empirical study*. Unpublished Thesis, Universiti Utara Malaysia.

Badan Kebijakan Fiskal, Kementerian Keuangan Republik Indonesia (2010). Potret industri manufaktur Indonesia sebelum dan pasca krisis.

Baiman. S. (1982). Agency research in managerial accounting: A survey. *Journal of Accounting Literature*, 1, 154-213.

Baiman, S., & Evans, J. H. (1983). Pre-decision information and participative management control systems. *Journal of Accounting Research*, 22, 371-395.

Baiman, S., & Lewis, B. L. (1989). An experiment testing the behavioral equivalence of strategically equivalent employment contracts. *Journal of Accounting Research*, 27, 1-20.

Baiman, S. (1990). Agency research in managerial accounting: A second look. *Accounting, Organizations and Society*, 15(4), 341-371.

Bedford, D.S, (2006). PhD Proposal, School of Accounting. University of Technology, Sydney.

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of personality and social psychology*, 51(6), 1173-1182.

Belsley, D. A, Kuh, E. & Welsch, R. E. (1980) Regression diagnostics: identifying influential data and sources of collinearity

Bisbe, J., & Otley, D. (2004). The effects of the interactive use of management control systems on product innovation. *Accounting, organizations and society,* 29(8), 709-737.

Bedford, D.S (2006). PhD Proposal, School of Accounting, University of Technology, Sidney.

Bergen, M., Dutta, S., & Walker Jr, O. C. (1992). Agency relationships in marketing: a review of the implications and applications of agency and related theories. *The Journal of Marketing*, 1-24.

Blanchard, G. A., & Chow, C. W. (1983). Allocating indirect costs for improved management performance. *Strategic Finance*, *64*(9), 38-41.

Bonner, S.E & Sprinkle, G. B (2002). The effect of monetary incentives on effort and task performance : Theories, evidence, and a framework for research. *Accounting, organizations and society*, 27, 303-345.

Brown, J. L., Evans III, J. H., & Moser, D. V. (2009). Agency theory and participative budgeting experiments. *Journal of Management Accounting Research*, 21(1), 317-345.

Brownell, P. (1981). Participation in budgeting, locus of control and organizational effectiveness. *Accounting Review*, 56 (4), 844-860.

Brownell, P. (1982). Participation in the budgeting process when it works and when it doesn't. *Journal of Accounting Literature,* Spring. 124-53.

Brownell, P. (1985). Budgetary System and the control of functionally differentiated organizational activities. *Journal of Accounting Research*, 23(2), 502-512.

Bruining, H., Bonnet, M., & Wright, M. (2004). Management control systems and strategy change in buy outs. *Management Accounting Research*, *15*(2), 155-177.

Cameron, K. S., & Quinn, R. E. (1999). Diagonising and changing organizational culture. *NY: Addison, Wesley Inc*.

Cammann, C. (1976). Effects of the use of control systems. *Accounting, Organizations and Society,* 1(4), 301-313.

Chalos, P., & Haka, S. (1989). Participative Budgeting and Managerial Performance. Decision Sciences, 20(2), 334-347.

Chenhall, R., & Morris, D. (1995). Organic decision and communication processes and management accounting systems in entrepreneurial and conservative business organizations. International Journal of Managemant Science, 23(5), 485-497.

Chenhall, R. H. (2003). Management control systems design within its organizational context: findings from contingency-based research and directions for the future. *Accounting, Organizations and Society*, *28*(2), 127-168.

Chong, V. K., & Ferdiansah, I. (2011). The effect of trust-in-superior and truthfulness on budgetary slack: An experimental investigation. *Advances in Management Accounting*, *19*, 55-73.

Chow, C. W., Cooper, J. C., & Waller, W. S. (1988). Participative budgeting: effects of a truth-inducing pay scheme and information asymmetry on slack and performance. *Accounting Review*, 63(1), 111-122.

Chow, C. W., Cooper, J. C., & Haddad, K. (1991). The effects of pay schemes and ratchets on budgetary slack and performance: A multiperiod experiment. *Accounting, Organizations and Society*, 16(1), 47-60.

Christensen, J. (1982). The determination of performance standards and participation. *Journal of Accounting Research*, 589-603.

Church, B.K., Hannan, R. L., Kuang, X. J. (2012). Shared interest and honesty in budget reporting. *Accounting, Organizations and Society*. 37 (3), 155–167.

Clarkson, M. E. (1995). A stakeholder framework for analyzing and evaluating corporate social performance. *Academy of Management Review*, 20(1), 92-117.

Coughlan, A. T., & Schmidt, R. M. (1985). Executive compensation, management turnover, and firm performance: An empirical investigation. *Journal of Accounting and Economics*, 7(1), 43-66.

Cyert, R. M. & J. G. March (1992). A behavioral theory of the firm. Cambridge, MA: Blackwell Publishers, Inc.

Dakhli Anissa (2009). Budgetary participation, locus of control and job satisfaction in Tunisia. La place de la dimension europeenne dans la compatibilite control Audit, Strasbourg France.

Davila, T. (2000). An empirical study on the drivers of management control systems' design in new product development. *Accounting, organizations and society*, 25(4), 383-409.

Davila, T., & Wouters, M. (2005). Managing budget emphasis through the explicit design of conditional budgetary slack. *Accounting, Organizations and Society*, 30(7), 587-608.

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

Douthit, J., & D. Stevens, (2015). The Robustness of honesty effects on budget proposals when the superior has rejection authorit. *The Accounting Review* 76 (4), 467-493.

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

Dunk, A. S., & Perera, H. (1997). The incidence of budgetary slack: a field study exploration. *Accounting, Auditing & Accountability Journal*, 10(5), 649-664.

Dunk, A. S., & Nouri, H. (1998). Antecedents of budget slack: a literature review and synthesis. *Journal of Accounting Literature*, 17, 72-96.

Dunk, A. S., & Lal, M. (1999). Participative budgeting, process automation, product standardization, and managerial slack propensities. *Advances in Management Accounting*, 8, 139-158.

Dwi, K.S.C., & Agustina, L. (2010). The effect of budget participation, information asymmetry and job relevant information on budget slack. *Accounting* Journal, 2(2), 101-121.

Eisenhardt, K. M. (1989). Agency theory: An assessment and review. Academy of management review, 14(1), 57-74.

Eker, M., & Üniversitesi, U. (2006). The impact of budget participation on managerial performance via organizational commitment: *A study on the top 500 firms in Turkey. Ankara Universitesi SBF Dergisi, 118-136.*

Eker, Melek. (2008). The affect of the relationship between budget participation and job-relevan information on managerial performance. *Ege Academic Review*. 8 (1), 183-198.

Elizabeth, V. P. (2014). The effect of informasi asymmetry locus of control on the relationship between budget participation and budget slack. *E-Journal Accountancy* 6(2), 287-305.

Elmassri, M., & Harris, E. (2011). Rethinking budgetary slack as budget risk management. *Journal of Applied Accounting Research*, 12(3), 278-293.

Emsley, D. (2001). Redesigning variance analysis for problem solving. *Management Accounting Research*, 12(1), 21-40.

Epstein, M. J. (1996). Measuring corporate environmental performance. Irwin, Chicago.

Evans III, J. H., Hannan, R. L., Krishnan, R., & Moser, D. V. (2001). Honesty in managerial reporting. *The Accounting Review, 76*(4), 537-559.

Everitt, B. S., & Dunn, G. (1983). Advanced methods of data exploration and modelling. London: Heinemann educational books.

Ezzamel, M., & Hart, H. (1987). Advanced management accounting: an organisational emphasis. London: Cassell.

Falikhatun, F. (2007). Pengaruh Partisipasi Penganggaran terhadap Budgetary Slack dengan Variabel Pemoderasi Ketidakpastian Lingkungan dan Kohesivitas Kelompok. *Jurnal Akuntansi dan Keuangan*, *6*(2), 207-221.

Fisher, J. (1995). Contingency-based research on management control systems: categorization by level of complexity. *Journal of accounting literature*, *14*, 24-53.

Fisher, J. G. (1998). Contingency theory, management control systems and firm outcomes: past results and future directions. *Behavioral Research in Accounting*, 10, 47-64.

Flamholtz, E. G. (1983). Accounting, budgeting and control systems in their organizational context: theoretical and empirical perspectives. *Accounting, Organizations and Society*, 8(2), 153-169.

Flamholtz, E. G., Das, T. K., & Tsui, A. S. (1985). Toward an integrative framework of organizational control. *Accounting, Organizations and Society*, 10(1), 35-50.

Frow, N., Marginson, D., & Ogden, S. (2005). Encouraging strategic behaviour while maintaining management control: multi-functional project teams, budgets, and the negotiation of shared accountabilities in contemporary enterprises. *Management Accounting Research*, 16(3), 269-292.

Gamal Muhammad, (2001), Pengaruh interaksi partisipasi anggaran, informasi asimetris dan penekanan anggaran terhadap budget slack (The interaction effect of budget participation and information asymmetry on budget slack). Theses for Master Degree Post Graduate Program Universitas Diponegoro.

Garrison, Ray; Eric Noreen; Peter Brewer; G. Chesley & Ray Carroll (2006) Managerial Accounting, Mc Graw Hill Publisher.

Ghozali Imam., Yusfaningrum K., (2005), Analisis pengaruh partisipasi anggaran terhadap kinerja manajerial melalui komitmen tujuan anggaran dan job relevan information (JRI) sebagai variable intervening. Symposium Nasional Akuntansi VIII.

Givindarajan, V. (1986). Decentralization, Strategy and Effectiveness of Strategy and Business Units in Multi-Business Organizations. *Academy of Management Review,* 11, 844-856.

Gujarati, D. N. & Porter, D. C. (2009). Basic Econometrics. New Delhi. Mc Grow Hill International Book company.

Hansen, D. R., & Mowen, M. M. (1997). Cost management: accounting and control South Western College publishing, Cincinnati Ohio.

Hair, J., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis (7th ed.).* Upper saddle River, New Jersey: Pearson Education International.

Hanifah, I. A. (2013). Cognitive effects in the relationship between budgetary participation and job performance: A case study of manufacturing industry in Banten, Indonesia. *International Journal of Social Science and Humanity*, 3(4).

Harris, E. & Elmassri, M. (2011). Rethinking budgetary slack as budget risk management. *Journal of Applied Accounting Research* 12 (3), 278-293.

Harris, M., & Raviv, A. (1978). Some results on incentive contracts with applications to education and employment, health insurance, and law enforcement. *The American economic review*, 20-30.

Harvey, O and Ellen, M. (2012). Budget slack in the workplace: The effect of employees' ethical ideology predisposition. The 2012 Orlando International Academic Conference, Orlando, Florida, USA.

Hayes, A.F. (2013). Introduction to mediation, moderation, and conditional process analysis.

Henri, J. F. (2006). Management control systems and strategy: a resource-based perspective. *Accounting, Organizations and Society*, *31*(6), 529-558.

Hirst, M. K. (1983). Reliance on accounting performance measures, task uncertainty, and dysfunctional behavior: Some extensions. *Journal of Accounting Research*, 596-605.

Hobson, J. L., Mellon, M. J., & Stevens, D. E. (2011). Determinants of moral judgments regarding budgetary slack: An experimental examination of pay scheme and personal values. *Behavioral Research in Accounting*, *23*(1), 87-107.

Hofstede , Geer, H, (1968). The game of budget control. London, Taviastock: Assen, Van Gorcum.

Hofstede (1980). Culture's consequences : International differences in work related values. Sage publications, Beverly Hills, CA.

Hopwood, A. G. (1972). An empirical study of the role of accounting data in performance evaluation. *Journal of Accounting Research*, 10, 156-182.

Hopwood, A. G. (1974). Leadership climate and the use of accounting data in performance evaluation. *Accounting Review*, 485-495.

Horngren, C.T., Bhimani, A., Datar, S.M. & Foster, G. (2008), Management and cost accounting, Pearson Education.

Huang, C.L., & Chen, M.L (2009). The effect of attitudes towards the budgetary process on attitudes towards budgetary slack and behaviors to create budgetary slack. *Social Behavior and Personality*. 37 (5) 661-671.

Hughes, M. A. & Kwon, S. Y. (1990). An integrative framework for theory construction and testing . *Accounting Organizations and Society,* 15, 179-191.

Indonesian Commercial Newsletter (ICN, December, 2009). Prospects of manufacturing industry 2010.

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

Jensen, M. C., & Meckling, W. H. (1979). Theory of the firm: Managerial behavior, agency costs, and ownership structure. *Journal of Fincial Economics*, 163-231

Jensen, M. C., & Meckling, W. H. (2000). The theory of the firm: managerial behavior, agency costs and ownership structure. *Theory of the Firm, Bd*, *1*, 248-306.

Jaworski, B. J., & Young, S. M. (1992). Dysfunctional behavior and management control: an empirical study of marketing managers. *Accounting, Organizations and Society*, 17(1), 17-35.

Jobber, D. (1989). An examination of the effects of questionnaire factors on response to an industrial mail survey. *International Journal of Research in Marketing*, 6(2), 129-140.

Kato, Y., Boer, G., & Chow, C. W. (1995). Target costing: an integrative management process. *Journal of Cost Management*, 9(1), 39-51.

Kim, D. C. (1992). Risk preferences in participative budgeting. *Accounting Review*, 67, 303-318.

Kim, J. S., Kaye, J., & Wright, L. K. (2001). Moderating and mediating effects in causal models. *Issues in Mental Health Nursing*, *22*(1), 63-75.

Kenis, I. (1979). Effects of budgetary goal characteristics on managerial attitudes and performance. *Accounting Review*, 54(4), 707-721.

Kilfoyle, E., & Richardson, A. J. (2011). Agency and structure in budgeting: thesis, antithesis and synthesis. Critical Perspectives on Accounting, 22(2), 183-199.

Kim, J.-O. (1975). Factor analysis. In N.H. Nie, C. H. Hull, J. G. Jenkins, K. Steinbrenner & D. H. Bent (Eds.), SPSS: Statistical Package for the Social Sciences (pp.468-514.). New York, etc.: Mc Graw Hill.

Kirby, A. J., Reichelstein, S., Sen, P. K., & Paik, T. Y. (1991). Participation, slack, and budget-based performance evaluation. *Journal of Accounting Research,* 109-128.

Kren, L., & Kerr, J. L. (1993). The effect of behaviour monitoring and uncertainty on the use of performance-contingent compensation. *Accounting and Business Research, 23*(90), 159-167.

Kren, L. (1997) The role of accounting information in organizational control: The state of the art, in Arnold, V. & Sutton, S.G. (ads) Behavioral accounting research: Foundations and frontiers, American Accounting Association, Sarasota.

Kren, L. (2003). Effects of uncertainty, participation, and control system monitoring on the propensity to create budget slack and actual budget slack created. Advances in Management Accounting, 11, 143-167.

Krishnan, R., Marinich, E., & Shields, M. D. (2012, June). Participative budgeting, psychological contracts, and honesty of communication. AAA.

Kristianto, Dj. (2009) Pengaruh Informasi Asymmetry dan Budget Emphasis sebagai variable Moderating Terhadap Hubungan Antara Budgetary Participation dan Budgetary Slack. *Journal Manajemen Sumberdaya Manusia*. Vol 3(2)

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

Landfield-Smith, K. (2007). A review of quantitative research in management control system and strategy, in Chapman, C.S., Hopwood, A.G., and Shield, M.D. Handbook of Management Accounting Research, 2, 753-783.

Langevin A, P., & Mendoza C. (2013). How can management control system fairness reduce managers unethical behaviours. *European Management Journal*, 31, 209-222.

Latuheru, B.T, (2005). Pengaruh partisipasi anggaran terhadap senjangan anggaran dengan komitmen organisasi sebagai variabel moderating (The effect of budget participation on budget slack with organizational commitment as moderating variable). *Jurnal Akuntansi dan Keuangan*. 117-130.

Lau, C. M, (1999). The effects of emphasis on tigh budget targets and cost control on production anf marketing managers' propensity to create slack. *Br. Account. Rev*., 31(4), 415-437.

Lau, C.M., & Tan,S. L.C. (2006). The effects of procedural fairnessand interpersonal trust on job tension in budgeting. *Management Accounting Research.*

Libby, T. (1999). The influence of voice and explanation on performance in a participative budgeting setting. *Accounting, Organizations and Society*, 24(2), 125-137.

Little, H. T., Magner, N. R., & Welker, R. B. (2002). The Fairness of Formal Budgetary Procedures and Their Enactment Relationships with Managers' Behavior. Group & Organization Management, 27(2), 209-225.

Linn, G., Casey, K. M., Johnson, G. H., & Ellis, T. S. (2001). Do broad scope managerial accounting systems moderate the effects of budget emphasis, budget participation and perceived environmental uncertainty on the propensity to create budgetary slack? *Journal of Computer Information Systems*, 42(1), 90-96.

Leach-López, M. A., Stammerjohan, W. W., & McNair, F. M. (2007). Differences in the role of job-relevant information in the budget participation-performance relationship among US and Mexican managers: a question of culture or communication. *Journal of Management Accounting Research*, *19*(1), 105-136.

Lowe, E. A., & Shaw, R. W. (1968). An analysis of managerial biasing: Evidence from a company's budgeting process. *Journal of Management Studies*, 5(3), 304-315.

Lukka, K. (1988). Budgetary biasing in organizations: theoretical framework and empirical evidence. *Accounting, Organizations and Society*, 13(3), 281-301.

Macintosh, N. B. (1985). Social software of accounting and information systems. John Wiley & Sons, Inc.

Magner, N., Welker, R. B., & Campbell, T. L. (1996). Testing a model of cognitive budgetary participation processes in a latent variable structural equations framework. *Accounting and Business Research*, *27*(1), 41-50.

Maiga, A. S., & Jacobs, F. (2007). Budget participation's influence on budget slack the role of fairness perceptions, trust and goal commitment. *Journal of Applied Management Accounting Research*.

Maiga, A. S. & Jacobs, F. A. (2008). Moderating Effect of Manager's Ethical Judgment on the relationship between budget participation and budget slack. *Advances in Accounting*, 23, 113– 145

Maksum, A. (2009). Peran ketidakpastian lingkungan dan karakter personal dalam memoderasi pengaruh partisipasi anggaran terhadap senjangan anggaran. *Jurnal Keuangan & Bisnis Program Studi Magister Manajemen Sekolah Tinggi Ilmu Ekonomi Harapan*, *1*(1), 1-17.

Malmi, T., & Brown, D. A. (2008). Management control systems as a package-Opportunities, challenges and research directions. *Management accounting research*, 19(4), 287-300.

March, J. G. (1988). Decisions and organizations (p. 15). Oxford: Blackwell.

Marginson, D. E. (2002). Management control systems and their effects on strategy formation at middle-management levels: evidence from a UK organization. *Strategic management journal*, 23(11), 1019-1031.

Matteson, M. T., Ivancevich, J. M., & Smith, S. V. (1984). Relation of Type A behavior to performance and satisfaction among sales personnel. *Journal of Vocational Behavior*, *25*(2), 203-214.

Merchant, K. A. (1981). The design of the corporate budgeting system: influences on managerial behavior and performance. *Accounting Review*, 813-829.

Merchant, K. A. (1985). Organizational controls and discretionary program decision making: a field study. *Accounting, Organizations and Society*, *10*(1), 67-85.

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

Merchant, K. A. (1998). Modern management control systems: text and cases (p. 851). Upper Saddle River: Prentice Hall.

Merchant, K. A. (1990). The effects of financial controls on data manipulation and management myopia. *Accounting, Organizations and Society*, 15(4), 297-313.

Merchant, K. A. (1997). Modern management control systems: Prentice Hall.

Merchant, K. A. & Manzoni, J-F (1989). The achievability of budget targets in profit centers : A field study. *The Accounting Review*, 1(3)

Merchant, K. A. and Van der Stede, W.A. (2003). MCS, performance measurement, evaluation and incentives. Harlow, England; New York: FT Prentice Hall.

Merchant, K. A. and Otley, D.T, (2007). MCS: Performance measurement, evaluation and incentives, 2nd ed,. Prentice Hall.

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

Mohamed, R. (2011). Strategic performance measurement system, organisational capabilities and organisation competitive advantage: using levers of control framework (Doctoral dissertation, Universiti Teknologi MARA).

Murray, D. (1990). The performance effects of participative budgeting: An integration of intervening and moderating variables. *Behavioral Research in Accounting*, 2(2), 104-123.

Naranjo-Gil, D., & Hartmann, F. (2007). Management accounting systems, top management team heterogeneity and strategic change. *Accounting, Organizations and Society*, *32*(7), 735-756.

Norman, R. (2001). Letting and making managers manage: the effect of control systems on management action in New Zealand's central government. *International Public Management Journal*, 4(1), 65-89.

Nota Keuangan dan Rancangan Anggaran Pendapatan dan Belanja Negara, Republik Indonesia, tahun Anggaran 2014.

Nouri, H. (1994). Using organizational commitment and job involment to predict budgetary slack: A research note. *Accounting, Organizations and Society*, *19*(3), 289-295.

Nouri, H., & Parker, R. J. (1996). The effect of organizational commitment on the relation between budgetary participation and budgetary slack. *Behavioral Research in Accounting*, *8*, 74-90.

Nouri, H., & Parker, R. J. (1998). The relationship between budget participation and job performance: The roles of budget adequacy and organizational commitment. *Accounting, Organizations and Society*, *23*(5), 467-483.

Nunnaly, J. C. (1978). *Psychometric theory* (2nd ed.). New York: McGraw Hill.

Nur Afiani, D., Syafruddin, M. (2010). Pengaruh partisipasi anggara, penekanan anggaran dan asimetri informasi terhadap senjangan anggran pada instansi pemerintah daerah (studi pada pemerintah daerah Kabupaten Semarang). Doctoral dissertation, Universitas Diponegoro.

Nur, I. (1993). The Effect of Participative Budgeting on Job Performance and Job Satisfaction with Locus of Control & Cultur Dimension as Moderating Variable (Doctoral dissertation, Dissertation).

Oktorina, M., & Soenarno, Y. N. (2013). Effect of Budget Participation, Budget Emphasis, and Fairness Perception on the Budgetary Slack with Managerial

Trustworthy Behavior as Moderating Variable at Manufacturing Company in Jakarta.

Omobola, A. (2013). The influence of organizational culture and budgetary participation on propensity to create budgetary slack in public sector organizations : *British Journal of Arts and Social Science*, 13(1).

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

O'Reilly, C.a. & Chatman, J. A. (1996). Culture as a social control: corporations, culture and commitment. In B.M. Staw & L. L. Cummings (ads.). research in organizational Behaviour, 18, 157-200.

Otley, DT. (1978). Budget use and managerial performance. *Journal of Accounting Research*. 16(1), 122-149.

Otley, D. T. (1980). The contingency theory of management accounting: achievement and prognosis. *Accounting, Organizations and Society*, *5*(4), 413-428.

Otley, D. T. (1985). The accuracy of budgetary estimates: Some statistical evidence. *Journal of Business Finance & Accounting*, *12*(3), 415-428.

Otley, D., Broadbent, J., & Berry, A. (1995). Research in Management Control: An Overview of Its Development. Paper presented at the The International Management Accounting Conference, Universiti Kebangsaan Malaysia.

Otley, D. (1999). Performance management: a framework for management control systems research. *Management accounting research*, 10(4), 363-382.

Otley, D., & Tessier, S. (2012). A conceptual development of Simons' levers of control framework. *Management Accounting Reseach*, 23, 241-258.

Pallant, J. (2001). SPSS survival manual: A step-by-step guide to data analysis using SPSS for Windows (Version 10). Allen & Unwin.

Parker, R. J., & Kyj, L. (2006). Vertical information sharing in the budgeting process. *Accounting, Organizations and Society*, *31*(1), 27-45.

Pearce, J. A., & David, F. (1987). Corporate mission statements: The bottom line. *The Academy of Management Executive*, *1*(2), 109-115.

Penno, M. (1984). Asymmetry of pre-decision information and managerial accounting. *Journal of Accounting Research*, 22, 177-191.

Perera, S., Harrison, G., & Poole, M. (1997). Customer-focused manufacturing strategy and the use of operations-based non-financial performance measures: a research note. *Accounting, Organizations and Society*, 22(6), 557-572.

Putranto, Y.A. (2012). The Moderating effect of Information Asymmetry and Group Cohesiveness on the Relationship between Budget Participation and Budget slack. *Journal of Economia, 8, no, 2.*

Rachman, A.A. (2012). The Influence of Budgetray Participation on Budgetary Slack: The Role of Organizational Fairness, Managerial Trust, and Budget Goal Commitment. DOI: 10.7763/IPDR. 2012. V50.16.

Ramden, C., Santos, J., & Chatfield, H. K (2007). An exanimation of impact of budgetary participation, budget emphasis and information asymmetry on budgetary slack in the hotel industry. ramder@ccmail.nevada.cdr.ences.

Roberts, J. (1990). Strategy and accounting in a UK conglomerate. *Accounting, Organizations and Society*, *15*(1), 107-126.

Rodgers, R., & Joyce, P. (1996). The effect of under forecasting on the accuracy of revenue forecasts by state governments. *Public Administration Review* 56(1): 48–56. http://dx.doi.org/10.2307/3110053

Roscoe, J. T. (1975). Fundamental Statistics for the Behavioural Science. *New York: Holt*.

Ross, A. (1994). Trust as a moderator of the effect of performance evaluation style on job-related tension: a research note. *Accounting, Organizations and Society,* 19(7), 629-635.

Rousseau, D. M. (1990). Organizational culture: The case for multiple methods. In B. Schneider (Ed), *Organizational Culture and Leadership.* San Fransisco: Jossey-Bass.

Sekaran, U. (2000). Research methods for business: A skill building approach (4thed). New York: John Wiley.

Sekaran, U. (2003). Research methods for business*:* A skill building approach (4thed). New York: John Wiley.

Sekaran, U. (2006). Research methods for business*:* A skill building approach (4thed). New Delhi: Wiley India.

Sekaran, U., & Bougie, R. (2010). Research methods for business: A skill building approach. Wiley.

Sandelin, M. (2008). Operation of management control practices as a package A case study on control system variety in a growth firm context. *Management Accounting Research*, 19(4), 324-343. .

Schiff, M., & Lewin, A. Y. (1968). Where traditional budgeting fails. *Financial executive, 36*(5), 51-62.

Schiff, M., & Lewin, A. Y. (1970). The impact of people on budgets. *Accounting Review*, 259-268.

Schaltegger, S., Burritt, R., & Petersen, H. (2003). An introduction to corporate environmental management: Striving for sustainability. Sheffiled. UK: Greenleaf Publishing Limited.

Siegel, G., & Marconi, H. R. (1989). Behaviorial Accounting, Cincinnati, Ohio : South – Western Publishing Co.

Shields, J.F., & Shields, M.D. (1998). Antecedents of participative budgeting. *Accounting, Organizations and Society*, 23 (1): 49-76

Shields, J. F., & Young, S.M, (1993). Antecedents and consequences of participate budgeting : Evidence on the effects of information asymmetry, *Journal of Management Accounting Research*: 5, 265-280.

Sholihin, M., Pike, R., Mangena, M., & Li, J. (2011). Goal-setting participation and goal commitment: Examining the mediating roles of procedural fairness and interpersonal trust in a UK financial services organisation. *The British Accounting Review*, *43*(2), 135-146.

Simon, H. A. (1951). A formal theory of the employment relationship. Econometrica: *Journal of the Econometric Society*, 293-305.

Simons, R. (1987). Accounting control system and business strategy: An empirical Analysis. *Accounting, Organization and Society*, 12(4), 357-374.

Simons, R. (1990). The role of management control systems in creating competitive advantage: new perspectives. *Accounting, organizations and society*, 15(1), 127-143.

Simons, R. (1991). Strategic orientation and top management attention to control systems. *Strategic Management Journal*, *12*(1), 49-62.

Simons, R. (1995). Levers of control: how managers use innovative control systems to drive strategic renewal. Boston, MA: Harvard Business School Press.

Simons, R. (1997). Administrative Behavior: A study of division Making Process in Administrative Organization (4th ed.) The free Press: New York.

Simons, R (2000). Performance measurement and control systems for implementing strategy. Upper Saddle River, NJ: Prentice Hall.

Snell, S.A. & Dean, J. W. Jr. (1992). Integrated manufacturing an human resource management: A human capital perspective. *Academy of Management Journal*, 35: 467-5.

Soebaroyen, T (2005). MCS and dysfunctional behavior: An empirical investigation. Research Paper 2005-10 School of Management and Business, University of Wales, United Kingdom

Speklé, R. F. (2001). Explaining management control structure variety: a transaction cost economics perspective. *Accounting, Organizations and Society*, *26*(4), 419-441.

Stevens, D. E. (2002). The effects of reputation and ethics on budgetary slack.*Journal of Management Accounting Research*, *14*(1), 153-171.

Suhartono, Ehrmann, & Mochammad Solichin, (2007), Pengaruh kejelasan sasaran anggaran terhadap senjangan anggaran instansi pemerintah daerah dengan komitmen organisasi sebagai pemoderasi. Simposium Nasional Akuntansi (SNA) X, Makassar.

Sujana, I. K. (2010). Pengaruh Partisipasi Penganggaran, Penekanan Anggaran, Komitmen Organisasi, Asimetri Informasi, dan Ketidakpastian Lingkungan terhadap Budgetary Slack pada Hotel-Hotel Berbintang di Kota Denpasar. Jurnal Ilmiah Akuntansi dan Bisnis, 5(2).

Sulaiman, M., & Adnan, M., (2005) Does Islam influence budgetary slack creation ?. Empirical evidence from Malaysia. Conference on emergency issues in accounting business and technologies.

Sulaiman, M., and Mohamed Adnan, S. (2007) Organizational, cultural and religious factors of budgetary slack creation: Empirical evidence from Malaysia. *International Review of Business Research Papers*, 3 (3), 17-34.

Supanto, S. (2010). Analisis pengaruh partisispasi penganggaran terhadap budgetary slack dengan informasi asimetri, motivasi, budaya organisasi sebagai pemoderasi (Doctoral dissertation, Diponegoro University).

Tabachnick, G. B., & Fidell, L. S. (2007). *Using multivariate statistics* (5th ed.).Boston: Pearson.

Tanase, G, L., (2013). An overall analysis of participatory budgeting advantages and essential factors for an effective implementation in economic entities. *Journal of Eastern Europe Research in Business and Economics.*

Tay Su and Ling Lin, (2002a). The impact of information asymmetry and budget emphasis on budgetary participation and slack, Department of Finance, Southern Taiwan University of Technology.

Tiessen, P., & Waterhouse J. H. (1983). Towards a descriptive theory at management accounting. *Accounting Organizations and Society*. 8 (2-3), 251-267.

Triana, M., Yuliusman, Putra. W.E. (2012). Pengaruh partisipasi anggaran, budget emphasis dan locus of control terhadap budget slack. *E-Journal Binar Akunta*nsi, 1 (1).

Tuomela, T. S. (2005). The interplay of different levers of control: A case study of introducing a new performance measurement system. *Management Accounting Research,* 16(3), 293-320.

Utami, Pramuditha (2011). Pengaruh Kerja LOC, Pembelajaran Organisasi Internal dan Eksternal Terhadap Hasil Akhir Strategi Kompetitif. Universitas Sultan Ageng Tirtayasa.

Utami, R. F. S (2013). Pengaruh interaksi budaya organisasi dan group cohesiveness dalam hubungan antara partisipasi anggaran dan senjangan anggaran. Journal Accounting.(1).

Van der Stede, W. A. (2000). The relationship between two consequences of budgetary controls: budgetary slack creation and managerial short-term orientation. *Accounting, Organizations and Society,* 25(6), 609-622.

Van der Stede, W.A, Hansen, S.C, Otley, D.T. (2003), Practice developments in budgeting: An overview and research perspective. *Journal of Management Accounting Research*,15, 95-116.

Walker, K.B., & E.N., Johnson, (1999). The effect of budget–based incentive compensation scheme, on the budgeting behavior of managers and subordinates, *Journal of Management Accounting Research*, 11, 1-27.

Waller, W.S. 1988, Slack in Participative Budgeting. The Joint Effect of a Truth-Inducing Pay Scheme and Risk Preferences. *Accounting, Organizations and Society*, 13, 87-98.

Widener, S. K. (2007). An empirical analysis of the levers of control framework. *Accounting, Organizations and Society*, *32*(7), 757-788.

Welsh Glenn A., Hilton Ronald W., & Gordon Paul N.(1988). Budgeting: Profit Planning and Control, 5th ed. Englewood Cliffs : Prentice-Hall.

Wouters, M., & Wilderom, C. (2008). Developing performance-measurement systems as enabling formalization: a longitudinal field study of a logistics department. *Accounting, Organizations and Society*, *33*(4), 488-516.

Yang, M., Wang, A. M., & Cheng, K. (2009). The impact of quality of IS information and budget slack on innovation performance. Technovation, 29 527–536

Yilmaz, E. (2011). The effects of environmental uncertainty and budgetary control effectiveness on propensity to create budgetary slack in public sector African. *Journal of Business Management*, *5*(22), 8902-8908.

Young, S. M. (1985). Participative budgeting: The effects of risk aversion and asymmetric information on budgetary slack. *Journal of accounting research*, 23(2), 829-842.

Young, S.M & B. Lewis (1995). Experimental intensive contracting research in management accounting. "In R. Ashton and A. Ashton (Ads) judgment and

decision making research in accounting and auditing, Cambridge, England, Cambridge University Press, 55-75

Zhang, Y. (2008). The effects of perceived fairness and communication on honesty and collusion in a multi-agent setting. *The Accounting Review*, *83*(4), 1125-1146.

Zikmund, W. G. (2000). Business Research Methods (Sixth Ed.). Published by The Dryden Press, Orlando, Florida, U.S.A.

Zimmerman, D. W.(1998). Invalidation of Parametric and Nonparametric statistical tests by concurrent violation of two assumptions. *Journal of Experimental Education*, 67, 55-68.

APPENDIX A

1. LETTERS

*** Cover Letter**
*** First Reminder Letter**
*** Second Reminder Letter**

2. QUESTIONNAIERS TO MANAGERS OF INDONESIAN MANUFACTURING FIRMS

Othman Yeob Abdullah School of Business
Universiti Utara Malaysia
06010, Sintok Kedah Darul Aman,
Malaysia
Tel : (604) 9283902
Fax : (604) 9285220
Website: www.oyagsb.uum.edu.my

Dear Sir/Madam,

Regarding the study on "THE EFFECT OF MANAGEMENT CONTROL SYSTEM ON THE RELATIONSHIP BETWEEN BUDGET PARTICIPATION AND BUDGET SLACK" for my dissertation at the College of Business, Universiti Utara Malaysia, herewith I would like to ask for permission for data collection in your company. This study will involve the managers of manufacturer companies in Indonesia.

Attached is the certification letter of data collection from the Dean of Business Universiti Utara Malaysia. The study will bring benefit to the budgeting process and the application of controlling management system of a company in Indonesia.

The detail of the respondents will be kept confidential. The data will be collected through questionnaires that will reveal the perception of the managers of the company. Therefore, the data will be used for academic purpose solely. The data will be analyzed and presented cumulatively in the dissertation, thus the data will only show the accumulated managerial companies that participate in the study. The summary of the findings of the study will be presented to the participants as well.

According to result of the questionnaire's pretesting showed that the questionnaire will require not more than 30 minutes. The questionnaires will be distributed and collected by the researcher at the latest June 25, 2012. Your participation will be highly appreciated. If you have any questions related to the study, please do not hesitate to contact me through email or phone below. Thank you for your assistance.

Kind regards,

Masnawaty Sangkala
Phone : 082187515141
Email : wati_4529@yahoo.co.id

Dear Participants,

Last week a questionnaire seeking your opinions about management control system was mailed to you. Your name was choosen from a list of people that hold a key position in the company.

If you have already completed and returned the questionnaire to us, please accept our sincere thanks. If not, please complete and return the questionnaire today. We are especially thankful for your assistance because it is only by asking people like you to share your experience that we can understand the importance of management control system and how it can assist on the relationship between budget participation and budget slack.

If you did not receive a questionnaire, or if it was misplaced, please email to us at wati_4529@yahoo.co.id, or may call at +6282187515141 and we will get another one in the mail to you today.

Thank you very much for helping with this important study.

Sincerely,

Masnawaty Sangkala
PhD Student
School of Accounting
Universiti Utara Malaysia
06010 Sintok
Kedah Darul Aman

Dear participants

Re: We need your help

About a month ago we sent a questionnaire that ask your opinion about the effect of management control system on the relationship between budget participation and budget slack to you. To the best of our knowledge, it is not yet been returned.

We are writing again because it is very important to have your response in helping to get accurate results. Although we sent questionnaire to managers of production, managers of marketing, and managers of finance and accounting of every company listed in Jakarta Stock Exchange, it is only by hearing from nearly everyone in the sample that we can sure that the results are truly representative.

We understand that you are a busy person, but we are very appreciated if you can take 30 minutes of your time to answer the questionnaire. Your voluntary participation is extremely important. We therefore encourage you to participate in this voluntary survey by completing this questionnaire and help us to get accurate results.

A questionnaire of identification number is printed on the questionnaire so that we can check your name off of the mailing list when it is returned. This will not affect the confidentiality of your answer. Protecting the confidentiality of people's answers is very important to us as well as the university.

We hope that you will fill out and return the questionnaire soon, however, if for any reasons you prefer not to answer it, please let us know by returning a blank questionnaire in the enclosed stamped envelope so that we can delete your name from the mailing list.

Sincerely,

Masnawaty Sangkala
PhD Student
School of Accounting
Universiti Utara Malaysia
06010 Sintok
Kedah Darul Aman

THE EFFECT OF MANAGEMENT CONTROL SYSTEM ON THE RELATIONSHIP BETWEEN BUDGET PARTICIPATION AND BUDGET SLACK

MASNAWATY SANGKALA
PHD STUDENT

SUPERVISORS
ASSOC PROF DR CHE ZURIANA BT MOHD JAMIL
ASSOC PROF DR HASNAH KAMARDIN

SCHOOL OF ACCOUNTING
UNIVERSITI UTARA MALAYSIA

Budget Participation Measure (Milani, 1975)

The following items can be used to describe the role which you play in the development of the budget for your department. Please respond by circling a number from 1 to 7 on the scale for each of the following items.

(1) Which category below best describes your activity when the budget is being set? I am involved in setting:

1	2	3	4	5	6	7
All of the budget						None of the budget

(2) Which category below best describes the reasoning provided by your superior when budget revisions are made? The reasoning is:

1	2	3	4	5	6	7
Very sound and/or logical						Very arbitrary and/or Illogical

(3) How often do you state your requests, opinions and/or suggestions about the budget to your superior without being asked?

1	2	3	4	5	6	7
Very frequently						Never

(4) How much influence do you feel you have on the final budget?

1	2	3	4	5	6	7
Very high amount						None

(5) How do you view your contribution to the budget? My contributions:

1	2	3	4	5	6	7
Very important						Very Unimpor2tant

(6) How often does your superior seek your requests, opinions and/or suggestions when the budget is being set?

1	2	3	4	5	6	7
Very frequently						Never

Interactive Control System Measure (Widener, 2007)

Please indicate the extent to which you agree or disagree with the following statements (1=SD, 7=SA) based on the following scale:

1. Strongly disagree
2. Moderately disagree
3. Mildly disagree
4. Neutral
5. Mildly agree
6. Moderately agree
7. Strongly agree

(1) Manager pays little day-to-day attention on the budget system.

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

(2) Manager relies heavily on staff specialist in preparing and interpreting information from the budget system.

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

(3) Operating managers are involved infrequently and on an exception basis with the budget system

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

(4) Managers pay day-to-day attention to the budget system.

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

(5) Managers interpret information from the budget system.

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

(6) Operating managers are frequently involved with the budget system.

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

Boundary Control System Measure (Widener, 2007)

Please rate the extent to which you agree or disagree with the following (1=strongly disagree (SD), 7 strongly agree (SA) :

1. Strongly disagree
2. Moderately disagree
3. Mildly disagree
4. Neutral
5. Mildly agree
6. Moderately agree
7. Strongly agree

(1) Our firm relies on a code of business conduct to define appropriate behavior for managers.

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

(2) Our code of business conduct informs our managers about behaviors that are off-limits.

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

(3) Our firm has a system that communicates to our managers' risks that should be avoided.

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

(4) Managers are aware of the firm's code of business conduct.

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

Diagnostic Control System Measure (Widener, 2007)

Please rate the extent to which your top manager currently rely currently on budget measures based on the following scale (1=Small extent, 7= Large extent):

(1) Track progress towards goals.

1	2	3	4	5	6	7
Small extent						Large extent

(2) Monitor results.

1	2	3	4	5	6	7
Small extent						Large extent

(3) Compare outcomes to expectation.

1	2	3	4	5	6	7
Small extent						Large extent

(4) Review key measures.

1	2	3	4	5	6	7
Small extent						Large extent

(5) Enable discussion in meeting of superiors, subordinates and peers.

1	2	3	4	5	6	7
Small extent						Large extent

(6) Enable continual challenge and debate of underlying data, assumption, and action plans.

1	2	3	4	5	6	7
Small extent						Large extent

(7) Provide a common view of the organization.

1	2	3	4	5	6	7
Small extent						Large extent

(8) Tie the organization together.

1	2	3	4	5	6	7
Small extent						Large extent

(9) Enable the organization to focus on common issues.

1	2	3	4	5	6	7
Small extent						Large extent

(10) Enable the organization to focus on critical success factors.

1	2	3	4	5	6	7
Small extent						Large extent

(11) Develop a common vocabulary in the organization.

1	2	3	4	5	6	7
Small extent						Large extent

Belief Control System Measure (Widener, 2007)

Please indicate the extent to which the following items describe your organization (1= not descriptive, 7= very descriptive):

(1) Our mission statement clearly communicates the firm's core values to our managers.

1	2	3	4	5	6	7
Not descriptive						Very descriptive

(2) Top managers communicate core values to our managers.

1	2	3	4	5	6	7
Not descriptive						Very descriptive

(3) Our managers are aware of the firm's core values.

1	2	3	4	5	6	7
Not descriptive						Very descriptive

(4) Our mission statement inspires our managers.

1	2	3	4	5	6	7
Not descriptive						Very descriptive

Budget Slack Measure (Dunk, 1993)

The following statements relate to the budgetary environment in which you work. Please indicate the extent of your agreement with each statement by circling a number from 1 to 7, based on the following scale:

1. Strong disagree
2. Moderately disagree
3. Mildly disagree
4. Neutral
5. Mildly agree
6. Moderately agree
7. Strongly agree

(1) Standards set in the budget induce high productivity in my area of responsibility.

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

(2) Budgets set for my area of responsibility are safely attainable.

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

(3) I have to carefully monitor costs in my area of responsibility because of budgetary constraints

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

(4) Budget for my area of responsibility is not particularly demanding.

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

(5) Budgetary targets have not caused me to be particularly concerned with improving efficiency in my area of responsibility.

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

(6) Targets incorporated in the budget are difficult to reach.

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

Demographics Questions

Please answer the following questions:

1. Age:_____
2. Gender: [ ] Male [ ] Female
3. Religion:
   - ☐ Islam
   - ☐ Kristen
   - ☐ Hindu
   - ☐ Buddha
   - ☐ Others
4. Ethnic :_____(please state, e.g. java, batak, bugis, etc.)
5. Position in the company: _____
6. Length of time in the current position: ____years
7. Length of time you work for the company:____years
8. Length of time you work in Jakarta:____years
9. Educational background:
   - ☐ Diploma
   - ☐ Degree
   - ☐ Master
   - ☐ PhD
   - ☐ Others
10. Citizenship :_____(please state)
11. In the company how many levels are above you?
    Please tick (✓)

    ☐ You report directly to the director of the company

    ☐ The person you report to is directly at the level below the director of the company

    ☐ The person you report to is 2 level below the director of the company

    ☐ The person you report to Is 3 level below the director of the company

    ☐ The person you report to is 4 level below the director of the company

12. Total numbers of employee in the company

☐ 1 - 25 ☐ 26 - 100 ☐ 101 - 1000 ☐ 1001 - 10.000

☐ 10.000-50.000 ☐ more than 50.000

13 .Type of Business (Please tick)

☐ Food and Beverages

☐ Tobacco Manufacturers

☐ Textile Mill Product

☐ Apparel and other Textile Products

☐ Lumber and Wood Products

☐ Paper and Allied Products

☐ Chemical and Allied Products

☐ Adhesive

☐ Plastics and Glass Products

☐ Cement

☐ Metal and Allied Products

☐ Fabricated Metal Products

☐ Stone, Clay, Glass and Concrete Products

☐ Cables

☐ Electronic and Office Equipment

☐ Automotive and Allied Products

☐ Photographic Equipment

☐ Pharmaceuticals

☐ Consumer Goods

☐ Others ……. (Please State)

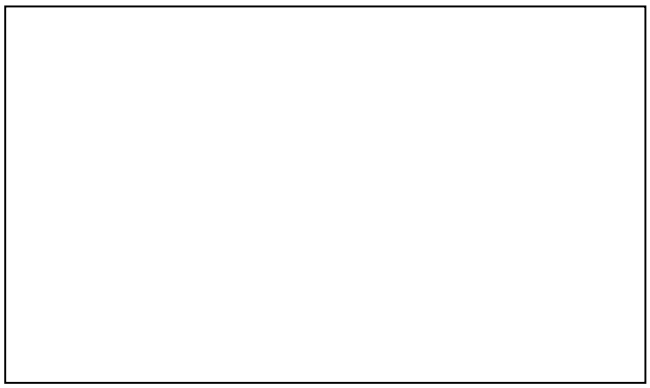
14. Department / Function (please tick)

☐ Accounting/Finance Manager

☐ Production/Operation Manager

☐ Marketing Manager

PLEASE PUT THE COMPANY STAMP HERE:



APPENDIX B

TEST OF NON-RESPONSE BIAS

T-Test

Group Statistics

	BIAS	N	Mean	Std. Deviation	Std. Error Mean
ICS	Non Late	100	3.3450	.63177	.06318
	late	40	3.2750	.49721	.07862
BP	Non Late	100	6.0933	.85816	.08582
	late	40	6.1000	.82586	.13058
DCS	Non Late	100	5.9882	.86954	.08695
	late	40	6.0727	.55017	.08699
BCS	Non Late	100	6.1950	.61297	.06130
	late	40	6.0813	.56723	.08969
BLFCS	Non Late	100	6.2850	.73942	.07394
	late	40	6.2063	.63014	.09963
BS	Non Late	100	4.3067	.62752	.06275
	late	40	4.1375	.46053	.07282

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
ICS	Equal variances assumed	2.047	.155	.627	138	.532	.07000	.11166	-.15078	.29078
	Equal variances not assumed			.694	90.730	.489	.07000	.10086	-.13035	.27035
BP	Equal variances assumed	.742	.390	-.042	138	.967	-.00667	.15886	-.32079	.30745
	Equal variances not assumed			-.043	74.489	.966	-.00667	.15625	-.31798	.30464
DCS	Equal variances assumed	3.413	.067	-.570	138	.569	-.08455	.14825	-.37768	.20859
	Equal variances not assumed			-.687	111.873	.493	-.08455	.12300	-.32825	.15916
BCS	Equal variances assumed	.001	.975	1.013	138	.313	.11375	.11232	-.10835	.33585
	Equal variances not assumed			1.047	77.299	.298	.11375	.10863	-.10255	.33005
BLFCS	Equal variances assumed	.913	.341	.593	138	.554	.07875	.13287	-.18398	.34148
	Equal variances not assumed			.635	83.779	.527	.07875	.12407	-.16799	.32549
BS	Equal variances assumed	3.490	.064	1.545	138	.125	.16917	.10948	-.04730	.38564
	Equal variances not assumed			1.760	97.298	.082	.16917	.09613	-.02161	.35994

APPENDIX C

FACTOR ANALYSIS RESULTS

Factor Analysis for Budget Participation

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.914
Bartlett's Test of Sphericity	Approx. Chi-Square	545.218
	Df	15
	Sig.	.000

Communalities

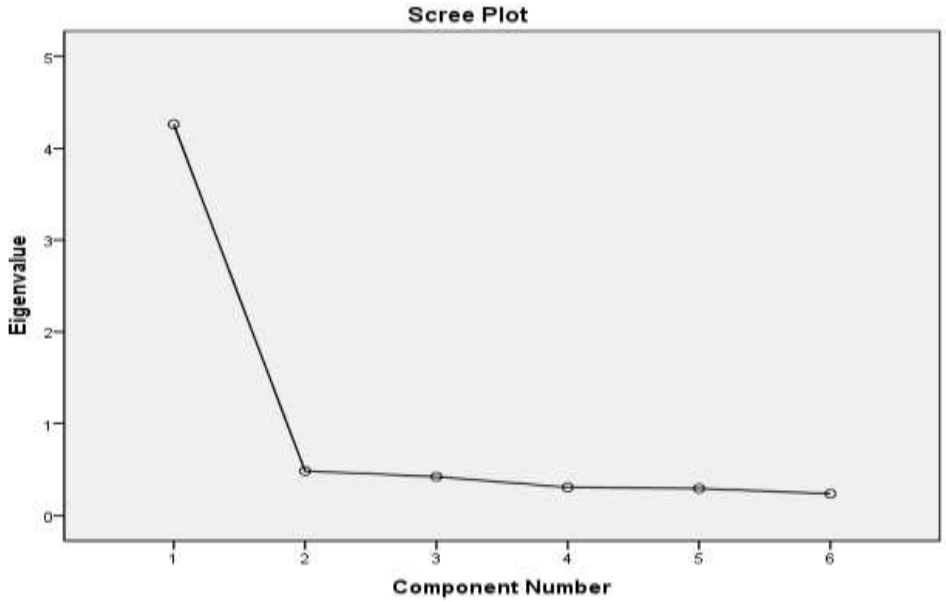
	Initial	Extraction
BP1	1.000	.734
BP2	1.000	.752
BP3	1.000	.644
BP4	1.000	.675
BP5	1.000	.662
BP6	1.000	.795

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.262	71.033	71.033	4.262	71.033	71.033
2	.483	8.056	79.089			
3	.422	7.026	86.115			
4	.305	5.077	91.192			
5	.294	4.894	96.086			
6	.235	3.914	100.000			

Extraction Method: Principal Component Analysis.



Component Matrix[a]

	Component
	1
BP1	.857
BP2	.867
BP3	.802
BP4	.822
BP5	.814
BP6	.891

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Factor Analysis for Interactive Control System

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.900
Bartlett's Test of Sphericity	Approx. Chi-Square	1244.422
	Df	15
	Sig.	.000

Communalities

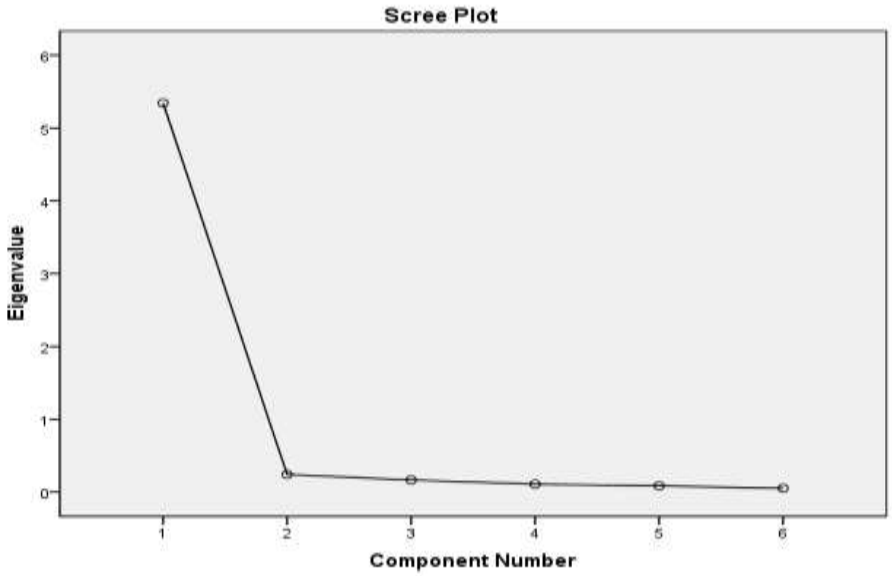
	Initial	Extraction
ICS1	1.000	.896
ICS2	1.000	.887
ICS3	1.000	.884
ICS4	1.000	.923
ICS5	1.000	.865
ICS6	1.000	.887

Extraction Method: Principal Component Analysis.

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.342	89.041	89.041	5.342	89.041	89.041
2	.243	4.050	93.092			
3	.166	2.770	95.861			
4	.110	1.829	97.690			
5	.086	1.426	99.116			
6	.053	.884	100.000			

Extraction Method: Principal Component Analysis.



Component Matrix[a]

	Component
	1
ICS1	.947
ICS2	.942
ICS3	.940
ICS4	.961
ICS5	.930
ICS6	.942

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Factor Analysis for Diagnostic Control System

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.947
Bartlett's Test of Sphericity	Approx. Chi-Square	1509.873
	Df	55
	Sig.	.000

Communalities

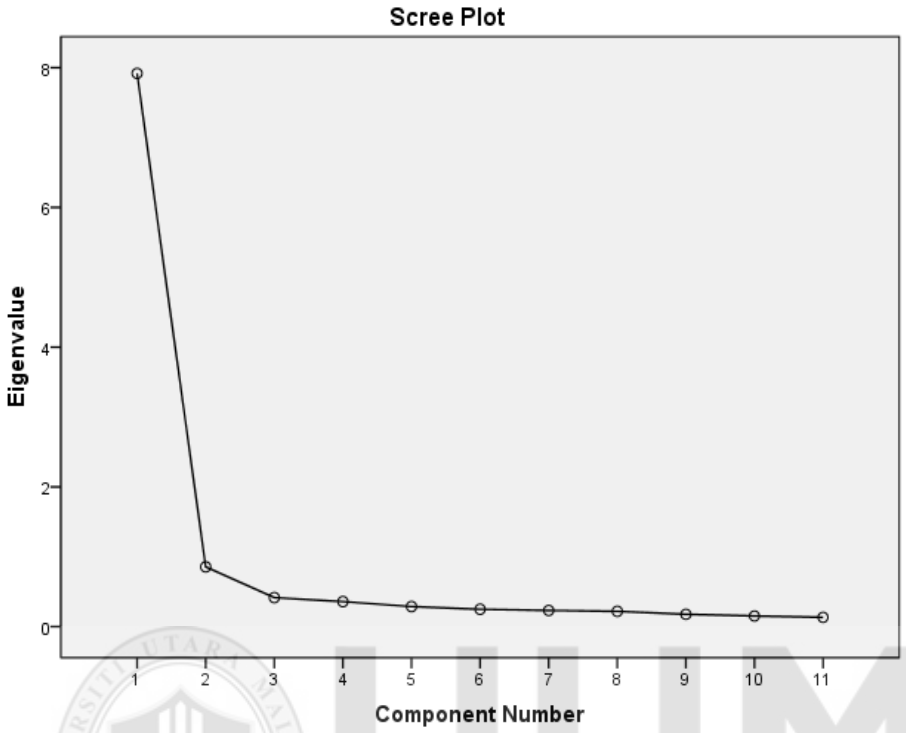
	Initial	Extraction
DCS1	1.000	.774
DCS2	1.000	.760
DCS3	1.000	.767
DCS4	1.000	.705
DCS5	1.000	.711
DCS6	1.000	.738
DCS7	1.000	.814
DCS8	1.000	.764
DCS9	1.000	.682
DCS10	1.000	.640
DCS11	1.000	.564

Extraction Method: Principal Component Analysis.

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.919	71.988	71.988	7.919	71.988	71.988
2	.856	7.780	79.767			
3	.416	3.779	83.547			
4	.358	3.256	86.802			
5	.287	2.612	89.414			
6	.249	2.266	91.680			
7	.232	2.113	93.793			
8	.219	1.992	95.785			
9	.177	1.606	97.391			
10	.153	1.391	98.782			
11	.134	1.218	100.000			

Extraction Method: Principal Component Analysis.



Component Matrix[a]

	Component
	1
DCS1	.880
DCS2	.872
DCS3	.876
DCS4	.840
DCS5	.843
DCS6	.859
DCS7	.902
DCS8	.874
DCS9	.826
DCS10	.800
DCS11	.751

Extraction Method: Principal Component Analysis.

Factor Analysis for Boundary Control System

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.866
Bartlett's Test of Sphericity	Approx. Chi-Square	678.572
	Df	6
	Sig.	.000

Communalities

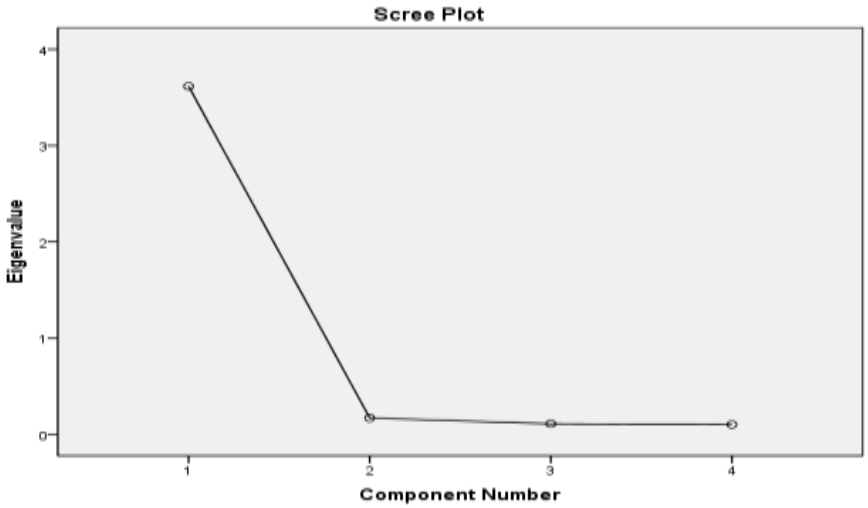
	Initial	Extraction
BCS1	1.000	.914
BCS2	1.000	.902
BCS3	1.000	.906
BCS4	1.000	.893

Extraction Method: Principal Component Analysis.

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.616	90.392	90.392	3.616	90.392	90.392
2	.171	4.282	94.674			
3	.110	2.753	97.426			
4	.103	2.574	100.000			

Extraction Method: Principal Component Analysis.



	Component
	1
BCS1	.956
BCS2	.950
BCS3	.952
BCS4	.945

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Factor Analysis for Belief Control System

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.861
Bartlett's Test of Sphericity	Approx. Chi-Square	634.533
	Df	6
	Sig.	.000

Communalities

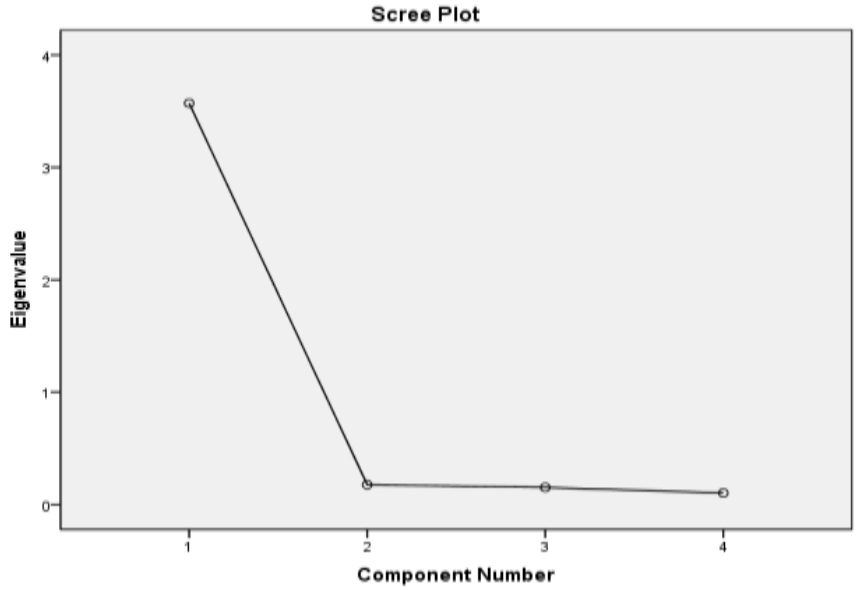
	Initial	Extraction
BLFS1	1.000	.899
BLFS2	1.000	.874
BLFS3	1.000	.904
BLFS4	1.000	.895

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.571	89.275	89.275	3.571	89.275	89.275
2	.176	4.392	93.667			
3	.151	3.783	97.449			
4	.102	2.551	100.000			

Extraction Method: Principal Component Analysis.



Component Matrix[a]

	Component
	1
BLFS1	.948
BLFS2	.935
BLFS3	.951
BLFS4	.946

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Factor Analysis for Budget Slack

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.924
Bartlett's Test of Sphericity	Approx. Chi-Square	1204.212
	Df	15
	Sig.	.000

Communalities

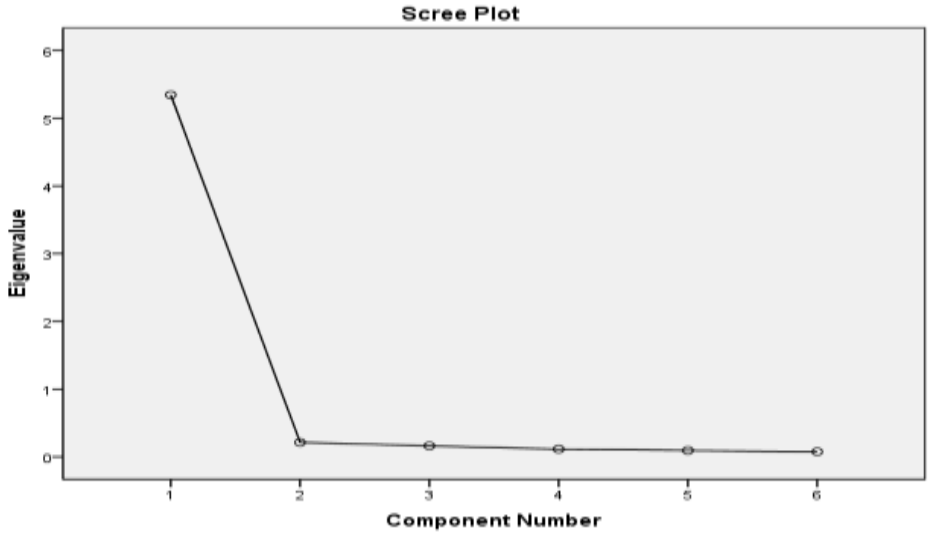
	Initial	Extraction
BS1	1.000	.877
BS2	1.000	.917
BS3	1.000	.894
BS4	1.000	.877
BS5	1.000	.878
BS6	1.000	.901

Extraction Method: Principal Component Analysis.

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.345	89.086	89.086	5.345	89.086	89.086
2	.212	3.540	92.626			
3	.161	2.691	95.317			
4	.113	1.886	97.203			
5	.093	1.552	98.755			
6	.075	1.245	100.000			

Extraction Method: Principal Component Analysis.



Component Matrix[a]

	Component
	1
BS1	.937
BS2	.958
BS3	.946
BS4	.937
BS5	.937
BS6	.949

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

APPENDIX D

RELIABILITY RESULTS

Reliability scale for Budget Participation

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.918	.918	6

Inter-Item Correlation Matrix

	BP1	BP2	BP3	BP4	BP5	BP6
BP1	1.000	.678	.671	.671	.587	.718
BP2	.678	1.000	.627	.658	.676	.735
BP3	.671	.627	1.000	.572	.558	.645
BP4	.671	.658	.572	1.000	.582	.675
BP5	.587	.676	.558	.582	1.000	.717
BP6	.718	.735	.645	.675	.717	1.000

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	5.856	5.757	6.043	.286	1.050	.010	6
Item Variances	1.259	1.154	1.394	.240	1.208	.007	6
Inter-Item Covariances	.820	.679	.969	.290	1.426	.007	6
Inter-Item Correlations	.651	.558	.735	.176	1.316	.003	6

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
BP1	29.0929	22.056	.786	.636	.901
BP2	29.3786	22.654	.800	.644	.899
BP3	29.3357	23.534	.717	.529	.910
BP4	29.2929	23.058	.740	.559	.907
BP5	29.3357	22.958	.729	.570	.909
BP6	29.2429	21.941	.833	.701	.894

Reliability scale for Interactive Control System

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.975	.975	6

Inter-Item Correlation Matrix

	ICS1	ICS2	ICS3	ICS4	ICS5	ICS6
ICS1	1.000	.852	.866	.932	.849	.859
ICS2	.852	1.000	.892	.885	.840	.864
ICS3	.866	.892	1.000	.908	.828	.829
ICS4	.932	.885	.908	1.000	.840	.872
ICS5	.849	.840	.828	.840	1.000	.910
ICS6	.859	.864	.829	.872	.910	1.000

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3.315	2.886	3.800	.914	1.317	.166	6
Item Variances	3.311	3.125	3.643	.518	1.166	.042	6
Inter-Item Covariances	2.872	2.712	3.217	.505	1.186	.017	6
Inter-Item Correlations	.868	.828	.932	.104	1.125	.001	6

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
ICS1	16.9643	74.625	.922	.884	.970
ICS2	16.5429	73.847	.916	.852	.970
ICS3	16.7571	74.948	.913	.866	.971
ICS4	17.0071	74.022	.941	.918	.968
ICS5	16.1000	73.904	.900	.854	.972
ICS6	16.0929	72.560	.917	.876	.971

Reliability scale for Diagnostic Control System

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.960	.961	11

Inter-Item Correlation Matrix

	DCS1	DCS2	DCS3	DCS4	DCS5	DCS6	DCS7	DCS8	DCS9	DCS10	DCS11
DCS1	1.000	.784	.764	.683	.770	.784	.768	.721	.708	.659	.535
DCS2	.784	1.000	.759	.772	.777	.788	.779	.716	.595	.586	.546
DCS3	.764	.759	1.000	.738	.708	.703	.812	.727	.653	.639	.651
DCS4	.683	.772	.738	1.000	.692	.742	.758	.696	.609	.560	.565
DCS5	.770	.777	.708	.692	1.000	.751	.766	.685	.612	.583	.493
DCS6	.784	.788	.703	.742	.751	1.000	.708	.693	.681	.597	.547
DCS7	.768	.779	.812	.758	.766	.708	1.000	.800	.687	.688	.623
DCS8	.721	.716	.727	.696	.685	.693	.800	1.000	.706	.737	.669
DCS9	.708	.595	.653	.609	.612	.681	.687	.706	1.000	.747	.738
DCS10	.659	.586	.639	.560	.583	.597	.688	.737	.747	1.000	.703
DCS11	.535	.546	.651	.565	.493	.547	.623	.669	.738	.703	1.000

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	5.858	5.650	6.014	.364	1.064	.015	11
Item Variances	1.295	1.078	1.589	.511	1.474	.039	11
Inter-Item Covariances	.885	.645	1.165	.520	1.805	.012	11
Inter-Item Correlations	.690	.493	.812	.319	1.647	.006	11

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
DCS1	58.4714	93.301	.846	.780	.955
DCS2	58.6286	91.127	.833	.780	.955
DCS3	58.6214	93.532	.844	.752	.955
DCS4	58.5643	93.456	.800	.701	.956
DCS5	58.4714	94.366	.801	.713	.956
DCS6	58.6571	92.659	.822	.745	.955
DCS7	58.4286	92.650	.874	.802	.954
DCS8	58.4571	90.437	.845	.738	.955
DCS9	58.7929	91.058	.794	.731	.956
DCS10	58.5643	93.312	.766	.678	.957
DCS11	58.7714	92.753	.711	.660	.960

Reliability scale for Boundary Control System

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.964	.965	4

Inter-Item Correlation Matrix

	BCS1	BCS2	BCS3	BCS4
BCS1	1.000	.872	.872	.892
BCS2	.872	1.000	.892	.848
BCS3	.872	.892	1.000	.856
BCS4	.892	.848	.856	1.000

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	5.657	5.600	5.736	.136	1.024	.004	4
Item Variances	2.228	2.081	2.579	.499	1.240	.056	4
Inter-Item Covariances	1.938	1.771	2.066	.294	1.166	.015	4
Inter-Item Correlations	.872	.848	.892	.044	1.052	.000	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
BCS1	16.9500	17.285	.921	.853	.951
BCS2	17.0286	18.675	.910	.837	.953
BCS3	17.0143	18.489	.913	.841	.952
BCS4	16.8929	18.787	.903	.825	.955

Reliability scale for Belief Control System

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.960	.960	4

Inter-Item Correlation Matrix

	BLFS1	BLFS2	BLFS3	BLFS4
BLFS1	1.000	.856	.879	.847
BLFS2	.856	1.000	.832	.847
BLFS3	.879	.832	1.000	.881
BLFS4	.847	.847	.881	1.000

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	5.486	5.400	5.550	.150	1.028	.004	4
Item Variances	2.529	2.324	2.681	.357	1.154	.023	4
Inter-Item Covariances	2.165	2.039	2.253	.214	1.105	.005	4
Inter-Item Correlations	.857	.832	.881	.049	1.059	.000	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
BLFS1	16.3929	20.111	.906	.827	.945
BLFS2	16.5429	20.595	.885	.788	.952
BLFS3	16.4500	21.041	.911	.840	.944
BLFS4	16.4429	20.565	.902	.822	.946

Reliability scale for Budget Slack

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.975	.975	6

Inter-Item Correlation Matrix

	BS1	BS2	BS3	BS4	BS5	BS6
BS1	1.000	.855	.903	.833	.832	.882
BS2	.855	1.000	.882	.887	.906	.893
BS3	.903	.882	1.000	.872	.835	.864
BS4	.833	.887	.872	1.000	.856	.857
BS5	.832	.906	.835	.856	1.000	.878
BS6	.882	.893	.864	.857	.878	1.000

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3.533	3.450	3.650	.200	1.058	.008	6
Item Variances	1.373	1.215	1.483	.268	1.221	.008	6
Inter-Item Covariances	1.192	1.107	1.291	.184	1.166	.003	6
Inter-Item Correlations	.869	.832	.906	.074	1.089	.001	6

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
BS1	17.5500	30.782	.908	.857	.971
BS2	17.7500	30.304	.938	.891	.968
BS3	17.5571	30.191	.921	.872	.970
BS4	17.7214	30.807	.909	.834	.971
BS5	17.6857	30.807	.909	.850	.971
BS6	17.7357	31.361	.926	.864	.970

APPENDIX E

REGRESSION ANALYSIS RESULTS

Simple Regression Analysis

1. SIMPLE REGRESSION : BP - BS

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.866[a]	.749	.748	.55573	.749	412.725	1	138	.000

a. Predictors: (Constant), ABP

ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	127.462	1	127.462	412.725	.000[a]
	Residual	42.619	138	.309		
	Total	170.081	139			

a. Predictors: (Constant), ABP

b. Dependent Variable: ABS

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	9.465	.296		32.004	.000	8.880	10.049					
	ABP	-1.013	.050	-.866	-20.316	.000	-1.112	-.914	-.866	-.866	-.866	1.000	1.000

a. Dependent Variable: ABS

2. SIMPLE REGRESSION : ICS - BS

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.929[a]	.864	.863	.40950	.864	876.264	1	138	.000

a. Predictors: (Constant), AICS

ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	146.940	1	146.940	876.264	.000[a]
	Residual	23.141	138	.168		
	Total	170.081	139			

a. Predictors: (Constant), AICS

b. Dependent Variable: ABS

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	5.519	.076		73.100	.000	5.370	5.669					
	AICS	-.599	.020	-.929	-29.602	.000	-.639	-.559	-.929	-.929	-.929	1.000	1.000

a. Dependent Variable: ABS

3. SIMPLE REGRESSION : DCS - BS

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.867[a]	.752	.750	.55312	.752	417.916	1	138	.000

a. Predictors: (Constant), ADCS

ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	127.860	1	127.860	417.916	.000[a]
	Residual	42.221	138	.306		
	Total	170.081	139			

a. Predictors: (Constant), ADCS

b. Dependent Variable: ABS

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	9.381	.290		32.364	.000	8.807	9.954					
	ADCS	-.998	.049	-.867	-20.443	.000	-1.095	-.902	-.867	-.867	-.867	1.000	1.000

a. Dependent Variable: ABS

4. SIMPLE REGRESSION : BCS - BS

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.579[a]	.335	.330	.90512	.335	69.609	1	138	.000

a. Predictors: (Constant), ABCS

ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	57.026	1	57.026	69.609	.000[a]
	Residual	113.055	138	.819		
	Total	170.081	139			

a. Predictors: (Constant), ABCS

b. Dependent Variable: ABS

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta	T	Sig.	Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	6.089	.316		19.284	.000	5.464	6.713					
	ABCS	-.452	.054	-.579	-8.343	.000	-.559	-.345	-.579	-.579	-.579	1.000	1.000

a. Dependent Variable: ABS

5. SIMPLE REGRESSION : BLFCS – BS

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.581[a]	.338	.333	.90340	.338	70.398	1	138	.000

a. Predictors: (Constant), ABLFS

ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	57.454	1	57.454	70.398	.000[a]
	Residual	112.626	138	.816		
	Total	170.081	139			

a. Predictors: (Constant), ABLFS

b. Dependent Variable: ABS

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1 (Constant)	5.881	.290		20.273	.000	5.307	6.454					
ABLFS	-.428	.051	-.581	-8.390	.000	-.529	-.327	-.581	-.581	-.581	1.000	1.000

a. Dependent Variable: ABS

Multiple Regression Analysis

Multiple Regressions for the Relationship between Budget Participation and Budget Slack

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.866[a]	.750	.748	3.33024	.750	413.500	1	138	.000

a. Predictors: (Constant), NGBP

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4585.915	1	4585.915	413.500	.000[a]
	Residual	1530.485	138	11.090		
	Total	6116.400	139			

a. Predictors: (Constant), NGBP

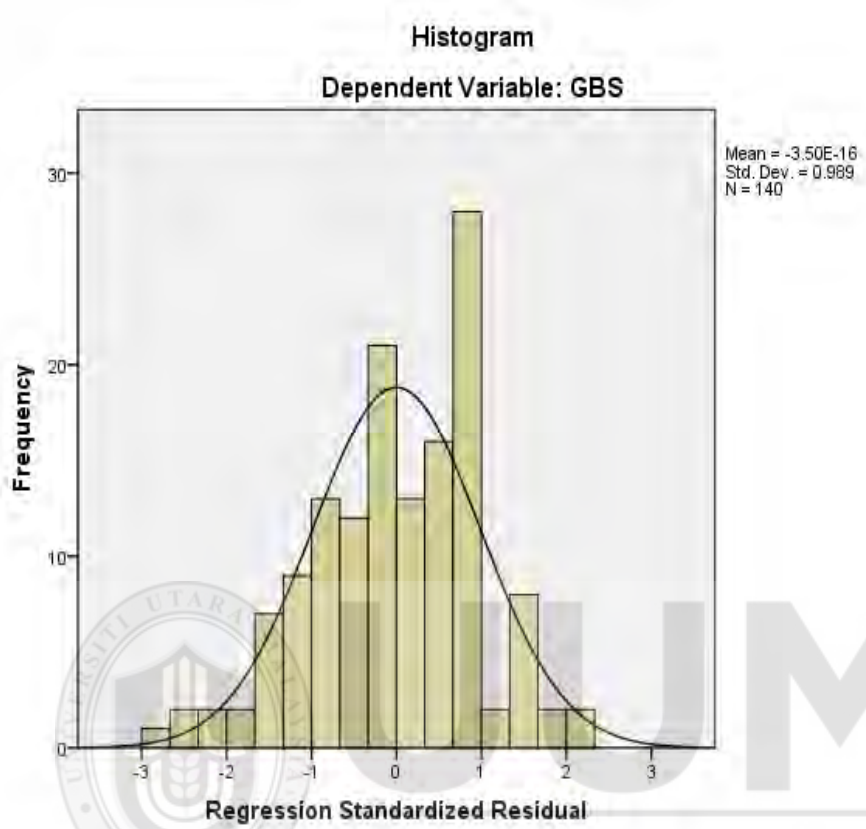
b. Dependent Variable: GBS

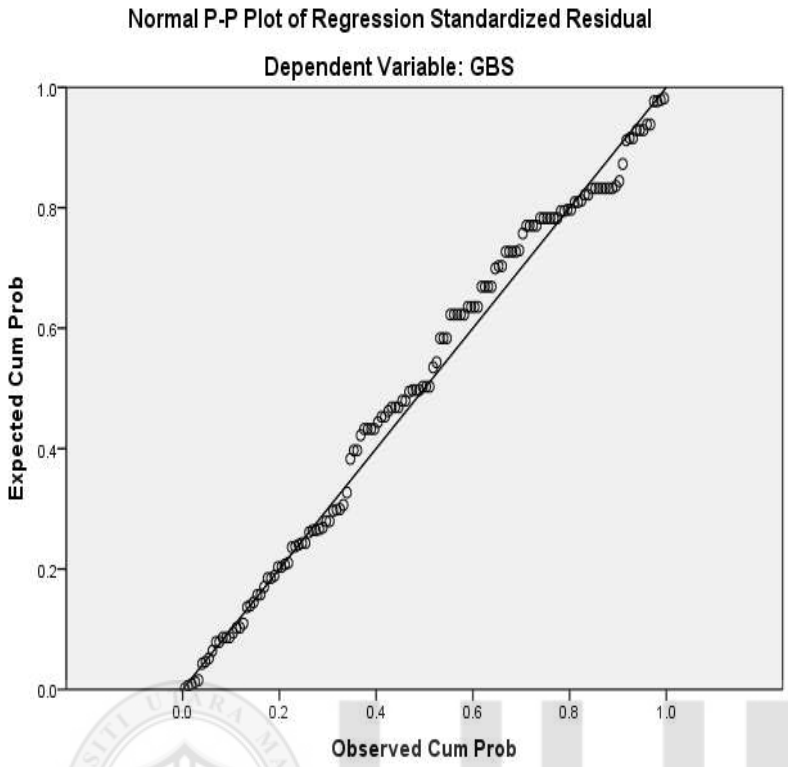
Coefficients[a]

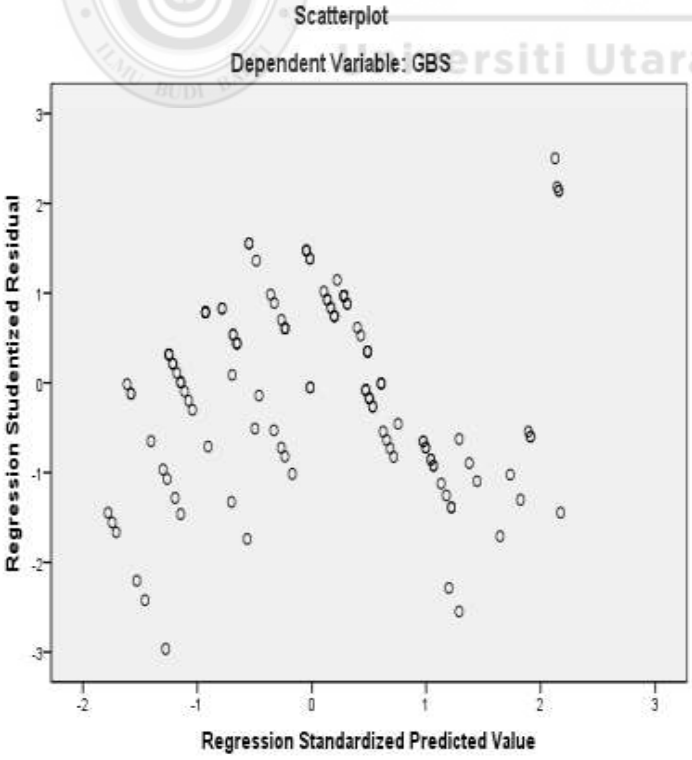
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Correlations	Collinearity Statistics			
		B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	21.200	.281		75.323	.000	20.643	21.757					
	NGBP	-1.013	.050	-.866	-20.335	.000	-1.111	-.914	-.866	-.866	-.866	1.000	1.000

a. Dependent Variable: GBS

Charts







Multiple Regressions for the Relationship between Budget Participation, Interactive Control System and Buget Slack

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.866[a]	.750	.748	3.33024	.750	413.500	1	138	.000
2	.957[b]	.916	.914	1.94077	.166	269.332	1	137	.000
3	.965[c]	.931	.930	1.75905	.016	30.768	1	136	.000

a. Predictors: (Constant), NGBP

b. Predictors: (Constant), NGBP, NGICS

c. Predictors: (Constant), NGBP, NGICS, NGBPNGICS

ANOVA[d]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4585.915	1	4585.915	413.500	.000[a]
	Residual	1530.485	138	11.090		
	Total	6116.400	139			
2	Regression	5600.378	2	2800.189	743.429	.000[b]
	Residual	516.022	137	3.767		
	Total	6116.400	139			
3	Regression	5695.581	3	1898.527	613.565	.000[c]
	Residual	420.819	136	3.094		
	Total	6116.400	139			

a. Predictors: (Constant), NGBP

b. Predictors: (Constant), NGBP, NGICS

c. Predictors: (Constant), NGBP, NGICS, NGBPNGICS

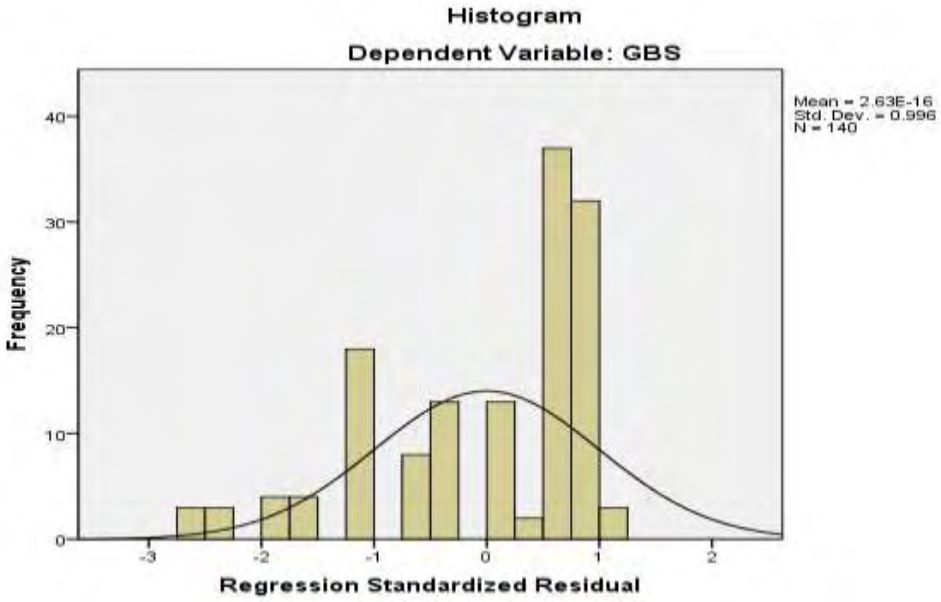
d. Dependent Variable: GBS

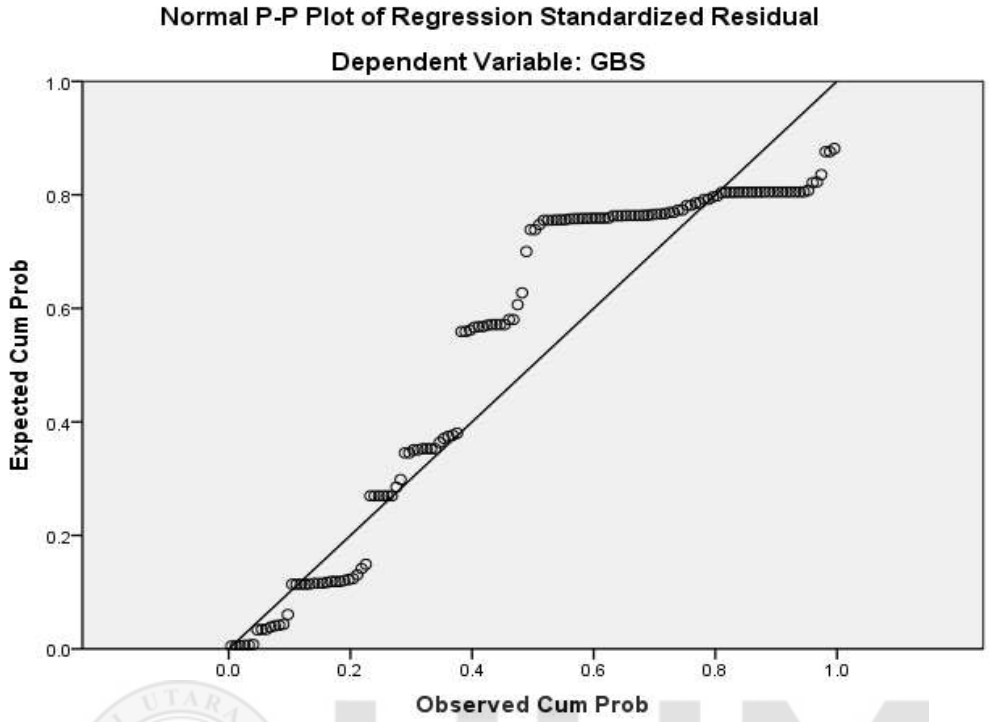
Coefficients[a]

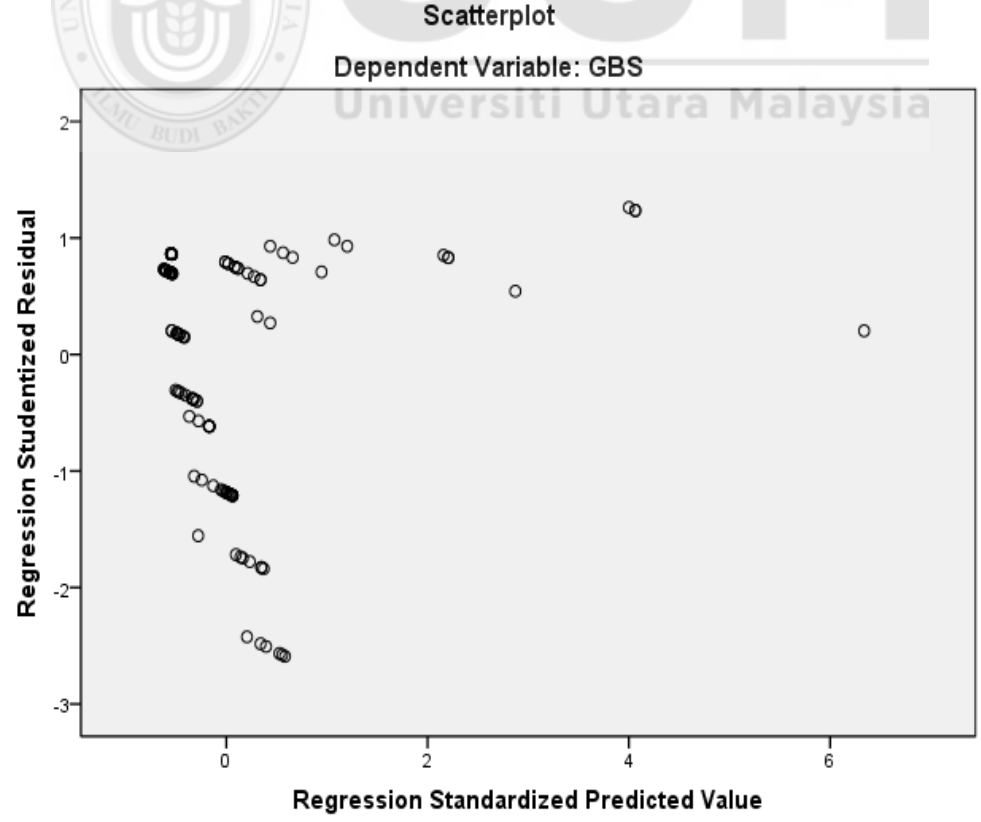
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	21.200	.281		75.323	.000					
	NGBP	-1.013	.050	-.866	-20.335	.000	-.866	-.866	-.866	1.000	1.000
2	(Constant)	21.200	.164		129.249	.000					
	NGBP	-.425	.046	-.363	-9.216	.000	-.866	-.619	-.229	.396	2.523
	NGICS	-.417	.025	-.647	-16.411	.000	-.929	-.814	-.407	.396	2.523
3	(Constant)	22.817	.327		69.722	.000					
	NGBP	-.926	.100	-.792	-9.303	.000	-.866	-.624	-.209	.070	14.315
	NGICS	-.190	.047	-.294	-4.039	.000	-.929	-.327	-.091	.095	10.505
	NGBPNGICS	-.036	.006	-.298	-5.547	.000	.094	-.430	-.125	.175	5.698

a. Dependent Variable: GBS

Charts







Multiple Regressions for the Relationship between Budget Participation, Diagnostic Control System and Budget Slack

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.866[a]	.750	.748	3.33024	.750	413.500	1	138	.000
2	.880[b]	.774	.771	3.17645	.024	14.685	1	137	.000
3	.911[c]	.830	.827	2.76120	.056	45.305	1	136	.000

a. Predictors: (

Constant), NGBP

b. Predictors: (Constant), NGBP, NGDCS

c. Predictors: (Constant), NGBP, NGDCS, NGBPNGDCS

- **ANOVA[d]**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4585.915	1	4585.915	413.500	.000[a]
	Residual	1530.485	138	11.090		
	Total	6116.400	139			
2	Regression	4734.089	2	2367.044	234.596	.000[b]
	Residual	1382.311	137	10.090		
	Total	6116.400	139			
3	Regression	5079.503	3	1693.168	222.077	.000[c]
	Residual	1036.897	136	7.624		
	Total	6116.400	139			

a. Predictors: (Constant), NGBP

b. Predictors: (Constant), NGBP, NGDCS

c. Predictors: (Constant), NGBP, NGDCS, NGBPNGDCS

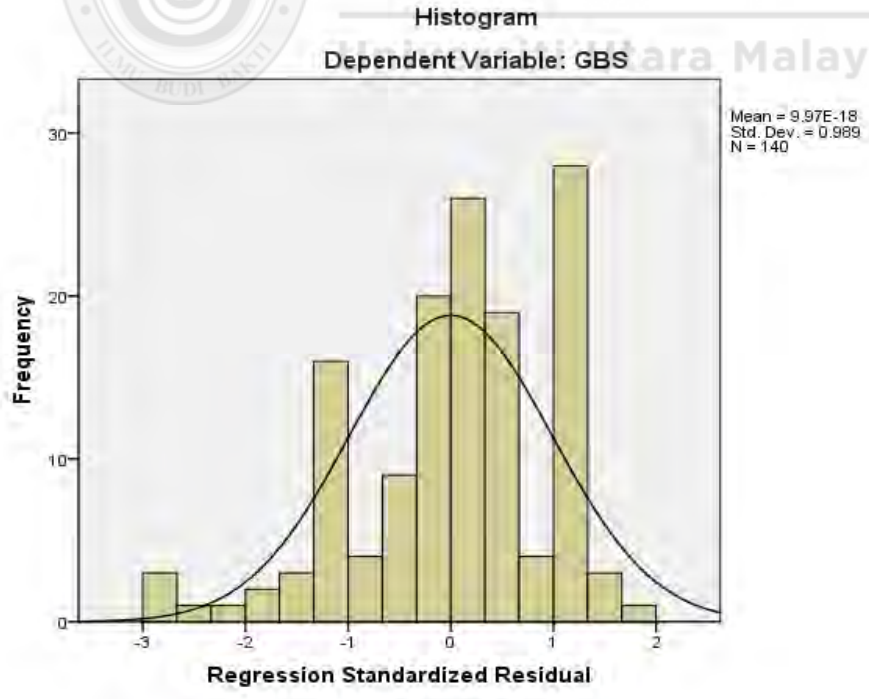
d. Dependent Variable: GBS

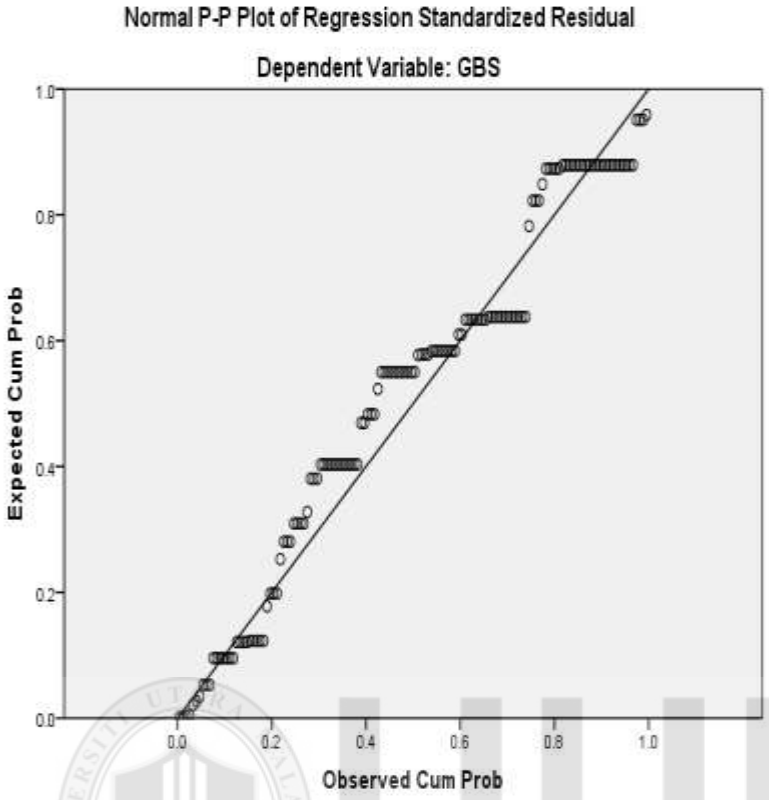
Coefficients[a]

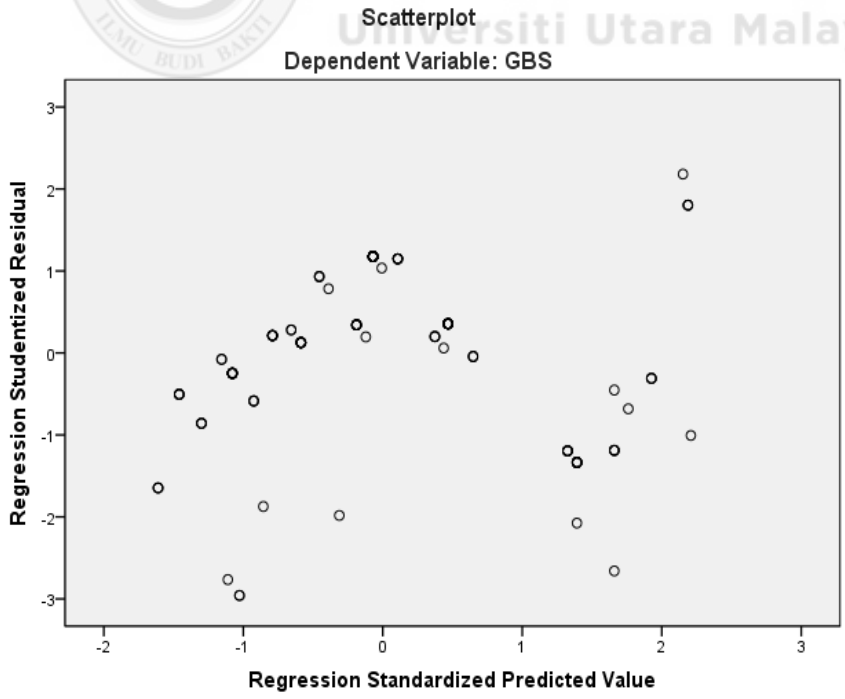
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	21.200	.281		75.323	.000					
	NGBP	-1.013	.050	-.866	-20.335	.000	-.866	-.866	-.866	1.000	1.000
2	(Constant)	21.200	.268		78.969	.000					
	NGBP	-.514	.139	-.439	-3.703	.000	-.866	-.302	-.150	.117	8.520
	NGDCS	-.285	.074	-.454	-3.832	.000	-.867	-.311	-.156	.117	8.520
3	(Constant)	22.323	.287		77.821	.000					
	NGBP	-.661	.123	-.565	-5.392	.000	-.866	-.420	-.190	.114	8.800
	NGDCS	-.366	.066	-.583	-5.562	.000	-.867	-.431	-.196	.113	8.814
	NGBPNGDCS	-.020	.003	-.345	-6.731	.000	.475	-.500	-.238	.474	2.111

a. Dependent Variable: GBS

Charts







Multiple Regressions for the Relationship between Budget Participation, Boundary Control System and Budget Slack

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.866[a]	.750	.748	3.33024	.750	413.500	1	138	.000
2	.866[b]	.751	.747	3.33664	.001	.470	1	137	.494
3	.882[c]	.779	.774	3.15410	.028	17.317	1	136	.000

a. Predictors: (Constant), NGBP

b. Predictors: (Constant), NGBP, NGBCS

c. Predictors: (Constant), NGBP, NGBCS, NGBPNGBCS

ANOVA[d]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4585.915	1	4585.915	413.500	.000[a]
	Residual	1530.485	138	11.090		
	Total	6116.400	139			
2	Regression	4591.152	2	2295.576	206.192	.000[b]
	Residual	1525.248	137	11.133		
	Total	6116.400	139			
3	Regression	4763.427	3	1587.809	159.606	.000[c]
	Residual	1352.973	136	9.948		
	Total	6116.400	139			

a. Predictors: (Constant), NGBP

b. Predictors: (Constant), NGBP, NGBCS

c. Predictors: (Constant), NGBP, NGBCS, NGBPNGBCS

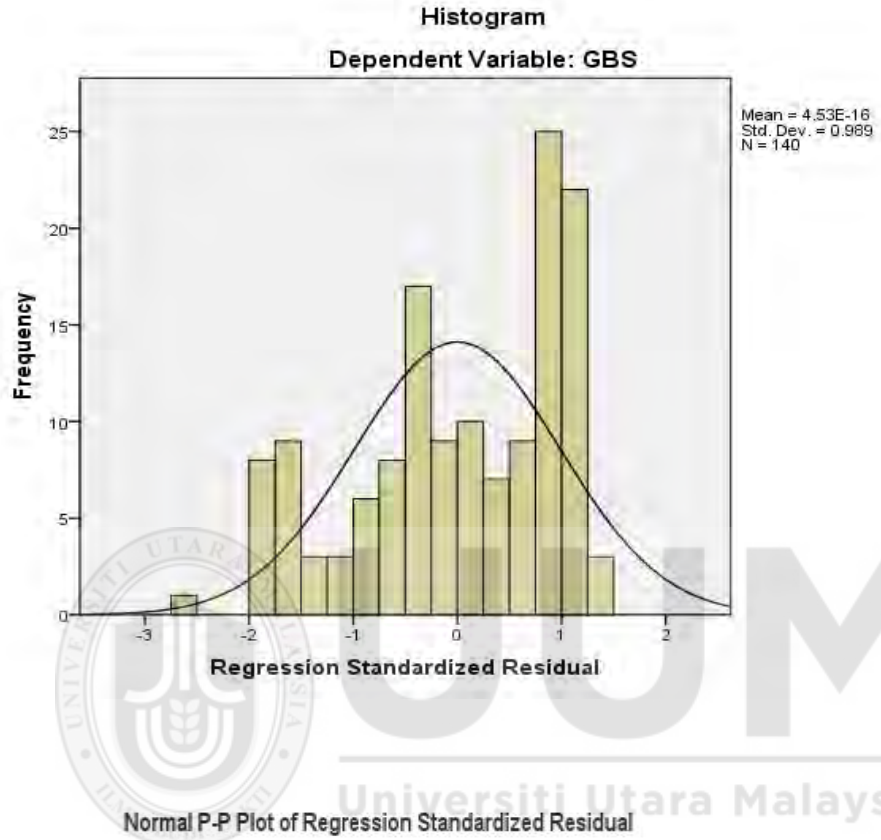
d. Dependent Variable: GBS

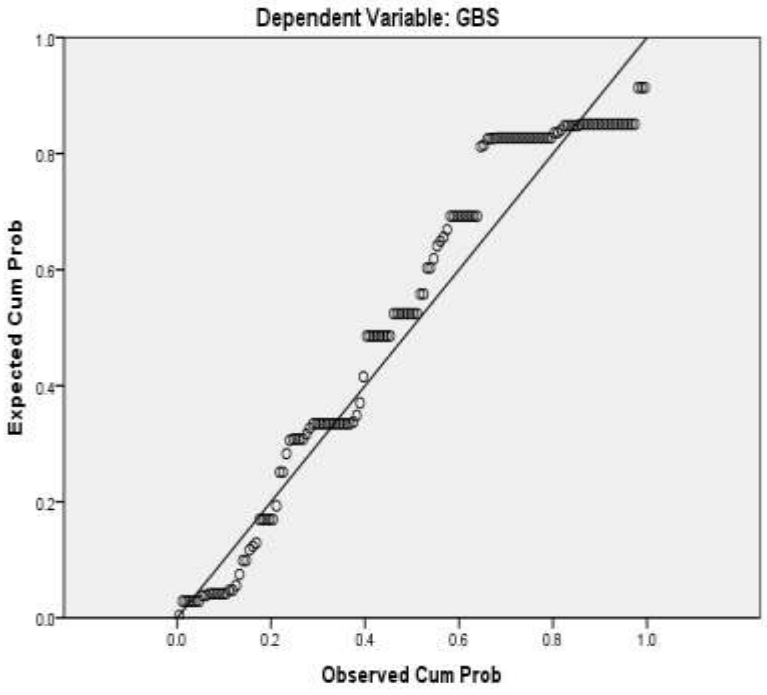
Coefficients[a]

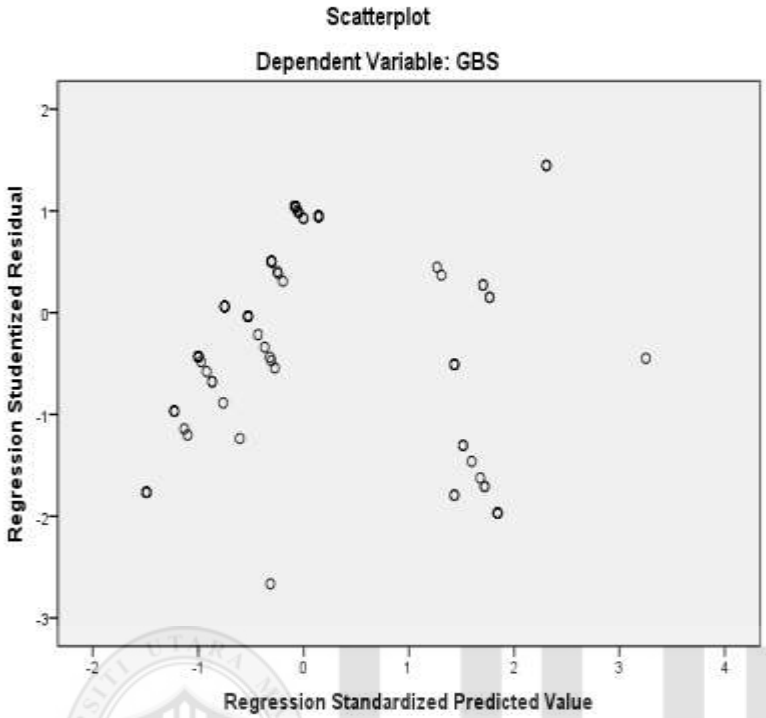
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	21.200	.281		75.323	.000					
	NGBP	-1.013	.050	-.866	-20.335	.000	-.866	-.866	-.866	1.000	1.000
2	(Constant)	21.200	.282		75.178	.000					
	NGBP	-1.046	.069	-.894	-15.099	.000	-.866	-.790	-.644	.519	1.926
	NGBCS	.048	.069	.041	.686	.494	-.579	.058	.029	.519	1.926
3	(Constant)	21.871	.312		70.202	.000					
	NGBP	-1.203	.076	-1.028	-15.919	.000	-.866	-.807	-.642	.390	2.565
	NGBCS	-.006	.067	-.005	-.094	.925	-.579	-.008	-.004	.500	2.001
	NGBPNGBCS	-.030	.007	-.238	-4.161	.000	.481	-.336	-.168	.496	2.017

a. Dependent Variable: GBS

Charts







Multiple Regressions for the relationship between Budget Participation, Belief Control System and Budget Slack

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.866[a]	.750	.748	3.33024	.750	413.500	1	138	.000
2	.880[b]	.775	.772	3.17008	.025	15.296	1	137	.000
3	.893[c]	.797	.793	3.02089	.022	14.865	1	136	.000

a. Predictors: (Constant), NGBP

b. Predictors: (Constant), NGBP, NGBLFCS

c. Predictors: (Constant), NGBP, NGBLFCS, NGBPNGBLFCS

ANOVA[d]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4585.915	1	4585.915	413.500	.000[a]
	Residual	1530.485	138	11.090		
	Total	6116.400	139			
2	Regression	4739.634	2	2369.817	235.817	.000[b]
	Residual	1376.766	137	10.049		
	Total	6116.400	139			
3	Regression	4875.292	3	1625.097	178.077	.000[c]
	Residual	1241.108	136	9.126		
	Total	6116.400	139			

a. Predictors: (Constant), NGBP

b. Predictors: (Constant), NGBP, NGBLFCS

c. Predictors: (Constant), NGBP, NGBLFCS, NGBPNGBLFCS

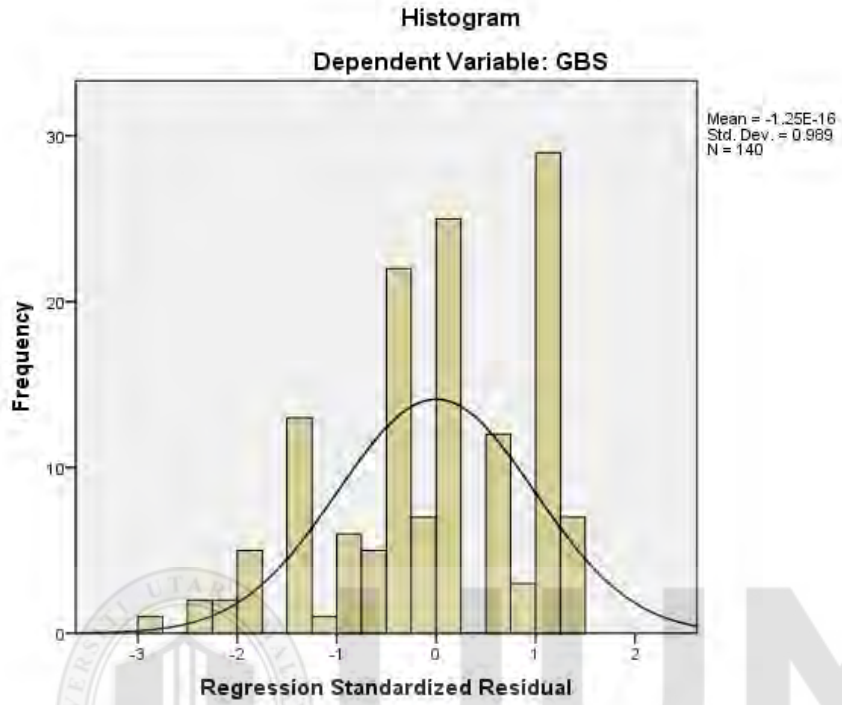
d. Dependent Variable: GBS

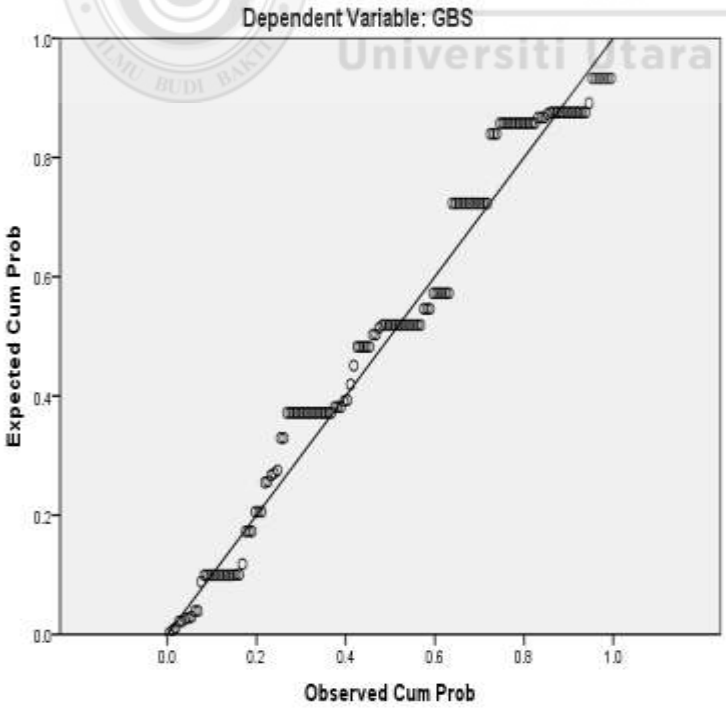
Coefficients[a]

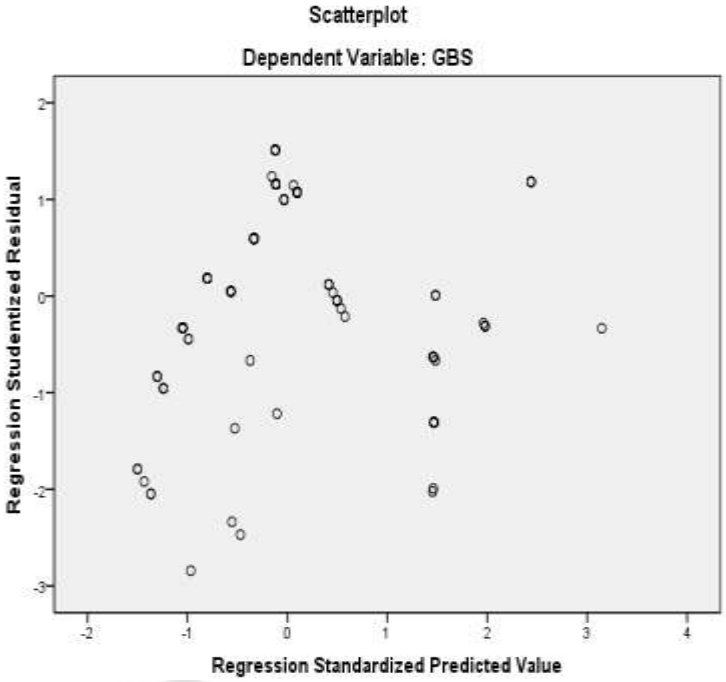
		Unstandardized Coefficients		Standardized Coefficients			Correlations			Collinearity Statistics	
Model		B	Std. Error	Beta	t	Sig.	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	21.200	.281		75.323	.000					
	NGBP	-1.013	.050	-.866	-20.335	.000	-.866	-.866	-.866	1.000	1.000
2	(Constant)	21.200	.268		79.128	.000					
	NGBP	-.902	.055	-.771	-16.304	.000	-.866	-.812	-.661	.735	1.360
	NGBLFCS	-.204	.052	-.185	-3.911	.000	-.582	-.317	-.159	.735	1.360
3	(Constant)	21.646	.280		77.238	.000					
	NGBP	-1.011	.060	-.864	-16.891	.000	-.866	-.823	-.652	.570	1.755
	NGBLFCS	-.219	.050	-.198	-4.389	.000	-.582	-.352	-.170	.731	1.368
	NGBPNGBLFCS	-.026	.007	-.180	-3.856	.000	.370	-.314	-.149	.684	1.461

a. Dependent Variable: GBS

Charts







Multiple Regressions for the relationship between Budget Participation, MCS and Budget Slack

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.866[a]	.750	.748	3.33024	.750	413.500	1	138	.000
2	.936[b]	.877	.875	2.34338	.127	141.705	1	137	.000
3	.949[c]	.901	.899	2.11297	.024	32.507	1	136	.000

a. Predictors: (Constant), NGBP

b. Predictors: (Constant), NGBP, NGMCS

c. Predictors: (Constant), NGBP, NGMCS, NGBPNGMCS

ANOVA[d]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4585.915	1	4585.915	413.500	.000[a]
	Residual	1530.485	138	11.090		
	Total	6116.400	139			
2	Regression	5364.075	2	2682.037	488.405	.000[b]
	Residual	752.325	137	5.491		
	Total	6116.400	139			
3	Regression	5509.207	3	1836.402	411.320	.000[c]
	Residual	607.193	136	4.465		
	Total	6116.400	139			

a. Predictors: (Constant), NGBP

b. Predictors: (Constant), NGBP, NGMCS

c. Predictors: (Constant), NGBP, NGMCS, NGBPNGMCS

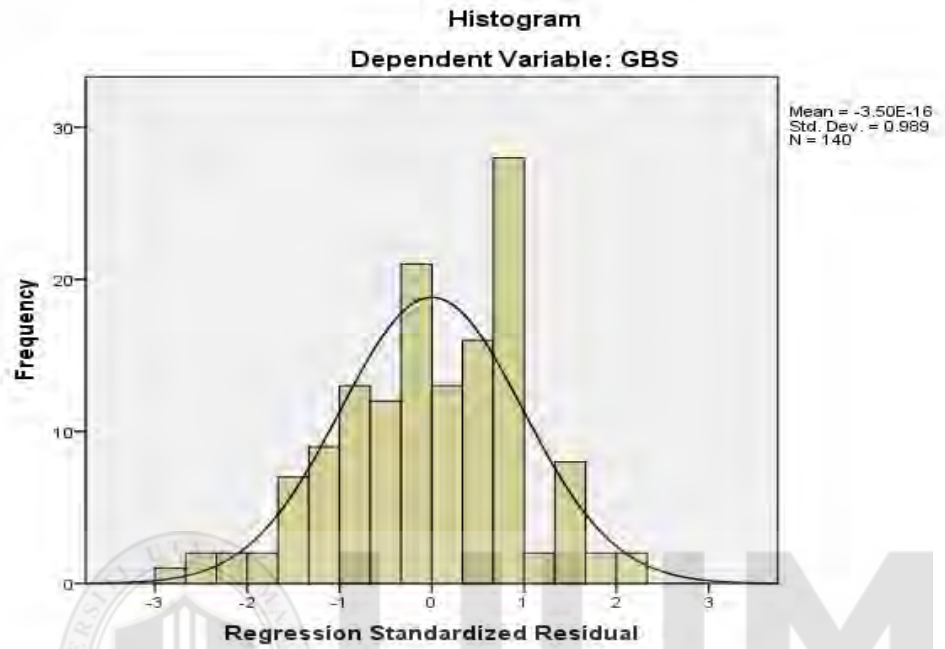
d. Dependent Variable: GBS

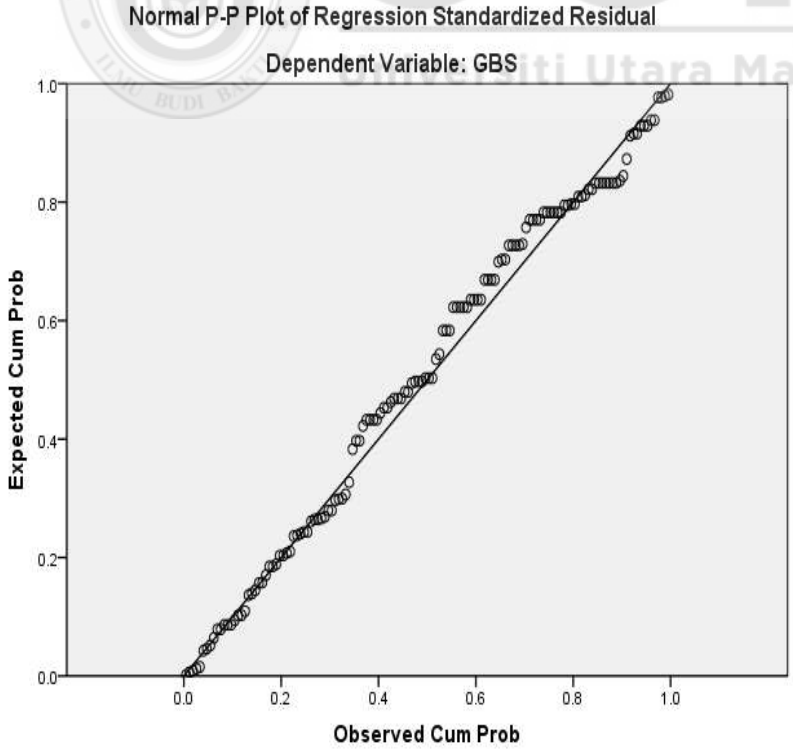
Coefficients[a]

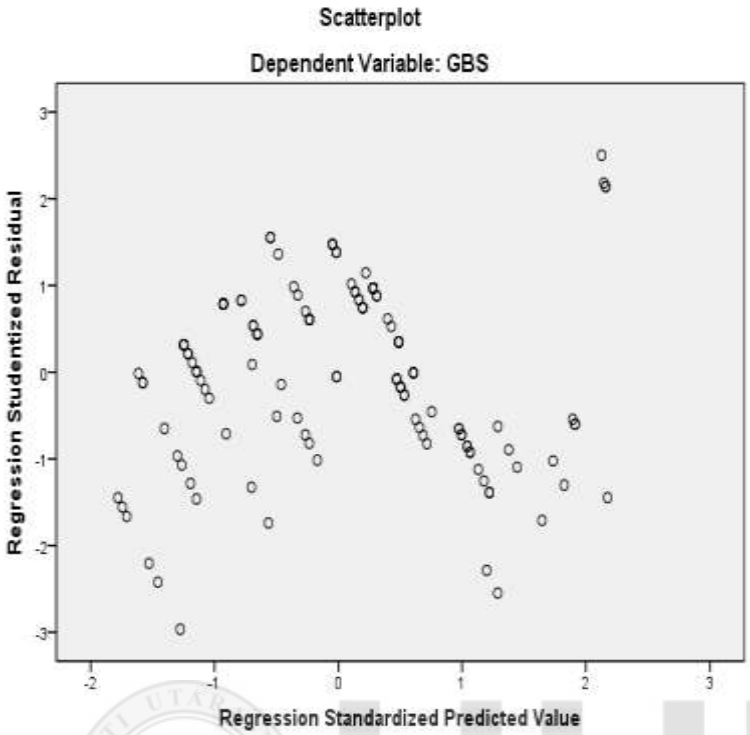
Model		Unstandardized Coefficients		Standardized Coefficients			Correlations			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	21.200	.281		75.323	.000					
	NGBP	-1.013	.050	-.866	-20.335	.000	-.866	-.866	-.866	1.000	1.000
2	(Constant)	21.200	.198		107.043	.000					
	NGBP	-.061	.087	-.052	-.697	.487	-.866	-.059	-.021	.161	6.206
	NGMCS	-.216	.018	-.889	-11.904	.000	-.936	-.713	-.357	.161	6.206
3	(Constant)	22.001	.227		96.845	.000					
	NGBP	-.363	.095	-.310	-3.823	.000	-.866	-.311	-.103	.111	9.010
	NGMCS	-.187	.017	-.769	-10.900	.000	-.936	-.683	-.294	.147	6.812
	NGBPNGMCS	-.006	.001	-.219	-5.701	.000	.399	-.439	-.154	.495	2.022

a. Dependent Variable: GBS

Charts







APPENDIX F

LIST OF PUBLICATIONS

INTERNATIONAL CONFERENCE PROCEEDINGS PUBLISHED

1. The Effect of Budget Participation, Locus of Control, Job Relevant Information, Cultual Dimention on Job Performance and job Satisfaction. A paper presented at The 2nd International Conference on Arab-Malaysia Islamic Global Business and Enterpreneurship at Yarmouk University Jordan and Damascus University Syria, 20-24 March 2010.

2. The Relationship of Budgetary Process in Management Accounting Techniques and Job Performance. A paper presented at 1st International Conference on Public Policy and Social Sciences at Universiti MARA Kedah Darul Aman, Malaysia. 26-27 May 2010.

3. The Effect of Interactive Control System and Boundary Control System in the Relationship between Budget Participation and Budget Slack. A paper presented at The 14th Asian Academic Accounting Association Annual Conference at Penang, Malaysia. 27-30 October 2013.

4. The Effect of Diagnostic Control System and Belief Control System in the Relationship between Budget Participation and Budget Slack. A paper presented at The International Congress on Interdisciplinary Behavior and Social Sciences 2013 (ICIBSoS 2013) at Swiss Bell Ciputra Hotel, Jakarta, Indonesia. 04-05 November 2013.

5. The Moderating Effect of Interactive Control System and Diagnostic Control System in the Relationship between Budget Participation and Budget Slack. A paper presented at The International Conference on Social Transforming towards Sustainable Society, EDC – Universiti Utara Malaysia, Kedah Darul Aman, Malaysia. 16 December 2013.