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## FEEDBACK'S EFFECT ON BUDGETARY SLACK AND SELF-EFFICACY AS MODERATION VARIABLE

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### *Abstract*

This study aimed to examine the effect of positive and negative feedback on budgetary slack and the interaction between feedback and self-efficacy on budgetary slack under a condition of information asymmetry. Preliminary researches have tested various ways of mitigating budgetary slack practices, which did not separate the effects of positive and negative feedback. This study hypothesized that positive feedback minimizes the potential for budgetary slack under conditions of information asymmetry—and vice versa. Additionally, high self-efficacy reinforces positive feedback in reducing budgetary slack under conditions of information asymmetry—and vice versa. By employing experimental data, this study documented the results that positive feedback significantly minimizes (the potential for budgetary slacking under conditions of information asymmetry—and vice versa. However, there is no difference in the average budget slack on managers with high or low self-efficacy, who get positive feedback.

**Keywords:** *budgetary slack, feedback, information asymmetry, self-efficacy*

### **Abstrak**

Tujuan penelitian ini adalah menguji pengaruh umpan balik positif dan negatif terhadap senjangan anggaran serta pengaruh efikasi diri terhadap hubungan keduanya pada kondisi informasi asimetri. Penelitian terdahulu telah menguji berbagai cara mitigasi praktik senjangan anggaran, tetapi penelitian tersebut belum memisahkan antara umpan balik positif dan negatif. Penelitian ini memprediksi umpan balik positif (negatif) akan memperkecil (memperbesar) potensi senjangan anggaran pada kondisi informasi asimetri, dan efikasi diri tinggi akan memperkuat umpan balik positif (negatif) dalam mengurangi (meningkatkan) senjangan anggaran pada kondisi informasi asimetri. Berdasarkan data eksperimen, penelitian ini mendokumentasikan hasil bahwa umpan balik positif (negatif) dapat secara signifikan memperkecil (memperbesar) potensi senjangan anggaran pada kondisi informasi asimetri. Namun, tidak ada perbedaan rata-rata senjangan anggaran pada manajer dengan efikasi diri tinggi maupun rendah yang mendapatkan umpan balik positif.

**Kata kunci:** *senjangan anggaran, umpan balik, efikasi diri*

## INTRODUCTION

Globalization, intense business competition, the rapid development of information technology, and shorter product life cycles are some of the factors that transform business processes. Changes in business processes will also prompt changes to the budgeting process (Ahmad et al. 2003), which play an essential role in organizational planning and control.

Budget is used as a basis for evaluating the actual performance of managers (Anthony and Govindarajan 2009). Manager's achievement on budget targets may tell his performance. A manager who exceeds their budget target is usually rewarded with several forms of compensation to maintain success. Notwithstanding the incentives, unethical behavior may also arise if managers deliberately lower their budget targets to achieve the target quickly. The practice is designated as a budgetary slack.

Some factors that promote budgetary slack are the uncertainty of achieving budget targets, the desire of managers to control organizational resources (Nouri 1994), and the existence of asymmetric information between superiors and subordinates (Young 1985; Dunk 1993; Faria and Silva 2013). Budgetary slack may result in the use of organizational resources to be inefficient and futile (Yuen 2004).

Budgetary slack is necessary to investigate as it may be present in all kinds of organizations. There is always asymmetric information on subordinates who understand more about the company's operational conditions than their superiors (Lau and Eggleton 2003). Besides, budgetary slack also has a detrimental effect because the company must spend excess resources (compensation and other resource allocations) for the manager who has undermined his actual production capacity. Budgetary slacking, especially in the private sector, is interesting

because there is no transparency in budget reports; hence it is difficult to detect.

Earlier research has examined ways to reduce the practice of budgetary slacking through informal control (Chong and Ferdiansah 2011; Rodríguez and Naranjo-gil 2016) and formal control (Chen 2012; Yuen 2004). Chong and Ferdiansah (2011); Rodríguez and Naranjo-gil (2016) employed informal control of subordinates' trust in superiors to reduce budgetary slack. Formal control in the form of rewards and punishments may also reduce budgetary slack (Chen 2012; and Yuen 2004). Another effective formal control to reduce budgetary slack in private information conditions is the feedback control policy (Chong and Ferdiansah 2012).

Feedback control policy requires subordinates to report their budget performance to superiors for evaluation. This control can reduce information asymmetry because superiors know their subordinates' capabilities so that budgetary slacking can be easily detected. However, previous research has not distinguished two types of impacts from feedback, namely, positive and negative feedback. Positive feedback contains information that shows that someone has exceeded a goal (Klein 1989) whereas negative feedback indicates weakness, wrong response, and failure to achieve goals (Finkelstein and Fishbach 2012).

Bandura (1989); Mesch et al. (1994); and Philips et al. (1996) asserted that someone would react to the feedback received; and that the reaction depends on the desire to compare the gap between the feedback with the goals. Besides, the concept of Control Theory and Self-Efficacy Theory indicates that each individual's reaction and behavior to feedback may diverge according to the type of feedback they receive. In response to this matter, this study examined two types of feedback (positive and negative) that have not been explored by previous researchers.

Following Social Cognitive Theory, Wood and Bandura (1989) affirmed that the gap created by positive and negative feedback could increase or weaken motivation depending on self-efficacy. Consistent with this, Chong and Ferdiansah (2012) suggested that individual behavior is not only influenced by external factors, but also internal factors. Individual characteristics such as self-efficacy is vital predictors of individual motivation and behavior (Robertson and Sadri 1993; Nease et al. 1999; Olayiwola 2011).

Self-efficacy is an assessment of an individual's ability to do something in a specific condition (Bandura 1977). Self-efficacy is needed in the context of budgetary slack because individuals assess their ability to create and achieve budget targets. This study investigated the self-efficacy variables that affect the relationship between feedback (positive and negative) and budgetary slack.

Budgetary slack may arise due to asymmetric information between superiors and subordinates. Lau and Eggleton (2003) affirmed that information symmetry would not occur under real managerial conditions. Top management managers might set high work standards in order to produce higher productivity (Young 1985). However, subordinates will downplay their capabilities if they have private information about productive capabilities that are not known by their superiors. The situation indicates that budgetary slack arises from asymmetric information so that all hypotheses proposed are in asymmetric information.

This study is necessary to do for two reasons. First, feedback types have not been distinguished in previous studies. Control Theory and Self-Efficacy Theory states that each individual's reaction and behavior to feedback will be different according to the type of feedback it receives. This study analyzed the effect of positive and negative feedback on budgetary slack. Second, a

person's behavior is determined by external factors (feedback) and is determined by internal factors within the individual (Chong and Ferdiansah 2012). As an internal factor, self-efficacy was examined as in its impact on the relationship between feedback and budgetary slack.

Based on experimental data involving 66 undergraduate business students with 2x1 factorial designs between subjects, ANOVA analysis results showed that positive feedback significantly reduces the potential for budgetary slack in conditions of asymmetric information and vice versa. On the other hand, negative feedback reduces the budgetary slack's potential for managers with high self-efficacy. There is no difference in the average budgetary slack for managers with high or low self-efficacy who get positive feedback. The generalization of these results needs to be arranged carefully because hypothetical cases, undergraduate student participants, and the self-efficacy questionnaire in the experiment may mitigate the ability to generalize results.

The overall presentation of the results of this study was organized as follows. The introduction, literature review and the development of hypotheses, research methods, and the results and discussion are sequentially discussed. Conclusions, limitations, and suggestions for further research are presented at the end of this paper.

## LITERATURE REVIEW

Budgetary slack occurs when subordinates downplay their productive capabilities (Young 1985; Kren 2003; Hobson et al. 2011; Faria and Silva 2013) meanwhile allowed to determine work standards that will be used as a basis for evaluation (Young 1985). Productive capability is reduced to obtain budget targets more easily achieved as one intends to produce monetary rewards (bonuses) and

non-monetary rewards (Joshi and Abdulla 1996; Douglas and Wier 2000).

Various methods are applied to reduce productive capability by subordinates, for example by increasing cost estimates, reducing income estimates (Anthony and Govindarajan 2009; Hobson et al. 2011), reducing the estimated output of production (Hobson et al. 2011), and reducing the capability performance (Young 1985; Kren and Maiga 2007). The difference between subordinates' best estimates and budget targets that are not in line with the subordinates' capabilities is budgetary slack.

Some reasons for managers in making budgetary slack are to be evaluated positively (Joshi and Abdulla 1996; Stede 2000), pressure from superiors to achieve budget targets (Onsi 1973), the uncertainty of budget achievement (Onsi 1973; Nouri 1994; Libby 2003), and the desire to control resources (Lukka 1988; Nouri 1994). Budgetary slack must be avoided because it causes various adverse effects, such as not optimal profit. After all, the cost function is not minimized (Onsi 1973), company profits are reduced due to increased costs, compensation and additional consumption of subordinates (Fisher et al. 2002), an additional allocation of resources the fault (Douglas and Wier 2000; Lau and Eggleton 2003), the non-optimal return on investment (Douglas and Wier 2000), and resources become useless and inefficient (Yuen 2004).

### **Feedback and Budgetary Slack**

Feedback is information about the performance of subordinates that is available both for superiors and subordinates in their work environment (Chen and Jones 2004). Feedback is one of the most critical factors to improve organizational effectiveness (Lingnan and Leung 2000) because feedback conveys the compatibility between the nature and quality of subordinate performance against the goals to be achieved by the

organization (Erez 1977; Karl et al. 1993; Lingnan and Leung 2000; Finkelstein and Fishback 2012).

Theories that explain how individuals regulate their behavior according to the feedback they receive are Control Theory (Carver and Scheiher 1979, 1990; Mesch et al. 1994; Klunger and DeNisi 1996; Philips et al. 1996; Vancouver et al. 2001; Sitzmann and Yeo 2013) and Self-Efficacy Theory (Bandura 1977, 1999; Wood and Bandura 1989; Nicklin and William 2011). Control Theory and Self-Efficacy Theory require individuals to compare feedback information and objectives to be achieved in evaluating performance. Both theories affirm that there is a mismatch if the feedback does not match the intended purpose. This mismatch will impact the sustainability of discrepancy production and discrepancy reduction, which play a role in motivation (Philips et al. 1996). Control Theory emphasizes reducing non-conformities, whereas self-efficacy theory highlights the sustainability of mismatching.

Positive feedback contains information that shows that someone has exceeded his goals (Klein 1989). An individual will further expand the gap by maximizing the distance between objectives and standards if there is positive feedback (Klein 1989). The individual may try to set goals more than the standard rather than adjust to the standard or set goals higher than the previous best performance (Carver et al. 1979; Philips et al. 1996). Positive feedback, such as the manager being told that last year's performance was outstanding because it succeeded in achieving the budget target, is estimated to play a role in the context of budgetary slack.

Self-Efficacy Theory emphasizes the sustainability of making a gap when feedback matches the goals. This theory states that positive feedback reflects a match between the feedback and the objectives to be achieved. This type of feedback may encourage managers to improve their goals

and performance by increasing their budget targets, thus reducing the budgetary slack possibilities.

Conversely, negative feedback is characterized by negative information that contains criticism thrown by superiors to discourage subordinates who have failed to achieve their budget targets (Zheng et al. 2013). This type of feedback affects weakness, wrong response, and failure to achieve goals (Finkelstein and Fishbach 2012). This type reflected a mismatch between the feedback with the objectives to be achieved. Negative feedback affects budgetary slack. As an illustration, negative feedback happens when a supervisor told the manager that their last year's performance was deficient because they failed to reach the target budget.

According to Control Theory, individuals will reduce or change previous reference standards (Mesch et al. 1994), change behavior, or reject feedback (Klunger and DeNisi 1996). As a result, the manager will change or reduce the standard reference (budget target) before, reject negative feedback, or change his behavior, leading to budgetary slacking. Budgetary slack can occur when managers reject negative feedback by reducing reference standards (budget targets).

**H<sub>1</sub>: positive feedback will reduce the tendency of managers to budgetary slack rather than negative feedback on the condition of asymmetric information.**

### **Feedback and Self-Efficacy**

Social Cognitive Theory states that individuals are operator agents who not only use brain activity in learning, but also consider other influences, such as future actions that are appropriate to the situation, predict the value to be gained, evaluate the effects of actions, and make changes if needed (Bandura 1999). The theory explains the psychosocial function in the triadic reciprocal causation model. The model

contains a reciprocal causal relationship between three factors; namely, the environment can influence cognition, which further influences behavior (Bandura 1999).

Behavior is an interaction of environmental and cognitive factors. Erez (1977) also states that the interaction function between individual factors and the environment is a behavior that is often called as self-efficacy. Feedback can enter into environmental factors and interact with self-efficacy and further influence the behavior of budgetary slack. Control Theory emphasizes reducing the discrepancy between objectives and negative feedback (Philips et al. 1996), which might have a different impact on individuals. Individuals with high self-efficacy are more likely to produce less effort than individuals with low self-efficacy (Philips et al. 1996; Sitzmann and Yeo 2013). The possible reason in that because individuals with high self-efficacy possess more optimistic perceptions of performance so that they will reduce effort and time resources (Carver and Scheier 1990; Vancouver et al. 2001, 2002, 2005, 2014; Schmidt and DeShon 2009).

In the context of budgetary slack, managers who have high self-efficacy will reduce their efforts and standards if they get negative feedback (Klunger and DeNisi 1996) as the perceived gap between the feedback received and the objectives to be achieved is getting below the standard. The individual will reduce his standards and efforts when getting unpleasant feedback. The reduction of business standards is made by lowering an easily attained budget target; hence the potential budgetary slack becomes even more significant.

Self-Efficacy Theory stresses the sustainability of making a gap when there is a match between the goal and the feedback it receives, in this case, positive feedback. Positive feedback indicates that someone has reached or exceeded the goal. Individuals

with high self-efficacy will increasingly improve their goals and performance when they receive positive feedback, compared to individuals with low self-efficacy (Bandura 1977; 1999).

Managers with high self-efficacy will increase their business if they get positive feedback as the gap between the feedback received and the goals are getting smaller. The manager is more likely to increase his business by setting higher standards and will not lower his budget targets. Therefore, managers with high self-efficacy and get positive feedback favor to minimize the potential for budgetary slack. The hypothesis for testing the interactional impact between feedback and self-efficacy is as follows.

**H<sub>2</sub>: positive feedback will further reduce managers' tendency to do budgetary slack, and negative feedback will increase managers' tendency to do budgetary slack for managers with high self-efficacy than managers with low self-efficacy of asymmetric information.**

## METHODOLOGY

### Experiment Design and Participants

Laboratory experimental methods were conducted to test the hypothesis of this study. The experimental design used was a factorial design between 2x1 subjects. Feedback was manipulated into two conditions: positive and negative feedback. The self-efficacy variable was measured using a questionnaire.

Participants in this study were undergraduate business students who have taken courses in management accounting and management control systems. Students are justified to be valid participants as the assignment of experiments does not require actual budgeting experience (Chong and Ferdiansyah 2012). This proxy was a simple problem-solving assignment that requires participants to understand budgeting techniques. Besides, the experimental partici-

pants have the attributes needed to carry out the experiment protocol; therefore, the experiment can be carried out (Nahartyo 2013).

Participants acted as counseling division managers in a company. Participants who participated in this study were 72 students, and 6 did not pass the manipulation check. Manipulation checks were carried out by participants by giving a checkmark (√) according to the feedback they received. If there was a statement that the participant could achieve the budget target last year, then that participant got positive feedback and vice versa. Participants who give a checkmark not following the manipulation they received were considered to have failed this check. The 66 participants who managed to escape the manipulation were divided roughly equally into each group.

The instrument used in this study was adapted from Chow et al. (1988); Chong and Ferdiansah (2012) with several changes. Changes were made by simplifying the assignment scenario and translating it into the Indonesian context so that the participating students more easily understood it. Group discussions were conducted with several academics for face validity and content validity. Besides, a pilot test was conducted on 38 business students to comprehend the effectiveness of the manipulation of research instruments. Focus group discussions and pilot tests take place before actual experiments were conducted.

### Operational Definition and Measurement

The independent variable in this study is feedback, while the moderating variable is self-efficacy. Feedback is information about the performance of subordinates that is available both for superiors and subordinates. Feedback is divided into two, namely, positive and negative feedback. Positive (negative) feedback was provided by informing participants that last year they

showed outstanding performance (or poor) in achieving budget targets.

Self-efficacy was measured using the New General Self-Efficacy Scale Instrument by Chen et al. (2001). This instrument has high reliability to predict self-efficacy for different tasks in various contexts (Chen et al. 2001). This instrument has been employed in various preceding studies (Cowan and Taylor 2015; Maddy III et al. 2015; and Fast et al. 2014). Participants were divided based on average scores to determine high and low self-efficacy.

The dependent variable in this study is budgetary slack. Budgetary slack is the behavior of subordinates who diminish their productive capabilities (Young 1985; Kren 2003; Hobson et al. 2011; Faria and Silva 2013) when allowed to determine work standards that will be used as a basis for evaluation (Young 1985). Budgetary slack was measured by the discrepancy between the participant's best estimate and the budget collected by the supervisor.

### **Experimental Procedure**

Firstly, participants received three envelopes containing the assignment scenario they would do. The first envelope contained a consent sheet, demographic data, self-efficacy questionnaire, assignment, and best target estimation. The second envelope contained the payment scheme, feedback treatment, and manipulation checks. The third envelope contained the participant's actual assignment that will only be used in determining participant compensation.

In the initial session, participants opened the first envelope and were asked to fill out an agreement sheet containing the participants' willingness to become research participants. Then, participants were asked to fill in demographic data. Participants were then demanded to fill out a self-efficacy questionnaire to determine the level of self-

efficacy. Succeeding, each participant performed an actual assignment to find out their actual capabilities.

All participants were requested to decode by converting a series of letters into numbers, for five minutes. The task was a representation of participants' production activities and intended to determine the actual capabilities of their performance. Afterward, they calculated for themselves of how much code they translated correctly. Participants were then ordered to state their estimated best performance points if they carry out the next similar assignment.

In the second session, participants opened the second envelope and explained the payment scheme they would receive. The slack-inducing payment scheme was carried out by paying the basic salary plus a bonus for each production unit that exceeds the budget. Participants will continue to receive Rp20,000 if they cannot reach the budget target and receive an additional Rp10,000 for each production unit above the budget target. This payment scheme is not used as an actual payment and is only used to internalize the participants' assignment.

Participants are later given an exercise to calculate their payment based on the payment scheme formula to see if they understand the incentive scheme. After an explanation of the incentive payment scheme, participants were given random positive or negative feedback treatment. Subsequently, they are demanded to determine the target budget that will be collected back to the boss by considering the incentive payment scheme and feedback received.

Feedback was provided to all participants, both in positive and negative feedback. The feedback provided to all participants requires each production manager to provide feedback (reports) every three months, to senior managers based on their budget performance. As additional information, participants were advised that they



**Table 1**  
**Descriptive statistics**

Cell 1 (positive feedback)	Cell 2 (negative feedback)
n = 34	n = 32
Average = 0.21	Average = 1.63
Standard deviation = 1.473	Standars deviation = 2.826

had shown excellent performance (positive feedback) and terrible (negative feedback) in achieving budget targets. The statement indicates that the condition of asymmetric information that the participant's capabilities were not exposed to the supervisor. After composing their budgets, participants were required to check manipulation questions. Participants gave a checkmark (✓) according to the feedback they received.

In the last session, participants were directed to open the third envelope to complete the code-breaking task for five minutes. This assignment was a realization of the participant's work and as a basis for granting experimental compensation. At the end of the experiment, participants were given an explanation of the purpose of the research and the manipulation provided (debriefing).

## **RESEARCH RESULTS AND DISCUSSION**

Data were obtained from 66 respondents who passed the manipulation check. The participants correctly responded to the manipulation check questions according to the feedback they received. Six participants failed the manipulation check as they responded to positive feedback manipulation when given negative feedback manipulation, and vice versa.

Before conducting the hypothesis test, a preliminary test consisting of a randomization test and a test of the influence of participant characteristics were carried out. A randomization test was carried out using Chi-

Square. The test results showed that there were no differences in the characteristics of participants between each group (Pearson  $\chi^2$  sex = 9,052; age = 59,264; semester = 11,709). These results indicated that the randomization carried out is effective. Alongside, the effect of participant characteristics on budgetary slack was investigated. ANOVA test results showed that there is no significant difference in budgetary slack caused by the characteristics of the participants (F gender = 0.156; age = 0.918; semester = 0.182).

## **Descriptive statistics**

Descriptive statistical results showed that there are indications of support for all hypotheses. Negative feedback has an average value of budgetary slack that is greater than positive feedback on asymmetric information conditions. Besides, there is an indication of support for the second hypothesis that tests the interaction of feedback and self-efficacy of budgetary slack under conditions of asymmetric information.

## **Hypothesis test**

Data were analyzed using Two Way Anova to confirm the effect of each variable on the dependent variable. The research hypothesis predicts that positive feedback decreases the potential for budgetary slack rather than negative feedback on the condition of asymmetric information.

The test results showed statistically significant support for the First Hypothesis (F = 6.006,  $p < 0.05$ ), which means there is an effect of feedback on budgetary slack. The

**Table 2**  
**ANOVA Hypothesis Test**

Source	Type III Sum of Squares	Df	Mean Square	F	Sig
Corrected Model	65.129 <sup>a</sup>	3	21.71	4.688	0.005
Intercept	45.757	1	45.757	9.88	0.003
Feedback	27.814	1	27.814	6.006	0.017
SE	12.632	1	12.632	2.728	0.104
Feedback* SE	19.993	1	19.993	4.317	0.042
Error	287.129	62	4.631		
Total	405	66			
Corrected Total	352.258	65			

R squared = .185 (Adjusted R Squared = .145)

**Tabel 3**  
**Independent t-test H1**

Slack	Feedback	N	Mean	Std. Deviation	Std. Error Mean	Sig (2-tailed)
	positive	34	0.21	1.473	0.253	0.012
	negative	32	1.63	2.826	0.499	0.015

average value of budgetary slacking in participants who received negative feedback was higher than that of participants who received positive feedback.

An Independent t-test is employed to examine whether the average value of positive and negative feedback is significantly different. The test also showed that the average budgetary gap of participants who received negative feedback was higher and significant (2-tailed) at 0.012 than participants with positive feedback. The number implied that budgetary slack between participants who get positive and negative feedback was significantly different. These three results showed that negative feedback increases manager's tendency to do budgetary slack than positive feedback on asymmetric information conditions.

The second hypothesis (H2) predicts that there is an interaction effect between feedback and self-efficacy in influencing budgetary slack. The analysis showed that there was a significant combined/ interaction effect between feedback and self-efficacy in influencing budgetary slack ( $F = 4.317$ ,  $p < 0.05$ ). The number implies that positive

feedback will further reduce the tendency of managers to do budgetary slack, and negative feedback will further increase the tendency of managers to do budgetary slack for managers with high self-efficacy than managers with low self-efficacy in conditions of asymmetric information.

Additional analysis using an independent t-test was used to observe whether the average value of budgetary slack in managers with high and low self-efficacy significantly differed when getting each type of feedback. Table 4 shows that the average value of budgetary slack by managers with high self-efficacy exceeds the average value of managers with low efficacy when receiving negative feedback (2.50 and 0.50) and is significant at 0.045. The number implies that budgetary slack in participants with high and low self-efficacy who get negative feedback is significantly different.

Table 5 shows that the average value of budgetary slack by managers with high self-efficacy is less than the average value of managers with low efficacy when receiving positive feedback (0.07 and 0.30) and is not significant at 0.663. These results indicated

**Table 4**  
**Negative feedback on self-efficacy**

Slack	Feedback	N	Mean	Std. Deviation	Std. Error Mean	Sig (2-tailed)
	SE high	18	2.50	3.502	0.825	0.045
	SE low	14	0.50	0.760	0.203	0.030

**Table 5**  
**Positive feedback on self-efficacy**

Slack	Feedback	N	Mean	Std. Deviation	Std. Error Mean	Sig (2-tailed)
	SE high	14	0.07	0.616	0.165	0.663
	SE low	20	0.30	1.867	0.417	0.615

Table 5 shows that the average value of budgetary slack by managers with high self-efficacy is less than the average value of managers with low efficacy when receiving positive feedback (0.07 and 0.30) and is not significant at 0.663. These results indicate that budgetary slacking in participants with high and low self-efficacy who receive positive feedback does not differ significantly. The various analysis results of the SPSS output above shows partial support for the Second Hypothesis.

## DISCUSSION

The main consequence of feedback, as aforementioned, predicts that negative feedback will increase managers' inclination to create budgetary slack than positive feedback on the condition of information asymmetry. The results of statistical tests and additional analysis have shown support for this hypothesis. These results are consistent with the Control Theory and Self-Efficacy Theory, which asserts that individuals will try to compare the gap between the feedback they receive and their goals. The comparison results in an increase or decrease in performance and goals. Self-Efficacy Theory reveals the increase in performance and goals due to the suitability of the feedback (positive feedback). Conversely, Control Theory

explains the decline in performance and goals due to mismatched feedback (negative feedback).

Self-Efficacy Theory affirms that the suitability of feedback and goals leads to the sustainability of the gap creation. Sustainability is carried out by increasing performance and goals. Positive feedback is feedback following individual expectations; hence the individual will further improve the performance, goals, and budget targets. The potential for budgetary slack was proven to be smaller in positive feedback than negative feedback because of the correspondence between feedback and goals; consequently, managers do not lower their budget targets.

The results of this study are consistent with and support the results of previous studies in several contexts. Positive feedback in the behavioral field can increase employee commitment and reduce the desire to change jobs (Belschak and Den Hartog 2009). In the context of marketing communication to customers, positive feedback can increase the commitment of new customers (Finkelstein and Fishbach 2012).

Control Theory asserts that individuals will reduce the gap between feedback and the goals to be achieved by reducing their goals or standards. Negative feedback creates a significant gap because it indicates that a person's performance is below standard. Such

feedback prompts managers to reduce goals or standards, namely, budget targets. The potential for budgetary slack proves to be higher in this feedback than positive feedback.

These results are also consistent and support the results of previous studies. Feedback is considered a failed experience so that it can increase anxiety (Daniels and Larson 2001), reducing positive feelings and increasing negative feelings (Ilies et al. 2007). As a result, negative feedback can produce reactions that are the opposite of what is expected (Brown et al. 2016), such as decreasing employee commitment and increasing desire to change jobs (Belschak and Den Hartog 2009).

The second hypothesis predicts that self-efficacy variables affect the relationship between feedback and budgetary slack on asymmetric information conditions. The statistical test results showed that the interaction results between feedback and self-efficacy differ significantly. This indicates that self-efficacy strengthens the effect of feedback on budgetary slack.

Additional analysis for the second hypothesis shows that the average value of budgetary slack by managers with high self-efficacy exceeds the average value of managers with low efficacy significantly when receiving negative feedback (2.50 and 0.50). The study results are in line with the Control Theory, which stresses reducing mismatches between goals and feedback (Philips et al. 1996).

According to Control Theory, individuals with high self-efficacy produce less effort than individuals with low self-efficacy (Philips et al. 1996; Sitzmann and Yeo 2013). The possible explanation is because individuals with high self-efficacy feel more optimistic about their performance, reducing the allocation of business resources and time (Schmidt and DeShon 2009). In the context of budgetary slack, managers who

have high self-efficacy are proven to reduce their efforts and lower their standards when getting negative feedback (Klunger and DeNisi 1996)

This finding is in line with research by Cervone and Wood (1995); and Carver and Scheier (1990); Vancouver et al. (2001, 2002, 2005, 2014). Participants with high self-efficacy in the Cervone and Wood (1995) study rated their capabilities too high. The participant then received negative feedback and resulted in poor performance. Vancouver et al. (2001, 2002, 2005, 2014), and Carver and Scheier (1990) discovered that individuals who have high self-efficacy performed worse because they felt that they had significant progress and reduced their time and effort.

Subsequent additional analysis for the second hypothesis shows that the average value of budgetary slack by managers with high self-efficacy is less than the average value of managers with low efficacy when receiving positive feedback (0.07 and 0.30) but is not significant. The results of this study indicate that budgetary slack in participants with high and low self-efficacy who get positive feedback does not differ significantly. The result does not follow the research hypothesis, which affirms that positive feedback will further reduce the potential for budgetary slack on individuals with high self-efficacy rather than low. Several reasons could explain the insignificance of a part of the second hypothesis.

One source that forms self-efficacy beliefs is the achievement of past performance (Bandura 1977). Experiences that show success (positive feedback) will increase individual confidence. The statement is supported by Karl et al. (1993); Reynolds (2005); and Achterkamp et al. (2015), who found that positive feedback significantly improved a person's self-efficacy. Individuals who previously had low self-efficacy are more likely to increase their

self-efficacy when getting positive feedback. Positive feedback may increase an individual's self-confidence. As a result, the individual believes that he can achieve the budget target, so as not to reduce the budget target to be achieved. The potential for budgetary slack in individuals with low self-efficacy when getting positive feedback will be lower. This explanation answers why budgetary slacking is not significantly different for participants with high and low self-efficacy who get positive feedback.

Individuals with low self-efficacy also show two reactions when given positive feedback (Hattie and Timperley 2007). The first reaction is that the individual will improve his performance to avoid failure so that he will not lower the budget target. The second reaction is that the individual will avoid positive feedback because he feels that he has had enough success and to avoid further risk. Avoidance of positive feedback was seen through research data, which explicated that most participants equated their budget targets with their best estimates.

The research data revealed that 23 participants received positive feedback manipulation and made the budget target the same as the best estimate. This amount was far more than that of participants who lowered their budget targets (7 participants) and those who increased their budget targets (4 participants). Details of 23 participants are 12 participants who had high self-efficacy and 11 participants who had low self-efficacy. This second reason induces the average budgetary slack of participants with high and low self-efficacy who get positive feedback manipulation is not significantly different.

## CONCLUSION

This study aimed to examine the effect of positive and negative feedback on budgetary slack, with self-efficacy as a moderating variable. The results showed that

negative feedback increases budget slack rather than positive feedback. According to Control Theory, reducing the gap between feedback and standards/objectives may be performed by reducing individual effort rather than increasing performance. Negative feedback originates the gap between feedback and goals wider hence an individual might further reduce his efforts; in other words, budgetary gap high possibly occurs.

Self-Efficacy Theory asserts that if there is a gap between feedback that is equal or exceeds the objectives, individuals will be more motivated to improve their performance. Positive feedback indicates that individual performance exceeds the standard. The condition induces individuals not to reduce their budget targets because they incline to improve their performance; hence the potential for budgetary slacking is smaller.

The potential for budgetary slack will be higher if individuals who get negative feedback are individuals with high self-efficacy. Control Theory emphasizes reducing the gap between feedback and standards/objectives in reducing the gap. Individuals with high self-efficacy tend to reduce their efforts because they feel more optimistic about their performance, therefore reducing time and effort. Individuals with high efficacy may further reduce their efforts when receiving negative feedback as the gap between feedback and the goal is getting bigger.

Notwithstanding low or high self-efficacy, budgetary slacking in individuals does not significantly vary when receiving positive feedback. Positive feedback can increase individual confidence, even in individuals with low self-efficacy. An individual will experience an increase in self-confidence not to shrink the budget target so that it can be easily achieved. This condition explains why budgetary slack does not deviate significantly in participants with high

and low self-efficacy who get positive feedback.

This research may still have an external validity since it was conducted by the experimental method. The use of hypothetical cases and student participants in experiments also potentially lessens the ability to generalize research results in different situations or real business practice situations. The manipulation test that has been done in this research is expected to be able to mitigate this weakness. Besides, the use of questionnaires that have been developed in studies of different cultural contexts in the measurement of self-efficacy in this study can bring up the potential for measurement bias. However, the questionnaire has been tested in various previous studies.

The threat of experimental research, such as history and maturation, is possible. History could appear when subjects are placed at different times during the experiment. The hole can be avoided by researchers by doing all stages of the study before the lecture begins. Maturation could also occur when a subject is exhausted. The condition might affect the results of an experiment. The experiment, which takes a maximum of 15 minutes, is expected to reduce these weaknesses.

It was suggested that future studies manipulate rather than measure self-efficacy variables to reduce the potential for measurement bias. Another way is by applying the self-efficacy variable as a mediating variable using Social Cognitive Theory. This theory affirms that one source of self-efficacy is prior experience (Bandura 1977). The previous successful experience might increase self-efficacy, and vice versa. The application of business practitioners' experimental participants might also be carried out to evaluate and improve the generalization of the study's results.

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