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# Budget based bonus, budget emphasis, budget gaming and the impact on budget value

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## Abstract

The issue of budget value has received attention and criticism from many researchers, especially that the budget value is not aligned with the sacrifices made in the budgeting process. The purpose of the study is to examine the effect of budget-based bonus and budget emphasis towards budget gaming and its implications on budget value. A questionnaire survey was used for data collection and was collected by personal and online (via email/link) to managers who have joined the Indonesian Management Association. Non-probability sampling method was used for the sample selection. A total of 286 data were collected and could be analyzed. Data were analyzed using Partial Least Square. The results show that budget emphasis affects budget gaming and also affects budget value. But budget-based bonus has no effect neither towards gaming budget nor budget value. This research enriches the budgeting literature especially for the context in Indonesia and enriches the findings of budget practices in the world. The results contribute to practitioners in making decisions, such as modifying the budget, leaving the budget, or continuing to run the budget. The design of a budget system that has more value-added to the company is an important implication of this research.

## Abstrak

*Isu* budget value *mendapat perhatian dan kritik dari banyak peneliti, khususnya bahwa* budget value *tidak selaras dengan pengorbanan yang dilakukan di dalam proses* budgeting. *Studi ini menjawab kritik terhadap* budget *dalam konteks di Indonesia. Tujuan studi adalah menguji* pengaruh budget-based bonus *dan* budget emphasis *terhadap* budget gaming *serta implikasinya pada* budget value. *Pengumpulan data menggunakan survei kuesioner yang dikumpulkan via personal dan online (melalui email/link) kepada manajer yang bergabung di Asosiasi Manajemen Indonesia. Pemilihan sample menggunakan metode* sampling non-probability. *Sebanyak 286 data berhasil dikumpulkan dan dapat dianalisis. Data dianalisis menggunakan Partial Least Square. Hasil menunjukkan bahwa* budget emphasis *mempengaruhi* budget gaming *dan kemudian berpengaruh juga pada* budget value. *Namun* budget-based *bonus tidak berpengaruh pada* budget gaming *dan juga tidak berpengaruh pada* budget value. *Riset ini memperkaya literatur* budgeting *khususnya dalam konteks di Indonesia dan memperkaya temuan praktik* budget *di dunia. Hasil berkontribusi bagi praktisi di dalam pengambilan keputusan, seperti memodifikasi* budget, *meninggalkan* budget *atau tetap menjalankan* budget. *Desain sistem* budget *yang lebih bernilai tambah bagi perusahaan menjadi implikasi penting riset ini.*

## 1. Introduction

Budgetary control is the planning and control method which is most widely used to plan and control organizational performance (Coveney & Cokins, 2016). Even though budgetary control has been known for a while, but because of the changing business environment, there is a doubt on whether this budget concept is still appropriate. Hansen, Otley, & Van der Stede (2003) showed that budgeting is filled with politics and gameplay, too focused on reducing costs rather than adding value, and consuming too much resources and few benefits.

A budget is considered to have value if the management perceives that the budget helps in achieving organizational goals. Neely, Bourne, & Adams (2003) stated that the presence or absence of the budget value has become the reason for criticizing budget weaknesses. The budgeting process is often not focused on value and does not worth the effort (Hope & Fraser, 2003; Jensen, 2001; Neely et al., 2003). Criticism is also related to the provision of compensation based on the budget (budget-based bonus). According to Hope & Fraser (2003), budget based bonus will encourage the emergence of budget gaming behavior such as setting targets that are easily achieved, modifying actual results, and delaying the expenses needed to increase profits and acquiring compensation on achieving the budget. This budget gaming behavior is a dysfunctional behavior in the budget (Anthony & Govindarajan, 2007) and is going against company's goals.

Previous researches had examined a lot of budget value issues, but the results were not conclusive. Libby & Lindsay (2010) examined companies in North America to test criticism towards the budget. The results showed that many companies rated budgets as useful, and this means that the criticism expressed by some previous researchers (Neely et al., 2003: Hope & Fraser, 2003) that budgets are

not useful is too generalizing. Libby & Lindsay (2010) showed that most companies did not intend to abandon budgetary practices even though they plan to develop better budget concepts.

The research in Europe discusses budgetary practices with different results. Wallander (1999) concluded that budgeting is ancient and dangerous. The reason is, if the company believes in the budget, it will prevent the company from adapting to the new situation, whereas if the company does not believe in the budget, there will be no benefit of planning the budget. Ouassini (2018) showed several other companies in Europe that had left the traditional budget and has gone beyond budgeting. Heinzelmann (2018) also said that beyond budgeting had been implemented in several companies in Scandinavia even though the implementation style was varied. The results of those studies showed differences with those in North America and Canada. These different results have not provided a final conclusion whether traditional budgeting practices should be completely abandoned or not.

In Indonesia, studies that discuss about budget, for example Widanaputra & Mimba (2014), Kahar, Rohman, & Chariri (2016), Ariffianto & Andhariani (2018), still focus on slack in government agencies and the public sector. A few discussed budget practices in private companies, for example SeTin, Sembel, & Agustine (2019) gave an overview of the budget gaming practices in manufacturing companies, but did not examine the causes of budget gaming that is associated with budget value. For a better understanding to budgeting practices in Asia and especially in Indonesia, this study focuses on a broader discussion of budgeting topics (budget value) in the private sector.

Research about budget value in private sector is very important to be conducted in order to answer the criticism towards the budget. The results of the study contribute to providing information for budget practices in companies in making

decisions, such as modifying the budget, leaving the budget or continuing to run the budget.

Libby & Lindsay (2019) showed that budget value is affected by budget gaming, and budget gaming is affected by budget-based bonus, prior period performance, budget emphasis, and trust. Huang & Chen, 2010; Chong & Ferdiansyah, 2012; Chong & Khudzir, 2018, evaluated that budget-based bonus and budget emphasis were more objective and more affecting budget gaming. Therefore, this research focuses on examining the effect of these two variables towards budget gaming and its impact on budget value.

This research enriches the budgeting literature (budget value) in the context in Indonesia and enriches the results of studies about budget practices in the world. This study uses private companies registered in Indonesian Management Association as the subject.

## 2. Hypotheses Development

Budget gaming is conducted based on certain motivations, one of which is the budget-based bonus. Companies that provide compensation based on achieving budget provide incentives for managers to achieve the budget through dysfunctional budget gaming behavior (Libby & Lindsay 2019). Jensen (2003) stated that the pressure to reach the budget will be higher if the bonus is given based on the achievement of the budget.

Huang & Chen (2009) stated that budget gaming is affected by leadership behaviors that provide rewards or punishment. If the leadership is to give rewards, managers are motivated to work hard to reach the budget, tend to play economic games to achieve the budget, and will behave positively towards the budgeting process. But if the leadership is to give punishment instead, managers will be motivated to lie in the budgeting process to avoid sanctions and get rewarded. To overcome the pres-

sures related to achieving the budget, managers tend to behave negatively towards the budgeting process, namely by conducting gaming.

Huang & Chen (2010) showed that budget emphasis increases motivation, but also increases pressure. Managers with a high perception of budget emphasis tend to play games in the budgeting process. Libby & Lindsay (2019) found out that budget emphasis has a positive effect towards budget gaming, which means that the higher the company's emphasis on the budget, managers tend to do budget gaming. The company's emphasis on the budget can be in the form of a tight budgeting deadline, giving bonuses/rewards based on the budget, or giving a budget-based penalty. The higher the budget emphasis will make managers tend to focus on short-term goals to ensure that the performance of achieving the budget is achieved. This is motivated because of having the fear of punishment or because they want to receive rewards and appreciations.

$H_1$: budget-based bonus has a positive effect towards budget gaming

$H_2$: budget emphasis has a positive effect towards budget gaming

Budget value is the added value for company in the budgeting process (Libby & Lindsay, 2019). Budget value is the level of effectiveness of the budget in helping business units to achieve goals. One criticism of the budget according to Neely et al. (2003) is that budget is considered not to provide any value which is proportional to the resources used by the company in the budgeting process. Budget is considered to have no value or added value because it does not help the company in achieving its goals. Too many gaming which make budget practices deviated from what they should be, and this makes the budget failed to provide value for the company. Libby & Lindsay (2010) conducted a study in North

American and Canadian companies and found that budget value is affected by budget gaming. The higher the practice of budget gaming in budgeting, the lower the value obtained from the budget. This means that the higher the budget gaming practices, the lower the budget value created.

$H_3$: budget gaming has a negative effect towards budget value

Libby & Lindsay (2019) found out that budget based bonus and budget emphasis has a positive effect towards budget gaming. Libby & Lindsay (2010) found that budget value is affected by budget gaming. Considering the lack of theory regarding the relationship between budget-based controls, budget gaming and budget value, therefore a mediating variable is used to study this relationship.

Continuing from the hypothesis from H1, H2, namely that budget-based bonus and budget emphasis have a positive effect towards budget gaming, and H3, that budget gaming has a negative effect towards budget value, it is assumed that:

$H_4$: the effect between budget-based bonus and budget value is significantly mediated by budget gaming.

$H_5$: the effect between budget emphasis and budget value is significantly mediated by budget gaming.

## 3. Methods, Data, and Analysis

Questionnaires survey was used for data collection and was collected by personal and online (via email/link) to managers who have joined the 2019 Indonesian Management Association (AMA-Indonesia) which covers various sectors, such as manufacturing, services, trades, banking, and education. AMA members are involved in company management functions. Variations in the types and business sector of the company are likely to generalize the results.

A non-probability sampling method (purposive sampling) was used for sample selection. Respondents selected by contacting them via offline (face-to-face) and online (via email/media) channels. Respondents who can be contacted and are willing to become respondents will be the sample of this research. Data was collected from the period of October 2019-February 2020. From approximately 1,000 managers who are the members of the Indonesian Management Association, there are 286 data collected and can be analyzed. SmartPLS 3.2.9 used for hypothesis testing, by looking at the p-value on the path coefficient of each path.

A total of 3 (three) statement items from Libby & Lindsay (2019) were used to measure budget-based bonus. Responses include whether besides the bonus based on sales, the company applies bonus based on performance; whether the bonus is based on achieving the annual financial budget; and whether bonus is limited to a certain degree. Budget emphasis is measured by 4 (four) statement items adapted from Van der Stede (2000), which are statements related to the importance of achieving the budget in manager's performance assessment. Five (5) budget gaming statement items were measured using the Libby & Lindsay (2010) instrument, which is about gaming behavior, which is identified in their department. Budget value is measured by an instrument developed by Libby & Lindsay (2010) through 3 (three) question items related to the evaluation of the budgeting system in their department. All question items used a 7-point Likert scale, from strongly disagree to strongly agree.

## 4. Results

Based on the results of the questionnaire, the biographies of 286 respondents were obtained in Table 1.

**Tabel 1.** Working department

| Departemen | Frequency | Percentage |
|---|---|---|
| HRD (Human Resource Department) | 107 | 37.4 |
| Accounting | 44 | 15.4 |
| Marketing | 39 | 13.6 |
| Operational | 13 | 4.6 |
| Logistic/supply chain | 12 | 4.2 |
| Production | 11 | 3.9 |
| Finance | 7 | 2.4 |
| Engineering | 6 | 2.1 |
| Banking | 8 | 2.8 |
| R&D | 5 | 1.8 |
| Services | 5 | 1.8 |
| Study program | 5 | 1.8 |
| Sales Commercial | 5 | 1.8 |
| Commercial | 3 | 1.0 |
| IT | 3 | 1.0 |
| Entrepreneurship | 3 | 1.0 |
| Quality | 3 | 1.0 |
| Creative | 3 | 1.0 |
| Communication | 2 | 0.7 |
| Urban planning & Design development | 2 | 0.7 |
| **Total** | **286** | **100** |

ment, general manager, (2.1 percent); R&D, services, study programs, sales commercial (1.8percent); commercial, IT, entrepreneurship, quality, and creative (1.0 percent); communication, urban planning & design development (0.7 percent).

**Tabel 2**. Company type

| Company Type | Frequency | Percentage |
|---|---|---|
| Manufacture | 99 | 34.6 |
| Service | 55 | 19.2 |
| Trading | 42 | 14.7 |
| Banking | 42 | 14.7 |
| Education | 8 | 2.8 |
| Automotive | 6 | 2.1 |
| Office furniture | 6 | 2.1 |
| Service, Trade | 6 | 2.1 |
| Service, Investment | 3 | 1.0 |
| Multi business | 3 | 1.0 |
| Manufacture, Trade | 3 | 1.0 |
| Food beverage | 3 | 1.0 |
| Retail | 3 | 1.0 |
| Restaurant | 3 | 1.0 |
| Trade, Banking | 2 | 0.7 |
| Property development | 2 | 0.7 |
| **Total** | **286** | **100** |

Table 1 shows that the highest number of respondents came from the HRD, which was 37.4 percent, followed by the accounting department (15.4 percent) and marketing (13.6 percent). Then the operational department (4.5 percent), logistics/supply chain (4.2 percent), production (3.9 percent), banking (2.8 percent), and finance (2.4 percent). A small percentage came from the engineering depart-

Table 2 shows the largest number of respondents come from manufacturing companies (34.6 percent), followed by services (19.2 percent), trade, banking (14.7 percent). The rest are educational institutions (2.8 percent); automotive, office furniture, services/trade (2.1 percent); services/investment, multi-business, manufacturing/trade, food/beverage, retail, restaurant (1.0 percent); trade/banking, property development (0.7 percent).

**Table 3.** Outer loading dimension test result (convergent validity)

| Latent variable | Indicator | Loading Factor | Standard | Note |
|---|---|---|---|---|
| | $X_1\_1$ | 0.879 | > 0.5 | Valid |
| $X_1$. *Budget-Based Bonus* | $X_1\_2$ | 0.864 | > 0.5 | Valid |
| | $X_1\_3$ | 0.882 | > 0.5 | Valid |
| | $X_2\_4$ | 0.933 | > 0.5 | Valid |
| $X_2$. *Budget Emphasis* | $X_2\_5$ | 0.947 | > 0.5 | Valid |
| | $X_2\_6$ | 0.959 | > 0.5 | Valid |
| | $X_2\_7$ | 0.866 | > 0.5 | Valid |
| | $Y\_8$ | 0.842 | > 0.5 | Valid |
| | $Y\_9$ | 0.832 | > 0.5 | Valid |
| Y. *Budget Gaming* | $Y\_10$ | 0.862 | > 0.5 | Valid |
| | $Y\_11$ | 0.893 | > 0.5 | Valid |
| | $Y\_12$ | 0.853 | > 0.5 | Valid |
| | $Z\_13$ | 0.914 | > 0.5 | Valid |
| Z. *Budget Value* | $Z\_14$ | 0.957 | > 0.5 | Valid |
| | $Z\_15$ | 0.882 | > 0.5 | Valid |

Table 3 shows the convergent validity test results, namely that all dimensions are stated valid because they have a loading factor value which exceeded the minimum standard of 0.5 (Hair, Ringle, & Sarstedt, 2014).

**Table 4.** Average Variance Extracted Test Result (Convergent Validity)

| Variable | AVE |
|---|---|
| $X_1$. *Budget Based Bonus* | 0.766 |
| $X_2$. *Budget Emphasis* | 0.859 |
| Y. *Budget Gaming* | 0.734 |
| Z. *Budget Value* | 0.843 |

**Table 5.** Cross loading dimension test result (discriminant validity)

| Indicator | $X_1$ | $X_2$ | Y | Z |
|---|---|---|---|---|
| X1_1 | 0.879 | 0.215 | -0.142 | 0.124 |
| X1_2 | 0.864 | 0.134 | -0.040 | 0.114 |
| X1_3 | 0.882 | 0.086 | -0.172 | 0.112 |
| X2_4 | 0.199 | 0.933 | -0.506 | 0.517 |
| X2_5 | 0.198 | 0.947 | -0.568 | 0.579 |
| X2_6 | 0.213 | 0.959 | -0.554 | 0.542 |
| X2_7 | -0.009 | 0.866 | -0.537 | 0.474 |
| Y_8 | -0.101 | -0.435 | 0.842 | -0.376 |
| Y_9 | -0.076 | -0.431 | 0.832 | -0.489 |
| Y_10 | -0.149 | -0.567 | 0.862 | -0.579 |
| Y_11 | -0.191 | -0.507 | 0.893 | -0.537 |
| Y_12 | -0.118 | -0.538 | 0.853 | -0.522 |
| Z_13 | 0.170 | 0.569 | -0.569 | 0.914 |
| Z_14 | 0.157 | 0.567 | -0.548 | 0.957 |
| Z_15 | 0.024 | 0.423 | -0.513 | 0.882 |

**Table 5**. Cross loading dimension test result (discriminant validity)

| Latent Variables | Cronbach's Alpha | Composite Reliability | Suggested value | Notes |
|---|---|---|---|---|
| $X_1$. *Budget-Based Bonus* | 0.852 | 0.907 | > 0.700 | Reliable |
| $X_2$. *Budget Emphasis* | 0.945 | 0.961 | > 0.700 | Reliable |
| Y. *Budget Gaming* | 0.910 | 0.932 | > 0.700 | Reliable |
| Z. *Budget Value* | 0.907 | 0.942 | > 0.700 | Reliable |

**Table 6.** Cronbach's alpha & composite reliability test result (discriminant validity)

| Latent Variables | Cronbach's Alpha | Composite Reliability | Suggested value | Notes |
|---|---|---|---|---|
| $X_1$. *Budget-Based Bonus* | 0.852 | 0.907 | > 0.700 | Reliable |
| $X_2$. *Budget Emphasis* | 0.945 | 0.961 | > 0.700 | Reliable |
| Y. *Budget Gaming* | 0.910 | 0.932 | > 0.700 | Reliable |
| Z. *Budget Value* | 0.907 | 0.942 | > 0.700 | Reliable |

Table 4 shows that the four constructs of latent variables have a good validity (AVE> 0.5) which means the variables are valid (Hair et al., 2014). Table 5 shows the results of cross loading that factor loading of each dimensions towards latent variables is proven to be greater than the relation to the other latent variables so that it can be concluded that discriminant validity is fulfilled.

Table 6 shows that the results of the Cronbach's alpha test and composite reliability are stated to be reliable where all variables have values exceeding the suggested value, which is > 0.7.

## Structural Model / Inner Model Test

**Table 7.** R-square analysis ($R^2$)

| Endogent Variable | R Square ($R^2$) |
|---|---|
| Y. *Budget Gaming* | 0.345 |
| Z. *Budget Value* | 0.428 |

Table 7 shows that the budget gaming variable (Y) is affected by budget-based bonus ($X_1$) and budget emphasis ($X_2$) simultaneously ($R^2$= 34.5 percent), and the budget value variable (Z) is affected by budget-based bonus ($X_1$) , budget emphasis ($X_2$)

and budget gaming (Y) simultaneously ($R^2$= 42.8 percent). The result of the calculation of Q square from the formula $Q_2$ = 1- (1-R12) (1-R22) ... (1-Rp2) (Hair et al, 2014) is $Q_2$ = 1- (0.655 x 0.572) = 0.625. $Q_2$ value is 0.625 where this value is > 0, which indicates that the model has a good predictive relevance.To test the overall quality of the model, goodness of fit is used.

**Table 8**. GoF calculation based on AVE dan R-square ($R^2$) value

| Variables | R Square ($R^2$) | AVE |
|---|---|---|
| Budget Based Bonus | | 0.766 |
| Budget Emphasis | | 0.859 |
| Budget Gaming | 0.345 | 0.734 |
| Budget Value | 0.428 | 0.843 |
| Average | 0.387 | 0.800 |

$GoF = \sqrt{AVE\ R^2}$
$GoF$ = 0.556

The classifications of GoF values are 0.1 (GoF) small, 0.25 (GoF) moderate and 0.36 (GoF) great (Wetzels et al., 2009). Based on the above calculation, the model in this study has a GoF value of 0.556. This value proves that this research model has a large (great) performance of measurement model and structural model.

Table 9 shows the results of the analysis using SmartPLS 3.2.9 with a significance level of 5 percent. For the effect of budget-based bonus towards budget gaming, the original sample value is -0.057 indicates a negative value. T-statistic value is 1.007 > t-table (1.960) and p-value of 0.316> 0.05. Thus $H_1$ is rejected, which means that budget-based bonus does not have a positive effect towards budget gaming. For the effect of budget emphasis towards budget gaming, the original sample value is 0.575, shows a positive value. T-statistic value is 14.643 > t-table (1.960) and p-value 0.000 <0.05. Thus $H_2$ is supported, which means that budget emphasis has a positive effect towards gaming budget. For the effect of budget gaming towards the budget value, the original sample value is -0.392 indicates a negative value. T-statistic value is 7.173> t-table (1.960) and p-value of 0.000 < 0.05. Thus $H_3$ is supported, which means that budget gaming has a negative effect towards budget value.

Hypothesis 4 test was based on the results of hypothesis 1 and 3 test which were calculated using the Sobel test. T-statistic value of 1,008 was obtained, the value of which is between the two values of t-table (1.960) and p-value of 0.314> 0.05. Thus, it is concluded that budget gaming does not mediate the effect of budget-based bonus towards budget value. Hypothesis 5 test was based on the results of hypothesis 2 and 3 test which were calculated using the Sobel test. T-statistic value of 6.385> t-table (1.960) and p-value 0.000 <0.05 was obtained. Thus

it is concluded that budget gaming proves to mediate the effect of budget emphasis towards budget value and this is partially mediating.

## 5. Discussion

### Budget-based bonus and budget gaming

The results showed that budget-based bonus does not have a positive effect towards budget gaming. This result is contrary to Libby & Lindsay (2010). The results also do not support SeTin et al. (2019) which concluded that slack / budget gaming practices still exist in organizations for bonus purposes and receiving a better evaluation result. This research is also not aligned with Jensen, 2003; Chong & Ferdiansyah, 2012; Chong & Khudzir, 2018.

The results of this study are likely to be affected by respondents from a various types of companies, whereas previous researches were only focused on just one type of company. This might result to a more general outcome and does not reflect on any specific type of business.

In addition, the questionnaire instrument did not specify whether the bonus was given based on the overall budget achievement or also taking into account of the budget achievement per division. Respondent's demographic data has showed that the majority of respondents are from the field of human resources (HR). Anthony & Govindarajan (2007) stated that the HR division is a discretionary

**Table 9.** Hypothesis test

| Hypothesis | Original Sample (O) | Mean Sample (M) | Standard Deviation (STDEV) | Standard Error (STERR) | T Statistics (\|O/STERR\|) | p-value | Conclusion |
|---|---|---|---|---|---|---|---|
| $X_1 \rightarrow Y$ | -0.057 | -0.070 | 0.065 | 0.065 | 1.007 | 0.316 | Insignificant , $H_1$ rejected |
| $X_2 \rightarrow Y$ | 0.575 | 0.571 | 0.040 | 0.040 | 14.488 | 0.000 | Significant, $H_2$ accepted |
| $Y \rightarrow Z$ | -0.392 | 0.393 | 0.055 | 0.055 | 7.173 | 0.000 | Significant, $H_3$ accepted |
| $X_1 \rightarrow Y \rightarrow Z$ | | | | | 1.008 | 0.314 | Y not mediating($H_4$ rejected) |
| $X_2 \rightarrow Y \rightarrow Z$ | | | | | 6.385 | 0.000 | Y mediating (H5 accepted) |

X1= Budget Based Bonus; X2= Budget Emphasis; Y= Budget Gaming; Z= Budget Value

expense center, therefore it can be assumed that the awarding of bonus based on the overall budget achievement will not encourage budget gaming practices. Divisions that are discretionary expense centers, expense budget of responsibility centers are usually stable, regardless of how high or low the sales and profits are of the company.

Another argument, this result is most likely related to the performance evaluation system. Onsy (1973) argued that dysfunctional behavior is influenced by the performance evaluation system. A performance evaluation system that is perceived as fair will affect behavior (Lau & Scully, 2015) Therefore, it is likely that the budget-based bonuses were perceived as fair by managers, thereby reducing their tendency to play games.

### Budget emphasis and budget gaming

The finding has indicated that budget emphasis has a positive effect towards budget gaming. This means that the higher the budget emphasis, it will cause the management to focus on short-term goals to ensure their performance has successfully reached the specified budget. Whether it's motivated because of the fear of punishment or motivated by rewards and appreciation. This behavior refers to the budget gaming behavior that is the dysfunctional behavior due to the pressure to fulfill the performance goals related to the budget (Libby & Lindsay, 2010). This finding supports Huang & Chen (2010), where budget emphasis increases motivation, but at the same time also increases pressure, and creates slack (Oktorina & Soenarno, 2013).

### Budget gaming and budget value

The result has indicated that budget gaming has a negative effect towards budget value. This means that the higher the budget gaming practice is, the lower the budget value created. The result supports the result of previous research, namely that budget value is affected by budget gaming (Libby

& Lindsay, 2010). This result is also aligned with Neely et al. (2003) which stated that if there is too much budget gaming during the process of budgeting, it will result the budget practices to deviate from the way it should be.

### Budget-based bonus, budget gaming, and budget value

The finding has indicated that budget gaming does not significantly mediate the effect of budget-based bonus towards budget value. This result is aligned with previous findings, where the budget-based bonus does not have a positive effect towards budget gaming ($H_1$ is rejected), but the budget gaming has a negative effect towards budget value ($H_3$ is accepted). This finding also supports Hair et al. (2014); Baron & Kenny (1986) where mediation is not significant if there is an insignificant path coefficient. As explained before, there is a possibility that this is affected by the respondents from various types of companies combined, with the majority of respondents come from the field of HR.

### Budget Emphasis, Budget Gaming, dan Budget Value

The result has indicated that budget gaming mediates the effect of budget emphasis towards budget value. This result links with the previous findings which showed that budget emphasis has a positive effect towards budget gaming ($H_2$ accepted) and budget gaming has a negative effect towards budget value ($H_3$ accepted). This finding also supports Hair et al. (2014), where mediation is considered significant if all path coefficients are also significant.

## 6.   Conclusion

The result has indicated that budget emphasis has the effect towards budget gaming and has the impact on budget value. However, budget-based

bonus has no effect towards budget gaming and also have no impact on budget value. From a theoretical perspective, the result of this study supports Anthony & Govindarajan (2007) who stated that the application of budgeting can affect aspects of managerial behavior. The result has proved that motivation based on budget can affect behavior. Although motivation in the form of a reward which is bonus, does not affect behavior, the company's pressure on the importance of the budget is what motivates the managers in behaving dysfunctionally. This finding has also provided a reference for practitioners in the business world. The application of the budget has the potential to provide value that is not in accordance with the company needs because it can boost gaming behavior. Practitioners can consider the application of the budget in the company more maturely by designing a budget system that can overcome gaming behavior.

This study used very heterogeneous sample, so that the results may be less relevant for certain types of business, such as manufacturing or merchandising. Future research could select sample focusing on certain types of industry. This research is limited to only a few variables, such as budget-based bonus, budget emphasis, and budget gaming as variables that affect the budget value. Future studies are expected to add other variables, such as trust, fairness and prior period performance. This research used a survey method, therefore the limitations of this method are likely to be inherent in this study, for example the limitations in obtaining a representative and unbiased sample. Future studies could collect data by direct interviews with the respondents. This research provides recommendations for leaders in formulating the budget system which can reduce the dysfunctional behavior of budget gaming by designing a budget system that pays attention to the other aspects. For examples in determining sales targets, it needs to be accompanied by A / R day target with a certain level so that the managers' chance in gaming is lower. Other than that, knowing that the budget emphasis can trigger gaming behavior, the application of beyond budgeting could be one of the alternatives for companies to continue to have evaluation tools without having to trigger dysfunctional behavior.

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