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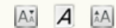
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Roles of Fairness in the Relationship between Performance Evaluation Systems and Budget Gaming Behavior

(Peranan Keadilan dalam Hubungan antara Sistem Penilaian Prestasi dan Tingkahlaku Permainan Belanjawan)

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ABSTRACT

Budget gaming is still an unsolved problem and requires a serious handling. The purpose of this study is to investigate if the perceptions of procedural fairness mediate the relationships between performance evaluation systems and budget gaming behavior. The survey was conducted on go public manufacturing companies in Indonesia with a division manager as a unit of analysis. A total of 128 samples were analyzed using Partial Least Square Warp PLS 3.0. The results show that procedural fairness significantly mediates the relation between non-financial measure and budget gaming. However, procedural fairness does not mediate the relationship between relative performance evaluation and budget gaming. This study supports goal setting theory, agency theory, and organizational justice theory which provide practical implications in terms of overcoming budget gaming through the use of non-financial performance measures.

Keywords: Performance evaluation systems; budget gaming; procedural fairness

ABSTRAK

Permainan belanjawan masih merupakan masalah yang belum dapat diselesaikan dan memerlukan penanganan yang serius. Kajian ini bertujuan untuk mengkaji hubungan persepsi tentang keadilan prosedur sebagai penengah hubungan antara sistem penilaian prestasi dan perilaku permainan belanjawan. Kajian ini dijalankan pada syarikat pembuatan awam di Indonesia dengan pengurus bahagian sebagai unit analisis. Sejumlah 128 sampel dianalisis dengan menggunakan Partial Least Square Warp PLS 3.0. Hasil penemuan menunjukkan bahawa keadilan prosedur secara signifikan mengantara hubungan antara ukuran bukan kewangan dan permainan belanjawan. Walau bagaimanapun, keadilan prosedur tidak berperanan mengantara hubungan antara penilaian prestasi relatif dan permainan belanjawan. Kajian ini menyokong teori penetapan matlamat, teori agensi dan teori keadilan organisasi dan memberikan implikasi praktikal dari segi mengatasi permainan anggaran melalui penggunaan ukuran prestasi bukan kewangan.

Kata kunci: Sistem penilaian prestasi; permainan belanjawan; keadilan prosedur

INTRODUCTION

Budget gaming behavior is a dysfunctional behavior routinely adopted by managers in the budgeting process (Collins et al. 1987). The budget process that includes budget planning and implementation is a risky process for budget gaming (Libby & Lindsay 2010). For example, managers negotiate budgets that are more achievable, delaying the required expenses, spending unused budgets at the end of the period (Libby & Lindsay 2010). Budget gaming has a negative effect on long-term performance (Libby & Lindsay 2010; Lidia 2014).

Despite having serious effect, budget gaming has occurred for decades, e.g Huang and Chen (2010); Hartmann and Maas (2010); Davis et al. (2006). The rise of budget gaming practices was caused by the wide range of traditional budgeting practices which operated with *command and control* in the *top-down* hierarchy are difficult for companies

to abandon (Sandalgaard & Bukh 2014; Cardoso 2014). Therefore, budget gaming is still an unsolved problem in budgeting (Baerdemaeker & Bruggeman 2015; Libby & Lindsay 2010). Moreover, budgets are used in all organizations for many purposes (Kenno et al. 2018) which is why budgeting issue is an important topic to continue its research and requires a serious handling (Libby & Lindsay 2010).

There has been a lot of research that attempted to provide solutions to budget gaming practices, especially researches that focus on budgeting system (e.g. information asymmetry, budget participation and budget emphasis). However, the variables that had been tested have not sufficiently explained the budget gaming behavior so that they still need to identify the effect of other explanatory variables (Baerdemaeker & Bruggeman 2015). Example, budget participation is the variable that is most commonly associated with budget dysfunctional behavior, but the results show an inconclusive relationship (e.g. Ogiedu & Odia 2013; Collins 1978). The results concluded by Jensen (2003), indicates that the source of the problem is not on the budgeting system, but on how the organization pays its employees (performance evaluation system). Long before, Onsy (1973) also suggests that a clear performance evaluation system would likely reduce the dysfunctional behavior. Lau and Oger (2012) also emphasized that performance evaluation system is an important aspect of the management accounting system because of its effect on behavior. From these results and arguments, it is important for organizations to understand how performance evaluation systems affect budget gaming.

Previous studies on performance evaluation systems and its relation to dysfunctional behavior (slack) stopped at the use of financial performance measures (e.g. Baerdemaeker & Bruggeman 2015; Wiersma 2017) with results that are still debating about the advantages and the consequences of dysfunctional behavior. After the era of financial performance measures, in the 1980s, Management accounting proposes a non-financial performance evaluation and relative performance evaluation developed in the era of the 2000s as a more adaptive management accounting technique (Morlidge & Player 2010). The development of performance evaluation system has not been followed by research that associates it with the budget gaming. All this time, non-financial measure researches were associated with employee outcomes and performance (e.g. Lau & Scully 2015; Chia et al. 2014; Agritansia & Sholihin 2011), and relative performance evaluations generally related with incentive contract and executive compensation (e.g. Chen et al. 2012; Dekker et al. 2012). Until now, empirical evidence about whether the two performance evaluation systems that are seen as more adaptive have effects towards managerial behavior has not been found (Nguyen et al. 2018). There was a research gap regarding the relationship between performance evaluation systems and budget gaming behaviors, also strengthen the argument of Daumoser et al. (2018), which is although research topics of budget gaming (slack) are well established, this issue still needs further research because this topic is related to complex interactions between individual and organizational interests.

Referring to goal setting theory (Locke & Latham 1990) and agency theory (Jensen & Meckling 1976) that to overcome moral hazard, companies should have had an accordance of purpose through a proper performance evaluation system. This study highlights the effort to align the individual and organizational goals through an appropriate performance evaluation system, through the question “Whether and how the utilization of non-financial performance measures and relative performance measures have an effect on budget gaming behavior”.

Considering that it is not yet clear whether the performance evaluation system has a positive or negative effect on budget gaming, so this study uses mediating variables. Organizational justice theory explains that individuals are concerned on fairness (Greenberg 1987) and because this study investigates performance evaluation system that is a part of the procedure, therefore, procedural fairness is used as a mediating variable. Understanding perceptions of fairness is very important because it has an impact on behavior.

Previous studies have associated procedural fairness with budget gaming behavior in the context of budgetary fairness (e.g. Özer & Yilmaz 2011) and have not associated it to the context of performance evaluation. Likewise, fairness perceptions on performance evaluation systems are associated with employee outcomes and has yet to be associated with the budget gaming behaviour. Considering that performance evaluation system can support the perceptions of fairness (Jack et al. 2018) and employees tend to react positively to performance evaluation system that is considered fair (Lau & Oger 2012), this study fills the gap in the literature by showing the relationship of procedural fairness on budget gaming behavior in the context of performance evaluation system.

This study contributes in enriching the literature on management control systems and increasing the understanding regarding the mechanism of performance evaluation systems on budget gaming behavior through procedural fairness. This study also expands the research on relative performance evaluation both in topics and research methods. So far, studies on RPE have not been associated with behavioral impacts and experimental methods and archival data are generally used.

This study also contributes to practice, namely providing understanding of how budgeting interacts with performance evaluation system, specifically in showing the way employees are being evaluated can have an effect on the emergence of budget gaming behavior. With this understanding, organizations can design a performance evaluation

system that is perceived as fair and can reduce budget gaming. This finding provides solutions and practical implications for budget gaming problems in go public manufacturing companies in Indonesia, namely solutions by conducting performance evaluation using non-financial performance measures. Manufacturing managers in Indonesia are chosen as samples because so far, the budget gaming researches have been focusing on western countries and a few parts in Asia, namely Huang and Chen (2010) research in Taiwan.

LITERATURE REVIEW

THE UNDERLYING THEORIES

This study uses agency theory, goal setting theory, and organizational justice theory to explain the relationship between performance evaluation systems and budget gaming mediated by procedural fairness. In the context of budgeting, achievement of targets often creates a moral hazard (gaming) and to overcome this, strict control is needed (Jensen & Meckling 1976) through a performance evaluation system. Goal setting theory emphasizes the importance of clear goals as directions for employees (Locke & Latham 1990) and this study argues that the existence of clear goals through an appropriate performance evaluation system will align the individual and organizational goals and will have an effect on behavior. Organizational justice theory refers to the importance of a sense of justice for individuals (Greenberg 1987), and this study investigates the perceived fairness of the performance evaluation system and its consequences on behavior.

NON FINANCIAL PERFORMANCE MEASURES

Non-financial performance measures refer to three perspectives from the Balanced scorecard, namely learning and growth perspective, internal business process perspective and customer perspective (Kaplan & Norton 1996). Learning and growth perspective focuses on long-term growth, e.g employee training, turnover rate, satisfaction level, etc. The internal business process perspective focuses on internal processes for the company's excellence, namely level of output defects, product quality. The customer perspective focuses on customers and market segments, satisfaction, number of complaints, etc.

RELATIVE PERFORMANCE EVALUATION

Relative performance evaluation refers to the performance standard that uses peer performance as the benchmark (Van Elten 2017), namely evaluating performance by comparing the employee's performance with the peer's and / average performance in one division (O'Grady & Akroyd's 2016).

PROCEDURAL FAIRNESS

Procedural fairness are judgements about how fair the use of rules, processes, and means in making decisions (Tang & Sarsfield-Baldwin 1996). The criteria for fairness which was explained in procedural fairness literature according to Lind and Tyler (1988); Leventhal (1980) are accuracy and completeness of information, retention of control over decisions, avenues to rectify, adoption of a long-term perspective, the manner in which people are treated, and consideration of the interests of all parties. In the context of performance evaluation, employees perceive fairly to performance evaluation procedures, if the procedure leads to a performance evaluation based on accurate and complete information; reflects to long-term interests; giving opportunities for employees to appeal and fix unfair judgments, reflecting the performance that is within the control of employees; protecting the interests of employees and showing respectful and dignified treatment towards employees (Lau & Moser 2008).

BUDGET GAMING BEHAVIOUR

Budget gaming behavior describes the planned manipulation behavior of employees regarding costs, sales, and other manipulations in the budgeting process (Bart 1989), e.g. negotiate a budget that is easy to achieve, postpone routine expenses that have a significant impact, spend the budget at the end of the budget period.

CONCEPTUAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

NON-FINANCIAL MEASURES AND PROCEDURAL FAIRNESS

The use of non-financial measures as performance evaluation's criteria has a positive effect on judgments of procedural fairness of employees (Lau 2015; Chia et al. 2014). The use of non-financial measures is perceived fairly by employees because they meet the fairness criteria (Lau & Moser 2008). The following are arguments about the fairness criteria which is reflected in the non-financial performance measures:

1. Non-financial performance measures are broad and varied, so performance evaluations based on non-financial measures are considered more comprehensive and accurate (Lau & Moser 2008). Non-financial measures are not related to the periodic reporting cycle, so they can measure the achievement of performance results in a broader dimension and a longer period of time, allow employees to be acknowledged and provides various perspectives for superiors in evaluating employees' performance, so as to improve employees' perceptions of procedural fairness (Agritansia & Sholihin 2011).
2. Non-financial performance measures reflect the performance that is in the control of employees. Non-financial performance measures can be expressed in variety of non-monetary requirements (Lau & Oger 2006). This allows employers to develop measures that are adjusted specifically to the individual situations. These flexible performance measures more accurate, meaningful and easier for individuals to understand, and relate to this performance measure. Employees are more confident and capable of controlling situations of what they must do to achieve good performance evaluation (Chia et al. 2014).
3. Non-financial performance measures allow employees to appeal and fix unfair judgments, to have an easy understanding of things related to their performance measures and to control the work that will be evaluated, so this condition makes it easier for employees to participate in the target setting process, finding explanations and feedback, and allowing them to appeal against superiors' decisions regarding unfair performance evaluation (Chia et al. 2014).
4. Non-financial performance measures can protect employees' interests / can increase the level of employee control on performance evaluation and become a tool to protect themselves. This condition is in accordance with Thibaut and Walker (1975), namely that even if someone has submitted the final decision to another person, they still need to have control to protect their interests.
5. Non-financial performance measures reflect long-term interests. Procedural fairness judgment is also affected by long-term consideration (Lau & Moser 2008). Because non-financial measures are not limited by time considerations, this measure is more useful as a tool to communicate the organization's goals, expectations, and long-term results. This allows employees to understand how their relation with the organization will be valued in long-term.

The explanation above shows that the use of non-financial performance measures tends to be associated with an increase in the fairness perception. The use of non-financial performance measures is perceived by employees as a fair way to evaluate their performance (Jack et al. 2018).

H_{1a} The use of nonfinancial measures as criteria for performance evaluation is positively related to employees' perceptions of procedural fairness.

RELATIVE PERFORMANCE EVALUATION AND PROCEDURAL FAIRNESS

Howell and Dipboye (1986) state that relative performance evaluation can lead to unfair perceptions for employees because superiors are forced to place employees into categories that represent normal distribution, whereas perhaps the actual performance is not normally distributed. This can cause employees to receive lower performance evaluations than they should. Murphy & Cleveland (1995) show that the use of relative performance evaluation has negative effect on performance evaluation systems because it is inconsistent with getting feedback and for delivering information. This might happen because of the feedback obtained is dependent not only towards the performance of employees, but also on the performance of employees which relative towards the performance of colleagues.

The use of relative performance evaluation shows performance measurement criteria that are not clearly defined, unclear performance expectations and performance standards that are less consistent, so that relative performance evaluation may be considered unfair (Roch et al. 2007). For example, in measuring relative performance, in some situations, an employee will be evaluated as an excellent employee because other employees in the group perform at a certain level below the performance of this employee. However, if employees with the same performance level are

transferred to different groups, there is a possibility that the performance level will be lower than the level of other colleague's performance in the group, so that they will be evaluated as non-superior employees. Thus, employees will have an unfair perception of the use of this relative performance evaluation.

The use of relative performance evaluation has the potential on not supporting procedural fairness criteria, namely consistency and accuracy criteria and may also violate ethics and suppression of bias criteria. Performance standards are inconsistent, because they depend on individuals in group comparison and when the composition of the comparison group changes, it also changes the results of evaluating one's performance, and this results in inconsistent in performance evaluation. Performance evaluation of an employee may be a reflection of work group performance as the employee's own performance, so that performance evaluation can also be considered inaccurate in reflecting one's performance. This can result in a perception made by employees as a biased performance evaluation system. The use of relative performance evaluation is also attached to the possibility of shifting or changing of performance standards, and this can be regarded as unethical because employees might think that 'it is not true' that their rank is highly determined by comparative performance which is not clearly understood.

This study suspects that the use of relative performance evaluation as a measure of employee's performance will have an unfair perception by employees.

H_{1b} The use of relative performance evaluation as criteria for performance evaluation is negatively related to employees' perceptions of procedural fairness.

PROCEDURAL FAIRNESS AND BUDGET GAMING

Colquitt et al. (2001) shows that procedural fairness is significantly related to behaviors. The study of procedural fairness in management accounting tends to focus on the context of budgeting and generally shows that fairness is negatively related with dysfunctional behaviors. Implementation of procedures in a fair way plays an important role in reducing the tendency of managers to create gaming (Magner et al. 2006). The result is also strengthened by Chong and Strauss (2017); Özer and Yilmaz (2011), namely that managers' perception on procedural fairness has a negative effect on the tendency of managers to create slack.

Although the research which directly examines the relationship between procedural fairness and budget gaming is still very limited, Skarlicki et al. (1999) emphasize that procedural fairness is related with a negative, subtle, and hidden employee behavior such as damaging equipment, wasting company materials and damaging work processes. Efforts to create budget gaming (slack), is a type of negative employee behavior, which is similar to employees subtly and quietly trying to avoid formal organizational control (Little et al. 2002).

Based on the explanation above, this study expects that managers' perceptions regarding the implementation of procedural fairness will reduce budget gaming. Because managers perceived that procedures are regulated and implemented adequately, managers will perceive a higher level of procedural fairness and tend to create less budget gaming.

H₂ Employees' perceptions of procedural fairness are negatively related to budget gaming.

MEDIATING EFFECT OF PROCEDURAL FAIRNESS

The previous studies showed that the relationship between performance evaluation system and employee behavior and/or outcome is an indirect relationship (e.g. Baerdemaeker & Bruggeman 2015; Lau & Scully 2015; Chia et al. 2014). This study suspects that the relationship between performance evaluation systems and budget gaming behavior is mediated by procedural fairness.

A clearer, more complete, and easier to understand non-financial performance measure, has a positive effect on employees' perceptions of fairness (e.g. Chia et al. 2014; Lau & Scully 2015) and if employees perceive fairness on performance evaluation measures, their perceptions will affect behavior (e.g. Özer & Yilmaz 2011; Lau & Scully 2015). In accordance with H_{1a}, the use of non-financial measures has a positive effect on procedural fairness and H₂, procedural fairness is negatively related to budget gaming, so this study predicts that procedural fairness mediates the relationship between non-financial measures on budget gaming.

Relative performance evaluation uses performance criteria that is not clearly defined, unclear performance expectations, less consistent performance standards will be perceived unfair by employees (e.g. Murphy & Cleveland 1995; Howell & Dipboye 1986), and the perception of unfairness felt by employees will affect behavior (e.g. Özer & Yilmaz 2011; Lau & Scully 2015). In accordance with H_{1b}, the use of relative performance measure as performance

evaluation criteria is negatively related to procedural fairness and H_2 , procedural fairness is negatively related to budget gaming, so this study predicts that procedural fairness mediates the relationship between relative performance evaluation with the budget gaming.

This argument is strengthened by Hair et al. (2014) with a statistical explanation, namely mediation is considered significant if all path coefficients are also significant.

H_{3a} The relationship between non-financial measures and the tendency of employees to create budget gaming is significantly mediated by procedural fairness.

H_{3b} The relationship between relative performance evaluation and the tendency of employees to create budget gaming is significantly mediated by procedural fairness.

The following conceptual framework in Figure 1.

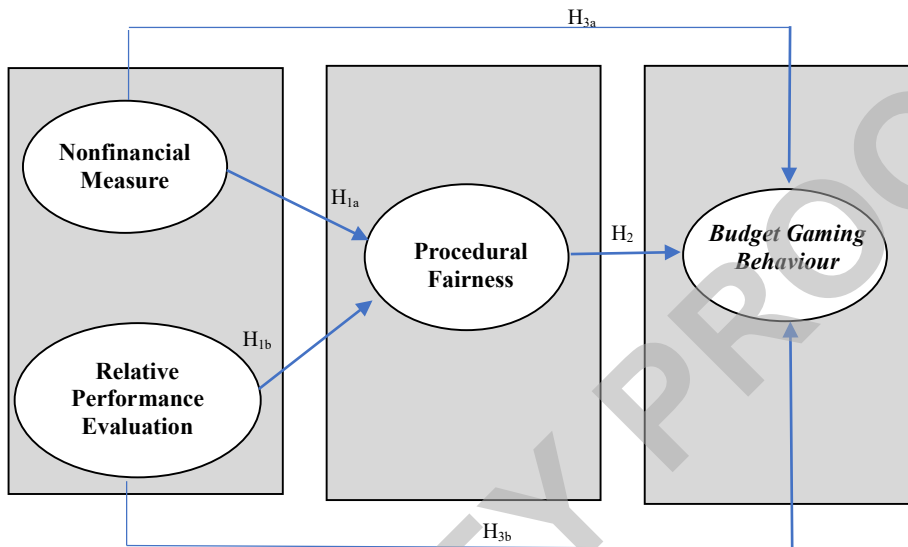


FIGURE 1. Conceptual model

METHODOLOGY

PRELIMINARY STUDY

This study was preceded by a preliminary study conducted in July-August 2018 to obtain the evidence on practice of budget gaming in go public manufacturing companies and obtain confidence that the research instruments are appropriate to the context in Indonesia. Data were collected through interviews, surveys, and analysis of directors' reports and management discussions on financial reports in three companies for the period of 2013-2017. The results show that budget gaming practice still occurs in manufacturing companies and from the results of interviews with four managers and the results of surveys on 31 respondents, information about the budget gaming is related to the performance evaluation system is obtained. Pilot testing was conducted on the pre-existing instruments, namely 17 non-financial performance measures items; 3 relative performance measure items; 7 procedural fairness items, and 9 budget gaming behavior items. From the results of pilot testing and interviews, the number of question items used for this study was obtained, namely 14 non-financial performance measures items; 7 relative performance measures items; 5 procedural fairness items, and 8 budget gaming behavior items.

SAMPLE SELECTION & DATA COLLECTION

The survey was conducted on go public manufacturing sector in Indonesia with the division manager as the unit of analysis. The go public manufacturing industry was chosen for reasons namely, (1) for industrial control (He & Lau 2012); (2) non-financial performance measures are more commonly used in large companies (Lau & Scully 2015); (3)

Performance evaluation systems related to control procedures and the procedures are more complex in large companies (Lau & Moser 2008); (4) manufacturing industry is one of the largest industries in Indonesia.

Managers were chosen because the manager level is regarded to have been accommodating greater responsibilities (He & Lau 2012). This study does not limit the functional area. Managers' level in each department are believed to be processing with the budget. The selection of managers from various departments allows generalization in research results (Hopwood 1972).

This study used non-probability sampling techniques for practical considerations of data accessibility. The convenience sampling technique is used in the sample selection process. Questionnaires were obtained through questionnaires distributed via postal, personal questionnaires, and questionnaires via links. Of the 156 responses, 128 questionnaires could be processed for further analysis.

TABLE 1. Respondents' profile

Respondents' Profile	Σ Respondents	%
Sub-Industries		
<i>Consumer Goods</i>	54	42.16
<i>Basic and Chemical</i>	44	34.36
Others		
<i>Automotive and Components</i>	9	7.03
<i>Textile and Garment</i>	7	5.46
<i>Cable</i>	5	3.90
<i>Gas</i>	3	2.34
<i>Elektronics</i>	2	1.56
Total	128	100
Gender		
<i>Male</i>	98	76.6
<i>Female</i>	30	23.4
Total	128	100
Age		
<i>< 30 years</i>	12	9.4
<i>30 – 40 years</i>	27	21.1
<i>41 – 50 years</i>	62	48.4
<i>51 – 60 years</i>	26	20.3
<i>> 60 years</i>	1	.8
Total	128	100
Level of Education		
<i>Bachelor</i>	97	75.8
<i>Master</i>	29	22.7
<i>Doctoral</i>	2	1.6
Total	128	100
Division		
<i>Production</i>	33	25.8
<i>Marketing</i>	49	38.3
<i>Accounting</i>	17	13.3
<i>Human Resources</i>	16	12.5
<i>Research & Development</i>	2	1.6
<i>Others</i>	11	8.6
Total	128	100
Managerial Position		
<i>< 2 years</i>	18	14.1
<i>3 – 5 years</i>	36	28.1
<i>6 – 8 years</i>	30	23.4
<i>9 – 11 years</i>	11	8.6
<i>> 11 years</i>	33	25.8
Total	128	100
In charge of less than 100 employees		
<i>< 100 employees</i>	111	86.7
<i>100-200 employees</i>	9	93.8
<i>200-500 employees</i>	2	95.3
<i>>500 employees</i>	6	100
Total	128	100

Table 1 shows the respondents' profile. The most participated manufacturing sub-industries were the consumer goods sub-industry (54 respondents; 42.16 percent); basic and chemical sub-industries (44 respondents; 34.36 percent) and the rest from other sub-industries. Demographic data shows the majority of respondents are male (76.6 percent); aged between 41-50 (48.4 percent); with undergraduate level of education (75.8 percent); from the marketing division

(38.3 percent); has held the managerial position for 3-5 years (28.1 percent), experienced for over 11 years (25.8 percent); and in charge of less than 100 employees (86.7 percent).

MEASUREMENT OF VARIABLES

NON-FINANCIAL MEASURE

Performance evaluation with non-financial measures refers to the three perspectives of the Balanced Scorecard developed by Kaplan and Norton (1996), namely customer perspective, internal business process, and learning and growth perspective. Non-financial performance measures are measured by 14 items of questions which were initially developed by Hoque et al. (2001) which came from three dimensions of non-financial measures in the Balance Scorecard of Kaplan and Norton (1992). Because Hoque et al. (2001) instrument was initially used to measure organizational performance, while this study intends to measure managerial performance, this study accommodates the words in the questionnaire from the Hopwood instrument (1972) that measures managerial performance. Specifically, respondents were asked "When your superior evaluates your performance, how important do you think your superior relates it with 14 non-financial measures items?" The 14 items consist of 4 items related to internal business processes; 3 learning and growth items and 7 items related to the customer. Adoption of Hopwood's sentence, 1972 has also been conducted by many previous researchers (e.g. Chia et al. 2014; Agritansia & Sholihin 2011).

RELATIVE PERFORMANCE EVALUATION

Relative performance evaluation uses the term used by Van Elten (2017), namely RPE-Use. RPE-Use measures how far will the peer performance serve as a reference for superiors to evaluate the performance of managers at the end of the period. There are 7 items to measure RPE-Use, namely 2 items from Van Elten, 2017 and 5 items from the interview results. 2 items from Van Elten's statement, 2017, namely first, how far / how important it is for your boss to refer to peer performance when evaluating your performance, in situations when you are performing well and second, in situations when you are not performing well. 5 items from the interview results in the preliminary study, namely the relative performance evaluation measured by comparing the performance of managers and peers in terms of (1) delivering ideas; (2) accepting additional duties outside of the main responsibilities; (3) completing additional tasks outside of the main responsibilities; (4) overcoming employees turnover; (5) pressing overtime.

PROCEDURAL FAIRNESS

Procedural fairness are judgments about how fair the rules, processes and means are which are used by superiors to evaluate performance (He & Lau 2012). Procedural fairness is measured using 5 items from the instrument developed by Colquitt et al. (2001). This instrument measures respondents' perceptions on the fairness of performance evaluation procedures in organizations, namely whether they fulfil the principle of justice according to Leventhal, 1980, such as, accuracy, representation, bias suppression, consistency, ethicality, and avenue for appeal.

BUDGET GAMING BEHAVIOUR

Budget gaming behavior is an intentional and planned behaviour by managers by manipulating current sales, costs, profit estimation and other manipulations in the budgeting process. Budget Gaming Behavior is measured by 8 questions items which came from 5 items developed by Libby & Lindsay (2010) and 4 items adapted from the slack attitude measure of Onsy (1973). Statement's that measure respondents' perceptions on procedural fairness and respondents' answers regarding budget gaming behaviour are using a 7-point interval scale, namely scale 1 (strongly disagree) to scale 7 (strongly agree).

DATA ANALYSIS AND RESULTS

Structural equation modelling (SEM) is used with variant-based techniques which is partial least square (PLS). The reason for using PLS is because the purpose of this study is to do a casual - predictive analysis, which is to analyze the relationship between the performance evaluation system and budget gaming behavior through perceptions mediation of procedural fairness. Research for casual purposes - predictive analysis and low theory information support is suitable for using PLS (Joreskog & Wold, 1982). Another reason is that the question items in questionnaires are reflective. PLS

is also suitable when items in instruments are reflective indicators (Hair et al. 2014). The standard error sobel test calculation formula for paths with a single mediator, which is *squared root of $(a_i^2 se_{b_i}^2 + b_i se_{a_i}^2)$* , where $se_{a_i}^2$ and $se_{b_i}^2$ are the squared standard errors of a_i and b_i . (Hayes 2013), will be used to test the significance of variables of procedural fairness mediation.

MEASUREMENT MODEL

Discriminant validity and convergent validity are used for Validity test. Discriminant validity refers to cross loadings of the indicators, with rule of thumb for acceptable outer loading values is ≥ 0.7 (Hair et al. 2014). The discriminant validity test results towards 34 questions items, has been obtained nine items with an outer loading below 0.7, namely seven items of non-financial performance measures (NFM 1, loading = 0.607; NFM2, loading 0.670; NFM3, loading 0.647; NFM5, 0.617; NFM6, loading = 0.577; NFM7, loading 0.617 and NFM9, loading 0.613). One procedural fairness item, which is PF2, with loading value of 0.661 and one budget gaming item (BG 1, loading = 0.667). Furthermore, these items are not further analyzed. Confirmatory factor analysis was conducted again until no more loading factors that were found scoring 0.7 and below 0.7. The final results are shown in table 2.

TABLE 2. Validity indicator test (outer loadings)

Cross Loadings	NFM	RPE	BG	PF	SE	P value
<i>Nonfinancial measures</i>						
NFM8	0.730	0.151	0.078	0.022	0.085	<0.001
NFM10	0.887	-0.010	-0.203	-0.192	0.145	<0.001
NFM11	0.890	-0.063	0.129	-0.038	0.092	<0.001
NFM12	0.929	-0.077	-0.017	0.024	0.112	<0.001
NFM13	0.903	-0.008	-0.023	0.115	0.127	<0.001
NFM14	0.835	0.040	0.054	0.075	0.091	<0.001
<i>Relative Performance Evaluation</i>						
RPE1	0.018	0.908	0.017	0.080	0.061	<0.001
RPE2	0.057	0.877	0.005	0.028	0.067	<0.001
RPE3	0.021	0.943	0.152	0.074	0.044	<0.001
RPE4	0.019	0.949	0.084	0.073	0.051	<0.001
RPE5	0.030	0.899	-0.022	-0.025	0.053	<0.001
RPE6	-0.051	0.918	-0.102	-0.093	0.043	<0.001
RPE7	-0.094	0.890	-0.146	-0.143	0.047	<0.001
<i>Budget Gaming</i>						
BG2	0.033	-0.082	0.710	-0.157	0.081	<0.001
BG3	-0.041	0.073	0.894	0.069	0.068	<0.001
BG4	-0.145	0.078	0.896	0.054	0.060	<0.001
BG5	0.067	0.002	0.908	0.063	0.076	<0.001
BG6	-0.027	0.015	0.942	0.025	0.062	<0.001
BG7	0.150	-0.257	0.725	-0.050	0.088	<0.001
BG8	-0.002	0.103	0.908	-0.047	0.078	<0.001
<i>Procedural Fairness</i>						
PF1	0.163	-0.089	0.101	0.810	0.055	<0.001
PF3	-0.044	0.042	0.152	0.906	0.057	<0.001
PF4	-0.041	0.100	-0.069	0.909	0.063	<0.001
PF5	-0.060	-0.061	-0.172	0.912	0.061	<0.001

Table 2 shows the results of the final measurement model towards 24 valid question items. All items show outer loadings of more than 0.7 (between 0.710 and 0.949) and are significant at $p < 0.001$. These 24 items will be analysed further. The absence of cross loading shows that discriminant validity is satisfying.

Convergent validity is valued based on AVE (average variance extracted). According to Hair et al. 2014, AVE value ≥ 0.50 shows that on average, construct explains more than half the variance of its indicators. The results show that the AVE value for each construct ranges between 0.738 and 0.909 and the results indicate a contented convergent validity.

Reliability test is based on the results of internal consistency reliability test using Cronbach's alpha and composite reliability's coefficient value. The Cronbach's alpha value gives an estimation of reliability based on inter correlations of the observed indicator variables (Hair et al. 2014). Each construct's Cronbach's alpha value ranges from 0.836 and 0.966 and these values exceeded the recommended value limit of ≥ 0.7 (Nunnally 1978). The composite reliability value of each construct ranges from 0.924 and 0.972, and these values also show values above the minimum threshold

of 0.7 (Hair et al. 2014). These results conclude that the respondents' answer are consistent in answering the question items.

Two values are used to test the structural model, namely (1) prediction oriented measure (Urbach Ahleman 2010) with R2 value and (2) predictive relevance (Geisser 1974) with Q2 value > 0 (Hair et al. 2014). R2 test results for budget gaming are explained by non-financial performance measures and procedural fairness (R2 = 30.9%). This R2 value indicates a pretty strong predictive power (Ringle & Hansmann 2004). Furthermore, the Q2 value for all endogenous procedural fairness construct, and the budget gaming behaviour range from 0.476 to 0.483. Because all Q2 values are greater than 0, this indicates the support of predictive relevance of the structural model.

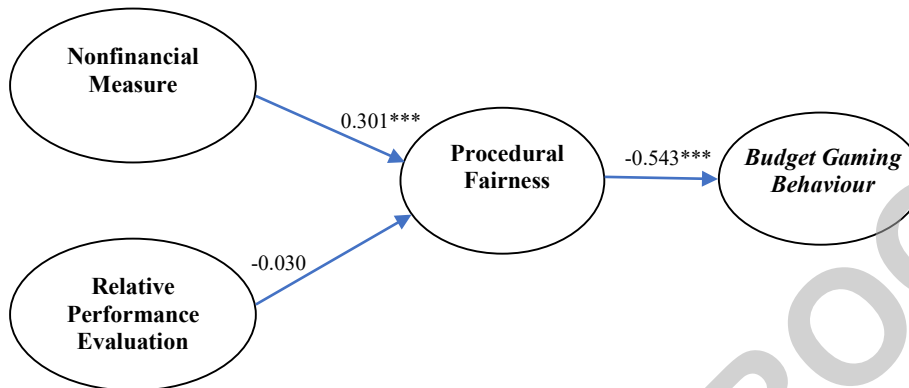


FIGURE 2. Model with path coefficients
Notes: ***p < 0.01, **p < 0.05, and *p < 0.10

HYPOTHESES TEST

TABLE 3. Hypothesis test for H₁ and H₂

Hypothesis	Path coefficients	Standard Error	t-statistic	p-value One-tailed	Results
NFM-PF	0.301	0.095	3.168	<0.001***	Significant, H _{1a} supported
RPE-PF	-0.030	0.110	0.272	0.434	Not Significant, H _{1b} not supported
PF - BG	-0.543	0.128	4.242	<0.001***	Significant, H ₂ supported

Notes: NFM (non-financial measure); RPE (relative performance evaluation); PF (Procedural Fairness); BG (budget gaming) (**pvalue <1%; *pvalue <5%; *pvalue <10%)

TABLE 4. Hypothesis test for H₃

Hypothesis	Standard Error Sobel	p-value	Results
NFM-PF-BG	0,065	0.017**	Significant, H _{3a} supported
RPE-PF-BG	0.061	0.385	Not Significant, H _{3b} not supported

Notes: NFM (non-financial measure); RPE (relative performance evaluation); PF (Procedural Fairness); BG (budget gaming) (**pvalue <1%; *pvalue <5%; *pvalue <10%)

DISCUSSION

NON-FINANCIAL MEASURE AND PROCEDURAL FAIRNESS

Table 3 shows that the relationship between non-financial performance measures and procedural fairness is significantly positive (path coefficient 0.301; p-value 0.001) and the results support hypothesis 1a. The results of non-financial performance measures increase the perceptions of procedural fairness adds to the long list of similar results from previous studies (e.g. Lau, 2015; Chia et al. 2014).

These findings strengthen the argument of the use of non-financial performance measures meets the criteria of fairness and is perceived by employees as a fair way to evaluate their performance. Goal setting theory explains that goals alignment is needed to provide direction to employees, and this result implies that goals alignment between

employees and organization can be formed through non-financial performance measures that are perceived as fair by employees.

RELATIVE PERFORMANCE EVALUATION AND PROCEDURAL FAIRNESS

The results of relationship of relative performance evaluation on procedural fairness are not significant (path coefficient -0.030 ; p -value 0.434). The results do not support H_{1b} . The results may be due to not all of the respondents in majority rates that relative performance evaluation is perceived in important areas (always important, usually important and often important). As many as 45.4% of respondents perceived that relative performance evaluation is included in the area not so important for superiors in evaluating performance. Therefore relative performance evaluation does not significantly reduce the perception of procedural fairness.

Based on further interviews by phone with respondents, information of manufacturing companies face a high uncertainty was obtained so that it is difficult to actually determine the level of manager performance target. Precisely, using relative performance evaluation in which managers' performance is compared to peer's performance, both individually or as a business unit can overcome the difficulty of determining the level of performance targets, and the relative evaluation can be accepted by the manager so far. Other additional information was also obtained and supports the previous explanation, namely that performance targets based on evaluation are not subjective to or refer to the managers' performance of the previous year, so that this evaluation is unlikely to be manipulated. Therefore, the use of relative performance evaluation does not make managers assume that this evaluation can damage fairness perceptions.

The results state that the relative performance measure does not lead to perceptions of unfairness for employees, provide new evidence because it does not support the results of previous studies (e.g. Howell & Dipboye 1986; Murphy & Cleveland 1995). These results imply that the relative performance measure is perceived not to violate the criteria of fairness, and perhaps this is influenced by certain age groups, genders, and levels of education. This study shows that respondents are dominated by a certain age group ($41-50$ 48.4%), a certain gender (76.6% male), a certain level of education (bachelor 75.8%). Confirmation of this possibility requires further empirical study.

PROCEDURAL FAIRNESS AND BUDGET GAMING

Table 3 shows employees' perceptions of the procedural fairness which is applied in all resources' allocation processes can reduce budget gaming dysfunctional behavior (path coefficient -0.543 ; p -value <0.001). The results support the hypothesis (H_2). The research results also support Colquitt et al. 2001; Cohen-Charash & Spector 2001 namely that procedural fairness is significantly related to behaviors. The results add more support to the results of previous studies, namely that managers' perceptions of procedural fairness negatively affect the tendency of managers to create a budget gaming (slack) (Ozer & Yilmaz 2011; Magner et al. 2006).

These results emphasize that managers' perceptions regarding the implementation of procedural fairness, which will reduce the probability of creating a budget gaming. Managers will perceive higher towards procedural fairness if the managers perceive that the procedures have been regulated and implemented adequately.

NON-FINANCIAL MEASURE, PROCEDURAL FAIRNESS AND BUDGET GAMING

Table 4 shows the indirect effect of non-financial performance measures and budget gaming through the track of procedural fairness is significant (p -value 0.017^{**}). The results show support for the hypothesis (H_{3a}). This means that procedural fairness mediates the effect of non-financial performance measures and budget gaming.

The results are also in accordance with previous study that shows support of non-financial performance measures have a positive effect on procedural fairness (significant, H_{1a} is supported) and procedural fairness has a negative effect on budget gaming (significant, H_2 is supported). This study supports Hair et al. 2014 that mediation is considered significant if all path coefficients are also significant.

The results support the goal setting theory, agency theory, and organizational justice theory. This study proves that specific and clear goals through the use of non-financial performance measures can improve understanding of how employee performance is evaluated. This understanding and belief increase the sense of fairness and will have an impact on reducing budget gaming behaviour. The existence of alignment of individual and organizational goals through a performance evaluation control system that is perceived as fair can overcome budget gaming.

RELATIVE PERFORMANCE EVALUATION, PROCEDURAL FAIRNESS AND BUDGET GAMING

The results for the indirect effect of relative performance evaluation and budget gaming through the track of procedural fairness are not significant (p-value 0.3851). The results are not as expected, thereby is not supporting H_{3b} . These results are in accordance with the results of H_{1b} , namely the relationship between the relative performance evaluation is not significant with procedural fairness (H_{1b} is rejected), then procedural fairness does not mediate the relationship between relative performance evaluation on budget gaming. This study is in accordance with the statement that mediation is considered significant if all path coefficients are also significant (Hair et al. 2014).

CONCLUSION AND IMPLICATION

This study examines the relationship between performance evaluation systems and budget gaming behavior. The purpose is to investigate the mediating role of procedural fairness in the relation between the performance evaluation system and budget gaming.

For the relationship between non-financial performance measures and budget gaming, the results are in accordance with the expectation that procedural fairness significantly mediates the relationship. For paths which are related to relative performance evaluation on budget gaming, the mediating role of procedural fairness does not significantly mediate this relationship. Overall, these results indicate that the use of performance measures, especially non-financial performance measures, has an effect on employees' behavior, which can increase a sense of fairness and reduce budget gaming behavior.

From the perspective of practice, this finding provides justification for organizations to use non-financial performance measures in performance evaluation system to help organizations improve their sense of fairness. Managers involved in budgeting are suggested to consider the performance evaluation system used, which can improve fairness perceptions and reduce budget dysfunctional behavior. Therefore, this study contributes to accounting practices by showing that performance evaluation system plays an important role in providing benefits to reduce budget gaming.

In the context of go public manufacturing companies in Indonesia, where budget gaming practices still occur, this finding provides an understanding that budget gaming is closely related to the performance evaluation system that is perceived as fair by employees. The results of the study provide solutions to reduce the budget gaming through the use of a non-financial performance evaluation system.

From a theoretical perspective, this study supports the goal setting theory and agency theory, namely that there must be a harmony between individual and organizational goals, and there must be an appropriate control system within the organization to cope with employees' behavior. The results prove that the application of appropriate performance evaluation controls through the use of non-financial performance measures can improve the accordance of individual and organizational goals and this accordance has an impact on reducing dysfunctional budget gaming behavior. This study also supports organizational justice theory, namely that the fairness perception according to Leventhal (1980) on procedures has an effect on behavior.

LIMITATION AND FUTURE RESEARCH

In reflecting upon the findings, specific research limitations need to be recognized. First, this research is supported by relatively small sample data and quite homogeneous sample characteristics, thus, this is likely to reduce the strength of statistical tests. Future research is suggested to expand the sample data and accommodate other sampling methods besides convenience sampling. Second, there is limited reference to empirical research related to relative performance evaluation in the context of management accounting, which provides avenue for future studies to further the search into this variable. Third, the sample comes from a relatively large manufacturing organization, so the results of the research may not be generalized to small organizations and the non-manufacturing sector. Future research can highlight this sample. Fourth, this research uses survey methods, therefore the limitations of this method are possible to be attached in this research, for example limitations in obtaining representative and unbiased samples. Therefore, experimental methods can be considered in the future to ensure a causal relationship of performance measures on budget gaming behavior.

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