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The Effect of Comprehensive Performance Measures on Managerial Performance: Testing for Mediation and Moderation

Ifah Lathifah[1], Eko Madyo Sutanto [2], Lilis Sulistyani[1], Lukman Ahmad Imron P[1]

[1] STIE AUB Surakarta

[2] USB Surakarta

Abstract

Recent research shows that the performance measurement system can produce positive psychological effects, leading to higher levels of managerial performance. We extend this literature by examining the extent to which a comprehensive performance measurement system (CPM) may be associated with increased roles clarity (RC) and autonomous motivation (AM) and reinforced by a goal specificity (GS) with positive consequences for managerial performance (MP). The findings confirm our predictions. The results support the argument that the CPM can be very important to make the experience positive psychological and indirectly increase MP. Furthermore, GS also plays an important role in strengthening the relationship. Our study contributes further evidence of the beneficial role of psychological and GS played by the CPM in affecting performance.

Keywords*:* Comprehensive performance measures, Role clarity, Autonomous motivation, Goal specificity and Managerial performance

1. Introduction

Researchers and practitioners of management accounting are now starting to focus attention on the use of non-financial measures to establish a performance measurement system that is more comprehensive [1, 2]. Research suggests that a comprehensive performance measures (CPM) is better than the financial measures [3] and have positive consequences on the individual results such as managerial performance (MP) or job satisfaction [4, 5] with emphasis on the importance of cognitive and motivational mechanisms [6, 7]. Work in this area indicates that the CPM indirectly affect the performance of the manager (MP) mediated by several variables such as role clarity [8, 9], role ambiguity [10], psychological empowerment [1, 7], procedural fairness [4, 11], trust in superior [5], self-efficacy [12] as well as the feedback quality [13]. However, the model of the existing research has not shown how the role of moderating variables such as goal specificity (GS) to arrive at causal explanations where specific goals will allow managers to reach their targets [6, 14]. At the same time, the body of literature currently only offers little insight into the extent of use the CPM can increase MP to

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consider the psychological impact such as role clarity (RC) and autonomous motivation (AM). Therefore, the purpose of this study is to fill this gap by examining the influence of CPM on MP mediated by role clarity (RC) and autonomous motivation (AM) and moderated by goal specificity (GS) for the Indonesian context.

Indonesia offers an interesting phenomenon to study because it is one country in Southeast Asia which have less influence of the global financial crisis significantly in 2008-2012, according to data from the Organization for Economic Co-operation and Development (OECD). That is evidenced by Indonesia to achieve positive growth rates during the crisis period. According to [15], one of the causes of the global financial crisis is the weak governance structure and management control, including a performance measurement system (PMS). Besides, according to data from the Indonesian Institute for Corporate Directorship (IICD), Indonesia in 2015 increased corporate governance significantly. This indicates that Indonesia provide a right setting for the test model of the relationship between the CPM and the MP, which previous research has also been conducted in Australia [16, 17], Canada [18], Nepal [19], Singapore [4], U.K [9, 14] and the U.S [7]. However, for research in Indonesia itself is still leaves an empirical gap. In addition, we believe that with improved corporate governance significantly as reported by IICD, this being an indication that companies in Indonesia are already using CPM. However, until now unclear whether the use of the CPM may increase MP.

Our study contributes to the current literature in several ways. First, this is the first study to examine the relationship model between CPM and MP taking into account the mediating and moderating variables together. Thus, this study answers the call of [6] to include moderating variables on the relationship between variables. Although [16] have used a moderating variable in the model study, but moderating variables he uses is the demographic variables.

Second, this study reconciles a mix of evidence of the relationship between CPM and MP mediated by RC and AM for the Indonesian context, where previous studies provide inconsistent evidence for the relationship between variables. For example, [8, 9] and [7] found that RC can mediate the association between CPM and MP, while [1] and [20] found no such relationship. Therefore, we add the moderating variable GS on the relationship in which the RC will increase when there is a specific goal and will affect performance [21]. Furthermore, [17] found an association between CPM and MP with mediated by controlled extrinsic

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motivation, while [22] did not find the role of AM on the relationship between participation in strategic planning and budgetary slack.

We organize the article as follows. The next section presents the literature review and develops the study's hypotheses. In subsequent sections, we describe the research methods, present the empirical results, and discuss the implications and limitations of our study.

2. Literature Review and Hypothesis Development

2.1. Comprehensive Performance Measures and Managerial Performance through Role Clarity

CPM as a set of indicators that help companies to assess the efficiency and effectiveness of their operations [27]. Previous research showed that CPM cannot directly affect the MP, but must go through mediating variables such as role clarity [1, 7, 8, 9]. RC is defined as an individual's beliefs about the expectations and behaviors associated with their job role. It includes (1) the goal and scope of responsibility, where the goal results of the work are clearly stated (goal clarity); (2) the behavior required for achieving goals, and how to do the job (process clarity); and (3) the ways in which performance is evaluated [1, 28]. When RC is low, the manager did not know what to do to achieve the goals and where they should direct our attention and efforts. Conversely, when the RC is high, it will have many positive effects such as lower levels of stress, burnout and turnover, and improve job satisfaction or managerial performance. These results can be obtained when individuals understand their role within the company.

Therefore, the information generated by the CPM will assist managers in companies to understand their goals and their roles. When the supervisor does not know or understand how subordinates should be evaluated, it will be a great source of RC for subordinates. The level of RC manager therefore will likely depend on the clarity of performance measures. CPM will assist subordinate managers in understanding the purpose and strategy of the company, motivating managers to perform in accordance with these objectives, and provide feedback on the achievement of these objectives [29]. GST explain if it has a clear purpose it will make clear the roles and tasks to be performed. Specifically, a high goal to eliminate ambiguity in order to achieve high effective performance. It is defined by the manager as an acceptable level of performance. In addition, a high goal usually plays a role in causing results that are important to an individual. Thus, the CPM will have an indirect effect on MP mediated by RC. Previous

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research has found an important role of RC on the relationship between CPM and MP [7, 8, 9], strategic PMS and MP [10], as well as non-financial measures and procedural justice [30]. From the above discussion the following hypothesis can be derived:

H1a: *CPM positive effect on RC*

H1b: *RC positive effect on MP*

H1c: *RC will mediate the relationships between CPM on MP*

2.2. Comprehensive Performance Measures and Managerial Performance through Autonomous Motivation

CPM as a mechanism for allocating responsibilities and decision rights, specified performance targets and reward the achievement of targets [31]. Previous research showed that CPM cannot directly affect the MP, but must go through mediating variables such as AM [17, 31]. AM is defined as an activity undertaken in order to achieve some of the results separately. AM is therefore different from intrinsic motivation, which refers to the activities just for the enjoyment of the activity itself, not its instrumental value [26]. In Self-Determination Theory [33], distinguished between autonomous extrinsic motivation and controlled extrinsic motivation [25], in which autonomous motivation characterized by feelings underlying the freedom and the will desires (for example, I work for fun), while controlled motivation is characterized by overall feeling of pressure, a sense of belonging to engage in action [34]. This distinction is important because the AM will give positive consequences, whereas controlled motivation will have a negative impact [25, 32].

Therefore, AM requires each individual to identify the value of behavior for the purpose of their own choosing and CPM supports this. The performance evaluation is based on some non-financial measures tend to increase the motivation of subordinates. If the performance evaluation is based on measurements of narrow (for example, only financial), subordinates will receive a bad evaluation [5]. In such situations, subordinates are likely to see a positive performance evaluation. Therefore, the motivation of subordinates will increase and will positively affect their performance. Thus, they will be more motivated to achieve the goals set in advance (for example, by giving rewards for achieving an objective), although they need to add more time and effort. Previous research has found an important role of AM on the relationship between organizational commitment and MP [32]. From the above discussion the following hypothesis can be derived:

H2a: *CPM positive effect on AM*

H2b: *AM positive effect on MP*

H2c: *AM will mediate the relationships between CPM on MP*

2.3. Comprehensive Performance Measures and Managerial Performance through Role Clarity Moderated by Goal Specificity

GS is defined as the extent to which the objectives are clearly defined by their supervisor, so that subordinates know what to do [21]. GST therefore believes that people with clear goals will perform better than someone with no apparent purpose. So the interaction GS and CPM will increase RC and subsequent interaction GS and RC will improve MP. Previous research has found an important GS as a moderator on the relationship between reliance on multiple PMS and MP [14]. From the above discussion the following hypothesis can be derived:

H3a: *GS will moderate the relationships between CPM on RC*

H3b: *GS will moderate the relationships between RC on MP*

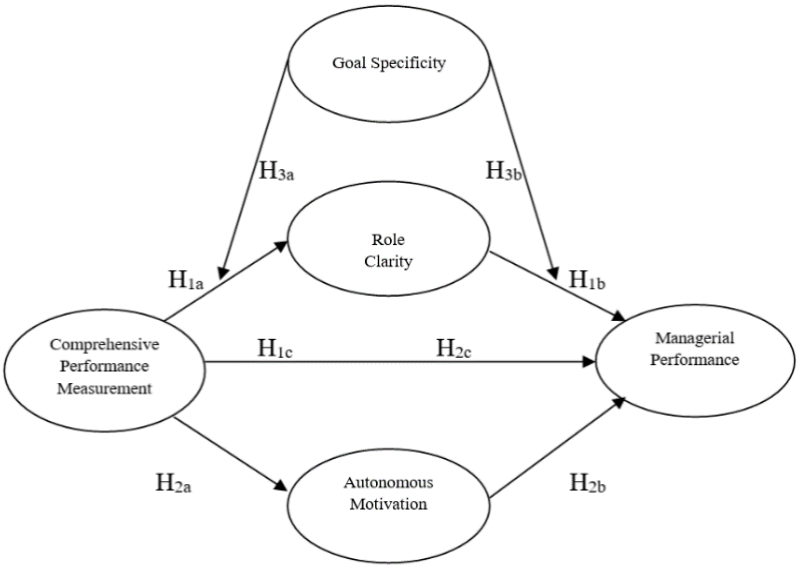

Figure 1. Conceptual Model and Hypotheses

3. Research Method

3.1. Sample Selection and Data Collection

Respondents in this study is a strategic business unit (SBU) managers in the banking industry that operates in Indonesia. We chose the banking industry because the industry is still very rare, where most of the CPM studies done on the manufacturing industry [36, 37]. We are

collecting data using questionnaires online by placing the item in question to measure each construct in this study on a virtual network. Web link to the questionnaire later in an email to the company (branches) are scattered in various cities in Indonesia. Company email address was obtained from each company's website for 2020. Based on the website, about 258 banking companies contacted with total respondents of 440 managers. After sending the original invitation to complete the survey, the research team sent two additional reminder email. Finally, to improve the response rate research team started more personal approach by calling the targeted respondents. In addition, the respondent was assured of confidentiality and anonymity of their responses and did not disclose their personal information. Furthermore, for the purpose of testing non-response bias, as suggested by [38], the length of time given to respondents to complete this survey is 3 months.

At the end of this process, which took place between October 2020 - February 2021, we obtained 147 questionnaire responses, of which there were 8 incomplete questionnaires, so the questionnaires that were valid and could be used in this study were 139 with a 31.59% response rate. Results of the *t*-test showed that there was no difference in the statistically significant response (p <0.05) between the manager who came from government banks and private banks. We also used the Wilcoxon test for comparison. In addition, the statistical test results also showed that there was no significant difference between the response in the initial 10 respondents compared to the 10 late respondents, which means there is no problem of non-response bias that would affect the systematic results [41]. We also conducted testing for common method bias [42, 43] using a full collinearity approach. The analysis showed that the value obtained AFVIF < 3.3, thus indicating no common bias method problem occurred.

We believe that the number of questionnaires was obtained by the absolute standards statistical test based on comparison with studies carried out recently, for example, studies of [1, 16] with 83 respondents, [3, 44] with 104 respondents, and [7] with 98 respondents. In addition, some rules were applied to prove the adequacy of the sample size so that it did not affect the results of this study. Using [45] rules, the minimum sample required is 91 (power = 80%, significance level of 1%, R^2 < 0.25 and minimum number of arrows pointing at a construct ≤ 4). In addition, by using the software G * power, the minimum sample required for this study was 119 (power = 0.80, effect size = 0.15, significance level of 1% and number of predictors ≤ 4). So, by setting all the existing rules, the study had a sample size that is larger than the minimum size recommended.

3.2. Measurement of Variables

The instrument used to measure each of the variables in this study consists of three parts. The first section describes the purpose and objectives of this research, by asking the willingness of respondents to participate in the survey. The second part contains the respondents' demographic information such as gender, age, level of education, tenure, and position. And the third part presents questions related to each of the variables to be studied. The instrument used was adopted from previous studies with proven reasons that need not be formed again. Each construct in this study was measured using reflective indicators.

3.2.1. Comprehensive Performance Measures

The CPM constructs were measured using nine-item questionnaire adopted from [1]. Respondents were asked about the extent to which an PMS that is used is able to provide a wide range of information and the different dimensions of the unit and the extent to which it is related to long-term goals of the company, by selecting one of the seven (7) options using a Likert scale from 1 = not at all to 7 = to a great extent). The values obtained validity and reliability of the analytical results measurement model for both the loading factors so that rho_A is > 0.70 and the value is AVE > 0.50, thus meeting the recommended requirements [47, 48]. Previous study also obtained similar results when using this instrument [1, 3, 16]. Table 1 below shows the indicators and outcome measurement model for this variable.

3.2.2. Role Clarity

The RC constructs were measured using six-item questionnaire adopted from [49]. Respondents were asked about whether they have a clear purpose, responsibilities and tasks, by selecting one of the seven (7) options using a Likert scale from 1 = strongly disagree to 7 = strongly agree. The values obtained validity and reliability of the analytical results measurement model for both the loading factors so that rho_A is > 0.70 and the value is AVE > 0.50, thus meeting the recommended requirements [47, 48] Previous study also obtained similar results when using this instrument [7, 8, 9]. Table 1B below shows the indicators and outcome measurement model for this variable.

3.2.3. Autonomous Motivation

AM constructs are measured using a six-item questionnaire adopted from [50]. Respondents will be asked why do you or would you put efforts into your current job? by selecting one of the seven (7) options using a Likert scale from 1 = not at all to 7 = completely. The values obtained validity and reliability of the analytical results measurement model for both the loading factors so that rho_A is > 0.70 and the value is AVE > 0.50 [47, 48]. Previous study also obtained similar results when using this instrument [22, 50]. Table 1C below shows the indicators and outcome measurement model for this variable.

3.2.4. Goal Specificity

GS constructs were measured using a four-item questionnaire adopted from [51]. Respondents were asked about how clearly the purpose tasks assigned by superiors, by selecting one of the seven (7) options using a Likert scale from 1 = strongly disagree to 7 = strongly agree. The values obtained validity and reliability of the analytical results measurement model for both the loading factors so that rho_A is > 0.70 and the value is AVE > 0.50 [47, 48]. Previous study also obtained similar results when using this instrument [14, 51]. Table 1D above shows the indicators and outcome measurement model for this variable.

Table 1. Construct Indicators and Measurement Model

	Code	FL	AVE	rho_A
Comprehensive performance measures (CPM)			0.544	0.899
Provides a broad range of performance information	CPM1	0.717		
Produced in a fully documented	CPM2	0.741		
Provides a diverse set of measures related to the key performance	CPM3	0.656		
Provides consistent and mutually reinforcing	CPM4	0.661		
Provides information on different dimensions	CPM5	0.770		
It links together the activities and objectives of the organization	CPM6	0.821		
Provides a variety of information	CPM7	0.833		
It shows affect the activities of other units within the organization	CPM8	0.752		
Provides a range of measures that cover the critical areas	CPM9	0.660		
Role clarity (RC)			0.645	0.890
Clear planned goals and objectives	RC1	0.747		
Clear explanation	RC2	0.818		
Divide time properly	RC3	0.827		
Know responsibilities	RC4	0.788		
Know what is expected of me	RC5	0.799		
Certain about how much authority	RC6	0.834		

Autonomous motivation (AM)			0.634	0.899
Because I personally consider it important to put efforts in this job	AM1	0.854		
Because putting efforts in this job aligns with my personal values	AM2	0.860		
Because putting efforts in this job has personal significance to me	AM3	0.836		
Because I have fun doing my job	AM4	0.829		
Because what I do in my work is exciting	AM5	0.741		
Because the work I do is interesting	AM6	0.633		
Goal specificity (GS)			0.769	0.900
Specifically explained my assigned goals.	GS1	0.851		
Specific assigned goals	GS2	0.881		
Exact level of my assigned performance goals	GS3	0.867		
Assigned goals are general*	GS4	0.907		
Managerial performance (MP)			0.838	0.810
Own recent performance	MP1	0.921		
Compare with other managers at the same level	MP2	0.909		

3.2.5. Managerial Performance

MP constructs were measured using a two-item questionnaire adopted from [7]. Respondents were asked about the extent of MP today and compared to other managers at the same level, by selecting one of the seven (7) options using a Likert scale from 1 = well below average to 7 = well above average. The values obtained validity and reliability of the analytical results measurement model for both the loading factors so that rho_A is > 0.70 and the value is AVE > 0.50 [47, 48]. Previous study also obtained similar results when using this instrument [1, 8, 9, 16]. Table 1E above shows the indicators and outcome measurement model for this variable.

Finally, we tested the discriminant validity for all variables in the model. Table 2 below shows the results of testing discriminant validity (divergent) using Fornell-Lacker criterion and heterotrait-monotrait ratio (HTMT). From the analysis above it can be seen that the square root of the AVE on diagonal lines is greater than the correlation between the constructs in the model, which means it can be concluded that all variables in this research model meet the discriminant validity. We also tested the discriminant validity using HTMT, and the results of the analysis in the table above show that the value of HTMT was smaller than 0.85, which means that it meets the recommended requirements [52].

Table 2. Correlations and Discriminant Validity Results

Construct	Mean	S.D	1	2	3	4	5
AM	4.98	1.04	*0.796*	0.824	0.814	0.847	0.839
CPM	5.45	0.90	0.726*	*0.737*	0.832	0.746	0.811
GS	5.45	0.98	0.746*	0.711*	*0.877*	0.842	0.810
MP	5.03	1.10	0.720*	0.641*	0.727*	*0.915*	0.794
RC	5.12	1.06	0.755*	0.726*	0.716*	0.673*	*0.803*

Note: *Correlation is significant at the 0.05 level (2-tailed).
Diagonal and italicized elements are the square roots of the AVE (average variance extracted).
Above the diagonal elements are the HTMT values.

4. Results

We tested the hypothesis by using a partial least squares-structural equation modeling (PLS-SEM) approach [53, 54]. PLS-SEM is made on the grounds that this is a flexible approach and superior when modeling large and complex sytems, such as CPM, with the relative scarcity of theoretical knowledge [55, 56, 57]. In addition, the use of the PLS can be considered especially when the situation demanded an investigation was in the hands of the exploration rather than confirmation. Testing PLS will pass through two stages, namely the measurement model and structural model. The measurement model is intended to assess the validity (convergent and discriminant) and reliability of each indicator forming latent constructs [48]. Evaluation of the measurement model is already done in the previous section. As for the evaluation of the structural model, it is intended to assess the quality of the model and examine the research hypothesis with the help of the SmartPLS 3 program [62] through the process of bootstrapping (bias-corrected and accelerated), with a 5,000 resample that obtained structural model evaluation results in Table 3 below.

In Table 3 it can be seen that the MP is able to be explained by the predictor variables (CPM, RC, AM and GS) of 0.604, or 60.4%. This value indicates that the explanatory power of the predictor variables was approaching substantial [48]. The resulting effect size value of each predictor variable in the model ranged from 0.01 to 0.09, which is included in the category of small to large [63]. The value variance inflation factor (VIF) is generated for all the independent variables in the model < 5, which means that there was no collinearity trouble between the predictor variables. The Q^2 predictive relevance value generated each endogenous variable as excellent i.e > 0, which means that the model has predictive relevance.

Table 3. Structural Model Results

Constructs	R^2	Adj. R^2	f^2	Q^2	VIF	AFVIF
Comprehensive Performance Measures (CPM)	–	–	0.001 – 0.431	–	3.738	–
Role Clarity (PBC)	0.681	0.675	0.035 – 0.053	0.635	3.286	–
Autonomous Motivation (AM)	0.571	0.568	0.077	0.550	3.451	–
Goal Specificity (GS)	–	–	0.082 – 0.092	–	3.498	–
Managerial Performance (MP)	0.618	0.604	–	0.568	–	3.288

4.1. Hypothesis Testing

We tested the hypothesis of direct, indirect and interaction together with a view coefficient parameters and significance resulting from bias corrected 95% confidence intervals for each variable. This is referred to as conditional process modeling or conditional process analysis, which is used when one's research goal is to understand and describe the conditional nature of the mechanism or mechanisms by which a variable transmits its effect on another and testing hypotheses about such contingent effects [65]. We also use the orthogonalization approach is to create interaction. This approach was chosen because it produces an accurate estimate, has a high predictive accuracy and is able to minimize problems collinearity. As shown in Table 4, it can be seen that the CPM positive and significant both for RC and AM (CPM→RC, p = 0.002; CPM→AM, p = 0.004), thus supporting H1a and H2a. These results are consistent with previous studies [7, 8, 9, 32]. CPM will provide information to clarify the performance evaluation process and let individuals know how they will be evaluated. Although the primary function of the CPM is to measure the performance, it is also a means for companies to be able to communicate about the objectives, plans and strategies to managers. Correspondingly, GST also notes the lack of specific goals and objectives can be a source of ambiguity, confusion and lack of direction for the manager. Through the measurement of performance, the manager will know their roles and responsibilities and what their supervisor expects. Thus, this will have an impact on the RC. In addition, CPM will also provide more varied information about the current manager's performance and provide feedback to them. Feedback will stimulate manager the next to set goals and make them more motivated to achieve that goal. So, it will have an impact on their AM.

Furthermore, variable RC and AM is also positive and significant impact on MP (RC →MP, p = 0.026; AM→MP, p = 0.004, one-tailed), thus supporting H1b and H2b. These results are consistent with previous studies [7, 8, 9, 32]. When RC and AM managers have

high, it will have a positive impact on MP. RC will assist managers in achieving the goal, where the lack of clarity in roles and responsibilities that make them easier to do attempt and provide a more efficient, thereby increasing their performance. In addition, an individual requires a considerable boost to work on a task effectively. It was only when a person has an AM where he would feel doing the work without coercion. So that the results of the work will be better and improve its performance.

Table 4. Relationships between Variables

Structural path	Coef (β)	S.D	*p*-values	95% BCa CI	Conclusion
CPM → RC	0.596	0.071	0.000**	(0.002, 0.697)**	H1a supported
RC → MP	0.210	0.122	0.042*	(0.001, 0.424)**	H1b supported
CPM → RC → MP	0.365	0.087	0.000**	(0.007, 0.495)**	H1c supported
CPM → AM	0.756	0.033	0.000**	(0.004, 0.804)**	H2a supported
AM → MP	0.318	0.141	0.012*	(0.012, 0.536)*	H2b supported
CPM → AM → MP	0.263	0.115	0.000**	(0.003, 0.236)**	H2c supported
CPM x GS →RC	0.139	0.048	0.002**	(0.041, 0.163)*	H3a supported
RC x GS → MP	0.147	0.048	0.001**	(0.037, 0.070)*	H3b supported

Note: **, * statistically significant at the 1 per cent and 5 per cent levels, respectively.

For an indirect relationship between the CPM and MP through the RC and AM obtained significant results for both (CPM → RC → MP, $p = 0.007$; CPM → AM → MP, $p = 0.003$), thus supporting H1c and H2C. This means that the RC and AM can mediate in full or indirect mediation-only relationship between CPM and MP [66]. These results are consistent with previous research, which suggests that the relationship CPM and MP must go through mediating variables [1, 7, 8, 9]. Finally, the interaction of variables GS on the relationship between CPM → RC and RC → MP also positive and significant impact on MP (CPM x GS RC, $p = 0.041$; RC x GS MP, $p = 0.037$), thus supporting H3a and H3b. This shows that with GS, information provided by the CPM will be better and understandable, so that managers better understand the role and the tasks to be performed. GS will also assist managers in carrying out any work so that the performance can be improved.

5. Discussions and Conclusion

This study examined whether the use of CPM can improve MP indirectly through RC and AM and moderated by GS. Specifically, this study attempts to provide a systematic empirical evidence for the following research questions. First, whether the use CPM could affect MP? If so, whether this effect indirectly through increased RC and AM, which in turn increases the MP? Furthermore, if the presence of the GS will reinforce the strength of this

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relationship? Answers to these questions are important in helping to resolve the gaps in the literature arising from the findings of previous research.

The results showed that they were generally consistent with the hypothesis that the relationship between the CPM and the MP is not directly through RC and AM. These results are consistent with the argument that the cognitive and motivational mechanisms help in explaining the effect of PMS on behavioral consequences [6, 7]. In particular, the results show that the use of CPM facilitate increased RC and AM, which in turn, they can increase the MP. In addition, the GS also assist in strengthening the relationship between the CPM $\rightarrow$ AM $\rightarrow$ MP. These results support the importance of RC, AM and GS in improving the MP. Overall, the use of CPM as performance evaluation criteria a positive effect on the MP.

This study has implications for theoretical and practical importance. From a theoretical perspective, the study showed that the development of theoretical models that include cognitive and motivational variables that are relevant, ie, RC and AM, can help improve our understanding of how the management control system (MCS), which CPM affects MP. This study also extends the findings of several previous management accounting studies that have examined the effects of CPM which involves a combination of financial and nonfinancial measures [1, 2, 3, 10, 16]. From a practical perspective, this highlights the importance for organizations to ensure that the RC and AM present when implementing and using PMS comprehensive. In addition, this study contributes to the literature management accounting to fill the gaps in the lack of evidence relating to the role of a moderating variable. The study found that GS can strengthen the relationship between the CPM and the MP through RC. It simultaneously answers the call of [6] to include moderating variables on the relationship.

As with other empirical studies, there are some limitations associated with this study. First, the sample used only from the financial sector. The results may not be generalizable to other sectors such as the public sector which have different characteristics [67]. Second, this study only considers the influence of CPM consequences, without entering the antecedent variables such as decentralization [68] or institutional pressure [40] that could affect the CPM. Third, this study did not consider the effect of extraneous variables that might interfere with the results of this study (such as age, gender or job tenure). Finally, there are issues related to measurement variables. Although the manager is considered to assess their own performance,

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it may lead to biased judgments. Therefore, it might be better if you use the supervisor assessment of MP.

Subsequent research could look into the relationship between CPM and MP mediated by several variables such as organizational politics [44], intrinsic motivation [17] or self-efficacy [12]. Further study to examine the effect of the interaction effects are also needed such as adding a goal variable difficulty [14] or goal commitment [21]. Studies replication in other sectors will also allow access to generalize the findings of this study. Overall, the researchers feel that it is necessary to replicate this study using a qualitative approach / fsQCA [69] which might provide new avenues for future studies in this research area.

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References

[1] Hall, M. (2008). The effect of comprehensive performance measurement systems on role clarity, psychological empowerment and managerial performance. *Accounting, Organizations and Society, 33*(2-3), 141–163.

[2] Lau, C. M., & Martin-Sardesai, A. V. (2012). The role of organisational concern for workplace fairness in the choice of a performance measurement system. *The British Accounting Review, 44*(3), 157–172.

[3] Lau, C. M., & Amirthalingam, V. (2014). The Relative Importance of Comprehensive Performance Measurement Systems and Financial Performance Measures on Employees' Perceptions of Informational Fairness. In M. Epstein & M. A. Malina (Eds.), *Advances in Management Accounting* (Vol. 24, pp. 77–115). U.K: Emerald Group Publishing Limited.

[4] Chia, D. P. S., Lau, C. M., & Tan, S. L. C. (2014). The relationships between performance measures and employee Outcomes: The mediating roles of procedural fairness and trust. In M. Epstein & A. M. Farrell (Eds.), *Performance Measurement and Management Control: Behavioral Implications and Human Actions* (Vol. 28, pp. 203–232). U.K: Emerald Group Publishing Limited.

[5] Lau, C. M., & Sholihin, M. (2005). Financial and nonfinancial performance measures: How do they affect job satisfaction? *The British Accounting Review, 37*(4), 389–413.

[6] Franco-Santos, M., Lucianetti, L., & Bourne, M. (2012). Contemporary performance measurement systems: A review of their consequences and a framework for research. *Management Accounting Research, 23*(2), 79–119.

[7] Marginson, D., McAulay, L., Roush, M., & Zijl, T. v. (2014). Examining a positive psychological role for performance measures. *Management Accounting Research, 25*(1), 63–75.

[8] Lau, C. M. (2011). Nonfinancial and financial performance measures: How do they affect employee role clarity and performance? *Advances in Accounting, 27*(2), 286–293.

[9] Lau, C. M. (2015). The effects of nonfinancial performance measures on role clarity, procedural fairness and managerial performance. *Pacific Accounting Review, 27*(2), 142–165.

[10] Burney, L., & Widener, S. K. (2007). Strategic performance measurement systems, job-relevant information, and managerial behavioral response: Role stress and performance. *Behavioral Research in Accounting, 19*(1), 43–69.

[11] Lau, C. M., & Moser, A. (2008). Behavioral effects of nonfinancial performance measures: The role of procedural fairness. *Behavioral Research in Accounting, 20*(2), 55–71.

[12] Burney, L., & Widener, S. K. (2013). Behavioral work outcomes of a strategic performance measurement system-based incentive plan. *Behavioral Research in Accounting, 25*(2), 115–143.

[13] Latan, H., Ghozali, I., Fuad, & Ramli, N. A. (2016). The effect of comprehensive performance measurement system on managerial performance: Testing the serial multiple mediator. *The British Accounting Review, In Press*, 1–24.

[14] Sholihin, M., Pike, R., & Mangena, M. (2010). Reliance on multiple performance measures and manager performance. *Journal of Applied Accounting Research, 11*(1), 24–42.

[15] Munir, R., & Baird, K. (2016). Influence of institutional pressures on performance measurement systems. *Journal of Accounting & Organizational Change, 12*(2), 106–128.

[16] Hall, M. (2011). Do comprehensive performance measurement systems help or hinder managers' mental model development? *Management Accounting Research, 22*(2), 68–83.
[17] Lau, C. M., & Roopnarain, K. (2014). The effects of nonfinancial and financial measures on employee motivation to participate in target setting. *The British Accounting Review, 46*(3), 228–247.
[18] Bellavance, F., Landry, S., & Schiehll, E. (2013). Procedural justice in managerial performance evaluation: Effects of subjectivity, relationship quality, and voice opportunity. *The British Accounting Review, 45*(3), 149–166.
[19] Upadhaya, B., Munir, R., & Blount, Y. (2014). Association between performance measurement systems and organisational effectiveness. *International Journal of Operations & Production Management, 34*(7), 853–875.
[20] He, J. Q., & Lau, C. M. (2012). Does the Reliance on Nonfinancial Measures for Performance Evaluation Enhance Managers' Perceptions of Procedural Fairness? In M. Epstein & A. M. Farrell (Eds.), *Performance Measurement and Management Control: Global Issues* (Vol. 25, pp. 363–388). U.K: Emerald Group Publishing Limited.
[21] Locke, E. A., & Latham, G. P. (Eds.). (2013). *New Developments in Goal Setting and Task Performance*. New York: Psychology Press.
[22] Baerdemaeker, J. D., & Bruggeman, W. (2015). The impact of participation in strategic planning on managers'creation of budgetary slack: The mediating role of autonomousmotivation and affective organisational commitment. *Management Accounting Research, 29*(1), 1–12.
[23] Birnberg, J. G., Luft, J., & Shields, M. D. (2007). Psychology Theory in Management Accounting Research. In C. S. Chapman, A. G. Hopwood & M. D. Shields (Eds.), *Handbook of Management Accounting Research* (Vol. 1, pp. 113–135). Boulevard, Langford Lane: Elsevier.
[24] Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry, 11*(4), 227–268.
[25] Gagne, M., & Deci, E. L. (2005). Self-determination theory and work motivation. *Journal of Organizational Behavior, 26*(4), 331–362.
[26] Ryan, R. M., & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Educational Psychology, 25*(1), 54–67.
[27] Neely, A., Kennerley, M., & Adams, C. (2007). Performance Measurement Frameworks: A Review. In A. Neely (Ed.), *Business Performance Measurement: Unifying Theory and Integrating Practice* (2nd ed., pp. 143–162). New York: Cambridge University Press.
[28] King, L. A., & King, D. W. (1990). Role conflict and role ambiguity: A critical assessment of construct validity. *Psychological Bulletin, 107*(1), 48–64.
[29] Ittner, C. D., Larcker, D. F., & Randall, T. (2003). Performance implications of strategic performance measurement in financial services firms. *Accounting, Organizations and Society, 28*(7-8), 715–741.
[30] Lau, C. M., & Berry, E. (2010). Nonfinancial Performance Measures: How do they Effect Fairness of Performance Evaluation Procedures? In M. J. Epstein, J.-F. Manzoni & A. Davila (Eds.), *Performance Measurement and Management Control: Innovative Concepts and Practices* (Vol. 20, pp. 285–307). U.K: Emerald Group Publishing Limited.
[31] Merchant, K. A., & Van der Stede, W. A. (2007). Management Control Systems: Performance Measurement, Evaluation, and Incentives. Harlow, UK: Prentice-Hall.
[32] Wong-On-Wing, B., Guo, L., & Lui, G. (2010). Intrinsic and extrinsic motivation and participation in budgeting: Antecedents and consequences. *Behavioral Research in Accounting, 22*(2), 133–153.

[33] Deci, E. L., & Ryan, R. M. (1985). Intrinsic Motivation and Self-Determinationvin Human Behavior. New York: Plenum Press.
[34] Vansteenkiste, M., Smeets, S., Soenens, B., Lens, W., Matos, L., & Deci, E. L. (2010). Autonomous and controlled regulation of performance-approach goals: Their relations to perfectionism and educational outcomes. *Motivation and Emotion, 34*(4), 333–353.
[35] Robbins, S. P., & Judge, T. A. (2013). *Organizational Behavior* (15th ed.). Upper Saddle River, NJ: Prentice Hall.
[36] Hussain, M. (2005). Management accounting performance measurement systems in Swedish banks. *European Business Review, 17*(6), 566–589.
[37] Hussain, M., & Gunasekaran, A. (2002). Non-financial management accounting measures in Finnish financial institutions. *European Business Review, 14*(3), 210–229.
[38] Oppenheim, A. (2001). Questionnaire Design, Interviewing and Attitude Measurement (2nd ed.). New York: Basic Books.
[39] Munir, R., Baird, K., & Perera, S. (2013). Performance measurement system change in an emerging economy bank. *Accounting, Auditing & Accountability Journal, 26*(2), 196–233.
[40] Munir, R., & Baird, K. (2016). Influence of institutional pressures on performance measurement systems. *Journal of Accounting & Organizational Change, 12*(2), 106–128.
[41] Dillman, D. A., Smyth, J. D., & Christian, L. M. (2014). *Internet, Phone, Mail, and Mixed Mode Surveys: The Tailored Design Method* (4th ed.). Hoboken, NJ: Wiley.
[42] Podsakoff, P. M., MacKenzie, S. B., Podsakoff, N. P., & Lee, J.-Y. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88*(5), 879–903.
[43] MacKenzie, S. B., & Podsakoff, P. M. (2012). Common method bias in marketing: Causes, mechanisms, and procedural remedies. *Journal of Retailing, 88*(4), 542–555.
[44] Lau, C. M., & Scully, G. (2015). The roles of organizational politics and fairness in the relationship between performance management systems and trust. *Behavioral Research in Accounting, 27*(1), 25–53.
[45] Cohen, J. (1992). A power primer. *Psychological Bulletin, 112*(1), 155–159.
[46] Marcoulides, G. A., & Chin, W. W. (2013). You Write, but Others Read: Common Methodological Misunderstandings in PLS and Related Methods. In H. Abdi, W. W. Chin, V. E. Vinzi, G. Russolillo & L. Trinchera (Eds.), *New Perspectives in Partial Least Squares and Related Methods* (pp. 31–64). New York: Springer.
[47] Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)* (2nd ed.). Thousand Oaks: Sage Publications.
[48] Latan, H., & Ghozali, I. (2015). Partial Least Squares: Concepts, Techniques and Application using program SmartPLS 3.0 (2nd ed.). Semarang: Diponegoro University Press.
[49] Rizzo, J. R., House, R. J., & Lirtzman, S. I. (1970). Role conflict and role ambiguity in complex organisations. *Administrative Science Quarterly, 15*(2), 150–163.
[50] Gagné, M., Forest, J., Vansteenkiste, M., Crevier-Braud, L., Van den Broeck, A.,Aspeli, A.K., Battistelli, A., Bellerose, J., Benabou, C., Chemolli, E., Güntert, S.T.,Halvari, H., Johnson, P., Indiyastuti, D.L., Ndao, A., Martin-Albo, J., Molstad, M.,Naudin, M., Ntalianis, F., Nunez, J.L., (2015). The multi-dimensional workmotivation scale: Validation evidence in seven languages and nine countries. *European Journal of Work and Organizational Psychology*, *14*(2), 178–196.

[51] Fang, E., Evans, K. R., & Zou, S. (2005). The moderating effect of goal-setting characteristics on the sales control systems–job performance relationship. *Journal of Business Research, 58*(9), 1214–1222.
[52] Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy Marketing Science, 43*(1), 115–135.
[53] Wold, H. (1982). Soft Modeling: The Basic Design and Some Extensions. In K. G. Joreskog & H. Wold (Eds.), *Systems under Indirect Observation: Causality, Structure, Prediction* (Vol. 2, pp. 1–54). Amsterdam: North Holland.
[54] Wold, H. (1985). Partial Least Squares. In S. Kotz & N. L. Johnson (Eds.), *Encyclopedia of Statistical Sciences* (Vol. 6, pp. 581–591). New York: Wiley.
[55] Noonan, R. (1989). Evaluation of School System using Partial Least Squares (PLS): An Application in the Analysis of Open Social System. In H. Wold (Ed.), *Theoretical Empiricism: A General Rationale for Scientific Model-Building* (pp. 31–61). New York: Paragon House.
[56] Noonan, R., & Wold, H. (1986). Partial Least Squares Path Analysis. In T. Husen & T. N. Postlethwaite (Eds.), *The International Encyclopedia of Education* (Vol. 7, pp. 3769–3775). Oxford: Pergamon Press.
[57] Sellin, N. (1988). Partial Least Squares Modeling in Research on Educational Achievement. In J. P. Keeves (Ed.), *Educational Research, Methodology and Measurement: An International Handbook* (pp. 256–267). Oxford: Pergamon.
[58] Sarstedt, M., Hair, J. F., Ringle, C. M., Thiele, K. O., & Gudergan, S. P. (2016). Estimation issues with PLS and CBSEM: Where the bias lies! *Journal of Business Research, 69*(10), 3998–4010.
[59] Wold, H., & Kaasch, K. (1987). Transfers Between Industrial Branches in the Course of Schumpeter-Mensch Long Swings. In T. Vasko (Ed.), *The Long-Wave Debate* (pp. 405–419). Berlin Heidelberg: Springer-Verlag.
[60] Wold, H. (1986). Factors Influencing the Outcome of Economic Sanctions: An Application of Soft Modeling. In N. N (Ed.), *Trabajos de Estadistica Y de Investigacion Operativa: Homenaje al Profesor Sixto Rios* (Vol. 36, pp. 325–337). Haifa: University of Haifa International Workshop on Conflict Resolution.
[61] Voorhees, C. M., Brady, M. K., Calantone, R., & Ramirez, E. (2016). Discriminant validity testing in marketing: an analysis, causes for concern, and proposed remedies. *Journal of the Academy Marketing Science, 44*(1), 119–134.
[62] Ringle, C. M., Wende, S., and Becker, J.-M. 2015. "SmartPLS 3." Boenningstedt: SmartPLS GmbH, http://www.smartpls.com.
[63] Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences* (2nd ed.). Mahwah, NJ: Lawrence Erlbaum Associates.
[64] Henseler, J., Hubona, G., & Ray, P. A. (2016). Using PLS path modeling in new technology research: updated guidelines. *Industrial Management & Data Systems, 116*(1), 2–20.
[65] Hayes, A. F. (2013). Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach. New York: Guilford Press.
[66] Zhao, X., Lynch, J. G., & Chen, Q. (2010). Reconsidering Baron and Kenny: Myths and truths about mediation analysis. *Journal of Consumer Research, 37*(2), 197–206.
[67] Speklé, R. F., & Verbeeten, F. H. M. (2014). The use of performance measurement systems in the public sector: Effects on performance. *Management Accounting Research, 25*(2), 131–146.

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[68] Bangchokdee, S., & Mia, L. (2016). The role of senior managers' use of performance measures in the relationship between decentralization and organizational performance. *Journal of Accounting & Organizational Change, 12*(2), 129–151.
[69] Ragin, C. C. (2008). *Redesigning Social Inquiry Fuzzy Sets and Beyond*. Chicago: University of Chicago Press.