



# The Effect of Non-financial Performance Measures on Role Clarity and Procedural Fairness

## The Role of Knowledge of Performance Appraisal Systems

Utami Puji Lestari<sup>1</sup>(✉), Yusep Friya Purwa Setya<sup>1</sup>, and Lanita Winata<sup>2</sup>

<sup>1</sup> Accounting Department, Politeknik Negeri Jakarta, Depok, Indonesia  
utami.lestari@akuntansi.pnj.ac.id

<sup>2</sup> Department of Accounting, Finance and Economics, Griffith University, Gold Coast, Australia

**Abstract.** Due to the lack of efficiencies of traditional performance measures that focus on financial performance, organizations emphasize non-financial performance measures. There is a growing discussion on the advantages and consequences of non-financial performance measures usages, such as employees' behavior. To be accepted by employees, the performance measurement systems need to be perceived as clear and fair. This study aims to investigate the effect of non-financial performance measures on role clarity and procedural fairness. In addition, this study also examines whether the knowledge of performance appraisal systems mediates the relationships. The data were collected through survey questionnaires from 79 employees at the managerial level of service organizations, specifically public accounting firms and a state-owned administrative service located in Jakarta, Bogor, Depok, Tangerang, and Bekasi. PLS-SEM with SmartPLS Software Version 3.3.3 was used to analyze the data. The results indicate that non-financial performance measures significantly affected role clarity and knowledge of performance appraisal systems. While there are no relationships between (1) non-financial performance measures and procedural fairness and (2) knowledge of performance appraisal system and procedural fairness, there are significant associations between (1) knowledge of performance appraisal systems and role clarity and (2) role clarity and procedural fairness. These results suggest that non-financial performance measures improve employees' perceptions of role clarity and procedural fairness through a better knowledge of performance appraisal systems.

**Keywords:** Non-financial performance measures · Knowledge of performance appraisal systems · Role clarity · Procedural fairness

## 1 Introduction

Prior studies on performance evaluation systems have suggested that organizations cannot rely only on conventional performance measures that focus only on financial aspects [1–4]. Due to the lack of efficiencies of traditional performance measures that focus on financial performance, organizations emphasize non-financial performance measures [4,

5]. There is a growing discussion on the advantages and consequences of non-financial performance measures usages, such as employees' behavior [1, 6]. To be accepted by employees, the performance measurement systems need to be perceived as clear and fair [4, 5, 7].

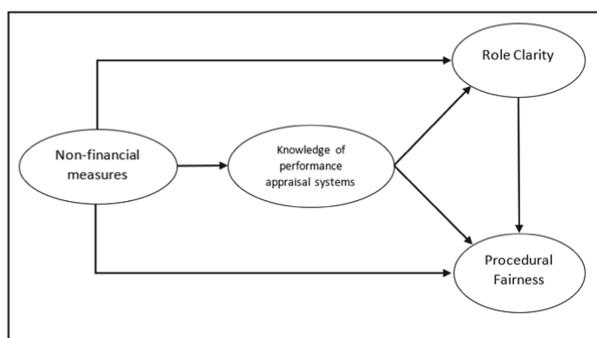
Role clarity is one of the essential aspects of the study in management accounting as it may affect employees' behavior and performance [4]. When employees clearly understand what is expected of them at work, it will create more certain working conditions, improving employees' performance [7].

Kaplan and Atkinson [8] suggest that employees must believe that the performance measurement system used by the organization is fair as it has significant effects on employees' behavior. For example, previous studies have found that fairness affects employees' commitment [9], trust in superiors and employees' job satisfaction [6], and managerial performance [4].

This study examines the effect of organizational use of non-financial performance measures on role clarity and procedural fairness. Studies in management accounting have also explained how performance measurement systems affect employees' behavior. This study also explores how these effects occur, whether non-financial performance directly affects (1) role clarity and (2) procedural fairness, or indirectly through the knowledge of performance appraisal systems. This variable defines the extent to which employees perceive they understand essential aspects of the performance appraisal systems related to their job. This study includes the knowledge of performance appraisal systems on the relationships between non-financial measures, role clarity and procedural fairness. Employees' perception of role clarity and procedural fairness tends to be higher when employees have better knowledge of performance appraisal systems. Including this variable as the mediating variable in these relationships may be helpful as previous studies have not investigated.

## 1.1 Research Framework

Figure 1 shows the research framework of this study.



**Fig. 1.** Research framework.

Based on the research framework, this study proposes the hypotheses below:

- H1: Non-financial measures affect role clarity
- H2: Non-financial measures affect procedural fairness
- H3: Non-financial measures affect knowledge of performance appraisal systems
- H4: Knowledge of performance appraisal systems affect role clarity
- H5: Knowledge of performance appraisal systems affect procedural fairness
- H6: Role clarity affect procedural fairness

## 2 Research Method

The data of this study were obtained from survey questionnaires sent to employees at the middle and senior level of accounting firms and one state-owned administrative service located in Jakarta, Bogor, Depok, Tangerang, and Bekasi. The accounting firms of business service were selected because they would become one of the service sectors with the highest business growth in Indonesia [10]. The state-owned administrative service was carefully chosen because it is one of the government institutions that has effectively reorganized its administration [11].

A link to the questionnaire was sent through an email to the accounting firms in the directory, expecting the firms' partners to share the link promptly to two of their senior and/or supervisor auditors. For the state-owned administrative service, the link of the survey questionnaire was emailed to the public relations department of each office, asking them to share the link with the middle and senior managers. Of the 303 links sent to the respondents, 79 respondents completed the questionnaire, which accounted for a 26.07% response rate.

Most of the respondents were males (75.95%). The sample mostly worked full-time (89.87%). The majority of respondents have worked at their current workplace for less than five years (49.37%), and about 58.23% hold bachelor's degrees.

This study adapted well-established instruments from previous studies to measure variables of the research framework. The survey instruments include non-financial performance measures by Lau and Moser [1], role clarity by Sawyer [12], procedural fairness by McFarlin and Sweeney [13], and knowledge of performance appraisal systems by William and Levy [14]. Data were analyzed using Partial Least Square with SmartPLS software Version 3.3.3 [15] to test the measurement and structural models.

## 3 Results and Discussion

The first step of the Partial Least Square is to test the measurement model. The construct reliability and validity test results are shown in Table 1. The Cronbach Alpha value of all of the variables indicated a satisfactory reliability level with values above 0.6. The instruments also have satisfactory discriminant validity as in Table 2, which indicates that the square root AVE for each variable is more significant than any value of the non-diagonal element.

The second step is to test the structural model. The test results of direct effects between variables were presented in Fig. 2. Non-financial performance measures affect

**Table 1.** Construct reliability and validity test

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Non-financial measures	0.912	0.918	0.927	0.587
Knowledge of Perf. Appraisal System	0.959	0.963	0.966	0.780
Procedural Fairness	0.959	0.964	0.970	0.890
Role Clarity	0.940	0.944	0.952	0.768

**Table 2.** Fornell\_larcker discriminant validity test

	Non-financial	Knowledge of Performance Appraisal System	Procedural Fairness	Role Clarity
Non-financial measures	0.766			
Knowledge of Performance Appraisal System	0.663	0.883		
Procedural Fairness	0.563	0.540	0.943	
Role Clarity	0.685	0.750	0.622	0.876

role clarity ( $\beta = 0.336$ ,  $p\text{-value} \leq 0.01$ ), supporting Hypothesis 1. This result adds to the list of similar results from previous studies [e.g. 4, 16]. The third hypothesis is also supported as non-financial performance measures are significantly related to knowledge of performance appraisal systems ( $\beta = 0.663$ ,  $p\text{-value} \leq 0.000$ ). Knowledge of performance appraisal systems significantly affected role clarity ( $\beta = 0.528$ ,  $p\text{-value} \leq 0.000$ ), supporting Hypothesis 4. In addition, role clarity affects procedural fairness ( $\beta = 0.395$ ,  $p\text{-value} \leq 0.01$ ), as expected of Hypothesis 6. This result supports the results of [e.g. 4, 17]. This study fails to prove direct relationships between (1) non-financial performance measures and procedural fairness, and (2) knowledge of performance appraisal systems and procedural fairness. Therefore, Hypothesis 2 and Hypothesis 5 are not supported. The lack of the relationship between non-financial performance measures and procedural fairness empirically supports the result from the previous study [18] which suggests that the relationship may occur via other factors.

For the indirect effect, role clarity intervenes the relationships between (1) non-financial performance measures and procedural fairness ( $\beta = 0.132$ ,  $p\text{-value} \leq 0.05$ ), and (2) knowledge of performance appraisal systems and procedural fairness ( $\beta = 0.208$ ,  $p\text{-value} \leq 0.05$ ). The use of non-financial performance measures such as the number

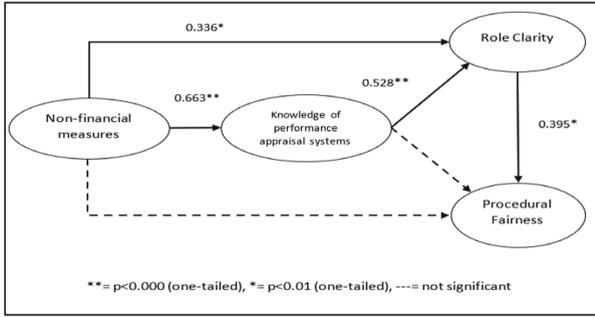


Fig. 2. Results of structural model.

of customer complaints, customer satisfaction, on-time delivery, and the number of training per employee, are clearer for subordinates as they directly link the effort and consequences, resulting in higher employees’ role clarity [4]. The use of non-financial performance measures that complement the financial performance measures is highly relevant, accurate and fair [19], which would increase the level of employees’ knowledge of performance appraisal systems. Employees with a sufficient level of knowledge of performance appraisal systems would have higher role clarity as they are well informed with what they are expected to complete [20] and understand they are being evaluated by proper and logical criteria [21]. When employees have a stronger understanding of their organizational roles, they tend to perceive their work condition as more constructive, resulting in a higher perception of more accurate procedures and systems [22]. These results conclude that employees’ perception of procedural fairness is increased through the clarity of their role in the organization. This result was consistent with previous studies by Lau [4] and Lau & Oger [5]. This study also proves that (a) knowledge of performance appraisal systems mediates the relationship between non-financial performance measures and role clarity ( $\beta = 0.138$ ,  $p\text{-value} \leq 0.10$ ), and (b) both knowledge of performance appraisal systems and role clarity intervene in the relationship between non-financial performance measures and procedural fairness ( $\beta = 0.350$ ,  $p\text{-value} \leq 0.000$ ).

#### 4 Conclusion

This study aims to investigate the role of performance appraisal systems knowledge on the relationships between non-financial performance measures and (a) role clarity and (b) procedural fairness. The results add to the current understanding of the various intervening roles of some variables in the relationships between performance measures and employees’ behavior.

This study concludes that knowledge of performance appraisal systems has a significant role in the relationship between non-financial performance measures and role clarity. In terms of employees’ perception of procedural fairness, this study suggests that it can be increased by companies’ use of non-financial performance measures, better knowledge of performance appraisal systems, and improved perception of role clarity. Therefore, organizations need to improve their employees’ awareness/knowledge of

performance appraisal systems as non-financial performance measures usages improve employees' perceptions of role clarity and procedural fairness through a better knowledge of performance appraisal systems.

Future research could use manufacturing industries or another type of service industry as this study only uses two types of service sectors which generalizes the results must be undertaken with caution. In addition, as this study only focused on two central relationships – between non-financial performance measures and (a) role clarity and (b) procedural fairness – with one mediating variable (knowledge of performance appraisal systems), further research may include other omitted variables in the study.

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