

## The Moderation Effect of Psychological Empowerment on The Relationship of Comprehensive Performance Measurement System With Managerial Performance

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### Abstract

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*This study aims to examine and obtain empirical evidence regarding the moderating effect of psychological empowerment on the relationship between comprehensive performance measurement systems and managerial performance. The sample for this research is all levels of managers at the Bank in Ambon City. The sample was selected using the judgment sampling method, with the criteria of having experience as a manager for at least three years. Data collection was carried out through questionnaires which were directly submitted to business unit managers. A total of 100 questionnaires were successfully collected, and 98 questionnaires that could be used. Data were analyzed to test the hypothesis using multiple linear regression. The results of the study show that a comprehensive performance measurement system has a positive and significant effect on managerial performance; and psychological empowerment acts as a variable that moderates the relationship between a comprehensive performance measurement system and managerial performance.*

**Keywords:** *comprehensive performance measurement system, psychological empowerment, and managerial performance*

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### INTRODUCTION

Management control is a process of a manager to influence other organizational members to implement organizational strategy. Activities included in management control are planning activities to be carried out, coordinating activities from several parts of the organization, communicating information, evaluating information, deciding what actions to take and influencing people to change their behavior (Anthony and Govindarajan, 2007). Management control is closely related to a comprehensive performance measurement system. The importance of the benefits of the performance measurement system as a control mechanism in increasing the effectiveness of organizational work is an attraction for researchers (e.g., Al-Najjar & Kalaf, 2012; Franco-Santos et al., 2012; Behrouzi et al., 2014; Shaik & Abdul -Kader, 2014; Fullerton et al., 2014; Dubey et al., 2015; Rahim et al., 2018). For example, Al-Najjar and Kalaf (2012)



specifically examine how the balanced scorecard as a form of a comprehensive performance measurement system has a significant impact on improving performance in the banking sector.

In this study, a comprehensive performance measurement system is expected to have a positive influence on the behavior of business unit managers because a comprehensive performance measurement combines financial and non-financial aspects to measure and evaluate overall managerial and organizational performance. A comprehensive performance measurement system will have a positive impact on managers in terms of allocating time in the units they lead so they can focus on achieving financial and non-financial measures. This will have a significant impact on improving the performance of managers which in turn will have a positive impact on improving organizational performance.

The effectiveness of implementing a performance measurement system is also greatly influenced by various contextual factors. One of them is the factor of psychological empowerment. Psychological empowerment is a motivation for someone in carrying out activities in his work. Spreitzer (1995) states that psychological empowerment is a form of cognitive construct that refers to the intrinsic motivation of each individual. Psychological empowerment is expected to make a major contribution to the effectiveness of implementing a comprehensive performance measurement system to improve managerial performance. When a manager feels psychologically empowered in his work, it is hoped that the manager will be motivated to work effectively and efficiently based on the measures (financial and non-financial) provided by a comprehensive performance measurement system. This study aims to empirically examine the effect of psychological empowerment as an intrinsic motivation to maximize job performance in the relationship between a comprehensive performance measurement system and managerial performance.

## **LITERATURE REVIEW**

### **Contingency Theory**

Contingency theory can be used to analyze the design and implementation of management control systems to provide information that companies can use for various purposes and to face competition (Otley, 1980). The basic essence of this theory is that there is no universally appropriate control system that can be applied to all organizations in every situation. Control systems will vary in each organization based on organizational and situational factors.

Researchers have applied a contingency approach to analyze and design control systems, particularly in the field of management accounting systems. Based on the contingency theory, there is an assumption that there are other situational factors that might interact with each other in certain conditions. Based on contingency theory, a comprehensive performance measurement system needs to be generalized using contextual factors such as individual behavior which in this case is psychological empowerment so that it can be implemented effectively within the company in order to improve the performance of the individuals within the company.

### **Comprehensive Performance Measurement System**

The performance measurement system is a primary mechanism that can be used to achieve an organization's strategic goals. A main premise behind the development of a comprehensive performance measurement system is that this system can help lead to better managerial performance improvement (Al-Najjar & Kalaf, 2012; Behrouzi et al., 2014). Fullerton et al (2014) stated that the performance measurement system is a process for measuring the efficiency and effectiveness of performance. According to Sim and Killough (1998) the performance measurement system is the frequency of performance measurements on managers in organizational units led regarding quality in the company's operational activities. Kaplan and Norton (1996) identified four main steps that must be taken in implementing a comprehensive performance measurement system, namely: (1) clarifying and translating vision and strategy, (2) linking and communicating vision with strategy, (3) making plans and targets, (4) strategic learning and feedback.

A comprehensive performance measurement system maintains a balance between different strategic measures in an effort to achieve goal alignment, thereby encouraging individuals to act in the best interests of the organization. These studies show that the availability of performance measures (financial and non-financial) covering different parts of an organization's operations is an important aspect of a more comprehensive performance measurement system.

### **Psychological Empowerment**

Empowerment is a motivational construct. Empowerment as a motivational construct was developed by Thomas & Velthouse (1990) into the concept of psychological empowerment. Psychological empowerment is a cognitive construct that refers to the intrinsic motivation of each individual (Thomas and Velthouse, 1990). Psychological empowerment refers to a set of psychological states that are necessary for individuals to feel a sense of control in relation to their work.

Thomas and Velthouse (1990) expand on the ideas of Conger & Kanungo (1988) by developing a theoretical framework of articulation empowerment as intrinsic motivation shown in four cognitions that reflect their orientation to work. Thomas and Velthouse (1990) describe empowerment as a set of cognitions or conditions influenced by the work environment that help create an active orientation to a job.

Spreitzer (1995) divides psychological empowerment into four dimensions, namely, (1) meaning, is the value of the intent or purpose of work, assessing the relationship to the ideals or standards owned by the individual; (2) competence, referring to specific self-efficacy in a job, or belief in one's ability to carry out work activities with skill; (3) Self-determination, leading to an individual's perception of the level of choice they have to initiate and carry out actions in work; (4) impact, is the level at which individuals believe they can influence the results of operations at work. These four cognitions reflect an orientation to roles in work. In other words, the experience of empowerment manifests itself in four dimensions. If there are missing dimensions, the experience of empowerment will be limited (Spreitzer, 1995).

### **Managerial Performance**

Managerial performance is the ability of managers to carry out their responsibilities for product quality, product quantity, product timeliness, new product development, personnel development, budget achievement, cost reduction (income increase), and public affairs (Govindarajan and Gupta, 1985). Managerial performance is the perception of managers about the skills of managers in carrying out managerial activities including planning, investigation, coordination, evaluation, supervision, staffing, negotiation and representation and overall performance (Mahoney et al., 1963). The manager's duties can be described in terms of various organized roles, which are identified with a position, that every manager can play three roles through his authority and status, namely the interpersonal role, the informational role, and the decision-making role. Attitudes and perceptions, motivation, and actualization of managers will influence how these managers operate and how effective these operations are in order to achieve company goals.

### **The Effect of Comprehensive Performance Measurement System on Managerial Performance.**

A more comprehensive performance measurement system is expected to influence the work results of managers in a better direction. This is because a comprehensive performance measurement system provides relevant information to managers to make better decisions with a series of effective and efficient actions and has an impact on improving managerial performance. The unification of measurement tools covering the value chain of an organization is believed to be able to help managers understand cross-functional relationships that lead to better and more precise problem solving and decision making (Banker et al., 2004). Several research results show the positive impact of a performance measurement system that combines financial and non-financial measures on improving performance. For example, Fullerton et al (2014) found evidence that employees will react positively to measures from a performance measurement system that can bridge all information in a timely and visible manner. Rahman et al. (2007) provide evidence that the performance measurement system has a positive influence on managerial performance. Furthermore, Al-Najjar & Kalaf (2012) provide evidence that a comprehensive performance measurement system such as the balanced scorecard makes a positive contribution to improving performance in the banking sector.

By implementing a comprehensive performance measurement system, managers will be able to measure how their business units are creating value today while taking into account future interests. Based on the explanation above, the following hypothesis is proposed:

H1: The comprehensive performance measurement system has a positive and significant effect on managerial performance.

### **The Moderation Effect of Psychological Empowerment on the relationship between Performance Measurement Systems and Managerial Performance.**

Each dimension of psychological empowerment, namely Meaning, Competence, Self-determination and Impact, is expected to have a positive influence on the effectiveness of a comprehensive performance measurement system in improving performance. An empowered individual should perform

better than a less empowered individual (Liden et al., 2000). Thomas and Velthouse (1990) stated that the perception of empowerment is directly related to the range of behavioral factors which include activity, concentration, initiative steps, flexibility, which will improve individual performance.

According to Spreitzer (1995), these four cognitions are a unity that cannot be separated because individuals will only feel empowered psychologically if they experience all of these cognitions. Dust et al (2018) stated that the success of employees in an organization is very dependent on the experience of empowerment that they experience psychologically. Furthermore, Malik et al (2021) also found that psychological empowerment is a determining factor in facilitating organizational effectiveness and increased performance. When individuals experience psychological empowerment, it is expected to increase the effectiveness of a comprehensive performance measurement system in improving managerial performance. Based on the description above, the following hypothesis is proposed:

H2: There is a positive impact of psychological empowerment on the relationship between a comprehensive performance measurement system and managerial performance.

## **METHOD**

The population in this study are managers at banks in Ambon city. The sample selection in this study used a judgment sampling method. The criteria for managers who are sampled in this study are managers who already have experience working as a manager for at least 2 years. This criterion is set with the intention that the manager has sufficient experience in carrying out their managerial duties. This research was conducted by submitting questionnaires directly to managers in each bank. The number of questionnaires collected was 100 questionnaires but only 98 questionnaires could be used because 2 were not filled in completely. According to Sekaran (2006) a sample size greater than 30 and less than 500 is suitable for almost all studies.

For the measurement of research variables, the first is a comprehensive performance measurement system which is defined as a process for measuring efficiency and effectiveness of performance by providing more comprehensive performance information to managers regarding measures that fully describe business unit operations and relate them to strategies to achieve goals. This variable was measured using the instrument used by Hall (2004) which consisted of nine question items with a five-point Likert scale ranging from a score of one for strongly disagreeing to a score of five for strongly agreeing. Second, psychological empowerment is defined as a cognitive construct that refers to the intrinsic motivation of each individual (Thomas and Velthouse, 1990). Psychological empowerment consists of four cognitions: the value or meaning of a job, competence, self-determination, and impact (1995). The instrument used to measure this variable was developed by Spreitzer (1995) using a five-point Likert scale ranging from a one for strongly disagreeing to a five for strongly agreeing. Finally, managerial performance is defined as the ability of managers to carry out managerial activities including planning, investigation, coordination, supervision, staffing, negotiation and representation (Mahoney et al., 1963 in Hall, 2004).

Managerial performance is measured using a self-rating instrument with nine items developed by Mahoney et al. (1963). The managerial performance variable instrument consists of nine question items using a five-point Likert scale from a score of one if performance is far below average to a five if performance is far above average.

To test the research hypothesis using multiple regression analysis test using SPSS 24 software with the regression model as follows:

$$\text{Hypothesis 1: } Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$$

$$\text{Hypothesis 2: } Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_1 X_2 + e$$

Note:

Y = managerial performance      X2 = psychological empowerment

$\alpha$  = constant      e = Error

$\beta$  = regression coefficient

X1 = comprehensive performance measurement system

## RESULT AND DISCUSSION

### Descriptive statistics

The sample descriptive statistics consist of a comprehensive performance measurement system, psychological empowerment and managerial performance. Descriptive statistics can be seen in the following table:

Table 1. Sample descriptive statistics

Variabel	N	Min	Max	Mean	Std.Deviation
comprehensive performance measurement system (X1)	98	42	60	49,73	4,506
psychological empowerment (X2)	98	60	84	71,43	6,352
Managerial performance (Y)	98	46	62	54,44	4,003

Source: Data analysis result

### Classical Assumption Testing

Based on the results of the classical assumption test, it shows that the Kolmogorov-Smirnov test results show that the significance level is above 5%. This means that the data has been normally distributed. The test shows that the Tolerance value is not less than 0.10 and the VIF value does not exceed 10, meaning that it can be concluded that there is no multicollinearity between variables. The results of the Glejser test showed that there was no heteroscedasticity with tcount being smaller than ttable (t-table value:  $\alpha = 5\% = 1.98$ ).

### Hypothesis Testing

The results of testing the research hypothesis using multiple regression analysis are shown in table 2.

Table 2. Results of multiple regression analysis

Variable	Unstandardized Coefficients	t	Sig.
(Constant)	86.699	2.302	<b>0.024</b>
comprehensive performance measurement system (X1)	2.880	3.307	<b>0.001*</b>
psychological empowerment (X2)	2.654	3.110	<b>0.002*</b>
The interaction between Comprehensive Performance Measurement Systems and Psychological Empowerment (X1.X2)	1.245	2.825	<b>0.005*</b>
R	<b>0.603</b>	Keterangan: *Significant at p value < 0,05	
R <sup>2</sup>	<b>0.450</b>		
F-test	<b>34.73</b>		
Sig. F	<b>6 0.000</b>		

Source: Data analysis result

From the test results presented in table 2 above, the regression model is:

$$Y = 86,699 + 2,880X_1 + 2,654X_2 + 1,245 X_1. X_2 + e$$

### The Effect of Comprehensive Performance Measurement System on Managerial Performance.

Hypothesis 1 (H1) states that a comprehensive performance measurement system has a positive and significant effect on managerial performance. From the results of multiple regression analysis in table 2, it shows that the comprehensive performance measurement system variable shows a positive relationship (+) 2.880 with a t count of 3.307 and is significant at 0.05 (significance level of 0.000). If we look at the direction of the beta coefficient on the comprehensive performance measurement system variable, it appears that the direction of the relationship is positive, which means that the comprehensive performance measurement system variable will improve managerial performance.

Acceptance of hypothesis 1 (H1) indicates that a comprehensive performance measurement system can provide information that is relevant to decision making by managers because performance information provides managers with more accurate predictions about the environmental conditions of the company, resulting in a better alternative decision making by a series of effective and efficient actions and have an impact on improving manager performance.

### The Moderation Effect of Psychological Empowerment on the relationship between Performance Measurement Systems and Managerial Performance.

Hypothesis 2 (H2) states that there is a positive effect of psychological empowerment on the relationship between a comprehensive performance measurement system and managerial performance. From the results of multiple

regression analysis for the interaction between the comprehensive performance measurement system and psychological empowerment, it shows that the t-value for the interaction variable between the comprehensive performance measurement system and psychological empowerment is 2.825 and is significant at 0.05 (a significance level of 0.005).

These results indicate that hypothesis 2 which states that there is a positive effect of psychological empowerment on the relationship between a comprehensive performance measurement system and managerial performance is accepted. Psychological empowerment is proven to be a variable that moderates the relationship between comprehensive performance measurement systems and managerial performance. These findings reinforce the premise of contingency theory that there are contextual factors that influence the relationship between a comprehensive performance measurement system and managerial performance. The results of this study prove that when individuals in an organization experience psychological empowerment in the four empowerment cognitions (meaning, competence, self-determination, and impact) it will further increase the effectiveness of the performance measurement system in encouraging managerial performance improvement.

## **CONCLUSION**

Based on the research results, it can be concluded that the existence of a measurement system that provides more comprehensive measures (financial and non-financial measures) will help improve managerial performance. A comprehensive performance measurement system becomes a tool to motivate managers to improve their performance, so that it becomes the basis for self-assessment which ultimately has an impact on the manager's career development. Furthermore, the results of this study indicate that when managers are maximally empowered in the four cognitions of psychological empowerment (meaning, competence, self-determination, and impact), the effectiveness of the performance measurement system in improving managerial performance will further increase.

This study has several limitations that may undermine the results. Some of these limitations and weaknesses are as follows: (1) The scope of this study only uses the banking sector so that in order to obtain general conclusions, it is necessary to conduct more extensive research; (2) This study does not include organizational factors but only focuses on the influence of individual aspects, namely the psychological empowerment dimension on the relationship between a comprehensive performance measurement system and managerial performance; and (3) This study examines the psychological empowerment variable which consists of four cognitions (meaning, competence, self-determination, and impact) simultaneously.

Based on the limitations that exist in this study, several suggestions can be put forward that can be taken into consideration for researchers who wish to conduct further research. The next researcher can conduct research outside the banking sector, so that later the results can be generalized to a wider scope. wider so to strengthen the external validity further research is needed. Further research is suggested to test the psychological empowerment variables based on each cognition (meaning, competence, self-determination, and impact) separately, so as

to obtain more valid results as expected. Furthermore, Further research also recommended to add variables that influence the effectiveness of implementing a comprehensive performance measurement system to improve managerial performance such as strategy, environmental uncertainty and organizational culture.

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