

# Comprehensive Performance Measures, Job Satisfaction and Managerial Performance: The Effect of Trust in Superior and Organizational Commitment

Utami Puji Lestari<sup>1</sup> and Yusep Friya Purwa Setya<sup>1</sup>

<sup>1</sup>*Department of Accounting, Politeknik Negeri Jakarta, Jalan Prof. Dr. G. A. Siwabessy, Kampus Baru UI, Depok, Indonesia*

**Keywords:** Performance, measures, job, satisfaction, trust, commitment.

**Abstract:** This study's objectives are, first, to investigate if the use of financial and non-financial measures is related to some employee performances, such as job satisfaction, managerial performance, and commitment to the organization. This study also investigates if financial and non-financial performance measures affect employees' job satisfaction and managerial performance through employees' trust in superiors and their commitment to the organization. The data were collected from management-level employees of two service industries – public accounting firms and state-owned administrative service – located in Jakarta, Bogor, Depok, Banten, and Serang. The 79 data were analyzed by using PLS-SEM with SmartPLS Software Version 3.2.8. The results show that (1) financial performance measures do not affect job satisfaction directly or indirectly, (2) financial performance measures affect managerial performance through commitment to the organization, and (3) the use of non-financial measures as the company's employee performance evaluation affect employee job satisfaction and managerial performance indirectly through higher trust in superior and commitment to organization.

## 1 INTRODUCTION

Companies cannot depend only on traditional accounting-based measures for their performance evaluations in today's more competitive situation (Chenhall, 1997; Chenhall & Langfield-Smith, 2007; Hoque, Mia, & Alam, 2001; Kaplan & Norton, 1992). They have been forced to adopt a variety of performance improvement programmes, for instance benchmarking, which need an upgrade of their performance measurement systems to the more comprehensive one that includes non-financial performance measures (Bai & Sarkis, 2012; Kulatunga, Amaratunga, & Haigh, 2011; Micheli & Manzoni, 2010; Muchiri, Pintelon, Gelders, & Martin, 2011; Neely, 1999). Regardless of the increasing tendency of the adoption of more complete performance measurement evaluation system, there is not enough empirical support on the behavioural consequences of the use of this system (C. M. Lau, 2015; C. M. Lau & Roopnarain, 2014). In other words, there is a need to comprehend how the use of both financial and non-financial performance

measures affect employees' attitudes and performance. This study aims to fill this knowledge gap by investigating the consequence of the use of financial and non-financial performance measures on employees' attitudes and performances, including their trust in superior, organizational commitment, job satisfaction and managerial performance.

This study includes the effect of trust in superior on the association concerning financial and non-financial performance measures and employees' job satisfaction and managerial performance, because better performance evaluation tend to happen when there is a trust between subordinates and their superiors in an organization. Prior studies have found that there is a positive association between performance evaluation and trust in superiors (e.g. Chia, Lau, & Tan, 2014; C. M. Lau & Sholihin, 2005). This study contributes to this area by studying trust in superior in the context of financial and non-financial performance measures in a service industry.

The research of organizational commitment is important as it has significant effect on employees' performance. In the context of job satisfaction as

employees' performance, the relationship between organizational commitment and job satisfaction is unclear. Some studies have used job satisfaction as the dependent variable (e.g. Vandenberg & lance, 1992); while other previous studies have recognised job satisfaction as the independent variable (Jernigan, Beggs, & Kohut, 2002; Lok & Crawford, 2001; Tan & Lau, 2012). Regarding organizational commitment and managerial performance, some studies have found a positive relationship (e. g. Chong & Law, 2016; Mathieu & Zajac, 1990); while other studies have found no relationship (Steers, 1977; Wiener & Vardi, 1980). This study extends Chong and Law'

(2016) study by adding job satisfaction as one of dependent variable. However, this study differs from Chong and Law' (2016) study as this study investigates the impact of financial and non-financial performance measures on employees' job satisfaction and managerial performance through trust in superior and organizational commitment. Figure 1 presents the model of the study.

The literature relevant to this study is reviewed and followed by hypotheses development. The research method and the results of the study then presented. The last section concludes the paper with conclusions, limitation and suggestions.

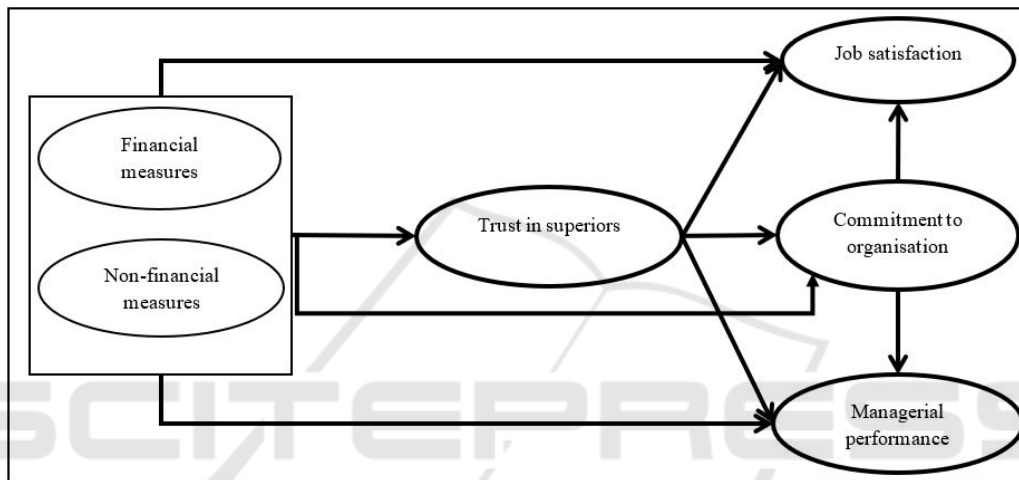


Figure 1: Research Model

## 2 LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

### 2.1 The Use of Financial and Non-financial Performance Measures and Employees' Job Satisfaction and Managerial Performance

Companies' use of financial and non-financial performance measures is believed to have favorable behavioral significances (C. M. Lau & Sholihin, 2005). It provides some indications and encourages subordinates to make some progress in their activities (Hoque et al., 2001). In other words, these significances tend to improve subordinates' performance, such as their job satisfaction and

managerial performance, which lead to the following hypotheses.

- H1: Financial performance measures are associated with job satisfaction
- H2: Non-financial performance measures are significantly associated with job satisfaction
- H3: Financial performance measures are significantly associated with managerial performance
- H4: Non-financial performance measures are significantly associated with managerial performance

## 2.2 The Use of Financial and Non-financial Performance Measures, Trust in Superior and Employees' Job Satisfaction and Managerial Performance

The concept of trust used in this study is borrowed from Read (1962), who conceptualized trust as "Subordinates' trust in superior' motivation regarding subordinates status and career in the company." Multiple financial and non-financial performance measures usage as the employees' performance evaluation may increase subordinates' trust in superior (C. M. Lau & Sholihin, 2005; Whitener, Brodt, Korsgaard, & Werner, 1998). By using financial and non-financial measures that represent a more comprehensive measures, these show that the company has taken into account the contributions made by the subordinates, superior then would be perceived as more concern about their organization and subordinates, which lead to higher subordinates' trust in superior (C. M. Lau & Sholihin, 2005). While subordinates and superiors in an organization trust each other, there would be less organizational conflicts (C. M. Lau & Sholihin, 2005), which lead to higher job satisfaction and managerial performance. Accordingly, the following hypotheses are tested.

- H5: Financial performance measures are significantly associated with job satisfaction through trust in superior
- H6: Non-financial performance measures are significantly associated with job satisfaction through trust in superior
- H7: Financial performance measures are significantly associated with managerial performance through trust in superior
- H8: Non-financial performance measures are significantly related to managerial performance through trust in superior

## 2.3 The Use of Financial and Non-financial Performance Measures, Commitment to Organization and Job Satisfaction and Managerial Performance

Porter, Steers, Mowday & Boulian (1974) define commitment to the organization as the relative strength of an individual's identification with and attachment to an organization. Previous studies in organizational behavior show that organizational commitment is a critical factor, positively affecting

employees' behavior, such as enhancing their effort, performance, and loyalty to an organization (Mathieu & Zajac, 1990; Sholihin & Pike, 2010).

By using multiple financial and non-financial performance measures, an organization would be able to evaluate individual performance from many perspectives (Kaplan & Norton, 1996). As it is seen as more comprehensive, individual that evaluated by that kind of performance measurement tend to show a more favorable behavior, including a higher commitment to organization (C. M. Lau & Moser, 2008). Previous study by Lau and Moser (2008) suggest that the use of non-financial performance measure in manufacturing companies has a positive effect on organizational commitment. Employees with higher organizational commitment tend to have a higher motivation to support their organization in achieving their goals (Chong & Law, 2016). In other words, employees with higher organizational commitment have higher performance than those with lower organizational commitment. The discussions lead to the following hypotheses.

- H9: Financial performance measures are significantly associated job satisfaction through commitment to the organization
- H10: Non-financial performance measures are significantly related to job satisfaction through a commitment to the organization
- H11: Financial performance measures are significantly associated with managerial performance through a commitment to organization
- H12: Non-financial performance measures are significantly related to managerial performance through a commitment to organization

## 2.4 Trust in Superior and Commitment to Organization

It is mentioned before that organization which have subordinates with higher trust in superior may have less conflicts (C. M. Lau & Sholihin, 2005). As this situation leads to a more comfort work environment, it would then increase employees' attachment to their organization (Chong & Law, 2016). In other words, trust in superior may lead to higher organizational commitment. Accordingly, the following hypothesis is developed.

- H13: Trust in superior is significantly related to commitment to organization

## 2.5 The Use of Financial and Non-financial Performance Measures, Trust in Superior, Commitment to Organization and Employees' Job Satisfaction and Managerial Performance

The use of multiple financial and non-financial performance measures as employees' performance evaluation tools in an organization may increase subordinates' trust in superior (C. M. Lau & Sholihin, 2005; Whitener et al., 1998). This will lead to higher employees' organizational commitment (Chong & Law, 2016) and their' effort to help companies in achieving their objectives, which in turn, may improve employees performance. The following hypotheses are tested.

- H14: Financial performance measures are significantly associated with job satisfaction via trust in superior and a commitment to organization
- H15: Non-financial performance measures are significantly associated with job satisfaction via trust in superior and a commitment to organization
- H16: Financial performance measures are significantly associated with managerial performance via trust in superior and commitment to organization
- H17: Non-financial performance measures are significantly associated with and commitment to organization

## 3 METHOD

### 3.1 Sample and Data Collection Procedure

Data were collected from employees at the middle and senior level of accounting firms and one state-owned administrative service located in Jakarta, Bogor, Depok, Tangerang, Bekasi, Banten and Serang. Data of accounting firms is obtained from the list in the Ministry of Finance electronic database. The accounting firms – one type of business service – were selected as based on Indonesian Central Bank' Activity Survey, in the future would become one of service sectors with the highest business growth in Indonesia (Raswa, 2015). The state-owned administrative service was selected as based on Indonesian Ministry of Finance (2009), is one of

government institution that has successfully reform its bureaucracy.

An email was sent to the accounting firms in the list, asking the partner of the firms to obtain two names of their senior auditors and supervisors or send the link of the questionnaire directly to two of their senior and/or supervisor auditors. For the state-owned administrative service, after obtaining the research permission from the head office, the link of the survey questionnaire was emailed to the public relations department of each office, asking them to send the link to the middle and senior managers. Of the 303 emails sent to the respondents, only 79 fill the questionnaire, constituting a 26.07% response rate. This rate is higher than the 10%-20% of average response rate for surveys of higher management level of participant-level (Menon, Bharadwaj, & Howell, 1996; Voola, Casimir, Carlson, & Agnihotri, 2012).

The demographic data show that the participants consist of 19 females (24.05%) and 60 males (75.95%). Only eight participants were part time employees (10.13%), while the rest were full time employees (89.87%). Most of the participants have worked at their current workplace for less than five years (49.37%), 17.72% have been employed for 5 to 10 years at the same place, and 32.91% have worked for more than 10 years on the same workplace. All participants held tertiary education, with about 58.23% holding bachelor's degrees and 41.77% owned master's degrees.

### 3.2 Measurement of Variables

#### 3.2.1 Non-financial Performance Measures

The financial and non-financial performance measures were assessed by using the instrument developed by Lau and Moser (2008). The participants were asked to rate the importance of the items when their superior is evaluating their performance. The instruments have shown satisfactory reliability level with Cronbach Alpha of 0.821 (financial measures) and 0.912 (non-financial measures).

#### 3.2.2 Trust in Superior

This variable is measured using a four-item instrument developed by Read (1962). The participants were asked to rate the extent to which they agree with the statements. The instruments have demonstrated high internal reliability with Cronbach Alpha value of 0.821. One item was deleted as it has factor loading lower than 0.5.

### 3.2.3 Organizational Commitment

Organizational commitment was measured using an eleven-item instrument developed by Mowday, Steers and Porter (1979). After deleting two items that have factor loadings below 0.5, the variable demonstrated satisfactory internal reliability with Cronbach Alpha value of 0.944.

### 3.2.4 Job Satisfaction

The variable was evaluated using an instrument developed by Rusbult and Farrel (1983). The items of this variable have satisfactory factor loadings, with Cronbach Alpha value of 0.943.

### 3.2.5 Managerial Performance

Managerial performance was measured using the nine-item self-rating instrument developed by Mahoney, Jerdee and Carroll (1965). The items have a satisfactory loadings value with Cronbach Alpha of 0.961. Table 1 shows the factor loadings for all items of each variables while Table 2 demonstrate the results of construct reliability and validity test. As shown in Table 3, all of the variables have acceptable discriminant validity as the square root AVE for each variable is more significant than any value of the non-diagonal element.

Table 1: Factor Loadings Of Variables.

	Commitment	Fin	Job Satisfaction	Managerial performance	Non Fin	Trust
F1		0,904				
F2		0,843				
F3		0,828				
JobS1			0,906			
JobS2			0,771			
JobS3			0,924			
JobS4			0,934			
JobS5			0,914			
JobS6			0,842			
MPerf2				0,888		
MPerf3				0,947		
MPerf4				0,839		
MPerf5				0,944		
MPerf6				0,827		
MPerf7				0,714		
MPerf8				0,900		
MPerf9				0,879		
Mperf1				0,905		
NF1					0,789	
NF2					0,783	
NF3					0,744	
NF4					0,766	
NF5					0,801	
NF6					0,754	
NF7					0,717	
NF8					0,809	
NF9					0,711	
OrgCom1	0,701					

OrgCom10	0,626					
OrgCom11	0,900					
OrgCom2	0,834					
OrgCom3	0,814					
OrgCom4	0,663					
OrgCom5	0,898					
OrgCom6	0,888					
OrgCom7	0,709					
OrgCom8	0,879					
OrgCom9	0,893					
Trust2						0,777
Trust3						0,935
Trust4						0,856

Table 2: Construct Reliability and Validity.

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Organizational commitment	0,944	0,953	0,953	0,651
Financial measures	0,821	0,822	0,894	0,738
Job Satisfaction	0,943	0,954	0,955	0,781
Managerial performance	0,961	0,966	0,967	0,764
Non-Financial measures	0,912	0,921	0,927	0,585
Trust in superior	0,821	0,853	0,893	0,737

Table 3: Fornell Larker Discriminant Validity.

	Commitment	Fin	Job Satisfaction	Managerial performance	Non-Fin	Trust
Organizational commitment	0,807					
Financial measures	0,609	0,859				
Job Satisfaction	0,699	0,537	0,884			
Managerial performance	0,696	0,391	0,643	0,874		
Non-Financial measures	0,638	0,680	0,487	0,511	0,765	
Trust in superior	0,608	0,440	0,487	0,546	0,559	0,858

## 4 RESULTS

Partial least square equation modelling with SmartPLS<sup>®</sup> software Version 3.2.8 (Ringle, Wende, & Becker, 2015) was used to test the models. By using bootstrapping with 5.000 samples with replacement, the results in Table 4 have shown that all of the R<sup>2</sup> values of each independent variables are higher than 0.1, which means that variables explained

by the dependent variables have statistical and practical significance.



Table 4: The R-Square Values.

	R Square	R Square Adjusted
Organizational Commitment	0,547	0,529
Job Satisfaction	0,513	0,487
Managerial performance	0,519	0,493
Trust in superior	0,305	0,287

The results presented in Table 5, Table 6, and Figure 2 advice that only H10, H11, H13, H15 and H17 are significant. H10 states that non-financial performance measures are significantly related to job satisfaction through organizational commitment; while H11 states that financial performance measures are connected significantly to managerial performance. The results in Table 6 specify that non-financial performance measures are connected significantly to job satisfaction via organizational commitment (0.149,  $p < 0.005$ , one-tailed), and financial performance measures are significantly related managerial performance through organizational commitment (0.162,  $p < 0.05$ , one-tailed). Therefore, H10 and H11 are supported. H13 states that trust in superior is significantly related to organizational commitment. Table 5, Figure 2 indicate that trust in superior is associated

significantly with organizational commitment (0.341,  $p < 0.001$ , one-tailed), supporting H13. Finally, H15 and H17 state that non-financial performance measures are significantly related to job satisfaction through trust in superior and commitment to the organization, and non-financial performance measures are significantly associated with managerial performance through trust in superior and commitment to the organization respectively. Table 6 indicates that non-financial performance measures are associated significantly with job satisfaction through trust in superior and commitment to organization (0.087,  $p < 0.05$ , one-tailed) and non-financial performance measures are associated significantly with managerial performance through trust in superior and commitment to organization (0.091,  $p < 0.05$ , one-tailed), which supported H15 and H17 respectively.

Table 5: Beta Coefficients, Standard Deviation, t-Values and p-Values - Direct Effects.

	Beta Coefficient	Standard Deviation	T Values	P Values
Commitment -> Job Satisfaction	0,561	0,162	3,451	0,000
Commitment -> Managerial performance	0,586	0,131	4,481	0,000
Fin -> Commitment	0,277	0,135	2,051	0,020
Fin -> Job Satisfaction	0,188	0,172	1,090	0,138
Fin -> Managerial performance	-0,134	0,138	0,969	0,166
Fin -> Trust	0,129	0,149	0,863	0,194
Non-Fin -> Commitment	0,266	0,149	1,790	0,037
Non-Fin -> Job Satisfaction	-0,046	0,137	0,335	0,369
Non-Fin -> Managerial performance	0,131	0,157	0,837	0,201
Non-Fin -> Trust	0,457	0,133	3,431	0,000
Trust -> Commitment	0,341	0,108	3,157	0,001
Trust -> Job Satisfaction	0,088	0,136	0,645	0,260
Trust -> Managerial performance	0,177	0,115	1,531	0,063

Table 6: Beta Coefficients, Standard Deviation, t-Values, p-Values - Indirect Effects.

	Beta Coefficient	Standard Deviation	T Values	P Values
Fin -> Trust -> Commitment	0,044	0,055	0,805	0,211
Non-Fin -> Trust -> Commitment	0,156	0,070	2,225	0,013
Fin -> Commitment -> Job Satisfaction	0,155	0,102	1,525	0,064
Non-Fin -> Commitment -> Job Satisfaction	0,149	0,088	1,688	0,046
Fin -> Trust -> Commitment -> Job Satisfaction	0,025	0,034	0,724	0,235
Trust -> Commitment -> Job Satisfaction	0,191	0,088	2,180	0,015
Non-Fin -> Trust -> Commitment -> Job Satisfaction	0,087	0,051	1,717	0,043
Fin -> Trust -> Job Satisfaction	0,011	0,028	0,403	0,344
Non-Fin -> Trust -> Job Satisfaction	0,040	0,069	0,582	0,280
Fin -> Commitment -> Managerial performance	0,162	0,083	1,958	0,025
Non-Fin -> Commitment -> Managerial performance	0,156	0,108	1,443	0,075
Fin -> Trust -> Commitment -> Managerial performance	0,026	0,034	0,762	0,223
Trust -> Commitment -> Managerial performance	0,200	0,078	2,559	0,005
Non-Fin -> Trust -> Commitment -> Managerial performance	0,091	0,047	1,953	0,026
Fin -> Trust -> Managerial performance	0,023	0,036	0,637	0,262
Non-Fin -> Trust -> Managerial performance	0,081	0,062	1,306	0,096

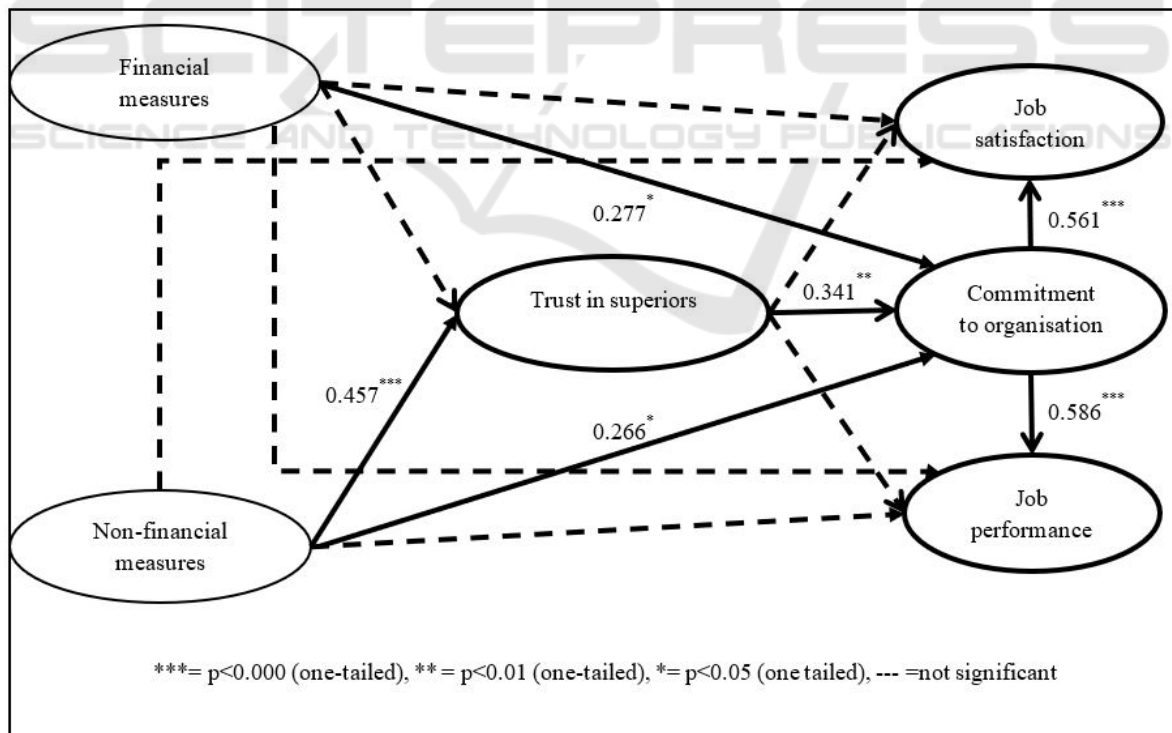


Figure 2: Structural Model Results – Direct Effect



## 5 CONCLUSIONS

This study's objectives are to examine if financial and non-financial measures are connected to some employees' performances, for instance, job satisfaction, managerial performance and organizational commitment. This study also investigates whether financial and non-financial performance measures affect employees' job satisfaction and managerial performance through employees' trust in superiors and their organizational commitment. The findings show that (1) financial performance measures affect organizational commitment and (2) non-financial performance measures affect (a) employees' trust in superiors and (b) their organizational commitment. As the results also indicate that there are (1) no connection between financial and non-financial performance measures and (a) job satisfaction and (b) managerial performance; (2) no relationship between employees' trust in superior and (a) job satisfaction and (b) managerial performance; and (3) employees' trust in superiors affect their organizational commitment; the indirect effect tests have pointed out that (1) financial performance measures affect managerial performance fully through organizational commitment and (2) non-financial performance measures affect job satisfaction and managerial performance fully through employees' trust in superiors and their organizational commitment.

The contributions of this study to the theory are as follows. This study is advising the importance of financial and non-financial performance measures on the employees' attitudes, namely employees' trust in superior and organizational commitment. Therefore, this study's results support Solihin and Pike (2010) and Lau and Moser (2008). This study also indicates that employees' trust in superiors and organizational commitment increase our understanding on how financial and non-financial performance measures affect job satisfaction and managerial performance. The use of financial performance measures would affect managerial performance only through organizational commitment. This result supports Solihin and Pike (2010), who suggest that the association between financial performance measures and organizational commitment is direct. The use of non-financial performance measures would affect job satisfaction and managerial performance through employees' organizational commitment only or through both employees' trust in superior and organizational commitment. These results support Chong and Law (2016) who argue that trust in superior and organisational commitment have a

significant role in increasing managerial performance. The lack of direct and indirect link between financial performance measures and job satisfaction through trust in superior and or organizational commitment indicates that this relationship may happen through other factors.

This study's practical contributions are to enhance employees' job satisfaction and managerial performance; organizations need to design and manage a clear performance measurement system and raise their employees' trust in superiors to gain better employees' organizational commitment.

There are some limitations to this study. The use of only two types of service industries makes the results may not apply to other sectors. Future research should include other service industries. Second, more than 30% of the respondents have worked for the same organization for more than ten years. This may raise the issue of "survivor bias" as these employees tend to have stronger ties with their organization (Hrebiniak & Alutto, 1972). As a result, their commitment to the organization is relatively high, which leads to better managerial performance and job satisfaction. Research in the future may study this issue in different settings.

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