Influence Satisfaction, Compensation and Work Discipline the Employee Performance at PT. Lion Air in Batam

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Received: July 12, 2016 Accepted: August 8, 2016 Online Published: November 3, 2016

Abstract

This study aimed to analyze the extent to which the effect of satisfaction, compensation and discipline on the performance of employees at PT. Lion Air in Batam as well as to analyze the most dominant variables affect the performance of employees at PT. Lion Air in applying Batam. For goal then used descriptive analysis, multiple regression analysis, validity and reliability test and partial test and test simultaneously.

From the results of the regression equation the influence of variables (job satisfaction, compensation and working discipline) with the performance of employees at PT. Lion Air Batam, there was a strong and significant influence, because the higher job satisfaction, compensation and working discipline, the higher the employee's performance because it has a probability value of less than 0.05. Thus, in this study proved the first hypothesis. The most dominant variable affecting the performance of employees is job satisfaction, reasons for job satisfaction has a standardized coefficient of the largest value when compared with the variable compensation and work discipline.

Keywords: job satisfaction, compensation, work discipline, employee performance

1. Introduction

In today's global competition, the working world desperately needs people who can think for advanced, intelligent, innovative and able to work with high morale in the face of progress era no only that, under current conditions the role of human resources itself has an important role in an organization or company, also prioritized on mature managerial aspects in the management of the organization or company organization. Various trying to improve the performance of all elements within their respective organizations with the aim of achieving the survival of this company. Case increasingly competitive due to competition with other competing companies.

Rival (2009, p. 357) and Martoyo (2007, p. 126), suggest that compensation is something that employees received in lieu of their services to the company's contribution. Therefore, the existence of competition in various sectors to make the process of managing and maintaining the organization's management is getting serious attention from all elements within the company to create a managerial system that is resilient and able to follow current developments. Human resources in this case is the employee or employees at an agency or organization, of course, trying to work with their capabilities in order to achieve high performance. To improve the performance of employees, many factors need to be considered by companies such as satisfaction, compensation, discipline, and this work. In keeping kosher with research conducted by Trias (2011), which examines the motivation factor analysis, compensation and working discipline on employee performance through job satisfaction at the Muhammadiyah University Jember. Result research shows that compensation significantly influence job satisfaction and employee performance, labor discipline significantly affect performance and job satisfaction have a significant effect on employee performance. Ruky (2006, p. 15) points out: "The performance is a record of the results obtained from the specific job functions or activities for a certain period of time". In addition to these two variables, then the discipline of work is a factor that can affect the performance of employees, according to Mangkuprawira (2007, p. 122) that the discipline of work greatly affect the performance of employees, it is because discipline is a form of exercises for employees in implementing company rules, increasingly higher employee discipline employee productivity and company performance.

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Siagian (2008, p. 305) states that: "Discipline is the management's action to encourage members of the organization meet the various demands of the provision".

According to Glanz, Shulman and Sullivan (2007), quality education partly depends on how well teachers are trained, compensated and supervised since they are one of the key inputs to education delivery. Employees generally perform well on the job when they feel that they are fairly compensated for their work (Gurbuz, 2009). Compensation is a form of reward that flows to employees arising from their employment. Employees' satisfaction with their compensation usually influences their job satisfaction, which could lead to higher worker productivity (Mondello & Maxcy, 2009). Similarly, many researchers believe that supervision of instruction has the potential to improve classroom practices, and contribute to student success through the professional growth of teachers and improvement of their work performance (Yimaz, Tadan, & Ouz, 2009; Baffour-Awuah, 2011). Supervision is viewed as a co-operative venture in which supervisors and teachers engage in dialogue for the purpose of improving instruction which logically should contribute to teachers' performance, and improved student learning and success (World Bank, 2011).

Hasibuan (2008, p. 193) states that: "Discipline is the awareness and the willingness of a person to comply with all company rules and social norms in force". Steps to perform employee performance according to Dessler (2008, p. 3) are: Defining the job which means you and your subordinates agree on duties and standard positions, assess the performance which means comparing the actual performance of your subordinates with the standards that have been set, and the last step is the feedback that the intention is subordinate performance and progress are discussed and plans were made for the development of what is required.

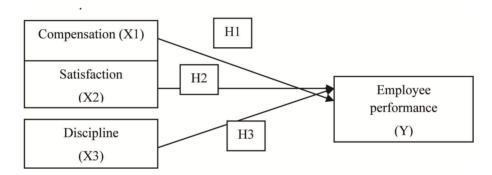


Figure 1. Framework research concept

2. Research Methods

2.1 Variable Operational Research and Definitions

Operational definitions, variables and measurement represents the union of views and similarity of opinion on some of the terms in this study were used as variables studied were as follows.

Table 1. Variable indicators framework research concept

variable	Definition	Indicator	Measurement
Job satisfaction (X ₁)		-Income that I received in accordance with the position that my lap	Likert scale, with a score weights are:
	Expression of feelings felt by someone on his attitude feeling happy or not happy at work	-I feel I hold positions that are in accordance with ability	1=Strongly Agree 2=Quite Agree 3=Neutral 4=Disagree 5=Strongly disagree
		-I feel happy with the working conditions now	
(21)		-I feel quite de-ngan income provided by this agency	
		-I guarantee keakra-tire with my colleagues both within like-anybody outside the company	
Compensation (X ₂)	Remuneration is given as a result	-The salary that I get to meet the necessities of life	Likert scale, with a score weights are:
	of work activities	-Salary received a fair manner	1=Strongly Agree 2=Quite Agree

		acceptable se-how to other employees	3=Neutral 4=Disagree
		-The allowances given are appropriate -Giving bonus-wan work on time	5=Strongly disagree
		-Medical benefits are awarded in accordance with the needs of employees	
		-With a high work discipline, the performance will be the maximum	Likert scale, with a score weights are:
labor discipline	Awareness and willingness of a person to obey all company rules and social norms in force as well	-Discipline encourages maintain office facilities	1=Strongly Agree 2=Quite Agree 3=Neutral
(X ₃)	as aware of the duties and responsibilities	-Discipline of work will create conditions conducive work -With the kedisip-linan then the job will be done properly	4=Disagree 5=Strongly disagree
		-Each employee is given the opportunity for creativity	Likert scale, with a score weights are:
		-Working together to provide ease in working	1=Strongly Agree 2=Quite Agree 3=Neutral
Employee	The results of the quality and quantity of work accomplished by an employee in performing their duties suits their responsibilities given to him	-Suitability of the work associated with the target	4=Disagree 5=Strongly disagree
performance (Y)		-Leaders provide a guarantee of job security	
		-The skills possessed affect work performance improvement-wan	
		-Promotion of a performance boost employee	

2.2 Population and Sample

The population in this study are the employees of the company of PT. Lion Air Batam numbering as many as 50 employees. While the technique of sampling using sampling techniques saturated, where according Sugiyono (2009) when the population of less than 100 people, it can be taken as the amount of the overall sample in this study, given the number of employees 50 people, then the amount can be made as the number of samples in this research.

2.3 Method of Analysis

To prove the hypothesis that has been proposed, then used the method of analysis as follows:

- (1) Descriptive analysis is a statistical analysis using descriptive, such as the average and standard deviation. This analysis is used to get a picture of satisfaction, compensation and discipline of work to employees performance at PT. Lion Air in Batam.
- (2) Multiple linear regression analysis is an analysis aimed to examine the effect of job satisfaction, compensation and work discipline on employee performance. By using multiple linear regression formula cited of books Mulyono (2006, p. 257).

$$Y=b_0+b_1X_1+b_2X_2+b_3X_3+e$$

Where:

Y=employee performance

X1=Job satisfaction

X2=Compensation

X3=Discipline work

b1, b2, b3=Regression coefficients to be observed

(3) Partial test (t test) for the first hypothesis testing

This test is to determine whether the effect of each the independent variable on the dependent variable is meaningful or not. Testing is done by comparing the tcount each independent variable with a value t tabel with a degree of error of 5% in terms of (α =0.05). If t count table, then the independent variables significantly influence the dependent variable.

(4) Test unison (Test F) for the second hypothesis testing

This test is used to determine whether all the independent variables jointly have a significant effect on the dependent variable. Testing is done by comparing the F _{value} of with F _{table} on the degree of error of 5% in terms of (α =0.05). If the F_{value} \geq of F _{table}, it means that the independent variables together give a significant effect on the dependent variable or the first hypothesis that can be accepted.

(5) The reliability test was used to test the reliability of grain research instruments, testing the reliability of the grain instrument reliable study if Cronbach alpha values above 0.60.

3. Results Analysis

3.1 Description Characteristics of Respondents

This study aims to determine the extent of the influence of satisfaction, compensation and discipline on the performance of employees at PT. Lion Air in Batam. To work on employee performance and to analyze the most dominant variable that facilitates the research process, it needs to be supported by the determination of the identity of respondents, where respondents in this study were employees and an employee at PT. Lion Air Batam numbering as many as 50 people. Then how sampling is done by using a saturated or census sampling method. Where the sample is determined by taking the total number of population.

3.1.1 Characteristics of Respondents by Gender

In a company or organization, often gender becomes an obstacle because of the differences in perspective between men and women. Grouping of respondents in this study is intended to determine the level of grouping gender proportion of male and female, which can be viewed through the following Table 2.

Table 2. Characteristics of respondents by gender

No.	Category	number of Respondents	Percentage (%)
1.	Man	24	48,0
2.	Women	26	52,0
		50	100,0

Source: The results of primary data processing, 2014.

According to Table 2 the characteristics of respondents by gender, shows that the level of the proportion of respondents by sex is the greatest in this study were women with a number of respondents as many as 26 people (52%) and men as many as 24 people (48%), so it can be said that most great employees at PT. Lion Air in Batam are women.

3.1.2 Characteristics of Respondents by Age

Characteristics of respondents in this study can be classified on the respondents aged under 25 years, 26-35 years, 36-45 years and over 46 years of age, for the complete results can be presented through the following Table 3.

Table 3. Characteristics of respondents by age

No.	Category	number of Respondents	Percentage (%)
1.	<25 year	3	6,0
2.	26-35 year	22	44,0
3.	36-45 year	20	40,0
4.	Above 46 year	5	10,0
		50	100,0

Source: The results of primary data processing, 2014.

The above table that the description of respondents by age, where the largest age group of respondents in this study were respondents aged between 26-35 years that as many as 22 people (44%), followed by respondents aged between 36-45 years with the number of respondents was 20 people (40%), so it can be concluded that the average employee at PT. Lion Air in Batam is aged between 26-35 years.

3.1.3 Characteristics of Respondents by Type of Education

Descriptions in this study, illustrates the kind of education last held by the employee, where the employee last type of education can be grouped into four groups, namely: high school, college, Bachelor's, and Master's degree. The description of the respondents according to the type of recent education can be seen in the following table.

Table 4. Characteristics of respondents by type of education

No.	Category	number of Respondents	Percentage (%)
1.	SMA	1	2,0
2.	Academy	10	20,0
3.	Bachelor	34	68,0
4.	Postgraduate	5	10,0
		50	100,0

Source: The results of primary data processing, 2014.

Based on the above table that outlines the description of the respondents according to the type of education, so that education can be said that the last respondent is the largest undergraduate (S1), which is as many as 34 people or 68%, so it can be concluded that the average type of education of employees at PT. Lion Air in Batam is Bachelor.

3.1.4 Characteristics of Respondents by Length of Work

Characteristics of respondents by length of work outlines the employment period or devotion to one respondent to the company where he worked, for more details will be presented the characteristics of respondents by length of work that can be viewed through the following table.

Table 5. Characteristics of respondents by duration of work

No.	Category	number of Respondents	Percentage (%)
1	1-5 year	3	6,0
2	5-10 year	21	42,0
3	Above 10 year	26	52,0
		50	100,0

Source: The results of primary data processing, 2014.

From the above data, it appears that the largest tenure respondents in this study were over 10 years that as many as 26 people or 52%, so it can be concluded that the average employee working at PT. Lion Air in Batam is have a service life over 10 years.

3.1.5 Characteristics of Respondents by Marital Status

Description of the identity of respondents by marital status shows whether the employee is married or not, for more details the characteristics of respondents by marital status in this study can be seen in the following Table 6.

Table 6. Characteristics of respondents by marital status

No.	Category	number of Respondents	Percentage (%)
1.	marry	42	84,0
2.	single	8	16,0
		50	100,0

Source: The results of primary data processing, 2014.

The above table shows that the frequency distribution of respondents by marital status in this study are dominated by respondents with marital status is as many as 42 people or 84%, this means that most employees at PT. Lion Air in Batam is already married.

3.2 Testing Instrument Data

3.2.1 Test Validity

Test the validity of a list of questions to gauge whether or not a legitimate or valid questionnaires. A questionnaire considered valid if the questions on the questionnaire were able to consider something that is measured by the questionnaire method is to use corrected item-total correlation is done by correlating each item score with the total scor and perform correlation with correlation coefficient values over estimate. This is because in order to avoid the total item coefficient over estimate. In determining whether or not an item to be used is usually done significant test. Therefore, according to Dwi (2010, p. 90) that an item is considered valid if the following significant test correlation coefficient of 0.05, more Dwi suggested that an item is considered valid if the value of the correlation above 0.30. Thus, the validity of test results can be presented on job satisfaction, compensation and working discipline by using SPSS release 17 that can be seen in the table is as follows.

Table 7. Validity of test results job satisfaction

code Questions	Corrected Item Total Correlation	R standard	Conclusion
X11	0,350	0,30	Valid
X12	0,486	0,30	Valid
X13	0,524	0,30	Valid
X14	0,476	0,30	Valid
X15	0,390	0,30	Valid

Source: Data processed, 2014.

Table 7 which is the result of testing the validity of job satisfaction, the statement of 5 items tested turned out to be all the item in question is valid, for the fifth statement items have correlation values that have been on top of 0.30

Then the validity of the test results will be presented on the compensation that can be viewed through the following Table 8.

Table 8. Validity of test results compensation

code Questions	Corrected Item Total Correlation	R standard	Conclusion
X21	0,360	0,30	Valid
X22	0,534	0,30	Valid
X23	0,380	0,30	Valid
X24	0,353	0,30	Valid
X25	0,438	0,30	Valid

Source: Data processed, 2014.

Table 9 which is the result of testing the validity of compensation, the statement of 5 items tested turned out to be all the item in question is valid, for the fifth statement items have correlation values that have been on top of 0.30. Then it will be presented the results of testing the validity of the discipline of work which can be seen through the following.

Table 9. Work discipline validity of test results

code Questions	Corrected Item Total Correlation	R standard	Conclusion
X31	0,618	0,30	Valid
X32	0,680	0,30	Valid
X33	0,747	0,30	Valid
X34	0,698	0,30	Valid

Source: Data processed, 2014.

Based on the validity of the test results on the discipline of work, then the statement of the four items were tested, it appears that the four items of the statement is valid or invalid because it has corrected item total correlation values above of 0.30. Furthermore, the validity of the test results will be presented on the employee's performance can be viewed through the following.

Table 10. Validity of test results employee performance

code Questions	Corrected Item Total Correlation	R standard	Conclusion
Y1	0,302	0,30	Valid
Y2	0,513	0,30	Valid
Y3	0,586	0,30	Valid
Y4	0,601	0,30	Valid
Y5	0,557	0,30	Valid
Y6	0,584	0,30	Valid

Source: Data processed, 2014.

Based on the validity of the test results on the performance of employees with 6 items proposed statement, it is seen that the sixth item of the statement is valid or invalid because it has corrected item total correlation values above of 0.30.

3.2.2 Test Reliability

In this study, the authors use the questionnaire as a measure of the influence of satisfaction, compensation and discipline of work to employees performance at PT. Lion Air in Batam. Test Reliability is a reliability test aims to determine how far the measuring instrument can be trusted. A questionnaire said to be reliable or reliable if someone answers to the question of constant or stable over time.

Reliability testing will construct in this study using Cronbach's alpha values generated through SPSS data processing. If the value of Cronbach's alpha>0.60 then said to be reliable (Ghozali, 2001). Reliability testing results can be seen in the following.

Table 11. Reliability test results

Research variable	Cronbach's Alpha	R standard	Information
Job satisfaction	0,684	0,60	reliable
Compensation	0,653	0,60	reliable
labor discipline	0,847	0,60	reliable
Employee performance	0,765	0,60	reliable

Source: Appendix SPSS.

From Table 11 reliability test results on the variables satisfaction, compensation and working discipline with the performance of employees at PT. Lion Air Batam shows all items of questions all reliable because it has a value of Cronbach's alpha (α) above 0.60, which can be specified for job satisfaction variables with Cronbach's alpha of 0.684, compensation to the value of Cronbach's alpha (α) of 0.653, labor discipline with cronbach's alpha of 0.847, and the performance of employees with a value of cronbach's alpha (α) of 0.765, so it can be said that the four variables have been reliable or reliable because it has a value of 0.60 r standar above.

Analysis and Discussion Influence Satisfaction, Compensation and Discipline of work the Employee Performance

Based on test results regarding quality test data from each research tool, it can be done multiple linear regression analysis on the effect of satisfaction, compensation and work discipline on the performance of employees, which in testing in this study used multiple linear regression analysis (multiplier regression), using SPSS release 17 that can be seen in the following Table 12.

Table 12. Processed data regression using SPSS program version 17

	Model	Unstandardized Coefficients		Standardized Coefficients	t .	Sig.
		В	B Std. Error			
1	(Constant)	.584	.303		1.926	.060
	Job satisfaction	.352	.106	.408	3.325	.002
	Compensation	.317	.094	.306	3.379	.001
	Work discipline	.255	.100	.289	2.542	.014
a. Dep	endent Variable: Employee	Performance				

According to the Table 12 regression data that is processed by using SPSS release 17 then the regression equation ie:

 $Y=0.584b_0+0.352X_1+0.317X_2+0.255X_3$

From the results of the regression equation above, it can be given the explanation that:

b0=0.584 which is a constant value, meaning that if the job satisfaction (X1), compensation (X2) and discipline (X3) constant, then the employee performance (Y) amounted to 0.584%.

b1=0.352 which shows the regression coefficients satisfaction work (X1), meaning that if the job satisfaction increases, the influence on the performance of employees will increase by 0.352%.

b2=0.317 which is the regression coefficient of variable compensation, meaning that when compensation is improved it will affect employee performance improvement amounting to 0.317%.

b3=0.255 which is the regression coefficient of work discipline, meaning that if the labor discipline increases will affect employee performance amounted to 0.255%.

Then it will be presented the results of multiple correlation analysis that can be viewed through the following Table 13.

Table 13. Correlation analysis results

	R	R Square	Adjusted R Square	Std. Error of the Estimate	F_{count}	Sign
1	.865ª	.747	.731	.206090,000	45.374	$0,000^{a}$

Source: Appendix SPSS.

According to the Table 13 which is the result of multiple correlation analysis of the obtained figures R of 0.865, this shows that satisfaction, compensation, discipline, work has a significant relationship with employee performance, because the value of R positive and close to 1. Then the value of R2 (R-square) of 0,747 (74.70%), this shows that the percentage of the influence of the independent variables (job satisfaction, compensation and working discipline) able to explain amounted to 74.70% of the variation of the variable employee performance.

The standard error of the estimated error is a measure of the amount of regression models in predicting employee performance (Y). From the results of the regression analysis of the obtained value of the estimated standard error of 0.206. This indicates that the number of errors in predicting employee performance can be determined at 0.206.

3.3 Hypothesis Testing

3.3.1 Partial Test (T-test)

To test the extent of influence of each variable that job satisfaction, compensation and work discipline on the performance of employees then used the significant test, by comparing $t_{account}$ and t_{table} of each variable that job satisfaction, compensation and discipline of work which can be described as follows:

a) Effect of Job Satisfaction (X1) on employee performance (Y)

From the results of the regression coefficients obtained by regression coefficient of 0.352, but it has t $_{count}$ for job satisfaction at 3.325 and 1.679 t $_{table}$, and has a value of probability of 0,002< α 0.05. Because t count greater than t table and has a probability value smaller than the standard value, it can be said that job satisfaction has a significant influence on improving the performance of employees at PT. Lion Air in Batam.

b) Variable Compensation (X2) on employee performance (Y)

Based on the data processing result of regression showed that the value of the regression coefficients for compensation of 0.317, and has t $_{count}$ 3.379>1.679 t $_{table}$ and in addition it has a probability value 0,001< α 0.05. This means that the compensation has a significant influence on the performance of employees at PT. Lion Air Batam.

c) Variable Work Discipline (X3) on the performance of employees

Based on the results of data processing showed regression coefficient regression value for the working discipline at .255, and has t $_{count}$ 2,542>1,679 t $_{table}$ and besides it has a probability value 0,014< α 0.05. It can be concluded that the discipline of work has a significant influence on improving the performance of employees at PT. Lion Air in Batam.

3.3.2 Simultaneously Test (Test F)

To be able to prove that the job satisfaction, compensation and working discipline has a simultaneous effect on employee performance or simultaneously, it can be used by F_{test} . In Anova obtained of F_{value} (45.374>2.807) and in addition it has a probability value<alpha (0.000<0.005), it can be said that the regression model can be used to predict the performance of employees.

4. Conclusions

The conclusions of the research and discussion about the influence of satisfaction, compensation and discipline of work to employees performance at PT. Lion Air in Batam, then a number of conclusions as follows:

- (1) Effect between variables (job satisfaction, compensation and working discipline) with the performance of employees at PT. Lion Air Batam there was a strong and significant influence, because the higher job satisfaction, compensation and working discipline, the higher the employee's performance because it has a probability value of less than 0.05. Thus, in this study proved the first hypothesis.
- (2) The most dominant variable affecting the performance of employees is job satisfaction, reasons for job satisfaction has a standardized coefficient of the largest value when compared to variable compensation and work discipline.

5. Suggestions

Based on the conclusions that have been described, it can be presented several suggestions as recommendation to the company PT. Lion Air in Batam is as follows:

(1) To provide satisfaction for employees, it should PT. Lion Air attention to the issue positions and working conditions of the company to provide satisfaction for employees.

- (2) It is recommended that the need for the company given notice regarding the salaries, besides that bonuses are given in a timely manner.
- (3) It is recommended that companies need to increase the level of discipline, by imposing sanctions or penalties for employees who break the rules.

References

As'ad, M. (2006). *Phsikologi Industry* (4th ed.). Liberty, Yogyakarta.

Cantika, Y., & Sri, B. (2005). *Human Resource Management* (1st ed.). The University of Muhammadiyah Malang.

Fathoni, A. (2006). Human Resource Management. Rineka Cipta, Jakarta.

Gomes, C., & Faustino. (2008). Human Resource Management (1st ed.). Andi Offset, Jakarta.

Handoko, T. H. (2008). The Personnel and Human Resources Management (2nd ed.). BPFE, Yogyakarta.

Hasibuan, M. S. P. (2008). Human Resource Management (revised edition). Earth Literacy, Jakarta.

Made, I., & Yusa, D. (2011). Effect of Compensation and Working Environment Non Physical against Discipline and Employee Performance Hotel Nikki Denpasar. Udayana University Graduate Program.

Mangkuprawira, S., & Aida, V. H. (2007). Quality Management Human Resources. Ghalia Indonesia, Jakarta.

Martoyo, S. (2007). Human Resource Management (4th ed.). BPFE, Yogyakarta.

Rival, V. (2009). Human Resource Management for Corporations (1st ed.). King Garfindo Persada, Jakarta.

Setyowati, T. (2011). Analysis of Factors Influence Motivation, Compensation and Work Discipline on Employee Performance through Job Satisfaction at the University of Muhammadiyah Jember.

Siagian, S. P. (2008). Human Resource Management (1st ed.). Earth Literacy, Jakarta.

Simamora, H. (2006). Human Resource Management (3rd ed.). YKPN, Yogyakarta.

Sopiah. (2008). Organizational Behavior (1st ed.). Andi, Yogyakarta.

Sri, M. (2006). Statistics for Economics and Business (3rd ed.). Faculty of Economics, University of Indonesia, Jakarta.

Sugiyono. (2004). Qualitative and Quantitative Research Methods R & D. Alfabeta, Bandung.

Sugiyono. (2009). Business Research Methods (7th ed.). Alfabeta, Bandung.

Supriyadi, A. (2005). Influence Analysis Compensation Satisfaction, Empowerment and Cultural Organization on Employee Performance (Empirical Study at PT. Bina Guna Kimia). University of Diponegoro.

Suwatno, & Donni, P. J. (2011). Human Resource Management. In the Public Organization and Business (1st ed.). Alfabeta, Bandung.

Tohardi, A. (2002). Human Resource Management (1st ed.). Mandar Maju, Bandung.

Wesiati, S. (2003). Human Resource Management (1st ed.). Liberty, Yogyakarta.

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