

# Analysis of the Effect of Competence on the Performance of Outsourcing Engineering Technical Services in PT PLN (Persero) Region Unit North Sumatera

Tumpal Hutapea<sup>1</sup>, Dr. Ir. Nazaruddin<sup>2</sup>, Dr. Isfenti Sadalia<sup>2</sup>

<sup>1</sup>Postgraduates Students Master of Management University of North Sumatera, Indonesia

<sup>2</sup>Postgraduates Lecturer Master of Management University of North Sumatera, Indonesia

Corresponding Author: Tumpal Hutapea

## ABSTRACT

The purpose of this study was to find out and analyze the influence of competencies consisting of knowledge variables, knowledge and attitude towards the performance of Technical Services at PT. PLN (Persero) North Sumatra Main Unit of Medan Customer Service Implementation Unit. Data analysis methods used include descriptive analysis and quantitative analysis including F test, t test, multiple linear regression and coefficient of determination R<sup>2</sup>.

Research results show that performance can be explained by variables of knowledge, skills and behavior of 63.5%. From the results of the F-test that the variables of knowledge, skills and behavior simultaneously have a significant effect on performance. From the multiple regression equation based on the pattern or influence of independent variables on the dependent variable, it can be concluded that the most influential on performance is the skill of 64.6%, then knowledge of 19% and behavior of 4.8%.

**Keywords:** competency, knowledge, skills, behavior, performance

## INTRODUCTION

The Era of Globalization creates very fast-changing environmental conditions, the path of change beginning from the cyber era to trade liberalization, homogenization of consumer goods and services worldwide and growth-oriented exports, all components of the globalization phenomenon (Hucysnki et al., 2002). In the era of globalization and the demands of the tight competition of the business world today, many companies try to improve their business performance through effective and efficient management of the organization. One effort is made by employing a minimum number of workers to be able to contribute to the maximum goals of the company. For this reason, the company seeks to focus on handling work that is the

core business (core business), while supporting work is handed over to other parties. The transfer of part of the routine work to another party is known as outsourcing.

PT. PLN (Persero) in increasing the efficiency and efficiency of the company through Decree No. DIR. 500 has decided to hand over (transfer) part of its operations to other parties using the outsourcing method. Based on DIR Decree no. 500, PT. PLN (Persero) North Sumatra Region Master Unit Medan Customer Service Implementation Unit implements outsourcing in several operational activities and one of them is Technical Service activities.

Technical Services is a company activity that provides services to customers

in the form of maintaining the continuity of electricity to customers. So that customers can use electrical energy continuously without interruption (interference). If there is a customer complaint about a disruption or power outage at a customer's installation, then the officer must immediately respond (respond) and immediately make repairs (recovery).

Technical Services at PT PLN (Persero) North Sumatra Regional Master Unit Medan Customer Service Implementation Unit is carried out by PT. Prima Razza Trafo. The employment agreement began in 2014 with the end of a 5-year contract. The work area includes 9 rayon units at PT PLN (Persero) North Sumatra Main Unit of Medan Customer Service Unit.

Technical Services managed by this outsourcing method must be able to provide good quality electrical services to customers. The minimum quality of work must be as good as the services provided if carried out by PLN employees because officers carry the vision and mission of PLN in the field of service to customers. The public does not want to know whether it is outsourced officers or not, they assume that all who deal with electricity are the responsibility of PLN. Therefore, the outsourcing method must be managed properly so that customer service is better. To ensure that the Technical Service activities are carried out properly, the performance targets in outsourcing work arrangements have been established, called Service Level Agreement (SLA).

SLA indicators that often get attention from management are response time and recovery time for complaints of electricity disruptions at the customer's home connection because they relate to the quality of service to customers. Response time is the length of time needed by the measured officer starting from the customer reporting to the officer arriving at the house or customer installation. Whereas recovery time is the time needed by the clerk to correct the disturbance and turn on

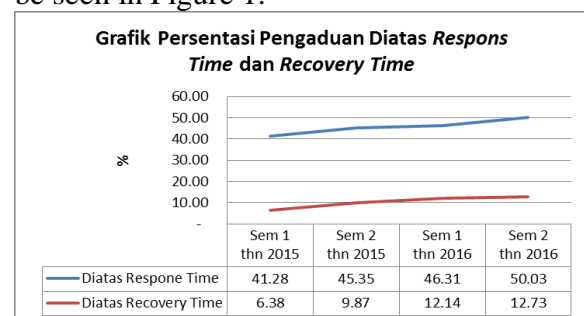
the customer's electricity which is calculated from the time the officer arrives at the house (installation) until the electricity turns on again. Service level agreement (SLA) for response time complaints of home connection disruption is 40 minutes and SLA for the recovery time is 60 minutes. Both types of indicators are very influential on the quality of service perceived by customers where this greatly determines the customer's perception of PLN.

Data on the realization of Technical Service performance, especially in reports of customer home connection disruption every semester during the period of 2015 and 2016, for indicators of response time and recovery time there are still many who exceed the SLA target and even increase every semester. The number of customer complaints and the number of complaints that exceed the SLA response time and recovery time and the average response time and recovery time that did not reach the SLA as shown are shown in Table 1.

**Table 1 Realization of complaints above response time and recovery time**

Response time	2015		2016	
	Sem 1	Sem 2	Sem 1	Sem 2
Number Report	38,892	39,213	40,903	46,796
Above 40 min	16,053	17,784	18,942	23,414
Average(min)	59,29	74,17	62,46	81,69
Report exceeds SLA (%)	41.28	45.35	46.31	50.03
Recovery time	2015		2016	
	Sem 1	Sem 2	Sem 1	Sem 2
Number Report	38,892	39,213	40,903	46,796
Above 60 min	2,483	3,869	4,964	5,957
Average (men)	72.92	90.29	78.03	104.55
Report Exceeds SLA(%)	6.38	9.87	12.14	12.73

The increase in complaints reports that exceed the SLA response time and recovery time as performance indicators of the Technical Services outsourcing officer can be seen in Figure 1.



**Figure 1. Complaints Realization Graph Above Response Time and Recovery Time**

While the percentage of the average response time and the average recovery time to the target can be seen in Figure 2 and Figure 3.

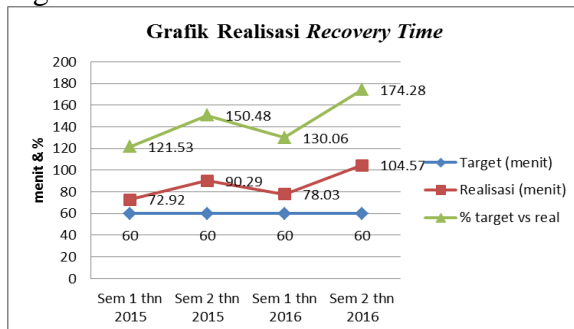


Figure 2. Average Realization Graph and Percentage of Recovery Time vs. Target SLA

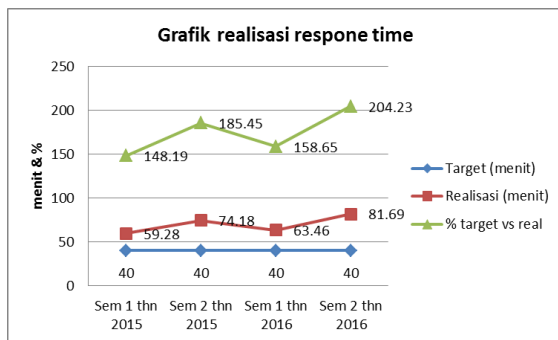


Figure 3. Realization Average Graph and Percentage of Response Target VS SLA

Response time is strongly influenced by the condition of the city that is getting bogged down so that officers do not easily reach the location of the complaining customer. While the increase in the number of reports completed beyond the SLA on the recovery time indicator is largely determined by the ability of the outsourcer of Technical Services to make improvements to customer installation disruptions. Work on repairing the disorder starts from analyzing the cause of the disorder, finding the cause of the disorder, making repairs and then turning it on. The time it takes for the officer to arrive at the customer's home until the light is on is called recovery time. The ability of the Technical Service outsourcing officer to complete the repairs greatly determines the recovery time value. Realization of the response time and recovery time is a performance indicator of outsourcing the

Technical Services determined by the ability of the officer itself.

According to Nasution and Soetadi (2012), low performance can be one indicator of a person's lack of competence in work in the field. The ability (competency) of officers is the main requirement for performance achievement.

According to Spencer (1993) explains competency is a basic characteristic of a person that can be used to predict the level of effectiveness or success in tasks and responsibilities for certain situations. Competence is an important element that is used to improve performance (work results). Competency development will provide perfect work results because everyone will try to take the initiative to improve their work.

According to Spencer (1993) revealed that there are three main components of forming competencies, namely knowledge, skills, and behavior. Knowledge (information) is information that is owned by an employee to carry out their duties and responsibilities in accordance with the field they are engaged in. Skills (skills) are something that is owned by individuals to carry out tasks or jobs that are charged to employees, for example, the standards of behavior of employees in choosing work methods that are considered more effective and efficient. Behavior (attitude) is a feeling or reaction to a stimulus that comes from outside, for example, a reaction to the economic crisis, a feeling of a salary increase. Based on the description above, the competency of officers is very important in improving performance, especially in improving the recovery time indicator.

## LITERATURE REVIEW

According to the theory of Wyatt (2003) defines that competence as a combination of knowledge, skills, and attitudes that can be observed and applied critically to the success of an organization and the work performance and personal

contribution of employees to the organization.

Kenneth (1995) defines that competence as a combination of knowledge, skills, abilities, personal characteristics (personal characteristics) and other individual factors that distinguish superior performance from average performance in certain specific situations. He underlined that competence is closely related to work and workers.

According to Law No. 13/2003 concerning Manpower article 1 paragraph 10, the definition of competency is the workability of each individual which includes aspects of knowledge, skills and work attitudes that are in accordance with the standards set.

Based on the theory of Spencer and Spencer (1993) revealed that there are three main components of forming competencies, namely knowledge, skills, and behavior, where the three components are influenced by self-concept, trait, and motives. Knowledge is information that an employee has to carry out his duties and responsibilities in accordance with the fields he engages in, such as computer language. Skills (skills) are something that is owned by individuals to carry out tasks or jobs that are charged to employees, for example, the standards of behavior of employees in choosing work methods that are considered more effective and efficient. Attitude is a feeling or reaction to stimuli that come from outside, for example, a reaction to the economic crisis, feelings about salary increases.

Knowledge is the result of remembering things, including recalling events that have been experienced either intentionally or unintentionally and this happens after a person observes a particular object (Mubarak, et al., 2007).

According to Reber (2010) in its collective meaning, knowledge is a collection of information held by a person or group, or a particular culture. In general, according to Reber (2010) knowledge is the mental components produced from all any

processes, both born from below and those that are achieved through experience.

According to Gordon (1994), skill is the ability to operate equipment to work more easily and precisely. The definition of skills according to Gordon (1994) tends to lead to human psychomotor activity in working every day.

According to Widiastuti (2010), the term skilled is usually used to describe the level of one's ability that varies in an activity. Skills (skills) are the ability to operate work easily and carefully.

Whereas according to Amirullah (2003) the term skilled is also interpreted as an act or task, and as an indicator of a level of proficiency. According to Singer quoted by Amung (2000), skills are a consistent degree of success in achieving an objective effectively.

According to Hottinger (Amirullah Day, 2003), motion skills based on genetic and environmental factors can be divided into two, namely: (a) phylogenetic skills, are skills that are born from birth, which can develop with increasing age of the child. (b) ontogenetic skills are skills that result from practice and experience as a result of environmental influences. Thus from the above opinion it can be concluded that to achieve a good skill level, it is necessary to pay attention to the following: First, individual / personal factors, namely the willingness and seriousness of the individual itself in the form of great motivation to master the skills taught. Second, the teaching and learning process factors point to how learning conditions can be tailored to individual potential, and the environment plays a role in mastering skills. Third, situational factors refer to the methods and techniques of practice or practice.

It shows that competency consists of three variables, namely knowledge (X1), skill (X2), attitude (X3) and 1 (one) dependent variable, namely performance (Y). This study is to determine the correlation (relationship) between competencies (knowledge, skill and

attitude) and performance so that the conceptual framework of this research can be seen in Figure 4.

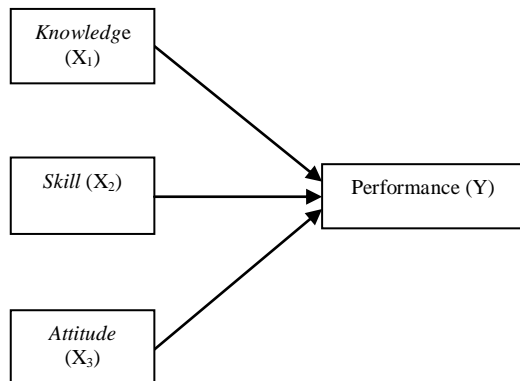


Figure 4: Conceptual frame work

### Hypothesis

Based on the conceptual drawing framework, two hypotheses are formed, namely simultaneous hypotheses and partial hypotheses as follows:

1. Simultaneous hypotheses in this study are as follows:

There is no effect of knowledge, skill, and attitude simultaneously and significantly on the performance of officers in technical services at PT PLN (Persero) Main Unit of North Sumatera Region UP3 Medan.

There is the influence of knowledge, skill, and attitude simultaneously and significantly on the performance of technical service officers at PT PLN (Persero) Main Unit of North Sumatera Region UP3 Medan.

2. The partial hypothesis is as follows:

There is no significant effect of knowledge on the performance of officers in technical services at PT PLN (Persero) Unit of North Sumatera Region UP3 Medan.

There is a significant influence of knowledge on the performance of technical service officers at PT PLN (Persero) Unit of North Sumatera Region UP3 Medan.

There is no significant effect of skills on the performance of officers at the technical service id PT PLN (Persero) Unit of the North Sumatera Region UP3 Medan.

There is a significant influence of skills on the performance of technical service officers

at PT PLN (Persero) Main Unit of North Sumatera Region UP3 Medan.

There is no significant effect of attitude on the performance of officers in technical services at PT PLN (Persero) Unit of North Sumatera Region UP3 Medan.

There is a significant influence of attitude on the performance of technical service officers at PT PLN (Persero) Main Unit of North Sumatera Region UP3 Medan.

## MATERIALS & METHODS

This study aims to examine the effect of competency on the performance of engineering service outsourcing officers at PT PLN (Persero) North Sumatera Region Main Unit UP3 Medan. In research using quantitative correlational methods.

Sekaran (2006) explains that a population is a group of people, an event or something that attracts a researcher to do an investigation. The populations in this study were engineering service officers totaling 126 people spread across 9 service centers. Because the population size in the study only amounted to 126 people, the sample in the study was the entire population, or in other words, this research was a census.

Data collection techniques in research are questionnaires and documentation studies, and data used in primary data and secondary data.

## RESULT AND DISCUSSION

### Characteristics of Respondents by Gender

Table 4 Characteristics of Respondents by Gender

Gender	Amount	Percentage (%)
Men	126	100
Women	0	0
Tottal	126	100

Based on Table 4 Characteristics of the respondents above can be seen that based on sex, all respondents were male with a total of 126 people (100%) because in general the repair and installation part of the electricity network is heavy work and requires a large amount of labor so that the electricity network installation work is carried out by man.



### Characteristics of Respondents by Age

Table 5 Characteristics of Respondents by Age

Age (Year)	Amount	Percentage (%)
<25	8	6.35
25 - 30	18	14.29
31 - 40	27	21.43
>41	73	57.94
Tottal	126	100

In general, the age of the respondents who were the object of study was over 41 years old, amounting to 73 people (57.94%), and was followed by respondents aged 31-40 years which amounted to 27 people (21.43%) who were of productive age.

### Characteristics of Respondents by Education

Table 6 Characteristics of Respondents by Education

Education	Amount	Percentage (%)
High School	111	88.10
Bachelor	3	2.38
S1	12	9.52
Tottal	126	100

Based on Table 6 it can be seen that the respondents generally have high school education levels which amounted to 111 people (88.10%) this is because in the repair of the electricity network installation does not really require high education but good skills in the repair work, while the rest have diploma education and S1 which only amount to 15 people who are usually people who serve as head of the field (foreman) install networks that are responsible for work in the field.

### Characteristics

Table 7 Characteristics of Respondents by Job

Lenght of work (year)	Amount	Percentage
Under 2 years	5	3.97
2 - 5	20	15.87
5 - 10	46	36.51
Above 10	55	43.65
Total	126	100

Based on Table 7 it is known that the majority of respondents have worked more than 10 years totaling 55 people (43.65%) and work between 5 to 10 years, amounting to 46 people (36.51%) so that it can be concluded that workers who do network installation work are experienced in their fields.

### Validity test

Testing the validity of each item statement is by correlating the score of each item with the total score which is the number of each item score. The minimum requirement is to fulfill whether each statement is valid or not by comparing it to the table of 0.349 (with n equal to 30 and free degrees of 2 / two tail). So if the correlations between items with a score smaller than rtable, then the items in the statement are declared invalid. Conversely, if the r count is greater than rtable, it is declared valid.

### Reliability Test

Furthermore, to test the reliability of the instrument using Alpha Cronbach. All instruments can be said to be reliable (reliable) if you have reliability or alpha of 0.6 or more. Based on the results of reliability testing it is known that the value of Alpha Cronbach count is 0.672. Because the value of the Alpha Cronbach count (0.672) is greater than the comparative alpha value (0.6), it can be concluded based on the reality test instrument using Alpha Cronbach to be displayed reliably and can be used to do the next test.

### Residual Normality Test

Tabel 8 Residual Normality Test		
One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		126
Normal Parameters <sup>a</sup>	Mean	.0000000
	Std. Deviation	.20341495
Most Extreme Differences	Absolute	.100
	Positive	.100
	Negative	-.070
Kolmogorov-Smirnov Z		1.120
Asymp. Sig. (2-tailed)		.163
a. Test distribution is Normal.		

The results of data processing that have been done for normality test using Kolmogorov-Smirnov (K-S) one sample that the residual data gives a sig value of 0.163 which is above the alpha error value of 0.05, it can be concluded that the results of testing the data are normally distributed.

### Multicollinearity Test

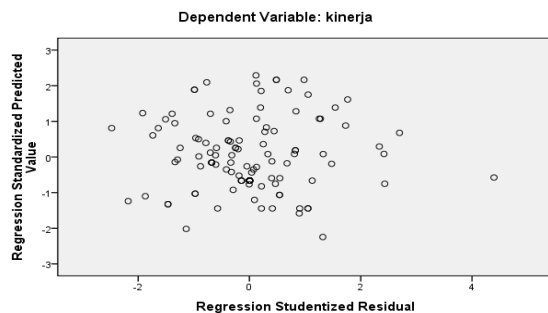
**Table 9 Recapitulation of Tolerance Values and VIF Values from Multicollinearity Test**

Coefficients <sup>a</sup>			
Model		Collinearity Statistics	
		Tolerance	VIF
1	Knowledge	.680	1.471
	Skill	.697	1.434
	Behavior	.699	1.431
a. Dependent Variable: Skill			

Based on Table 9 shows that the VIF value is below 10 and the tolerance value is not less than 0.1, this means that between the independent variables in this study there is no relationship or no relation to each other so it can be concluded that the regression model does not have Multicollinearity.

### Heteroscedasticity Test

Scatterplot



**Figure 5: Result Heteroscedasticity Test**

From Figure 5, it can be seen that the points spread randomly and spread both above and below the number 0 on the Y axis. So it can be concluded that there is no heteroscedasticity in the regression model in this study.

### Simultaneous Test (Test F)

**Table 10. F Test Results of the Independent Variables Against Variables Simultaneously Bound**

ANOVA <sup>b</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.353	3	3.118	73.541	.000 <sup>a</sup>
	Residual	5.172	122	.042		
	Total	14.525	125			
a. Predictors: (Constant), knowledge, skill, behavior						
b. Dependent Variable: performance						

From Table 4.22, it can be assessed that Fcount is 73.541 indicating the value of F count (73.541) > of Ftable (2.679) and the level of significance of the F test is 0.000 (p

<0.05) then Ho is rejected and Hi is accepted. It means that there is a significant influence between knowledge variables (X1), skills (X2) and behavior (X3) on performance (Y) simultaneously

### Partial Test (t test)

**Table 11 Partial Test Results (t Test)**

Coefficients <sup>a</sup>			
Model		t	Sig.
1	(Constant)	1.717	.089
	Pengetahuan	3.262	.001
	Keterampilan	10.028	.000
	Perilaku	.774	.440
a. Dependent Variable: performance			

### 1. Hypothesis testing 1 (H1)

Analysis of the effect of the knowledge variable (X1) on the performance variable (Y): because  $t_{count} > t_{table}$  (3.262 > 1.979) it can be said that the knowledge variable (X1) has a positive and significant effect on the performance variable (Y) then Ho is rejected or Hi is accepted, besides it uses the Sig value contained in the table, then compared with a significant level of 0.05. If the Sig value is greater than the significant level, Ho will be accepted, whereas if the Sig value is smaller than 0.05 then Hi will be accepted and Ho will be rejected. The sig value in the table is worth 0.001 (<0.05) so that meeting Ho's acceptance requirements means that there is a positive and significant influence between the knowledge variable (X1) on the performance variable (Y).

### 2. Hypothesis testing 2 (H1)

Analysis of the effect of skill variables (X2) on the performance variable (Y): because  $t_{count} > t_{table}$  (10,028 > 1,979) it can be said that the skill variable (X2) has a positive and significant effect on the performance variable (Y) then Ho is rejected or Hi is accepted, besides it uses the Sig value contained in the table, then compared with a significant level of 0.05. If the Sig value is greater than the significant level, Ho will be accepted, whereas if the Sig value is smaller than 0.05 then Hi will be accepted and Ho will be rejected. The sig value on the table is worth 0,000 (<0.05) so that meeting Ho's rejection requirements means that there is a

positive and significant influence between the skill variables (X2) on the performance variable (Y).

### 3. Test the hypothesis 3 (H1)

Analysis of the effect of behavioral variables (X3) on the performance variable (Y): because  $t_{count} < t_{table}$  ( $0.774 < 1.979$ ) it can be said that the behavior variable (X3) has a positive but not significant effect on the performance variable (Y) then  $H_0$  is accepted or  $H_1$  rejected, other than that by using the Sig value contained in the table, then compared with a significant level of 0.05. If the Sig value is greater than the significant level,  $H_0$  will be accepted, whereas if the Sig value is smaller than 0.05 then  $H_1$  will be accepted and  $H_0$  will be rejected. The sig value in the table is 0.440 ( $> 0.05$ ) so that it meets  $H_0$ 's acceptance requirements, meaning that there is no significant influence between the behavior variable (X3) on the performance variable (Y).

### Coefficient of Determination $R^2$

Tabel 12. Result of the determination coefficient Analysis

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.802 <sup>a</sup>	.644	.635	.20590

a. Predictors: (Constant), knowledge, skill, behavior

Based on Table 12 can be seen the  $R^2$  test results that the coefficient of determination (R square) of the influence between the knowledge variable (X1), skills (X2) and behavior (X3) together is worth 0.635 means that 63.5% variation of performance can be explained by knowledge variables (X1), skills (X2) and behavior (X3), while the remaining 36.5% are explained by other causes not discussed in this study.

### Interpretation of Multiple Linear Regression Models

Table 13 Results of Multiple Linear Regression

Model		Unstandardized Coefficients		Standardized Coefficients
		B	Std. Error	Beta
1	(Constant)	.466	.271	
	Knowledge	.190	.058	.214
	Skill	.646	.064	.649
	Behavior	.048	.061	.050

a. Dependent Variable: perilaku

Based on Table 13 above it is known that value :

$$a : 0,466 \quad b_1 : 0,190$$

$$b_2 : 0,646 \quad b_3 : 0,048$$

So that the multiple regression equation of the above values is :

$$Y = 0,466 + 0,190 X_1 + 0,646 X_2 + 0,048 X_3$$

Based on the pattern or form of influence, it can be concluded that the most influential on performance is the skill of 0.646 then the knowledge variable is 0.190, while the behavior variable gives a positive but not significant effect that is equal to 0.048.

### DISCUSSION AND CONCLUSION

From a total of 126 respondents there were 100% of respondents were male. The majority of respondents were  $> 41$  years old as many as 73 people. Based on education, the majority of respondents had SMK levels of 111 people. Generally the respondents had a tenure over 10 years.

### The Influence of Knowledge Variables on the Performance of Technical Service Outsourcing Officers

Based on the partial test results, it can be seen that the knowledge variable (X1) on the performance variable (Y): because  $t_{hitung} > t_{table}$  ( $3.262 > 1.979$ ), it can be said that the knowledge variable (X1) has a positive and significant effect on the performance variable (Y). This shows that there is a unidirectional relationship so that if knowledge is improved, the performance of outsourcing service technicians will increase. This can be caused because knowledge is a requirement that must be owned in working on things efficiently and effectively. So if the knowledge possessed by a worker in the installation and repair section is good then the installation or repair process can take place quickly and precisely.

### Effect of Skill Variables on the Performance of Technical Service Outsourcing Officers

Based on descriptive analysis of skill variables divided into 6 questions related to skills, respondents generally answer questions with a value of 4 (agree) of 68.25% and followed by a value of 5



(strongly agree) of 24.47%. This states that in general respondents agree with questions related to skill variables.

Partial test results can be seen that the skill variable (X2) on the performance variable (Y): because  $t_{count} > t_{table}$  ( $10,024 > 1,979$ ) it can be said that the skill variable (X2) has a positive and significant effect on the performance variable (Y). This shows that there is a unidirectional relationship so that if the skills are improved, the performance of outsourcing service technicians will increase. This can be caused by skills that are actions taken in connection with skills possessed by an outsourcing service technician in the work of repairing electrical disturbances. Skills are a necessity possessed by technical service outsourcing officers in repairing the electricity network. The work can be done quickly and permanently.

#### **Effect of Behavior Variables on the Performance of Technical Service Outsourcing Officers**

Partial test results can be seen that the behavior (X3) of the performance variable (Y): because  $t_{count} < t_{table}$  ( $0.740 < 1.979$ ) it can be said that the behavior variable (X3) has a positive but less significant effect on the performance variable (Y). This shows that there is a unidirectional relationship, so that if employee behavior is increased, it will improve employee performance even though it is less significant. This is because that behavior related to attitudes toward consumers, motivation, habits and work culture also determines the results obtained from the work done so that it can provide positive and consistent results. However, in general, the assessment of the performance of an officer outsourcing service disruption to technical services is the speed of repairing the network so that electricity is quickly ignited and there is rarely interaction between consumers and employees, so that behavior is more internal to workers such as motivation to work.

#### **Effect of Competence on the Performance of Technical Service Outsourcing Officers**

From the value of  $F_{count}$  is 73.541 shows the value of  $F_{count}$  ( $73.541$ )  $>$  from  $F_{table}$  (2.679) and the level of significance of the F test is 0.000 ( $p < 0.05$ ) then there is a significant effect between knowledge variables (X1), skills (X2) and behavior (X3) on performance (Y) simultaneously. From the  $R^2$  test results that the coefficient of determination (R square) of the influence between knowledge variables (X1), skills (X2) and behavior (X3) together is worth 0.635, which means that 63.5% of the variation in performance can be explained by knowledge variables (X1), skills (X2) and behavior (X3), while the remaining 36.5% are explained by other causes

### **CONCLUSION**

Based on the result of research, discussion, and conclusions the suggestions that can be given are as follows :

1. Knowledge variable (X1) and skill (X2) have a positive and significant effect on the performance of outsourcing service technicians, PT PLN (Persero) Unit of North Sumatra Region, UP3 Medan. While the behavioral variable (X3) has a positive and significant effect on the performance of outsourcing service technicians, PT PLN (Persero) Unit of the North Sumatra Region, UP3 Medan.
2. Based on the F test, it can be seen that knowledge, skills and behavior together have a significant effect on the performance of outsourcing service technicians at the North Sumatra Region UP3 Medan PT PLN (Persero) Unit.
3. Based on the value of determination ( $R^2$ ), influence between the variables of knowledge, skills and behavior of services engineering personnel PT PLN (Persero) Main Unit North Sumatra Region UP3 Medan is equal to 0.635 meaning that it is known that 63.5% of employee performance can be explained by the variables of knowledge, skills, and behavior while the remaining 36.5% can be explained by other factors not discussed in this study.

### Recommendations

Based on the result of research, discussion, and conclusions the suggestions that can be given are as follows :

1. For companies of PT PLN (Persero) North Sumatra Regional Master Unit Medan Customer Service Unit, it must explicitly list the competency requirements of technical service outsourcing officers in the work agreement and require periodic training to ensure competency quality can be maintained and even improved.

2. For outsourcing services contracts that are currently in force so that workshops and training will be carried out to refresh the knowledge and skills of current staff.

To the researcher, it is then possible to conduct studies by involving different research locations so that they can compare the results obtained and also can be examined other factors of 36.5% which can affect competency.

### REFERENCES

- Agha, Sabah. 2011. *Effect of Core Competence on Competitive Advantage and Organizational Performance*. Journal International
- Ahmad, Ruky, 2011. *Sistem Manajemen Kinerja*, Jakarta :PT. Gramedia Pustaka.
- AA. Anwar Prabu Mangkunegara, (2017). *Manajemen Sumber Daya Manusia Perusahaan*. Bandung : Rosda.
- Alifitran, M. 2012. *Kajian Pengaruh Kompetensi Terhadap Kinerja Karyawan Level Manajerial Studi Kasus pada Bank Syariah ABC*. [Tesis]. Jakarta: Universitas Indoneisa, Program Pasca Sarjana.
- Allport, W. Gordon. 1954. *The Nature of Prejudice*. United States of America : Addison-Wesley Publishing Company
- Amin Widjaja Tunggal. 2015. *Business Process Outsourcing*: Jakarta: Harvarindo.
- Amirullah, Hari. 2003. *Alat Evaluasi Keterampilan Bermain Bola Basket* : Jurnal Nasional Pendidikan Jasmani dan Ilmu Keolahragaan. Jakarta : Depdiknas
- Burhan Bungin, 2001, *Metodologi Penelitian Sosial*. Surabaya: Airlangga University Press.
- Fahmi, Irham. 2013. *Manajemen Strategis*. Bandung: Alfabeta.
- Greaver, F. Maurice II. 2000. *Strategic Outsourcing: A Structured Approach to Outsourcing Decisions an Initiative*. New York: Amacom.
- Hendra, AW. 2008. *Faktor-Faktor Yang Mempengaruhi Pengetahuan*. Available : <http://ajang-berkarya.wordpress.com/2008/06/07/Konsep-Pengetahuan/17/05/2011>
- Hutapea, Parulin, MBA dan Thoha, Dr. Nuriana, MBA. 2008. *Kompetensi Plus*. Jakarta : PT. Gramedia
- <https://www.duniapelajar.com/2014/07/29/pengertian-keterampilan-menurut-para-ahli/>
- Indrajit, Djokopranoto&RichardusEko. 2003. *Proses Bisnis Outsourcing*. Jakarta:Grasindo.
- Listio, Ronald. 2010. *Pengaruh Kompetensi dan Motivasi Kerja Terhadap Kinerja Karyawan PT. Allianz Life Indonesia Wilayah Jawa Barat*. Jurnal. Jawa Barat.
- Lexy J. Moleong. 2007. *Metode Penelitian Kualitatif*. Bandung: Remaja Rosda karya.
- Mubarak, Wahit Iqbal, dkk. 2007. *Promosi Kesehatan Sebuah Pengantar Proses Belajar Mengajar dalam Pendidikan*. Yogyakarta: Graha Ilmu.
- Moeloeng, J. 2007. *Metode Penelitian Kualitatif*, Bandung: PT. Remaja Rosdakarya.
- Nasution, Harmein. 2015. *Pengelolaan Modal Manusia*: Medan: USU Press.
- Ningsih, Nina. 2013. *Pengaruh Kompetensi Terhadap Prestasi Kerja Karyawan Divisi Administrasi Pada PT.Moriss Site Muara Kaman*. Jurnal. Kalimantan Timur.
- Neuman, Lawrence W. 2003. *Social Research Method: Qualitative and Quantitative Approaches*. USA: Earson Education.
- Notoatmodjo, Soekidjo. *Pendidikan dan Perilaku Kesehatan*. Jakarta. Rineka Cipta. 2003.
- Pemerintah Indonesia. 2003. *Undang-Undang No. 13 Tahun 2003 Yang Mengatur Tentang Ketenagakerjaan*. Lembaran Negara RI Tahun 2003, No. 39. Sekretariat Negara. Jakarta.
- Prasetyo, Bambang dan Lina Miftahul Jannah. 2005. *Metode Penelitian Kuantitatif*. Jakarta: Raja Grafindo Persada.
- Reber, S.A., Reber, S.E. (2010). *Kamus Psikologi*. Yogyakarta: Pustaka Pelajar.

- Rivai, Veithzal. 2004. *Manajemen Sumber Daya Manusia untuk Perusahaan: dari Teori ke Praktik*. Jakarta: Raja Grafindo Persada.
- Sinulingga, Sukaria. 2016. *Metode Penelitian*. Medan: USU Press.
- Simanjuntak, Payaman J. 2005. *Manajemen dan Evaluasi Kinerja*. Jakarta: FE UI.
- Spencer, L. M. & Spencer, S. M. 1993. *Competence At Work*. USA
- Sri Widiastuti dan Nur Rohmah Muktiani. (2010). Peningkatan Motivasi dan Keterampilan Menggiring Bola Dalam Pembelajaran Sepakbola Melalui Kucing Tikus Pada Siswa Kelas 4 SD Glagahombo 2 Tempel. *Jurnal Pendidikan Jasmani Indonesia*. Volume 7 Number 1.
- Sugiyono. 2011. *Metode Penelitian Kuantitatif Kualitatif dan R&D*. Bandung: Alfabeta.
- Suparlan Suhartono. (2008). *Wawasan pendidikan: Sebuah pengantar pendidikan*. Yogyakarta: Ar-Ruzzmedia
- Wibowo. 2016. *Manajemen Kinerja*. Jakarta: Rajawali Pers.
- Wirawan, 2004. *Evaluasi Kinerja Sumber Daya Manusia*. Jakarta : Salemba.
- Zaim, Halil. 2013. Analyzing the effects of individual competencies on performance: A Field study in services industries in Turkey. *Journal International*. Turkey.

How to cite this article: Hutapea T, Nazaruddin I, Sadalia I. Analysis of the effect of competence on the performance of outsourcing engineering technical services in PT PLN (Persero) region unit north Sumatera. *International Journal of Research and Review*. 2019; 6(8):102-112.

\*\*\*\*\*