

## ANALYSIS OF FACTORS THAT INFLUENCE THE PERFORMANCE OF PLN IN IMPROVING COMMUNITY SERVICES IN THE DISTRICT OF MEDAN TIMUR

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### ABSTRACT

The purpose for this research is to analyze factors that influence the performance of State Electricity Company in improving community services in the district of Medan Timur. The Research Method is quantitative method with Survey method which use questionnaire as research instrument to collect data. The Population in this research is every consumer of PLN Medan Timur estimate at 71.383 Consumer Number. Using Slovin formula,  $n = N / (1 + (N \times e^2))$  with Margin of Error 10% so that obtained 100 Respondents for Independent and multiple linear regression test that will be used as a tools to learn how much influence does Independent Variable cause to Dependent variable. Research results shows that Creativity and Innovation Factors gives significant effects from partial even simultant in improving community sevice in the District of Medan Timur. Creativity and Innovation Variable shows Improvement of Community Services By 26%.

**Keywords** BUMN, Inovasi, Kreatifitas, Digitalisasi, Kebutuhan

### INTRODUCTION

The State Electricity Power Plant (PT. PLN) is a State-Owned Enterprise whose ownership is entirely held by the State originating from budgeted state assets. PLN is a company that acts as the country's main electricity provider by providing electricity for the community. PT. PLN is a State-Owned Enterprise which is responsible for all matters concerning electricity in Indonesia. Electrical Energy Sources are energy that is very important and very essential in human daily life. PLN is responsible for providing electricity services to all corners without exception and providing innovations and creations that can help people use electricity and facilitate access to electricity. Some regions in Indonesia such as Kalimantan, Maluku and Papua still find it difficult to get access to electricity where 80% in Kalimantan & Maluku Province, and 50% in Papua & West Papua still do not enjoy Electric Energy.

Although PLN aims to provide public services to the community, PLN is still a profit-seeking company, where the profits are used for the state in developing the company and the country, PLN is also able to create and strive to provide services to society as a whole for profit. PLN provides many Digitalization Innovations such as Electric Tokens, PLN makes these efforts in order to provide services and relief to the community in using electricity. PLN is also trying to reach remote areas or 3T areas (Lagged, Frontier, & Outermost).

**Creativity** is defined as the tendency to generate or recognize ideas, alternatives, or possibilities that may be useful in solving problems, communicating with others, and entertaining ourselves and others. **Innovation** is the practical implementation of ideas that result in the introduction of new goods or services or improvement in offering goods or services. ISO TC 279 in the standard ISO 56000:2020 defines innovation as "a new or changed entity realizing or redistributing value". Others have different definitions; a common element in the definitions is a focus on newness, improvement, and spread of ideas or technologies. **A public service** is any service intended to address specific needs pertaining to the aggregate members of a community. Public services are available to people within a government jurisdiction as provided directly through public sector agencies or via public financing to private businesses or voluntary organizations

(or even as provided by family households, though terminology may differ depending on context). Other public services are undertaken on behalf of a government's residents or in the interest of its citizens. The term is associated with a social consensus (usually expressed through democratic elections) that certain services should be available to all, regardless of income, physical ability or mental acuity. Examples of such services include the fire brigade, police, air force, and paramedics (see also public service broadcasting). Researcher wants to find out the improvement of PLN services after providing Creativity, Innovation and public services that are strived to provide better services to the State Community, while paying attention to the services provided are affordable by the community from top to bottom and from Sabang to Merauke can be realized by analyzing effort's of PLN

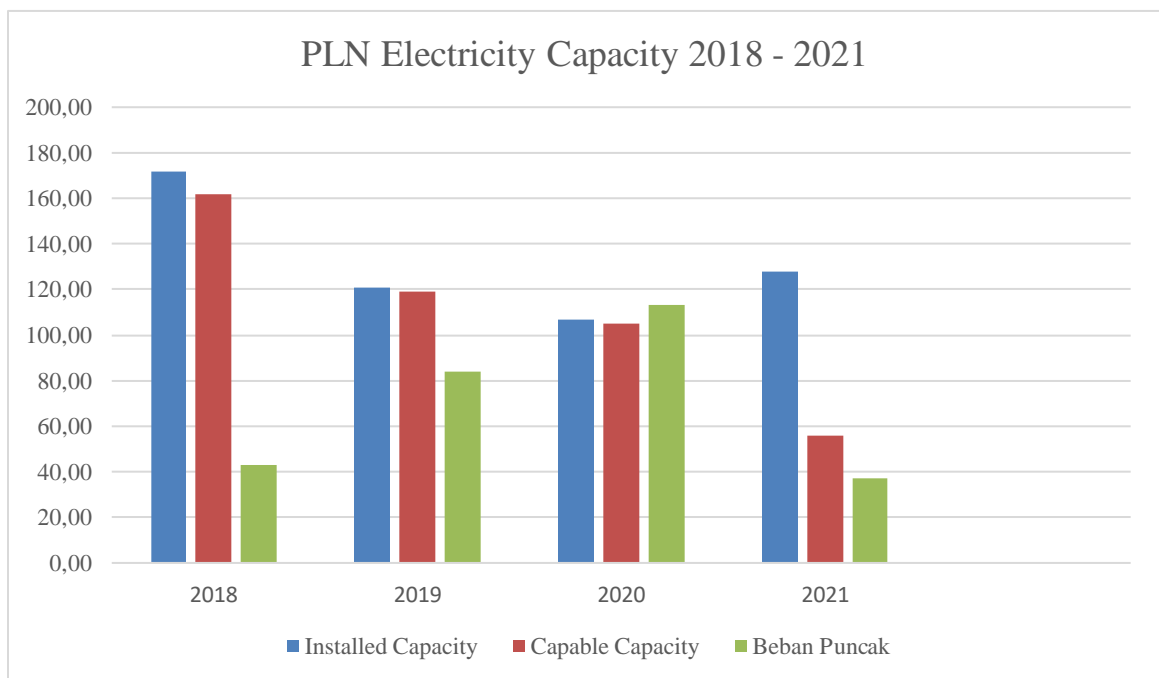


Figure 1: Figure 1. Data of Installed Capacity, Capable Power, and PLN Peak Load 2018-2021

It can be seen from Figure 1, PLN has a very high capable electrical power capacity in 2018, but the Peak Load of electricity usage is still minimal when compared to its capable capacity. So, in 2019, PLN reduced its capable power capacity, coinciding with Covid-19 hitting, causing almost all people to stay at home which made more electricity use at home. Even so, PLN's Capability is still adequate to meet customer needs. In 2020, the Peak Load exceeds PLN's capacity which causes frequent blackouts that make customers feel they are not being served properly because people are Working From Home or staying at home. In 2021, PLN will again increase its electricity capacity so that it can continue to meet the electricity needs of the community.

## LITERATURE REVIEW

Creativity is the ability to make new combinations or new relationships between elements of data variables that already exist before (Setiawan, 2017), while according to Suryana quoted from (Nurzaman, 2013) which states that creativity is: "Think something new". . Creativity is the ability to develop new ideas to find new ways to solve problems facing opportunities.

Innovation according to Zimmerer in Suryana (2014:11), is defined as the ability to apply creativity in order to solve problems and opportunities to improve or enrich life

(innovation is the ability to apply creativity solutions to those problems and opportunities to enhance or to enrich peoples live).

Hardvard's Theodore Levitt in Suryana (2014: 43) suggests the definition of innovation is the ability to apply creative solutions to existing problems and opportunities to make people's lives more prosperous. So innovation is doing something new.

Public Service is an activity or series of activities in the context of fulfilling service needs in accordance with laws and regulations for every citizen and resident of goods, services, and/or administrative services provided by public service providers (Permenpan No. 17, 2017)

### Indicator

Creativity Indicators in Suryana (2008):

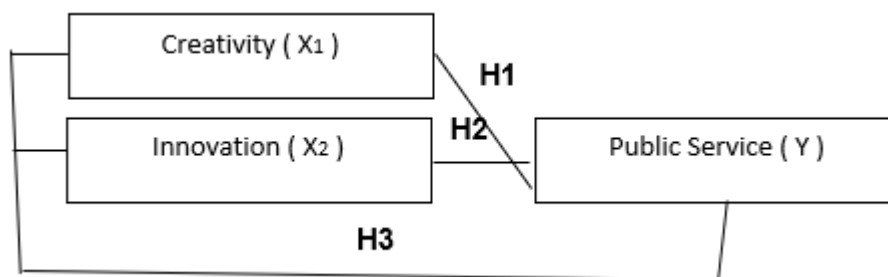
1. Curious, Curiosity level helps to grow ideas
2. Optimisistic, the level of optimism in making new products
3. Flexible, Flexible attitude towards developing new products
4. Finding Solutions, Level of finding solutions to solve problems
5. Imagination, Imagination to create something new.

Innovation Indicators in Zimmerer and Scarborough (2008):

1. Design Change, Product Design change rate
2. Technical Innovation, The level of attention of the company's processes in making products that aim to satisfy customers
3. Product Development, Product development level to attract buying interest

Public Service Indicators in Ministerial Regulation no. 17/2017 :

1. Service Policy
2. HR Professionalism Involved
3. Public Service Facilities and Infrastructur
4. Public Service System
5. Consultation and Complaint
6. Service Innovation



Picture 1. Hypothesis

### RESEARCH METHOD

The data collection method used is a questionnaire with a Likert scale instrument. To see the effect of the dependent variable with the independent variable, the data analysis techniques used in this study include multiple regression analysis. This study aims to examine the effect of Creativity, Innovation, and Public Service on PLN's Performance.

The population used in this study were PLN customers in the District of Medan Timur. The population in this study was 71,383 people. Then the Slovin formula (Sugiyono, 2011:37) is used, namely  $n = N / (1 + (N \times e^2))$  with the result of 99.86, rounded up to 100 respondents. The data collection method used is a questionnaire with a Likert scale instrument. To see the effect of the dependent variable with the independent variable, the data analysis techniques used in this study include multiple regression analysis.

## RESULTS AND DISCUSSION

### Respondent Analysis

The population in this study was 71,383 people. Then the Slovin formula (Sugiyono, 2011:37) is used, namely  $n = N / (1 + (N \times e^2))$  with the result of 99.86, rounded up to 100 respondents.

Table 1. Characteristics of Respondents

Age	Frequency	Percentage
18 – 25 Years	24	24%
25 – 40 Years	57	57%
> 40 Years	19	19%
<b>Total</b>	<b>100</b>	<b>100%</b>
Gender	Frequency	Percentage
Pria	74	74%
Wanita	26	26%
<b>Total</b>	<b>100</b>	<b>100%</b>
Profession	Frequency	Percentage
Self – Employed	33	33%
Government Employees	11	11%
Private Employees	52	52%
Housewife	4	4%
<b>Total</b>	<b>100</b>	<b>100%</b>

## DISCUSSION

Based on the table above, it can be seen that as many as 24 respondents (24%) were aged 18-25 years, 57 respondents were aged 25-40 years (57%), and 19 respondents were aged over 40 years (19%). Based on gender, there were 74 male respondents (74%) and 26 female respondents (26%). And based on their occupation, there are 33 respondents who are self-employed (33%), 11 respondents are civil servants (11%), 52 respondents are private employees (52%), and 4 respondents are housewives (4%).

### Validity and Reliability Test

The instrument's validity test aims to find out how far the instrument measures what (object) it wants to measure (Muri, 2017). Reliability testing in quantitative research is essentially synonymous with the words dependability, consistency and replicability over time, on an instrument and a group of respondents. It has to do with precision and accuracy; some features, such as height, can be measured precisely (Sinambela, 2014). The results of testing the validity and reliability in the study can be seen in table 2.

Table 2. Validity and Reliability Test Results

Variable	Indicator	Validity Score	Conclusion	Cronbach's Alpha	Conclusion
Creativity	Curiosity	0.607	Valid	0.744	Reliable
		0.655	Valid		
	Optimism	0.536	Valid		
		0.460	Valid		
	Flexible	0.451	Valid		
		0.516	Valid		
	Problem Solving	0.608	Valid		
		0.611	Valid		
Imagination	0.598	Valid			
	0.547	Valid			
Innovation	Design Change	0.459	Valid	0.847	Reliable
		0.518	Valid		
	Technical Innovation	0.417	Valid		
		0.585	Valid		
	Product Development	0.411	Valid		
0.500		Valid			
Public Service	Service Policy	0.582	Valid	0.912	Reliable
		0.703	Valid		
	HR Professionalism Engaged	0.466	Valid		
		0.655	Valid		
	Public Service Facilities and Infrastructure	0.663	Valid		
		0.546	Valid		
	Public Service Information System	0.400	Valid		
		0.547	Valid		
	Consultation and Complaint	0.616	Valid		
		0.652	Valid		
	Service Innovation	0.723	Valid		
0.719		Valid			

The results of the validity and reliability tests are in Table 2. It shows that the correlation value of each indicator for each latent variable,  $r > 0.195$  and the Alpha-Cronbach value  $> 0.60$ . This shows that all variables are declared valid and reliable

### Multiple Linear Regression Test

In this study the classical assumption test has been fulfilled. Multiple linear regression analysis was processed using the SPSS version 25 application, with the following regression equation:

$$\text{Community Service} = 15,607 - 0.163 \text{ Creativity} + 0.385 \text{ Innovation} + e$$

The constant 15,607 is interpreted statistically that if Creativity and Innovation have no value or equal to zero, then the value of Community Service is 15.607

The Regression coefficient of the Creativity variable (X1) is -0.163 indicating that if the Creativity variable is increased by 1 unit, then public service will increase by -0.163 units. If the regression coefficient is negative, then the influence of Creativity can have a negative effect or increase in unequal directions. This means that the increase in creativity has no effect on public services that subscribe to PLN Medan Timur

The Regression coefficient of the Innovation variable (X2) of 0.385 indicates that if the Creativity variable is increased by 1 unit, then public service will increase by 0.385 units.

Table 3. Multiple Linear Regression Analysis Results

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	15.607	3.601		4.334	.000
	Creativity	-.163	.222	-.171	-.734	.465
	Innovation	.385	.135	.664	2.859	.005

a. Dependent Variable: Public Service

**Hypothesis testing**

**T test (Partial Test)**

The results of this study prove that the Creativity variable has a significant partial effect on Public Service by PLN Medan Timur. Based on the results of multiple linear regression analysis in the table above, the creativity variable shows a t-count value of -0.734 which is smaller than the t-table of 1.664 and a significance value of 0.465 which is greater than 0.05. Thus, the creativity variable has no partial and insignificant effect on loyalty, so H1 cannot be accepted. This research can be interpreted that if the customer does not get the creativity results from PLN Medan Timur, it will not affect the level of customer service to better satisfy them, in other words, customers will still use electricity. The results of this study are not in line with (R. Munthe, 2019) who simultaneously stated that the Creativity variable had a significant effect on customer service at BPJS Ketenagakerjaan Pematangsiantar Branch.

The results of the multiple linear regression also show that the Innovation variable has a t-count value of 2.859 which is greater than the t-table of 1.664 and a significance value of 0.05 which is equal to 0.05. Thus, the Innovation variable has a partial and insignificant effect on Public Service. So H2 can be accepted. The results of this study are in line with (Zulkifli, 2020) who simultaneously stated that the Innovation variable has a significant effect on Public Service by the Government in South Labuhanbatu Regency.

**F Test (Simultaneous Effect)**

Based on the results of the F-test in Table , the F-count obtained is 17,073 with a significance level of 0.000, while the F-table with a significance level of 0.05 and degrees of freedom (df)=(k-) (n-k)=(2-1)(100 -2)=(2;157), then the F-table value is 3.94. Thus, the third hypothesis can be accepted, because the F-count (17.073) is greater than the F-table (3.94) with a significance level of 0.000 less than 0.05. These results indicate that the variables of Creativity and Innovation have a simultaneous and significant effect on Public Service by PLN Medan Timur.

Tabel 4. F Test Result (Simultaneous Effect)

		ANOVA <sup>a</sup>				
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1141.264	2	570.632	17.073	.000 <sup>b</sup>
	Residual	3242.126	97	33.424		
	Total	4383.390	99			

a. Dependent Variable: Public Service

b. Predictors: (Constant), Innovation, Creativity

### Coefficient of Determination Test

The results of the coefficient of determination test (R<sup>2</sup>) show a number of 0.26 or 26% (Table 5). These results indicate that the PLN Medan Timur Creativity and Innovation variable is able to explain variations in the community service variable by 26%, while the remaining 74% is explained by other variables that are not used in this research model.

Table 5. Coefficient of Determination Test Results

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.510 <sup>a</sup>	.260	.245	5.78135
a. Predictors: (Constant), Innovation, Creativity				

### CONCLUSION,

Based on the results of statistical calculations in the partial test (t test), the Creativity variable does not have a partial and insignificant effect on Public Service PLN Medan Timur or H1 cannot be accepted. But the Innovation variable has a partial and significant influence on Public Service PLN Medan Timur or H2 is acceptable. Other statistical results, namely the simultaneous test (F test) also proves that the variables of Creativity and Innovation simultaneously have a significant effect on Public Service PLN Medan Timur or H3 can be accepted.

The coefficient of determination test shows a number of 0.260 or 26%. These results indicate that the PLN Medan Timur Creativity and Innovation variable is able to explain the variation in the customer loyalty variable by 26%, while the remaining 74% is explained by other variables that are not used in this research model.

Therefore, it is necessary to increase the creativity of PLN Medan Timur, because by making new things in service it can make customers feel satisfied and will be happy to receive services from PLN Medan Timur. But apart from that, Innovation must also be improved in order to attract more new customers.



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