

IMPROVING WORK EFFECTIVENESS THROUGH COMPETENCE

Wiwin Sapta Prabudi¹⁾, Kiki Farida Ferine²⁾, Sri Rahayu³⁾

¹⁾Master of Management Student, Pancabudi Development University, Indonesia

^{2),3)}Pancasila Development University, Indonesia

Email: wiwinsapta@pln.co.id

Correspondence author: kikifaridaferinesyarif@gmail.com, sriahayu@dosen.pancabudi.ac.id

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Abstract

This study aims to analyze the influence of career management, organizational commitment, and competence on work effectiveness, as well as examining the moderating role of competence. A quantitative approach was applied using the Partial Least Squares Structural Equation Modeling (PLS-SEM) method. Data were collected through questionnaires distributed to 86 employee respondents. The results indicate that career management, organizational commitment, and competence have a positive and significant effect on work effectiveness. However, competence does not significantly moderate the relationship between career management or organizational commitment and work effectiveness. These findings highlight the importance of strengthening career management and enhancing organizational commitment to improve employee work effectiveness.

Keywords: *Career management, organizational commitment, competence, work effectiveness, moderation.*

Background

Work effectiveness is not only related to achieving company targets, but also to how employees can work efficiently and productively. PT PLN (Persero) UP3 Padangsidimpuan, as a strategic company operating in the energy sector, faces the challenge of ensuring that its employees can work effectively to support the achievement of company goals. As a company that plays a major role in providing electricity to the community, PLN has a responsibility to maintain continuity of service with the best quality. Electricity is not only a basic need for the community, but also a key driver for various sectors such as industry, education, and health. Therefore, any disruption in electricity service can have a broad impact on people's lives and the economy as a whole. In facing these demands, PLN must ensure that each employee has adequate competency and clear career support to reach their full potential. PLN also faces challenges from external changes, such as rapid technological developments, evolving government policies, and increasing customer expectations for more reliable and innovative services. These changes require PLN to continue transforming, both in terms of technology and human resources.

Employees must be able to adapt quickly to change, making competency a crucial factor in supporting the success of this transformation. Therefore, synergy between career management, organizational commitment, and competency is needed to create high work effectiveness at PT PLN (Persero) UP3 Padangsidimpuan. Rapid changes in the business environment, including technological developments, government regulations, and customer expectations, further emphasize the importance of having superior human resources. Rapid technological developments require companies to continuously improve the technical capacity and adaptability of employees in facing the automation and digitalization of work processes. Dynamic government policies also require employees who not only understand the technical aspects of their work but also have analytical skills regarding the impact of new regulations on company operations. Furthermore, customer expectations for fast, reliable, and innovative services require companies to create a work culture that is responsive to market needs. Employees are not only required to understand their duties but also to continuously adapt to changes. This includes regular skill updates through training, certification, and other competency development. Career is one of the factors that plays a crucial role in driving employee work effectiveness. With good career management, employees can have a clear view of their career paths. This, in turn, motivates employees to improve their performance. A clear career path provides

employees with an overview of professional development opportunities, ultimately boosting self-confidence and job satisfaction. Organizational commitment is also a key factor in determining how much employees contribute to achieving the company's vision and mission. This commitment reflects the employee's level of emotional attachment and loyalty to the company. Employees with a high level of commitment tend to demonstrate greater dedication to their duties and responsibilities. They are not only motivated to meet work targets but also have a strong desire to support the company's sustainability and growth. In a dynamic work environment, organizational commitment can be a driving force that helps a company face both internal and external challenges.

Formulation of the problem

1. Does Career Management have a positive and significant effect on Competence at PT PLN (Persero) UP3 Padangsidimpuan?
2. Does Organizational Commitment have a positive and significant effect on Competence at PT PLN (Persero) UP3 Padangsidimpuan?
3. Does Competence have a positive and significant influence on the Work Effectiveness of PT PLN (Persero) UP3 Padangsidimpuan Employees?
4. Does Career Management have a positive and significant effect on Work Effectiveness moderated by Employee Competence at PT PLN (Persero) UP3 Padangsidimpuan?
5. Does Organizational Commitment have a positive and significant effect on Work Effectiveness moderated by Employee Competence at PT PLN (Persero) UP3 Padangsidimpuan?

Research purposes

1. To test and analyze the influence of Career Management on Competence at PT PLN (Persero) UP3 Padangsidimpuan.
2. To determine and analyze the influence of Organizational Commitment on Competence at PT PLN (Persero) UP3 Padangsidimpuan.
3. To test and analyze the influence of Competence on the Work Effectiveness of Employees of PT PLN (Persero) UP3 Padangsidimpuan.
4. To test and analyze the influence of Career Management on Work Effectiveness moderated by Employee Competence at PT PLN (Persero) UP3 Padangsidimpuan
5. To test and analyze the influence of Organizational Commitment on Work Effectiveness moderated by Employee Competence at PT PLN (Persero) UP3 Padangsidimpuan

Literature review**Work Effectiveness**

According to Dessler (2017), work effectiveness is the level of employee success in carrying out assigned tasks with results that meet the quality and quantity standards expected by the organization.

Work effectiveness can be measured by how well an individual achieves organizational goals in a timely manner and with optimal resources. According to Gibson et al. (2017), work effectiveness is the achievement of predetermined organizational outcomes by utilizing available resources optimally and efficiently.

Effectiveness Indicators

Work Effectiveness Indicators according to Dessler (2017), including:

1. Achievement of Work Goals: The extent to which employees achieve the goals set by the organization.
2. Quality of Work: The quality of work results produced by employees is in accordance with established standards.
3. Productivity: The amount of output produced by an employee within a specified time.
4. Efficient Use of Resources: The ability of employees to use available resources in an efficient manner to achieve goals.

Factors Affecting Work Effectiveness

According to Hasibuan (2016), the factors that influence work effectiveness are:

- a. work environment,
- b. supervision,
- c. work discipline,
- d. work motivation,
- e. compensation

Career Management

According to Greenhaus et al. (2017), career management encompasses organizational efforts to provide training, guidance, and opportunities to support individual career growth. According to Robbins and Judge (2017), career management is a series of activities designed to help individuals plan, manage, and develop their career paths so they can make optimal contributions to the organization.

Career Management Indicators

Career management indicators according to Robbins and Judge (2017), namely:

1. Career Planning: Refers to a systematic process that helps individuals determine short- and long-term career goals. This includes recognizing one's potential, identifying opportunities, and developing strategic steps to achieve them.
2. Career Development: Focuses on efforts to improve individual skills and competencies through training, mentoring, and work experience. The goal is to equip employees to meet current and future job demands.
3. Employee Capacity Improvement: Involves providing opportunities for employees to learn and develop, whether through formal education, training, or practical experience, to ensure they have relevant and up-to-date skills.

Organizational Commitment

According to Luthans (2017), organizational commitment is an employee's strong desire to remain part of the organization and actively participate in achieving organizational goals. According to Meyer and Allen (2017), organizational commitment is the level of emotional attachment, loyalty, and identification of employees with the organization.

Organizational Commitment Indicators

Indicators of organizational commitment according to Meyer and Allen (2017):

1. Affective Commitment

Affective commitment refers to an employee's emotional attachment to the organization. Employees with high affective commitment tend to work enthusiastically because they feel proud to be part of the organization. This typically occurs when employees feel that their personal values align with those of the organization.

2. Ongoing Commitment

Continuance commitment relates to employees' awareness of the risks or consequences of leaving the organization. Employees stay not because they want to, but because they perceive significant losses, such as the loss of financial stability or other benefits.

3. Normative Commitment

Normative commitment reflects an employee's sense of moral obligation to remain with the organization. Employees feel obligated to continue contributing because of moral values or because they have received significant support from their previous organization, such as training or education.

Competence

According to Spencer and Spencer (2017), competency is a fundamental individual characteristic related to effective job performance. Meanwhile, Boyatzis (2017) defines competency as a collection of skills, knowledge, and behaviors required to perform tasks optimally.

Competency Indicators

According to Spencer & Spencer (2017), competency indicators include:

1. Knowledge: The extent to which employees have a deep understanding of the work being performed.
2. Skills: The technical and functional abilities that employees possess to perform tasks effectively.
3. Behavior: Attitudes and ways of acting that support the achievement of desired results in work.
4. Work Experience: The level of experience that employees have in the field of work they are working in.

Conceptual Framework

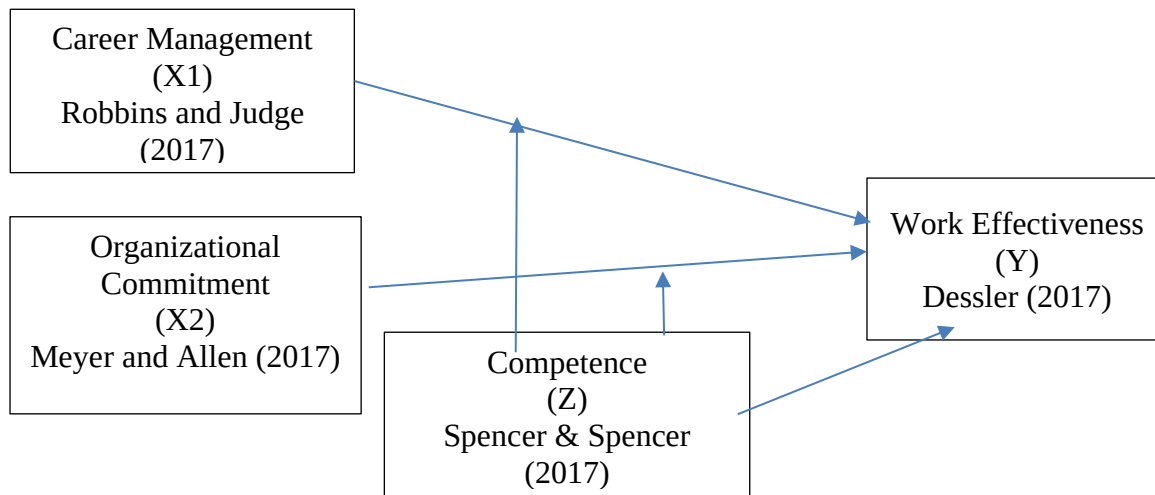


Figure 1: Conceptual Framework

Hypothesis

1. Career management has a positive influence on work effectiveness at PT PLN (Persero) UP3 Padangsidimpuan
2. Organizational commitment has a positive influence on work effectiveness at PT PLN (Persero) UP3 Padangsidimpuan
3. Competence has a positive and significant influence on the Work Effectiveness of PT PLN (Persero) UP3 Padangsidimpuan Employees
4. Career Management has a positive and significant effect on Work Effectiveness moderated by Employee Competence at PT PLN (Persero) UP3 Padangsidimpuan
5. Organizational Commitment has a positive and significant effect on Work Effectiveness moderated by Employee Competence at PT PLN (Persero) UP3 Padangsidimpuan

Types of research

This research uses quantitative methods with descriptive and causal approaches. Descriptive research aims to provide an overview of the variables studied, while causal research is used to analyze the causal relationship between the independent variables (career management and organizational commitment), the moderating variable (competence), and the dependent variable (work effectiveness). According to Sugiyono (2017), quantitative methods are used to test hypotheses using statistical analysis tools.

Time and Location of Research

This research was conducted at PT PLN (Persero) UP3 Padangsidimpuan. Data collection took place from June to August 2025.

Population and Sample

Population: The population in this study was all employees of PT PLN (Persero) UP3 Padangsidimpuan, totaling 86 people. Sample: This study used a saturated sampling technique, where all members of the population were sampled. According to Sugiyono (2017), the saturated sampling technique is used when the population is relatively small so that the entire population can be studied.

Data collection technique

Data collection was conducted using a survey method using a structured questionnaire. This questionnaire consists of statements that measure each research variable based on predetermined indicators.

Data Analysis Techniques

The data analysis technique was carried out using Partial Least Squares-Structural Equation Modeling (PLS-SEM), which is operated through SmartPLS software. According to Hair et al. (2017), PLS-SEM is used to analyze the relationship between variables with data that does not have to strictly meet the assumption of normality.

Data Analysis Model

The analysis model used in this study is MRA (Moderated Regression Analysis), which is a multiple regression analysis technique used to test whether the relationship between the independent variable (X) and the dependent variable (Y) is influenced or depends on the level of another variable called the moderator (M).

Characteristics of MRA

- The form is the same as ordinary linear regression, but adds an interaction variable ($X \times M$).
- The moderator does not have to have a direct relationship with Y, but the influence of X on Y can change when M changes.
- Generally, data are centered (reduced to the mean) before forming interaction terms, to avoid multicollinearity.

RESULTS AND DISCUSSION

Research Test

By conducting initial testing of the questionnaire instrument, the accuracy and reliability of the variable and indicator data collected for this study were confirmed. The test results revealed four variables in the model to be used in the study, as listed below:

Evaluation of measurement model (outer model)

Convergent Validity

In this study, the acceptable loading factor value is 0.7 and the acceptable AVE value is 0.5. Higher values are considered valid. An indicator is considered valid if it has a value >0.7 when explaining the construct variable. The following graph displays the structural model of this study.

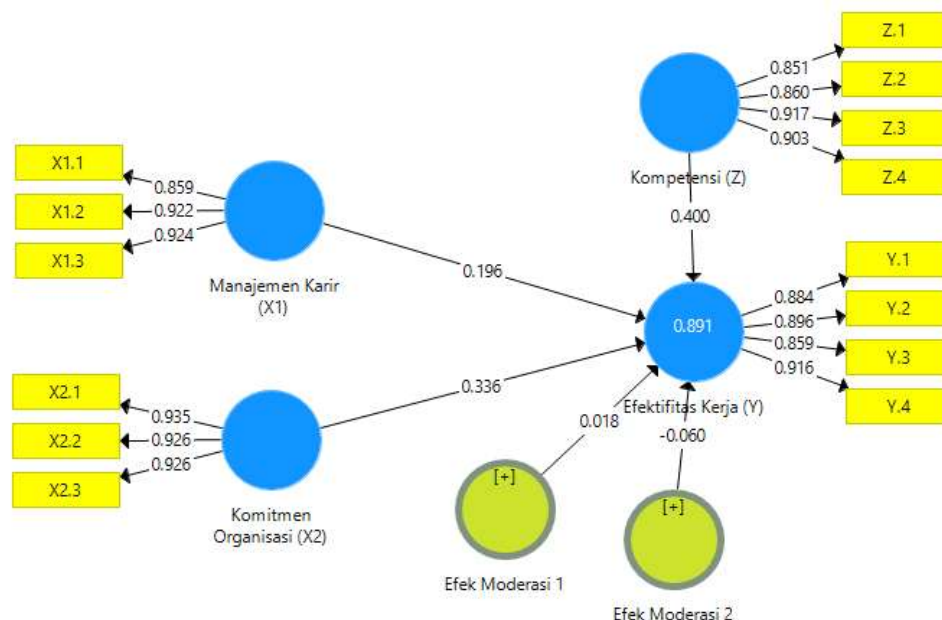


Figure 2. Research Model in SmartPLS

The Smart PLS output for loading factor gives the results in the following table: Outer Loadings In this study there is an equation and the equation consists of two equations.

$$Y = b_1X_1 + b_2Z + b_3X_1Z + e_1$$

$$Y = 0.196 + 0.400 + 0.018 + e_1$$

$$Y = b_2X_2 + b_3Z + b_4X_2Z + e_2$$

$$Y = 0.336 + 0.400 - 0.060 + e_2$$

Table 1. Outer Loadings/Cross Loading

	Moderation Effect 1	Moderation Effect 2	Work Effectiveness (Y)	Organizational Commitment (X2)	Competence (Z)	Career Management (X1)
Organizational Commitment (X2) * Competence (Z)		1,727				
Career Management (X1) * Competence (Z)	1,785					
X1.1						0.859
X1.2						0.922
X1.3						0.924
X2.1				0.935		
X2.2				0.926		
X2.3				0.926		
Y.1			0.884			
Y.2			0.896			
Y.3			0.859			
Y.4			0.916			
Z.1					0.851	
Z.2					0.860	
Z.3					0.917	
Z.4					0.903	

Source: Smart PLS 3.3.3

All indicators for each construct have outer loadings above 0.70, with most exceeding 0.90. This indicates that each indicator is highly valid in measuring the intended latent variable. No indicators need to be eliminated from the model. The moderation effect value indicates that the interaction between the latent variables ($X*Z$) contributes to moderating the relationship, and the value is significant.

Discriminant Validity

This discussion will focus on the results of the discriminant validity test in this section. Cross-loading values are used to test discriminant validity. If the cross-loading of an indicator is higher than that of another variable, it indicates discriminant validity. The cross-loading values for each indicator are as follows:

Table 2. Discriminant Validity

	Moderation Effect 1	Moderation Effect 2	Work Effectiveness (Y)	Organizational Commitment (X2)	Competence (Z)	Career Management (X1)
Organizational Commitment (X2) * Competence (Z)	0.981	1,000	-0.691	-0.655	-0.657	-0.688
Career Management (X1) * Competence (Z)	1,000	0.981	-0.693	-0.666	-0.663	-0.680
X1.1	-0.578	-0.589	0.714	0.793	0.693	0.859
X1.2	-0.679	-0.676	0.825	0.804	0.765	0.922
X1.3	-0.582	-0.597	0.840	0.833	0.792	0.924
X2.1	-0.638	-0.640	0.831	0.935	0.811	0.860
X2.2	-0.660	-0.637	0.796	0.926	0.792	0.771
X2.3	-0.564	-0.553	0.900	0.926	0.828	0.865
Y.1	-0.628	-0.625	0.884	0.730	0.805	0.758
Y.2	-0.608	-0.600	0.896	0.837	0.796	0.788
Y.3	-0.611	-0.635	0.859	0.788	0.760	0.779
Y.4	-0.621	-0.601	0.916	0.872	0.854	0.811
Z.1	-0.534	-0.524	0.772	0.754	0.851	0.702
Z.2	-0.581	-0.568	0.830	0.875	0.860	0.777
Z.3	-0.595	-0.588	0.784	0.708	0.917	0.692
Z.4	-0.630	-0.637	0.807	0.739	0.903	0.769

Source: Smart PLS 3.3.3

All indicators in the model have the highest loading value for their respective constructs, so it can be concluded that: Discriminant validity in this model has been fulfilled, meaning that each construct in the model is measured by the appropriate indicator and there is no overlap between constructs.

Composite reliability

In composite reliability analysis, the reliability coefficients of each variable are correlated. Research is considered reliable if the variable value is greater than 0.60, but unreliable if it is less than 0.60 or as low as 0.07. Several evaluation blocks can indicate the effectiveness and validity of research, such as Cochran's alpha, composite reliability, and AVE values, as shown in the table below.

Table 3. Construct Reliability and Validity

	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Moderation Effect 1	1,000	1,000	1,000
Moderation Effect 2	1,000	1,000	1,000
Work Effectiveness (Y)	0.911	0.938	0.790
Organizational Commitment (X2)	0.921	0.950	0.863
Competence (Z)	0.906	0.934	0.780
Career Management (X1)	0.885	0.929	0.813

Source: Smart PLS 3.3.3

All constructs in the model meet the criteria for reliability and convergent validity: Cronbach's Alpha and Composite Reliability are all $> 0.85 \rightarrow$ highly reliable. AVE is all $> 0.75 \rightarrow$ very strong convergent validity, as most of the indicator variance is explained by the construct. This means that this research instrument can be interpreted as reliable and valid overall for use in further analysis.

Inner Model Analysis

To ensure the baseline model is accurate and robust, an internal model evaluation is performed. The completed audit phase is one of the indicators taken into account when evaluating the baseline model.

Coefficient of Determination (R²)

By using the SmartPLS 3.0 program to process the data, here's how to determine the R Square value:

Table 4. R Square Results

	R Square	Adjusted R Square
Work Effectiveness (Y)	0.891	0.884

Source: Smart PLS 3.3.3

This means that 89.1% of the variation in Work Effectiveness (Y) can be explained by all the independent variables in the model. This research model has excellent predictive power, as 89.1% of the variation in Job Effectiveness (Y) is explained by the independent variables within the model. The remaining 10.9% is explained by factors outside the model. If you'd like, I can also assist you in interpreting the results of the Path Coefficients, moderation tests, or general conclusions from the overall model.

Hypothesis Testing

The relationship between idle builds and the data in this example must be confirmed after the deep model is created. T-Statistics and P-Values are examined to perform statistical analysis in this case study. To determine whether the P-Values are < 0.05 and T-Insights values are > 1.96 , speculation is used. The impact of the Road Impact Coefficient over time is as follows:

Table 5. Hypothesis Results

	Original Sample (O)	T Statistics (O/STDEV)	P Values	Results
Moderation Effect 1 -> Work Effectiveness (Y)	0.018	0.183	0.428	Rejected
Moderation Effect 2 -> Work Effectiveness (Y)	-0.060	0.566	0.286	Rejected
Organizational Commitment (X2) -> Work Effectiveness (Y)	0.336	3,341	0,000	Accepted
Competence (Z) -> Work Effectiveness (Y)	0.400	5,172	0,000	Accepted
Career Management (X1) -> Work Effectiveness (Y)	0.196	2,341	0.010	Accepted

Source: Smart PLS 3.3.3

The hypothesis results in Table 5 are the final results of the research and will be explained as follows:

1. Moderation effect 1 has a positive but insignificant effect on work effectiveness, as shown by the original sample value of 0.018 with a p value of 0.428. Competence does not moderate the effect of Organizational Commitment on Work Effectiveness. This means that employee competency levels neither strengthen nor weaken the relationship between organizational commitment and work effectiveness.
2. Moderation effect 2 has a negative but insignificant effect on work effectiveness, as shown by the original sample value of -0.060 with a p value of 0.286. Competence does not moderate the effect of career management on work effectiveness. This means that employee competence does not play a role in strengthening or weakening the influence of career management on work effectiveness.
3. Organizational commitment has a positive and significant effect on Work Effectiveness as shown by the original sample value of 0.336 with a p value of 0.000. Organizational commitment has a positive and significant impact on work effectiveness. Employees who are highly committed to their organization tend to work more effectively.
4. Competence has a positive and significant effect on Work Effectiveness as shown by the original sample value of 0.400 with a p value of 0.000. Competence has a positive and significant influence on work effectiveness. This means that the higher an employee's competency, the higher their work effectiveness.
5. Career management has a positive and significant effect on work effectiveness, as shown by the original sample value of 0.196 with a p-value of 0.010. Career management has a positive and significant effect on work effectiveness. The better employees' career management, the more effective their work is.

Conclusion

The conclusions of this study are as follows:

1. Competence does not moderate the relationship between Organizational Commitment and Work Effectiveness.
2. Competence does not moderate the relationship between Career Management and Work Effectiveness.
3. Organizational Commitment has a positive and significant effect on Work Effectiveness.
4. Competence has a positive and significant effect on Work Effectiveness.
5. Career Management has a positive and significant impact on Work Effectiveness.

Suggestion

1. Strengthening Career Management: Management should develop clear career paths and provide career development opportunities for employees to increase work effectiveness.
2. Increasing Organizational Commitment: Organizations need to create a work environment that supports loyalty and a sense of belonging, for example through open communication, performance rewards, and employee involvement in decision-making.
3. Competency Development: Continuous training, workshops, and involvement in strategic projects are required to improve employees' technical and soft skills.
4. The Role of Competence as a Moderator: Since competency has not been shown to be a significant moderator, organizations need to re-examine their competency development approach to optimally strengthen the influence of other variables on work effectiveness.

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