



Measuring Employee Performance by Competence and Self-efficacy

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Abstract—Telecommunication companies that always update themselves, demand optimal employee performance. Increased employee competence can be associated with self-efficacy of self-efficacy in doing work to be able to make increased performance achievements. The purpose of this study was to determine the effect between variables, namely competence, self-efficacy and employee performance. This study uses a quantitative approach using a sample of 206 employees at a telecommunications company. The analytical technique used in this research is path analysis with the help of the partial least square–structural question model (PLS-SEM) program. The results showed that there was an influence between the three variables: competence, self-efficacy and employee performance. Competence affects self-efficacy and employee performance. While self-efficacy affects employee performance and competence affects employee performance through self-efficacy.

Keywords: Competence; Self-efficacy; Employee Performance; Telecommunication Companies; Optimal Performance

1. INTRODUCTION

The development of information and technology triggers companies to act effectively and efficiently. No exception on the employee side, where there are still many low employee competencies. Even though within the scope of the organization itself, the quality of human resources (HR) certainly plays a very important role important. Moreover this is highly dependent on the quality of recruitment and potential applicants (Ernawati & Arifianto, 2023). However, many recruits do not have the competencies required by the company. Telecommunications companies, which are always trying to develop themselves due to environmental demands, 'force' employees to develop their competencies to keep up with company changes. Unfortunately, the inability to change adds to the burden on the state because it changes its status to unemployment.

Currently, unemployment is still a major problem in Indonesia. The open unemployment rate based on education tends to increase (see table 1), especially for Diploma and Bachelor graduates, as much as 12 percent (BPS, 2022). In fact, the level of education is related to the quality of work, which is the underlying literacy ability (Wicht et al. 2019). So far, it can be said that it is far from fire, where there is an error in the management of job demand and supply. One of them is because the skills possessed by undergraduate or diploma graduates do not match the needs of the company or industry (Ernis, 2022). What's more, Informatics Engineering graduates account for more than 400,000 graduates per year (Budianto, 2021).

Table 1. Open Unemployment Rate by Education Level (in percent)

Education Level	2020	2021	2022
Elementary school and below	2.6	3.13	3.09
Junior high school	4.99	5.87	5.61
Senior high school	6.69	8.55	8.35
Vocational high school	8.42	11.45	10.38
Diploma	6.69	6.61	6.09
Bachelor and above	5.7	6.97	6.17

Source: BPS (2022)

Moher et al. (2017) explained that core competencies in the form of basic knowledge, skills and characteristics are needed to be able to fulfill work tasks competently. The solution to these problems is the need to provide soft skills and hard skills before entering the world of work. Furthermore, company support is needed for competency development (Pang et al., 2019).

Responding to these challenges, the government opened a pre-employment training program on the competency aspect, namely soft skills and hard skills organized by the Ministry of Manpower of the Republic of Indonesia through companies that have collaborated. The implementation of the program is known as the Indonesian National Work Competency Standard (SKKNI). The SKKNI is used primarily for designing and implementing job training, conducting an assessment of training outputs, as well as assessing the current level of skills and expertise possessed by a person. The SKKNI is mandated in Article 10 paragraph 2 and also paragraph 4 of Law Number 13 of 2003 concerning Manpower.

Although there are surprising results, where the SSKNI does not have an effect on Human Resource (HR) competence and development, HR competence has a real influence on company policies (Mahdane et al., 2018). For this reason, there are several dimensions that play an important role in competency development. Psychological ability and professional performance are the main and most effective dimensions in competency development. Next, the

components of job information and awareness, desire for career development, and managerial skills are the most active components and affect other components (Torabi et al., 2021).

This research is then carried out to find out what things are useful to improve the declining performance of employees. The researcher found the root of the problem based on the fishbone diagram (see Figure 1). The results of this mapping look at the indicator gaps that are thought to affect employee performance. The results of previous studies show that self-efficacy, competence, and emotional intelligence have a significant effect on career development and employee performance (Mujanah, 2020).

Departing from the conceptual model, this study will identify the relationship between the variables of self-esteem, self-efficacy and general competence. It is possible to be able to set performance standards for employees, which of course has the effect of increasing the competitive position in the quality of the organization. The competency framework applied in the organization can help the relationship between employee development and human resource management as well as understanding competence helps in improving employee performance standards.

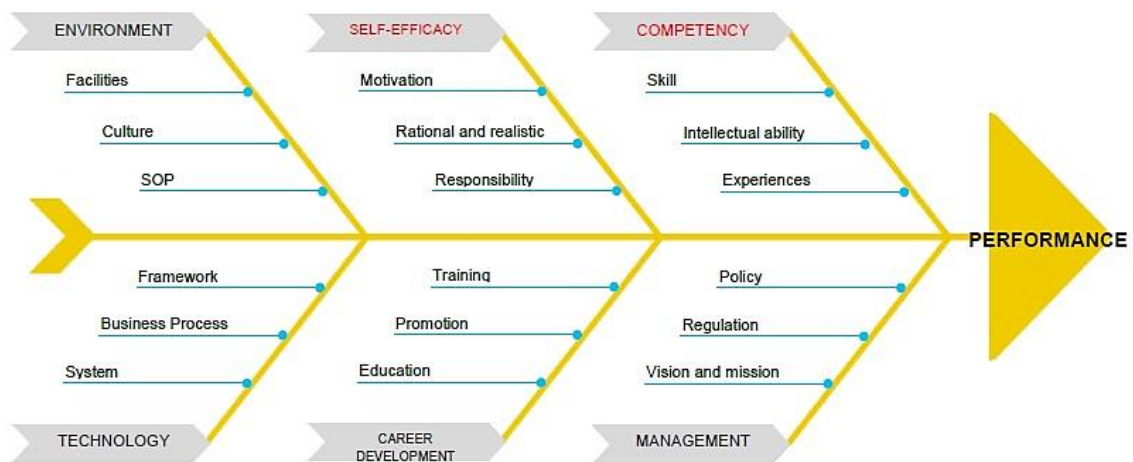


Figure 1. Gap analysis with Fishbone Diagram

Self-efficacy determines how people feel, think, motivate themselves and behave (Bandura, 1997). Self-efficacy can also be described as a person's belief in his ability to organize, carry out, and manage performance to achieve the type of performance that he determines (Sharma & Nasa, 2014). Bandura divides dimensions that refer to self-efficacy, namely the level of difficulty (magnitude), strength of belief (strength), and generality (Medyasari et al., 2021). By looking at these three dimensions, there are several indicators of self-efficacy, namely: belief in one's own abilities, optimistic, objective, responsible, and rational and realistic.

Competence is a characteristic that exists in an individual related to criteria that are used as a reference for superior or effective performance in a job or also in certain situations (Tagala, 2018). There are factors that affect a person's competence, namely: beliefs and values, skills, experience, personality characteristics, motivation, emotional issues, intellectual abilities, and organizational culture (Wibowo, 2017).

Meanwhile, performance can be defined as the work of a person or group of people within the scope of the organization in accordance with their respective authorities and responsibilities in order to achieve organizational goals legally and not violate morals and ethics (Afandi, 2018). This study uses six indicators for performance variables, including: work results, job knowledge, initiative, mental agility, attitude, time discipline, and absenteeism (Sutrisno, 2011).

2. RESEARCH METHODS

This research is a type of quantitative research with research methods based on the philosophy of positivism. It is used to examine certain populations or samples, data collection using research instruments, quantitative or statistical data analysis, with the aim of testing predetermined hypotheses (Sulistiyani & Fauzan, 2012). In this study, the data used is quantitative data by collecting primary data, namely the results of the distribution of questionnaires in the telecommunications company environment using google form. The population in this study amounted to 425 employees while determining the number of samples using the Slovin formula with an error rate of 5%, finally obtained the following amount:

$$N = 425/1 + (425 \times 0.052) = 206.1 \sim 206 \text{ employees}$$

The analytical technique used in this study is path analysis to determine the effect between variables (commitment, self-efficacy and performance). Statistical analysis was carried out with the help of the partial least squares – structural question model (PLS-SEM) program which aims to perform path analysis with latent variables. The

measurement model is used to test the validity and reliability, while the structural model is used to test causality (testing hypotheses with predictive models). While the picture of the framework of this research is as shown in Figure 2. It is necessary to have previous research for forming hypotheses.

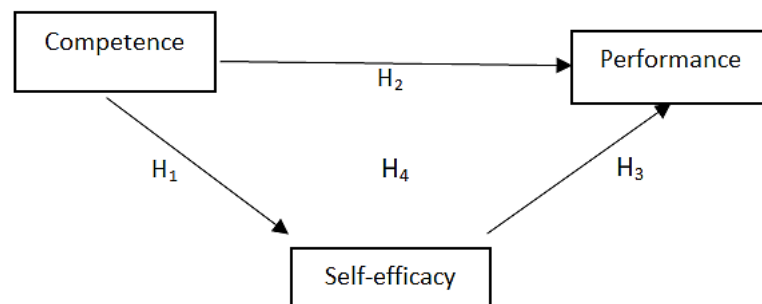


Figure 2. Research Framework

The results of the first study showed that competence had a significant positive effect on auditor self-efficacy in Semarang (Romadon & Fridatien, 2019). The same result is shown by the results of the second study where pedagogical competence has a positive and significant effect on teacher self-efficacy at SDN Cluster VI Palmerah, West Jakarta (Nurmalia & Setiyaningsih, 2020). So, it can be described as:

Hypothesis 1: it is suspected that there is an influence of competence on self-efficacy.

The first study shows the influence of human resource competence on employee performance at the South Sulawesi Provincial Social Service (Dinas Sosial) office (Lodi, 2021). While the second study describes HR competencies which include motives, traits, self-concepts, knowledge, and skills partially have a significant positive influence on employee performance at PT. Tresnamuda Sejati Surabaya branch (Callista, 2016). The same result is shown by the third study that competence has a significant effect on employee performance at PT. Telekomunikasi Indonesia (Persero) Tbk. Witel Bandung (Soetrisno & Gilang, 2018). However, the results of the fourth study show that there is no influence between professional competence on the performance of teachers at State Vocational Schools in Pemalang Regency (Slamet & Sutomo, 2019). Based on these studies, it can be described as:

Hypothesis 2: it is suspected that there is an influence of competence on employee performance.

The results of the first study show that self-efficacy and professional competence have a positive influence on knowledge donating. Meanwhile, self-efficacy, professional competence and knowledge donating have also been shown to have an effect on teacher performance, so that knowledge donation is proven to be an intervening variable between self-efficacy and professional competence on teacher performance (Rohmawati & Nurcholis, 2020). Furthermore, the second study shows the results if self-efficacy has a positive and significant effect on employee performance partially (Mahawati & Endang, 2021). While the results of the third study showed different results where self-efficacy in an effort to improve performance did not affect the performance of MAP Fashion Tunjungan Plaza Surabaya employees (Saputri and Lestariningsih 2021). So, it can be drawn the picture that:

Hypothesis 3: it is suspected that there is an effect of self-efficacy on employee performance.

The first study shows that self-efficacy can mediate a significant positive influence on the performance of auditors in Semarang (Romadon & Fridatien, 2019). Meanwhile, the results of the second study stated that self-efficacy could not mediate motivation and competence on the performance of lecturers at the Semarang Shipping Science Polytechnic (Sulistiyani & Fauzan, 2012). So, the hypothesis can be drawn as follows:

Hypothesis 4: it is suspected that there is an influence of competence on employee performance through self-efficacy.

3. RESULTS AND DISCUSSION

In this study, the data were processed based on variable statements consisting of eight statements for the competency variable (X1), namely for each indicator: beliefs and values, skills, experience, personality characteristics, motivation, emotional issues, intellectual abilities, and organizational culture. While the self-efficacy variable (X2), which uses five statements, namely for each indicator: belief in one's own abilities, optimistic, objective, responsible, and rational and realistic. Finally, there are six statements for the employee performance variable (X3), with indicators: work results, job knowledge, initiative, mental agility, attitude, and time discipline and attendance.

3.1 Results

Data analysis in this study using SEM-PLS. As an alternative to covariance-based SEM, the variance based or component-based approach with analysis-oriented PLS shifts from testing causality/theory models to component based predictive models. Structural model testing in PLS was carried out with the help of Smart-PLS software version 3. The

structural model generated from PLS can be seen in Figure 3. There are two group stages to analyze SEM-PLS, namely the analysis of the measurement model (outer model), namely (a) convergent validity; (b) construct reliability and validity; and (c) discriminant validity and structural model analysis (inner model), namely (a) coefficient of determination (r-square); (b) f-square; and (c) hypothesis testing (Sugiyono, 2017).

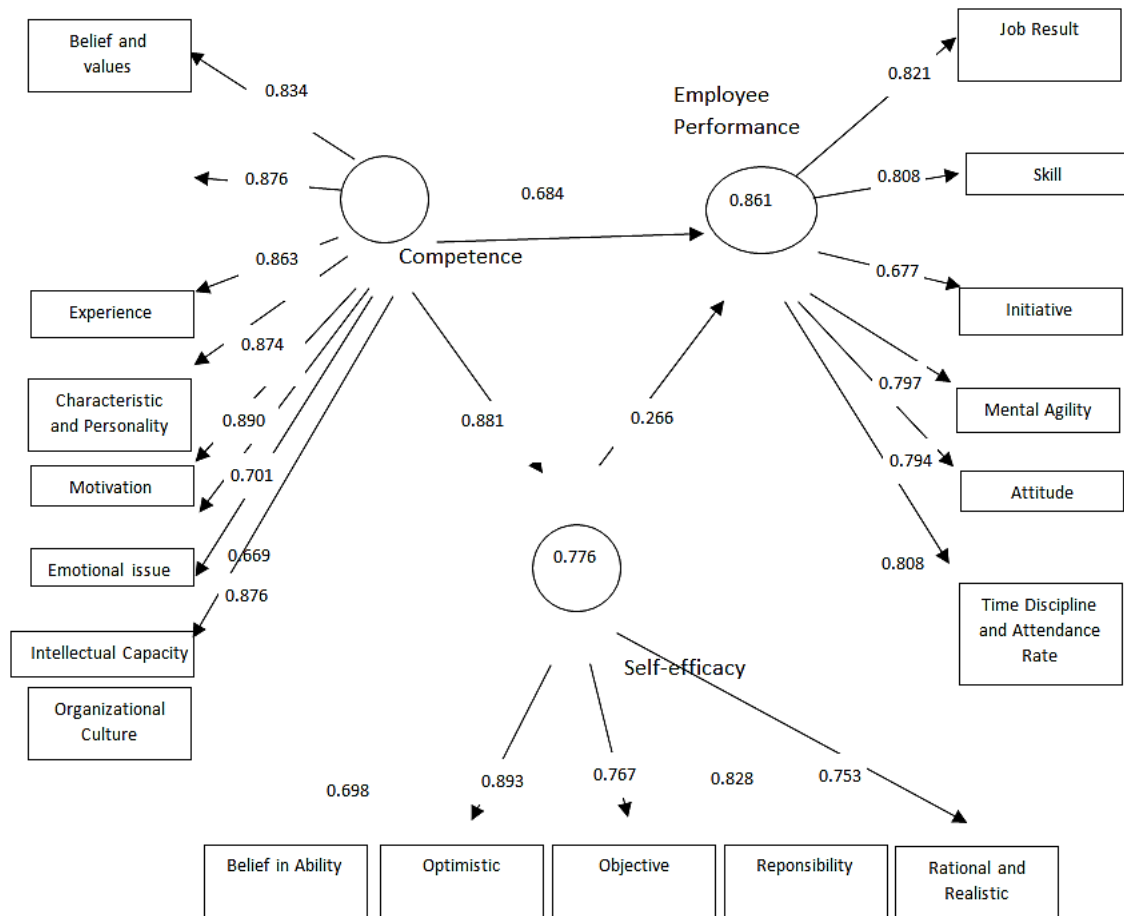


Figure 3. PLS Structural model results

3.1.1 PLS Analysis

Analysis of the measurement model (outer model) uses 2 tests, including: (1) Convergent validity and (2) Discriminant validity. The following is a discussion of the test results.

a. Convergent Validity

Convergent validity aims to determine the validity of each indicator relationship with other constructs or variables. The instrument is declared valid if it has a loading factor value > 0.6. The results of calculating the validity using Smart-PLS stated that all questionnaire questions were valid with an outer loading score greater than 0.6 (see table 2).

b. Discriminant validity

Discriminant validity is the extent to which a construct is completely different from other constructs (a construct is unique). Discriminant validity is used to compare the value of the square root of average variance extracted (AVE) of each construct with the correlations between other constructs in the model. If the AVE construct is greater than the correlation with all other constructs, it is said to have good discriminant validity. The AVE score obtained must be greater than 0.50. In smart PLS there are 2 types of reliability tests, namely the Cronbach Alpha test and the Composite Reliability test. Cronbach Alpha measures the lowest value (lower bound) reliability. Meanwhile, composite reliability measures the real reliability value of a variable. Based on the calculation results, it was found that all items of the instrument were reliable, with a Cronbach Alpha and composite reliability scores of more than 0.5 (see table 3).

Table 2. Convergent validity calculation results

Variables	Instrument Codes	Outer Loading	Information
Competence (X ₁)	X1.01	0.834	Valid
	X1.02	0.876	Valid
	X1.03	0.863	Valid



Variables	Instrument Codes	Outer Loading	Information
Self-efficacy (X ₂)	X1.04	0.874	Valid
	X1.05	0.890	Valid
	X1.06	0.701	Valid
	X1.07	0.769	Valid
	X1.08	0.876	Valid
	X2.01	0.798	Valid
	X2.02	0.893	Valid
	X2.03	0.767	Valid
Performance (X ₃)	X2.04	0.828	Valid
	X2.05	0.753	Valid
	X3.01	0.821	Valid
	X3.02	0.808	Valid
	X3.03	0.777	Valid
	X3.04	0.797	Valid
	X3.05	0.794	Valid
	X3.06	0.808	Valid

Source: Data processing (2022)

Table 3. Calculation of discriminant validity and composite reliability results

	Cronbach's Alpha	rho_A	Composite reliability
Competence (X ₁)	0.932	0.933	0.945
Self-efficacy (X ₂)	0.855	0.880	0.892
Performance (X ₃)	0.875	0.881	0.906

Source: Data processing (2022)

3.1.2 Structure Model Analysis (Inner Model)

a. Coefficient of Determination (R-Square)

R-square is a measure of the proportion of variation in the value that is influenced (endogenous) which can be explained by the variables that influence it (exogenous). This is useful for predicting whether the model is good or bad. The r-square result for the endogenous latent variable of 0.75 indicates that the model is substantial (good); 0.50 indicates that the model is moderate (moderate) and 0.25 indicates that the model is weak (poor). Table 3 informs that the influence of competence (X₁) and self-efficacy (X₂) on performance (X₃) with an r-square value of 0.861, which indicates that variations in X₃ values can be explained by variations in X₃ values of 86.1% or in other words that the model it is substantial (good) and 2.6% is influenced by other variables. The probability value (I) obtained is 0.000 < 0.05, which means significant. However, the model is classified as weak.

b. Hypothesis Testing

This test is conducted to determine the path coefficient of the structural model. The goal is to test the significance of all relationships or hypothesis testing (see table 4 and table 5). Table 6 illustrates that the results of hypothesis testing show the results if the competency (X₁) has a path coefficient value of 0.881 on self-efficacy (X₂). This shows that the higher the level of employee competence, the more effective the employee's self-efficacy. This effect has a probability value (p-values) of 0.000, which means it is below 0.05. So that there is an influence of competence on self-efficacy. These results are the same as the results of studies Romadon & Fridatien (2019) and Nurmalia & Setyaningsih (2020).

Table 4. Path coefficient calculation results

	Original (O)	sample (M)	Sample mean (M)	Standard (STDEV)	Deviation	T Statistics	P Values
Competence to Self-efficacy	0.881	0.882	0.882	0.025		35.932	0.000
Competence to Performance	0.684	0.682	0.682	0.085		8.061	0.000
Self-efficacy to Performance	0.266	0.270	0.270	0.093		2.853	0.005

Source: Data processing (2022)

Table 5. Calculation of specific indirect effects

	Original (O)	sample (M)	Sample mean (M)	Standard (STDEV)	Deviation	T Statistics	P Values
Competence→ Self-	0.235	0.238	0.238	0.083		2.838	0.005



efficacy → Performance

Source: Data processing (2022)

Table 6. Hypothesis test results

Hypothesis	Results
There is an influence between competence (X_1) on self-efficacy (X_2)	accepted
There is an influence between competence (X_1) on employee performance (X_3)	accepted
There is an influence between self-efficacy (X_2) on employee performance (X_3)	accepted
There is an influence between competence (X_1) on employee performance (X_3) through self-efficacy (X_2)	accepted

Source: Data processing (2022)

Furthermore, the effect of competence (X_1) on employee performance (X_3) has a path coefficient value of 0.684. This shows that the higher the competence, the more effective the employee's performance. This effect has a probability value (p-values) of 0.000 and is below 0.05. This means that there is a significant influence of competence on employee performance. This is also consistent with the results of studies Lodi (2021), Callista (2016) and Soetrisno & Gilang (2018).

The effect of self-efficacy (X_2) on employee performance (X_3) itself has a path coefficient value of 0.266. This shows that the higher the self-efficacy of the employee, the more effective it is on the employee's performance. This effect has a probability value (p-values) of 0.005, which is still below 0.05. This means that the effect of self-efficacy on employee performance is significant. The same results were also obtained by previous studies by Rohmawati & Nurcholis (2020) and Mahawati & Endang (2021).

Finally, the effect of increasing competence (X_1) on employee performance (X_3) through self-efficacy (X_2) has a path coefficient of 0.235 and has a probability value (p-values) of 0.005, which is smaller than 0.05. This shows that the higher the influence of competence, the higher the employee's performance through self-efficacy mediation. This result is the same as the study before by Romadon and Fridatien (2019).

4. CONCLUSION

An acceptable conclusion is that there is a significant effect of competence on self-efficacy. The same results also occur in the influence of competence on employee performance significantly. While self-efficacy has an effect on employee performance and is significant. Also, the effect of competence through self-efficacy on employee performance is also significant. Therefore, the results of this study can show that employee competencies must have self-efficacy and confidence in the ability to do work, in an effort to improve the performance of telecommunications company employees. However, when examined again, there are several indicators that greatly affect each variable. Motivation greatly affects competence, optimism is very influential on self-efficacy, and work results are the most influential indicator on employee performance. If each of these indicators can be improved, then the level of each variable can also be increased. The implication is that these three aspects need to be the main concern of the company when it wants to increase the capacity of its employees, especially in telecommunications companies. Researchers realize that there are still other aspects that most influence the performance of employees in telecommunications companies and have not been explored further. Therefore, this research also needs to be followed up by involving aspects of motivation, in addition to aspects involving internal employee factors, such as morale, emotional/spiritual quotient and self-confidence.

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