Research Article

Budiman Sitepu[1]*, Isa Indrawan[2]

The Influence of the Availability of Work Facilities on the Work Effectiveness of Employees with Competency as Intervening Variables in the Defense Service Food and Agriculture City of Binjai

*Corresponding Author: **Budiman Sitepu**; Universitas Pembangunan Pancabudi, Indonesia; budimansitepu@gmail.com
Muhammad Isa Indrawan; Universitas Pembangunan Pancabudi, Indonesia; isaindrawan@dosen.pancabudi.ac.id

Abstract: *This study aims to see the effect of the availability of work facilities on the work effectiveness of employees with competence as an intervening variable with associative quantitative. The population in this study amounted to 130 employees and used a saturated sample. Collecting research data using a questionnaire. The data source used is primary data. This research was conducted at the Office of Food Security and Agriculture, Binjai City. The research model used is Path Analysis and the measurement tool is Smart PLS version 3.3.3. The result of this study is that work facilities have a positive and significant effect on work effectiveness. Work Facilities have a positive and significant effect on competence. Competence has a positive and significant effect on work effectiveness.*

Keywords*: Work Facilities, Work Effectiveness, Competence*

Introduction

In order to realize food security, the agricultural sector is a very important sector because this sector is the main food provider, especially in developing countries which has a dual role, namely one of the main targets of development and one of the main instruments in economic development. Food security is one of the strategic issues in a country's development. Law Number 18 of 2012 concerning Food states that food administration is carried out to meet basic human needs that provide fair, equitable and sustainable benefits based on food sovereignty, food self-sufficiency and food security.

The development of the company's growth requires the availability of reliable human resources. Efforts to provide these resources can be obtained through improving the quality of human resources. Qualified human resources according to company needs can be obtained through education and job training programs. Education and job training are factors that encourage the achievement of employee performance so that they can provide the best performance for the company. Companies need to identify organizational needs so that companies can implement the types of job education and training programs that will be provided to individuals within the organization. Compatibility with organizational needs and tasks with work education and training programs will support increased employee performance. Competence is the basic foundation of people's characteristics and indicates a way of behaving or thinking, equalizing situations and supporting for a long period of time (Spancer, 2003). Competence can deepen and broaden one's work abilities. The more often someone does the same job, the more skilled and faster he gets the job done. The more kind of work a person does, the richer and wider his work experience and the increase in his performance will also increase (Simanjuntak, 2005). The size of effectiveness can be assessed by comparing the achievement of the objectives of an activity carried out and not regarding the costs incurred to carry out the activity (Danim, 2004).

The phenomenon that occurs at the Food Security and Agriculture Office of the City of Binjai is the lack of work facilities so that employee effectiveness is not good and employee work is slow because when employees use limited facilities, other employees will wait for their work to be ready after other employees

are ready to use work facilities then they can be use in meaning that the facilities owned by the company are forced to take turns using them making work effectiveness slow and with a lack of facilities, the competencies possessed by employees will not come out properly.

Literature Review

Work Facilities

According to Sofyan (2014) work facilities are supporting facilities in physical company activities, and are used in normal company activities, have a relatively permanent term of use and provide benefits for the future. According to Moenir (2010), facilities are everything that is used, used, occupied by employees/employees both in a direct relationship with work and for the smooth running of work.

Work Facilities Indicator

According to Sofyan (2014), indicators of work facilities within the company consist of:
1. Machinery and equipment
2. Infrastructure
3. Office supplies
4. Equipment inventory
5. Land and buildings
6. Means of transportation

Competence

According to Rahmat (2019) states that competence is a characteristic of a person related to effective and or superior performance in certain work situations. Rachmaniza (2020) states that competence is a characteristic that underlies a person related to the effectiveness of individual performance in his work or basic characteristics of individuals that have a causal relationship or as a cause-and-effect relationship with criteria that are used as a reference, are effective or have excellent or superior performance at work or in situations certain.

Competency Indicator

According to Rahmat (2019) states that there are 5 (five) competency characteristics as indicators that can measure competency, namely:
1. A motive is something a person consistently thinks or wants that causes an action.
2. Traits are physical characteristics and consistent responses to situations or information.
3. Self-concept is a person's attitude, values, or self-image.
4. Knowledge is information possessed by people in a specific field.
5. Skill is the ability to perform certain physical or mental tasks.

Work Effectiveness

The notion of work effectiveness was also put forward by several other experts, according to Hasibuan (2013) work effectiveness is a condition that indicates the level of success of management activities in achieving goals including quantity of work, quality of work, and timeliness in completing work. stated by Gibson (2010), effectiveness is the achievement of agreed goals and objectives to achieve common business goals. The level of goals and objectives shows the level of effectiveness.

Effectiveness Indicator

As for several indicators to measure work effectiveness according to Hasibuan (2013), namely:

1. Quality of Work Quality of work is the attitude shown by employees in the form of work results in the form of neatness, accuracy, and relevance of results without ignoring the volume of work in carrying out work.
2. Work Quantity Work quantity is the volume of work produced under normal conditions. This can be seen from the amount of workload and conditions that are obtained or experienced during work.
3. Utilization of Time Utilization of time is the use of working period adjusted to company policy so that the work is completed at the stipulated time.

Methods

The type of research used is quantitative associative, namely research that aims to determine the relationship between two or more variables (Sugiyono, 2013). In this study, the exogenous variable is Work Facilities (X). Meanwhile, the endogenous variable is Work Effectiveness (Y) and the Intervening Variable is Competence (Z). This research was conducted at the Department of Food Security and Agriculture in Binjai City, when this research was carried out from March 2023 to July 2023.

According to Sugiyono (2018) population is a generalized area consisting of objects/subjects that have certain qualities and characteristics determined by researchers to be studied and then drawn conclusions. The population used was 130 employees consisting of civil servants (87) and honorary employees (43). The sampling technique used is saturated sample technique, which involves all respondents to become a sample, meaning that the sample to be used is 130 employees.

Data analysis technique

The data analysis technique used in this study is a quantitative data analysis method. Data analysis in this study used Partial Least Square (PLS) based Structural Equation Modeling (SEM) using SmartPLS 3.3.3 software run on computer media.

Measurement Model (Outer Model)

The procedure for testing the measurement model consists of a validity test and a reliability test.

1. Validity Test

The validity test is used to assess whether or not a questionnaire is valid. A questionnaire is said to be valid if the questionnaire questions are able to reveal something that is measured by the questionnaire. Validity testing is applied to all question items in each variable.

2. Reliability Test

In general, reliability is defined as a series of tests to assess the reliability of statement items. The reliability test is used to measure the consistency of measuring instruments in measuring a concept or measuring the consistency of respondents in answering statement items in questionnaires or research instruments. To measure the level of reliability of research variables in PLS, you can use the value of the alpha coefficient or Cronbach's alpha and composite reliability). Cronbach's alpha value is suggested to be greater than 0.7 and composite reliability is also suggested to be greater than 0.7. (Now, 2014)

Structural Model (Inner Model)

This test was conducted to determine the relationship between exogenous and endogenous constructs which has become a hypothesis in this study (Hair et al., 2017). To produce inner model test values, steps in SmartPLS are carried out using the bootstrapping method. The structural model is evaluated using the R-square for the dependent variable, the Stone-Geisser Q-square test for predictive elevation and the t test and the significance of the structural path parameter coefficients with the following explanation:

1. Coefficient of Determination / R Square (R2)

In assessing the model with PLS begins by looking at the R-square for each dependent latent variable. The interpretation is the same as the interpretation of the regression. Changes in the R-square value can be used to assess the effect of certain independent latent variables on the dependent latent variable whether it has a substantive effect (Ghozali, 2012). The value of R2 is generally between 0 and 1.

2. Predictive Relevance (Q2)

This test is used to measure how well the observed values are generated by the model and also the parameter estimates. If the Q2 value is greater than 0, it indicates that the model has predictive relevance, which means it has a good observation value, whereas if the value is less than 0, it indicates that the model does not have predictive relevance (Ghozali, 2014).

3. t-Statistics

at this stage it is used for hypothesis testing, namely to determine the significance of the relationship between variables in research using the bootstrapping method. In the full Structural Equation Modeling model besides confirming the theory, it also explains whether or not there is a relationship between latent variables (Ghozali, 2012). The hypothesis is said to be accepted if the t statistic value is greater than the t table. According to (Latan and Ghozali, 2012) the criteria for the t table value are as follows:

- Value 1.96 with a significance level of 5%

4. Path Coefficient (Path Coefficient)

This test is used to determine the direction of the relationship between variables (positive/negative). If the value is 0 to 1, then the direction of the relationship between variables is positive. Meanwhile, if the value is 0 to -1, then the direction of the relationship between variables is declared negative.

5.Model Fit

This test is used to determine the level of suitability (fit) of the research model with the ideal model for this study, by looking at the NFI value in the program. If the value is closer to 1, the better (good fit).

Results and Discussion

Outer Model Analysis

Testing the measurement model (outer model) is used to determine the specification of the relationship between latent variables and their manifest variables, this test includes convergent validity, discriminant validity and reliability.

1. Convergent Validity

Convergent validity is used to determine the validity of each indicator on its latent variables, in the SmartPLS software to see the results of the validity, it can be seen in the outer loading table. In the outer loading table there are numbers or values that indicate indicators that show similarities with the construct variables. The value for the indicator is said to be valid, if the indicator explains the construct variable with a value of > 0.7. The structural model in this study is shown in the following figure:

Figure 1.Oder Model

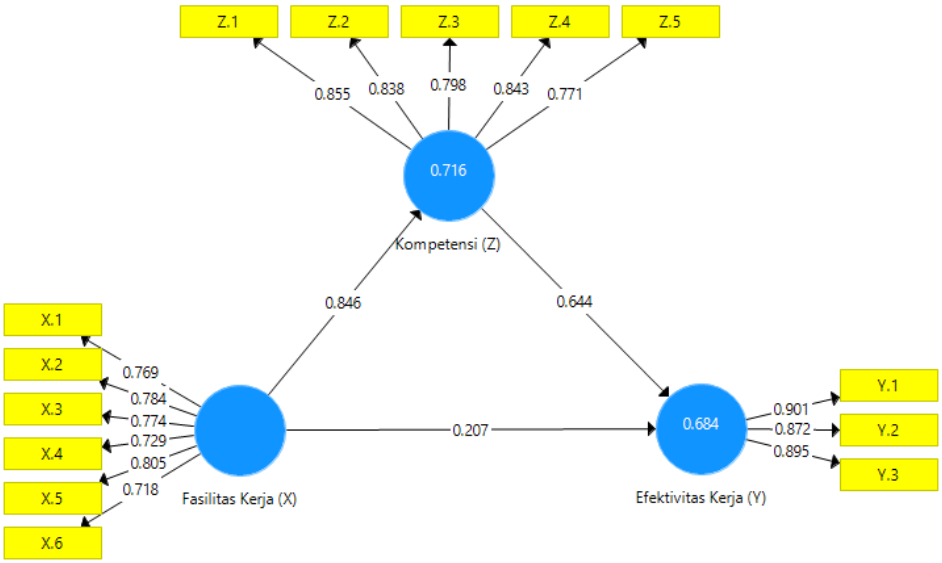

Figure 1. Outer Model
Source: Smart PLS 3.3.3

The Smart PLS output for the loading factor gives the results in the following table: Outer Loadings In this study there are equations and the equation consists of two substructures for substructure 1

$Z = b1X1 + e1$

$Z = 0.770 + e1$

For substructure 2

$Y = b2X1 + b3Z + e2$

$Y = 0.496 + 0.335 + e2$

Table 1. Outer Loadings

	Work Effectiveness (Y)	Work Facilities (X)	Competency (Z)
X.1		0.769	
X.2		0.784	
X.3		0.774	
X.4		0.729	
X.5		0.805	
X.6		0.718	
Y. 1	0.901		
Y.2	0.872		

	Work Effectiveness (Y)	Work Facilities (X)	Competency (Z)
Y.3	0.895		
Z. 1			0.855
Z. 2			0.838
Z. 3			0.798
Z. 4			0.843
Z. 5			0.771

Source: Smart PLS 3.3.3

It can be seen in table 1 above that the outer loading shows that the value of each outer loading indicator is greater than 0.7 so that it is determined that the indicators in each variable have a value greater than 0.7 so that each indicator is declared valid and can continue research in The next step.

2. Discriminant Validity

Discriminant Validity can be tested by looking at the cross loading table, this output is used to test discriminant validity at the indicator level with the condition that the correlation between indicators and their late variables is > compared to the correlation between indicators and other latent variables (outside the block). For more details can be seen in the table below:

Table 2. Discriminant Validity

	Work Effectiveness (Y)	Work Facilities (X)	Competency (Z)
X.1	0.404	0.769	0.518
X.2	0.514	0.784	0.545
X.3	0.496	0.774	0.560
X.4	0.591	0.729	0.644
X.5	0.658	**0.805**	0.773
X.6	0.684	0.718	0.737
Y. 1	**0.901**	0.619	0.651
Y.2	0.872	0.765	0.810
Y.3	0.895	0.602	0.704
Z. 1	0.709	0.709	**0.855**
Z. 2	0.723	0.688	0.838
Z. 3	0.606	0.672	0.798
Z. 4	0.705	0.663	0.843
Z. 5	0.617	0.744	0.771

Source: Smart PLS 3.3.3

Based on table 2 above, it shows that the cross-loading factor value appears to be greater than the latent variable so that it can be explained that the Work Effectiveness variable cross loading factor is greater than the cross-loading factor on other latent variables, for the Work Facilities variable the loading factor variable is greater than the loading factor on other latent variables. For the competency variable the loading

factor is greater than the other latent factor loading variables, meaning that this research is discriminately valid.

3. Composite reliability

Subsequent tests determine the reliable value with the composite reliability of each construct, the construct value that is considered reliability is where the composite reliability value is above 0.6 or greater than 0.6. If the value of Coranbasch alpa is also greater than 0.7 then the value of each construct in the block is considered reliable in each construct variable and if the AVE value is also above 0.7 then each construct variable is considered valid. The following is a table of loading values for the research variable construct resulting from running the Smart PLS program in the next table:

Table 3. Construct Reliability and Validity

	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Work Effectiveness (Y)	**0.869**	**0.919**	**0.791**
Work Facilities (X)	**0.859**	**0.893**	**0.583**
Competency (Z)	**0.879**	**0.912**	**0.675**

Source: Smart PLS 3.3.3

Based on the research above, in the Coranbach Alpha column, there is a value above 0.7 for each variable, meaning that in the Coranbach Alpha column, the reliability data for each variable. As can be seen in the composite reliability table, the value of each variable is greater than 0.6. so that it can be interpreted that all variables in the composite column have reliable data. For the AVE column, there is a value greater than 0.7 for each variable so that in this study the value is stated to be valid by AVE and can carry out further research.

Inner Model Analysis

Evaluation of the structural model (inner model) is carried out to ensure that the structural model built is robust and accurate. The stages of analysis carried out in the evaluation of the structural model are seen from several indicators, namely:

1. Coefficient of Determination (R2)

Based on the data processing that has been done using the SmartPLS 3.0 program, the R Square value is obtained as follows:

Table 4. R Square results

	R Square	Adjusted R Square
Work Effectiveness (Y)	0.684	0.679
Competency (Z)	0.716	0.714

Source: Smart PLS 3.3.3

Based on the research table above, it can be explained that the R square value for the Work Effectiveness variable is 0.684 if it is distributed in this study of 68.4 for the effectiveness variable, which means that the effect of Work Facilities and Competence is 68.4% and the remaining 31.6% is in another variable. For the

R square value of the Competency variable of 0.716 with a percentage of 71.6%, it means that the influence of Work Facilities on Competence is 71.6% and the sism is 28.4% in other variables.

2. Assessment of Goodness of Fit (GoF)

The goodness of fit model test can be seen from the NFI value ≥ 0.697 which is declared fit. Based on the data processing that has been done using the SmartPLS 3.3 program, the Fit Model values are obtained as follows:

Table 5. Model Fit

	Saturated Model	Estimation Models
SRMR	0.116	0.116
d_ULS	1.417	1.417
d_G	0.657	0.657
Chi-Square	438,251	438,251
NFIs	0.883	0.883

Source: Smart PLS 3.3.3

Based on this study, the NFI value is 0.883 while the value that is considered fit must be greater than the base value, namely 0.697 and it can be seen that the NFI value is greater than the value of 0.697 so that in the GoF test research there is a fit value and it is feasible to conduct research and test hypotheses.

3. Hypothesis Testing

After assessing the inner model, the next thing is to evaluate the relationship between latent constructs as hypothesized in this study. Hypothesis testing in this study was carried out by looking at the T-Statistics and P-Values. The hypothesis is declared accepted if the T-Statistics value is > 1.96 and the P-Values are <0.05. The following are the results of the Path Coefficients of direct influence:

Table 6. Path Coefficients (Direct Effects)

	Original Sample (O)	T Statistics (| O/STDEV |)	P Values	Results
Work Facilities (X) -> Work Effectiveness (Y)	0.207	2,202	**0.028**	
Work Facilities (X) -> Competency (Z)	0.846	40,039	**0.000**	
Competence (Z) -> Work Effectiveness (Y)	0.644	6,953	**0.000**	

Source: Smart PLS 3.3.3

In this study, the results of the research in per hypothesis can be explained as follows:

1. Work facilities have a positive and significant effect on work effectiveness with an original sample of 0.207 and P values 0.028 <0.05 meaning that if work facilities increase, work effectiveness will increase; if they decrease, effectiveness will increase.

2. Work Facilities have a positive and significant effect on Competence with an original sample value of 0.846 and P values 0.000 <0.05 meaning that if Work Facilities increase, Competence will also increase if Facilities decrease then Competence will also decrease.
3. Competence has a positive and significant effect on Work Effectiveness with an original sample value of 0.644 and P values 0.000 <0.05 meaning that if Competence increases, Effectiveness increases. If Competence decreases, Work Effectiveness also decreases.

Table 7. Path Coefficients (Indirect Effects)

	Original Sample (O)	T Statistics (| O/STDEV |)	P Values
Work Facilities (X) -> Competence (Z) -> Work Effectiveness (Y)	0.545	6,802	**0.000**

Source: Smart PLS 3.3.3

It can be seen from table 7 above that Work Facilities have a positive and significant effect on Work Effectiveness through Competence with an original sample value of 0.545 and P values of 0.000 <0.05 meaning that work facilities are qualified so that employee competence comes out with complete facilities, so work effectiveness increases high with this it is stated that competence is an intervening variable.

Closing

Conclusion

1. Work facilities have a positive and significant effect on work effectiveness with an original sample of 0.207 and P values of 0.028 <0.05.
2. Work facilities have a positive and significant effect on competence with an original sample value of 0.846 and P values of 0.000 <0.05.
3. Competence has a positive and significant effect on work effectiveness with an original sample value of 0.644 and P values of 0.000 <0.05.
4. Work Facilities have a positive and significant effect on Work Effectiveness through Competence with an original sample value of 0.545 and P values of 0.000 <0.05.

Suggestion

1. The organization must complete the lacking facilities and add new facilities for the convenience and security of employee performance and the progress of organizational results.
2. The organization must be able to find highly competent employees and improve the competence of existing employees.
3. The organization is able to increase the effectiveness of employee work so that work is easier and faster.

References

Ghozali, Imam. 2013. Structural Equation Modeling, Metode Alternatif dengan Partial Least Square (PLS). Edisi 4. Semarang: Badan Penerbit Universitas Diponegoro.

Hasibuan, Malayu S.P. 2013. Manajemen Sumber Daya Manusia. Jakarta: Bumi Aksara.

Hair, J. F. et. al. 2017. A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM). SAGE Publications, Los Angeles

Lubis, M. S. H., Anwar, Y., & Indrawan, M. I. (2022). Employee Performance Improvement at PT Cahaya Abadi Terang Medan Is Based on the Work Environment, Work Motivation, and Work Discipline. SIASAT, 7(4), 261-270.

Rahmat, S. N., & Basalamah, J. (2019). Pengaruh Kompetensi, Kompensasi Dan Disiplin Kerja Terhadap Kinerja Pegawai Badan Pendapatan Daerah Kota Makassar. PARADOKS: Jurnal Ilmu Ekonomi, 2(1), 121–132.

Rachmaniza, S. (2020). Pengaruh kompetensi dan komitmen organisasi terhadap Kinerja Karyawan Pada Divisi Produksi Di PT. Sinar Ragamindo Utama Bandung. Prosiding Manajemen Seminar Penelitian Sivitas Akademika Unisba, 6(1), 11–16.

Tijjang, B., Nurfadhilah, N., Putra, P., Jayadi, U., & Ilham, R. (2022, August). The Influence of Product Quality and Purchase Decisions on Helmet LTD's Brand Image. In Proceedings of the 6th Batusangkar International Conference, BIC 2021, 11-12 October, 2021, Batusangkar-West Sumatra, Indonesia.

Sofyan. (2014). Manajemen Produksi dan Operasi. Jakarta: Lembaga Penerbit Fakultas Ekonomi Universitas Indonesia

Sekaran, Uma. 2014. Metodologi Penelitian Untuk Bisnis (Research Methods for Business) Buku 1 Edisi 4. Jakarta: Salemba Empat.

Spencer and Spencer. (2013). Competence At Work: Model For Superior Peformance. John Wiley And Sons, Inc.

Sugiyono. 2013. Metode Penelitian Pendidikan Pendekatan Kuantitatif, Kualitatif, dan R&D. Bandung: Alfabeta.