

## ***The Effect of Non-Physical Work Environment, Competence on Employee Engagement Mediated By Job Satisfaction***

**<sup>1</sup>Marina Fadilah, <sup>2</sup>Sulaiman Helmi**

<sup>1,2</sup> Faculty of Social Humanities, Universitas Bina Darma

---

### ARTICLE INFO

**Keywords:** Employee Engagement, Job Satisfaction, Non-Physical Work Environment, Competence

### ABSTRACT

*The purpose of this study was to analyze the direct effect of the non-physical work environment, competency on employee engagement mediated by job satisfaction, the object of research was PT. Semen Baturaja Palembang, the sample of this study were employees at PT. Semen Baturaja Palembang, with a total of 111 employees, the method used is a quantitative method with the SEM-Smart-PLS analysis technique. The data used are primary and secondary data, hypothesis testing using weight relations. Results on job satisfaction, competence has a positive and significant effect on job satisfaction, non-physical work environment is positive but not significant on employee engagement, competence has a positive and significant effect on employee engagement, non-physical work environment is positive but not significant on employee engagement mediated by job satisfaction, positive and significant competency on employee engagement is mediated by job satisfaction.*

**E-mail:**  
[Sulaimanhelmi@binadarma.ac.id](mailto:Sulaimanhelmi@binadarma.ac.id)

Copyright © 2023 Economic Journal. All rights reserved.  
is Licensed under a [Creative Commons Attribution-NonCommercial 4.0 International License \(CC BY-NC 4.0\)](https://creativecommons.org/licenses/by-nc/4.0/)

---

### 1. INTRODUCTION

Human Resource is the main asset for an organization. By applying good human resources, high human and organizational resources will be created. Employee engagement is a form of motivation related to a positive mentality, self-fulfillment, and job dependency [1]. Emotionally engaged employees are positive, optimistic, energetic, focused and fully devoted to their performance relationships [2]. Phenomenon at PT. Semen Baturaja Palembang stated that employee engagement needs to be further improved, which can be seen from the interest and concentration of employees in carrying out their tasks which are not good enough to affect the work given by superiors. Job satisfaction is an employee's emotional state when there is or is not an intersection between the employee's remuneration value and the remuneration value desired by the employee [3].

At PT. Semen Baturaja Palembang has a phenomenon that needs to be improved because there are still employees who are not satisfied with the work that has been given by their superiors. Employees feel that the work given is not in accordance with the placement and is not in accordance with their area of expertise, such as the financial sector being placed in the field of operations so that employees feel uncomfortable and affect job satisfaction in dealing with their work [4]. Competence is an individual's ability to do well and receive benefits based on knowledge, skills, and attitudes [5]. The phenomenon of competence at PT. Semen Baturaja Palembang, seen from 2018-2020, only 24 have attended education and training, only 6 materials have been provided. And material should be added so that employees who attend education and training are more competent in carrying out their duties properly. The non-physical work environment is a set of conditions that occur in relation to the workplace, both relationships with

*Pengaruh Lingkungan Kerja Non Fisik, Kompetensi Terhadap Employee Engagement Dimediasi Oleh Kepuasan Kerja*

superiors and co-workers, or subordinates [6]. There is a phenomenon at PT. Semen Baturaja Palembang is still lacking in basics, this can be seen from the poor attitude of fellow co-workers or the lack of interaction among co-workers. This can affect the work creativity of other employees and can hinder work.

Considering the importance of employee engagement for the success of an organization, where the work environment is non-physical, competency is a factor that can influence job satisfaction, and there are still very limited studies examining employee engagement, the researchers are interested in conducting this research and want to know the extent to which environmental variables influence non-physical work, competency on employee engagement is mediated by job satisfaction. Researchers choose objects in PT. Semen Baturaja Palembang because there are problems that are in accordance with the title of researcher such as competence which is still lacking, this can be seen from the knowledge of employees in carrying out tasks that are not optimal, such as lack of employee knowledge because many employees have not attended education and training, and lack of material provided. Based on the background above, the authors are interested in conducting research with the aim of analyzing the influence of non-physical work environment, competence on employee engagement mediated by job satisfaction.

## 2. LITERATURE REVIEW

### *Employee engagement*

Employee engagement is a characteristic of the relationship between employees and their organization and the degree of employee attachment to the organization and their work, this can be seen from how they present themselves in their performance [7]. This engagement is not only physical but also emotional and cognitive [8]. Employees who have joined organizations tend to bring higher performance to the organization and their work, because employee engagement shows more variety in tasks and higher performance [9]

### *Job satisfaction*

Job satisfaction is a person's general attitude towards his work [10]. Job satisfaction is a complex combination of several different and inseparable job factors [11]. Job satisfaction is an emotional attitude that likes and loves one's work [12]. This attitude is reflected in work enthusiasm, discipline and work efficiency.

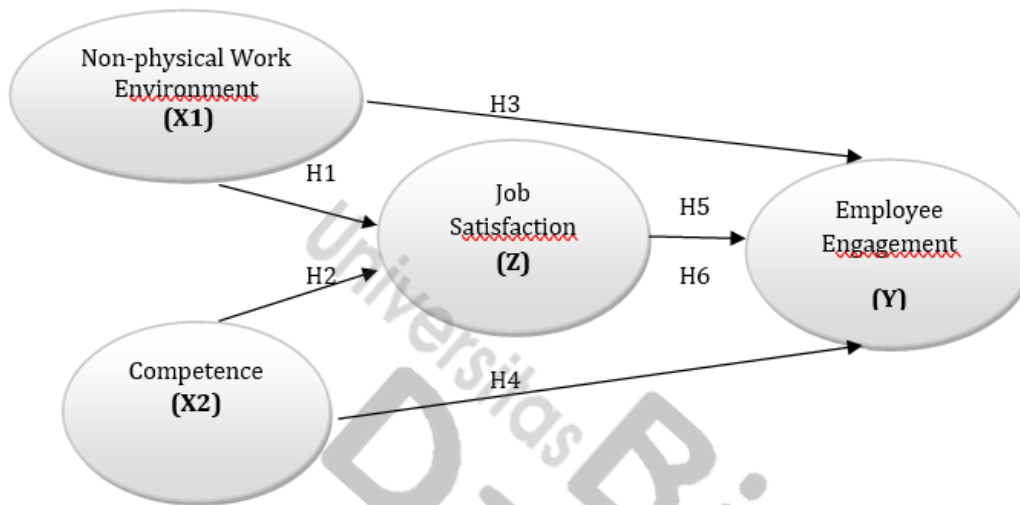
### *Competence*

Competence is an individual's ability to perform well and be useful based on matters related to knowledge, skills, and attitudes [13]. Factors that influence competence are beliefs and values, skills, experience, characteristics, personality, motivation, emotional problems, organizational culture and intellectual abilities [14].

### *Non-Physical Work Environment*

Non-physical work environment is a psychological work environment which is defined as something related to the psychological aspects of the work environment, including employees' sense of security, employee loyalty (between leaders and subordinates, between subordinates and leaders, between colleagues at the same level), and employee job satisfaction. or employee needs [15].

### Thinking Framework



**Figure 1. Conceptual Framework Model**

### Hypothesis Development

A hypothesis is a statement whose truth is unknown at the time it is disclosed, but allows it to be tested in the phenomenon of reality, because a hypothesis is a temporary statement whose truth is still weak [16].

The theoretical framework of thinking that has been put forward, the research hypothesis can be formulated as follows:

H1: The non-physical work environment influences job satisfaction at PT. Semen Baturaja Palembang.

H2: Competence affects job satisfaction at PT. Semen Baturaja Palembang.

H3: The non-physical work environment has an effect on employee engagement at PT. Semen Baturaja Palembang.

H4: Competence has an effect on employee engagement at PT. Semen Baturaja Palembang.

H5: The non-physical work environment has an effect on employee engagement mediated by job satisfaction at PT. Semen Baturaja Palembang.

H6: Competence influences employee engagement mediated by job satisfaction at PT. Semen Baturaja Palembang.

### 3. RESEARCH METHODOLOGY

#### Types of research

The method in this study uses a type of quantitative research data that is used to measure the strength of the relationship between the dependent variable and the independent variable in a population in this study.

#### Research Object

The object of this research was conducted at PT. Semen Baturaja Palembang, whose address is Jl. Abikusno Cokrosuyoso Kertapati Palembang 30258.

*Pengaruh Lingkungan Kerja Non Fisik, Kompetensi Terhadap Employee Engagement Dimediasi Oleh Kepuasan Kerja*

### Sample Collection Techniques

For the sampling technique researchers used cluster sampling. The cluster sampling method is part of probability sampling, used to determine the sample if the object or data source is very large. Probability sampling is a sampling technique that provides equal opportunities for each population selected to be the sample (Setyorini et al., 2023). As for determining the sample size in this study is to use the Slovin formula, as follows:

$$n = \frac{N}{1+N(e)^2}$$

n: Sample size

N: Population size (153 employees)

E: Standard error (5%)

Taking into account the size of the population and the acceptable error rate in this study, the calculation for the sample size can be done as follows:

$$n = \frac{153}{1+153(0.05)^2}$$

n = 111

Based on the Slovin formula, it is known that the number of employees who will be used as the research sample is 111 employees.

### Types of Research Data

Primary data with data collection method using a questionnaire. Primary data is data that is directly obtained from the source. The primary data used in this study can be used by providing a questionnaire filled out by PT employees. Semen Baturaja Palembang. Secondary data, data obtained from various sources of documents or other written reports at PT. Semen Baturaja Palembang.

**Table 1. Operational Variables**

Operational Variables	Operational Definition	Indicator
Non-Physical Work Environment (X1)	The non-physical work environment is a situation that occurs and is related to work relationships, both relations with superiors and relationships with colleagues, or with subordinates, this non-physical work environment is also a collective work environment group that should not be missed (Priyatin and Helmy, 2022).	a. Relations between superiors and subordinates b. Relations between employees and leaders c. Relations with employees  [17]

Operational Variables	Operational Definition	Indicator
Competence (X <sub>2</sub> )	Competence is an individual's ability to do well and receive benefits based on knowledge, skills, and attitudes (Tjahyanti and Chairunnisa, 2021).	a. Motives b. Traits c. Self-concept d. Knowledge e. Skills  [18]
Employee Engagement (Y)	Employee engagement is a form of motivation related to positive psychological states, self-satisfaction and work-related (Wijaya, 2022).	a. Absorption b. Vigor c. Dedication  [2]
Job Satisfaction (Z)	Job satisfaction is a complex combination of several different and inseparable job factors. Job satisfaction is an emotional attitude that likes and loves one's work. This attitude is reflected in work enthusiasm, discipline and work efficiency (Ilhamsyah and Maliah, 2020).	a. Work b. Wages c. Promotion d. Supervisor e. Work colleague [19]

#### Variable measurement

In this study, researchers used a Likert scale measurement. Likert scale is used Likert is used to measure one's attitudes, opinions and perceptions of social phenomena. Giving a score for the answer category can be given a large value for the expected results, starting from the positive to negative answer category or vice versa.

**Table 2. Response Category**

Information	Score
Strongly agree	5
Agree	4
Neutral	3
Don't agree	2
Strongly disagree	1

**Data analysis method**

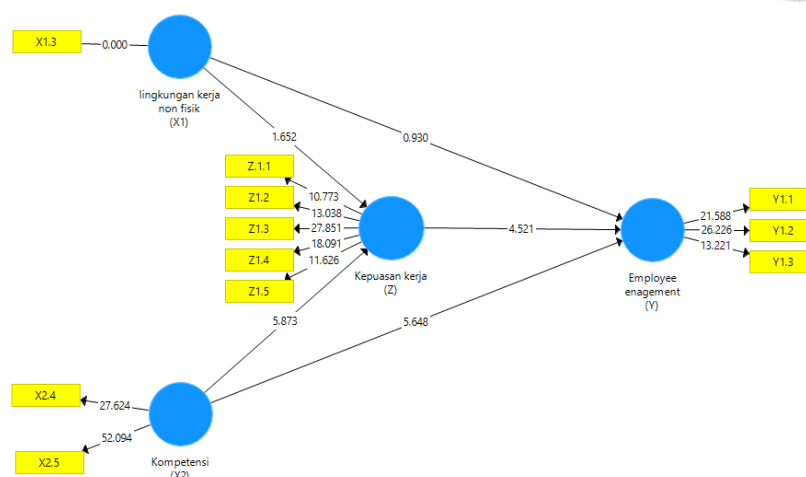
This study uses data analysis methods using Smart-PLS software version 3.0 which is run on computer media.

**Hypothesis testing**

Testing the hypothesis between constructs, namely exogenous constructs on endogenous constructs and endogenous constructs on endogenous constructs, was carried out using the bootstrap resampling method developed by Geisser. Hypothesis testing uses a full model Structural Equation Modeling (SEM) analysis with smart-PLS. In the full SEM model with PLS in addition to predicting the model, it also explains whether or not there is a relationship between latent variables. The relationship of path analysis of all latent variables in PLS in this study: 1) Outer model which specifies the relationship between indicators and latent variables. 2) The inner model specifies the relationship between latent variables. 3) Weight relation where the case value of the latent variable can be estimated. Decision making on the acceptance of the hypothesis in the study is carried out with the provision that the t-table one tail test value determined in this study is 1.65 for a significance of 0.05.

**4. RESULTS AND DISCUSSION**

The results of testing by bootstrapping from the SmartPLS analysis can be seen in the output result for inner weight which is presented in the structural model image.



**Figure 2. Inner Weight Analysis**

Source: Processed Data SmartPLS 3.2.9

*Pengaruh Lingkungan Kerja Non Fisik, Kompetensi Terhadap Employee Engagement Dimediasi Oleh Kepuasan Kerja*

**Table 3. Results of Path Coefficients**

Path Coefficients	Original Sample (O)	Sample Average (M)	Standard Deviation (STDEV)	T Statistik ( O/STDEV )	P Values
Competence(X2) -> Employee engagement(Y)	0,477	0,460	0,081	5,914	0,000
Competence(X2) -> Job satisfaction(Z)	0,535	0,527	0,097	5,518	0,000
Non-physical work environment_(X1) -> Employee engagement_(Y)	-0,083	-0,091	0,085	0,980	0,328
Non-physical work environment_(X1) -> Job satisfaction_(Z)	0,161	0,147	0,095	1,688	0,092

Source: Processed Data SmartPLS 3.2.9

Based on the table above, it can be concluded:

X1-Y = -0.083 (positive). P-Value 0.328 > 0.05 (not significant) (H3)

X1-Z = 0.161 (positive). P-Value 0.092 > 0.05 (not significant) (H1)

X2-Y = 0.477 (positive). P-Value 0.000 < 0.05 (significant) (H4)

X2-Z = 0.535 (positive). P-Value 0.000 < 0.05 (significant) (H2)

**Table 4. Indirect Effect**

Path Coefficients	Original Sample (O)	Sample Average (M)	Standard Deviation (STDEV)	T Statistik ( O/STDEV )	P Values
Competence(X2) -> Job satisfaction_(Z) -> Employee engagement_(Y)	0,220	0,219	0,066	3,318	0,001
Non-physical work environment_(X1) -> Job satisfaction_(Z) -> Employee engagement_(Y)	0,066	0,060	0,042	1,557	0,120

The indirect effect of X2-Z-Y is 0.153 (positive), with a P-Value of 0.001 < 0.05 (significant) (H6). This means that the variable job satisfaction "plays a role" in mediating the effect of competency on employee engagement.

The indirect effect of X1-Z-Y is 0.066 (positive), with a P-Value of 0.120 > 0.05 (not significant) (H5). This means that the variable job satisfaction "plays no role" in mediating the effect of the non-physical work environment on employee engagement.

## 5. CONCLUSION

### 5.1 Conclusion

- Non-physical work environment (X1) Does not have a significant effect on job satisfaction (Z). That is, the non-physical work environment (X1) is not able to increase job satisfaction (Y). The higher the non-physical work environment (X1), the higher the job satisfaction (Z). Vice versa, the lower the non-physical work environment (X1), the lower the job satisfaction (Z).
- Competence (X2) has a significant positive effect on job satisfaction (Z). That is, competence (X2) is able to increase job satisfaction (Z). The higher the competency (X2), the higher the job satisfaction. Vice versa, the lower the competence (X2), the lower the job satisfaction (Z).
- The non-physical work environment (X1) has no significant effect on employee engagement (Y). This means that the non-physical work environment is not able to increase employee engagement (Y). The higher the non-physical work environment (X1), the higher the employee engagement (Y). Vice versa, the lower the non-physical work environment, the lower the employee engagement (Y), the lower the employee engagement (Y).
- Competence (X2) has a significant positive effect on employee engagement (Y). This means that competence (X2) is able to increase employee engagement (Y). The higher the competence (X2), the higher the employee engagement (Y). Vice versa, the lower the competence (X2), the lower the employee engagement (Y).
- Job satisfaction (Z) is a mediating variable from the influence of the non-physical work environment (X1) on employee engagement (Y), the results of which have no significant positive effect (no role). This means that job satisfaction (Z) does not play a role in increasing employee engagement (Y).
- Job satisfaction (Z) becomes a mediating variable from the influence of competence (X2) on employee engagement (Y) whose results have a significant positive influence (play a role). That is, by adding job satisfaction (Z), then employee engagement (Y) will increase.

### 5.2 Suggestion

Based on the conclusions from the results of the data analysis carried out, several suggestions are proposed, namely as follows:

#### 1. For companies

- Employee job satisfaction can bind employee engagement, so agencies need to pay attention to every indicator that can shape job satisfaction. The most dominant indicator of job satisfaction is work.
- The role of the non-physical work environment in increasing employee engagement is very important, so companies need to pay attention to every indicator that is able to form a non-physical work environment. The most dominant indicator in shaping non-physical work environment variables is the relationship between superiors and subordinates.



## 2. For further researchers

To add more diverse references by adding other variables and indicators that can strengthen the influence of the non-physical work environment, competency on employee engagement is mediated by job satisfaction.

### REFERENCES

- [1] C. B. Wijaya, "Pengaruh Work Motivation Terhadap Employee Engagement Melalui Job Satisfaction Sebagai Variabel Intervening Pada Karyawan Cv Karunia Sejahtera Motor Jember," vol. 10, p. 2, 2022.
- [2] A. Kosim, B. Wicaksono, S. Alimi, and A. Gunawan, "Pengaruh Employee Engagement, Beban Kerja dan Kepuasan Kerja terhadap Kinerja Karyawan," *Remik*, vol. 7, no. 1, pp. 281–290, 2023, doi: 10.33395/remik.v7i1.12079.
- [3] N. Nurhasanah, J. Jufrizen, and Z. Tupti, "Pengaruh etika kerja, budaya organisasi dan beban kerja terhadap kinerja karyawan dengan kepuasan kerja sebagai variabel intervening," *Jesya (Jurnal Ekon. Ekon. Syariah)*, vol. 5, no. 1, pp. 245–261, 2022, doi: 10.36778/jesya.v5i1.618.
- [4] M. A. AM, S. Helmi, G. K. Kassymova, H. Retnawati, S. Hadi, and E. Istiyono, "Effect of job satisfaction on service quality mediated by lecturer performance at state universities," in *Materials of International Practical Internet Conference "Challenges of Science,"* 2022, no. V, pp. 62–71. doi: 10.31643/2022.08.
- [5] S. Tjahyanti and N. Chairunnisa, "Kompetensi, Kepemimpinan, Disiplin Kerja Terhadap Kinerja Karyawan Human Resources and Facility Management Directorate," *Media Bisnis*, vol. 12, no. 2, pp. 127–132, 2021, doi: 10.34208/mb.v12i2.917.
- [6] K. Fauziyyah and I. Rohyani, "Pengaruh Self Efficacy, Lingkungan Kerja Non Fisik, dan Work Discipline Terhadap Kinerja Karyawan pada PT Semestanustra Distrindo Depo Kebumen," *J. Ilm. Mhs. Manajemen, Bisnis dan Akunt.*, vol. 4, no. 3, pp. 330–343, 2022, doi: 10.32639/jimmba.v4i3.112.
- [7] X. Gao-Urhahn, T. Biemann, and S. J. Jaros, "How affective commitment to the organization changes over time: A longitudinal analysis of the reciprocal relationships between affective organizational commitment and income," *J. Organ. Behav.*, vol. 60, no. Special Issue, pp. 1–22, 2016, doi: 10.1002/job.
- [8] K. Y. Kim, R. Eisenberger, and K. Baik, "Perceived organizational support and affective organizational commitment: Moderating influence of perceived organizational competence," *J. Organ. Behav.*, vol. 37, no. Special Issue, pp. 558–583, 2016, doi: 10.1002/job.
- [9] T. Trisninawati, S. Ariana, and S. Helmi, "The Influence of Perceived Organizational Support on Extra Role Performance and Intra Role Performance Mediated by Employee Engagement," *Financ. Eng.*, vol. 1, pp. 128–136, 2023, doi: 10.37394/232032.2023.1.12.
- [10] Ilhamsyah and H. Maliah, "Pengaruh lingkungan kerja fisik dan lingkungan kerja non fisik terhadap kepuasan kerja karyawan pada PT.PLN (PERSERO) wilayah Sumatera Selatan," *J. Kompetitif*, vol. 9, no. 2, pp. 73–91, 2020.
- [11] S. Mujiatun, "Model Kelelahan Emosional: Antaseden Dan Dampaknya Terhadap Kepuasan Kerja Dan Komitmen Organisasi Dosen Siti Mujiatun, Jufrizen, dan Pandapotan Ritonga Universitas Muhammadiyah Sumatera Utara," *Mix J. Ilmu Manaj.*, vol. 9, no. 3, pp. 447–465, 2019, [Online]. Available: <https://mix.mercubuana.ac.id/media/293236-model-kelelahan-emosional-antaseden-dan-d69d4bd4.pdf>
- [12] A. M. Saks, "Antecedents and consequences of employee engagement revisited," *J. Organ. Eff.*, vol. 6, no. 1, pp. 19–38, 2019, doi: 10.1108/JOEPP-06-2018-0034.
- [13] S. Marković and S. R. Janković, "Exploring the relationship between service quality and customer satisfaction in croatian hotel industry," *Tour. Hosp. Manag.*, vol. 19, no. 2, pp. 149–164, 2013, doi: 10.20867/thm.19.2.1.
- [14] P. M. Larastrini and I. G. A. D. Adnyani, "Pengaruh Kepuasan Kerja Lingkungan Kerja Dan Work – Life Balance Terhadap Loyalitas Karyawan," *E-Jurnal Manaj. Univ. Udayana*, vol. 8, no. 6, p. 3674, 2019, doi: 10.24843/ejmunud.2019.v08.i06.p14.
- [15] Yulia erfeni, Isyandi, and raden lestari Garnasih, "Pengaruh Lingkungan Kerja Non Fisik, Pengaruh Lingkungan Kerja Non Fisik, Kompetensi Terhadap Employee Engagement Dimediasi Oleh Kepuasan Kerja

- Kompensasi, Dan Pelatihan Karyawan Terhadap Employee Engagement Melalui Kepuasan Kerja Pada Bank Tabungan Negara Pekanbaru,” *J. Sos. Hum. Terap.*, vol. 5, no. 1, 2022, doi: 10.7454/jsht.v5i1.1013.
- [16] B. Setyadi, *Metode penelitian*. Yogyakarta: Jejak Psutaka, 2022.
- [17] M. Wahyudin, “Pengaruh Kepemimpinan, Efikasi Diri dan Lingkungan Kerja Non- Fisik Terhadap Kinerja Karyawan pada Bank Syariah Bumi Artha Sampang Kebumen,” vol. 2, no. 3, pp. 314–322, 2020.
- [18] T. Herlina, R. Dewi, and M. Anisa, “Pengaruh Pelatihan , Kompetensi dan Penempatan Karyawan Terhadap Motivasi Kerja Karyawan Pendahuluan Persaingan dunia usaha saat ini yang semakin,” vol. 12, no. 1, pp. 57–66, 2022, doi: 10.32502/jimn.v12i1.5270.
- [19] M. Fahmi, “Pengaruh Kepemimpinan, Kepuasan Kerja Dan Motivasi Kerja Terhadap Loyalitas Karyawan,” *Maneggio J. Ilm. Magister Manaj.*, vol. 2, no. 2, pp. 214–225, 2019, doi: 10.30596/maneggio.v2i2.3776.



Address, New Pratama Asri Blok C, Medan, Sumatera Utara, Indonesia, Email ekonomi@seaninstitute.or.id

**Letter of Acceptance**  
**No. 27.17/EKONOMI/19/VIII/2023**

Herewith, the Jurnal Ekonomi Publication informs that the manuscript has been sent with the following data:

Title                    The Effect of Non-Physical Work Environment,  
Competence on Employee Engagement Mediated By Job  
Satisfaction  
Author                 <sup>1</sup>Marina Fadilah, <sup>2</sup>Sulaiman Helmi  
Affiliation             Faculty of Social Humanities, Universitas Bina Darma

The article has met the requirements and is **accepted** and will be published in the Jurnal Ekonomi Edition October - December Vol. 12 No. 04 2023, It is thus this certificate to be used properly.



Medan, 19 August 2023  
Managing Editor

  
Paska Marto Hasugian, M.Kom

Decision conveyed to

1. Leaders of Yayasan Dermawan Cendikiawan Bersatu
2. Concerned
3. Residence documents



## Form Review article Jurnal Ekonomi

**Article title :** The Effect of Non-Physical Work Environment, Competence on Employee Engagement Mediated By Job Satisfaction

Assessment variables	Description	Assessment indicators				
		VB	B	E	G	VG
<b>A. General</b>						
Relevance	Suitability of articles with publication topics and template					✓
Contribution	The quality of the paper is viewed from the ideas and originality, novelty and innovation					✓
<b>B. Writing technique</b>						
Article organization	The language used, clarity of article content and ease of understanding by readers				✓	
Abstract (English)	Short, clear and complete, can attract attention and encourage people to take the time to get and read the full paper					✓
Introduction	Clarity of disclosure of background of problem, differences with previous studies, and contributions to be made					✓
Research Method	Research design, procedures(diagrams, algorithms, pseudocode or flowchart)				✓	
Results and analysis	Presentation of results and analysis acumen Can be accompanied tables and figures for easy understanding )					✓
Tables, pictures and citations	Title and numbering and citation techniques				✓	
Conclusion	The essence of the findings from the research carried out and thei presentation according to the problem					✓
Reference	Appropriateness of references given, procedures for writing and referencing the manuscript (all references must be referenced in the text)				✓	
<b>C. Result</b>						
Decision	<b>1.</b> Articles can be published directly [...] <b>2.</b> <b>Articles can be published with minor revisions</b> [✓] <b>3.</b> Articles can be published with mayor revisions [...] <b>4.</b> Please submit articles for evaluation after revision [...] <b>5.</b> The articles not eligible for publication based on the above reasons [...]					
Suggestions and comments						

\* ) Give sign (✓) forgrading in one column each row.

Medan, 19 August 2023

### Indicator table

	Keterangan
VB	Very Bad
B	Bad
E	Enough
G	Good
VG	Very Good

