

PAPER • OPEN ACCESS

Determinants factors toward the performance of the employee in the crude palm oil industry in West Sumatera, Indonesia

To cite this article: Hendy Tannady *et al* 2020 *IOP Conf. Ser.: Mater. Sci. Eng.* **771** 012066

View the [article online](#) for updates and enhancements.

Determinants factors toward the performance of the employee in the crude palm oil industry in West Sumatera, Indonesia

Hendy Tannady¹, Johanes Fernandes Andry², Filscha Nurprihatin³

¹Department of Management, Universitas Pembangunan Jaya, Indonesia

²Department of Information System, Universitas Bunda Mulia, Indonesia

³Department of Industrial Engineering, Universitas Bunda Mulia, Indonesia

corresponding e-mail: *¹hendy.tannady@upj.ac.id, ²jandry@bundamulia.ac.id, ³fnurprihatin@bundamulia.ac.id

Abstract. Human resources are the most important part in achieving organisational goals and improving organisational performance, in completing its work human resources require an adequate working environment and compensation as a reward for providing maximum work results. The purpose of this study is to examine and analyse the effect of compensation (X_1) and work environment (X_2) on employee performance (Y), especially in the crude palm oil industry in West Sumatra. Observations were made on three companies, research conducted in March to June 2019 showed that between compensation and work environment has a positive and significant effect on employee performance. With the structural equation modelling approach and Lisrel 8.8 application assistance, the coefficient of estimated of compensation toward performance is 0.37 while the estimated coefficient of work environment toward performance is 0.42. Compensation and work environment simultaneously have a positive influence on employee performance of 0.65.

1. Introduction

Human resources are the most important part in achieving the goals of an organisation, both large and small organisations, as well as companies as an organisation [4]. Equipment owned by organisations or companies with various levels of technology will be meaningless if not handled properly by appropriate human resources [3]. Human resources are an important element in improving the performance of an organisation [5], [24]. Every leader needs to ensure that every employee who works in their organisation has a high commitment toward his work and provides the best work results for the achievement of organisational goals [12]. It is easier for management to influence the work performance of production equipment because production equipment will work according to instructions and manuals, production equipment also does not require compensation or additional incentives to spur its work performance, but human resources require a combination of various factors both physical and psychologically to increased their work performance [18]. The purpose of this study is to look at the model of the relationship between compensation and work environment toward employee performance.

Research conducted by Akter & Husain on the garment industry in Bangladesh concluded that the provision of appropriate compensation has a positive impact on the work performance of employees [2]. Darma & Supriyanto, in their research at one of the telecommunication company in Indonesia, concluded that the provision of appropriate compensation could play an important role in improving employee performance and job satisfaction [7]. Regarding the impact of a supportive work environment, Malik et al. who conducted a study of 115 employees in telecommunication companies in Pakistan concluded that management could improve the work performance of employees by providing a conducive work environment [13]. In line with Malik et al., a study conducted by Samson



et al. toward 173 bank employees also concluded the same thing that a good work environment can improve employee work performance [21].

2. Literature Review

2.1. Performance

Organisational performance refers to the ability of the organisation to achieve several goals set by the management team, top leader or the founder such as good product quality, large market share, high profits, and maintained business sustainability [11]. Work performance is an aggregate financial or non-financial value given by employees as a form of a contribution to the fulfilment of both directly and indirectly in their participation to succeed in achieving the targets of the organisation [6]. So that the organisation is expected to be able to fulfil [27]. Work performance of the employee is something that can be managed well to achieve organisational goals, and through proper management of human resources, the organisation will have a competitive advantage over competitors [17]. The behaviour of an employee largely determines work performance, and this behaviour can affect organisational goals so that good behaviour control over each individual in the organisation will also accelerate the achievement of organisational goals [26]. Work performance can be measured through three dimensions quantity, quality and discipline factors [25], [14].

2.2. Compensation

Compensation is various forms of payment or appreciation given by the organisation to employees which will increase according to the status of their position [8]. Compensation can play an important role in improving employee performance [10]. Appropriate compensation policies can increase employee focus on his work and reduce the level of turnover in the organisation [15]. Failure to design appropriate policies regarding compensation systems has negatively impact on productivity and job satisfaction of the employee and the overall effectiveness of the organisation [16]. Compensation can be measured through two dimensions, namely financial factors and non-financial [23].

2.3. Work Environment

The quality of work depends on safe and healthy working conditions. Working environment conditions also determine employee work behaviour [1]. The condition of the work environment will greatly affect job satisfaction and work engagement of an employee, which, of course, has the final impact on better employee performance [22]. The work environment is an internal and external condition of the organisation that can affect the working spirit and speed of task completion of an employee [3]. The work environment is all the facilities and infrastructure used and felt by an employee when working, and this greatly affects work practices. Work environment includes the workplace, funding facilities to support the smooth work, cleanliness, lighting, tranquillity, and good working relationships with colleagues or with superiors [20]. The work environment can be measured in three dimensions, namely work facilities, relationship with colleagues and work atmosphere [19].

3. Research Methodology

Analysis tools used in this research are Structural Equation Modelling (SEM). The variables used are work performance (Y), compensation (X_1) and work environment (X_2). Variable of Y uses three dimensions, namely quantity, quality and discipline factors. These three dimensions produce six statement indicators (PE1-PE6) [25], [14]. Variable of X_1 uses two dimensions, namely financial factors and non-financial factors, these two dimensions produce six statement indicators (CO1-CO6) [23]. Variable of X_2 uses three dimensions, namely work facilities, relationship with colleagues and work atmosphere. These three dimensions produce six statement indicators (WE1-WE6) [19]. The population in this study were all workers in crude palm oil in West Sumatra. Purposive sampling technique is used for sampling. The total sample of respondents is a minimum of 90 respondents using multiplication of five and 18 indicators [9]. The design of the questionnaire uses the interval measurement scale. Data quality testing uses validity and reliability tests. Data quality tests were tested on 30 respondents. After confirmed that the data are valid and reliable, it will be analysed using SEM. Validity test is conducted using Pearson correlation if the value of r-count is greater than the value of r-table, then it can be concluded that the indicators used in the study are valid, a variable is concluded to be reliable if the value of Cronbach alpha is greater than 0.6.

4. Discussion and Analysis

This section will discuss the results of a series of data quality tests which include validity and reliability tests, then proceed with confirmatory analysis using SEM. For the parameters in the validity test required the value of degree of freedom (DOF) to identify the value of r table, with the number of respondents to the initial survey of 30 people, the value of r table is 0.361 (dof : 28). Data is declared valid if it has r value greater than r table ($r\text{-value} \geq r\text{ table}$, $\alpha: 0.05$). Table 1 shows the results of the validity and reliability tests of all indicators.

Table 1. Validity and Reliability Test Results

Compensation (Reliability: 0.74)		Work Environment (Reliability: 0.81)		Performance (Reliability: 0.76)	
Indicator	Validity Score	Indicator	Validity Score	Indicator	Validity Score
CO1	0.422	WE1	0.562	PE1	0.589
CO2	0.614	WE2	0.559	PE2	0.534
CO3	0.511	WE3	0.533	PE3	0.549
CO4	0.623	WE4	0.554	PE4	0.694
CO5	0.506	WE5	0.571	PE5	0.663
CO6	0.576	WE6	0.701	PE6	0.617

The purpose of the CFA analysis is to find the coefficient of estimation or regression of each latent variable toward the dependent variable either partially or simultaneously. Table 2 shows the results of the analysis of the coefficient of regression and t-values of the compensation and work environment on work performance.

Table 2. CFA Measurement Results

No	Variable	Estimation Coefficient	T Value
1	Compensation	0.37	0.58
2	Work Environment	0.42	0.62

The next step is to conduct goodness of fit test, known as the model feasibility test, the purpose of this test is to identify whether the model built in the study is sufficient to use data samples and instruments. The expectation of the experiments in this test is the decision to accept H_0 . Table 3 shows information about the final results of the goodness of fit test. Some parameters used in the goodness of fit test are GFI, RFI, NFI, IFI, CFI, NNFI, RMSEA, and AGFI.

Table 3. The goodness of fit Index

Parameters	Results	Criteria
GFI, RFI, NFI	0.88, 0.84, 0.92	Marginal fit, Marginal fit, good fit
IFI, CFI, NNFI	0.86, 0.813, 0.903	Marginal fit, Marginal fit, good fit
RMSEA	0.072	Good fit
AGFI	0.871	Marginal fit

Based on the result of analysis and data processed on the full structural model, the results show that there is an effect of compensation on work performance with a value of regression coefficient is 0.37 and t value is 0.58, these results indicate the acceptance of hypothesis 1, compensation has a positive and significant effect on work performance. The results of the analysis of the effect of the work environment on work performance, the value of regression coefficient is 0.42 and t value is 0.62, these results indicate the acceptance of hypothesis 2, the work environment has a positive and significant effect on work performance. SEM analysis results also show the simultaneous effect of latent variables in influencing the dependent variable, R^2 value is 0.65, these results indicate that simultaneously compensation and work environment has a positive and significant effect of improving the work performance of employees who were working in the crude palm oil industry in West Sumatra, Indonesia.

5. Conclusion

The variables of compensation and work environment either partially or simultaneously have a positive and significant effect in influencing the work performance of employees in the crude palm oil industry in West Sumatra. Therefore it is recommended for management to evaluate or make appropriate policies regarding compensation and work environment for employees. Based on descriptive analysis, it is found that the dimensions of non-financial factors and work facilities have an average value below the average value of the other dimensions on each variable, so efforts to improve work performance can begin with a focus on efforts to make appropriate policies related to non-financial factors and how to improve work facilities. Suggestions for further research is to estimate work performance by using other latent variables such as leadership, organisational citizenship behaviour or employee engagement. Further research can also add moderation variables or use the same model on different research objects.

References

- [1] Ahmad, A. (2011). Study of work environment and employees' performance in Pakistan. *African Journal of Business Management*, 5(34), 13227-13232.
- [2] Akter, N., and Husain, M. M. (2016). Effect of compensation on job performance: An empirical study. *International Journal of Engineering Technology, Management and Applied Sciences*, 4(8), 103-116.
- [3] Al Omari, K., and Okasheh, H. (2017). The influence of work environment on job performance: A case study of engineering company in Jordan. *International Journal of Applied Engineering Research*, 12(24), 15544-15550.
- [4] Aslam, A., Ghaffar, A., Talha, T., and Mushtaq, H. (2015). Impact of compensation and reward system on the performance of an organization: an empirical study on banking sector of Pakistan. *European Journal of Business and Social Sciences*, 4(8), 319-325.
- [5] Bello, S. M. (2012). Impact of ethical leadership on employee job performance. *International Journal of Business and Sosial Science*, 3(11), 228-236.
- [6] Dajani, M. A. Z. (2015). The impact of employee engagement on job performance and organisational commitment in the Egyptian banking sector. *Journal of Business and Management Sciences*, 3(5), 138-147.
- [7] Darma, P. S., and Supriyanto, A. S. (2017). The effect of compensation on satisfaction and employee performance. *Management and Economics Journal*, 1(1), 69-77.
- [8] Dessler, G. (2005). *Human Resource Management*. 10th edition. Prentice-Hall.
- [9] Hair, J. F., Black, W. C., Babin, B. J., and Anderson, R. E. (2010). *Multivariate Data Analysis*. New Jersey: Pearson.
- [10] Hameed, A., Ramzan, M., Zubair, H. M. K., Ali, G., and Arslan, M. (2014). Impact of compensation on employee performance (Empirical evidence from banking sector of Pakistan). *International Journal of Business and Social Science*, 5(2), 302-309.
- [11] Koontz, H., and Donnell, C. (1993). *Introduction to Management*. New York : McGraw-Hill Inc.
- [12] Maduka, C. E., and Okafor, O. (2014). Effect of motivation on employee productivity: A case study of manufacturing companies in Nnewi. *International Journal of Managerial Studies and Research (IJMSR)*, 2(7), 137-147.
- [13] Malik, M. I., Ahmad, A., Gomez, S. F., and Ali, M. (2011). A study of work environment and employees' performance in Pakistan. *African Journal of Business Management*, 5(34), 13227-13232.
- [14] Muda, I., Rafiki, A., and Harahap, M. R. (2014). Factors influencing employees' performance: a study on the Islamic banks in Indonesia. *International Journal of Business and Social Sciences*, 5(2), 73-80.
- [15] Negash, R., Zewude, S., and Megersa, R. (2014). The effect of compensation on employees motivation: In Jimma University academic staff. *Basic Research Journal of Business Management and Accounts*, 3(2), 17-27.
- [16] Neo, R., Hollenbeck, J., Gerhart, B., and Wright, P. M. (2006). *Human Resource Management (Gaining Competitive Advantage)*. 5th edition. McGraw-Hill Companies Inc.
- [17] Njoroge, S. W., and Kwasira, J. (2014). Influence of compensation and reward on performance of employees at Nakuru County government. *IOSR Journal of Business and Management*,

- 17(11), 87-93.
- [18] Nzewi, H. N., Augustine, A., Mohammed, I., and Godson, O. (2018). Physical work environment and employee performance in selected brewing firms in Anambra State, Nigeria. *Journal of Good Governance and Sustainable Development in Africa*, 4(2), 131-145.
- [19] Pawirosumarto, S., Sarjana, P. K., and Gunawan, R. (2017). The effect of work environment, leadership style, and organizational culture towards job satisfaction and its implication towards employee performance in Parador Hotels and Resorts, Indonesia. *International Journal of Law and Management*, 59(6), 1337-1358.
- [20] Putra, P. P. A. A., and Sary, F. P. (2017). The influence of working environment towards employee performance in perum damri Bandung. *e-Proceeding of Management*, 4(2), 1753-1757.
- [21] Samson, G. N., Waiganjo, M., and Koima, J. (2015). Effect of workplace environment on the performance of commercial banks employees in Nakuru town. *International Journal of Managerial Studies and Research*, 3(12), 76-89.
- [22] Scott, K. D., Jusanne, M., and Steven, M. E. (2000). Factors influencing employee benefits beliefs that pay is tied to performance. *Journal Business Psychology*, 14, 553-562.
- [23] Tannady, Hendy., Ismuhadjar., and Zami, Alex. (2017). Factors affecting the performance of driver: The experience of transjakarta bus driver. *International Journal of Research Science & Management*, 4(11), 22-28.
- [24] Tannady, Hendy., Tannady, Henny., and Zami, Alex. (2019). The effect of organizational culture and employee engagement on job performance of healthcare industry in province of Jakarta, Indonesia. *Calitatea*, 20(169), 18-22.
- [25] Wong, W. P., and Wong, K. Y. (2007). Supply chain performance measurement system using DEA modeling. *Industrial Management and Data Systems*, 107(3), 361–381.
- [26] Zheng-Xue, L., Kan, S., Wen-Dong, L., & Dan-Min, M. (2008). Construct of job performance: Evidence from Chinese military soldiers. *Asian Journal of Social Psychology*, 11(3), 222-231.
- [27] Andry, J.F., Suroso, J.S., Bernanda, D.Y. (2018). Improving quality of smes information system solution with ISO 9126. *Journal of Theoretical and Applied Information Technology*, 96(14), 4610-4620.