

The Influence Analysis of Work Stress, Work Environmental and Motivation on Employee Performance Through Job Satisfaction as an Intervening Using Variable SEM (Structural Equation Modelling) Method

Moch. Kalam Mollah¹ and Misbahul Munir²

¹Civil Engineering Department, Institut Teknologi Adhi Tama Surabaya, Surabaya, 60117, Indonesia

²Electrical Engineering Department, Institut Teknologi Adhi Tama Surabaya, Surabaya, 60117, Indonesia

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Abstract: PT. Pentana Service is a company engaged in construction specifically steel fabrication. The problem encountered by company was frequent overtimes with low remuneration but cannot meet production target. The objective of study was to know the influence of motivation, environment, stress on employee performance through job satisfaction as intervening variable. The method used was path analysis with Structural Equation Modeling. The results of study indicated that motivation had positive influence of 0.229, environment had positive influence of 2.746, and stress had significant influence of 0.139 on job satisfaction. Motivation had positive influence of 0.910, environment had positive influence of 2.526, and stress had negative influence of -0.221 on employee performance. Motivation had positive influence of 0.093, environment had positive influence of 1.120, and stress had positive and significant influence of 0.056 on employee performance through job satisfaction as intervening variable. Job satisfaction had positive influence of 0.408 on employee performance.

1 INTRODUCTION

Construction companies have become an important pillar that has a useful role improve national development. This is the impact of increased public awareness general to development. One way to be able to answer the needs of society, a construction company requires an increase in expert human resources (HR) in the field of development as well as improving the quality of materials to be used (LePine et al., 2016).

PT XYZ is a company engaged in the field of developers and civil contractors aims to support government programs in national development. To guard reputation and being able to compete with PT XYZ's competitors requires high performance employees optimally in order to produce output of goods whose quality is guaranteed.

Based on the background explanation above, it is necessary to improve employee performance carried out research Analysis of Work Motivation, Work Environment, Work Stress on Performance Employees using Job Satisfaction as An Intervening

Variable With using the Structural Equation Modelling (SEM) Method. To measure how big the significance of these variables that can be used to provide recommendations for improvement improve employee performance.

2 LITERATURE REVIEW

2.1 Definition of Performance, Motivation, Work Environment and Stress

Performance is a result that has been achieved by employees in carry out the duties and responsibilities that have been assigned to him and in carrying out their work cannot be separated from the terms and conditions set by the company (Shatté et al., 2017) (Khamisa et al., 2015). Motivation is a desire that has an impact on someone to take action. The importance of employee motivation is related to reactions against

compensation from other workers related to that motivation (Davidescu et al., 2020).

The work environment is part of the job design that can increase effectiveness and productivity of an organization, and productivity and ensure the organization to be a good place to work and conducive to work (Siengthai & Pila-Ngarm, 2016) (Paais & Pattiruhu, 2020). Stress is where a person's psychological condition is under pressure to reach for an opportunity, where the main source of stress is loss opportunities caused by limitations or barriers. stress is the most frequent reason for job dissatisfaction, but it does exist (Atmojo, 2015) (Pawirosumarto et al., 2017). Other reasons for job stress include anger, frustration and disagreements (Babalola, 2016).

2.2 SEM (Structural Equation Modeling) Method

General and has the benefits of special versions in a number of methods other analyzes as special cases. Another definition describes that structural Equation modeling is a statistical technique that is utilized to build and test statistical models that are often used in causal models (Taheri et al., 2020). In this study, the researcher cited several journals used as sources reference in progress. the first is the Analysis of the Effect of Work Motivation, Work Environment and Work Stress on Employee Performance reviewed by Sandhi in 2013 found that motivation and work stress had a significant impact on worker performance, but the work environment has less significant impact on employee performance. Next research conducted by primandaru et al with the title Effect of Work Motivation and Work Environment on Job Satisfaction, Work Discipline and Employee Performance at PT. Kereta Api Indonesia (Persero) Daop IX Jember in this study found that the results motivation, and work environment have a positive and significant effect on performance PT employees Kereta Api Indonesia (Persero) Daop IX Jember. Third Effect of Satisfaction Work on Employee Performance of PT Dapensi Dwikarya Bandung which was researched by Wardhana in 2018 the conclusion obtained is job satisfaction significant impact on the performance of employees of PT Dapensi Dwikarya Bandung.

2.3 Model Fitment Test (Goodness of Fit Test)

The goodness of fit test (GOFI) is a measure that can be used to see suitability model. Based on the

goodness of fit test it can be interpreted how good the model has been made theoretically can reflect the existing reality (Jung & Yoon, 2015) (Bataneh, 2019). Each suitability tool the model has a recommended value limit. However, these numbers are not numbers of dead (Hanaysha & Tahir, 2016). The cut off value which is the limit of each test tool above is listed in the Table 1.

Table 1: Model Goodness of Fit Test.

Goodness of Fit Index	Cut Off Value
Chi-Square	Expected small value
Probability	$\geq 0,05$
RMSEA	$\geq 0,08$
GFI	$\geq 0,90$
AGFI	$\geq 0,90$
CMIN/DF	$\geq 2,00$
TLI	$\geq 0,95$
CFI	$\geq 0,95$

3 RESEARCH METHODS

The research method is useful for helping researchers to understand the flow that should be done so that and carry out research effectively and efficiently, and also can overcome the various limitations that exist in writing a report that will discussed in research. The following are the stages in the research method will be done.

The flowchart of research is an essential tool that provides a visual representation of the entire research process, from the initial idea to the final results. It outlines the steps that a researcher will take to achieve their research objectives, and it helps to ensure that the research is conducted in a systematic and efficient manner. The flowchart of research helps to ensure that the research process is well-organized and that all steps are followed in a logical and coherent sequence. It is important to note that the flowchart of research may differ based on the nature and scope of the research, but it generally includes the key steps such as defining the research question, conducting a literature review, selecting the research design, collecting and analyzing data, and presenting the findings.

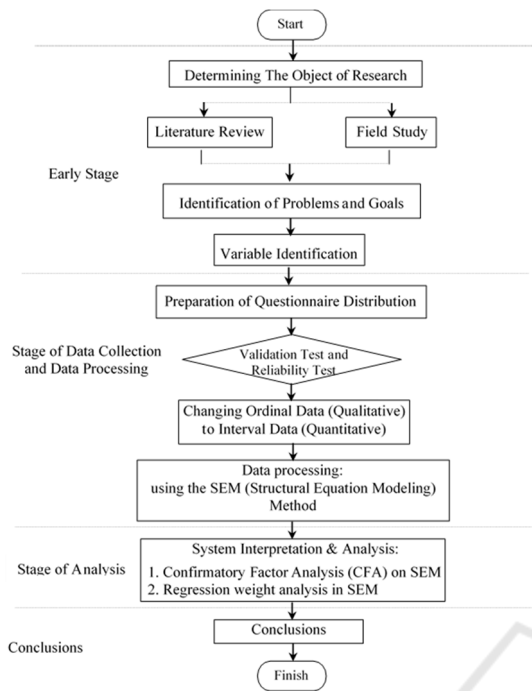


Figure 1: Flowchart.

4 RESULT AND DISCUSSION

4.1 SEM (Structural Equation Modelling) Method

After conducting analysis and establishing a measurement model with using the CFA method, then the structural model analysis uses the method Structural Equation Modeling (SEM) on the entire model with software tools Amos (Jayaweera, 2015) (Al-Omari & Okasheh, 2017).

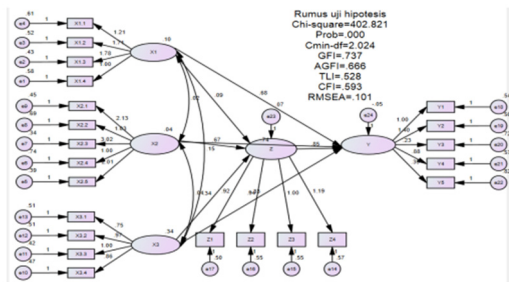


Figure 2: Overall Running of SEM Model.

4.2 Overall Model Goodness of Fit (GOFI) Evaluation

After that, an evaluation step is carried out to get the appropriate model. Model it is said to be good if the value of the suitability of the model (Goodness of Fit) is in accordance with the criteria (Prabowo et al., 2020). The goodness of fit value for the overall model can be seen in Table 2:

Table 2: The Goodness of Fit Criteria.

Goodnes of Fit Index	Cut Off Value	Model Results	Description
Chi-Square	Expected small value	402,821	Not good
Probability	$\geq 0,05$	0,000	Not good
RMSEA	$\geq 0,08$	0,101	Not good
GFI	$\geq 0,90$	0,737	Not good
AGFI	$\geq 0,90$	0,666	Not good
CMIN/DF	$\geq 2,00$	2,034	Not good
TLI	$\geq 0,95$	0,528	Not good
CFI	$\geq 0,95$	0,593	Not good

Based on Table 2, the Goodness of Fit index is generated by the structural model not suitable, so modifications are needed. Model modifications are selected with correlating between residual indicators based on output modification indices (M.I) Amos software Figure 3.



Figure 3: SEM Model Result.

Next, the Goodness of Fit evaluation stage was carried out again as a whole model in Table 3 following:

Table 3: The Goodness of Fit Result.

Goodness of Fit Index	Cut Off Value	Model Results	Description
Chi-Square	Expected small value	192,975	Fit models
Probability	$\geq 0,05$	0,194	Fit models
RMSEA	$\geq 0,08$	0,030	Fit models
GFI	$\geq 0,90$	0,870	Pretty good
AGFI	$\geq 0,90$	0,815	Pretty good
CMIN/DF	$\geq 2,00$	1,090	Fit models
TLI	$\geq 0,95$	0,958	Fit models
CFI	$\geq 0,95$	0,968	Fit models

Based on the above, the overall SEM model meets the criteria of Goodness of Fit. Matter this shows that the indicators used in measuring each latent variable are appropriate (Li et al., 2018). So, then the results of the estimated value are tested again for find out how much influence the indicators have on latent constructs. said to have the significant effect of the probability value obtained is less than $\alpha = 0.05$ (5%). Then the data processing stages that have been carried out in the previous chapter show the relationship between latent variables that have been significant with a 5% level of confidence. That matter indicated by a p-value > 0.05 and the calculation of the influence of the construct variable is good directly (directly) or indirectly (indirectly) the results are in Table 4.

Table 4: Effect of Exogenous Variables on Endogen.

Effect	Relational	Loading Factor	Description
Direct	$Z \leftarrow X_1$	0.229	Influential
	$Z \leftarrow X_2$	2.746	Influential
	$Z \leftarrow X_3$	0.139	Influential
	$Y \leftarrow Z$	0.408	Influential
	$Y \leftarrow X_1$	0.910	Influential
	$Y \leftarrow X_2$	2.526	Influential
	$Y \leftarrow X_3$	-0.221	Negative Influential
Indirect	$X_1 \rightarrow Z \rightarrow Y$	0.093	Influential
	$X_2 \rightarrow Z \rightarrow Y$	1.120	Influential
	$X_3 \rightarrow Z \rightarrow Y$	0.056	Influential
	$X_1 \rightarrow Y$		
	$X_2 \rightarrow Y$		

In this study, the variables of motivation and work environment were influential positive so that the company only needs to do a little improvement such as adding lighting so that the workplace is brighter so

that it can increase the accuracy of workers and also provide rewards for what has been achieved by employees because in general workers motivation will burn if you receive commensurate remuneration, but at work stress has a negative effect so it is necessary to make more complex improvements, namely to add Familiarity between workers needs to be held at least every FGD (Focus Group Discussion). month or hold a vacation once a year to refresh and strengthen relationships companies with workers' families, then provide a transparent performance appraisal system so that there is no jealousy between one worker and another.

5 CONCLUSIONS

In this study it was found that work motivation has a positive effect on job satisfaction of PT Pentana Service division employees of 0.229, influential work environment positive effect on job satisfaction of employees of PT Pentana Service of 2.746, work stress has a positive effect on job satisfaction of PT Pentana Service employees by 0.139. Work motivation has a positive effect on the performance of PT Pentana Service employees of 0.910, the work environment has a positive effect on the performance of Pentana Service employees is 2.526, work stress has a negative effect on employee performance employees of PT Pentana Service of -0.221.

Work motivation has a positive effect on the performance of PT Pentana Service employees through job satisfaction of 0.093, the work environment has a positive effect on performance employees of PT Pentana Service through job satisfaction of 1.120, work stress has an effect positive effect on the performance of employees of PT Pentana Service through job satisfaction of 0.056. Job satisfaction performance has a direct positive influence on employee performance at PT Pentana Service of 0.408.

REFERENCES

- LePine, M. A., Zhang, Y., Crawford, E. R., & Rich, B. L. (2016). Turning their pain to gain: Charismatic leader influence on follower stress appraisal and job performance. *Academy of Management Journal*, 59(3), 1036-1059.
- Shatté, A., Perlman, A., Smith, B., & Lynch, W. D. (2017). The positive effect of resilience on stress and business outcomes in difficult work environments. *Journal of Occupational and Environmental Medicine*, 59(2), 135.

- Khamisa, N., Oldenburg, B., Peltzer, K., & Ilic, D. (2015). Work related stress, burnout, job satisfaction and general health of nurses. *International Journal of Environmental Research and Public Health*, 12(1), 652-666.
- Davidescu, A. A., Apostu, S.-A., Paul, A., & Casuneanu, I. (2020). Work flexibility, job satisfaction, and job performance among Romanian employees—Implications for sustainable human resource management. *Sustainability*, 12(15), 6086.
- Siengthai, S., & Pila-Ngarm, P. (2016). The interaction effect of job redesign and job satisfaction on employee performance. In *Evidence-based HRM: A Global Forum for Empirical Scholarship*. Emerald Group Publishing Limited.
- Paais, M., & Pattiruhu, J. R. (2020). Effect of motivation, leadership, and organizational culture on satisfaction and employee performance. *The Journal of Asian Finance, Economics and Business*, 7(8), 577-588.
- Atmojo, M. (2015). The influence of transformational leadership on job satisfaction, organizational commitment, and employee performance. *International Research Journal of Business Studies*, 5(2).
- Pawirosumarto, S., Sarjana, P. K., & 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*.
- Babalola, S. S. (2016). The effect of leadership style, job satisfaction and employee-supervisor relationship on job performance and organizational commitment. *Journal of Applied Business Research (JABR)*, 32(3), 935-946.
- Taheri, R. H., Miah, M. S., & Kamaruzzaman, M. (2020). Impact of working environment on job satisfaction. *European Journal of Business and Management Research*, 5(6).
- Jung, H. S., & Yoon, H. H. (2015). The impact of employees' positive psychological capital on job satisfaction and organizational citizenship behaviors in the hotel. *International Journal of Contemporary Hospitality Management*.
- Bataineh, K. A. (2019). Impact of work-life balance, happiness at work, on employee performance. *International Business Research*, 12(2), 99-112.
- Hanaysha, J., & Tahir, P. R. (2016). Examining the effects of employee empowerment, teamwork, and employee training on job satisfaction. *Procedia-Social and Behavioral Sciences*, 219, 272-282.
- Jayaweera, T. (2015). Impact of work environmental factors on job performance, mediating role of work motivation: A study of hotel sector in England. *International Journal of Business and Management*.