

Model of Leadership Relationship “Field Executive” to Motivation and Improved Performance of Contractor Company personnel

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Abstract: Improving the workforce quality of foremans, skill labors and workers has an important role in improving the quality of the building. In addition to bridging communication between site engineer and site manager with workforce in the field, the field executives must have technical skills and managerial or leadership skills in direct contact with the foreman, skilled workers and hired workers. From the organizational relationship, the field execution must be able to apply the working drawings with the implementation method into the building by optimizing the available resources. The leadership and communication methods being developed must be fully understood to make no doubt the foreman, the skill labours and the workers in carrying out the series of development activities. This study aims to obtain the factors that influence the relationships of the leadership of field managers on motivation and performance improvement of workforce, i.e., foreman, skill labors and workers in the contractor company and make the modeling. The research was conducted on the contractors grade 5-7 in Malang, Surabaya, Blitar and Probolinggo. Data collection is obtained through questionnaires and interviews. The Structural Equation Model (SEM) method is used to see the relationship among variables. Then, the results are analyzed to model the relationship between leadership of field executive upon motivation and improvement of workforce performance factors. The results show the leadership of the field manager affects to the improvement of the workforce performance. While the work motivation has an effect on the workforce performance. Whereas, the leadership affects to the work motivation. And the leadership has an indirect effect on the improvement of workforce performance through motivation.

Key words: Leadership, motivation, workforce performance, structural equation model, Blitar, contractors

INTRODUCTION

A project is a temporary activity that has a clear beginning and purpose with resource utilization and is a dynamic work environment that can affect worker motivation and stress (Gallstedt, 2003). In its development, the number and size of projects that are carried out continuously can change, so that, making predictions about the needs of human resources becomes difficult and needs to be well prepared. So, it needs management of leadership and motivation to the right workforce.

Companies especially contractors are not good at managing corporate issues and tend to be unconcerned with several reasons including (Turner *et al.*, 2008). The company needs to make a profit because of the tight competition in winning the job. So, they have to carry out the work below the normal price. In some corporate contracts, the workforce is targeted to work beyond the normal time limit. If the obtained results is below the acquisition targets, then the workforce may start to behave inappropriately such as not taking breaks,

working while ill or not attending a training. Managing the problem requires several efforts, especially in the creation of a resource management system. While there is no resource management system that can completely solve all the above problems. Some companies do not want the resource management system to be implemented because they want the workforce to be responsible for its performance. So that, a worker who does not perform well will have a low utilization then by itself will leave the company.

A resource management system will help achieve high utilization even for poor performing employees (Zika-Viktorsson *et al.*, 2006). Gallstedt (2003) suggests that if this problem cannot be properly managed, there will be a cost swelling in human resources due to a lack of skills at work.

By exploiting the workforce excessively will have an impact on motivation and stress on the project workers, so that, it can impact on the absence of project objectives. While ethical treatment of employees or project workers may have a beneficial effect on the organization (Pastoriza *et al.*, 2008).

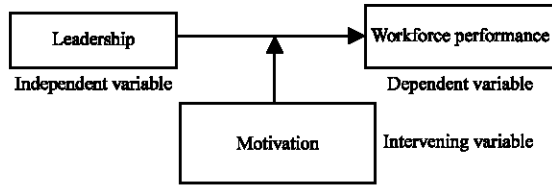


Fig. 1: The conceptual frame of the leadership and motivation relationship upon the workforce performance

Conceptual framework model of research: Referring to the description above and the research gap, it is still essential to develop a model that can answer the challenges in leadership management and motivation to the right workforce to increase the performance of the workforce. Therefore, they impact on the sustainability of the company/the project-oriented contractor organization. In the model, the leadership functions as an independent variable, workforce performance as a dependent variable and motivation as a mediating variable (Fig. 1).

By using research hypotheses as follows:

- H_1 : leadership affects to the workforce performance
- H_2 : motivation affects to the workforce performance
- H_3 : leadership affects to the motivation
- H_4 : leadership has an indirect effect on workforce Performance through motivation

MATERIALS AND METHODS

This study will discuss the research method: Identifying the indicators of the field leadership, motivation and workforce performance variables. Indicators of these variables are obtained based on the previous research concerning the relationship and influence of leadership on work motivation and performance of foreman, skill labor and worker. They are leadership factor (Lloyd-Walker and Walker, 2011; Ofori, 2008; Avolio, 2004), motivation factor (Oyedele, 2012; Rose and Manley, 2011; Muller and Turner, 2010) and workforce performance factor (Hyvari, 2006; Dafid *et al.*, 2012; Soekiman *et al.*, 2011). It aims to determine the factors and variables used in the study and to determine the influence of the three factors of employment leadership, motivation and performance.

Compiling and sorting out the conformity of factors and variables of leadership motivation and workforce performance of foreman, skill labor and worker as well as drafting the questionnaire.

Conducting trip to government agencies, construction service associations, and to contractor companies. Conducting preliminary interviews with

workforce and field executives from contractor companies to seek inputs and information for perfection preparation of questionnaires.

Collecting data from respondents through improved questionnaires and interviewing to get responses from field respondents and workforce including foreman, skill labor and workers of contractor companies having grade of 5-7. They were asked to respond to the questionnaire to find out the influence of field manager's leadership on employee motivation and performance. The Likert scale is used to assess in the order of 1-5 from strongly agree, agree, moderately agree, disagree and strongly disagree.

Data processing is conducted by giving a weight of respondent answer according to the type of statement. Studying in advance on the results of data processing above concerning factors and variables that influence leadership upon workforce motivation and performance, especially affecting the foreman, skill labor and worker in contractor companies. Creating a model that can illustrate the three variables of leadership variables, workforce motivation and performance on contractor companies having grade of 5-7.

Data analysis: Data processing is conducted by classifying the answers according to the question type. These classified answers are then made tables and tested by validity test with product moment and reliability test technique using alpha cronbach method. Furthermore, the answers are analyzed concerning the factors that influence the leadership upon workforce motivation and performance. At this stage, there is still spreading of the factors that affect the above conditions. So, that, it requires more detailed identification that can be grouped according to the influence level. This study aims to identify the factors that influence the leadership of field executives upon the workforce motivation and performance (i.e., foreman, skill labor and workers) on the contractor companies and develop a model by using SEM (Structural Equation Model) modeling. The concept of modeling is illustrated in Fig. 2.

After analysis using SEM method, the relationship and influence between each variable will be clear. This research output is a model that can measure the main factors of leadership upon the workforce motivation and performance in contractor companies having Grade 5-7 in Malang, Surabaya, Blitar and Probolinggo. Figure 3 illustrates the modeling results post evaluation.

Statistically, the result of all path coefficient test on evaluation model is significant ($p < 0.05$). Job motivation is significantly explained by leadership. Workforce performance is significantly explained by leadership and work motivation.

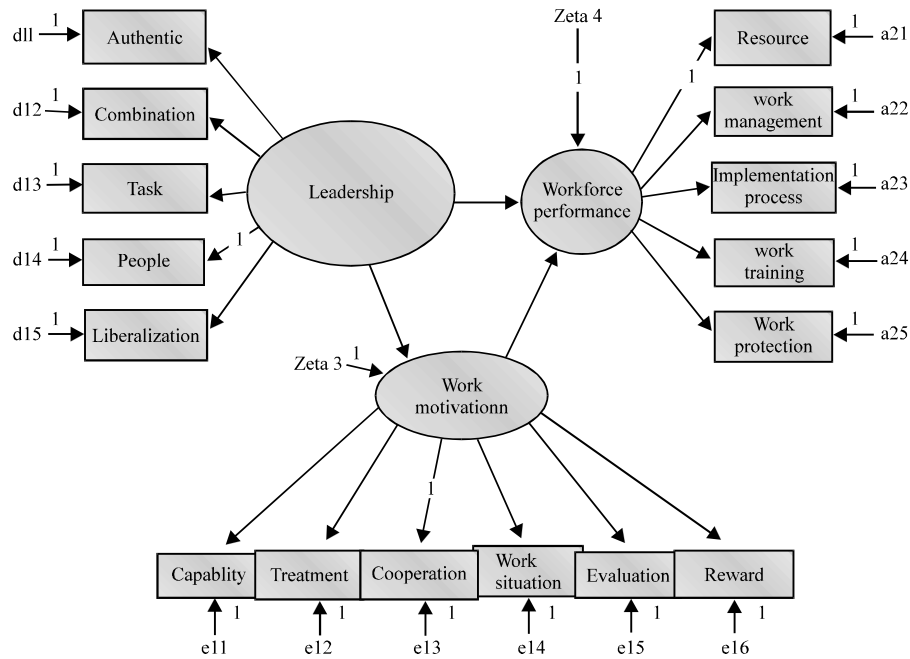


Fig. 2: The model of leadership, motivation and workforce performance

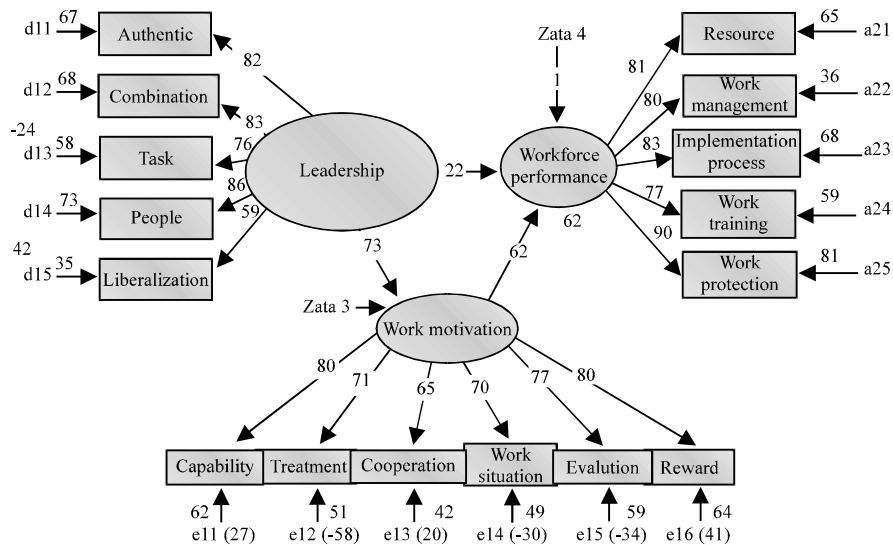


Fig. 3: Results of structural evaluation model; Goodness of fit; Chi-square = 108.192; Prob. = 0.106; df = 91; GFI = 0.920; CFI = 0.989; TLI = 0.985; RMSEA = 0.036

Table 1 shows a summary of the results obtained in the analysis and recommended values for measuring the model feasibility. The results of model feasibility test of the evaluation model are better than the initial model. And all criteria have already met the recommendations.

The result of model feasibility test on the absolute fit part consisting of Chi-square, GFI and RMSEA shows

changes to the existence of eligible components. GFI value of 0.920 is good as having value >0.90 . RMSEA value of 0.036 is good because of it is <0.08 . The GFI value of 0.920 means 92.0% of the population co-variant matrix can be explained by the sample co-variance matrix. The result of the model test using chi-square yields a value of 108,192 with a probability of 0.106. This result

Table 1: Evaluation of conformity index criteria structural evaluation model

Criteria	Result	Critical value	Evaluation
Absolute fit			
Chi-square (χ^2)	108.192	≤ 114.27	Good
Probability	0.106	≥ 0.05	Good
Free degree	106.000	-	-
GFI	0.920	≥ 0.90	Good
RMSEA	0.036	≤ 0.08	Good
Parsimony fit			
CMIN/DF	1.189	≤ 2.00	Good
AGFI	0.880	≥ 0.90	Marginal
Incremental fit			
CFI	0.989	≥ 0.95	Good
TLI	0.985	≥ 0.95	Good

Processed primary data (2016)

explains that the variant-co-variant matrix of empirical data is not different from the proposed model (prob. >0.05). So, the absolute fit component of this structural model is acceptable. The value of CFI and Tucker-Lewis Index (TLI) has reached 0.989 and 0.985; it is good because of exceeding the value of 0.95. So, the two criteria in parsimony fit have not been fulfilled. The evaluation results of this model are acceptable because the fit parsimony component meets the recommendation limit.

The model feasibility index in the incremental fit section consists of CFI and TLI values. The TLI value recommends at least 0.90 and the calculation of the TLI model has reached 0.985. While the feasibility index with Comparative Fit Index (CFI) recommends a value of at least 0.90 and the calculation has reached 0.989. So, the component of the incremental fit of the structural model is acceptable.

Measurement model: The test of the measurement model corresponds to three latent variables. The test results related to the measurement model are presented in Table 2.

Description: Fixed is an indicator position that no parameter estimation is performed. In SEM modeling, parameter of one indicator must be set. While the rest will be estimated. So, the indicator has no value of CR and p value.

Table 2 shows that the loading of the leadership indicators ranges from 0.59-0.86. This result gives a decision that all indicators are significant ($p < 0.05$) to measure leadership. Thus, the measurement model of this variable is acceptable. Substantially, the largest loading factor of leadership is explained by the person indicator (X14).

Loading of work motivation indicators ranges from 0.65-0.80. This result gives a decision that all indicators are significant ($p < 0.05$) to measure the work motivation. So, the measurement model of this variable is

Table 2: Loading factor significance test result in measurement model

Variables/Indicators	Loading	CR	p-values
Leadership			
X11; Authentic	0.82	11.966	<0.001
X12; Combination	0.83	12.148	<0.001
X13; Task	0.76	10.701	<0.001
X14; Person	0.86	Fixed	Fixed
X15; Liberation	0.59	9.003	<0.001
Y11; Ability	0.79	7.912	<0.001
Work motivation			
Y12; Treatment	0.71	7.059	<0.001
Y13; Cooperation	0.65	Fixed	Fixed
Y14; Work situation	0.70	8.488	<0.001
Y15; Evaluation	0.77	8.156	<0.001
Y16; Appreciation	0.80	8.007	<0.001
Y21; Resource	0.81	Fixed	Fixed
Workforce performance			
Y22; Management	0.60	7.590	<0.001
Y23; Implementation	0.83	11.380	<0.001
Y24; Training	0.77	11.728	<0.001
Y25; Protection	0.90	12.727	<0.001

acceptable. Substantially, the largest loading factor of work motivation is explained by the reward indicator (Y16).

Loading of workforce performance indicators ranges from 0.60-0.90. These results provide a decision that all indicators are significant ($p < 0.05$) to measure workforce performance. So, the measurement model of this variable is acceptable. Substantially the largest loading factor of workforce performance is described by work protection indicators (Y25).

Direct variable influence: Hypothesis testing results on the structural model relates to regression coefficient test results on each of the resulting paths are presented in Table 3. The causality relationship developed in the hypothesis in this model is tested by the null hypothesis which states that the regression coefficient between the two collisions relationship is not different from zero through the t-test as it is in the regression analysis. The statistical value of CR will be distributed t with a degree of free of 91.

Indirect and total influence: In the existing modeling in this study, the leadership of workforce performance indirectly influences through work motivation. Leadership variables on the model are described to influence first on work motivation followed by a direct influence of work motivation on workforce performance. The following table summarizes the results of the total effects calculated from the sum of direct and indirect effects. The full results are shown in Table 4.

Concerning workforce performance, the greatest total effect is on the relationship of leadership with a value of 0.662. These results can be interpreted that leadership variables have an indirect strategic role through work motivation to raise workforce performance.

Table 3: Test result of regression coefficient of influence between variables in evaluation model

Influence					
From	To	Standard coefficients	CR	p-values	Information
Leadership	Work	0.726	6.898	<0.001	Significant
Work motivation	Workforce performance	0.615	5.079	<0.001	Significant
Leadership	Workforce performance	0.215	2.071	0.038	Significant

Table 4: Result of indirect and total influence on final model

From	To	Direct	Indirect	Total
Leadership	Work motivation	0.726	Nothing	0.134
Work motivation	Workforce performance	0.615	Nothing	0.615
Leadership workforce	Performance	0.215	0.447	0.662

Hypothesis testing

Hypothesis testing 1

Hypothesis: Leadership affects to work motivation. The hypothesis testing criteria are as follows:

- $H_0: \gamma_1 = 0$: there is no significant direct relationship between leadership and work motivation

Table 4 shows that the regression coefficient 0.726 of leadership variables with work motivation with CR = 6.898 ($p < 0.001$) gives the decision to reject H_0 . In other words that have been obtained a positive and significant relationship between leadership variables on work motivation. Thus, enough evidence have been obtained from the results of statistical tests that hypothesis H_1 concerning a direct relationship between leadership with work motivation is acceptable.

Hypothesis testing 2

Hypothesis: Leadership affects to workforce performance. The hypothesis testing criteria are as follows:

- $H_0: \gamma_1 = 0$: there is no significant direct relationship between leadership and workforce performance

Table 3 shows that the regression coefficient 0.215 of leadership variables with workforce performance with CR = 2.071 ($p = 0.038$) gives the decision to reject H_0 . In other words that obtained a positive and significant relationship between leadership variables on workforce performance. Thus, the results of statistical tests have obtained enough evidence that hypothesis H_2 concerning a direct relationship between leadership with workforce performance can be accepted.

Hypothesis testing 3

Hypothesis: Work motivation affects to workforce performance. The hypothesis testing criteria are as follows:

- $H_0: \gamma_1 = 0$ there is no significant direct relationship between work motivation and workforce performance

Table 3 shows that the regression coefficient 0.615 of the work motivation variable with workforce performance with CR = 5.079 ($p < 0.001$) gives the decision to accept H_0 . In other words, it is found that there is a significant correlation between work motivation variable and work performance. Thus, the statistical test results obtains enough evidence that hypothesis H_3 concerning a direct relationship between work motivation with workforce performance is acceptable.

Hypothesis testing 4

Hypothesis: Leadership has an indirect effect on workforce performance through work motivation. The hypothesis testing criteria are as follows:

- $H_0: \gamma_1 = 0$ and or $\gamma_2 = 0$: there is no significant direct relationship between leadership on work motivation or from work motivation on workforce performance

In this hypothesis, there are two path coefficients tested if both are tested significantly then hypothesis H_0 will be rejected. Table 3 shows that the regression coefficient 0.726 of leadership variables on work motivation with CR = 6.898 ($p < 0.001$) gives the decision to reject H_0 . In other words, it is obtained a significant relationship between leadership variables and work motivation. Then obtained regression coefficient 0.615 from work motivation variable to workforce performance with CR = 5.079 ($p < 0.001$) giving decision to reject H_0 . In other words, it is found that there is a significant correlation between work motivation variable and work performance. Thus, from the statistical test results, enough evidence is obtained in which the research hypothesis H_4 which states there is an indirect relationship between leadership with workforce performance through work motivation is not acceptable. Table 5 presents the summary of the hypothesis testing. Based on hypothesis test results as presented above that of 4 hypothesis and all hypotheses are accepted at significance level 5%.

Table 5: Summary of hypothesis testing results

Hypothesis	Hypothesis statement	Decision
1	Leadership affects to workforce performance	Accepted
2	Work motivation affects to workforce performance	Accepted
3	Leadership affects to work motivation	Accepted
4	Leadership has an indirect effect on workforce performance through work motivation	Accepted

CONCLUSION

The results of the analysis and discussion that have been done in the previous study it will produce some conclusions as follows: The leadership of field managers influence the improvement of workforce performance. Proper leadership in construction projects will be a key determinant of good workforce performance. The leadership advocated in the construction project is people-oriented leadership, authentic leadership and combination leadership.

The motivation of work affects the improvement of workforce performance. This relationship explains that the improvement of workforce performance is determined by how much workforce motivation work. workforce performance has a stronger correlation with work motivation compared to executive leadership. This analysis explains that directly the role of work motivation on performance is stronger. The results of the analysis found that rewards and capabilities are the two main indicators in explaining the high workforce motivation.

Leadership affects the motivation of work. Increasing employment motivation is determined by the field manager's leadership. Leadership by executives will involve many types of leadership. People-oriented leadership shows that executive should be good at managing the feelings of others and their emotions, valuing communication as a means to encourage individual and group participation.

Leadership has an indirect effect on improving workforce performance through motivation. This relationship explains that more performance changes are determined by the strength of motivation but increased motivation depends on the leadership carried out by the implementer. In all three relationships, leadership positions become very important because it will give a big change in work motivation and workforce performance.

REFERENCES

- Avolio, B.J., W.L. Gardner, F.O. Walumbwa, F. Luthans and D.R. May, 2004. Unlocking the mask: A look at the process by which authentic leaders impact follower attitudes and behaviors. *Leadersh. Q.*, 15: 801-823.
- Dafid, I., Riman, C. Utomo and I.B. Mochtar, 2012. The measurement model for freelance worker performance employed by middle class contractor to improve the quality of building. *J. Basic Appl. Sci. Res.*, 2: 6579-6587.
- Gallstedt, M., 2003. Working conditions in projects: Perceptions of stress and motivation among project team members and project managers. *Intl. J. Project Manage.*, 21: 449-455.
- Hyvari, I., 2006. Project management effectiveness in project-oriented business organizations. *Intl. J. Project Manage.*, 24: 216-225.
- Lloyd-Walker, B. and D. Walker, 2011. Authentic leadership for 21st century project delivery. *Intl. J. Project Manage.*, 29: 383-395.
- Muller, R. and R. Turner, 2010. Leadership competency profiles of successful project managers. *Int. J. Project Manage.*, 28: 437-448.
- Ofori, G., 2008. Leadership for future construction industry: Agenda for authentic leadership. *Intl. J. Project Manage.*, 26: 620-630.
- Oyedele, L.O., 2012. Analysis of architects' demotivating factors in design firms. *Int. J. Project Manage.*, 31: 342-354.
- Pastoriza, D., M.A. Arino and J.E. Ricart, 2008. Ethical managerial behaviour as an antecedent of organizational social capital. *J. Bus. Ethics*, 78: 329-341.
- Rose, T. and K. Manley, 2011. Motivation toward financial incentive goals on construction projects. *J. Bus. Res.*, 64: 765-773.
- Soekiman, A., K.S. Pribadi, B.W. Soemardi and R.D. Wirahadikusumah, 2011. Factors relating to labor productivity affecting the project schedule performance in Indonesia. *Procedia Eng.*, 14: 865-873.
- Turner, R., M. Huemann and A. Keegan, 2008. Human resource management in the project-oriented organization: Employee well-being and ethical treatment. *Int. J. Project Manage.*, 26: 577-585.
- Zika-Viktorsson, A., P. Sundstrom and M. Engwall, 2006. Project overload: An exploratory study of work and management in multi-project settings. *Intl. J. Project Manage.*, 24: 385-394.