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# The Effect of Employee Involvement and Work Engagement on Workforce Agility

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**Abstract.** The purpose of this study was to examine the effect of employee involvement and work engagement on workforce agility. Participants are permanent employees of 154 heavy equipment manufacturing companies. Data collection using convenience sampling techniques. The survey was conducted using an employee involvement instrument with 10 items, a work engagement questionnaire with 12 items, and a workforce agility questionnaire with 39 items. The regression analysis technique uses SPSS 24. The results obtained are in accordance with the initial hypothesis of the research that there is a positive relationship between employee involvement and work engagement on workforce agility.

**Keywords:** employee involvement, work engagement and workforce agility.

## 1 Introduction

Currently in all corners of the world is entering a new era called the millennial era. This era demands innovation and rapid with competent change. All work activities both in companies, government agencies, hospitals, schools are already using a digital system that is connected via the internet, so that the term also appears with just one click all can change and be connected to one another. Indonesia as a developing country also does not want to be left behind with this rapidly developing universal style. Infrastructure-infrastructure was actively built to support and meet the challenges of the world in the millennial era. Various forms of applications ranging from games, banking, health to the emergence of new business lines such as startups change the mindset of humans to be more flexible. Companies that used to be conventional style are demanded to be more flexible in order to meet diverse and fast market demands. In other words, companies are required to be agile and quickly adapt to business developments that occur. Because if not, they will be eliminated gradually and surely.

Agile company means being able to operate profitably in a competitive environment continuously and unexpectedly [1]. Previous research put forward by De Meyer, et al., 1989; Hayes and Wheelwright, 1984; Fine and Hax, 1985; Skinner, 1985 [2], said that a company's flexibility has long been recognized and can be an important source of competitive advantage. Gunasekaran (1999) [3] states that a company's agility is the ability of the company's organization to survive and prosper in a competitive environment that responds quickly to changes through the use of manufacturing and managerial methods.

This phenomenon must also be balanced with the quality of qualified individuals. The need for agile workforce is intended to survive and thrive in a competitive environment of sustainable and unpredictable change, this requires rapid and effective reactions to market changes driven by products and services determined by customers [4]. Dove and Wills (1996) [1] say that an individual, being agile means he is able to contribute to a company that is

constantly managing its human resources and technology in responding to opportunities that change unexpectedly. Plonka (1997) [1] believes that labor agility helps organizations to change their technology and methods. The individual is one of the most common considerations of all agile manufacturing models, which shows the importance of workforce agility [5].

Increased recognition that workforce agility is very important to achieve competitiveness, but the standard concept of labor agility has not been systematically studied (Sherehiy and Karwowski, 2014; Muduli, 2009; Gunasekaran, 1999) [4]. However, the definition of workforce agility itself is related to how employees handle and respond to change through adaptation to changes and new conditions using the company's capabilities [3]. An agile individual is certainly able to overcome all the difficulties of the changes that occur in the company where he works and is able to survive with various situations as a result of these changes.

Employee involvement is seen as key in making the workforce truly agile (Van Oyen, et al., 2001) [6]. Research conducted by Muduli (2016) proves that employee involvement has a large role in workforce agility. According to Sumukadas and Sawhney (2004) [6], employee involvement is a predictor of the agility of the workforce itself. They observed that although the low level of employee engagement practices (quality circle, quality of work life, survey feedback, suggestion system) have the potential to directly promote workforce agility, only high power practices (job enrichment; job expansion; and managed teams themselves) who are able to contribute to the agility of the workforce. Individuals who are actively involved in every activity of the company will contribute their overall ideas and energy to be able to survive and increase company productivity.

Besides the work engagement factor also has an influence on workforce agility. Previous research conducted by [7] shows that employees who have a higher work engagement will be more motivated to work as well as possible so that it has an impact on increasing employee agility. This research will be conducted at X company, which is a company engaged in manufacturing, especially manufacturers of heavy equipment such as excavators, bulldozers, dumptrucks, motor graders, and heavy equipment spare parts. Based on the results of the organizational analysis conducted by the business strategy carried out by X company is evaluated every three years. This is intended so that X company can be aware of changes in the market economy that occur, so that companies are required to be more flexible in facing the challenges ahead that they will face in accordance with market conditions. In addition, the quality of X company's human resources also needs to be improved.

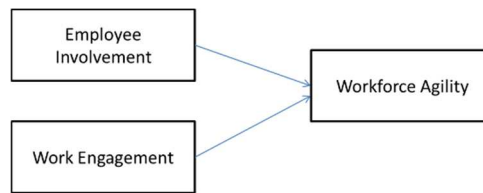
To always maintain the quality of its human resources, the company applies a continuous learning system (continuous improvement). This is as an implication of the QC (Quality control) program implemented by the company. However, the application of this program was felt by some employees as a program that was not properly implemented. They complained that this program became additional work in the midst of their work that piled up every day, thus sometimes hampering the work process that they had planned beforehand.

Based on this background the researchers want to do research on the effect of employee involvement and work engagement on workforce agility from the manufacturing employees. Researchers then derived several research models and hypotheses, such as:

H<sub>1</sub>: Employee involvement has a significant effect on workforce agility

H<sub>2</sub>: Work engagement has a significant effect on workforce agility

H<sub>3</sub>: Both of employee involvement and work engagement have a significant effect on workforce agility.



**Fig. 1.** The theoretical model effect from employee involvement and work engagement on workforce agility.

## 2 Literature Review

### 2.1 Workforce agility

According to experts as stated by Kidd (1994) [6] he said that agility is quick and proactive adjustment in the elements of a company regarding changes that are both predictable and unpredictable. From that, Sherehiy (2007) defines From some of the notions that have been put forward about agility, he concludes that the concept of agility is to combine two characteristics of adaptability and flexibility. Workforce agility as a way of how employees handle and respond to change by adapting to new changes and conditions and using the capabilities that have been given by the company [3].

### 2.2 Employee involvement

Employee involvement can be defined as the actual participation of an employee in the decision making process within an organization [10]. According to Lodahl and Kejnar (1965) [11] Employee involvement refers to the extent to which an employee is notified by the company and whether they can influence or not a new decision taken. The concept of employee involvement proposed by Adham (2014) [11] which includes employee participation in a decision making process and work autonomy from the employee itself.

### 2.3 Work engagement

Work engagement is defined as a positive, satisfying, and work related condition of mind [12]. According to him, the focus of work engagement is on strengths rather than weaknesses in work in the field of positive psychology. Significantly this work engagement is closely related to individual and organizational factors [13]. Work engagement proposed by Schaufelli and Bakker (2003), namely by defining positive, satisfying, and work-related mental states that are characterized by vigor, dedication, and absorption [14].

## 3 Research Methodology

### 3.1 Design research

This research use cross-sectional design because this reasearch used only in one time. The advantage of this methods is can control the confounding variable. The data were collected using convenience sampling technique which was filled both offline (paper and pencil) and online (digital form), this is because depend on the readiness participant in the field.

### 3.2 Participant

Participants in this study were 154 manufacturing employees of a leading heavy equipment company in Indonesia. Participants must have at least one year of experience in their workplace. The hypothesis tested using simple regression model on SPSS 24.

### 3.3 Measurement

The instrument for this study consisted of a modified workforce scale [3] with cronbach's  $\alpha$  0.844, the modified UWES [8] with cronbach's  $\alpha$  0.925 and a modified employee involvement scale [9] with cronbach's  $\alpha$  0.847. This measurement instrument has a score range between 1 to 6 for all instrument.

## 4 Results

Table 1. explain the correlation results of the analysis from SPSS 24. The first result showed that the correlation coefficient between employee involvement and workforce agility is 0.482 with a significance of 0.000. This shows that there is a significant and positive relationship between employee involvement and workforce agility. Beside that, from the regression result, employee involvement also has a positive and significant effect on workforce agility with a value of R square ( $R^2$ ) of 0.233. This means that every increase of 1 score from the average on the employee involvement will increase 0.233 scores on the measurement of workforce agility. This indicates that these results support hypothesis 1.

Second, The results of the calculations also showed that the correlation coefficient between work engagement and workforce agility was 0.579 with a significance of .000. This shows that there is a significant and positive relationship between work engagement and workforce agility. From the calculation results it is also explained that work engagement has a significant effect on workforce agility with a significance value of R square ( $R^2$ ) of 0.336. This means that every increase of 1 score from the average on work engagement will increase 0.336 scores on the measurement of workforce agility. This indicates that these results support hypothesis 2.

Third, from tabel 4. we can see the results of the calculations that tell us about the correlation coefficient between employee involvement and work engagement on workforce agility was 0.607 with a significance of 0.000. This shows that there is a significant and positive relationship between work engagement and workforce agility. From the calculation results it is also explained that employee involvement and work engagement have a significant effect on workforce agility with a significance value of R square ( $R^2$ ) of .369. hypothesis 3 was support.

**Table 1.** Means, standard deviations and correlations of all variables.

\*\* Correlation is significant at the 0.01 level (2-tailed)

	Mean	SD	1	2	3	4
1. <i>Employee involvement</i>	4.4604	0.64600				
2. <i>Work Engagement</i>	4.3736	0.83157	0.576**			
3. <i>Workforce agility</i>	4.5042	0.47573	0.482**	0.579**		

**Table 2.** Model Summary of Employee involvement

Note : Dependent variabel : workforce agility

R	R-sq	F	df1	df2	p
0.482	0.233	46.087	1	152	0.000

**Table 3.** Model Summary of Work engagement

Note : Dependent variabel : workforce agility

R	R-sq	F	df1	df2	p
0.579	0.336	76.804	1	152	0.000

**Tabel 4.** Model Summary of Employee involvement and Work engagement

Note : Dependent variabel : workforce agility

R	R-sq	F	Mean-sq	p
0.607	0.369	44.113	6.385	0.000

## 5 Discussion

This study was aim to see the influence from employee involvement and work engagement to workforce agility. Based on the result, there is an effect of employee involvement by 23.3% and the effect of work engagement by 33.6% on workforce agility. this means, it can be conclude that employee involvement and work engagement have a positive relationship with workforce agility. This proves that workforce agility in heavy equipment manufacturing employees can be influenced by employee involvement in doing their daily work and their attachment to the work. Employees with an agility will assist the organization in implementing new and innovative work programs. Because employees are agile, of course they are flexible and easy to adapt when confronted with new activities or policies provided by the organization.

Other than that, this research was also conducted in certain populations where respondents were the employee from the manufacturing company under license from Japan. Access to this population is still very limited for the general public because even though they are private companies, there is a rigid bureaucracy in our sample. The researcher must have special permits with certain requirements that must be examined first through a long bureaucracy.

## 6 Conclusion

The result showed that both of the variables, employee involvement and work engagement, have a positif effect and significance result on workforce agility. This study was conducted on a specific population where the respondents are worker from heavy equipment company. Theoretical implication from this study was produce an antecedent for workforce agility. Practical implications for organizational development obtained from this study was the importance of describing the level employee's involvement and their work engagement on

workforce agility. By knowing them, the company can provide the right intervention to increase their workforce agility such as training for the employees.

### **Acknowledgements**

Authors are thankful for the employees and managers from X's company well as all experts from the university of Indonesia (magister profession of industrial and organizational psychology) for their contributions for this research. Even though, this research still has limitation because the respondents are several in number. Distribution of data online that is felt by most employees is quite difficult, given their busyness in doing daily work that is often pursued by deadlines. Besides the age factor also affects filling out the questionnaire online. Therefore, it is quite difficult for researchers to get more relevant data in the field, so researchers feel that they cannot represent all employees in this company. However, even distribution of data in each section can be considered for the results of this study. Suggestions for further research if similar research is to be carried out in manufacturing companies is to increase the number of respondents and anticipate the busy lives of employees by allocating special time for them. In this study, researchers also did not enter control variables, such as gender and age. Even though the number of men in this company is more dominant, and there are still many employees whose age will retire, these variables are felt to have an influence. Suggestions for further research are to include gender variables and as control variables.

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