

PAPER • OPEN ACCESS

The relationship between work environment and work culture with the work capacity of the employees of the oil palm processing division of PTPN XIV

To cite this article: A Amiruddin *et al* 2021 *IOP Conf. Ser.: Earth Environ. Sci.* **807** 022021

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

The relationship between work environment and work culture with the work capacity of the employees of the oil palm processing division of PTPN XIV

A Amiruddin, M S S Ali, Rahmadanih, Y Lumoindong, L Fudjaja and I A M Suryadnyani

Agribusiness Study Program, Faculty of Agriculture, Hasanuddin University, Makassar, Indonesia

E-mail: achmad_amiruddin@unhas.ac.id

Abstract. The work environment and culture play an important role in increasing the work capacity of employees, the more conducive the work environment and work culture of an organization is, the more employee work capacity will be. The purpose of this study is to analyze the relationship between work environment and work capacity of employees, and to analyze the relationship between work culture and work capacity of employees of the palm oil processing division of PT. PN XIV PKS Luwu. The analysis technique used is the Spearman Rank correlation test with the help of the SPSS application. The results of this study indicate that the work environment and work culture have a very weak correlation with work capacity, but the relationship between each variable and work capacity has a positive value.

1. Introduction

The palm oil industry plays a very important role in the Indonesian economy. The product of the palm oil industry is not only used for cooking oil, but is also used as a basic material for other industries such as the food, cosmetics and soap industries. The prospect of developing the palm oil industry is currently very fast, where there is an increase in the area and production of palm oil in line with the increasing needs of the community. Indonesia's palm oil area is now around 7 million hectares with a production of around 23 million tons of CPO (crude palm oil) per year. The palm oil industry in Indonesia is unique, in that around 43% of its area is cultivated by smallholders [1].

One of the plantation companies that produces oil palm commodity is PT. PN XIV which has a Palm Oil Mill in East Luwu Regency. The activities of the company PT. PN XIV, Luwu Palm Oil Mill is processing palm fresh fruit bunches (FFB) into palm oil (CPO / Crude Palm Oil) and palm kernel (Kernel). Oil palm fruit processed by PT. PN XIV, Luwu Palm Oil Mill comes from the harvest of oil palm fruit from the company's own plantations covering an area of 9,073 ha and oil palm fruit from plantations outside the company's property (plasma). The processing of oil palm in this company takes place continuously by working in shifts (shift work) for its employees.

Increasing productivity is very important for companies in the context of highly competitive business competition, so that companies are required to improve their performance in order to be able to compete with other companies. Productivity can be an indicator of a company's success in utilizing company resources to produce a desired product so that many companies try to improve and increase their productivity [1]. Company productivity can be achieved if the employee's work productivity is



high. Increasing work productivity can be carried out by implementing better management, physical conditions, a pleasant workplace which plays a very important role in maintaining occupational health and safety and even can prevent burnout and boredom during work [2].

The work environment in a company is very important to be noticed. Even though the work environment does not carry out the production process in a company, the work environment has a direct influence on the employees who carry out the production process. A satisfying work environment for employees can increase employee capacity. A work environment condition is said to be good or appropriate if humans can carry out activities in an optimal, healthy, safe and comfortable. The consequences of the work environment can be seen in the long term. The work environment includes, among other things, a clear job description, work targets challenging, effective communication patterns, working climate and relatively adequate work facilities [3].

2. Research methods

This research was implemented at PT. PN XIV, Luwu Palm Oil Mill (POM), which is located in Burau District, East Luwu Regency. The location selection was by purposive method with the consideration that this company is one of the state-owned companies with high productivity, while the research was conducted in October 2019. The sample determination in this study used the census method. According to Sugiyono (2015) the census method is a sampling technique when all members of the population are used as samples [4]. Based on this understanding, the number of samples in this study amounted to 68 people, which is the total number of employees of the oil palm processing division of PT. PN XIV, Luwu POM.

Correlation is a statistical technique used to find the relationship between two or more variables which are quantitative and qualitative in nature. The correlation test used in this study is the Spearman Rank correlation coefficient. In the correlation analysis, there is no term independent variable (X) or dependent variable (Y). Thus, it can be interpreted that the two variables which are correlated (linked) are independent from one another, meaning that each variable is independent and independent of one another.

The criteria for the level of correlation strength in determining the level of strength of the relationship between variables, we can refer to the correlation coefficient value which is the result of the SPSS output, provided that the correlation coefficient value is 0.00-0.25 = the relationship is very weak, the correlation coefficient value is 0, 26-0.50 = sufficient relationship, the correlation coefficient value is 0.51-0.75 = strong relationship, the correlation coefficient value is 0.76-0.99 = the relationship is very strong, and the correlation coefficient value is 1.00 = perfect relationship . Criteria for the direction of correlation, the direction of correlation is seen in the correlation coefficient figures as well as the level of correlation strength. The value of the correlation coefficient lies between +1 to -1. If the correlation coefficient is positive, then the relationship between the two variables is unidirectional. The purpose of this unidirectional relationship is that if variable X increases, variable Y will also increase. Conversely, if the correlation coefficient is negative, the relationship between the two variables is unidirectional. Not unidirectional, meaning that if variable X increases, variable Y will decrease.

3. Results and discussion

3.1. Relationship between work environment and employee capacity

The relationship between the work environment and the work capacity of employees at PT PN XIV. Luwu POM is measured using the parametric Spearman Rank Correlation, while the results of the calculation of the two variables can be seen in table 1 below.

Table 1. Result of nonparametric rank spearman correlation of work environment.

	Work Capacity	
	Work Environment	Correlation
	<i>Sig. (2-tailed)</i>	.891
	N	68

From the output above, the correlation coefficient is 0.017, which means that the level of relationship strength (correlation) between work environment variables and work capacity is less than 0.05 or very weak. The criteria for the significance of correlation, strength and direction of correlation (relationship) will have meaning if the relationship between these variables is significant. It is said that there is a significant relationship, if the value is sig. (2-tailed) the calculation result is smaller than the value of 0.05 or 0.01. Meanwhile, if the value is sig. (2-tailed) is greater than 0.05 or 0.01, then the relationship between these variables can be said to be insignificant or insignificant [5].

The correlation coefficient in the results above is positive, it's 0.017 so that the relationship between the two variables is unidirectional. Thus it can be interpreted that the more improved or better the work environment is, the work capacity of employees will also increase, even though the increase is very small and insignificant. In line with the results of research by which state that the work environment has a significant effect on employee work capacity [6,7]. This insignificant relationship or the weak relationship between work environment variables and work capacity tends to be caused by various factors, namely age, gender and salary [8].

Age has a significant relationship with fatigue, workers over 45 years of age will feel tired faster than workers who are relatively younger. Gender is one of the determinants in the success of this work. This is because this work can only be done by men, where in general men have greater physical strength than women. Salary is an important element for employees in encouraging increased work capacity of employees because salary can encourage employees to work optimally and try to produce as many goods as possible.

3.2. The relationship between work culture and work capacity

The relationship between the work culture and the work capacity of employees at PT PN XIV. Luwu POM is measured using the parametric Spearman Rank Correlation, while the results of the calculation of the two variables can be seen in Table 2 below.

Table 2. Results of nonparametric rank spearman correlations of work culture.

	Work Capacity	
	Work Culture	Correlation
	<i>Sig. (2-tailed)</i>	.229
	N	68

From the output above, the correlation coefficient is 0.148, which means that the level of relationship strength (correlation) between work culture variables and work capacity is less than 0.05 or very weak. The criteria for the significance of correlation, strength and direction of correlation (relationship) will have meaning if the relationship between these variables is significant. It is said that there is a significant relationship, if the value is sig. (2-tailed) the calculation result is smaller than the value of 0.05 or 0.01.

The correlation coefficient value in the results above is positive, it's 0.148 so that the relationship between the two variables is unidirectional, thus it can be interpreted that the better the prevailing culture in an institution, it will affect employee performance, so that there is a distinct satisfaction felt by employees in work. The same results were also found that organizational culture has a positive

effect on employee performance. The insignificant relationship or the weak relationship between work culture variables and work capacity tends to be caused by various factors, like responsibility, adaptability, and ability [9–11].

Responsibility is the ability to complete the assigned work as well as possible and on time and dare to take risks for the decisions it makes. Every employee has an awareness of the responsibilities and duties that have been given even without having to be supervised by the leadership. Adaptability is the ability to adapt to new things. Where this ability shows the readiness of the individual to follow the changes that occur. Personality is a characteristic or pattern of feelings, emotions, and thoughts related to behavior, namely the thoughts, feelings, attitudes, habits and behavior of each individual that persists from time to time in response to different situations, distinguishing one individual from any action that is different from the other person.

4. Conclusion

The relationship between the work environment and the work capacity of employees is not significantly related ($r = 0.017$; $\text{sig} = 0.891$). This is because there are tendencies caused by factors of age, gender and wages/salaries, which are earned by employees. The relationship between work culture and employee work capacity is not significantly related ($r = 0.229$; $\text{sig} = 0.148$). This is because there are tendencies caused by factors of responsibility, adaptability and individual personalities owned by employees.

References

- [1] Indonesia-Investments 2017 Bisnis Komoditas Minyak Sawit
- [2] Siagian S P 2009 Kiat Meningkatkan Produktivitas Kerja, PT Rineka Cipta
- [3] Mangkunegara A A A P 2016 *Manajemen sumber daya manusia perusahaan* Jakarta PT. Remaja Rosdakarya
- [4] Sugiyono P 2015 Metode penelitian kombinasi (mixed methods) *Bandung Alf.*
- [5] Ghozali I 2006 *Aplikasi Analisis Multivariate dengan Program SPSS* Surabaya Badan Penerbit Universitas Diponegoro
- [6] Sangki R Y, Kojo C and Sendow G M 2014 Lingkungan kerja, budaya kerja dan semangat kerja terhadap kinerja karyawan outsourcing pada Grapari Telkomsel Manado *J. EMBA J. Ris. Ekon. Manajemen, Bisnis dan Akunt.* **2**
- [7] Rakhmawan M L, Utami H N and Ruhana I 2016 Pengaruh budaya kerja dan lingkungan kerja fisik terhadap kinerja karyawan (studi pada karyawan PT. Semen Indonesia (Persero) Tbk) *J. Adm. Bisnis* **35** 189–96
- [8] Suma'mur P K 2009 Higiene perusahaan dan kesehatan kerja (HIPERKES) *Jakarta Sagung Seto* 116–32
- [9] Soekardi N 2012 Pengaruh motivasi kerja, budaya organisasi dan kesejahteraan pegawai terhadap kinerja pegawai pada inspektorat Kabupaten Kediri *J. Ilmu Manaj. Revital.* **1** 123–32
- [10] Amaliyah 2010 *Pengaruh Motivasi, Kepemimpinan dan Budaya Organisasi terhadap Kinerja Karyawan Bank BNI Cabang Ahmad Yani Bekasi* (e-Library Gunadarma 1)
- [11] Susetyo W E, Kusmaningtyas A and Tjahjono H 2014 pengaruh budaya organisasi dan lingkungan kerja terhadap kepuasan kerja dan kinerja karyawan pada PT. Bank Muamalat Indonesia divisi konsumen area cabang Surabaya *JMM17 J. Ilmu Ekon. Manaj.* **1** 83–93