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Employee Performance in a Logistics Service Company is Determined by the Work Environment and Organizational Commitments



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ABSTRACT: The purpose of this study is to investigate the impact of organizational commitment and the work environment on employee performance. This study employs an associative research design and a quantitative approach. The population consists of 150 employees who work in the East Jakarta Shopee Express region. The sampling approach utilized was incidental sampling, and the sample size was calculated using the Slovin formula to be 60 respondents. This study's data gathering method is a questionnaire whose validity and reliability have been evaluated. This study suggests that logistics employee performance can be influenced by the workplace environment and that the business is committed to attaining company goals.

KEYWORDS: Employee Performance, Working Environment, and Organizational Commitment

I. INTRODUCTION

In the age of globalization, qualified human resources are critical. Every organization wants its resources to work well and correctly so that the company's goals are met as expected. As a result, man is the component that dictates the process of reaching an organization's goals. people resource management is the disclosure of an organization's people resources (2014) Marwansyah. Sutrisno (2016) defines human resource management as the activity of planning, procurement, development, maintenance, and application of SDM to individual and organizational goals. As a result, the company's personnel must be highly devoted, capable, and have a wealth of experience and performance, as well as knowledge, skills, effort, and potential. That aim will not be met despite advances in technology and knowledge if human resources are not available. One of the efforts that must be done in coping with external issues is to prepare human resources who have strong organizational commitments and a pleasant working environment.

The coronavirus (Covid-19) has been causing a lot of trouble since the end of 2019. COVID-19 was discovered in Wuhan, China, and has since spread to several other nations. The COVID-19 pandemic is a serious challenge that affects all industries worldwide, both technically and physically, and has extraordinary socio-psychological consequences (Carnevale & Hatak, 2020). The COVID-19 outbreak has also impacted jobs in Indonesia. According to the Ministry of Employment, 1.94 million workers from 114,340 enterprises have PHK and are being housed. Such circumstances can weaken corporate commitment and have an impact on staff performance.

According to Estiningsih (2018), employee performance is an employee's effort in accomplishing the company's desired success and minimizing losses, however Wibowo (2015) defines performance as the consequence of work or performance of work. However, performance has a larger definition that includes not only the outcome of the work but also how the work process is carried out. The COVID-19 pandemic has had an influence on the distribution of customers to products delivery providers because many consumers shifted to shopping through online marketplaces during the epidemic. The condition has resulted in a decrease in employee employment because, in the face of such an impact, the company is attempting to accelerate delivery times by adding people to the event so that items can still be delivered on time during the pandemics. However, according to data obtained from one of the companies that operate in the field of goods delivery, Shopee Express, it is seen that employees frequently do not meet the company's targets due to too many employees employed by the event who do not know how to work on the field, which causes a lot of goods to pile up and disperse.

Employees of Shopee Express have not met the company's aim, as evidenced by the lack of earnings of Shopee Express employees. As is the case, the commitment element of the organization in which the employee works might have an impact on the employee's loan. To obtain a high level of employee performance, the employee must be committed, which is one of the assurances for the organization's sustainability. Organizational commitment is an important behavioral characteristic in determining an employee's willingness to stay with the company (Sapitri & Suryalena, 2016). Employees who are devoted to their organization are loyal and proud of their organization, thus they are willing to maintain and do a good job. Employees who are deeply committed to the company will care about its long-term viability and strive to improve it. During the pandemic, the organizational work environment changed, such as when some organizations implemented work from home, commonly known as work from home. However, several businesses continue to employ their staff in the workplace or from home. Changes in the organization and a reduction in scale as a result of the COVID-19 incident will enhance employees' perceptions of job loss. The conditions described above are consistent with what occurs at Shopee Express, a firm or expedition warehouse that provides package delivery services, where each customer is required to pay a shipping price based on the destination area. As a result, applying WFH to his personnel during the COVID-19 pandemic is difficult. According to preliminary polls, several Shopee Express employees shown a lack of organizational commitment. Employees' lack of commitment is reflected in an increase in the number of absences on working days. Employees with a high level of commitment, on the other hand, will contribute to the organization's workforce stability. 2016 (Nofriansyah). Some Shopee Express employees are consistently late or absent from work. This demonstrates that many employees are loyal to the corporation, implying that many employees lack organizational commitment. Aside from organizational dedication, proper working circumstances can influence and boost employee performance. The working environment encompasses all of the means and means of work that exist around the employees who execute the work and can influence its execution. Sutrisno, 2017. Companies face the problem of employee discomfort at work due to noise and hazy air, which frequently cause employees to feel interrupted in their daily tasks. The lack of decorating in the Shopee Express workstation contributes to employee overcrowding.

II. LITERATURE REVIEW

Employee Performance

Sherlie and Hikmah (2020) define employee performance as "good work performance in both quantity and quality achieved by employees to perform their duties based on the responsibilities that have been applied by the company. Performance is the quality of the work effect as well as the individual's capacity to carry out its work under pressure or tasks imposed by the firm, Sembiring (2020). According to Esthi and Marwah (2020), performance is the achievement of the job or the value of the employee's success in carrying out his duties calculated over a specified time period, whereas Estiningsih (2018) defines employee performance as a worker's work in achieving the company's expected success while minimizing losses.. According to Mangkunegara (2018), four factors can be utilized to assess employee performance: 1) Quality; 2) Quantity; 3) Duty Execution; 4) Responsibility.

Organizational Commitment

Busro (2018) defines organizational commitment as "a level of confidence and acceptance of the workforce toward the organization's goals and a desire to remain within the organization." Organizational engagement originates from the complacency, integrity, and awareness of individuals who are always in the organization, as measured by how much authority, motivation, and confidence individuals have in attaining the vision, mission, and common goals (Busro, 2018). An organizational commitment, according to Triatna (2016), is a degree of loyalty of a member or employee to an organization or company who wishes to be a permanent part of the organization, give the best, and always maintain a good name within the organization, whereas an organizational commitment, according to Sutrisno (2018), represents a strong desire to be members of a group. Busro (2018) identifies three markers of organizational commitment, among others: 1) Commitment to Affect; 2) Commitment to Continuation; 3) Commitment to Norms.

Work Environment

The working environment includes all of the tools and objects of work that exist around the employee who does the work and can influence how the work is done. Sutrisno, S. (2017) The work environment includes anything surrounding the employees that influences an individual's ability to carry out the activities assigned to him, such as air conditioning and adequate lighting. Darmadi is due in 2020. According to Effendy and Fitria (2019), the working environment is a direct work interaction with someone in a higher, the same, or a lower position, whereas Anam (2018) defines the work environment as something that exists around the employee and affects a person's sense of safety, comfort, and satisfaction in doing and fulfilling the job assigned by superiors. Compensation in the form of allowances is a more important aspect in determining worker happiness, particularly at port

container terminals. However, one of the aspects that has an influence is work location, which is also employed as a measure to see the work environment. Because container terminals are located in coastal areas with relatively hot temperatures, particularly in tropical areas such as Indonesia, this has an impact on employee job satisfaction (Gracia et al, 2022). Work environment indicators, according to Fachrezi and Khair (2020), are: 1) Facilities; 2) Noise; 3) Air circulation; 4) Working relations.

Conceptual Framework

A conceptual framework is a way of thinking that reveals the relationship between variables and describes the research in a clear way. The following is a summary of the research's conceptual framework:

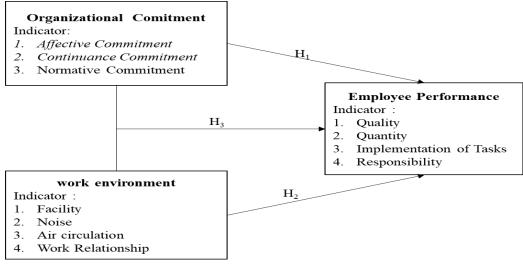


Figure 1 Conceptual Framework

This hypothesis is a tentative estimate or response to the formula for the following concerns mentioned in this text, among others:

- H1: Suspected Impact of Organizational Commitment on Shopee Express Ciracas Employee Performance
- H2: Suspected Influence of Workplace Environment on Shopee Express Ciracas Employee Performance
- H₃: uspected Influence of Organizational and Workplace Commitments on Shopee Express Ciracas Employee Performance

III. METHODOLOGY

The design is associative in nature and employs a quantitative approach. An associative design is a Maslaa formula that investigates the link between two or more variables using a quantitative approach, which is a research method that collects data using research instruments. Data is obtained from a sample of 60 Shopee Express employees in East Jakarta utilizing a questionnaire method, using Likert scale calculations and data analysis. With the use of double linear regression analysis, coefficient correlation, the determinant coefficient test, and the hypothesis test partial test (t) and simultaneous test (f).

IV. RESULTS AND DISCUSSION

RESULTS

The employee performance variable has a legitimate value result because the R-count value is greater than 0.3 and positive. It declares that the declaration's intruders are legal. The reliability calculations then yielded a Cronbach alpha value greater than 0.700, indicating that the assertion is extremely reliable. To evaluate whether a regression model has a normal distribution of data, the normality test examines the Kolmogrov-Smirnov test with signification (sig. > 0.05) and the P-Plot of Regression Standardized Resudual. The following are the findings of this study's normality test. This is indicated by a significant value of 0.067, which is greater than 0.05, the test's significant minimum limit.

Table 1. Kolmogorov-Smirnov Test

		Unstandardized Residual
N		60
Normal Parameters ^{a,b}	Mean	,0000000,
	Std. Deviation	2,80754890
Most Extreme Differences	Absolute	,115
	Positive	,088
	Negative	-,115
Test Statistic		,115
Asymp. Sig. (2-tailed)		,067 ^c
a. Test distribution is Normal.		

b. Calculated from data.

c. Lilliefors Significance Correction.

Source: SPSS data processing results, 2023

To determine whether two variables have a linear or non-significant relationship, a Linearity Test is required. The criterion applies, if the sig value, at a linearity ≤ 0.05 . According to Tables 2 and 3, the sig linearity value of the organization's commitment and the work environment is 0.05. The organizational commitment to employee performance and the working environment for the workforce then have a linear relationship.

Table 2. Commitment Linearity Test

			Sum of		Mean		
	_		Squares	Df	Square	F	Sig.
Employee	Between	(Combined)	105,868	10	10,587	,939	,075
performance *	Groups	Linearity	10,544	1	10,544	,935	,000
organizational		Deviation from Linearity	95,324	9	10,592	,939	,850
comitment	Within Gro	oups	552,532	49	11,276		
	Total		658,400	59			

Source: SPSS data processing results, 2023

Table 3. Work Environment Linearity Test

			Sum of		Mean		
			Squares	df	Square	F	Sig.
Employee	Between	(Combined)	177,668	10	17,767	1,811	,083
performance	Groups	Linearity	133,652	1	133,652	13,623	,001
* work		Deviation from Linearity	44,016	9	4,891	,498	,868
environment	Within Gr	roups	480,732	49	9,811		
	Total		658,400	59			
a abaa	1.	1. 2022					

Source: SPSS data processing results, 2023

The multicolinearity test determines whether or not a regression model has a correlation between free variables. There should be no good regression pattern. A multicollinear free regression unit has a variance inflation factor (VIF) of 10 and a tolerance value greater than 0.10. Based on Table 4, it can be deduced and concluded that the value of VIF for organizational and work environment commitments is 1,136, which is less than 10. And the value for the variable tolerance of the organization's and the working environment's commitment is 0.880, which is more than 0.10. Because of multicollinearity, the data conclusion does not occur.

Table 4. Multicollinearity Test

		Unstandardized		Standardized					
		Coefficients		Coefficients	Coefficients			Collinearity Statistics	
Mode	el	В	Std. Error	Beta		t	Sig.	Tolerance	VIF
1	(Constant)	32,094	3,434		_	9,346	,000		
	Organizational comitment	-,335	,124	-,3	21	-2,705	,009	,880	1,136
	Work environment	,415	,088	,5	62	4,733	,000	,880	1,136

a. Dependent Variable: Employee Performance

Source: SPSS data processing results, 2023

The heteroscadastisity test is used to determine whether there is an inequality in variance between the residuals of one observation and the residuals of the other observation in the regression model. If the test sig. value t > threshold of significance (0,05), it suggests the residual variants are the same (homokedastisity) or there is no heterocedastism. Based on table 5 shown above, we can conclude that the Organizational Commitment Test score is 0.260 and the Working Environment Test result is 0.60.

Table 5. Heteroscedasticity Test

		ndardized ficients	Standardized Coefficients		
Model	В	Std. Error	Beta	t	Sig.
1 (Constant)	5,901	1,871		3,154	,063
Organizational comitment	,077	,067	,144	1,139	,260
Work environment	-,179	,048	-,475	-3,756	,060
D 1 . I . I	1 1 1				

a. Dependent Variable: Employee Performance

Source: SPSS data processing results, 2023

The autocorrelation test, as well as the Durbin-Watson test, are intended for this test. (Uji DW). The table 6 below shows whether or not the regression equation has a problem. If the value of DW is more than dU but less than 4 dU, it is argued that there is no autocorrelation. If the value observed in the table above is: Du = 1,652 DW = 2,242 4 Du = 2,348. Then it can be stated that there are no indications of auto-correlation in this model.

Table 6. Autocorrelation Test

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin- Watson		
1	.849 ^a	.864	.862	2,856	2,242		
	Source: SPSS data processing results, 2023						

Source: SPSS data processing results, 2025

Double linear regression analysis is to calculate how much of a free variable has to do with a bound variable and to find out how large the coefficients of free variables, that is, creativity and innovation, have a significant influence on a tied variable, productivity. The results of the double linear regression analysis in this study can be seen in the following table 7.

Table 7. Multiple Linear Regression Test

	Model	el Unstandardized Coefficients B Std. Error		Standardized Coefficients	<u>t</u>	Sig.
				Beta		
1	(Constant)	32,094	3,434		9,346	.000
	\mathbf{X}_1	.335	.124	.321	2.705	.009
	\mathbf{X}_2	,415	.088	.562	4.733	.000

a. Dependent Variable: Employee Performance

Source: SPSS data processing results, 2023

In this study, we can construct a regression equation based on the table 7 coefficients, and such equations are explained as follows: $Y = 32,094 + 0,335X_1 + 0,415X_2$. The regression equation yielded the value 32,094 as a constant. This means that if the other independent variables remain constant or unchanged, Y (employee performance) will be 33,094 when the variable value of the

organization's commitment and working environment is zero. The corporate commitment regression coefficient (X_1) of 0.335 is a positive number, indicating that there is a correlation between the organization's commitment (X1) and employee performance (Y), implying that employee performance will grow by 0.335 for every unit added. The value of the working environment regression coefficient (X_2) is 0.415, which indicates that there is a direct association between the working environment and employee performance (Y). This suggests that for every unit added, the employee's performance will improve by 0.415.

Table 8. Coefficient of Determination Test

Modal	R	R Square	Adjusted P. Square	Std. Error of					
Model			Aujusted K Square	the Estimate					
1	.849 ^a	.864	.862	2,856					
a. Predi	a. Predictors: (Constant) Inovation, Creativity								
b. Depe	b. Dependent Variable: Employee Performance								

Source: SPSS data processing results, 2023

According to the table 8, R squared (R2) is 0.864. This explains why the total free variable employed in the research model of organizational commitment and the working environment can explain 0.864, or 86.4%, of the employee performance variable. Another variable other than organizational commitment accounts for 13.6% of the variance. Variables can take the form of motivation, compensation, or other factors.

Table 9. Partial Hypothesis Test Results (t Test)

	Model		Unstandardized Stand Coefficients Coef		t	Sig.
		В	Std. Error	Beta		
1	(Constant)	32,094	3,434		9,346	.000
	Organizational comitment	.335	.124	.321	2,705	.009
	Work environment	,415	.088	.562	4.733	.000
	Daman dant Vaniahlas	D 1 1	• ,			

a. Dependent Variable: Productivity

Source: SPSS data processing results, 2023

If the sig value for the t test in the table 9 is 0.009 or the organization commitment hypothesis test findings have a value of 0.05, then the organization commitment variable has a substantial impact on employee performance. As a result, both factors in the research model—organizational commitment and working environment—have a considerable impact on employee performance. Acceptable is the presented theory connecting to organizational commitment and the working environment as characteristics that have a partial and major influence on employee performance.

The F test is used to measure the importance of all independent variables in the research model in comparison to dependent variables. Based on the statistical computations, a probability significancy value of 0.000 is processed, and when compared to alpha 0.05, this value equals 0.05. It asserts that the complete set of free variables in the equation has a considerable influence on the bound variable. Thus, the presented hypothesis that there is a connection between the organization's commitment and the working environment that affects employee performance simultaneously and considerable is acceptable.

Table 10. Results of Multiple Hypothesis Analysis F Test (Anova Test)

Sum of Squares	df	Mean Square	F	Sig.
193,342	2	96,671	11,849	.000 ^b
465,058	57	8,159		
658,400	59			
	193,342 465,058	193,342 2 465,058 57	193,342 2 96,671 465,058 57 8,159	193,342 2 96,671 11,849 465,058 57 8,159

a. Dependent Variable: Produktivity

b. Predictors: (Constant), Organizational comitment, Work environment Source: SPSS data processing results, 2023

DISCUSSION

The findings of the research and testing have led to the conclusion that the hypothesis is accepted that there is a partial and significant influence between the organization's commitment to employee performance; however, when the aspect or value of the organization's contribution to employment performance is considered, it is still relatively lower than the contributions of the

working environment factor to performance. This implies that the contribution of each indicator that makes up the organization's commitment variable should be improved in the future, with particular emphasis on indicators of affective commitment, continuuance commitment, and normative commitment. If the results of research and hypothesis testing lead to the conclusion that there is a partial and significant influence between the work environment and performance, then the working environment factor is one of the important factors that can improve the performance of Shopee Express employees (Gateway JKS 777) in the future. This is reinforced by the value of the working environment's variable coefficient, which is more contributing and dominant than the organization's commitment to employee success. Employee performance is influence between organizational commitment and the work environment. According to the findings of the research, there is a simultaneous influence between organizational commitment and the work environment on employee performance. Based on the findings of the research, it is possible to conclude that there is a simultaneous relationship between organizational commitment and the work environment on employee performance. In this study, the corporation may improve the work environment and increase employee organizational commitment to promote comfort and improve employee performance at Shopee Express.

V. CONCLUSIONS

Organizational commitments and the working environment both have a significant impact on employee performance, which means that the higher the organization's commitment and the better the work environment in the employee's mind can improve employee performance. Employee performance is influenced positively by organizational commitment. This shows that the higher the organization's dedication, the better the firm's employment performance. Based on their findings, the researchers urge that the organizational commitment variables, particularly the indicators of affective commitment, continuum commitment, and normative commitment, be improved further and constructively. Furthermore, the indicators of the working environment, both the physical and social work environments, should be enhanced so that the work environment is more conducive and can improve the working atmosphere of employees, which in turn helps the business achieve its goals. Advanced employee performance research by incorporating variables not included in this study, where the variables in question are organizational cultural factors, transformational leadership, and other factors. According to research, in order to create an agile firm in a turbulent and changing environment, workforce agility is essential in addition to paying attention to the work environment and company commitment. There is a growing understanding that worker agility is essential for achieving competitiveness (Utomo & Latukismo, 2022).

REFERENCES

- 1) Anam, Chairul. (2018). "Pengaruh Motivasi, Kompetensi, Kepemimpinan, Lingkungan Kerja dan Disiplin Kerja terhadap Kinerja Guru di Sekolah Menengah Kejuruan Unggulan NU Mojoagung Kabupaten Jombang". *Jurnal Manajemen dan Pendidikan Islam. Vol. 04. No. 01.* https://doi.org/10.26594/dirasat.v4i1.1196
- 2) Busro, Muhammad. 2018. Teori-Teori Manajemen Sumber Daya Manusia. Jakarta: Prenadameidia Group.
- 3) Carnevale, Joel B., and Isabella Hatak. 2020. "Employee Adjustment and Well-Being in the Era of COVID-19: Implications for Human Resource Management." *Journal of Business Research*, 11(6). https://doi.org/10.1016/j.jbusres.2020.05.037
- 4) Darmadi. (2020). Pengaruh Lingkungan Kerja Dan Disiplin Kerja Terhadap Kinerja Karyawan Pada Indomaret Cabang Kelapa Dua Gading Serpong Kabupaten Tangerang. *Jurnal Ilmiah Manajemen Forkamma,3(3), 240–247*.
- 5) Effendy, A. A., & Fitria, J. R. (2019). Pengaruh Lingkungan Kerja Dan Stres Kerja Terhadap Kinerja Karyawan (Studi Kasus Pt. Modernland Realty, Tbk). *Jurnal Ilmiah Manajemen Forkamma, 2(2), 49–61*. http://dx.doi.org/10.32493/frkm.v2i2.3406
- 6) Esthi, R. B., & Marwah, Y. N. (2020, March). *Kinerja karyawan: motivasidan disiplin kerja pada pt asahi indonesia*. In Forum Ekonomi (Vol. 22, No.1, pp. 130-137).
- 7) Estiningsih, Estiningsih. (2018). "Pengaruh Kepemimpinan, Motivasi KerjaDan Komunikasi Terhadap Kinerja Karyawan Melalui Kepuasan Kerja." MBIA 17(2). https://doi.org/10.33557/mbia.v17i2.344
- Fachrezi, H., & Khair, H. (2020). Pengaruh Komunikasi, Motivasi dan Lingkungan Kerja Terhadap Kinerja Karyawan Pada PT. Angkasa Purall (Persero) Kantor Cabang Kualanamu. Maneggio: *Jurnal Ilmiah Magister Manajemen, 3(1), 107–119*. https://doi.org/10.30596/maneggio.v3i1.4834
- 9) Mangkunegara (2018). Pengaruh Budaya Organisasi Dan KomitmenOrganisasi Terhadap Kinerja Karyawan. 1(1), 9–25.
- 10) Marwansyah. (2014). Alfabeta Manajemen Sumber Daya Manusia EdisiKedua.
- 11) Nofriansyah, F. (2016). Hubungan Komitmen Organisasi Dengan Disiplin Kerja Pada Karyawan Indonesia Exim Bank. *Jurnal Psikologi*, 2(1), 1-9.

- 12) Sapitri, Ranty, and Suryalena Suryalena. (2016) "Pengaruh Komitmen Organisasi Terhadap Kinerja Karyawan Perusahaan Listrik Negara Area Pekanbaru." Jurnal Online Mahasiswa Fakultas Ilmu Sosial dan Ilmu Politik Universitas Riau. https://jom.unri.ac.id/index.php/JOMFSIP/article/view/10663/10319
- 13) Sutrisno, E. (2017). Manajemen Sumber Daya Manusia. Jakarta : Kencana
- 14) Sutrisno, Edy. (2016). Manajemen Sumber Daya Manusia, Edisi Pertama, Cetakan Ke-8. Penerbit: Kencana Pranada Media Group.
- 15) Sutrisno, S., Haryono, A. T., & Warso, M. M. (2018). Pengaruh kepuasan kerja dan komitmen organisasi terhadap kinerja karyawan melalui organizational citizenship behavior sebagai variabel intervening (Studi kasus karyawan PT. Fumira Semarang). *Journal of management*, 4(4). https://jurnal.unpand.ac.id/index.php/MS/article/view/1014/989
- 16) Sutrisno. E. (2018). Manajemen Sumber Daya Manusia. Edisi Pertama. Cetakan Kedua. Kencana Prenada Group. Jakarta, 292
- 17) Wibowo. (2015). Perilaku Dalam Organisasi. XXVI PT. Raja Grafindo Perkasa.
- 18) Sherlie, & Hikmah. (2020). Pengaruh Motivasi, Disiplin Kerja dan Kompensasi Terhadap Kinerja Karyawan Pada PT. Benwin Indonesia. *MOTIVASI Jurnal Manajemen dan Bisnis*, 5(1). https://doi.org/10.32502/mti.v5i1.2477
- Suryadi, G. P., Utomo, F. C., & Setiorini, A. The Role of Compensation and Work Environment on Employee Job Satisfaction (A Case Study at Container Terminal). *International Journal of Research and Innovation in Social Science* 5(7). 674-677. https://dx.doi.org/10.47772/IJRISS.2022.61240
- 20) Sembiring, H. (2020). Pengaruh motivasi dan lingkungan kerja terhadap kinerja karyawan pada Bank Sinarmas Medan. *Jurakunman (Jurnal Akuntansi Dan Manajemen)*, 13(1). http://dx.doi.org/10.48042/jurakunman.v13i1.37
- 21) Triatna, Cepi. 2016. Perilaku Organisasi Dalam Pendidikan. Bandung: PT Remaja Rosdakarya.
- 22) Utomo, F. C., & Latukismo, T. H. (2022). Trends and Patterns in Workforce Agility Literature: A Scopus-based Bibliometric Analysis. J. Wirel. Mob. Networks Ubiquitous Comput. Dependable Appl., 13(4), 211-224. http://doi.org/10.58346/JOWUA.2022.14.014



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