

The Implementation and Effect of Fixed Time Employment Agreement and Job Satisfaction On The Performance of Contract Empoyees With Compensation As A Moderating Variable

Aisa Citrabella¹, Dudung Hadiwijaya², Ismail Marzuki³

¹Universitas Muhammadiyah Tangerang, Indonesia, <u>bella.citra.aisa@gmail.com</u>

² Universitas Muhammadiyah Tangerang, Indonesia, <u>dhadiwijaya7@gmail.com</u>

³ Universitas Muhammadiyah Tangerang, Indonesia, ismailmarzuki@umt.ac.id

Corresponding Author: bella.citra.aisa@gmail.com

Abstract: This study aims to identify and analyze the extent to which compensation moderates the impact of the implementation of Fixed-Term Employment Agreements and job satisfaction on employee performance at PT. XYZ. The research method used is associative with a quantitative approach, utilizing moderation regression analysis. The sample consists of 97 employees, and data analysis includes moderation regression tests, determination coefficients, and hypothesis significance testing (t-tests). The results show that Fixed Time Employment Agreement has an insignificant effect on employee performance, while job satisfaction has a significant effect on employee performance. Furthermore, the implementation of the Fixed Time Employment Agreement, even when reinforced by compensation, does not significantly enhance employee performance at PT. XYZ. Additionally, compensation does not significantly moderate the relationship between job satisfaction and employee performance at PT. XYZ.

Keywords: Fixed Time Employment Agreement, Job Satisfaction, Compensation, Employee Performance.

INTRODUCTION

Human resources are the most crucial element in a business or company to ensure smooth and efficient operations. Without this element, or if its quality is lacking, the company will struggle to carry out and manage its activities, even if other resources are adequate. Therefore, special strategies are needed to empower the human resources within the company. Efforts to empower human resources to enhance overall company performance are known as HR management (Umiyati et al., 2022).

Employee performance is the output achieved in both quantity and quality by each employee in carrying out their duties according to their job description and responsibilities. Organizational goals can be achieved with improved employee performance through the achievements demonstrated in the workplace (Junianto & Sabtohadi, 2020). Several aspects of employee performance measurement include work results, creativity, proficiency, responsibility, work quality, initiative, attendance, attitude, timeliness in completing tasks, accuracy, and work quality (Mangkunegara, 2020).

At PT. XYZ., employee performance is characterized by a lack of cooperative individual collaboration between contract employees bound by Fixed Time Employment Agreement and permanent employees. This is related to differing levels of job satisfaction, where the satisfaction of employees is impacted by the compensation provided by the company, which varies between contract and permanent employees.

The current state of employee performance at PT. XYZ. can be seen in the following table:

No.	Bulan	Target Produksi	Pencapaian	Presentase %
1	January	8.334.000	8.270.000	99,23%
2	February	8.334.000	9.360.000	112,31%
3	March	8.334.000	8.190.000	98,27%
4	April	8.334.000	7.890.000	94,67%
5	May	8.334.000	8.280.000	99,35%
6	June	8.334.000	7.987.000	95,48%
7	July	8.334.000	7.967.000	95,60%
8	August	8.334.000	8.230.000	98,75%
9	September	8.334.000	8.120.000	97,43%
10	October	8.334.000	7.898.000	94,77%
11	November	8.334.000	7.976.000	95,70%
12	December	8.334.000	8.198.000	98,70%

 Tabel 1. Employee Performance Achievement of PT. XYZ In 2023

Source: PT. XYZ

From Table 1 on Employee Performance Achievements at PT. XYZ, the production targets were not met each month. In January, the targets set by the company were not achieved. Although February saw target achievement, from March to December, the desired targets were not met. This indicates a decline in employee performance at PT. XYZ, with subpar work quality leading to unmet performance targets. Additionally, there is a lack of cooperation between contract employees (Fixed Time Employment Agreement) and permanent employees, affecting performance and resulting in frequent delays in task completion.

The suboptimal performance of contract employees can be influenced by various factors. According to Davis (2000), employee performance is affected by ability and motivation. Novanda et al. (2023) state that employee performance is influenced by both internal and external factors. Internal factors include job satisfaction, while external factors come from outside the employee.

The Fixed Time Employment Agreement implemented by the company is crucial for achieving performance goals. The latest regulations on Fixed Time Employment Agreement employee rights are expected to motivate Fixed Time Employment Agreement workers to improve their performance. Issues arise when Fixed Time Employment Agreement contracts are terminated or extended without following proper procedures, reducing workers' rights and posing challenges for the Department of Labor (Sunarno, 2009).

Job satisfaction, another key factor, is the level of contentment a person feels about their job and work environment (Hasibuan, 2021). Job satisfaction can enhance employee performance (Pawirosumarto et al., 2017; Indrayani et al., 2024). Robbins & Judge (2019) note that individuals with high job satisfaction have positive feelings about their job, while those with low satisfaction have negative feelings. Aspects of job satisfaction include alignment of work with interests and skills, supportive working conditions, fair compensation, opportunities for growth, and supportive colleagues. Employee satisfaction depends on the compensation provided. Compensation is everything employees receive for their work. Fair and appropriate compensation can motivate employees to improve their performance (Mangkunegara, 2020). When employees feel valued through compensation, they experience job satisfaction.

Compensation for Fixed Time Employment Agreement is specified in Article 61A of the Labor Law: (1) Employers must provide compensation to workers upon contract termination; (2) Compensation is based on the length of service; (3) Further details are outlined in Government Regulations.

Implementing the Fixed Time Employment Agreement system for non-permanent employees is expected to have a positive impact. Job satisfaction can trigger performance improvements at PT. XYZ, and job satisfaction correlates with employee performance, strengthened by appropriate compensation in line with Fixed Time Employment Agreement regulations.

Compensation positively influences job satisfaction and performance (Azhari et al., 2021; Cristian et al., 2021; Ramli, 2018; Rojikinnor et al., 2023). Satisfied employees tend to improve their performance (Elbudrah, 2018; Fauziek & Yanuar, 2021; Na-Nan et al., 2020; Novanda et al., 2023; Mufarrohah & Mardiyanti, 2019; Waruwu & Khoiri, 2023). Job satisfaction is inherently individual and achieved when expectations align with reality, including salary, promotion, supervision, colleagues, and the work itself (Iman Dharmiarto et al., 2021).

The problem statement for this research is:

- 1. Does the implementation of Fixed Time Employment Agreement affect employee performance at PT. XYZ?
- 2. Does job satisfaction effect employee performance at PT. XYZ?
- 3. Does the implementation of Fixed Time Employment Agreement, moderated by compensation, impact employee performance at PT. XYZ?
- 4. Does job satisfaction, moderated by compensation, effect employee performance at PT. XYZ?

METHOD

Based on the formulated problem statement, objectives, and established hypotheses, this research employs a causal associative method with a quantitative approach.



Figure 1. Relationship Between Research Variables

The sample in this study consists of contract employees in the production department at PT. XYZ. A total of 97 respondents were selected using the Slovin sampling technique. Data analysis in this research is facilitated by the statistical software SPSS V.24, and the data analysis technique used is Moderated Regression Analysis. This technique determines the correlation between a criterion variable and a combination of two or more predictor variables. In moderated regression, prediction errors can be minimized by incorporating other influential variables (factors) into the prediction. The general form of moderated regression analysis is as follows:

$$Y = a + bX1 + bX2 + e \dots (1)$$

Y = a + bX1 + bX2 + bX3 + bX1*X3 + bX2*X3 + e \dots (2)

Keterangan :

Ŷ

= Employee Performance Prediction X_1

- = Implementation of Fixed Time Employment Agreement
- = Job Satisfaction X_2
- X3 = Compensation
- X1*X3 = Implementation Interaction Fixed Time Employment Agreement with Compensation
- X2*X3 = Job Satisfaction Interaction with Compensation
- = Constant Value a
- = epsylon (Other factor doesn't analyze) e

The next step involved conducting a coefficient of determination test to determine the percentage contribution of the simultaneous influence of independent variables on the dependent variable. The formula to calculate the coefficient of determination with three independent variables is:

$KD = r2 \times 100\%$

Additionally, hypothesis testing was conducted with a significance probability value set at 5% or 0.05 in the output, to decide whether to reject or accept the null hypothesis (Ho): H0:

If the significance probability value exceeds 0.05 (the chosen confidence level), then the null hypothesis (Ho) is accepted, and the alternative hypothesis (Ha) is rejected. Ha:

If the significance probability value is less than 0.05 (the chosen confidence level), then the n ullhypothesis (Ho) is rejected, and the alternative hypothesis (Ha) is accepted.

RESULTS AND DISCUSSION

Testing the quality of instrument data is a primary requirement in data processing, where data must possess validity and reliability. The basis for the decision for the validity of the statement is as follows:

If the calculated r value < r critical (0,300), then the statement item is invalid.

If the calculated r value > r critical (0,300), then the statement item is valid.

Following are the results of the data validity test:

18	Table 1. r test Pearson Correlation Fixed Time Employment Agreement							
Fixed Agree	Time Employment	r test	r critical	Conclusion				
1	Pearson Correlation	0,525	0,300	Valid				
2	Pearson Correlation	0,407	0,300	Valid				
3	Pearson Correlation	0,442	0,300	Valid				
4	Pearson Correlation	0,472	0,300	Valid				
5	Pearson Correlation	0,460	0,300	Valid				
6	Pearson Correlation	0,426	0,300	Valid				
7	Pearson Correlation	0,469	0,300	Valid				
8	Pearson Correlation	0,364	0,300	Valid				
9	Pearson Correlation	0,540	0,300	Valid				
10	Pearson Correlation	0,428	0,300	Valid				

Table 1. r test Pear	son Correlation	Fixed Time	Employment	t Agreement

Source :Output SPSS, Data is processed, 2024.

Table 2. r test Pearson Correlation by Work Satisfaction

Woi	k Satisfaction	r test	r critical	Conclusion
1	Pearson Correlation	0,533	0,300	Valid
2	Pearson Correlation	0,496	0,300	Valid

Work Satisfaction		r test	r critical	Conclusion
3	Pearson Correlation	0,430	0,300	Valid
4	Pearson Correlation	0,596	0,300	Valid
5	Pearson Correlation	0,481	0,300	Valid
6	Pearson Correlation	0,499	0,300	Valid
7	Pearson Correlation	0,494	0,300	Valid
8	Pearson Correlation	0,397	0,300	Valid
9	Pearson Correlation	0,450	0,300	Valid
10	Pearson Correlation	0,470	0,300	Valid

Source :Output SPSS, Data is processed, 2024.

Table 3. r test Pearson C	Correlation by	y Com	pensation
---------------------------	----------------	-------	-----------

Com	pensation	r value	r critical	Conclusion
1	Pearson Correlation	0,360	0,300	Valid
2	Pearson Correlation	0,351	0,300	Valid
3	Pearson Correlation	0,326	0,300	Valid
4	Pearson Correlation	-0,030	0,300	Tidak Valid
5	Pearson Correlation	0,411	0,300	Valid
6	Pearson Correlation	0,357	0,300	Valid
7	Pearson Correlation	0,412	0,300	Valid
8	Pearson Correlation	0,317	0,300	Valid
9	Pearson Correlation	0,370	0,300	Valid
10	Pearson Correlation	0,374	0,300	Valid

Source :Output SPSS, Data is processed, 2024.

	Table 4. r test Pearson Correlation by Employee Performance						
Emp	loyee Performance	r test	r critical	Conclusion			
1	Pearson Correlation	0,525	0,300	Valid			
2	Pearson Correlation	0,454	0,300	Valid			
3	Pearson Correlation	0,343	0,300	Valid			
4	Pearson Correlation	0,601	0,300	Valid			
5	Pearson Correlation	0,515	0,300	Valid			
6	Pearson Correlation	0,575	0,300	Valid			
7	Pearson Correlation	0,323	0,300	Valid			
8	Pearson Correlation	0,470	0,300	Valid			
9	Pearson Correlation	0,524	0,300	Valid			
10	Pearson Correlation	0,545	0,300	Valid			

Source :Output SPSS Data is processed, 2024.

Testing the quality of instrument data is a fundamental requirement in data processing, ensuring that the data is both valid and reliable. Here is a detailed explanation of data quality.

Table 5. Realiability Test Result					
Variable	Cronbach Alpha	Description			
Fixed Time Employment Agreement (X1)	0,657	High Reliable			
Job Satisfaction (X2)	0,648	High Reliable			
Compensation (X3)	0,809	High Reliable			
Employee Performance (Y)	0,629	High Reliable			

Source: Output SPSS, Data is processed, 2024

The reliability test results for Fixed Time Employment Agreement, Job Satisfaction, Compensation, and Employee Performance show that the Cronbach's Alpha values have a reliability coefficient greater than 0.600, indicating high reliability. The normality test is conducted to assess the normality of the data used.

One-Sample Kolmogorov-Smirnov Test				
			Unstandardized	
			Residual	
N			97	
Normal Parametersa,b	Mean		.0000000	
	Std. Deviation	3.11581144		
Most Extreme Differences	Absolute	.085		
	Positive		.085	
	Negative		060	
Test Statistic			.085	
Asymp. Sig. (2-tailed)			.079c	
Monte Carlo Sig. (2-tailed)	Sig.		.456d	
	99% Confidence Interval	Lower Bound	.443	
		Upper Bound	.469	

Table 6. Normal Test

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

d. Based on 10000 sampled tables with starting seed 2000000.

Source : Output SPSS, Research 2024

Based on the SPSS One-Sample Kolmogorov-Smirnov Test output, the Asymptotic Sig. value is 0.076 and the Monte Carlo Sig. value is 0.456, both of which are greater than 0.05. This indicates that the variables or data come from a normally distributed population. The regression test results are as follows:

Table 7. Test Result Regression 1 Equation

Coeffici	ientsa		0	-		
	Unstandardized Coefficient		ized Coefficients	Standardized Coefficients		
Model		В	Std. Error	Beta	t	Sig.
1	(Constant)	15.762	3.442		4.579	.000
	Fixed	Time032	.086	.037	.367	.715
	Employment					
	Agreement					
	Work Satisfac	ction .566	.099	.585	5.729	.000
- D	Work Satisfa	ction .566	.099	.585	5.729	.000

a. Dependent Variable: Employee Performance

Source: Output SPSS, 2024

The regression equation can be written as follows: Y = 15,762+0,032X1+0,566X2+e

- 1. From the SPSS output above, it is known that the Fixed Time Employment Agreement coefficient value is -0,032, with a significance value of 0,715, which is greater than 0,05. Therefore, it can be concluded that Fixed Time Employment Agreement has no significant effect on employee performance. One effort the company can make to obtain a quality and productive workforce is by employing contract workers. The company uses a contract worker system to reduce production costs, as this system can lower expenditures for Human Resources (HR). However, the current condition of contract labor is not very beneficial and is often considered disadvantageous. Besides permanent employees, non-permanent employees are contracted based on a Fixed Time Employment Agreement, leading to job discomfort. Many challenges are faced by workers, especially contract employees, who often unilaterally terminate their employment. This is common among Generation Z employees, resulting in high employee turnover.
- 2. The Job Satisfaction coefficient value is 0,566, with a significance value of 0,000, which is less than 0,05. Thus, it can be concluded that Job Satisfaction has a significant effect on Employee Performance. Job Satisfaction has a significant influence on Employee

Performance at PT. XYZ. Therefore, the company cannot ignore Job Satisfaction, as its contribution to Employee Performance is relatively substantial. Several aspects of job satisfaction that can be measured include whether the work matches the employees' interests and skills, the supportiveness of the working conditions, appropriate compensation, opportunities for employees to develop their potential, assistance from colleagues in solving problems, and fair treatment from the company towards its employees.

Coefficientsa					0	•		
				Unstandar	dized	Standardized		
				Coefficier	nts	Coefficients		
Model				В	Std. Error	Beta	t	Sig.
1	(Constan	nt)		28.765	14.589		1.972	.053
	Fixed	Time	Employmen	t.254	.391	.301	.650	.518
	Agreem	ent						
	Work Sa	atisfactio	n	.146	.387	.151	.378	.707
	Compen	sation		.441	.559	.683	.789	.433
	Fixed	Time	Employmen	t.012	.016	.789	.768	.445
	Agreem	ent *Cor	npensation					
	Work			.027	.015	1.835	1.820	.073
	satisfact	ion*Con	npensation					

Table 8. Test Result Regression 2 Equation

a. Dependent Variable: Employee Performance

Source: Output SPSS, 2024

The regression equation can be written as follows

Y = 28,765+0,254X1+0,146X2+0,441M+0,02X1*M+0,027X2*M+e

- 1. The significance value of the interaction variable between Fixed Time Employment Agreement and Compensation is 0,445, which is greater than 0,05. Therefore, it can be concluded that the Compensation variable does not moderate the effect of the Fixed Time Employment Agreement variable on Employee Performance. Thus, the implementation of the Fixed Time Employment Agreement system for non-permanent employees, even when supported by compensation, does not significantly enhance employee performance at PT. XYZ. Many Fixed Time Employment Agreement, predominantly from Generation Z, resign from their positions. According to a JakPat survey, the majority, or 64,9%, of Generation Z respondents will resign if their salary does not match their duties and responsibilities.
- 2. The significance value of the interaction variable between Job Satisfaction and Compensation is 0,073, which is greater than 0,05. Hence, it can also be concluded that the Compensation variable does not moderate the effect of the Job Satisfaction variable on Employee Performance at PT. XYZ. Job satisfaction among contract employees is not dependent on the amount of compensation, as the compensation they receive is significantly different from that of permanent employees. Compensation is everything employees receive for their work. It must be fair and commensurate with what employees provide. As stated by Mangkunegara (2020), compensation can be a tool to motivate employees to improve their performance. Through compensation, employees feel valued, leading to job satisfaction

Based on the coefficient of determination test, the results are as follows:

Table 9. Test Results Determination Coefficients Model Summary								
		5	Adjusted	RStd. Error of the				
Model	R	R Square	Square	Estimate				

1	.605a	.366	.321	3.3295	5
a. Predic	ctors: (Con	stant), Work	Satisfaction*	Compensation,	Fixed Time
Employr	nent Agree	ement, Work	Satisfaction,	Compensation,	Fixed Time

Employment Agreement *Compensation Source: Output SPSS, 2024

It is known that the R square value is 0.366, which means that the contribution of the variable Fixed Time Employment Agreement and Satisfaction after being strengthened by Compensation to Employee Performance is 36.60%.

CONCLUSION

- 1. Fixed Time Employment Agreement has an insignificant effect on Employee Performance. Fixed Time Employment Agreement employees face many challenges in their work, especially those from Generation Z who often unilaterally terminate their employment. Therefore, the dominant status of Fixed Time Employment Agreement among Gen Z has a negative impact and does not significantly improve performance. Employees prioritize Employee Experience over the stability of their employment status. In other words, Gen Z is more concerned with job satisfaction than with the status of being a Fixed Time Employment Agreement employee.
- 2. Job Satisfaction significantly influences Employee Performance. Therefore, the company cannot overlook Job Satisfaction at PT. XYZ, as its contribution to Employee Performance is relatively significant. With high job satisfaction, performance also improves. Individuals with high job satisfaction have a positive feeling about their work, while those without job satisfaction have negative feelings. Thus, job satisfaction can enhance employee performance.
- 3. The implementation of the Fixed Time Employment Agreement system for non-permanent employees, even when supported by compensation, cannot significantly boost employee performance at PT. XYZ.
- 4. Compensation cannot significantly moderate the relationship between Job Satisfaction and Employee Performance at PT. XYZ. Job satisfaction does not depend on the compensation given to employees, as the compensation received by Fixed Time Employment Agreement employees differs from that of Fixed Time Employment Agreement employees. However, compensation, being everything employees receive for their work, must be fair and commensurate with their efforts, which can positively impact employee performance.

REFERENCE

- Azhari, Z., Resmawan, E., & Ikhsan, M. (2021). The Effect of Job Satisfaction on Employee Performance. *FORUM EKONOMI*, 23(2), 187–193. http://journal.feb.unmul.ac.id/index.php/FORUMEKONOMI
- Cristian, D. P., Sesario, R., & W A Sutignya, T. C. (2021). Agro Estate Jurnal Budidaya Perkebunan Kelapa Sawit Dan Karet Effect Of Compensation And Work Satisfaction Toward Production Employee Performance In PT. Buana Tunas Sejahtera. Agro Estate, 5(2), 2580–0957.
- Davis, K. (2000). *Human Behavior at Work: Organizational Behavioral*. New Delhi: Mc-GrawHill Publishing Company.
- Elbudrah, P. R. (2018). The Influence of Leadership Style and Job Satisfaction on the Performance of Animal Husbandry and Animal Health Service Employees in Riau Province. *JURNAL MANDIRI: Ilmu Pengetahuan, Seni, Dan Teknologi, 2*(2), 443–445.
- Fauziek, E., & Yanuar, D. (2021). The Effect of Job Satisfaction on Employee Performance with Job Stress as a Mediating Variable. Jurnal Manajerial Dan Kewirausahaan, 3(3), 680–687.

- Hasibuan, M. (2021). *Human Resource Management Revised Edition*. Jakarta: PT. Bumi Aksara.
- Iman Dharmiarto, R., Ali Iqbal, M., Badawi Saluy, A., & Author, C. (2021). The Effect Of Leadership And Compensation On The Job Satisfaction Mediated By Motivation At PT. Indesso Culinaroma International. *Dinasti International Journal of Management Science (DIJMS)*, 3(1). https://doi.org/10.31933/dijms.v3i1
- Indrayani, I., Nurhatisyah, N., Damsar, D., & Wibisono, C. (2024). How Does Millennial Employee Job Satisfaction Affect Performance? *HIGHER EDUCATION, SKILLS AND WORK-BASED LEARNING*, 14(1), 22–40. https://doi.org/10.1108/HESWBL-01-2023-0004
- Junianto, D., & Sabtohadi, J. (2020). The Influence of a Fixed Time Work Agreement System and Work Motivation on Employee Performance in the Sugar Factory Industry. *Equilibrium*, 9(1), 1–9.
- Mangkunegara, A. A. A. P. (2020). Human Resource Management. Jakrta: Bumi Aksara.
- Mufarrohah, A. L., & Mardiyanti, I. (2019). The Relationship Of Job Satisfaction With Performance Of Contract Nurses In Rsi Surabaya Ahmad Yani. Surabaya Internasional Health Conferences
- Na-Nan, K., Kanthong, S., Joungtrakul, J., & Smith, I. D. (2020). Mediating Effects Of Job Satisfaction And Organizational Commitment Between Problems With Performance Appraisal And Organizational Citizenship Behavior. *Journal of Open Innovation: Technology, Market, and Complexity*, 6(3). https://doi.org/10.3390/JOITMC6030064
- Novanda, A. G., Hadi, S. P., & Budiatmo. (2023). The Influence of Job Satisfaction and Organizational Commitment on Employee Performance (Study of BPJS Employment Employees, Semarang Branch). *Jurnal Ilmu Administrasi Bisnis*, 12(1). https://ejournal3.undip.ac.id/index.php/jiab
- 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*, 59(6), 1337–1358. https://doi.org/10.1108/IJLMA-10-2016-0085
- Ramli, A. H. (2018). Compensation, Job Satisfaction And Employee Performance In Health Services. *Business and Entrepreneurial Review*, 18(2).
- Robbins, S. P., & Judge, T. A. (2019). Organizational Behavior. Jakarta: Salemba Empat.
- Rojikinnor, R., Gani, A. J. A., Saleh, C., & Amin, F. (2023). The Role Of Compensation As A Determinant Of Performance And Employee Work Satisfaction: A Study At The PT Bank Rakyat Indonesia (Persero) Tbk. *Journal of Economic and Administrative Sciences*, 39(4), 943–956.
- Sunarno. (2009). BEBERAPA Problems with Specific Time Work Agreements and Their Solutions. *Wacana Hukum*, 8(2).
- Umiyati, H., Nugroho, H., Anwar, K., Ruth Silaen, N., Amas Priatna, I., Enas, U., Miati, I., Dewi Ratih, S., Akbar, M., Nugroho, L., Bangun Sugiharto, S., & Syaifudin, A. (2022). MSDM DALAM ORGANISASI. www.penerbitwidina.com
- Waruwu, S., & Khoiri, M. (2023). Pengaruh Keterikatan, Kedisplinan Dan Kepuasan Kerja Terhadap Kinerja Karyawan Pada PT Dynacast Indonesia. NUSANTARA: Jurnal Ilmu Pengetahuan Sosial, 10(6), 3109–3116. https://doi.org/10.31604/jips.v10i6.2023. 3109-3116