(RESEARCH ARTICLE)

Work motivation and ethical leadership to increase employee job satisfaction at PT BGRLI Surabaya, Indonesia

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Abstract

The purpose of this study was to determine the effect of work motivation and ethical leadership on increasing employee job satisfaction at PT. BGRLI Surabaya, Indonesia. Using a saturated sample where all members of the population are used as research samples, namely as many as 50 employees. This research is a quantitative research to determine the relationship between the independent variable and the dependent variable, namely using a questionnaire filled out by respondents who are used as research data. Data analysis methods used include validity test, reliability test, classic assumption test and hypothesis testing using the SPSS program. The results of this study indicate that work motivation and ethical leadership influence job satisfaction. This research contributes to the scientific discussion regarding the relationship of work motivation and ethical leadership to increasing employee job satisfaction.

Keywords: Ethical Leadership; Employee Satisfaction; Work Motivation.

1. Introduction

Organization is a system that connects resources so as to enable the achievement of certain goals or targets. Implementation of a successful organizing process will encourage the organization to be able to achieve its goals. Organizations often face problems along with the times and environmental changes, including a lack of motivation causing decreased job satisfaction and ultimately decreased performance.

Lack of employee job satisfaction causes various effects negative effects such as absenteeism, strikes, changing jobs and intentional damage. On the other hand, employees with a strong sense of job satisfaction possess the determination to propel the company forward, enabling them to overcome obstacles. Contented employees are generally more productive, leading to enhanced company efficiency. Conducting research on job satisfaction is crucial for organizations as it is believed that heightened job satisfaction promotes improved individual and organizational performance, ultimately enhancing overall effectiveness.

Facts on the ground show that 73% of employees are dissatisfied with their jobs, resulting in low employee performance [1]. As it is known that performance is very influential on success and is directly proportional to the development of an organization. In this case employees have a very important role in the success or failure of an organization. This is the reason that employee performance in an organization is still relevant and important to study. With regard to the survey results, research related to job satisfaction behavior is still relevant and important to study.

Social exchange theory is when individuals are involved in social activities with the aim of mutual benefit or benefits. If both parties in the activity trust each other that they can gain more than they lose, they will try to maintain the social relationship. However, if individuals feel that the losses or costs, they have experienced exceed the benefits obtained,

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they will not continue the activity. Although the concept of social activity in theory can be applied to measure romantic relationships between two individuals, this theory can also be used to evaluate balance in friendships. This is because theory can directly influence emotions and logic [2].

Motivation is the driving force behind the enthusiasm and desire to work that arises in employees. Of course, this makes motivation the main factor in improving performance and is a must for companies, agencies and organizations to analyze employee motivation factors with the aim of working better. If the agency company or organizations are able to do a good analysis of what factors influence employee motivation to work better automatically, efficiency, effectiveness, competitiveness and quality of work will be better and output can be easily increased [3]. Work motivation is a combination of internal and external forces that cause workers to determine a synchronous course of action and adopt a certain attitude.

Leadership is very important in the organization or company, namely as one of the determining factors for success in achieving the mission, vision and goals of the organization. The success of an organization in achieving its goals depends on its leadership, namely whether the leadership mobilizes existing resources effectively, efficiently and in an integrated manner to achieve organizational goals [4]. A leader, on the other hand, is a person who inspires, encourages and influences his subordinates to work voluntarily towards organizational goals. One can only be a successful manager if one is also an effective leader [5]. Ethical Leadership is the principles, beliefs and values that correctly describe the basis of organizational behavior so as to formulate leadership in influencing employees to achieve organizational goals. Based on the description above, it can be concluded that ethical leadership has the main responsibility in dealing with conflicts among employees and providing a guiding foundation for teaching the right things. Ethical leaders with thoughts translating into policies that lead to making ethical decisions for the wider interest [6].

Job satisfaction is a subjective experience unique to each individual. Due to variations among individuals, the degree of job satisfaction they feel will also differ. When various aspects of their work align with their personal desires, individuals tend to experience higher levels of satisfaction. Conversely, if their expectations are not met, their level of satisfaction may decrease. Job satisfaction is also a positive attitude towards employees in various situations at work. Feelings of satisfaction at work can have a positive impact on behavior, discipline and morale will tend to increase [7]. This conceptual framework model will then be tested on PT. BGRLI employees in Surabaya.

1.1. Formulation of the problem

Based on this background, the following problem formulation appears:

- Does work motivation affect employee job satisfaction?
- Does ethical leadership affect employee job satisfaction?

2. Literature Review

2.1. Social Exchange Theory

The social exchange theory, a concept in social science, posits that within a social relationship, there exist mutually beneficial elements involving rewards, sacrifices, and benefits for both parties involved. Rewards refer to the results obtained after making sacrifices, sacrifices refer to everything that is avoided or sacrificed, while benefits are rewards obtained after reducing sacrifices. Social exchange theory is defined as a social science theory that focuses on cost-benefit analysis in creating relationships between two individuals. In general, this theory describes the relationship in the form of profit and loss.

Overall, Social exchange theory is the view that social relations involve elements of appreciation, sacrifice, and interacting perceptions. This theory explains how individuals view their relationships with others based on their perceptions. The focus is on maintaining a balance between what is given and what is received in the relationship. This theory also examines ongoing relationships and opportunities to improve relationships with others. Social exchange is a relational theoretical framework in the social sciences which is based on the idea that the relationship between two individuals is formed through analysis. It is not only a theory, but also a framework within which theorists can interact with one another. All of these theories are based on different assumptions about human nature and the nature of relationships between humans [8].

The characteristics of Social Exchange Theory: 1) People are motivated to receive value (reward) when they have to give up something, 2) Someone participates in social exchange when he receives more in return than the cost, 3) Benefits

and expenses can be material benefits or other forms such as hours of work or facilities, 4) People leave a relationship when they think the costs outweigh the benefits.

2.2. Work motivation

Work motivation refers to an individual's inherent determination that stems from being inspired and motivated to complete tasks or jobs with fervor, authenticity, and commitment, aiming to attain high-quality and gratifying outcomes. The term "motivation" derives from the English word "motivation," which denotes inner strength or encouragement. Thus, motivation encompasses anything that stimulates or propels a person to take action or engage in specific activities for a particular purpose. It represents an internal state that drives individuals, encourages goal achievement, and cultivates a genuine interest in particular pursuits [9]. Motivation is a function of individual expectations that certain efforts will produce a level of satisfaction which in turn will produce the desired reward or result. Motivation is a desire that exists in a person that stimulates him to take various actions [10]. According to [11]; [12] states that what can be used as an indicator of work motivation, namely: 1) Achievement, 2) Recognition, 3) Work itself, 4) Responsibility, 5) Development of individual potential.

2.3. Ethical Leadership

Ethical leadership is a style of leadership with an emphasis on adherence to recognized norms and values. The leader emphasizes principles such as fairness, honesty, responsibility and trust. In addition, they promote this principle to followers through two-way communication, reinforcement, and decision making. By cultivating ethics, leaders foster strong integrity, encouraging subordinates to place great trust in leaders. Finally, they are willing to accept and are willing to follow the leader's vision. At a higher level, ethical leaders can lead companies to develop culture and values in a better direction. Improving the company's image and the public will see it positively [13]. According to [14] that indicators of ethical leadership are: 1) Honesty, 2) Fairness, 3) Integrity, 4) Moral awareness, 5) Accountability.
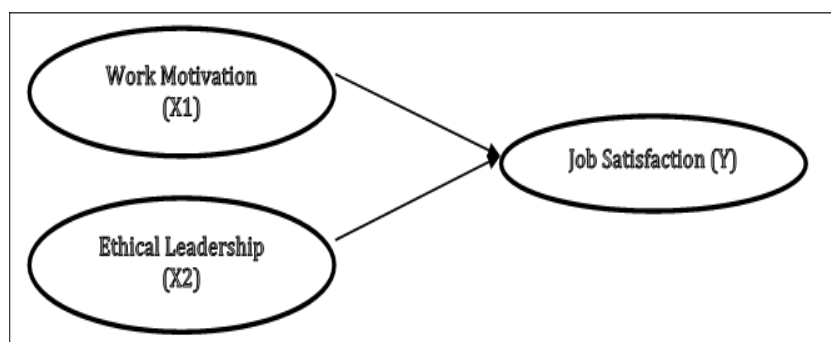
2.4. Job satisfaction

Job satisfaction refers to employees' perception of their work, encompassing various aspects such as work conditions, employee collaboration, received rewards, and relevant physical and psychological factors. This view is positive, indicating that employees or members of the organization are satisfied with aspects of the job, or negative, indicating dissatisfaction with all jobs, including work situation, tasks carried out.

Satisfaction is showing how far the organization has developed to meet the needs of its employees. Satisfaction measures include employee attitudes, absenteeism, tardiness and complaints. Based on the comparison between employees' expectations regarding their remuneration and their actual emotional attitude towards their work, job satisfaction can be characterized as either a positive or negative sentiment. It reflects the employees' overall pleasantness or unpleasantness towards their work [15].

According to [16] indicators of job satisfaction include the following: 1) Salary, 2) Work environment, 3) Career development opportunities, 4) Workload, 5) Relationships between co-workers.

According to the description that has been provided above. The conceptual underpinning for this study is defined in greater depth as follows:

Source: designed by Authors

Figure 1 Conceptual Framework

2.5. Hypothesis of Research

Based The research hypotheses used in this study include the following:

- H1: Work Motivation influences Employee Job Satisfaction.
- H2: Ethical Leadership influences Employee Job Satisfaction.

3. Methodology

This study employed a quantitative research approach. The research design utilized a saturated sample, which involved the inclusion of all members of the population as research participants, consisting of 50 individuals. A data collection technique is a way of gathering facts or information from the field in order to draw a conclusion. A questionnaire was used as the method for gathering data for this investigation. A questionnaire, as defined by [17] is a method of data collection that involves asking respondents to reply to questions or written comments. Questionnaires were conducted openly and closed. A Likert scale is used as the variable measuring approach in this investigation. The Likert scale is used to gauge someone's attitude, opinion, and impression of them or a collection of social phenomena [18].

Table 1 Five levels of preference for answers

Statement	Weight
Strongly Agree	5
Agree	4
Less agree	3
Disagree	2
Strongly Disagree	1

Source: composed by Authors

4. Results

4.1. Validity Test

According to [19], validity is an indicator that measures the extent to which an instrument can be considered valid or invalid. The validity of an instrument can be said to be fulfilled if the instrument is able to correctly disclose data that is relevant to the variable being studied.

Table 2 Result of validity test

Statement Item	r-count. X	r-count. Z	r-count. Y	r-table	Remark
1	0.702	0.683	0.704	0.2787	Valid
2	0.699	0.702	0.663	0.2787	Valid
3	0.663	0.672	0.600	0.2787	Valid
4	0.565	0.669	0.659	0.2787	Valid
5	0.561	0.505	0.765	0.2787	Valid
6	0.669	0.598	0.528	0.2787	Valid
7	0.732	0.630	0.580	0.2787	Valid
8	0.587	0.548	0.633	0.2787	Valid
9	0.684	0.494	0.545	0.2787	Valid
10	0.621	0.466	0.461	0.2787	Valid

Source: processed field data with SPSS

It can be seen in the above table shows that each statement item is able to represent X, Z and Y variables, because it can be seen that all variable items in this study have r-counts > r-table values at a significance level of 0.05 using a sample of 50 respondents (n = 50), the r-table value with degree of freedom (df): 50 – 2 = 48, and produces an r-table value of 0.2787. So, it can be concluded that all items used in this study are valid.

4.2. Reliability Test

The reliability test serves as a measurement tool to assess the consistency or stability of a questionnaire, which serves as an indicator of a variable. If the respondents' answers are consistently uniform, the questionnaire is considered reliable. In this study, the reliability test employed the Cronbach Alpha statistical test, where a Cronbach Alpha value greater than 0.60 indicates questionnaire reliability, and vice versa. The outcomes of the reliability test conducted in this research are presented in the provided table.

Table 3 Result of reliability test

Variable	Cronbach Alpha	Limit Value	Remark
Work Motivation (X1)	0.8271	0.6	Reliable
Ethical Leadership (X2)	0.7734	0.6	Reliable
Job Satisfaction (Y)	0.7900	0.6	Reliable

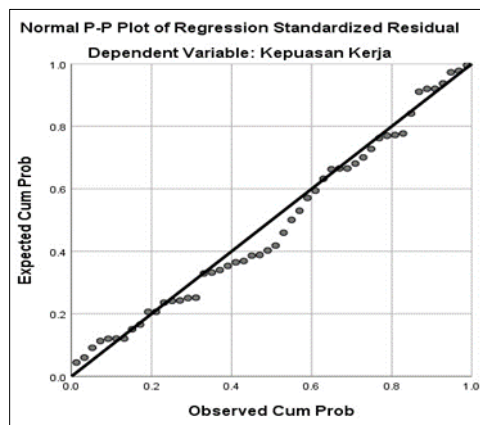Source: processed field data with SPSS

From the data above, it can be seen that all variables are reliable because all the Cronbach's alpha values in this study exceed the threshold value of 0.6, indicating that all variables examined in the research demonstrate reliability. Moreover, this suggests that there is consistency among the respondents' answers, so all variables have reliability and the research can continue with the analysis.

4.3. Classic Assumption Test

In order to assess the suitability of the multiple regression model employed in this study, the classical assumption test was conducted. This test was performed due to the presence of multiple independent variables in the research. The classical assumption test encompassed evaluating the normality, multicollinearity, and heteroscedasticity of the data.

4.3.1. Normality Test

The multiple regression model's confounding variables will be subjected to a normality test to determine whether they follow a normal distribution. To determine whether the data exhibits a normal distribution pattern graphically, a normal plot graph is utilized. A normal distribution pattern is present if the data points closely match the diagonal line and the direction of the histogram diagonal line. As a result, it can be said that the multiple regression model meets the requirement for normality.

Source: processed field data with SPSS

Figure 2 Plot Normal Image Normality Test

Observing the provided image, it is evident that the data points are dispersed in accordance with the diagonal line, indicating a normal distribution pattern. Thus, it can be concluded that the data exhibits a normal distribution.

4.3.2. Multicollinearity Test

The multicollinearity test's goal is to determine whether the independent variables in the multiple regression model are correlated with one another. The independent variables in a trustworthy multiple regression model should not be correlated. The Variance Inflation Factor (VIF) number can be used to determine whether correlation is present. There is no multicollinearity among the independent variables in the regression model if the tolerance value is more than 0.10 or the VIF value is less than 10, and vice versa. The results of the multicollinearity test done in this study are shown in the following outcomes.

**Table 4** Result of multicollinearity test

Independent Variable	Tolerance	VIF
Work Motivation (X1)	0.994	1.006
Ethical Leadership (X2)	0.994	1.006

Source: processed field data with SPSS

By examining the provided table, we can observe that the Tolerance value is 0.994, which exceeds the threshold of 0.10, and the VIF value is 1.006, which is below 10. Consequently, it can be concluded that there is no presence of multicollinearity among the independent variables in this multiple regression model.

4.3.3. Heteroscedasticity Test

An ideal multiple regression model does not exhibit heteroscedasticity. Heteroscedasticity can be detected by examining the scatter plot graph between the predicted value and the residual value. If the pattern appears indistinct and the data points are evenly distributed above and below the zero line on the Y-axis, it indicates the absence of heteroscedasticity. Conversely, if a clear pattern is observed, it suggests the presence of heteroscedasticity. The subsequent findings provide the results of heteroscedasticity analysis conducted in this study.
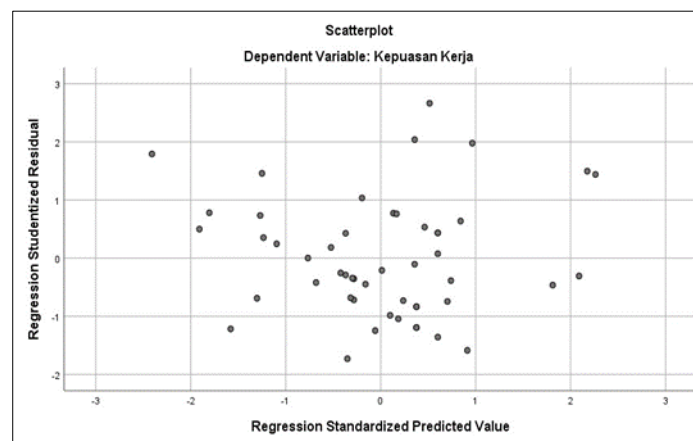
Source: processed field data with SPSS

Figure 3 Results of heteroscedasticity test

Upon examining the presented image, it is evident that the data points are dispersed unevenly and do not exhibit a distinct pattern. Additionally, the data points are distributed both above and below the zero line on the Y-axis. Thus, it can be concluded that there are no indications of heteroscedasticity in the data.

4.4. Multiple Regression Analysis

In order to predict the average value of the independent variables, Work Motivation (X1) and Ethical Leadership (X2), with respect to the dependent variable, Job Satisfaction (Y), multiple linear regression analysis is used. The following equation for multiple linear regression is produced by data processing using the SPSS version 26 application

Table 5 Result of multiple regression analysis

Model	Coefficient (β)
Constant (a)	10.110
Work Motivation (X1)	0.283
Ethical Leadership (X2)	0.459

Source: processed field data with SPSS

Multiple linear regression serves as a means to quantify the extent of changes in the dependent variable resulting from variations in the independent variables. Following the calculations, the multiple linear regression analysis generates a mathematical function incorporating specific numerical values.

$$Y = a + \beta 1 X1 + \beta 2 X2 + e$$

$$Y = 10.110 + 0.283 X1 + 0.459 X2$$

The regression equation above can be explained as follows:

1) The constant value (a) is 10.110 indicating that there is no change in the variable Work Motivation (X1) and Ethical Leadership (X2) with a value of 0, then Job Satisfaction (Y) with a value of 10.110.
2) The value of the regression coefficient of Work Motivation (X1) is 0.283 which has a positive value, meaning that if the variable Work Motivation (X1) decreases by one unit, then Job Satisfaction increases by 0.283 assuming the other variables of Ethical Leadership are constant.
3) The regression coefficient value of Ethical Leadership (X2) is 0.459 which has a positive value, meaning that if the Ethical Leadership variable (X2) increases by one unit, then Job Satisfaction increases by 0.459 assuming other variables (Work Motivation) are constant.

4.5. Analysis of the Coefficient of Determination (R^2)

The degree to which the variables Work Motivation (X1) and Ethical Leadership (X2) influence the Job Satisfaction variable (Y) is assessed in this study using the analysis of the coefficient of determination (R^2).

Table 6 Result of coefficient of determination test

Model	R	R Square	Adjusted R Square	Std. Error of the estimate
1	0.591	0.349	0.322	2.844

Source: processed field data with SPSS

According to the provided table, an Adjusted R-Square value of 0.32 or 32% is obtained. This signifies that the combined impact of Work Motivation (X1) and Ethical Leadership (X2) on Job Satisfaction (Y) accounts for 32%, while the remaining 68% is influenced by other variables not included in the analysis.

4.6. Hypothesis Test

4.6.1. Partial Test (t-Test)

To assess the individual effects of each variable—Work Motivation (X1) and Ethical Leadership (X2)—on the Job Satisfaction variable (Y), the t-test is used. A significance threshold of 0.05 is used in this investigation. The null hypothesis (Ho) is rejected and the alternative hypothesis (Ha) is accepted if the estimated t-value exceeds the critical t-value (obtained from the t-table) or the significance threshold is less than 0.05. This suggests that the variable Job Satisfaction (Y) is partially influenced by the variable Work Motivation (X1) in a statistically meaningful way. The formula df = n - k - 1 is used to calculate the t-table value, where n is the sample size (50), and k denotes the number of independent variables (2). Hence, the calculated t-table value is 2.012. Consequently, the results of the t-test are presented as follows.

Table 7 Result of t-Test

Independent Variables	t-count	Sig.	t-table
Work Motivation (X1)	2.575	0.013	2.012
Ethical Leadership (X2)	4.500	0.000	2.012

Source: processed field data with SPSS

- H1 = Work Motivation (X1) on Job Satisfaction (Y)

Work Motivation Variable (X1) has a calculated T-value of 2.575, which is higher above the critical T-table value of 2.012. Furthermore, the significance level of 0.013 is below the 0.05 cutoff. As a result, the alternative hypothesis (Ha) is accepted and the null hypothesis (Ho) is rejected. The Work Motivation variable (X1) thus partially demonstrates a strong influence on Job Satisfaction (Y), it can be argued.

- H2 = Ethical Leadership (X2) on Job Satisfaction (Y)

The critical t-table value is 2.012, however the computed t-value for the Ethical Leadership variable (X2) is 4.500. Additionally, the significance level of 0.000 is below the 0.05 cutoff. As a result, the alternative hypothesis (Ha) is accepted and the null hypothesis (Ho) is rejected. This means that Job Satisfaction (Y) is significantly impacted by the Ethical Leadership variable (X2) in part.

4.6.2. Model Feasibility Test (F Test)

The model's adequacy test, also known as the F-test, was conducted to assess whether all the variables, including Work Motivation (X1) and Ethical Leadership (X2), collectively exert a significant influence on the Job Satisfaction variable (Y). The F-test employs a significance level of 0.05 and is computed using the following formula.

$$df (N1) = k-1 \text{ then } df (N1) = 3-1 = 2 \quad df (N2) = n-k \text{ then } df (N2) = 50 - 3 = 47.$$

So that the obtained F table value of 3.20. Then it can be seen the results of the F test in the following table.

Table 8 Result of F-Test

Model	F-count	Sig.	F-table
Regression	12.616	0.000	3.20

Source: processed field data with SPSS

It is clear from the provided table that the F-count number (12.616) is higher than the F-table value (3.20). Furthermore, 0.000 has a significance value that is less than 0.005. As a result, the alternative hypothesis (Ha) is accepted and the null hypothesis (Ho) is rejected. From this, it can be concluded that the variables Work Motivation (X1) and Ethical Leadership (X2) collectively hold significance in predicting Job Satisfaction (Y) in a comparable manner.

5. Discussion

5.1. The Effect of Work Motivation on Job Satisfaction

Work motivation plays a crucial role in shaping job satisfaction, as employee satisfaction is greatly influenced by their motivation levels. Motivating employees is a key approach to fostering satisfaction since employees are at the core of the satisfaction equation. Additionally, it is acknowledged that work motivation contributes to a company's success by enhancing employee satisfaction. The analysis results indicate that work motivation significantly impacts job satisfaction, encompassing various aspects such as salary, work environment, career development opportunities, workload, and relationships with co-workers. The positive and significant influence of work motivation on job satisfaction is evident from the tested t-value and significance test. Therefore, the first hypothesis, "Work Motivation and Ethical Leadership to Increase Employee Job Satisfaction," aligns with the study's findings, and thus, the hypothesis can be accepted.

5.2. The Effect of Ethical Leadership on Job Satisfaction

Job satisfaction is impacted by various factors, including ethical leadership. When employees have an ethical leader who prioritizes honesty, they tend to experience higher levels of satisfaction. The analysis results reveal that ethical leadership, characterized by attributes such as honesty, fairness, integrity, moral awareness, and accountability, exerts an influence on job satisfaction. This influence is evident from the tested t-value and significance test. Therefore, it can be concluded that the ethical leadership variable demonstrates a positive and significant impact on job satisfaction. Hence, the second hypothesis, "Work Motivation and Ethical Leadership to Increase Employee Job Satisfaction," aligns with the study's findings, and thus, the hypothesis can be accepted.

5.3. Managerial Implication

Provide input to the organization/company through condition analysis. Business leaders can get a complete picture of their strengths and weaknesses and understand how to motivate their employees to drive job satisfaction. This research also provides input to enrich the theory of the relationship between leadership, motivation and job satisfaction.

6. Conclusion

Based on the results of research and analysis obtained related to the influence of work motivation and ethical leadership to increase job satisfaction of employees of PT. BGRLI Surabaya, then the following conclusions can be drawn:

1) The variable of work motivation has an effect on employee job satisfaction.
2) The ethical leadership variable influences employee job satisfaction.

Based on the research obtained from the calculation results of multiple linear regression analysis used to test the significance. In the multiple linear regression analysis, it can be concluded that it shows that Work Motivation and Ethical Leadership have an effect on employee job satisfaction.

Compliance with ethical standards

Disclosure of conflict of interest

The authors wish to declare that none has any interest to disclose.

References

[1] JobStreet. Survei 73% Karyawan Tidak Puas dengan Pekerjaan Mereka. www.jobstreet.co.id 2022.

[2] Umar U. Pendekatan Social Exchange Perspekstif George C. Homans. TAJDID J Pemikir Keislam Dan Kemanus 2017;1:97–111.

[3] Rizky M. Faktor–Faktor Yang Mempengaruhi Motivasi: Gaya Kepemimpinan, Kepuasan Kerja & Budaya Organisasi (Suatu Kajian Studi Literatur Manajemen Sumberdaya Manusia). J Ilmu Manaj Terap 2022;3:290–301.

[4] Restanti EY, Indrawati M, Muninghar M. Pengaruh Motivasi Kerja, Kepemimpinan, Dan Budaya Organisasi Terhadap Kepuasan Kerja Pegawai Di Bappeda Kabupaten Bojonegoro. J Mitra Manaj 2020;4:732–44.

[5] Wahjoedi T. Kepemimpinan Menuju Kinerja Organisasi yang Unggul. Jakad Media Publishing; 2021.

[6] Banks GC, Fischer T, Gooty J, Stock G. Ethical leadership: Mapping the terrain for concept cleanup and a future research agenda. Leadersh Q 2021;32:101471.

[7] Wiliandari Y. Kepuasan kerja karyawan. Society 2015;6:81–95.

[8] Mighfar S. Social Exchange Theory: Telaah Konsep George C. Homans Tentang Teori Pertukaran Sosial. LISAN AL-HAL J Pengemb Pemikir Dan Kebud 2015;9:259–82.

[9] Weiner B. History of motivational research in education. J Educ Psychol 1990;82:616.

[10]   Terry GR. Speaking from Experience--. Train Dev J 1977;41:43.

[11]   Herzberg F. One more time: How do you motivate employees. vol. 65. Harvard Business Review Boston, MA; 1968.

[12]   [Munir M. MOTIVASI ORGANISASI: Penerapan Teori Maslow, McGregor, Frederick Herzberg dan McLelland. AL-IFKAR J Pengemb Ilmu Keislam 2022;17:154–68.

[13]   Vikaraman SS, Mansor AN, Nor MYM, Alias BS, Gurusamy V. Ethical leadership practices and trust among public school leaders in Malaysia. Asian J Univ Educ 2021;17:174–91.

[14]   Mostafa AMS, Abed El-Motalib EA. Ethical leadership, work meaningfulness, and work engagement in the public sector. Rev Public Pers Adm 2020;40:112–31.

[15]   Pancasila I, Haryono S, Sulistyo BA. Effects of work motivation and leadership toward work satisfaction and employee performance: Evidence from Indonesia. J Asian Financ Econ Bus 2020;7:387–97.

[16]   Angraini A, Efendy BS, Munawarah D, Nurqoriah H, Laoli IS, Syamsir S. Peranan Pemimpin Dalam Peningkatan Kepuasan Kerja Di Kecamatan Mandiangin Koto Selayan Kota Bukittinggi. Ranah Res J Multidiscip Res Dev 2022;5:16–22.

[17]   Sugiyono. Metode Penelitian Kuantitatif, Kualitatif, dan R&D. Bandung: CV. Alfabeta; 2017.

[18]   Sugiyono PD. Metode Penelitian Pendidikan (Kuantitatif, Kualitatif, Kombinasi, R&d dan Penelitian Pendidikan). Metod Penelit Pendidik 2019;67.

[19]   Ghozali I. Aplikasi analisis multivariate dengan program IBM 2011.