

# **Dynamics of Job Satisfaction Among Contract-Based Employees: The Role of Commitment and Work Environment at the Education Office of South Buru Regency**

**Indra Wahyudi<sup>1</sup>, Fradana Firdiantoni Afsoh<sup>2</sup>, Syawal Zakaria<sup>3</sup>, Yudhy Muhtar  
Latuconsina<sup>4</sup>, Bay Latuconsian<sup>5</sup>**

<sup>1,3,5</sup> Department of Management, Faculty of Economy, Universitas Darussalam Ambon  
Jalan Waehakila Puncak Wara – Ambon, Maluku, Indonesia, 97128

Email: [indra@unidar.ac.id](mailto:indra@unidar.ac.id), [syawal@unidar.ac.id](mailto:syawal@unidar.ac.id), [baultc99@gmail.com](mailto:baultc99@gmail.com)

<sup>2</sup> Department of Industrial Engineering, Faculty of Engineering, Universitas Darussalam Ambon  
Jalan Waehakila Puncak Wara – Ambon, Maluku, Indonesia, 97128

Email: [fradana@unidar.ac.id](mailto:fradana@unidar.ac.id)

<sup>4</sup> Department of Accounting, Faculty of Economy, Universitas Darussalam Ambon  
Jalan Waehakila Puncak Wara – Ambon, Maluku, Indonesia, 97128

Email: [yudhy@unidar.ac.id](mailto:yudhy@unidar.ac.id)

## **ABSTRACT**

*The vital role of contract-based employees (honorary employees) in supporting the operational and administrative functions of local government education offices is often accompanied by employment uncertainties, potentially affecting their job satisfaction. This study aims to analyze the influence of organizational commitment and the work environment on the job satisfaction of contract employees at the Education Office of South Buru Regency. Employing a quantitative associative approach, data was collected from 100 respondents and analyzed using multiple linear regression. The results indicate that both employee commitment and the work environment have a significant positive effect on job satisfaction. However, the work environment demonstrates a stronger influence ( $\beta = 0.739, p = 0.000$ ) compared to organizational commitment ( $\beta = 0.094, p = 0.016$ ). The regression model explains 91.6% of the variance in job satisfaction ( $R^2 = 0.916$ ). This study concludes that to enhance the job satisfaction of contract employees, management interventions should prioritize creating a supportive and conducive work environment while simultaneously fostering organizational commitment. These improvements are essential for enhancing individual well-being and the overall quality of educational services.*

**Keywords:** Contract-Based Employees, Job Satisfaction, Organizational Commitment, Work Environment, Public Sector Education

## **Introduction**

The Office of the Education Service in South Buru Regency, like other local government agencies, relies significantly on the contributions of contract-based employees (honorary employees) to support educational operations and administration [1]. Although their role is crucial for service continuity, these contract employees often face work conditions characterized by uncertainty [2], [3], [4]. Fundamental issues such as non-permanent employment status, relatively low remuneration levels, and limited access to career development significantly influence their job satisfaction [5], [6]. This situation raises profound questions about the factors that can sustain or even enhance their motivation and satisfaction amidst such structural constraints [7].

In human resource management studies, job satisfaction is acknowledged as a key variable influencing an individual's performance, motivation, and productivity within an organization [8]. Two factors frequently identified as having a significant influence are organizational commitment and the work environment [9], [10]. Employee commitment, which reflects a sense of attachment and loyalty to the organization, can serve as an intrinsic driver that keeps employees satisfied and motivated despite external challenges [11]. Meanwhile, the work environment encompassing physical aspects (such as facilities and layout), social aspects (relationships among colleagues and with superiors), and psychological aspects (recognition and task clarity) directly shapes employees' experiences and comfort while working [12]. A supportive environment can enhance satisfaction, whereas an uncooperative one may trigger frustration and diminished work morale [13].

Preliminary observations at the South Buru Regency Education Office indicate several challenges related to both factors. Regarding commitment, indicators such as suboptimal discipline levels were noted,

marked by persistent issues of tardiness and unexcused absences among employees. On the other hand, the work environment also reveals several shortcomings. In terms of physical aspects, there is inconsistency in room comfort, a desk layout perceived as inefficient, and complaints regarding limited work support facilities. Regarding non-physical or social aspects, past conflicts among staff have affected harmony and created a less conducive work atmosphere. These phenomena have the potential to hinder productivity and diminish the quality of educational services to the community.

Based on the above exposition, research focusing on analyzing the influence of employee commitment and the work environment on the job satisfaction of contract-based employees at the South Buru Regency Education Office is highly relevant. This study is important to address an academic gap, considering that the position of contract workers in the public sector is often overlooked in discussions on job satisfaction. Furthermore, as stated by [14], [15], job satisfaction is not a singular entity but a multidimensional concept encompassing satisfaction with tasks, work relationships, supervisors, security, and income. Therefore, a holistic approach that considers both commitment and the work environment is deemed appropriate.

Practically, the findings of this research are expected to serve as an empirical basis for institutional management to formulate targeted policies and interventions. Improving the psychological well-being and working conditions of contract-based employees will ultimately not only impact on the enhancement of individual job satisfaction but also contribute to increased effectiveness and quality of educational services in South Buru Regency as a whole.

## Research Methods

This study employs an associative quantitative approach aimed at examining the relationship between two or more variables. It not only describes or compares but also correlates variables to determine whether a positive, negative, or no relationship exists. The sample size in this study consists of 100 respondents. Research instrument testing was conducted through validation tests using bivariate correlation and reliability tests with a Cronbach's alpha value  $> 0.60$ . The variables tested were employee commitment ( $X_1$ ), work environment ( $X_2$ ), and job satisfaction (Y). These variables will be analyzed using multiple regression analysis with the following equation [16]:

$$Y = a + b_1X_1 + b_2X_2 + e \quad \dots \dots \dots \quad (1)$$

The definitions of the research variables are presented in Table 1.

Table 1. Research variables

| Variable                      | Definition  | Indicator  |
|-------------------------------|---|--|
| Employee Commitment ( $X_1$ ) | Employee commitment refers to an employee's attitude and loyalty toward the company/institution, reflected through emotional attachment, willingness to contribute, and the desire to remain part of the organization itself. | 1. Affective Commitment<br>2. Continuance Commitment<br>3. Normative Commitment  |
| Work Environment ( $X_2$ )    | The work environment encompasses all physical and non-physical aspects surrounding the workplace that can influence employee comfort, productivity, and motivation in performing their duties.                                | 1. Physical Environment<br>2. Social Environment<br>3. Psychological Environment |

In addition to conducting multiple regression analysis, this study also requires several other statistical tests, namely classical assumption tests, which include tests for normality, multicollinearity, autocorrelation, and heteroscedasticity. The normality test is performed to determine whether the residual data in the regression model is normally distributed. One method to assess this is by examining the histogram and probability plot-P (P Plot). The histogram shows a distribution shape approximating a normal curve (bell-shaped and symmetric around zero). The meaning of the residuals is close to zero at  $-2.98E-16$ , with a standard deviation of 0.990. Therefore, the residual data are normally distributed, fulfilling the normality assumption.

Next, the multicollinearity test ensures that the regression model is not affected by a linear relationship among the independent variables. The multicollinearity test criteria are as follows: 1) Multicollinearity is present if the VIF value  $> 10$  or tolerance  $< 0.10$ , indicating multicollinearity in the regression model. 2) Multicollinearity is not present if the VIF value  $< 10$  and tolerance  $> 0.10$ , indicating the regression model does not exhibit multicollinearity.

The autocorrelation test aims to examine whether there is a correlation between disturbance errors in period  $t$  and  $t-1$  (previous period) in the linear regression model. If a correlation exists, it indicates an autocorrelation problem. A good regression model is one free from autocorrelation.

The autocorrelation test can be conducted using the Durbin-Watson (DW) test [17]. The general guideline for detecting autocorrelation is as follows: if the DW statistic is below -2, positive autocorrelation

exists; if it is between -2 and +2, no autocorrelation is present; and if it is above +2, negative autocorrelation exists [18].

The heteroscedasticity test aims to examine whether there is inequality in the variance of residuals from one observation to another in the regression model. If the variance of residuals remains constant across observations, it is termed homoscedasticity; if it varies, it is heteroscedasticity. The basis for heteroscedasticity analysis is the presence of a specific pattern in the scatter plot. If the points form a recognizable pattern (e.g., wavelike, widening then narrowing), it indicates heteroscedasticity. If no clear pattern exists and the points are scattered randomly above and below zero on the Y-axis, heteroscedasticity is not present.

Subsequently, the partial t-test is used to determine whether each independent variable (X) individually has a significant effect on the dependent variable (Y). The decision criteria (at a 5% significance level) are as follows: If the significance value (p-value)  $< 0.05$ ,  $H_0$  is rejected; if the significance value  $> 0.05$ ,  $H_0$  is accepted [19].

The t-test equation (from the regression output):  $\frac{bi}{SEbi}$  ..... (2)

## Results and Discussion

## Validity Test

Based on the questionnaire data collected from respondents, the results of the validity test for the research questionnaire are presented in the following table:

Table 2. Validity Test

| Variable            | Indicator   | R <sub>count</sub> | R <sub>Table</sub> | Note  |
|---------------------|---|--------------------|--------------------|-------|
| Employee Commitment | X <sub>1,1</sub> = Affective Commitment                   | 0.717              | 0.194              | Valid |
|                     | X <sub>1,2</sub> = Commitment Continuance                 | 0.687              | 0.194              | Valid |
|                     | X <sub>1,3</sub> = Commitment Normative                   | 0.710              | 0.194              | Valid |
| Work Environment    | X <sub>2,1</sub> = Physical Environment                   | 0.548              | 0.194              | Valid |
|                     | X <sub>2,2</sub> = Social Environment                     | 0.414              | 0.194              | Valid |
|                     | X <sub>2,3</sub> = Psychological Environment              | 0.679              | 0.194              | Valid |
| Job Satisfaction    | Y <sub>1</sub> = Work Itself (Intrinsic Job Satisfaction) | 0.283              | 0.194              | Valid |
|                     | Y <sub>2</sub> = Salary and Rewards                       | 0.369              | 0.194              | Valid |
|                     | Y <sub>3</sub> = Colleagues/Co-workers                    | 0.209              | 0.194              | Valid |
|                     | Y <sub>4</sub> = Career Development                       | 0.369              | 0.194              | Valid |

Table 2 shows that the calculated correlation coefficient ( $R_{\text{count}}$ ) for all indicators is greater than the critical  $R_{\text{table}}$  value (0.194). This indicates that all indicators are valid for subsequent analysis.

## Reliability Test.

A measurement instrument is considered reliable if it yields relatively consistent results when measuring the same attribute at different times. Reliability was measured using Cronbach's Alpha coefficient via SPSS for Windows [20], with the following criteria:

- 1) If  $\text{Alpha} > 0.6$ , the instrument is reliable.
- 2) If  $\text{Alpha} < 0.6$ , the instrument is not reliable.

Table 3. Reliability test

| Variable                      | Cronbach's Alpha | Note     |
|-------------------------------|------------------|----------|
| Employee Commitment ( $X_1$ ) | 0.711            | Reliable |
| Work Environment ( $X_2$ )    | 0.677            | Reliable |
| Job Satisfaction ( $Y$ )      | 0.660            | Reliable |

As shown in Table 3, all reliability test results indicate that the variables of employee commitment, work environment, and job satisfaction have Cronbach's Alpha values greater than 0.6. Therefore, it can be concluded that the questionnaire data used in this study are reliable and acceptable for further analysis.

## Classical Assumption Tests.

### a. Normality Test.

The normality test aims to determine whether the dependent and independent variables in the regression model are normally distributed, as a good model should have data that is normally or approximately normally distributed. Whether the data is normally distributed can be assessed by examining the shape of the data distribution, such as through a histogram or a probability plot.

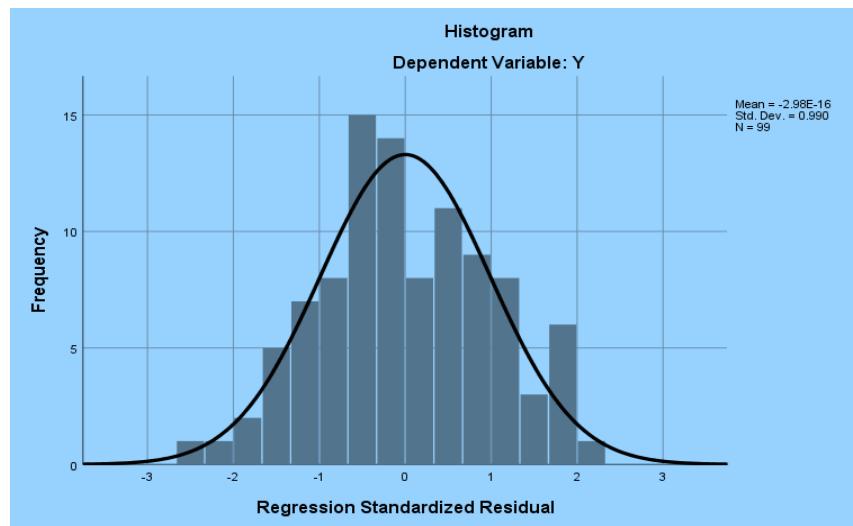


Figure 1. Normally distributed residuals

From the histogram in Figure 1 above, it can be concluded that the residuals are normally distributed and symmetrically shaped, not skewed to the right or left.

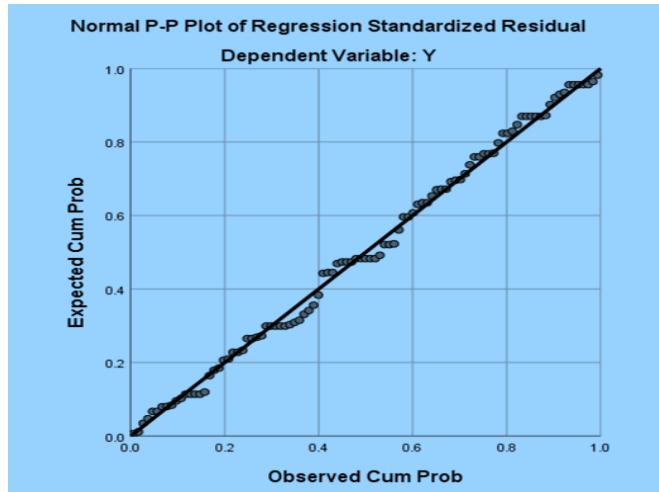


Figure 2. Normality test

Figure 2 shows that the data points spread around the diagonal line and follow its direction, and the histogram indicates a normal distribution. Thus, the regression model meets the assumption of normality.

### b. Multicollinearity Test.

The multicollinearity test is conducted to detect the presence of a perfect linear relationship among the independent variables in the regression model. Multicollinearity can be identified by examining the tolerance value and the Variance Inflation Factor (VIF). If the VIF value is less than 10 and the tolerance value is above 0.1 or 10%, it can be concluded that the regression model does not suffer from multicollinearity [21].

Table 4. Multicollinearity test

| Model                                 | Coefficients <sup>a</sup> |       |
|---------------------------------------|---------------------------|-------|
|                                       | Tolerance                 | VIF   |
| (Constant)                            |                           |       |
| Employee Commitment (X <sub>1</sub> ) | .903                      | 1.107 |
| Work Environment (X <sub>2</sub> )    | .903                      | 1.107 |

a. Dependent Variable: Y

Based on Table 4.10 above, it can be observed that the tolerance values for the Employee Commitment (0.903) and Work Environment (0.903) are greater than 0.1, and the VIF values (1.107) are less than 10. Therefore, it can be concluded that independent variables are free from multicollinearity.

#### c. Autocorrelation Test.

The autocorrelation test is a prerequisite or classical assumption test in regression analysis used to determine whether there is a correlation between disturbance errors (residuals) in one period and disturbance errors in the previous period [22]. Autocorrelation indicates a relationship between sequential observations in the data, making it necessary to test for its presence to ensure the regression model is valid and provides accurate estimates. The purpose of the autocorrelation test is to confirm that the disturbance errors in the regression model are not correlated with each other. If correlation exists, the regression model does not meet classical assumptions and may lead to biased and inefficient parameter estimates. The Durbin-Watson value in the summary table is the calculated Durbin-Watson statistic, which will later be compared with the critical Durbin-Watson (DW) table values. The upper critical value (Durbin Upper, DU) for 100 respondents is 1.633, and the lower critical value (Durbin Lower, DL) for 100 respondents is 1.715. The analysis results using SPSS regarding autocorrelation testing based on the DW value are as follows:

Table 5. Autocorrelation test results

| Model Summary <sup>b</sup> |                   |          |                   |                            |               |
|----------------------------|-------------------|----------|-------------------|----------------------------|---------------|
| Model                      | R                 | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
| 1                          | .957 <sup>a</sup> | .916     | .915              | 1.144                      | 1.999         |

a. Predictors: (Constant), X<sub>2</sub>, X<sub>1</sub>

b. Dependent Variable: Y

Based on the autocorrelation test results in the model summary, it can be observed that the Durbin-Watson value from the SPSS output is 1.999, which is greater than the upper critical value (DU = 1.633) and the lower critical value (DL = 1.715) for 100 respondents. Therefore, it can be concluded that there is no autocorrelation among the variables in this regression model.

#### d. Heteroscedasticity Test.

The heteroscedasticity test examines whether the variance of disturbance errors is non-constant across all independent variables [20]. A good regression model should exhibit no heteroscedasticity.

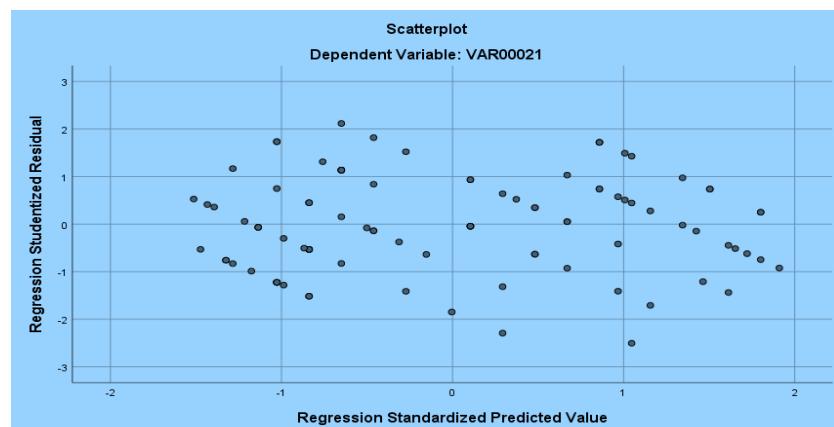


Figure 3. Heteroscedasticity test

From Figure 3, the results of the heteroscedasticity test indicate no discernible pattern, with the data points scattered both above and below zero on the Y-axis. Therefore, heteroscedasticity is not present.

### Multiple Linear Regression.

After completing the stages of validity testing, reliability testing, normality testing, autocorrelation testing, multicollinearity testing, and heteroscedasticity testing, the data were analyzed using multiple linear regression analysis to determine whether the variables of Employee Commitment and Work Environment influence the variable of Job Satisfaction. The data were processed using SPSS 20.

Table 6. Multiple linear regression  
 Coefficients<sup>a</sup>

| Model      | Unstandardized Coefficients  |            | Standardized Coefficients | t      | Sig.   |
|------------|------------------------------|------------|---------------------------|--------|--------|
|            | B                            | Std. Error | Beta                      |        |        |
| (Constant) | .502                         | 1.483      |                           | -1.013 | .314   |
| 1          | Var.X <sub>1</sub>           | .094       | .049                      | .100   | .899   |
|            | Var.X <sub>2</sub>           | .739       | .044                      | .873   | 16.640 |
|            | a. Dependent Variable: Var.Y |            |                           |        |        |

Based on the multiple linear regression analysis results in the table and the multiple linear regression formula, the following equation is obtained:

$$Y = 0.502 + 0.094 X_1 + 0.739 X_2 + e$$

The constant value is 0.502, meaning the consistent value of the Job Satisfaction variable is 0.502. Meanwhile, the regression coefficient for Employee Commitment is 0.094 and for Work Environment is 0.739. This indicates that for every 1% increase in the value of Employee Commitment and Work Environment, the value of Job Satisfaction increases by 0.094 and 0.739, respectively. These regression coefficients are positive, suggesting that the direction of the influence of variables X on variable Y is positive.

### Hypothesis Testing

#### a) T-Test (Partial Test)

1. The t-test coefficient for the Employee Commitment variable (X<sub>1</sub>) shows a significance value (sig.) = 0.016 < 0.05. This means that employee commitment has a significant partial effect on job satisfaction; therefore, H<sub>1</sub> is accepted.
2. The t-test coefficient for the Work Environment variable (X<sub>2</sub>) shows a significance value (sig.) = 0.000 < 0.05. This indicates that the work environment also has a highly significant partial effect on job satisfaction. With a larger coefficient (0.739), it demonstrates that the influence of the work environment is stronger than that of employee commitment. Therefore, H<sub>2</sub> is accepted.

#### b) Determination Test (R-Square)

Table 7. Coefficient of Determination (R-Square)  
 Model Summary<sup>b</sup>

| Model | R                 | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1     | .957 <sup>a</sup> | .9166    | .915              | 1.114                      |

a. Predictors: (Constant), Work Environment (X<sub>2</sub>), Employee Commitment (X<sub>1</sub>)

b. Dependent Variable: Job Satisfaction (Y)

Based on the table above, the R Square value is 0.916. This implies that the simultaneous influence of variables X<sub>1</sub> and X<sub>2</sub> on Y is 91.6%. The results align with existing literature identifying the work environment as a key determinant of job satisfaction, especially in public sector settings [9], [10]. Conversely, while another study highlighted organizational commitment as the prevailing factor, the present study demonstrates that the work environment plays a more substantial role in shaping job satisfaction among contractual employees in local educational agencies [5].

## Conclusion

This study confirms that both organizational commitment and the work environment significantly influence the job satisfaction of contract-based employees (honorary employees) at the South Buru Regency Education Office. The work environment emerges as the dominant factor, exerting a stronger positive effect than organizational commitment. The robust regression model ( $R^2 = 0.916$ ) indicates that these two factors collectively explain the majority of the variance in job satisfaction levels. The findings underscore a critical practical implication: while fostering employee commitment is important, managerial efforts to enhance job satisfaction among contract workers should be strategically prioritized toward improving the work environment. This includes addressing physical conditions (facilities, layout), strengthening social harmony, and ensuring psychological support through clear tasks and recognition. By implementing holistic policies that concurrently cultivate a supportive workplace and strengthen organizational attachment, management can significantly improve employee well-being. Ultimately, such improvements are not merely beneficial for the employees but are instrumental in advancing the overall effectiveness and quality of public educational services in the region. Therefore, it is recommended that management implement interventions aimed at improving physical facilities, optimizing spatial arrangements, strengthening the social climate through team-building programs, and providing psychological support through training and performance recognition. These efforts are expected not only to enhance job satisfaction but also to positively impact on the quality of educational services.

## References

- [1] W. P. Wibowo and H. Khairi, "Pengadaan Pegawai Honorer Di Kota Pangkalpinang Provinsi Bangka Belitung," 2025. [Online]. Available: [http://eprints.ipdn.ac.id/22539/0Ahttp://eprints.ipdn.ac.id/22539/1/32.0317\\_Wadi Prasetyo.pdf](http://eprints.ipdn.ac.id/22539/0Ahttp://eprints.ipdn.ac.id/22539/1/32.0317_Wadi Prasetyo.pdf)
- [2] J. Pradana and R. Nugraheni, "MENYELAMI HARAPAN DI TENGAH BAYANG-BAYANG KERESAAN KERJA (Studi Pada Kantor Sekretariat Daerah Kabupaten Grobogan)," *Diponegoro J. Manag.*, vol. 10, no. 3, pp. 1–15, 2021, [Online]. Available: <http://ejournals-s1.undip.ac.id/index.php/dbr>
- [3] Y. Yang, M. Chi, X. Bi, and Y. Xu, "How does the anthropomorphism of service robots impact employees' role service behavior in the workplace?," *Int. J. Hosp. Manag.*, vol. 122, no. 103857, 2024, doi: <https://doi.org/10.1016/j.ijhm.2024.103857>.
- [4] M. Raihanuddin, R. A. Karania, and A. M. Sujana, "Dampak Kebijakan Asn Dan Pppk Paruh Waktu Terhadap Eksistensi Guru Honorary employees," *J. Pahlawan*, vol. 21, no. 2, pp. 258–268, 2025, doi: <https://doi.org/10.57216/pah.v21i2.9>.
- [5] A. G. Ozanne and M. R. Carlos, "An exploratory study of workers in the residential aged care sector of New Zealand: what drives them to stay or leave?," *Int. J. Soc. Econ.*, vol. 49, no. 6, pp. 867–881, 2022, doi: <https://doi.org/10.1108/IJSE-09-2021-0544>.
- [6] H. D. Anjani, A. Nurhayati, and A. Kusumaningsih, *Manajemen Sumber Daya Manusia diperkaya dengan Studi Kasus Bidang Agribisnis*. Indonesia: Gadjah Mada University Press, 2024.
- [7] R. A. Sanjaya, H. Firlana, and M. B. Priyatno, "Faktor Motivasi Kerja Yang Mempengaruhi Produktivitas Pegawai Sektor Publik Di Indonesia," *J. Lentera Bisnis*, vol. 14, no. 2, pp. 2022–2038, 2025, doi: [10.34127/jrlab.v14i2.1571](https://doi.org/10.34127/jrlab.v14i2.1571).
- [8] W. D. Dami, J. E. FoEh, and H. A. Manafe, "Pengaruh Employee Engagement, Komitmen Organisasi, dan Budaya Organisasi Terhadap Kinerja Karyawan Melalui Kepuasan Kerja Sebagai Variabel Mediasi (Suatu Kajian Studi Literatur Manajemen Sumberdaya Manusia)," *J. Ilmu Multidisiplin*, vol. 1, no. 2, pp. 514–526, 2022, doi: [10.47467/reslaj.v7i6.6894](https://doi.org/10.47467/reslaj.v7i6.6894).
- [9] S. Apriliana, Wi. Paramita, and A. W. Handaru, "Pengaruh Stres Kerja dan Lingkungan Kerja terhadap Komitmen Organisasi," *J. Bisnis, Manajemen, dan Keuangan*, vol. 2, no. 3, pp. 7211–731, 2021.
- [10] A. R. Putra and R. Mardikaningsih, "Kompensasi Dan Lingkungan Kerja Serta Pengaruhnya Terhadap Komitmen Organisasi," *Edunomika*, vol. 06, no. 01, pp. 44–53, 2022.
- [11] N. Suryaningsih and S. Winasis, "JIMEA | Jurnal Ilmiah MEA ( Manajemen , Ekonomi , dan Akuntansi )," *J. Ilm. MEA (Manajemen, Ekon. dan Akuntansi)*, vol. 9, no. 2, pp. 1142–1154, 2025.
- [12] E. Winata, *Manajemen Sumberdaya Manusia Lingkungan Kerja: Tinjauan dari Dimensi Perilaku Organisasi dan Kinerja Karyawan*. Indonesia: Pusat Pengembangan Pendidikan dan Penelitian Indonesia, 2022.
- [13] A. Hakim, W. Utari, and S. Hartati, "Pengaruh Kepuasan Kerja, Lingkungan Kerja, Dan

Kepemimpinan Terhadap Semangat Kerja Karyawan pada CV. Zaroha Kopi Liberika Meranti,” *J. Manaj. Dirgant.*, vol. 15, no. 1, pp. 54–61, 2022.

[14] M. N. Ruki, *Faktor-faktor kunci dalam kepuasan kerja dan kinerja pegawai*. Indonesia: Deepublish, 2024.

[15] L. Su and S. R. Swanson, “Perceived corporate social responsibility’s impact on the well-being and supportive green behaviors of hotel employees: The mediating role of the employee-corporate relationship,” *Tour. Manag.*, vol. 72, pp. 437–450, 2019, doi: <https://doi.org/10.1016/j.tourman.2019.01.009>.

[16] W. M. Mendenhall, T. L. Sincich, and N. S. Boydreau, *Statistics for engineering and the sciences student solutions manual*. Chapman and Hall/CRC, 2016.

[17] A. K. Henaulu and S. Ardian, “Uji Statistika Kualitas Pelayanan Bagi Wisatawan Difabel Pada Wisata Bahari (Studi Kasus Daerah Wisata Desa Suli),” *J. Sains, Teknol. dan Ind.*, vol. 18, no. 1, pp. 43–48, 2020, doi: 10.24014/sitekin.v18i1.11402.

[18] P. U. Gio and E. Rosmaini, *Belajar olah data dengan piranti lunak statistik*. Indonesia: Medan: USU Press, 2015.

[19] H. Usman and P. S. Akbar, *Pengantar Statistika (Edisi Ketiga): Cara Mudah Memahami Statistika*. Indonesia: Bumi Aksara., 2020.

[20] P. U. Gio, *Statistika Nonparametrik dengan SPSS, Minitab dan R*. INA-Rxiv, 2018.

[21] F. Mony, A. K. Henaulu, A. Soleman, R. Abdulmudy, T. D. Kaisupy, and A. A. A. Solissa, “Analisis SWOT: Strategi Pengembangan Pasar Modern Mardika di Kota Ambon,” *JUSTE (Journal Sci. Technol.)*, vol. 6, no. 1, pp. 31–42, 2025.

[22] A. A. Purwati and I. Wijaya, “Pengaruh Kepemimpinan Transformasional, Integritas, Kompetensi, Dan Komitmen Organisasi Terhadap Kinerja Karyawan Di PT. Golden Riau Jaya Pekanbaru,” *J. Sains, Teknol. dan Ind.*, vol. 16, no. 2, p. 132, 2019, doi: 10.24014/sitekin.v16i2.10443.