The Impact of Work Planning, Work Environment, and Supervision on Employee Performance: A Case Study of Medan Belawan Tax Service Office in 2024

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ABSTRACT

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| **Aims:** Most studies on employee performance focus on private sector organizations or general public administration. However, there is limited research specifically examining the impact of work planning, work environment, and supervision on employee performance within tax service offices, particularly in Indonesia.This study aims to analyze the influence of work planning, work environment, and supervision on employee performance at the Medan Belawan Pratama Tax Service Office, both partially and simultaneously.  **Study design:** The object of this research is work planning, work environment and supervision as independent variables and employee performance as the dependent variable.  **Place and Duration of Study:** This research was conducted at the Medan Belawan Pratama Tax Service Office, located at Jalan Kolonel Laut Yos Sudarso No. 27 KM 8.2, Tanjung Mulia, Medan Deli District, Medan City, North Sumatra Province, with postal code 20241.  **Methodology:** The population in this study amounted to 90 people, while the sample used was 88 people. Data collection methods in this study include interviews, questionnaires, and documentation. To analyze the data, multiple regression techniques were used with the help of the IBM SPSS version 24 computer program.  **Results:** The results of the analysis show that work planning has a positive and significant influence on employee performance at the Medan Belawan Pratama Tax Service Office. This is indicated by the t-count value which is greater than the t-table (6.108 > 1.988) at n = 88 with a significance level of 95%. In addition, the work environment also has a positive and significant influence on employee performance, as indicated by the t-count value > t-table (2.062 > 1.988) at a significance level of 95%. Supervision also has a positive and significant influence on employee performance, with the t-count value > t-table (4.639 > 1.988) at n = 88 with a significance level of 95%.  **Conclusion:** Simultaneously, work planning, work environment, and supervision have a positive and significant effect on employee performance. This is evidenced by the F-count value which is greater than the F-table (82.575 > 2.71). Thus, the hypothesis proposed in this study can be accepted. |

*Keywords: Work Planning, Work Environment, Supervision, Employee Performance, Tax Service Office*

1. INTRODUCTION

The Medan Belawan Pratama Tax Service Office carries out the mandate of the target revenue that has been imposed and is also required to provide excellent service to Taxpayers. Based on observations made regarding employee performance issues at the Medan Belawan Pratama Tax Service Office, there are still employees who arrive late due to taking care of household needs or getting stuck in traffic and employees do not immediately work when they arrive at work, even though working hours start at 07.30 WIB (Western Indonesian Time) but employees do not immediately work but instead chat and drink coffee or tea first, they start working around 09.00 WIB with the excuse that their leaders have not arrived.

The selection of the Medan Belawan Pratama Tax Service Office (KPP Pratama) as the research location is based on various strategic, operational, and empirical considerations that make it a relevant and significant study object. Economically, Medan Belawan is one of the main trade centers in Indonesia, especially because of the presence of Belawan Port which is the main gateway for export and import activities. As a consequence of this strategic position, KPP Pratama Medan Belawan has an important role in managing tax compliance from the business sector engaged in trade, industry, and logistics. The complexity of tax transactions in this area requires optimal employee performance so that tax services can run well and in accordance with applicable regulations. In addition, KPP Pratama Medan Belawan faces a number of unique challenges that are different from other tax offices. Employees in this office are faced with a high volume of taxpayers from the trade and logistics sectors who have diverse tax compliance characteristics.

This creates a dynamic work environment and demands a good work planning strategy, a conducive work environment, and effective leadership supervision to ensure that employees can work optimally. In terms of research, there are still limited studies that specifically examine employee performance in tax offices, especially in relation to work planning, work environment, and supervision. Most previous studies have focused more on the private sector or government agencies in general without considering the complexity of the taxation sector. Therefore, this study aims to fill this gap by examining how internal organizational factors affect employee performance in tax offices, especially in KPP Pratama Medan Belawan. Furthermore, based on initial observations and internal reports, variations in employee performance in this office were found which can be associated with the effectiveness of work planning, work environment conditions, and the supervision methods applied. This study is expected to provide empirical insight into the factors that affect employee performance in tax offices and provide recommendations for policy makers to improve the effectiveness of human resource management in the taxation sector. Finally, the selection of KPP Pratama Medan Belawan is also supported by data accessibility and respondent participation which allows this study to be conducted in more depth. Thus, the results of this study not only contribute to the development of literature in the field of human resource management in the government sector but can also be a reference for improving policies and strategies to improve employee performance in other tax offices in Indonesia.

“Planning functions to achieve effectiveness and efficiency in organizational activities” (Philip, 2007; Ele et al., 2020; Dler & Tawfeq, 2021). “That way, efforts can be made to identify various obstacles, make corrections to deviations as soon as possible, so that the organization can be controlled properly. Careful planning from each organization indicates that the leadership and management of the organization concerned are able to provide products or services needed by the community through the work results of employees” (Epstein & Roy, 2001) (Weerawardena & Mort, 2006) . Planning develops the focus and flexibility of an organization to find out the best plan, what is needed, and good service quality. Based on previous research conducted by Anas et al. (2023) entitled *Pengaruh Perencanaan Kinerja dan Motivasi Kerja terhadap Kinerja Karyawan di KPRI UNM* (The Influence of Performance Planning on Employee Performance, Work Motivation on Employee Performance at KPRI UNM), the results of the study showed that performance planning partially had a significant effect on employee performance at KPRI UNM.

“Another factor that can affect employee performance is the work environment. A supportive work environment is one that has the ability to involve employees with their performance” (Bosma et al., 2020). Research by Raziq & Maulabakhsh (2015) states that “a good work environment, one of which is increasing employee production and performance which will ultimately increase organizational effectiveness and can reduce costs incurred by the company”.

Based on previous research conducted by Adha et al. (2019) entitled “*Pengaruh Motivasi Kerja, Lingkungan Kerja, Budaya Kerja Terhadap Kinerja Karyawan Dinas Sosial Kabupaten Jember* (The Influence of Work Motivation, Work Environment, Work Culture on the Performance of Social Service Employees of Jember Regency), the results of the study showed that the work environment had a significant effect on the performance of Social Service employees of Jember Regency”. Based on previous research conducted by Abyad (2013) entitled “*Pengaruh Pengawasan Terhadap Kinerja Pegawai Pada Kantor Bappeda Kabupaten Kutai Kartanegara* (The Influence of Supervision on Employee Performance at the Bappeda Office of Kutai Kartanegara Regency), the results of the study showed that there was a very strong influence between the supervision variable on employee work performance at the Bappeda of Kutai Kartanegara Regency”.

“Employee performance is a key factor in achieving the effectiveness and efficiency of an organization” (Ongwae et al., 2018; Diamantidis & Chatzoglou, 2019; Abdelwahed & Doghan, 2023), including government institutions such as the Medan Belawan Pratama Tax Service Office. Employees who have optimal performance will contribute to improving the quality of public services and achieving institutional targets (El-Ghalayini, 2017). Therefore, it is important to understand the factors that influence employee performance, such as work planning, work environment, and supervision.

Good work planning allows employees to have a clear direction and purpose in carrying out their duties (Bucăţa & Rizescu, 2017; Rony et al., 2023). With systematic planning, employees can work more effectively and efficiently. In addition, a conducive work environment also plays a role in increasing employee productivity (Jaskiewicz & Tulenko, 2012; Anitha J, 2014; Zhenjing et al., 2022). Factors such as physical comfort, relationships between employees, and work culture can have a significant impact on individual and organizational performance (Kamarulzaman et al., 2011; Kegel, 2017). On the other hand, optimal supervision can ensure that employees work in accordance with established procedures, thereby increasing accountability and work quality (Ellinger et al., 2003; Gruman & Saks, 2011; (Isnaini et al., 2025).

Given the importance of these three factors, this study aims to analyze the influence of work planning, work environment, and supervision on employee performance at the Medan Belawan Pratama Tax Service Office. With this research, it is expected to provide insight and recommendations for related parties in improving employee performance to support the achievement of organizational goals. Based on the above, it is necessary to conduct research with an analysis of the Influence of work planning, work environment and supervision on Employee Performance at the Medan Belawan Pratama Tax Service Office in 2024.

2. methodology

This research was conducted at the Medan Belawan Pratama Tax Service Office, Medan Deli District, Medan City, North Sumatra Province. The objects of this research are: work planning, work environment and supervision as independent variables and employee performance as the dependent variable.

**Table 1. Operational Definition of Variables**

|  |  |  |  |
| --- | --- | --- | --- |
| Variables | Variable Concept | Indicator | Scale |
| Work planning (X1) | The result of the planning process is a list of provisions regarding future action steps concerning what activities, who will implement them, where, when the schedule is and how many resources will be used, as well as various information regarding benchmarks, in order to achieve results.  Adisaputro (2010:89) | Operational work planning is measured by the following indicators:  1. Work results  2. Work behavior  3. Employee development plans  According to Aguinis (2013) | Likert |
| Work environment (X2) | Everything that is around employees and can influence them in carrying out the tasks assigned to them, for example with air conditioning (AC), adequate lighting and so on.  (Nuraini, 2013:97) | The work environment is operationally measured:  1. Physical environment  2. Non-physical environment  (Sedarmayanti, 2016:46) | Likert |
| Supervision (X3) | The most essential management function, no matter how good the work activities are without supervision, the work cannot be said to be successful.  (Sutrisno, 2014:138) | Operationally, monitoring variables are measured by 4 indicators, namely:  1. Setting standards (Standards)  2. Measurement (Measurement)  3. Comparing (Compare)  4. Taking action (Action)  (Satriadi, 2016:290) | Likert |
| Employee performance (Y) | The results of work in terms of quality and quantity achieved by an employee in carrying out his duties in accordance with the responsibilities given to him.  (Mangkunegara, 2017:67) | Employee performance is operationally measured by the following indicators:  1. Quality  2. Quantity  3. Cooperation  4. Responsibility  5. Initiative  Mangkunegara (2017:70) | Likert |

Source: Processed by researchers (2024)

**Population and Sample**

Sujarweni and Endrayanto (2012:13) say that “population is a generalization area consisting of objects/subjects that have certain qualities and characteristics determined by researchers to be studied and then conclusions drawn”. Meanwhile, according to Arikunto (2010:173) population is all research objects. The population in this study were all employees of the Medan Belawan Pratama Tax Service Office, 90 people. Population and Sample

Sujarweni and Endrayanto (2012:13) say that “population is a generalization area consisting of objects/subjects that have certain qualities and characteristics determined by researchers to be studied and then conclusions drawn”. Meanwhile, according to Arikunto (2010:173) “population is all research objects. The population in this study were all employees of the Medan Belawan Pratama Tax Service Office, 90 people. The sampling technique used in this study was non-probability sampling. Non Probability Sampling is a sampling technique that does not provide equal opportunities or chances for each element or member of the population to be selected as a sample”, Sugiyono (2022:82). The non probability sampling technique chosen is saturated sampling (census). According to Sugiyono (2022:85) “saturated sampling technique is a sampling determination technique where all members of the population are used as samples. So, the number of samples used in this study was 88 employees excluding the Head of Office and Researchers”.

This study uses two main methods, namely field research and library research. Field research is conducted by collecting data directly from agencies and employees as respondents through observation, interviews, and questionnaires. Observations are conducted by directly observing the problems being studied, while interviews are used to obtain data through questions and answers with authorized parties. In addition, questionnaires are distributed to respondents to obtain opinions or responses that are relevant to the study. Meanwhile, library research is conducted by reading and studying various sources, such as books, journals, and scientific works related to human resource management and research objects. This method aims to obtain secondary data that can be used as a comparison between theory and reality in the field.

In this study, the data analysis technique used is multiple linear regression analysis and uses a tool in the form of SPSS computer software. SPSS (Statistical Package for Social Sciences) is a computer program used to analyze data with statistical analysis, the SPSS used in this study is SPSS version 24.

Data quality testing in this study was carried out through validity and reliability tests. Valid instruments will provide accurate measurements of the assessment in the questionnaire. Reliability testing uses the Cronbach's Alpha method, where a variable is said to be reliable if the Cronbach Alpha value is > 0.60. The closer to 1, the higher the data reliability, indicating that the instrument used can produce consistent data even though it is used at different times. The classical assumption test is carried out to ensure that the sample used can be analyzed and the prediction model designed is in accordance with a series of data. This test includes three main tests, namely the normality test, the multicollinearity test, and the heteroscedasticity test.

**Multiple Linear Regression Analysis**

According to Sugiyono (2020:210) explains that multiple linear regression analysis is an analysis tool used to predict changes in the value of a particular variable if another variable changes. Multiple linear regression analysis is used to determine the direction of the relationship between the independent variables, namely X1 (work planning), X2 (environment), and X3 (supervision) and the dependent variable, namely Y (employee performance) whether each has a positive or negative influence

The multiple linear regression equation in this study is as follows:

Y = a + b1X1+ b2X2+b3X3 + e

Description:

Y = Employee performance

X1 = Work planning

X2 = Work environment

X3 = Supervision

a = Constant

b1 = Regression coefficient of Work planning

b2 = Regression coefficient of Work environment

b3 = Regression coefficient of Supervision

e = Error

a. Partial Significance Test (t-Test)

The t-statistic test is used to test how far the influence of the independent variable is partially on the dependent variable or to see which variable has a dominant influence among the existing variables. The steps in decision making for the t-test are to look at the significant value, if the sig α value <0.05 then it can be concluded that the independent variable partially has a significant effect on the dependent variable or the hypothesis is accepted. Likewise, if the sig α value> 0.05 then it can be concluded that the independent variable partially does not have a significant effect on the dependent variable or the hypothesis is rejected, Ghozali (2016:97).

With the decision-making rules:

H0: b1, b2, b3 = 0 (work planning, work environment and supervision partially do not affect employee performance at the Medan Belawan Pratama Tax Service Office).

H1: b1, b2, b3 ≠ 0 (work planning, work environment and supervision partially influence employee performance at the Medan Belawan Pratama Tax Service Office).

The t-test is conducted to determine whether the independent variables partially have a significant effect on the dependent variable. In this case, t count is compared with t table with the following conditions: If the t count value < t table then H0 is accepted and H1 is rejected, at α 5%. This means that the independent variables partially do not have a significant effect on the dependent variable. If the t count value > t table then H0 is rejected and H1 is accepted, at α 5%. This means that the independent variables partially have a significant effect on the dependent variables.

b. Simultaneous Significance Test (F Test)

The F statistical test basically shows whether all independent variables included in the model have a simultaneous or joint influence on the dependent variable. The steps in decision making for the F test are to look at the significant value, if the sig α value <0.05 then it can be concluded that the independent variables simultaneously or jointly have a significant effect on the dependent variable or the hypothesis is accepted. Likewise, if the sig α value> 0.05 then it can be concluded that the independent variables simultaneously or jointly do not have a significant effect on the dependent variable or the hypothesis is rejected, Ghozali (2016:96).

With the decision-making rules:

H0: b1, b2, b3 = 0 (work planning, work environment and supervision simultaneously do not affect employee performance at the Medan Belawan Pratama Tax Service Office).

H1: b1, b2, b3 ≠ 0 (work planning, work environment and supervision simultaneously influence employee performance at the Medan Belawan Pratama Tax Service Office).

If F count < F table, then H0 is accepted and H1 is rejected, at α = 5%. This means that the independent variables simultaneously do not have a significant effect on the dependent variable. If F count > F table l, then H0 is rejected and H1 is accepted, at α = 5%. This means that the independent variables simultaneously have a significant effect on the dependent variable.

c. Determination Coefficient Test

According to Nugroho (2005:118) the determination coefficient (R2) aims to determine how much the independent variable is able to explain the dependent variable. With the help of SPSS program processing, the determination coefficient (R2) is located in the Summary model table and is written as R Square. The determination coefficient value is between 0 and 1 (0 <R2 <1). A value close to one means that the independent variables provide almost all the information needed to predict the dependent variables.

3. results and discussion

**Descriptive Statistics**

From the data obtained for the variables of work planning, work environment and supervision as well as employee performance, the following general description of the results of descriptive statistical research can be seen:

**Table 2. Descriptive Statistics**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | **Instrument** | **Frequency (Percentage)** | | | | | |
| **5** | **4** | **3** | **2** | **1** | **Total** |
| Employee Performance (Y) | * + - 1. KP1       2. KP2       3. KP3       4. KP4       5. KP5       6. KP6       7. KP7       8. KP8       9. KP9       10. KP10 | 38,6  39,8  33,0  33,0  31,8  42,0  26,1  39,8  36,4  37,5 | 55,7  60,2  61,4  61,4  64,8  58,0  64,8  59,1  58,0  62,5 | 5,7  0  5,7  5,7  3,4  0  9,1  1,1  5,7  0 | 0  0  0  0  0  0  0  0  0  0 | 0  0  0  0  0  0  0  0  0  0 | 100  100  100  100  100  100  100  100  100  100 |
| Work planning  (X1) | * + - 1. PK1       2. PK2       3. PK3       4. PK4       5. PK5       6. PK6       7. PK7       8. PK8       9. PK9       10. PK10 | 26,1  36,4  31,8  22,7  22,7  35,2  29,5  31,8  33,0  27,3 | 61,4  62,5  64,8  58,0  70,5  64,8  67,0  53,4  63,6  63,6 | 12,5  1,1  3,4  18,2  6,8  0  3,4  13,6  3,4  9,1 | 0  0  0  1,1  0  0  0  1,1  0  0 | 0  0  0  0  0  0  0  0  0  0 | 100  100  100  100  100  100  100  100  100  100 |
| Work environment (X2) | * + - 1. LK1       2. LK2       3. LK3       4. LK4       5. LK5       6. LK6       7. LK7       8. LK8       9. LK9       10. LK10 | 42,0  30,7  37,5  44,3  28,4  39,8  37,5  35,2  31,8  34,1 | 58,0  61,4  55,7  53,4  63,6  59,1  51,1  59,1  63,6  55,7 | 0  4,5  6,8  2,3  4,5  1,1  5,7  4,5  4,5  8,0 | 0  2,3  0  0  2,3  0  4,5  1,1  0  1,1 | 0  1,1  0  0  1,1  0  1,1  0  0  1,1 | 100  100  100  100  100  100  100  100  100  100 |
| Supervision  (X3) | 1. P1 2. P2 3. P3 4. P4 5. P5 6. P6 7. P7 8. P8 9. P9 10. P10 | 35,2  39,8  34,1  31,8  30,7  35,2  28,4  36,4  39,8  38,6 | 56,8  51,1  59,1  63,6  58,0  56,8  60,2  62,5  56,8  58,0 | 6,8  9,1  6,8  4,5  11,4  6,8  10,2  1,1  3,4  3,4 | 1,1  0  0  0  0  1,1  1,1  0  0  0 | 0  0  0  0  0  0  0  0  0  0 | 100  100  100  100  100  100  100  100  100  100 |

Based on Table 2, it can be concluded that the majority of respondents showed a positive attitude towards various aspects of work. In terms of performance achievement, 38.6% of respondents strongly agreed and 55.7% agreed that they strive to exceed the set work standards, while 39.8% strongly agreed and 60.2% agreed that the organization's work targets are carried out with calculations. As many as 33.0% strongly agreed and 61.4% agreed that they were able to complete more than the tasks given by their superiors, and 31.8% strongly agreed and 64.8% agreed that work can be completed on time. In addition, 42.0% strongly agreed and 58.0% agreed that work knowledge helps in solving problems, and 26.1% strongly agreed and 64.8% agreed that work can be done effectively without much instruction from superiors. In terms of creativity, 39.8% strongly agreed and 59.1% agreed that high creativity helps in achieving better work, while 22.7% strongly agreed and 70.5% agreed that they show creativity when given the opportunity. As many as 35.2% strongly agree and 64.8% agree that they are able to present creative solutions in their work. Meanwhile, in terms of responsibility, 36.4% strongly agree and 58.0% agree that they are responsible for the facilities used, and 37.5% strongly agree and 62.5% agree that they are responsible for their respective jobs.

Regarding work procedures, 26.1% strongly agree and 61.4% agree that standard operating procedures (SOPs) help clarify tasks and responsibilities, while 31.8% strongly agree and 64.8% agree that SOPs make work easier. In terms of proposals and innovations, 22.7% strongly agree and 58.0% agree that they propose new ways to achieve work goals. Meanwhile, 33.0% strongly agree and 63.6% agree that they are responsible for completing work on time, and 27.3% strongly agree and 63.6% agree that they can be held accountable for decisions taken in their work.

In terms of work environment, 42.0% strongly agree and 58.0% agree that the lighting in the workplace is good enough, while 30.7% strongly agree and 61.4% agree that the lighting equipment in the workspace is adequate. In addition, 37.5% strongly agree and 55.7% agree that air circulation is sufficient, and 44.3% strongly agree and 53.4% ​​agree that the condition of the building is well maintained. In terms of work comfort, 39.8% strongly agree and 59.1% agree that the noise level affects work focus, while 37.5% strongly agree and 51.1% agree that the space provided by the company supports the work process. In terms of security, 35.2% strongly agree and 59.1% agree that the security unit works well, while 31.8% strongly agree and 63.6% agree that the workplace provides a sense of security. As many as 34.1% strongly agree and 55.7% agree that they do not experience conflict with fellow employees, and 35.2% strongly agree and 56.8% agree that leaders directly supervise employees.

In terms of supervision, 39.8% strongly agree and 51.1% agree that supervision is carried out to evaluate work standards, and 34.1% strongly agree and 59.1% agree that supervision is used to measure employee performance. As many as 36.4% strongly agree and 62.5% agree that supervision provides corrective action in correcting errors, and 39.8% strongly agree and 56.8% agree that work procedures help employees reduce errors. Finally, 38.6% strongly agree and 58.0% agree that leaders take firm action if there is a violation of the rules.

Thus, the survey results show that the majority of respondents have a positive view of the work environment, responsibility, creativity, security, and supervision, which support their performance in the company.

**Hypothesis testing simultaneously with the F test and partially with the t test.**

**Hypothesis Testing with the t Test**

Hypothesis testing with the t test, namely by paying attention to the calculated t value from the regression results to determine the effect of the independent variable partially on the dependent variable with a significance level in this study using alpha 5% or 0.05. The value of the calculated t test can be seen from the p-value (in the Sig. column) on each independent variable, if the p-value is smaller than the specified level of significance or the calculated t (in the t column) is greater than the t table (calculated from two-tailed α = 5% df-k, k is the number of independent variables), then the value of the independent variable partially has a significant effect on the dependent variable (in the sense that Ha is accepted and Ho is rejected).

The method for determining the t table uses a significance level of 5%, with df = n-k-1 (in this study df = 88 - 4 - 1 = 83), so that the t table value is 1.988 presented in table 3 as follows:

**Table 3. Partial Test (t-Test)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficientsa** | | | | | | |
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| B | Std. Error | Beta |
| 1 | (Constant) | 1.158 | 2.935 |  | .395 | .694 |
| Work Planning | .555 | .091 | .501 | 6.108 | .000 |
| Work Environment | .139 | .068 | .136 | 2.062 | .042 |
| Supervision | .350 | .076 | .351 | 4.639 | .000 |
| a. Dependent Variable: Employee Performance | | | | | | |

Source: Data processed 2024

Based on the table above, it is known that the t-value of each independent variable partially affects the dependent variable, namely:

1. The work planning variable has a p-value (in the Sig. column) of 0.000 <0.05, meaning significant, while the t-count of 6.108> from the t table of 1.988 means significant. This means that work planning has a positive and significant effect on employee performance.
2. The work environment variable has a p-value (in the Sig. column) of 0.042 <0.05, meaning significant, while the t-count of 2.062> from the t table of 1.988 means significant. This means that the work environment has a positive and significant effect on employee performance.
3. The supervision variable has a p-value (in the Sig. column) of 0.000 <0.05, meaning significant, while the t-count of 4.639> from the t table of 1.988 means significant. This means that supervision has a positive and significant effect on employee performance.

**Hypothesis Testing with F Test**

The results of the F test show that the independent variables simultaneously affect the dependent variable, if the p-value (in the sig. column) is smaller than the specified level of significance (5%), or the calculated F (in the F column) is greater than the F table. The F table is calculated using df1 = k-1, and df2 = n – k, namely df1 = 4 – 1 = 3 and df2 = 88 – 4 = 84, so that the F table value is 2.71. Meanwhile, the results of the F test with the help of the SPSS program can be seen in the table below:

**Table 4. Simultaneous Test Results (F Test)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ANOVAa** | | | | | | |
| Model | | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 735.501 | 3 | 245.167 | 82.575 | .000b |
| Residual | 249.397 | 84 | 2.969 |  |  |
| Total | 984.898 | 87 |  |  |  |
| a. Dependent Variable: Employee Performance | | | | | | |
| b. Predictors: (Constant), Supervision, Work Environment, Work Planning | | | | | | |

Source: Data processed 2024

Based on the F test or Anova test or simultaneous test above, the calculated F is 82.575 at α = 5% or 0.05 with a significant level of 0.000 because the probability value (0.000) is much smaller than 0.05, so the regression model can be used to predict that work planning (X1), work environment (X2), and supervision (X3) as independent variables simultaneously affect employee performance (Y). In other words, work planning (X1), work environment (X2), and supervision (X3) simultaneously have a positive and significant effect on employee performance, because the calculated F> F table, namely 82.575> 2.71. This means that if work planning (X1), work environment (X2), and supervision (X3) are jointly implemented in the organization, it will have an impact on increasing employee performance (Y). Conversely, if work planning (X1), work environment (X2), and supervision (X3) are not jointly implemented, it will have an impact on decreasing employee performance (Y).

**Analysis of Determination Coefficient (R2)**

“With the help of SPSS program processing, the determination coefficient (R2) is located in the Summary model table and is written as R Square” (Plonsky & Ghanbar, 2018; Sarstedt & Mooi, 2019). For multiple linear regression, it is better to use R Square that has been adjusted or written as Adjusted R Square because it is adjusted to the number of independent variables used in the study. The R Square/Adjusted R Square value is said to be good if it is above 0.5 because the R Square value ranges from 0 to 1. The results of the determination coefficient analysis in this study can be seen in the following:

**Table 5. Results of Determination Coefficient Analysis**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Model Summary** | | | | |
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | .864a | .747 | .738 | 1.723 |
| a. Predictors: (Constant), Supervision, Work Environment, Work Planning | | | | |

Source: Data processed 2024

The processed results in the table above show the adjusted determination coefficient (R2) value (Adjusted R Square) of 0.747. This means that 74.7% of the dependent variable (employee performance) is influenced or explained by the independent variables, namely work planning, work environment and supervision and the remaining 25.3% (100% - 74.7%) is influenced or explained by other variables outside the variables used in this study.

**Regression Equation Results**

To facilitate the reading of the results and interpretation of the regression analysis, the equation form is used. The results of the regression equation analysis in this study can be seen in the following:

**Table 6. Multiple Linear Regression Test**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficientsa** | | | | | | |
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| B | Std. Error | Beta |
| 1 | (Constant) | 1.158 | 2.935 |  | .395 | .694 |
| Work Planning | .555 | .091 | .501 | 6.108 | .000 |
| Work Environment | .139 | .068 | .136 | 2.062 | .042 |
| Supervision | .350 | .076 | .351 | 4.639 | .000 |
| a. Dependent Variable: Employee Performance | | | | | | |

Source: Data processed 2024

The regression equation that has been formulated is processed using data to obtain the final equation, namely:

Y = 1,158 + 0,555X1 + 0,139X2 + 0,350X3

In this regression model, the constant value listed is 1.158 which can be interpreted as if the independent variables in the model are assumed to be equal to zero or the independent variables in this case work planning, work environment and supervision are applied, then employee performance will increase by 1.158 units.

The value of the regression coefficient β1 of 0.555 in this study can be interpreted as meaning that the work planning variable (X1) has an effect on employee performance (Y). This shows that when work planning is fulfilled, employee performance will increase by 0.555 units.

The value of the regression coefficient β2 of 0.139 in this study can be interpreted as meaning that the work environment variable (X2) has an effect on employee performance (Y). This shows that when the work environment variable is fulfilled, employee performance will increase by 0.139 units.

The value of the regression coefficient β3 of 0.350 in this study can be interpreted as meaning that the supervision variable (X3) has an effect on employee performance (Y). This shows that when the monitoring variables are met, employee performance will increase by 0.350 units.

**Evaluation of the Influence of Work Planning, Work Environment and Supervision on Employee Performance**

Based on the results of hypothesis testing, work planning, work environment, and supervision simultaneously have a positive and significant effect on employee performance at the Medan Belawan Pratama Tax Service Office. This result is in line with the theory that states that these factors play a role in improving employee performance. The majority of respondents agreed that they strive to achieve work results that exceed standards, carry out work targets in a planned manner, complete tasks on time, and work effectively and efficiently with little instruction from superiors. Creativity and responsibility for the work and facilities used are also supporting factors in achieving optimal performance.

Partially, work planning has been proven to have a positive and significant effect on employee performance. Clear Standard Operating Procedures (SOPs) help clarify employee duties and responsibilities, facilitate work implementation, and open up opportunities for employees to put forward new ideas, propose innovative solutions, and take creative approaches in completing tasks. Employees also feel responsible for completing work on time and being accountable for decisions taken.

A good work environment also has a positive effect on employee performance (Pawirosumarto et al., 2017). Factors such as adequate lighting, good air circulation, well-maintained building conditions, and a harmonious and respectful work atmosphere contribute to comfort and productivity. Low noise levels, sufficient space to move around, and a good security system also help create a conducive and conflict-free work environment. In addition, supervision plays an important role in improving employee performance (Nwosu et al., 2021). Leaders conduct direct supervision to evaluate established standards, assess performance objectively, and provide motivation to increase productivity. Supervision also functions as a tool for correcting errors that occur and ensuring that work procedures are running well to minimize errors (Alam et al., 2024). Strict action against violations of rules also plays a supporting factor in maintaining discipline and work effectiveness in the office.

4. Conclusion

This study aims to see the influence of work planning, work environment and supervision on employee performance both simultaneously and partially. The results of this study provide the following conclusions: 1) Work planning, work environment and supervision simultaneously have a positive and significant effect on employee performance at the Medan Belawan Pratama Tax Service Office, this is supported by the results of the F-count analysis> F-table (82.575> 2.71) at n = 88 at a significance level of 95%; 2) Work planning partially has a positive and significant effect on employee performance at the Medan Belawan Pratama Tax Service Office, this is supported by the results of the t-count analysis> t-table (6.108> 1.988) at n = 88 at a significance level of 95%; 3) The work environment partially has a positive and significant effect on employee performance at the Medan Belawan Pratama Tax Service Office, this is supported by the results of the t-count analysis> t-table (2.062> 1.988) at n = 88 at a significance level of 95%; 4) Partial supervision has a positive and significant effect on employee performance at the Medan Belawan Pratama Tax Service Office, this is supported by the results of the t-test analysis> t-table (4.639> 1.988) at n = 88 at a significance level of 95%. Based on the conclusions in this study, several suggestions can be put forward as follows: 1) The Head of the Medan Belawan Pratama Tax Service Office should review the job descriptions of his subordinates to find out whether the tasks given have been carried out properly or otherwise. So that the supervision that occurs does not lead to supervision that can reduce employee performance; 2) The Medan Belawan Pratama Tax Service Office is advised to pay attention to and improve factors that can improve employee performance to achieve its goals; 3) For further researchers, research can be conducted by expanding the scope of research objects by examining variables that affect employee performance and increasing the research period so that maximum results can be obtained.

Disclaimer (Artificial intelligence)

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc.) and text-to-image generators have been used during the writing or editing of this manuscript.

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