

THE INFLUENCE OF HUMAN RESOURCE COMPETENCIES AND WORK ENVIRONMENT ON THE PRODUCTIVITY OF THE IMPLEMENTATION OF THE BENGKULU CITY HALL CONSTRUCTION PROJECT

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Abstract

Work productivity is a crucial factor in determining the success of construction projects, particularly in large-scale public infrastructure development. This study aims to analyze the effect of human resource competence and work environment on productivity in the Phase I Development Project of Bengkulu City Hall. A quantitative approach with a survey method was applied, in which primary data were collected through questionnaires distributed to 77 construction workers directly involved in the project. The data were analyzed using multiple linear regression with statistical software. The results indicate that human resource competence has a positive and significant effect on work productivity. Similarly, the work environment also has a positive and significant impact on productivity. Simultaneously, the two independent variables significantly influence productivity with an F-value of 170.866, $p < 0.001$, and a coefficient of determination (R^2) of 0.822. These findings emphasize that improving worker competence through training and certification, along with providing a safe and conducive work environment, are effective strategies to enhance productivity in construction projects.

Keywords: Human Resource Competence, Work Environment, Work Productivity, Construction Project.

INTRODUCTION

The construction sector plays a strategic role in national development because it provides infrastructure that supports economic, social, and public service activities. The success of a construction project is determined not only by technical aspects and budget availability but also heavily dependent on the productivity of the workforce in the field. High productivity is a key indicator of project completion on time, with appropriate quality and cost (Hermawan, 2017). According to Chandra and Chien (2013), construction productivity is the ratio of work output to resource input used within a specific period. Higher productivity, the more efficient the project implementation process, which directly impacts time, cost, and quality. Robbins

(2011) emphasizes that productivity is influenced not only by technical factors but also by human resource (HR) competence and a supportive work environment.

However, in practice, many construction projects in Indonesia still face the problem of low productivity. The Bengkulu City Hall Phase I (Berendo Merah Putih) Construction Project is a strategic regional project with a high level of complexity. Observations indicate that the achievement of time targets and work quality are suboptimal due to delays, rework due to technical errors, and low work motivation (author). These conditions indicate internal problems, particularly related to workforce competency and the work environment.

Worker competency is a key factor in determining project success. Robbins, in Eksan and Dharmawan (2020), defines competency as an individual's capacity to complete tasks within their field. Suryana (2018) states that competency in construction projects includes technical skills, understanding of safety procedures, and problem-solving abilities. Several studies have shown a positive effect of competency on productivity, as demonstrated by Subiyanto and Septyarini (2021). However, the phenomenon at the Bengkulu City Hall project shows that many workers lack the skills relevant to their field of work and have not received basic training. As a result, work quality declines and completion takes longer, in line with Rohmat's (2020) findings that a mismatch between competency and tasks leads to work inefficiency.

In addition to competency, the work environment is also a determining factor. A healthy, safe, and comfortable work environment has been shown to increase worker motivation and concentration (Setiawan, 2019). Riza (2018) found that a harmonious relationship between workers and superiors can increase a sense of responsibility and commitment. However, field observations indicate that the work environment on the project is far from ideal. Some workers do not consistently use Personal Protective Equipment (PPE), and there is ineffective communication between workers and field foremen. This condition aligns with research by Karauwan et al. (2024), which confirms that the work

environment significantly influences productivity. Conversely, several other studies, such as those by Parashakti and Noviyanti (2021) and Ryani Dhyan et al. (2024), report that the work environment does not always significantly influence productivity in certain contexts.

These differing research findings highlight a research gap regarding the extent to which human resource competencies and the work environment influence worker productivity on construction projects, particularly public sector projects. Evaluation of these factors is crucial to improve the efficiency of state budget use and the success of infrastructure development.

In addition to its practical contribution to project management, this research is also relevant to the Sustainable Development Goals (SDGs) agenda. This research supports Goal 8: Decent Work and Economic Growth, particularly Target 8.5 on achieving productive and decent work and Target 8.8 on protecting workers' rights and a safe working environment. The aspect of improving workforce competency also relates to Goal 4: Quality Education, particularly Target 4.4 on improving technical and vocational skills (United Nations, 2023).

Based on the description above, this research was conducted to analyze the influence of human resource competency and the work environment on construction project productivity, using a case study of the Bengkulu City Hall Construction Project Phase I (Berendo Merah Putih).

LITERATURE REVIEW

Human Resource Competence

Human resource competence is defined as the combination of knowledge, skills, and attitudes required to perform work effectively. Spencer, in Wibowo (2017), defines competence as a fundamental characteristic that differentiates average performance from superior performance. Meanwhile, Sedarmayanti (2017)

emphasizes that competence serves as a benchmark for an individual's qualifications in carrying out tasks in accordance with organizational demands.

Human resource competence can be divided into technical, human, and conceptual, which complement each other in supporting performance

(Milkovich & Newman, 2017). Its development is influenced by experience, motivation, work culture, and organizational support (Zwell, in Wibowo, 2017). Therefore, improving competence through continuous training and development is crucial for HR to adapt to change and improve organizational effectiveness.

Work Environment

The work environment is the conditions surrounding workers that can influence their activities, both directly and indirectly. This environment includes physical aspects such as lighting, cleanliness, temperature, room layout, and work safety facilities, as well as non-physical aspects such as interpersonal relationships, communication, and organizational climate (Sedarmayanti, 2017). A good work environment will support the achievement of organizational goals through the comfort and sense of security felt by workers.

Research by Arianto (2019) shows that a conducive work environment can increase morale and performance, while a less supportive work environment can trigger stress, decrease motivation, and negatively impact productivity. This aligns with Nitisemito's (2018) opinion, which emphasizes that a healthy work environment is one that creates a harmonious work atmosphere and encourages positive social relationships among employees.

Work Productivity

Work productivity is one of the main indicators in assessing the effectiveness of the workforce in producing a specific output within a specified time period. According to Sinungan (2014), productivity is the ratio between work results and the resources used. The greater the results obtained with the same input, the higher the level of productivity. In the context of organizations and projects, productivity is viewed as a measure of efficiency, reflecting the workforce's ability to complete tasks according to established performance standards.

Furthermore, Sedarmayanti (2017) emphasized that work productivity relates not only to the quantity of output, but also to the quality and timeliness of work completion. Productivity reflects the optimal utilization of human resources to achieve organizational goals. This aligns with the International Labour Organization (ILO, 2018), which states that productivity is a key indicator of economic growth and sustainable development, as it is directly linked to increased efficiency, competitiveness, and workforce well-being.

A complete breakdown of the relationships between the variables in this study can be seen in the following figure:

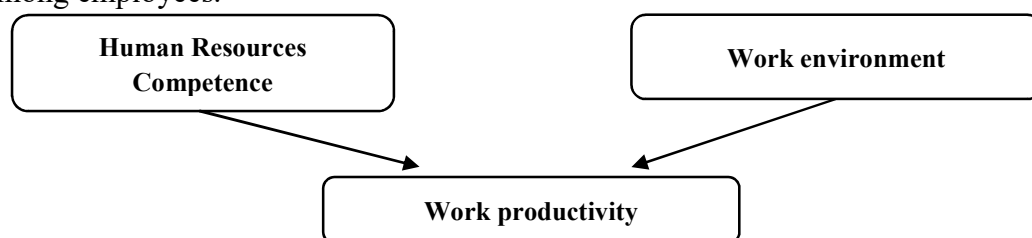


Figure 1 Research Paradigm

RESEARCH METHODS

This research uses a quantitative approach with an explanatory method. The aim is to

analyze the causal relationship between the independent variables, namely human resource competency and the work environment, and the dependent variable, construction project productivity. The population in this study was all workers involved in the Bengkulu City Hall Construction Project Phase I (Berendo Merah Putih), including workers, foremen, and technical staff. Purposive sampling was used based on the criteria of direct involvement in construction activities, resulting in 77 eligible respondents.

Primary data were collected through a questionnaire with a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree), designed to measure respondents' perceptions of workforce competency, work environment conditions, and achieved productivity levels. Secondary data were obtained from project documents, progress reports, and literature related to construction work productivity. Prior to use, the research instrument was tested for validity using Pearson Product Moment correlation and reliability using Cronbach's Alpha to ensure the validity and consistency of the questionnaire.

Data analysis techniques include descriptive statistical analysis to provide an overview of the characteristics of respondents and the distribution of answers, as well as classical assumption testing including normality, multicollinearity, and heteroscedasticity tests to ensure the feasibility of the regression model. Furthermore, multiple linear regression analysis is used to determine the effect of human resource competency and the work environment on work productivity. Hypothesis testing is carried out through a t-test to see the effect of each independent variable partially, and an F-test to determine the effect of both variables simultaneously. In addition, the coefficient of determination (R^2) is calculated to determine the contribution of the independent variables in explaining variations in productivity in construction project implementation. Thus, this research method is expected to be able to provide empirical evidence regarding the factors that influence work productivity in the Bengkulu City Hall Phase I construction project.

RESEARCH RESULT

Respondent Characteristics

Respondents' identities, including age, education level, employment status, and length of service, were determined using data from 77 workers involved in the Bengkulu City Hall Development Project.

Table 1 Respondent Characteristics

| Respondent Profile | Criteria | Frequency | Percentage |
|--------------------|--------------------------------|-----------|------------|
| Age | 20-25 years | 1 | 1% |
| Highest Education | 26-35 years | 32 | 42% |
| | 36-45 years | 20 | 26% |
| | Over 45 years | 24 | 31% |
| Employment Status | Elementary School/Equivalent | 12 | 16% |
| Respondent Profile | Junior High School/Equivalent | 29 | 38% |
| | High School/Equivalent | 33 | 43% |
| | Bachelor's Degree (Equivalent) | 3 | 4% |
| | | | |
| Age | Employee | 74 | 96% |
| | Field Worker | 3 | 4% |
| Highest Education | 1-3 Years | 5 | 6% |
| | 3-5 Years | 32 | 42% |
| | Over 5 Years | 40 | 52% |
| | | | |

Source: Researcher Data Processing, 2025

In Table 1, the majority of respondents (42%) were aged 26–35, and 31% were aged 45 and over. This indicates that respondents were generally of productive age with a good level of work maturity. In terms of education, the majority of respondents had secondary education, with 43% having a high school diploma and 38% having a junior high school diploma, while only 4% were college graduates. This indicates that project implementation was largely supported by a workforce with secondary education, who relied on technical skills in the field.

In terms of work status and experience, 96% of respondents were employed, and 52% had more than five years of work experience. This indicates that the majority of respondents possessed sufficient practical skills and experience to support the project's success. Therefore, these respondent characteristics are important factors in measuring the influence of human resource competency and the work environment on the productivity of the Bengkulu City Hall construction project.

Validity and Reliability Test

Table 2 Validity and Reliability Test

| Variables | Pernyataan | r Hitung | r Tabel | Ket. |
|--------------------------------|------------|----------|---------|-------|
| Human Resource Competence (X1) | X1.1 | 0.835 | 0,2242 | Valid |
| | X1.2 | 0.693 | 0,2242 | Valid |
| | X1.3 | 0.552 | 0,2242 | Valid |
| | X1.4 | 0.543 | 0,2242 | Valid |
| | X1.5 | 0.699 | 0,2242 | Valid |
| | X1.6 | 0.814 | 0,2242 | Valid |
| Work Environment (X2) | X2.1 | 0.778 | 0,2242 | Valid |
| | X2.2 | 0.382 | 0,2242 | Valid |
| | X2.3 | 0.800 | 0,2242 | Valid |
| | X2.4 | 0.744 | 0,2242 | Valid |
| | X2.5 | 0.767 | 0,2242 | Valid |
| | X2.6 | 0.635 | 0,2242 | Valid |
| | Y1 | 0.757 | 0,2242 | Valid |

| | | | | |
|--------------------------|-----|-------|--------|-------|
| Work Productivity (Y) | Y2 | 0.568 | 0,2242 | Valid |
| | Y3 | 0.723 | 0,2242 | Valid |
| | Y4 | 0.660 | 0,2242 | Valid |
| | Y5 | 0.715 | 0,2242 | Valid |
| | Y6 | 0.562 | 0,2242 | Valid |
| | Y7 | 0.667 | 0,2242 | Valid |
| | Y8 | 0.676 | 0,2242 | Valid |
| | Y9 | 0.696 | 0,2242 | Valid |
| | Y10 | 0.659 | 0,2242 | Valid |
| | Y11 | 0.532 | 0,2242 | Valid |
| | Y12 | 0.660 | 0,2242 | Valid |

In Table 2, the validity index value for each item of the Human Resources Competence, Work Environment, and Work Productivity variable questions is measured through the

product moment correlation value which has a value above the valid coefficient value, namely 0.2242, so each question is declared valid.

Table 3 Reliability Test Results

| No | Variables | <i>Alpha Cronbach</i> | <i>Alpha</i> | Information |
|----|--------------------------------|-----------------------|--------------|-------------|
| 1 | Human Resource Competence (X1) | 0,779 | 0,7 | Reliabel |
| 2 | Work Environment (X2) | 0,771 | 0,7 | Reliabel |
| 3 | Work Productivity (Y) | 0,879 | 0,7 | Reliabel |

Source: Data Processing with SPSS 25, 2025

Meanwhile, the reliability value of the statement items in the questionnaire for the three variables above shows a Cronbach's alpha value greater than 0.70. These results indicate

that the questionnaire items on the variables of Human Resource Competence, Work Environment, and Work Productivity can measure the variables and can be said to have high accuracy to be used as variables in a study

Classical Assumption Test

Normality Test Normality can be tested statistically using the Kolmogorov-

Smirnov test. If the p-value is > 0.05 , the data is normally distributed. The results of the Kolmogorov-Smirnov test are as follows:

Table 4 Normality Test Results
One-Sample Kolmogorov-Smirnov Test

| | | Unstandardized Residual |
|----------------------------------|----------------|-------------------------|
| N | | 77 |
| Normal Parameters ^{a,b} | Mean | .0000000 |
| | Std. Deviation | 3.07535355 |
| Most Extreme Differences | Absolute | .078 |
| | Positive | .055 |
| | Negative | -.078 |
| Test Statistic | | .078 |
| Asymp. Sig. (2-tailed) | | .200 ^{c,d} |

a. Test distribution is Normal.

b. Calculated from data.

Source: Data Processing with SPSS 25, 2025

Based on Table 4, the Kolmogorov-Smirnov test shows that the significance value of 0.2 is greater than 0.05, indicating that the data obtained are normally distributed, thus meeting one of the assumptions for hypothesis testing.

Multicollinearity Test

Multicollinearity issues can be detected by examining the VIF value. If the VIF value is less than 10, the model can be concluded to be free of multicollinearity. The VIF values in this study are as follows:

Table 5 Multicollinearity Test Results

| Variables | <i>Tolerance</i> | VIF |
|-----------------------------|------------------|------------|
| Human Resource Competencies | 0.346 | 2.887 |
| Work Environment | 0.346 | 2.887 |

Sumber: Olah Data dengan SPSS 25, 2025

Table 5 shows that the Human Resource Competence variable has a VIF value of 2.887 and the Work Environment variable has a VIF value of 2.887. Both VIF values are below the established limit of 10. These results indicate that there is no multicollinearity problem among the independent variables in the model.

Heteroscedasticity Test

One way to detect heteroscedasticity is to examine the scatterplot graph between the predicted values of the dependent variable, ZPRED, and its residual values (SRESID). The

basis for determining whether or not heteroscedasticity is present is as follows:

- If there is a specific pattern, such as the points forming a regular pattern (wavy, widening, then narrowing), this indicates heteroscedasticity.
- If there is no clear pattern, and the points are spread above and below 0 (zero) on the Y-axis, this indicates the model is free from heteroscedasticity.

The following image is used to detect the presence or absence of heteroscedasticity symptoms:

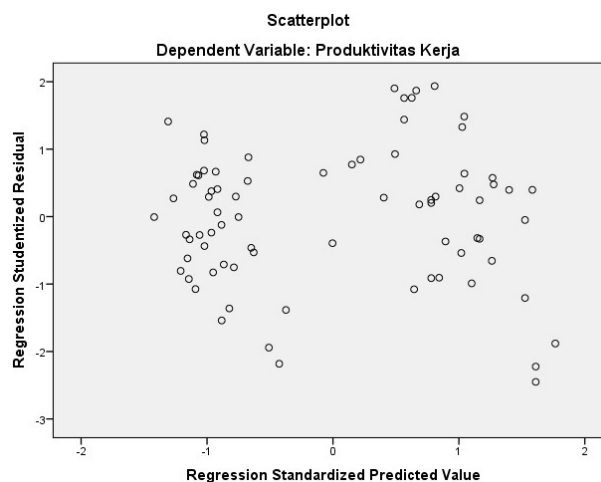


Figure 2. Heteroscedasticity Test with Scatterplot

Source: Data Processing with SPSS, 2025

From Figure 2, it can be seen that there is no heteroscedasticity in the model because there is no clear pattern in the image, and the points are spread above and below the number 0 on the Y axis. This indicates that in the model, the variance of the residuals from one observation to another is the same or constant. Therefore, the assumption of no heteroscedasticity or homoscedasticity has been met for the regression equation.

Multiple Linear Regression Model

The Multiple Linear Regression Model is useful for finding an equation model for how Human Resources and the Work Environment influence Work Productivity. SPSS 25 software is used to perform the multiple linear regression calculation as follows:

Table 6 Regression Coefficient Results

| Model | Coefficients ^a | | | | | | |
|--------------------------------|-----------------------------|------------|---------------------------|-------|------|-------------------------|-------|
| | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Collinearity Statistics | |
| | B | Std. Error | Beta | | | Tolerance | VIF |
| 1 (Constant) | 4.005 | 2.011 | | 1.992 | .050 | | |
| Kompetensi Sumber Daya Manusia | .945 | .156 | .503 | 6.041 | .000 | .346 | 2.887 |
| Lingkungan Kerja | .866 | .160 | .450 | 5.398 | .000 | .346 | 2.887 |

a. Dependent Variable: Produktivitas Kerja

Based on the results of the multiple linear regression analysis, the equation $Y = 4.005 + 0.945X_1 + 0.866X_2$ was obtained, where Y is work productivity, X₁ is human resource competency, and X₂ is the work environment. The constant value of 4.005 indicates the baseline productivity of the workforce even without the influence of competency or the work environment. The regression coefficient for human resource competency is 0.945, which is positive, indicating that the better the workforce competency, the higher the resulting productivity level. Meanwhile, the regression coefficient for the work environment is also positive, meaning that a more conducive work

environment leads to increased workforce productivity. Thus, it can be concluded that both human resource competency and the work environment have a positive and significant influence on work productivity in the Bengkulu City Hall Construction Project.

Hypothesis

Tests for the significance of regression coefficients are useful when determining the relationship between two variables, with one variable held constant or controlled.

Table 7 Partial Test Results

| Model | Regression Coefficient | t count | t Table | Sig. | Information |
|---------------------|------------------------|---------|---------|-------|----------------|
| $X_1 \rightarrow Y$ | 0,945 | 6,041 | 1,992 | 0,000 | H0 is rejected |
| $X_2 \rightarrow Y$ | 0,866 | 5,398 | 1,992 | 0,000 | H0 is rejected |

In the first hypothesis, namely the influence of Human Resource Competence on Work Productivity, the calculated t value of 6.041 is greater than the t table of 1.992, and it is known that sig. (0.000) is smaller than the significance level of α (0.05), so H₀ is rejected, meaning there is a significant influence between Human Resource Competence on Work Productivity in the Bengkulu City Hall Phase I construction project. The regression coefficient is positive, indicating that the higher the level of human resource competence, the higher the level of work productivity produced. Conversely, low workforce competence has the potential to reduce productivity in project implementation.

Testing the second hypothesis, namely the influence of the Work Environment on Work Productivity, the calculated t value of 5.398 is greater than the t table of 1.992, and it is known that sig. (0.005) is smaller than the significance level of α (0.05), so H₀ is rejected, meaning there is a significant influence between the Work Environment on Work Productivity. The regression coefficient is positive, indicating that better work environment conditions, both in terms of physical and social aspects, and supporting facilities, will have a positive impact on increasing workforce productivity. Conversely, a less conducive work environment has the potential to reduce

employee morale, efficiency, and productivity in the field.

Table 8 Simultaneous Hypothesis Test (F Test)

| ANOVA ^a | | | | | | |
|--------------------|------------|----------------|----|-------------|---------|-------------------|
| Model | | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 3319.380 | 2 | 1659.690 | 170.866 | .000 ^b |
| | Residual | 718.793 | 74 | 9.713 | | |
| | Total | 4038.173 | 76 | | | |

a. Dependent Variable: Produktivitas Kerja

b. Predictors: (Constant), Kompetensi Sumber Daya Manusia, Lingkungan Kerja

Source: Data processing using SPSS 25, 2025

Based on Table 8, the calculated F value is 170.866 with a sig. of 0.00, with $\alpha = 0.05$ (5%), and degrees of freedom ($df_1 = k = 2$ and $df_2 = n - (k + 1) = 77 - (2 + 1) = 74$). The F table is 3.12, indicating that the calculated F is greater than the F table ($170.866 > 3.12$). Furthermore, the sig. value is lower than the confidence level ($0.00 < 0.05$), indicating that H_0 is rejected. Thus, this study demonstrates a significant regression, indicating that Human Resource Competence and Work Environment simultaneously have a significant effect on

Work Productivity in Phase 1 of the Bengkulu City Hall Development Project.

Coefficient of Determination

The coefficient of determination measures the model's ability to explain variations in the dependent variable through the independent variables. According to Darma (2021), the coefficient of determination (R^2) is useful for assessing the extent of an indicated relationship, measuring whether changes in the independent variable will be accompanied by an equivalent change in the dependent variable. The coefficient of determination is obtained from the following calculation:

Table 9 Analysis of Determination Coefficient

| Model Summary ^b | | | | |
|----------------------------|-------------------|----------|-------------------|----------------------------|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | .907 ^a | .822 | .817 | 3.11664 |

a. Predictors: (Constant), Lingkungan Kerja, Kompetensi Sumber Daya Manusia

b. Dependent Variable: Produktivitas Kerja

Source: Data Processing with SPSS 25, 2025

$$Kd = r^2 \times 100\% = 0,907^2 \times 100\% = 82,2\%$$

The calculation results show a coefficient of determination of 82.2%, indicating that the variables Human Resource Competence and Work Environment influence Work Productivity by 82.2%, while the remaining 17.8% is influenced by other unobserved variables.

The Influence of Human Resource Competence on Work Productivity

Human Resource (HR) Competence is the combination of knowledge, skills, and work attitudes that a person possesses to carry out tasks effectively and efficiently. In the context of construction projects, HR competency is crucial for successful project implementation, particularly in terms of timeliness, quality of results, and efficient use of resources. According to Eksan (2020), competency is a person's ability to complete work based on their knowledge, skills, and work attitudes. Competent workers are able to understand technical specifications, master work safety procedures, and complete work independently and on time. The results of this study indicate that HR competency significantly influences Work Productivity. This is evidenced by the statistical test results, which obtained a t-value of 6.041, greater than the t-table of 1.992, with a significance value of 0.000, lower than the 0.05 level of significance. The null hypothesis (H_0) is rejected and the alternative hypothesis (H_1) is accepted, indicating a significant influence between HR Competence and Work Productivity. A positive regression coefficient indicates that higher worker competence leads to increased work productivity. Conversely, low worker competence has the potential to decrease productivity.

This research aligns with the research findings of Suwardi (2023) and Daffa Muahmmad Ak Irsyad (2022), which state that HR competence has a positive and significant effect on employee performance. High competence enables workers to better understand tasks, make quick decisions, and complete work to established quality standards. Improving HR competence through technical training, skills certification, and interpersonal skills development is a crucial strategy for

increasing construction project productivity, particularly in the Bengkulu City Hall Phase I construction project.

The Influence of the Work Environment on Work Productivity

The work environment is a crucial factor influencing the comfort, efficiency, and morale of workers in completing tasks in the field. According to Sunarsi (2020:24), the work environment is everything surrounding employees that can influence task performance, such as cleanliness, orderliness, security, and interpersonal relationships. A clean, safe, and conducive work environment can create a comfortable and harmonious work atmosphere, thus encouraging workers to perform optimally. In the context of construction projects, the work environment includes the physical conditions of the project site, the availability of supporting facilities, and the effectiveness of communication and cooperation among team members.

The results of this study indicate that the Work Environment significantly influences Work Productivity. This is evidenced by the calculated t-value of 5.398, which is greater than the t-table of 1.992, and the significance value (Sig.) of 0.000, which is less than the 5% significance level ($\alpha = 0.05$). The null hypothesis (H_0) is rejected and the alternative hypothesis (H_1) is accepted, indicating a significant and positive effect between the work environment and work productivity. A positive regression coefficient indicates that the better the work environment perceived by workers, the higher their work productivity. Conversely, if the work environment is inadequate, productivity can potentially decline due to discomfort, work stress, or other operational disruptions.

These results align with previous research by Purba (2019), which demonstrated that the work environment influences employee productivity. A good work environment provides a sense of security and comfort, thus encouraging employees to work optimally. Furthermore, research by Yumna and Pradana (2021) also states that the work environment can influence employees' emotional well-being.

Employees who feel comfortable and happy with their work environment tend to have higher loyalty and work enthusiasm. Creating a healthy, supportive, and structured work environment is a strategic step in increasing workforce productivity on construction projects, such as the Bengkulu City Hall Phase I construction project.

The Influence of Human Resource Competence and Work Environment on Work Productivity

Based on the results of simultaneous hypothesis testing, it was found that the variables Human Resource Competence and Work Environment significantly influenced Work Productivity in the Bengkulu City Hall Phase I construction project. This is evidenced by the F-test results, which showed a calculated F-value of 170.866, greater than the F-table of 3.12, and a significance value of 0.000, which is lower than the $\alpha = 0.05$ level of significance. Therefore, the null hypothesis (H_0) is rejected and the alternative hypothesis (H_1) is accepted, indicating that simultaneously there is a significant influence between Human Resource Competence and Work Environment on Work Productivity.

The coefficient of determination (R^2) value is 0.822, indicating that 82.2% of the variation in Work Productivity can be explained by variations in Human Resource Competence and the Work Environment simultaneously. The remaining 17.8% is influenced by other variables outside this research model, such as motivational factors, the wage system, leadership, or the technology used.

These results reinforce previous findings, including research by Jannah and Septayuda (2022), which concluded that the work environment and work competence significantly influence employee productivity at PT Trans Musi Palembang Jaya. This research also aligns with the results of research by Ersya Mayang Sari and Suroso (2024), which demonstrated a simultaneous influence between work environment and competence on productivity. These results confirm that the

combination of human resource quality and a conducive work environment is a crucial factor in driving increased workforce productivity, particularly in government-scale construction projects such as the construction of Bengkulu City Hall.

CONCLUSION

Based on the data analysis and discussion outlined previously regarding the influence of Human Resource (HR) Competence and the Work Environment on Work Productivity in the Bengkulu City Hall Phase I construction project, the following conclusions can be drawn:

1. Human Resource Competence and the Work Environment are still in the "sufficient" category, with mean scores of 3.38 and 3.37, respectively. These results indicate that workforce competency and work environment conditions have not yet reached optimal levels. Therefore, efforts are needed to improve skills training, technical understanding, and improve the work environment to support maximum productivity.
2. There is a significant influence between Human Resource Competence and Work Productivity, with a significance value of 0.000. The results of the hypothesis test indicate that higher workforce competency leads to increased work productivity. A positive regression coefficient indicates a unidirectional relationship, where competent workers are better able to complete work efficiently and meet quality standards.
3. There is a significant influence between the work environment and work productivity, with a significance value of 0.000. A good, orderly, and comfortable work environment has been proven to increase employee morale and efficiency. These results indicate the importance of creating a conducive work environment as a driving factor for productivity.
4. Human Resource Competence and the Work Environment simultaneously have a significant influence on work productivity. The results of a multiple regression analysis indicate that these two variables together contribute 82.2% to work productivity,

while the remaining 17.8% is influenced by factors outside the research model, such as work motivation, leadership, the wage system, or the construction technology used.

RECOMMENDATIONS

Based on the conclusions obtained, the following suggestions can be made to improve work productivity on construction projects, particularly for the construction of Bengkulu City Hall Phase I:

1. Improving Human Resource Competence

Project implementers are expected to pay more attention to improving workforce competency through technical training programs, workshops, or expertise certification in their respective fields. This is crucial to ensure that workers have adequate skills to complete tasks effectively and efficiently, thereby driving increased work productivity in the field.

2. Improving and Arranging the Work Environment

Project management needs to create a more conducive work environment by

providing adequate work facilities such as rest areas, safety equipment, and

proper sanitation facilities. Furthermore, establishing good communication between workers and foremen and creating a harmonious work climate can improve employee comfort and morale.

3. Strengthening Performance Monitoring and Evaluation

Periodic evaluations of employee performance and work environment conditions are recommended. A structured monitoring system and clear feedback will help detect productivity bottlenecks early and formulate targeted corrective measures.

4. Further Research

This study only examined two independent variables: human resource competency and the work environment. It is recommended that further research include other variables that also influence work productivity, such as motivation, leadership, organizational culture, incentive systems, or the use of construction technology. Qualitative research can also provide a more in-depth understanding of the factors influencing labor productivity in the construction sector.

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