

The Effect of Motivation, Welfare, Work Spirit and Work Engagement on the Performance of Employees at the Indonesian Aviation Academy

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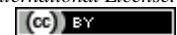
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Abstract

This study examines the influence of motivation, welfare, work spirit, and work engagement on the performance of employees at the Indonesian Aviation Academy Banyuwangi. The research addresses a gap in existing literature by integrating these four variables within the context of a high regulation, safety critical vocational education environment. Using a quantitative approach, data were collected from 60 civil servants through a structured questionnaire employing a five point Likert scale. The variables were measured using established indicators, and the data were analyzed through validity and reliability testing, followed by regression analysis including partial, simultaneous, and coefficient of determination tests. Results indicate that all four variables have a positive and significant impact on employee performance, with work engagement emerging as the most dominant predictor. Collectively, these variables explain 69.7% of the variance in performance. The findings underscore the need for integrated human resource management strategies that simultaneously enhance motivation, ensure adequate welfare, strengthen morale, and foster engagement to optimize performance. The study contributes theoretical insights to human resource management in vocational education and offers practical recommendations for institutional policy making. Future research is suggested to explore additional factors such as organizational culture and leadership style to further enhance performance models in aviation education.

Keywords: Motivation, Welfare, Work Spirit, Work Engagement, Employee Performance.

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1. Introduction

Employee performance is a fundamental determinant of organizational success, reflecting the extent to which employees contribute to achieving strategic objectives through the quality, quantity, and efficiency of their work output. High performance levels are associated with greater organizational competitiveness, innovation capacity, and service quality [1]. In the context of vocational higher education, particularly in aviation academies, employee performance has a direct impact on training quality, safety compliance, and the professional readiness of graduates [2]. Therefore, maintaining and improving employee performance is not only a managerial necessity but also a strategic imperative for institutions such as the Indonesian Aviation Academy, as it directly influences the quality of education, operational efficiency, institutional reputation, and the ability to compete and adapt in the rapidly evolving aviation industry.

Motivation is widely recognized as a psychological driver that stimulates individuals to act toward achieving personal and organizational goals [3]. Theories such as Maslow's hierarchy of needs and self determination theory emphasize that intrinsic and extrinsic motivators ranging from basic physiological needs to opportunities for self actualization play a crucial role in influencing work behavior and performance. Empirical evidence shows that employees

with higher motivation tend to display greater job commitment, creativity, and productivity, which in turn contribute to improved organizational performance, enhanced problem-solving capabilities, and a stronger alignment between individual goals and the institution's long-term objectives [4].

Welfare, often referred to as employee well being, encompasses financial, physical, and psychological aspects that enable employees to perform optimally. Comprehensive welfare programs covering adequate compensation, health care access, work life balance, and career development are positively correlated with job satisfaction and reduced turnover [5]. In service based and safety critical sectors such as aviation training, welfare provisions not only improve morale but also ensure that employees can maintain the high concentration and precision required in their roles.

Work spirit, or morale, reflects the enthusiasm and psychological readiness of employees to perform their duties with dedication. High morale leads to improved teamwork, lower absenteeism, and enhanced resilience in facing operational challenges [6]. Conversely, low morale can result in disengagement, errors, and decreased service quality, which is particularly detrimental in aviation education where precision and discipline are paramount. Work engagement refers to a positive, fulfilling work related state of mind characterized by vigor, dedication, and absorption [7].

Engaged employees exhibit higher adaptability, willingness to contribute beyond formal job descriptions, and sustained effort during demanding periods. Prior research in educational institutions shows that engagement enhances performance by fostering a sense of ownership and alignment with institutional values [8].

The urgency of this study arises from observed challenges at the Indonesian Aviation Academy, where some employees exhibit declining motivation, dissatisfaction with welfare provisions, and signs of reduced work spirit and engagement. Previous findings on the relationships between these variables and performance have been inconsistent [9], highlighting the need for further investigation in a highly regulated and discipline oriented environment such as aviation education. This research addresses these gaps by empirically examining the combined and individual effects of motivation, welfare, work spirit, and work engagement on employee performance. Therefore, the objective of this study is to analyze the extent to which motivation, welfare, work spirit, and work engagement influence the performance of employees at the Indonesian Aviation Academy, both individually and collectively. The findings are expected to contribute theoretically by enriching human resource management literature in the education sector, and empirically by providing actionable recommendations for institutional policy and practice to enhance workforce effectiveness.

Employee performance is a critical determinant of organizational success, particularly in safety sensitive vocational education institutions such as aviation academies. Previous studies have examined the influence of motivation, welfare, work spirit, and work engagement on employee performance [10]. However, the majority of these studies have been conducted in commercial or manufacturing sectors, leaving the vocational education sector especially those operating under strict regulatory and safety frameworks relatively underexplored. Furthermore, much of the existing research tends to investigate only one or two of these variables in isolation, for example, motivation and performance, or welfare and performance [11], without analyzing the simultaneous interrelationships among all four variables, which are theoretically interdependent. Prior findings have also shown inconsistencies; some studies report that intrinsic motivation significantly influences performance, while others find weak or insignificant effects in educational contexts [12]. These inconsistencies point to a knowledge gap that calls for further investigation in a high discipline and safety regulated environment such as aviation education.

In addition, previous research has rarely addressed the unique characteristics of the aviation academy work environment, where strict discipline, adherence to safety protocols, and compliance with international standards are critical determinants of performance [13]. In this sector, welfare extends beyond salary and benefits to include provisions that safeguard physical and mental health, enabling employees to maintain high

levels of concentration [14]. Similarly, work spirit and engagement in aviation vocational education influence not only service quality but also operational safety, an aspect often overlooked in general organizational studies [15]. The scarcity of studies examining the combined effects of motivation, welfare, work spirit, and work engagement on performance in aviation education institutions presents an opportunity for research that can make both theoretical and practical contributions. Such a study could offer sector specific insights that address operational realities while expanding the scope of human resource management literature in specialized educational contexts.

The novelty of this research lies in developing and testing an integrative model that simultaneously examines the effects of motivation, welfare, work spirit, and work engagement on employee performance in the context of an Indonesian aviation academy. To the best of current knowledge, no prior study has analyzed these four variables collectively within this specific high regulation and safety critical educational environment. This research not only addresses existing inconsistencies in the literature but also offers a sector specific framework that can inform policy decisions and performance management strategies tailored to aviation vocational education.

2. Research Method

This study adopts a quantitative research design to examine the causal relationship between four independent variables Motivation (X1), Welfare (X2), Work Spirit (X3), and Work Engagement (X4) and one dependent variable, Employee Performance (Y). The research focuses on civil servants at the Indonesian Aviation Academy (API) Banyuwangi, a vocational education institution under the Ministry of Transportation. The quantitative approach was selected as it enables hypothesis testing, statistical analysis, and generalization to the study population [16]. The following subsections describe the population and sample, research instruments, data collection procedures, and data analysis techniques.

The population consisted of 81 civil servants (ASN) working at API Banyuwangi. From this population, a total of 60 respondents were selected using purposive sampling, ensuring that participants had at least one year of work experience and were directly involved in operational or managerial roles. The sample size meets the minimum requirement for multiple regression analysis in SPSS, which generally recommends a ratio of at least 5–10 respondents for each independent variable to ensure statistical reliability. With four independent variables in this study, the chosen sample size of 60 respondents is sufficient to produce stable estimates and maintain the validity of the regression model. This sampling approach ensures that the data collected accurately represent the characteristics of the studied workforce.

The primary research instrument was a structured questionnaire using a five point Likert scale ranging

from 1 (strongly disagree) to 5 (strongly agree). Motivation (X1) was measured using indicators such as physiological needs, safety needs, social needs, esteem needs, and self actualization. Welfare (X2) included indicators such as household consumption, housing condition, facilities, health, access to education, and transportation [17]. Work Spirit (X3) comprised productivity, attendance, and workplace calmness, while Work Engagement (X4) encompassed work environment, leadership, teamwork, training, compensation, organizational policies, and workplace welfare. Employee Performance (Y) was assessed through quantity, quality, efficiency, discipline, initiative, accuracy, leadership, honesty, and creativity.

Prior to the main survey, a pilot test was conducted with 15 non sample employees to assess the validity and reliability of the instrument. The full scale data collection was carried out by distributing printed questionnaires during official working hours to maximize response rates. Each respondent was given approximately 30 minutes to complete the questionnaire, and completed forms were reviewed immediately for completeness. Ethical research procedures were strictly followed, with all participants providing informed consent and assurances of confidentiality [18].

To replicate this study, researchers should use a minimum of 60 respondents meeting the same inclusion criteria, apply identical questionnaire items, and conduct data collection under similar organizational conditions. The replication process should also ensure that data are gathered during regular workdays to reflect natural workplace dynamics. Ethical clearance and informed consent must be secured before data collection begins. Such replication details will help future researchers maintain both internal and external validity of the study [19].

The data analysis consisted of two stages: instrument testing and hypothesis testing. Validity testing employed Pearson's correlation with an r-table value of 0.256 at a 5% significance level, while reliability was assessed using Cronbach's Alpha, with coefficients ≥ 0.70 considered acceptable. Hypothesis testing was conducted using multiple linear regression analysis in SPSS version 25. This method was selected due to its capability to test the effect of multiple independent variables on a dependent variable, assess statistical significance, and provide measures of model fit for medium sized samples. The regression analysis included partial significance testing (t-test) to evaluate the individual effect of each independent variable, simultaneous significance testing (F-test) to assess the collective influence of all independent variables, and the coefficient of determination (R^2) to determine the proportion of variance in the dependent variable explained by the model. All statistical tests were conducted at a 5% significance level to ensure the reliability of conclusions [20].

3. Result and Discussion

This chapter presents the empirical findings of the study, which aims to analyze the influence of motivation, welfare, work spirit, and work engagement on the performance of employees at the Indonesian Aviation Academy. The presentation of results is carried out systematically, beginning with a descriptive analysis of each variable obtained through the research questionnaire, followed by instrument testing (validity and reliability) to ensure the quality of the data. Subsequently, inferential statistical analyses are presented, including partial tests (t-tests), simultaneous tests (F-tests), and the coefficient of determination (R^2 test). This structured approach is intended to ensure that the conclusions drawn are supported by robust empirical evidence and can be scientifically justified.

The discussion is organized by linking the statistical test results with relevant theoretical frameworks and previous research findings. This section not only interprets the numerical results but also examines their alignment or divergence from existing literature, exploring possible explanations for the observed relationships. Furthermore, the implications of the findings for both theory and practice are addressed, along with the contextual factors specific to the Indonesian Aviation Academy that may influence employee performance. This integrative discussion provides a comprehensive understanding of how the studied variables interact and contribute to performance outcomes within the organizational setting. *The T-test was conducted to determine whether there was a significant influence between the independent and dependent variables individually or partially. The results of the T-test can be seen in Table 1 below.*

Table 1. T-Test Results

Model	Coefficients ^a			T	Sig.
	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta		
1 (Constant)	5.886	2.088		2.819	0.007
Motivation (X1)	0.572	0.259	0.475	2.210	0.031
Welfare (X2)	0.513	0.240	0.495	2.133	0.037
Spirit at Work (X3)	0.121	0.349	0.092	3.142	0.029
Work Engagement (X4)	0.727	0.119	0.674	6.124	0.000
A. Dependent Variable: Employee Performance (Y)					

The partial significance test (t-test) in Table 1 indicates that all four independent variables Motivation (X1), Welfare (X2), Work Spirit (X3), and Work Engagement (X4) have a statistically significant positive effect on Employee Performance (Y) at the Indonesian Aviation Academy. This is evidenced by the p-values for each variable being below the 0.05 threshold, alongside positive standardized beta coefficients. Motivation ($\beta = 0.475$, $t = 2.210$, $p = 0.031$) shows that higher employee motivation is associated with improved performance outcomes, consistent with theoretical perspectives that fulfilling

intrinsic and extrinsic needs enhances commitment and productivity. Welfare ($\beta = 0.495$, $t = 2.133$, $p = 0.037$) also demonstrates a significant effect, confirming that adequate financial and non financial welfare provisions such as health benefits, housing, and career development directly contribute to job satisfaction and performance.

Work Spirit ($\beta = 0.092$, $t = 3.142$, $p = 0.029$), although having a smaller standardized coefficient compared to the other predictors, remains statistically significant. This suggests that enthusiasm, morale, and a positive psychological climate still contribute to sustaining high performance levels, particularly in safety critical environments such as aviation education. The strongest influence is observed in Work Engagement ($\beta = 0.674$, $t = 6.124$, $p < 0.001$), indicating that employees who are highly engaged characterized by vigor, dedication, and absorption deliver superior performance. From a managerial perspective, while motivation, welfare, and work spirit must be maintained, institutional policies should prioritize enhancing work engagement, as it exhibits the greatest predictive power. This can be achieved through leadership support, fostering teamwork, providing career advancement opportunities, and ensuring meaningful job design, thereby aligning individual contributions with organizational goals. The F-test aims to determine whether all independent variables entered into the regression model simultaneously influence the dependent variable. The criteria applied in this test are: if the significance value is less than 0.05, then the research model is considered valid for use as a testing tool in the study; otherwise, the model is not suitable. The results of the F-test can be seen in Table 2 below.

Table 2. F Test Results

Anova ^a						
	Model	Sum Of Squares	Df	Mean Square	F	Sig.
1	Regression	725.401	4	181.350	31.664	0.000 ^b
	Residual	314.999	55	5.727		
	Total	1040.400	59			
A. Dependent Variable: Employee Performance (Y)						
B. Predictors: (Constant), Work Engagement (X4), Motivation (X1), Welfare (X2), Work Spirit (X3)						

The simultaneous significance test (F-test) presented in Table 2 shows that the regression model, which includes Motivation (X1), Welfare (X2), Work Spirit (X3), and Work Engagement (X4) as predictors, has a statistically significant effect on Employee Performance (Y) at the Indonesian Aviation Academy. This is indicated by an F value of 31.664 with a significance level of 0.000, which is well below the 0.05 threshold. These results confirm that, when considered collectively, the four independent variables can explain variations in employee performance with a high level of statistical confidence.

This finding implies that employee performance is not solely driven by a single factor, but rather by the combined and interactive influence of psychological (motivation, engagement), socio economic (welfare), and attitudinal (work spirit) elements. In the context of

aviation vocational education where precision, discipline, and adherence to safety protocols are paramount integrating these factors into human resource strategies can yield substantial improvements in overall institutional effectiveness. The significant F-test result reinforces the validity of the regression model, supporting its use for predictive and policy making purposes in workforce development initiatives. The coefficient of determination (R^2) is used to assess the extent to which a model can explain variations in the dependent variable. The results of the coefficient of determination test can be found in Table 3 below:

Table 3. Results of the Determination Coefficient Test

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error Of The Estimate
1	0.835 ^a	0.697	0.675	2.393

A. Predictors: (Constant), Work Engagement (X4), Motivation (X1), Welfare (X2), Work Spirit (X3)

The coefficient of determination test in Table 3 shows that the model achieves an R value of 0.835, with an R^2 of 0.697 and an adjusted R^2 of 0.675. This means that 69.7% of the variance in Employee Performance (Y) at the Indonesian Aviation Academy can be explained by the four independent variables Motivation (X1), Welfare (X2), Work Spirit (X3), and Work Engagement (X4). The remaining 30.3% is attributed to other factors not included in the model, such as leadership style, organizational culture, job design, or external environmental influences.

An R^2 value of nearly 0.70 is considered high in social science research, indicating that the model has strong explanatory power. This suggests that the chosen variables are collectively relevant and effective in predicting employee performance, especially in a high regulation and safety sensitive environment such as aviation education. The relatively small gap between R^2 and adjusted R^2 (0.022) also indicates that the model's predictive capability remains stable even after adjusting for the number of predictors, reinforcing the robustness of the findings. From a managerial perspective, this high explanatory power provides a solid empirical basis for formulating integrated human resource strategies that simultaneously enhance motivation, welfare, morale, and engagement to achieve optimal performance outcomes.

4. Conclusion

This study has empirically demonstrated that motivation, welfare, work spirit, and work engagement each have a positive and significant effect on the performance of employees at the Indonesian Aviation Academy, both individually and collectively. The t-test results confirm the partial influence of all four variables, with work engagement emerging as the most dominant predictor. The F-test results indicate that the model as a whole is statistically significant, while the coefficient of determination ($R^2 = 0.697$) shows that these factors together explain nearly 70% of the variance in employee performance. These findings highlight the multifaceted nature of performance

drivers in a safety critical and discipline oriented environment such as aviation vocational education. From an application perspective, the results suggest that institutional policies should adopt an integrated approach to workforce management, prioritizing the enhancement of work engagement while maintaining high levels of motivation, adequate welfare provisions, and strong work spirit. Practical steps may include leadership development programs, career growth pathways, health and welfare improvements, and initiatives to foster a positive organizational climate. Future research could explore additional variables such as organizational culture, leadership style, or technological support that may contribute to performance but were beyond the scope of this study. Expanding the study to multiple aviation academies or comparing results across different vocational education sectors could also provide broader generalizability and deeper sector specific insights.

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