

The Effect of Response Time and Teamwork on Employee Performance in the Fire Department of Palopo City

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ABSTRACT

This study aims to determine the influence of response time and teamwork on employee performance at the Palopo City Fire Department. The research Employed a quantitative approach involving all 75 employees as the sample through saturated sampling technique. Data collection was conducted through observations, interviews, and questionnaires distribution. The data were then analyzed using multiple linear regression. The results show that response time and teamwork have a positive and significant effect on employee performance, both partially simultaneously. The coefficient of determination (R^2) of 0.712 indicates that 71,2% of the variation employee performance can be explained by these two variables, while the remaining 28,8% is influenced by other factors not discussed in this study.

Keywords: Response Time, Teamwork, Employee Performance, Fire Department

ABSTRAK

Penelitian ini bertujuan untuk mengetahui pengaruh waktu tanggap dan Kerja sama tim terhadap kinerja pegawai pada Dinas Pemadam Kebakaran Kota Palopo. Penelitian ini menggunakan pendekatan kuantitatif dengan melibatkan seluruh 75 pegawai sebagai sampel melalui teknik sampling jenuh. Pengumpulan data dilakukan melalui observasi, wawancara dan penyebaran kuesioner. Data yang diperoleh kemudian dianalisis menggunakan regresi linear berganda. Hasil penelitian menunjukkan bahwa waktu tanggap dan kerja sama tim berpengaruh positif serta signifikan terhadap kinerja pegawai baik, baik secara parsial maupun simultan. Nilai koefisien determinasi (R^2) sebesar 0,712 menunjukkan bahwa 71,2% variasi kinerja pegawai dapat dijelaskan oleh kedua variabel tersebut sedangkan sisanya sebesar 28,8% dipengaruhi oleh faktor lain yang tidak dibahas dalam penelitian ini.

Kata kunci: Waktu Tanggap, Kerjasama Tim, Kinerja Pegawai, Dinas Pemadam Kebakaran.

INTRODUCTION

Human resources represent one of the most valuable assets an organization possesses, since they are the ones who carry out its policies and day-to-day operations. How well employees perform is often treated as a core indicator of whether an organization is meeting its goals. Afandi (2018) frames performance as an employee's capacity to execute a particular skill, and argues that strong performance in this sense underpins the broader effectiveness and efficiency of an organization's work

Response time is one variable widely believed to shape how well employees perform. Alamsyah et al. (2021) describe it as an individual's capacity to act swiftly and appropriately when a situation calls for it, noting that a faster response tends to raise the odds of resolving a problem successfully. Teamwork is another variable that matters just as much: as Siagian explains (cited in Farica & Renwarin, 2022), effective teamwork rests on communication, coordination, and mutual trust among members, all of which allow tasks to be finished both efficiently and effectively.

A number of earlier studies point in the same direction. Asmalah and Arianto (2021) found that communication quality has a marked effect on employee performance, and both Tannady et al. (2022) and Fatahuddin et al. (2024) reported similarly strong effects of teamwork and team communication on workplace performance. Wijaya et al. (2022) and Yuditio et al. (2024) likewise showed that communication and teamwork jointly help lift employee performance across both public- and private-sector settings. Within firefighting specifically, Masripah and Rahmi (2025) linked personnel performance to work facilities and related organizational conditions, while Fristky and Suwarni (2023) and Fitri et al. (2023) highlighted teamwork as a driver of organizational effectiveness. Taken together, these findings make a strong case for treating response time and teamwork as key determinants of employee performance in emergency-service organizations such as the Palopo City Fire and Rescue Department.

The Palopo City Fire and Rescue Department provides emergency services that require employees to respond quickly, coordinate tasks, and work effectively as a team. These demands make response time and teamwork important factors in supporting employee performance and the effectiveness of emergency services.

Building on this background, the present study sets out to analyze how response time and teamwork, both individually and jointly, affect employee performance at the Palopo City Fire and Rescue Department

THEORETICAL BACKGROUND

2.1. Response Time

Response time captures how ready an organization is to respond quickly and appropriately to a given situation; a faster response during an incident raises the chances that the problem will be handled successfully (Rojak et al., 2024). Within emergency services in particular, this

readiness shows up in how prepared personnel are, how quickly they can be mobilized, how sound their decisions are under pressure, and how well they can carry out incident-response procedures. Karokaro et al. (2020) identify several factors that shape response time, among them the availability of personnel, the adequacy of facilities and infrastructure, and the overall readiness of staff.

2.2. Teamwork

Siagian (as cited in Farica & Renwarin, 2022) describes teamwork as a shared understanding among a group of individuals that creates synergy across the different activities its members carry out. Put differently, it is the process by which people combine their knowledge, skills, and abilities to work toward organizational goals in a collaborative way. Wang et al. (2022) found that how well a team performs depends heavily on the level of communication and trust among its members, both of which explain a meaningful share of the variation in team outcomes. Other studies point in the same direction, showing that solid teamwork tends to lift both organizational effectiveness and individual employee performance across a range of work settings (Fitri et al., 2023; Fristky & Suwarni, 2023).

2.3. Employee Performance

Afandi (2018) defines employee performance as the ability to carry out particular skills, an ability that becomes visible through the quality and quantity of work produced, punctuality, effectiveness on the job, and a sense of responsibility in completing assigned tasks. Within fire and rescue services specifically, Masripah and Rahmi (2025) show that performance is also shaped by organizational conditions such as the facilities provided, workload, and compensation.

RESEARCH METHODS

3.1. Population, Sample, and Data Collection Techniques

This study drew its population from all 75 employees at the Palopo City Fire Department. A saturated sampling technique was applied, meaning the entire population was taken as the research sample rather than a subset of it. Data collection combined direct observation, interviews, and a questionnaire built around a five-point Likert scale. Primary data came straight from the employees themselves, while secondary data was pulled from the institution's own documentation.

3.2. Data Analysis Method

Descriptive analysis was used first to profile the characteristics of the respondents. The research instrument was then checked for validity and reliability: an item was deemed valid once its correlation coefficient (r -value) exceeded 0.30, and the instrument as a whole was deemed reliable once its reliability coefficient passed 0.60. Multiple linear regression was then applied to test how response time (X_1) and teamwork (X_2) affect employee performance (Y), following the equation:

$$Y = \alpha + \beta_1.X_1 + \beta_2.X_2 + e \quad (1)$$

Where: Y = employee performance; X_1 = response time; X_2 = teamwork; a = constant; b_1 , b_2 = regression coefficients; e = error term. Hypotheses were tested through the F-test (for simultaneous effects), the t-test (for partial effects), and the coefficient of determination (R^2), all evaluated at a 5% significance level.

3.3. Operational Definition of Variables

In this study, response time refers to employees' speed and accuracy in responding to incidents, measured by response speed, accuracy of actions, clarity of information, and personnel readiness. Teamwork refers to employees' ability to work together through communication, coordination, participation, and mutual trust. Employee performance refers to work outcomes measured by quality, quantity, timeliness, effectiveness, and responsibility.

RESULT AND DISCUSSION

4.1. Respondent Characteristics

The questionnaires were distributed to 75 employees, and all were returned completely. The characteristics of the respondents by gender, age, highest educational attainment, and length of service are presented below.

Table 1. Characteristics of Respondents

No	Characteristics	Percentage
1	Gender	Male
		77,3%
		Female
		22,7%
2	Age	≤ 25 years
		36%
		26 - 35 years
		44%
		36 - 45 years
		18,7%
		≥ 46 years
		1,3%
3	Highest Education	Senior High School/ Equivalent
		30,7%
		Diploma III (D3)
		5,3%
		Bachelor's Degree (S1)
		60%
		Master's Degree (S2)
		4%
4	Length of Service	≤ 5 years
		69,3%
		6 - 10 years
		26,7%
		11 - 20 years
		2,7%
		≥ 21 years
		1,3%

Source: Processed Data (2026)

4.2. Multiple Linear Regression Analysis Results

Hypothesis testing was conducted using the F-test (simultaneous test), t-test (partial test), and the coefficient of determination (R^2) using SPSS. The results of the F-test are presented in Table 2, the t-test results are presented in Table 3, and the coefficient of determination results are presented in Table 4

Table 2. F-Test Results (Simultaneous Test)

Model	Sum Of Squares	df	Mean Square	F	Sig.
1 Regression	2712	2	1356	88,824	,000 ^b
Residual	1099,2	72	15,266		
Total	3811,1	74			

a. Dependent variabel: Employee Performance (Y)

b. Predictors: (Constant), Teamwork (X2), Response time (X1)

Source: SPSS Output (2026)

Table 3. t-Test Results (Partial Test)

Model	Unstandardized		Standardized		T	Sig.
	Coefficients		Coefficients			
	B	Std. Error	Beta			
1 (Constant)	3,583	4,758			0,753	0,454
Response time (X1)	0,263	0,12	0,247		2,188	0,032
Teamwork (X2)	0,675	0,121	0,628		5,561	0

a. Dependent variabel: Employee Performance (Y)

Source: SPSS Output (2026)

Table 4. Coefficient of Determination (R^2) Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,844 ^a	0,712	0,704	3,90718

a. Predictors: (Constant), Teamwork, Response time

Source: SPSS Output (2026)

The calculated F-value of 88.824 with a significance value of 0.000 (< 0.05) indicates that response time and teamwork simultaneously have a significant effect on employee performance; therefore, the first hypothesis (H3) is accepted. Partially, response time has a positive and significant effect on employee performance ($t = 2.188$; $sig. = 0.032$), and teamwork also has a positive and significant effect ($t = 5.561$; $sig. = 0.000$); therefore, H1 and H2 are accepted. The coefficient of determination (R^2) of 0.712 indicates that response time and

teamwork jointly explain 71.2% of the variation in employee performance, while the remaining 28.8% is explained by other factors outside the model.

4.3. Discussion

These findings show that response time has a positive and significant bearing on employee performance at the Palopo City Fire Department, in practical terms, the quicker personnel respond to fire reports and other emergencies, the better their performance tends to be. For an emergency-service organization, how fast information is received, equipment is readied, and the incident site is reached is central to whether the response succeeds. This points to the need for ongoing improvements in time management, achieved through regular training, simulation drills, and periodic checks on how prepared personnel really are.

Teamwork, too, was found to have a positive and significant effect on performance, echoing earlier research showing that effective coordination, open communication, mutual support, and clearly divided tasks all help teams work more effectively. Because firefighting inherently demands close collaboration on the ground, building stronger coordination and communication among personnel is key to improving the service delivered to the community.

Taken as a whole, these results suggest that response time and teamwork jointly shape employee performance in a meaningful way, how successfully employees carry out their duties hinges both on how quickly they respond to incidents and on how effectively they collaborate with their teammates.

CONCLUSION

Drawing on the analysis and discussion above, this study concludes that response time and teamwork significantly affect employee performance at the Palopo City Fire Department, whether examined separately or together. Performance rises as employees respond more quickly to incident reports, and it rises as well when teamwork among employees improves. Together, the two variables account for 71.2% of the variation in employee performance, with the remaining 28.8% attributable to factors this study did not capture.

Going forward, the Palopo City Fire Department would do well to keep sharpening employees' response time through regular training, emergency-response simulations, and adequate facilities and equipment, while also strengthening teamwork by fostering better communication, coordination, and a shared sense of responsibility among personnel. Because this study only examined two independent variables, future research could broaden the scope of inquiry and incorporate additional variables that may shape employee performance, so as to build a more complete picture.

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