

THE IMPACT OF WORK DISCIPLINE AND MOTIVATION ON EMPLOYEE PRODUCTIVITY: THE MEDIATING ROLE OF JOB SATISFACTION

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ABSTRACT

Employee productivity in the regional water distribution sector is often constrained by low work discipline and uneven motivation, while the mediating role of job satisfaction remains underexplored. This study examines the mediating effect of job satisfaction on the relationship between work discipline, motivation, and employee productivity at PDAM Tirta, Indonesia. A quantitative cross-sectional design was employed, involving 182 employees selected through proportionate stratified random sampling. Data were collected using a Likert-scale questionnaire with high reliability (Cronbach's Alpha = 0.887–0.918) and analyzed using path analysis, Sobel test, and bootstrapping. The results indicate that work discipline ($\beta = 0.287$) and motivation ($\beta = 0.315$) significantly affect productivity, while job satisfaction is the strongest predictor ($\beta = 0.348$). Job satisfaction also partially mediates the relationships between work discipline and productivity, and between motivation and productivity. These findings highlight the central role of job satisfaction in enhancing employee productivity.

Introduction

Employee productivity has long been recognized as a fundamental determinant of organizational success in both private and public sectors. In the context of regional water distribution services, productivity plays a critical role as it directly affects service reliability and community well-being. Regional Drinking Water Companies (PDAMs) and similar institutions are required to ensure the continuous, timely, and high-quality delivery of clean water. However, empirical conditions indicate that employee productivity in this sector often falls below expected standards. This issue is not solely attributed to infrastructural constraints but is also closely related to human resource factors, particularly work discipline and motivation.

Work discipline serves as a fundamental organizational mechanism that ensures employees comply with established rules, standard operating procedures, and working schedules. Without adequate discipline, the effective implementation of organizational policies becomes difficult to achieve. Meanwhile, motivation functions as a psychological driver that encourages employees to exert effort, demonstrate initiative, and achieve organizational goals. Despite their importance, many regional water distribution companies continue to face challenges such as

tardiness, absenteeism, and low levels of employee initiative (Agustina & Musa, 2023). These conditions not only disrupt operational efficiency but also negatively affect service quality and customer satisfaction, ultimately undermining organizational performance

Initial observations further reveal a complex phenomenon: some employees demonstrate high levels of discipline but remain unproductive, while others exhibit strong motivation yet lack discipline. This indicates that the relationship between discipline, motivation, and productivity is not linear or straightforward. Therefore, it is necessary to consider additional psychological variables that may explain this relationship. Job satisfaction is proposed as a potential mediating variable. Employees who exhibit strong discipline may experience a greater sense of order, fairness, and recognition, which enhances their job satisfaction. Similarly, motivated employees are more likely to achieve recognition and a sense of accomplishment, leading to higher levels of satisfaction. In turn, job satisfaction can stimulate higher productivity. However, this mediating mechanism has not been extensively examined, particularly within the regional water distribution sector, which is characterized by unique operational conditions such as 24-hour shift systems, high fieldwork demands, and strict public service regulations (Rasyidi, 2018).

To provide a theoretical foundation for this study, Herzberg's Two-Factor Theory (1959) is employed as a primary framework. This theory distinguishes between hygiene factors and motivating factors. Hygiene factors—such as company policies, supervision, interpersonal relationships, and working conditions—do not directly motivate employees but can lead to dissatisfaction when absent. In this context, work discipline can be conceptualized as a hygiene factor, as it relates to organizational rules and control mechanisms that regulate employee behavior. The presence of effective discipline helps prevent dissatisfaction, while its absence may lead to inefficiencies and reduced performance. Complementarily, motivation is categorized as a motivating factor, as it reflects the internal drive to achieve, grow, and perform. Thus, integrating discipline, motivation, and job satisfaction within a unified framework provides a more comprehensive understanding of employee productivity in this sector.

Based on the issues and theoretical considerations outlined above, this study aims to examine the direct effects of work discipline and motivation on employee productivity, as well as their indirect effects through job satisfaction as a mediating variable. Specifically, this study seeks to (1) analyze the effect of work discipline on employee productivity, (2) examine the effect of motivation on employee productivity, (3) investigate the influence of work discipline and motivation on job satisfaction, (4) analyze the effect of job satisfaction on

employee productivity, and (5) test the mediating role of job satisfaction in the relationships between work discipline and productivity, as well as between motivation and employee productivity in the regional water distribution sector.

Literature Review

Employee productivity is a key outcome in human resource management, influenced by various organizational and psychological factors. Among these, work discipline, motivation, and job satisfaction have been widely recognized as critical determinants. To understand the relationships among these variables, this study draws upon several established theoretical perspectives, including Herzberg's Two-Factor Theory, Vroom's Expectancy Theory, and Locke's Job Satisfaction Theory. Herzberg's Two-Factor Theory distinguishes between hygiene factors and motivating factors in the workplace. Hygiene factors, such as company policies, supervision, interpersonal relationships, and working conditions, do not directly motivate employees but can lead to dissatisfaction if absent. In this context, work discipline can be categorized as a hygiene factor, as it relates to organizational rules, procedures, and control mechanisms that regulate employee behavior. The presence of proper discipline ensures stability and prevents dissatisfaction, while its absence may result in inefficiencies and reduced productivity. Conversely, motivating factors such as achievement, recognition, responsibility, and career advancement directly influence employee motivation and performance. Work motivation in this study falls within this category, as it reflects the internal drive of employees to achieve and perform effectively.

Vroom's Expectancy Theory further explains that employee motivation is shaped by the expectation that effort will lead to performance, and performance will lead to valued rewards. When employees perceive a clear linkage between effort, performance, and outcomes, they are more likely to exert higher levels of effort, resulting in improved productivity (Suwinda & Wati Ni Nyoman Kurnia, 2021). This theory provides a strong foundation for understanding how motivation contributes to employee productivity. In addition, Locke's Job Satisfaction Theory defines job satisfaction as a positive emotional state resulting from the appraisal of one's job as fulfilling or enabling the fulfillment of important values (Hadiwijaya, 2024). Job satisfaction plays a central role in influencing employee attitudes and behaviors, including productivity. Employees who are satisfied with their jobs tend to demonstrate higher commitment, lower absenteeism, and greater willingness to exert extra effort.

Empirical studies have supported the relationships among these variables. Previous research indicates that work discipline has a significant positive

relationship with productivity, particularly in roles that require adherence to strict procedures (Robbins, 1996). Similarly, motivation has been shown to contribute significantly to productivity, accounting for a substantial proportion of performance outcomes in organizational settings (Wahyuni, 2021). Furthermore, a meta-analysis by Judge et al. (2001) found that job satisfaction is moderately to strongly correlated with productivity, suggesting a reciprocal relationship between these variables.

Despite these findings, research examining the mediating role of job satisfaction in the relationship between work discipline, motivation, and productivity remains limited. Some studies conducted in sectors such as banking and education (Fermayani et al.; Hakim & Putri, 2022) have suggested the presence of mediation effects; however, these findings cannot be generalized to the regional water distribution sector due to its unique operational characteristics. This sector is characterized by continuous service demands, high fieldwork intensity, and strict regulatory requirements, which may influence employee behavior differently compared to other industries.

Therefore, this study seeks to address this gap by developing a comprehensive model that integrates work discipline, motivation, and job satisfaction in explaining employee productivity. Unlike previous studies that primarily focused on direct relationships, this study positions job satisfaction as a mediating variable that explains the underlying mechanism through which discipline and motivation influence productivity. This approach provides a more holistic understanding of employee behavior, emphasizing that employees are not only driven by rules or internal motivation but also by their level of satisfaction in the workplace.

Research Method

This study employed a quantitative approach using an explanatory survey research design to examine the causal relationships among work discipline, motivation, job satisfaction, and employee productivity. A cross-sectional design was adopted, in which data were collected at a single point in time, as the variables under study are relatively stable in the short term. The research was conducted at the Regional Drinking Water Company (PDAM) Tirta, located in a mid-sized city in Java, Indonesia, over a three-month period from March to May 2026. The selection of this location was based on its established organizational structure, large service coverage, and the presence of productivity-related challenges identified through preliminary observations. The population of this study consisted of all permanent employees working in the water distribution operational division, totaling 320 individuals. A proportionate stratified random

sampling technique was applied to ensure representation across different job categories, including field workers, technicians, and administrative staff. Using the Slovin formula with a 5% margin of error, a minimum sample size of 178 respondents was determined. To account for potential non-responses, 196 questionnaires were distributed, and 182 valid responses were obtained, resulting in a response rate of 92.8%. The study involved three types of variables: work discipline and motivation as independent variables, job satisfaction as a mediating variable, and employee productivity as the dependent variable. Each variable was operationalized using established indicators, such as compliance with rules for discipline, achievement and recognition for motivation, satisfaction dimensions based on the Minnesota Satisfaction Questionnaire, and performance outcomes for productivity.

Data were collected using a structured questionnaire based on a five-point Likert scale, ranging from strongly disagree to strongly agree. Prior to the main data collection, a pilot test was conducted on 35 respondents to assess the validity and reliability of the instrument, with validity determined through Pearson correlation and reliability confirmed using Cronbach's Alpha. The data collection process involved three stages: preparation and permission, questionnaire distribution with follow-up reminders, and verification of completed responses. Data analysis was conducted using descriptive statistics, classical assumption tests, and hypothesis testing through path analysis with the support of SPSS 26 and AMOS 24 software. Classical assumption tests included normality, linearity, multicollinearity, and heteroscedasticity tests. Furthermore, mediation analysis was performed using the Sobel test and bootstrapping method with 5,000 resamples to ensure robustness. The mediation effect was considered significant if the confidence interval did not include zero.

Results and Discussion

Characteristics of Respondents

This study involved 182 respondents who were permanent employees in the water distribution operations department at PDAM Tirta. The characteristics of the respondents were classified based on four demographic variables: gender, age, length of service, and highest level of education. Understanding these characteristics is important, as they may influence respondents' perceptions and responses to the variables examined in this study. Based on gender, the majority of respondents were male, accounting for 148 individuals (81.3%), while female respondents totaled 34 individuals (18.7%). This distribution reflects the nature of work in the water distribution sector, which involves physically demanding tasks such as pipeline maintenance and leak repairs, thereby requiring a higher

proportion of male workers.

In terms of age, respondents were categorized into three groups. The young age group (20–30 years) consisted of 42 individuals (23.1%), the middle-aged group (31–45 years) comprised 98 individuals (53.8%), and the pre-retirement group (46–60 years) included 42 individuals (23.1%). The predominance of employees in the middle-aged category indicates that most respondents are in a mature and stable career phase, which may contribute to more consistent work performance and organizational commitment. Based on length of service, 38 respondents (20.9%) had less than 5 years of experience, 87 respondents (47.8%) had between 5 and 15 years of service, and 57 respondents (31.3%) had more than 15 years of service. These findings suggest that the majority of employees have considerable work experience, enabling them to develop a strong understanding of organizational culture, procedures, and job responsibilities.

Regarding educational background, 12 respondents (6.6%) had completed elementary school, 34 respondents (18.7%) junior high school, 108 respondents (59.3%) senior high school, and 28 respondents (15.4%) held diploma or bachelor's degrees. The predominance of senior high school graduates indicates that most employees possess sufficient educational qualifications to understand operational procedures and effectively respond to the research instrument.

Research Instrument Test Results

Prior to the main data analysis, the research instrument was evaluated for validity and reliability using the full research sample ($n = 182$) to ensure that all measurement items were appropriate for further analysis. Validity testing was conducted using confirmatory factor analysis (CFA), with the criterion that each item should have a factor loading of at least 0.50 and be statistically significant at $\alpha = 0.05$. The results indicate that all items across the four variables met these criteria, with factor loadings ranging from 0.612 to 0.878. Specifically, the work discipline variable demonstrated loadings between 0.634 and 0.845, the motivation variable ranged from 0.651 to 0.878, the job satisfaction variable ranged from 0.612 to 0.832, and the employee productivity variable ranged from 0.655 to 0.861. These findings confirm that all measurement items are valid and adequately represent their respective constructs.

Reliability testing was conducted using Cronbach's Alpha to assess the internal consistency of each variable. The results show that the work discipline variable achieved a Cronbach's Alpha value of 0.891, motivation 0.905, job satisfaction 0.918, and employee productivity 0.887. All values exceed the recommended threshold of 0.70, indicating a high level of reliability. Therefore,

the research instrument demonstrates strong internal consistency and is considered reliable for measuring the constructs in this study.

Descriptive Statistical Analysis

Descriptive statistical analysis was conducted to provide a general overview of the tendency of each research variable based on respondents' perceptions. The data were measured using a five-point Likert scale, with a theoretical minimum score of 1 (very low) and a maximum score of 5 (very high). The results of the descriptive analysis for the four variables are presented in Table 1. The findings indicate that work discipline (X1) has a mean score of 4.12 with a standard deviation of 0.54, suggesting a high level of discipline among employees. The relatively high mean score, which is above the midpoint of the scale, indicates that employees generally comply with organizational rules, including working hours, the use of uniforms and personal protective equipment, and adherence to standard operating procedures.

Motivation (X2) shows a mean value of 3.87 with a standard deviation of 0.61, placing it in the moderate-to-high category. This suggests that employees possess a relatively good level of motivation; however, it is not as strong as their level of work discipline. The slightly higher standard deviation also indicates greater variability in employee motivation, implying that some employees are highly motivated while others exhibit lower levels of motivation. Job satisfaction (Z) has a mean score of 3.65 with a standard deviation of 0.67, indicating a moderate level of satisfaction. This is the lowest mean among the variables, suggesting that employees are only moderately satisfied with aspects such as salary, benefits, and career advancement opportunities. The relatively large standard deviation reflects considerable variation in satisfaction levels, indicating disparities in how employees perceive their work conditions.

Table 1. Descriptive Statistics of Research Variables

Variables	N	Minimum	Maximum	Mean	Standard Deviation	Category
Work Discipline (X1)	182	2.33	5.00	4.12	0.54	Tall
Motivation (X2)	182	2.08	5.00	3.87	0.61	Medium-High
Job Satisfaction (Z)	182	1.93	5.00	3.65	0.67	Currently
Productivity (Y)	182	2.25	5.00	3.94	0.58	Medium-High

Employee productivity (Y) has a mean score of 3.94 with a standard deviation of 0.58, placing it in the moderate-to-high category. This indicates that employees are generally able to achieve work targets, maintain acceptable work quality, and complete tasks within the expected time frame. Nevertheless, there is still room for improvement, particularly in enhancing initiative and exceeding

minimum job requirements.

Classical Assumption Test

Before conducting path analysis to test the hypotheses, researchers conducted classical assumption tests to ensure that the data met the requirements for parametric analysis. The following are the results of the four classical assumption tests. Normality testing was performed using the Kolmogorov-Smirnov test. The results showed that the significance values (Asymp. Sig. 2-tailed) for all variables were 0.127 for work discipline, 0.084 for motivation, 0.092 for job satisfaction, and 0.105 for employee productivity. All significance values were greater than 0.05, thus concluding that the data were normally distributed. The linearity test was conducted using the Deviation from Linearity test. The results of the linearity test between work discipline and productivity showed a significance value of 0.187 (>0.05). The relationship between motivation and productivity had a significance value of 0.203 (>0.05). The relationship between work discipline and job satisfaction had a significance value of 0.156 (>0.05). The relationship between motivation and job satisfaction had a significance value of 0.178 (>0.05). The relationship between job satisfaction and productivity had a significance value of 0.142 (>0.05). All significance values above 0.05 indicate that the relationship between variables is linear, so the linearity assumption is met.

Multicollinearity testing was performed by calculating the Variance Inflation Factor (VIF) and tolerance. The analysis results showed that the VIF value for work discipline was 1.842 and for motivation was 1.842 (the same because both are predictors in the same model). The tolerance value for both variables was 0.543. Since the VIF value was <10 and tolerance value >0.10 , it can be concluded that there is no multicollinearity between the independent variables. The heteroscedasticity test was conducted using the Glejser test. The Glejser test results showed that the significance value for work discipline on the absolute value of the residual was 0.342, motivation 0.278, and job satisfaction 0.401. All significance values were >0.05 , so it can be concluded that there is no heteroscedasticity, or in other words, the residual variance is homogeneous.

Hypothesis Testing and Path Analysis

Hypothesis testing in this study was conducted using path analysis to examine both direct and indirect relationships among variables. Two structural equations were estimated. The first model assessed the effect of work discipline and motivation on job satisfaction, while the second model examined the effect of work discipline, motivation, and job satisfaction on employee productivity. The results of the first structural model indicate that work discipline and motivation simultaneously have a significant effect on job satisfaction ($F = 78.432$; $p < 0.05$). The

coefficient of determination ($R^2 = 0.468$) suggests that 46.8% of the variance in job satisfaction is explained by work discipline and motivation. Individually, work discipline has a positive and significant effect on job satisfaction ($\beta = 0.384$; $t = 5.672$; $p < 0.05$), as does motivation ($\beta = 0.402$; $t = 5.941$; $p < 0.05$). These findings indicate that higher levels of discipline and motivation are associated with increased employee satisfaction.

The second structural model shows that work discipline, motivation, and job satisfaction simultaneously have a significant effect on employee productivity ($F = 94.215$; $p < 0.05$), with an R^2 value of 0.614, indicating that 61.4% of the variance in productivity is explained by the model. Partially, work discipline ($\beta = 0.287$; $t = 4.321$; $p < 0.05$), motivation ($\beta = 0.315$; $t = 4.782$; $p < 0.05$), and job satisfaction ($\beta = 0.348$; $t = 5.234$; $p < 0.05$) all have positive and significant effects on employee productivity. Among these variables, job satisfaction emerges as the strongest predictor, indicating its central role in enhancing employee performance.

Furthermore, mediation analysis was conducted using the Sobel test and bootstrapping techniques. The results show that job satisfaction significantly mediates the relationship between work discipline and productivity ($z = 3.847$; $p < 0.05$), with an indirect effect of 0.1336 and a mediation proportion of 31.8%. Similarly, job satisfaction mediates the relationship between motivation and productivity ($z = 4.128$; $p < 0.05$), with an indirect effect of 0.1399 and a mediation proportion of 30.8%. Bootstrapping results confirm that the confidence intervals for both indirect effects do not include zero, indicating robust mediation effects. These findings suggest that job satisfaction partially mediates the influence of work discipline and motivation on employee productivity, meaning that both variables affect productivity directly and indirectly through job satisfaction.

The Influence of Work Discipline and Motivation on Job Satisfaction

The results of the regression analysis for the first equation show that simultaneously work discipline and motivation have a significant effect on job satisfaction with a calculated F value of 78.432 and a significance of 0.000 ($p < 0.05$). The coefficient of determination (R Square) value is 0.468, which means that 46.8% of the variation in job satisfaction can be explained by variations in work discipline and motivation, while the remaining 53.2% is explained by other variables outside the model. Work discipline has a path coefficient (β) of 0.384 with a t -value of 5.672 and a significance level of 0.000 ($p < 0.05$). This means that work discipline has a positive and significant effect on job satisfaction. Motivation has a path coefficient (β) of 0.402 with a t -value of 5.941 and a significance level of 0.000 ($p < 0.05$). This means that motivation has a positive and significant effect on job satisfaction.

The Influence of Work Discipline, Motivation, and Job Satisfaction on Productivity

The results of the path analysis are summarized in Table 2, which presents the path coefficients, t-values, and significance levels for each hypothesized relationship. As shown in Table 2, all proposed relationships are statistically significant, indicating that work discipline, motivation, and job satisfaction have meaningful effects on both job satisfaction and employee productivity. Furthermore, the regression results for the second structural equation indicate that work discipline, motivation, and job satisfaction simultaneously have a significant effect on employee productivity ($F = 94.215$; $p < 0.05$). The coefficient of determination ($R^2 = 0.614$) suggests that 61.4% of the variance in employee productivity is explained by these variables, while the remaining 38.6% is influenced by other factors not included in the model. Individually, work discipline has a positive and significant effect on employee productivity ($\beta = 0.287$; $t = 4.321$; $p < 0.05$), indicating that higher levels of compliance with organizational rules and procedures contribute to improved performance. Similarly, motivation shows a positive and significant effect ($\beta = 0.315$; $t = 4.782$; $p < 0.05$), suggesting that employees with stronger internal and external drives tend to achieve higher productivity. Job satisfaction demonstrates the strongest influence on productivity ($\beta = 0.348$; $t = 5.234$; $p < 0.05$), highlighting its critical role as a key determinant of employee performance.

Table 2. Summary of Path Coefficients and Significance Tests

Connection	Path Coefficient (β)	t count	Significance	Conclusion
X1 → Z	0.384	5,672	0,000	Significant
X2 → Z	0.402	5,941	0,000	Significant
X1 → Y	0.287	4,321	0,000	Significant
X2 → Y	0.315	4,782	0,000	Significant
Z → Y	0.348	5,234	0,000	Significant

Testing the Mediation Effect (Hypotheses 6 and 7)

To examine whether job satisfaction mediates the relationship between work discipline and employee productivity (H6), mediation analysis was conducted using the Sobel test, supported by the bootstrapping method. The results of the Sobel test indicate that job satisfaction significantly mediates the relationship between work discipline and productivity ($z = 3.847$; $p < 0.05$). The indirect effect is 0.1336, calculated as the product of the path coefficients (0.384×0.348), while the direct effect is 0.287, resulting in a total effect of 0.4206. The mediation proportion is 31.8%, indicating that approximately one-third of the effect of work discipline on productivity is transmitted through job satisfaction.

Furthermore, bootstrapping results with 5,000 resamples show that the 95%

confidence interval for the indirect effect ranges from 0.072 to 0.198 and does not include zero, confirming the robustness of the mediation effect. Therefore, Hypothesis 6 is supported, indicating that job satisfaction partially mediates the relationship between work discipline and employee productivity. This finding suggests that work discipline influences productivity not only directly but also indirectly through its effect on job satisfaction.

Hypothesis 7: Job Satisfaction Mediates the Relationship between Motivation and Productivity

To examine the mediating role of job satisfaction in the relationship between motivation and employee productivity (H7), mediation analysis was conducted using the Sobel test and supported by bootstrapping techniques. The results indicate that job satisfaction significantly mediates the relationship between motivation and productivity ($z = 4.128; p < 0.05$). The indirect effect is 0.1399, calculated as the product of the path coefficients (0.402×0.348), while the direct effect is 0.315, resulting in a total effect of 0.4549. The mediation proportion is 30.8%, indicating that nearly one-third of the influence of motivation on productivity is transmitted through job satisfaction. Furthermore, bootstrapping results with 5,000 resamples show that the 95% confidence interval for the indirect effect ranges from 0.078 to 0.212 and does not include zero, confirming the robustness of the mediation effect. Therefore, Hypothesis 7 is supported, indicating that job satisfaction partially mediates the relationship between employee motivation and productivity. This finding suggests that motivation influences productivity both directly and indirectly through its impact on job satisfaction, as can be seen in Table 3.

Table 3. Summary of Mediation Test Results

Hypothesis	Connection	Immediate Effect	Indirect Effects	Total Effect	Mediation Proportion	Conclusion
H6	X1 → Z → Y	0.287	0.1336	0.4206	31.8%	Partial Mediation
H7	X2 → Z → Y	0.315	0.1399	0.4549	30.8%	Partial Mediation

Discussion

The findings of this study demonstrate that work discipline has a positive and significant effect on employee productivity in the regional water distribution sector. A path coefficient of 0.287 with a significance level of 0.000 indicates that every one standard deviation increase in work discipline will increase productivity by 0.287 standard deviations, assuming other variables remain constant. The interpretation of these findings is that employees who have high discipline, such as arriving on time, complying with standard operating procedures, and using work

equipment according to regulations, tend to be more productive because work time is utilized efficiently, work errors can be minimized, and coordination between units runs smoothly. This finding is in line with research (Robbins, 1996) and (Ramdhani, Martowinangun, Alfiansyah, Herlina, & Mulyeni, 2025) which states that work discipline is a strong predictor of performance and productivity, especially in operational jobs that have standard procedures. However, the magnitude of the direct effect of work discipline on productivity (0.287) is classified as moderate, which indicates that discipline alone is not enough to guarantee high productivity. Other factors such as motivation and job satisfaction are still needed.

The Influence of Motivation on Employee Productivity (H2)

The results showed that motivation had a positive and significant effect on employee productivity, with a path coefficient of 0.315 ($p=0.000$). This value was slightly greater than the effect of work discipline, indicating that motivation contributed slightly more to productivity than work discipline. This finding can be explained by (Amalia & Salim, 2025), where motivated employees will exert greater effort because they expect that effort will result in good performance and, subsequently, valuable rewards. In the context of PDAM, motivated employees tend to take initiative, work faster, and seek creative solutions to problems in the field. This is in line with research. (Rahmawati, 2013) who found that motivation can increase productivity by up to 30%.

The Effect of Work Discipline on Job Satisfaction (H3)

The findings of this study demonstrate that work discipline has a positive effect on job satisfaction with a path coefficient of 0.384 ($p=0.000$). The interpretation is that disciplined employees tend to be more satisfied with their jobs. This may seem counterintuitive at first, as discipline is often associated with restrictions. However, the explanation is that discipline creates order and certainty. Disciplined employees are less likely to receive reprimands, have a good performance record, and are more appreciated by their superiors, which ultimately leads to a sense of satisfaction. These findings extend the Two-Factor Theory (Locke, 2016) which positions discipline as a hygiene factor. Herzberg argued that hygiene factors only prevent dissatisfaction, but the findings of this study indicate that high discipline can actually actively increase job satisfaction.

The Influence of Motivation on Job Satisfaction (H4)

The analysis results show that motivation has a positive influence on job satisfaction with a path coefficient of 0.402, which is the largest coefficient in this model (along with the influence of motivation on satisfaction). This means that motivation is the strongest predictor of job satisfaction. The interpretation of these findings is that motivated employees—those with a drive for achievement,

recognition, and career development—tend to be more satisfied because they actively pursue these goals at work. Job satisfaction does not come passively, but results from meaningful accomplishments. These findings are highly consistent with Herzberg's Two-Factor Theory, in which motivating factors (achievement, recognition, responsibility) are the primary sources of job satisfaction.

The Influence of Job Satisfaction on Employee Productivity (H5)

This study found that job satisfaction has a positive and significant effect on employee productivity, with a path coefficient of 0.348 ($p=0.000$). This value is the largest among the three productivity predictors (discipline 0.287, motivation 0.315, satisfaction 0.348). In other words, job satisfaction is the factor with the strongest influence on employee productivity at PDAM Tirta. This finding reinforces the thesis put forward by Judge et al. (2001) in their meta-analysis that job satisfaction is positively correlated with productivity, with the relationship being reciprocal. Satisfied employees tend to have higher organizational commitment, lower absenteeism rates, and lower job turnover. Lower employee turnover, and better organizational citizenship behavior. In the context of water distribution, satisfied employees are more willing to work overtime during emergency leaks, provide friendlier service to customers, and better safeguard company assets.

The Mediating Role of Job Satisfaction (H6 and H7)

The most important finding of this study is that job satisfaction partially mediates the relationship between work discipline and productivity (H6) and between motivation and productivity (H7). The term "partial mediation" means that work discipline and motivation have a direct influence on productivity, but some of this influence also operates through an indirect pathway by first increasing job satisfaction. For H6, the mediation proportion of 31.8% means that almost one-third of the total effect of work discipline on productivity is explained by the indirect effect through job satisfaction. In other words, when a company aims to increase productivity by improving work discipline, approximately 31.8% of its effectiveness will be lost if job satisfaction is not also increased. For H7, the mediation proportion of 30.8% indicates a similar result. Motivation does not automatically result in productivity; motivated employees need to be satisfied first for that motivation to truly translate into high productivity.

The theoretical interpretation of these mediation findings is that job satisfaction serves as a psychological mechanism linking work conditions (discipline and motivation) to work outcomes (productivity). This model enhances existing theories by demonstrating that the relationship between discipline and productivity, as well as motivation and productivity, is not straightforward and simple, but rather operates through affective processes (feelings of satisfaction).

This finding is also consistent with the attitude-behavior model in organizational psychology, where positive attitudes (satisfaction) serve as a bridge between antecedent conditions (discipline and motivation) and productive behavior.

Theoretical and Practical Implications

Theoretically, this study contributes by integrating Herzberg's Two-Factor Theory, Vroom's Expectancy Theory, and Locke's Job Satisfaction Theory into a comprehensive mediation model. It also strengthens the argument that job satisfaction is not merely an outcome but also an important mediator. Practically, for the management of PDAM Tirta and other regional water distribution companies, these findings provide guidance that to increase employee productivity, companies cannot focus solely on work discipline or motivation. The most effective effort is to increase job satisfaction as a key variable. Interventions that can be implemented include: providing more frequent recognition for employee achievements, creating a supportive work environment, providing fair promotion opportunities, and adjusting salaries to workload. By increasing job satisfaction, the positive effects of discipline and motivation on productivity will be more optimal.

Research Limitations

This study has several limitations that should be acknowledged. First, the cross-sectional design limits the ability to draw strong causal inferences, although path analysis provides indications of theoretically grounded relationships; therefore, future research using longitudinal designs is recommended to better establish causality. Second, the use of self-report questionnaires may introduce common method bias, although preliminary statistical tests suggest that this bias is not substantial. Third, the study was conducted within a single regional water distribution company, which may limit the generalizability of the findings to other sectors or geographic contexts. Finally, the explanatory power of the model remains limited, as job satisfaction accounts for only part of the variance explained by work discipline and motivation, and employee productivity is influenced by additional factors not included in this study. Variables such as leadership style, organizational culture, and compensation systems may also play significant roles and should be considered in future research to provide a more comprehensive understanding of employee productivity.

Conclusion

This study investigates the effects of work discipline, motivation, and job satisfaction on employee productivity in the regional water distribution sector. The findings reveal that work discipline and motivation have positive and significant

effects on both job satisfaction and employee productivity. Job satisfaction is identified as the strongest predictor of productivity and serves as a key mediating variable. Specifically, job satisfaction partially mediates the relationships between work discipline and productivity, as well as between motivation and productivity. These results underscore the importance of adopting an integrated human resource management approach. Enhancing productivity cannot rely solely on enforcing discipline or increasing motivation; rather, it requires fostering job satisfaction as a critical psychological mechanism. Therefore, organizations are encouraged to implement policies that support employee well-being, including fair compensation, career development opportunities, and a conducive work environment, in order to achieve sustainable improvements in productivity.

Daftar Pustaka

- Agustina, I., & Musa, C. I. (2023). THE EFFECT OF MOTIVATION ON EMPLOYEE WORK PRODUCTIVITY AT REGIONAL WATER DRINKING COMPANY (PDAM) TIRTA JENEBERANG , GOWA DISTRICT, 1(3), 151-162.
- Amalia, R., & Salim, R. (2025). Pengaruh Motivasi Terhadap Produktivitas Kerja Karyawan PT Indofood Sukses Makmur Tbk, 5, 507-518.
- Fermayani, R., Wahdiniawati, S. A., Barlian, B., Adiwinata, D., Karmila, M., Febrian, W. D., ... Sari, J. (n.d.). *No Title*.
- Hadiwijaya, D. (2024). Jurnal Manajemen Bisnis. *Manajemen Bisnis*, 1(2), 47-56. Retrieved from non-dwnldmngn-download-dont-retry2download
- Hakim, I., & Putri, A. (2022). Pengaruh Komitmen Organisasi , Kualitas Pelayanan , Kinerja Pegawai dan Pengalaman Kerja Terhadap Kepuasan Masyarakat Pada Pelayanan Perusahaan Daerah Air Minum Kabupaten Padang Pariaman.
- Judge, T. A., Thoresen, C. J., Bono, J. E., & Patton, G. K. (2001). The Job Satisfaction-Job Performance Relationship : A Qualitative and Quantitative Review, 127(3), 376-407.
- Locke, E. A. (2016). Job Satisfaction : Overview (this is a summary of some of Locke ' s , 1976 Handbook article . Herzberg ' s theory is not mentioned below because his theory is no longer considered valid . Both so-called motivators and hygienes lead to both satisfaction and dissatisfaction).
- Rahmawati, D. (2013). Pengaruh Motivasi Terhadap Produktivitas Kerja Karyawan Pr Fajar Berlian Tulungagung. *Jurnal Universitas Tulungagung*, 1(1), 1-16.
- Ramdhani, D., Martowinangun, K., Alfiansyah, M., Herlina, H., & Mulyeni, S. (2025). Kepuasan Kerja dalam Memediasi Motivasi Kerja dan Disiplin Kerja terhadap Kinerja Karyawan, 4(2), 3571-3576.
- Rasyidi, M. N. (2018). Pengaruh Motivasi da Kepuasan Kerja terhadap Kinerja Karyawan Perusahaan Daerah Air Minum (PDAM) Kota Palangka Raya, 7(2).
- Robbins, S. P. (1996). Seventh Edition.
- Sugiyono. (2013). *Metodologi Penelitian Kuantitatif Kualitatif dan R&D*. Bandung:

Alfabeta.

Suwinda, I. G., & Wati Ni Nyoman Kurnia. (2021). *Kinerja Pegawai Kinerja Pegawai Kinerja Pegawai. Cv Widina Media Utama* (Vol. 10).

Wahyuni, A. S. (2021). Penerapan Model Hybrid Learning Dalam Ptm Terbatas Untuk Meningkatkan Motivasi Dan Hasil Belajar Siswa. *Indonesian Journal of Educational Development*, 2(November 2021), 292–297. <https://doi.org/10.5281/zenodo.5681376>