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The Effects of Training and Employee Engagement on Managerial Performance: The Mediating Role of Teamwork in the BADAY Drinking Water Program, Sumenep

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Abstract: This study aims to examine and analyze the effect of training and employee engagement on manager performance with teamwork as an intervening variable. This study used a saturated sampling method, by distributing questionnaires to all 40 managers of the BADAY Drinking Water Program in Batang-Batang Daya Village, Sumenep Regency. Data were processed using SmartPLS with the SEM-PLS method. The results based on direct effects showed that training has a significant effect on teamwork (β=0.544, t=4.018, p=0.000), employee engagement has a significant effect on teamwork (β=0.332, t=2.262, p=0.024), training has no significant effect on manager performance (β=0.113, t=0.559, p=0.576), employee engagement has no significant effect on manager performance (β=0.267, t=1.346, p=0.178), and teamwork has a significant effect on manager performance (β=0.470, t=2.175, p=0.030). Furthermore, the indirect effect results showed that training has no significant effect on manager performance mediated by teamwork (β=0.256, p=0.084), and employee engagement has no significant effect on manager performance through teamwork (β=0.156, p=0.141). The R-Square values are 0.651 for teamwork and 0.603 for performance, indicating substantial explanatory power.

Keywords: Community Empowerment; Employee Engagement; Teamwork; Training; Performance

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1. Introduction

Community empowerment is one of the strategic approaches in development that aims to increase community independence and welfare, especially in rural areas (Setyawan et al., 2025). In Indonesia, empowerment is institutionalized through Village-Owned Enterprises (Badan Usaha Milik Desa - BUMDes), mandated by Village Law No. 6/2014 to manage village potentials and provide basic services. BADAY Drinking Water Program is one of the village community empowerment programs engaged in providing drinking water services for the community of Batang-Batang Daya Village, Sumenep Regency. This program is managed by Village-Owned Enterprise (BUMDes) together with Karang Taruna as an effort to improve public services and village community empowerment (Wafa, 2025). In its implementation, the success of the program is not only determined by facilities and infrastructure owned, but also influenced by the quality of human resources managing the program (Danial et al., 2024).

As a program that is still in the early stages of implementation since November 2025, BADAY Drinking Water Program requires readiness of human resources who are able to work effectively, have high

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work engagement, and are able to build good teamwork. At the early stage, managers are faced with various challenges such as adjustment of work systems, division of tasks, coordination among members, and ability to provide services to the community. Previous research on BUMDes with similar characteristics indicates potential managerial constraints. Study on BUMDes Lamida Bawah identified that performance of refill drinking water management was not yet optimal in aspects of productivity and service quality, caused by weak external supervision and minimal supporting facilities for customer service (Qibtiyah, 2021). In line with that, effectiveness of BUMDes Langkurung was identified as low because there were no fixed working hours so that gallon water business unit was often closed because managers were not on site (Mutrafidah & Sukmana, 2025). This condition has potential to occur in BADAY considering all managers are Karang Taruna and BUMDes administrators who have other activities outside the program. This indicates the importance of training to form work standards and employee engagement so that managers' commitment to service remains maintained since early implementation.

Therefore, aspects of training, employee engagement, and teamwork become important factors that can affect manager performance. According to Fließ et al. (2015), newly running programs remain feasible to be studied through formative evaluation approach, namely evaluation focusing on implementation process at early stage. Formative evaluation aims to identify effectiveness of internal organizational processes, readiness of program implementers, and barriers arising during program implementation. Thus, research at early stage has important role in providing input for future program development. In addition, research on employee engagement and performance has mostly been conducted in companies or business organizations such as PT Teguh Sindo Lestaritama (Sari & Yatimin, 2021), PT Aerofood ACS Kualanamu (Utari et al., 2026), and PT Nusantara Jaya Teknologi (Nurhasanah et al., 2023), while research on organizations managing village community empowerment programs is still relatively limited. According to Sekaran and Bougie (2016), different organizations can be a form of research novelty (contextual gap applying established theory to new context). Therefore, this research has novelty value because it examines the effect of training and employee engagement on manager performance through teamwork as intervening variable in context of BADAY Drinking Water Program in Batang-Batang Daya Village.

The program was developed through a mentoring process for several months covering production training, packaging, and application of drinking water quality standards. In addition, the program is directed as a village business unit managed by the community and projected to become one of the superior products of BUMDes in the future (Wafa, 2025). Training activities in the program show efforts to increase human resource capacity, especially in aspects of operational knowledge and skills. This indicates that training has important role in supporting program success. Training is systematic process to improve individual ability to carry out work effectively (Maneng et al., 2025). In perspective of modern human resource management, individual involvement in work is known as employee engagement. Employee engagement reflects level of enthusiasm, dedication, and emotional involvement of individuals towards their work (Daryoto, 2025). Individuals with high engagement tend to show better performance, because they have sense of responsibility, commitment, and concern for work results.

Although theoretically training and employee engagement are believed to improve performance, previous research results still show inconsistency (research gap). In relationship of training to performance, research of Sari & Yatimin (2021) at PT. Teguh Sindo Lestaritama and Hamam (2023) at PT. Telkom Akses found that training has positive and significant effect on employee performance. On contrary, research of Ruchiyat et al. (2025) found that training has no significant effect on performance, because training only improves basic competencies but not necessarily applied in daily work activities. Inconsistency also occurs in effect of employee engagement on performance. Research of Sari & Yatimin (2021) shows employee engagement has significant effect on performance, while research at PT. Lintong Bintang Makmur Medan found that partially employee engagement has no effect on employee performance (Gultom & Sianturi, 2025). This indicates that high work involvement does not automatically improve performance if not supported by other factors.

Meanwhile, on teamwork variable, research of Al Salman & Hassan (2016) and Chawla & Jain (2021) proves that teamwork has positive and significant effect on employee performance and organizational growth. However, there are also findings that aspects of cohesiveness and intrapersonal skills in team have no significant effect on performance. The existence of differences in research results shows that effect of training and employee engagement on performance is still contradictory and very dependent on organizational context. Therefore, it is important to re-examine the relationship in different context, namely community empowerment program that is still in early stage of implementation such as BADAY Drinking Water Program. By involving teamwork as intervening variable, this research is expected to explain indirect mechanism that has not been consistently revealed in previous research.

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Accordingly, this study aims to examine the direct effects of training and employee engagement on managerial performance and to test whether teamwork mediates these relationships. researcher is interested in conducting research entitled "The Effect Of Training And Employee Engagement On Manager Performance Through Teamwork As Intervening Variable In BADAY Drinking Water Program In Batang-Batang Daya Village, Sumenep".

2. Materials and Methods

2.1. Research Approach

The type of research used in this study is quantitative research. Quantitative research is a research method based on positivist philosophy, used to examine a particular population or sample, data collection uses research instruments, and data analysis is statistical with the aim of testing predetermined hypotheses (Mahardini et al., 2024). The approach in this study is explanatory research, namely research that aims to explain the causal relationship between research variables, namely training and employee engagement as independent variables, teamwork as an intervening variable, and performance as the dependent variable.

2.2. Research Object, Population and Sample

The object in this study is the managers of the BADAY Drinking Water Program located in Batang-Batang Daya Village, Sumenep Regency, Madura, East Java. The village has water scarcity issues and BADAY is a solution through community-based management. The population in this study is all managers of the BADAY Drinking Water Program, totaling 40 respondents, consisting of 20 BUMDes administrators (productive partners handling administration, finance, customer service) and 20 Karang Taruna members (non-productive partners handling field operations, pipe installation, maintenance). The sampling technique used is saturated sampling (census), namely all members of the population are used as research samples as many as 40 (Sari & Yatimin, 2021). Saturated sampling is considered appropriate because the population is relatively small and affordable, in accordance with Sekaran & Bougie (2016) and Sugiyono (2023).

2.3. Variable Identification and Operational Definition

Independent Variable (X): Training (X1) is a process to improve knowledge, skills, and abilities. According to Mangkunegara in Wahyuningsih (2019) indicators include: (1) Training Objectives (X1.1, X1.2), (2) Materials (X1.3, X1.4), (3) Methods (X1.5), (4) Participant Qualifications (X1.6), (5) Trainer Qualifications (X1.7). Measured with 7 items. Employee Engagement (X2) is level of involvement, enthusiasm, and dedication. According to Schaufeli et al. (2002) indicators include: (1) Vigor (X2.1, X2.2 - enthusiasm despite obstacles), (2) Dedication (X2.3, X2.4 - responsibility and pride), (3) Absorption (X2.5, X2.6 - full involvement and enjoyment). Measured with 6 items. Intervening Variable (Z): Teamwork (Z) is activity carried out and managed by group of individuals. According to Ibrahim et al. (2021) indicators include: (1) Cooperation (Z1, Z2 - active contribution), (2) Trust (Z3, Z4 - trust in ability and target), (3) Cohesiveness (Z5, Z6 - effectiveness and solidarity). Measured with 6 items. Dependent Variable (Y): Manager Performance (Y) is work result that can be achieved. According to Bernardin & Russell (2013) indicators include: (1) Quality (Y1, Y2), (2) Quantity (Y3, Y4), (3) Timeliness (Y5, Y6), (4) Effectiveness, (5) Independence, (6) Commitment. Measured with 6 items.

2.4. Measurement Scale

Measurement technique of data obtained from questionnaire answered by respondents will be measured using Likert Scale. Criteria: 5=Strongly Agree (SS), 4=Agree (S), 3=Neutral Enough (CS), 2=Disagree (TS), 1=Strongly Disagree (STS). Grand mean interpretation: 4.21-5.00 Very High/Strongly Agree, 3.41-4.20 High, 2.61-3.40 Medium, etc. Bougie & Sekaran (2020) state descriptive statistics mean and SD are most informative to describe data distribution on Likert scale.

2.5. Research Instrument Test - Measurement Model (Outer Model)

Outer model design is used to see relationship between latent variables. Validity Test: Convergent Validity can be known by loading factor value. An indicator can be considered valid if correlation value above 0.50 (Ghozali, 2021; Musyaffi et al., 2022) or >0.70 (Hair et al., 2021). Discriminant Validity can be known by cross loading and HTMT <0.90 (Henseler et al., 2016). Average Variance Extracted (AVE) valid if >0.50. Reliability Test: Cronbach alpha >0.60 and composite reliability >0.80 (Musyaffi et al., 2022).

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2.6. Data Analysis Technique - Structural Model (Inner Model

This study uses Structural Equation Modelling-Partial Least Square (SEM-PLS) with SmartPLS 4. SEM-PLS can use relatively small sample size and indicators reflective. Inner Model: R-Square criteria: 0.67 substantial (strong), 0.33 moderate, 0.19 weak (Chin, 1998). F-Square: 0.02 small, 0.15 moderate, 0.35 large. Predictive Relevance Q-Square and Goodness of Fit (GoF) = sqrt(average AVE * average R-Square) with criteria >0.36 large. Hypothesis Testing: p-value <0.05 significant, t-statistic >1.96 significant with bootstrapping 5000 subsamples (Hair et al., 2021).

3. Results and Disscussion

3.1 Descriptive Statistics and Respondent Characteristics

Based on Table 1, majority of respondents are in productive age range 20-30 years as many as 19 people (47.5%), followed by 31- 40 years 18 people (45.0%) and under 20 years 3 people (7.5%). Based on gender, majority male 26 people (65.0%) and female 14 people (35.0%), indicating technical field operations still dominated by male managers. Based on management element, balanced distribution where BUMDes 20 (50%) and Karang Taruna 20 (50%), reflecting active balanced collaboration

Table 1. Respondent Characteristics

Characteristic	Frequency	Percentage
Age 20-30 years (productive)	19	47.5%
Age 31-40 years	18	45.0%
Age <20 years	3	7.5%
Gender Male	26	65.0%
Gender Female	14	35.0%
BUMDes Administrators	20	50%
Karang Taruna Members	20	50%

Explanation of Table 1: Table 1 shows respondent characteristics are dominated by productive age 92.5% (20-40 years), indicating good ability to attend training and participate actively. The 65% male dominance reflects that field operations such as pipe installation and pump maintenance are still dominated by men, while women are more in administration and finance. The balanced 50:50 composition is the main strength of BADAY, namely collaboration between village apparatus and youth, but also a coordination challenge due to different organizational cultures. The program started operating November 2025 and still running, as early stage program requiring good management through training, engagement, and effective teamwork.

Table 2. Frequency Assessment of Variables

Variable	Grand Mean	Category	Detailed Explanation per Item
Training X1 (7 items)	4.45	SS - Very Good	X1.1 4.38 understand objectives, X1.2 4.55 training according to task needs, X1.3 4.42 relevant material, X1.4 4.60 material helps teamwork (highest), X1.5 4.45 method interesting, X1.6 4.40 participant suitable, X1.7 4.32 trainer competent (lowest)
Employee Engagement X2	4.46	SS - Very Good	X2.1 4.525 enthusiastic to collaborate, X2.2 4.575 resilient despite obstacles, X2.3 4.525 responsibility, X2.4 4.30 proud (15% neutral), X2.5 4.62 happy when working (highest), X2.6 4.22 concentrated (lowest)
Teamwork Z	4.49	SS - Very Good	Z1 4.42 cooperation, Z2 4.60 cooperation, Z3 4.45 trust, Z4 4.30 trust sharing info (15% neutral lowest), Z5 4.58 cohesiveness, Z6 4.58 solid
Manager Performance Y	4.62	SS - Very Good	Y1 4.70 quality highest, Y2 4.65 quantity, Y3 4.53 timeliness lowest, Y4 4.60 effectiveness, Y5 4.58 independence, Y6 4.66 commitment

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Based on Table 2 Training Objective X1-1 and X1-2 mean 4.38 and 4.55 Strongly Agree, showing respondents understand training objectives and assess training according to task needs in BADAY. Material X1-3 and X1-4 mean 4.42 and 4.60 Strongly Agree, indicating relevant material helps improve ability to complete work effectively in team. Method X1-5 mean 4.45 Strongly Agree. Participant Qualification X1-6 mean 4.40 and Trainer Qualification X1-7 mean 4.32 Strongly Agree. Overall Training grand mean 4.45 SS very good. Employee Engagement Vigor X2-1 and X2-2 mean 4.525 and 4.575 Strongly Agree, showing high enthusiasm to work together and stay enthusiastic despite obstacles. Dedication X2-3 and X2-4 mean 4.525 and 4.30, X2-4 there are 6 respondents (15.0%) answering Neutral Enough, mean slightly lower but still Strongly Agree. Absorption X2-5 and X2-6 mean 4.62 and 4.22. Overall EE grand mean 4.46 SS very good. Teamwork Cooperation Z1-1 and Z1-2 mean 4.42 and 4.60 Strongly Agree. Trust Z1-3 and Z1-4 mean 4.45 and 4.30, Z1-4 there are 6 respondents (15.0%) answering Neutral Enough, indicating aspect of trust in sharing information still needs improvement. Cohesiveness Z1-5 and Z1-6 mean 4.58 and 4.58 Strongly Agree. Overall Teamwork grand mean 4.49 SS showing collaboration between BUMDes and Karang Taruna in managing BADAY has been running very well. Performance Y1-1 highest mean 4.70 and Y1-3 lowest 4.53, all dominated Strongly Agree. Overall Performance grand mean 4.62 SS showing respondents assess performance very good in quality, quantity, timeliness.

3.2 Evaluation of Measurement Model (Outer Model)

Table 3. Outer Model Results - Loading Factor, AVE, Reliability

Variable	Loading Factor	AVE	Alpha / CR	Valid
Training X1	0.712-0.841	0.601	0.868 / 0.900	Valid
EE X2	0.654-0.792	0.548	0.727 / 0.828	Valid
Teamwork Z	0.734-0.874	0.640	0.808 / 0.876	Valid
Performance Y	0.698-0.823	0.550	0.725 / 0.830	Valid

Outer model results show all indicators loading factor above 0.5 valid (Ghazali, 2005; Musyaffi et al., 2022). AVE >0.5 valid. Cross loading shows each indicator higher on own construct than other constructs. Reliability Cronbach alpha >0.6 and CR >0.8 reliable (Musyaffi et al., 2022). Training CR 0.900 very reliable. All indicators loading 0.654-0.874 exceed threshold, indicating indicators accurately measure latent variable. AVE >0.50 shows more than 50% variance of indicators explained by construct - Training AVE 0.601 means 60.1% variance of 7 items explained, Teamwork AVE 0.640 highest indicating strong convergent validity. Discriminant validity assessed via cross-loading (each indicator higher on own construct) and HTMT <0.90 (Henseler et al., 2016). Reliability Cronbach alpha >0.60 and CR >0.80 indicates consistent answers. Training CR 0.900 very reliable means 7 items consistently measure training. Thus measurement model is valid and reliable, can proceed to inner model.

3.3 Evaluation of Structural Model (Inner Model)

Table 4. Inner Model - R-Square

Endogenous Variable	R-Square	R-Square Adjusted	Q-Square	GoF	Criteria
Teamwork Z	0.651	0.632	0.401	0.605	Substantial – 65.1% explained
Manager Performance Y	0.603	0.569	0.354		Substantial – 60.3% explained

Explanation of Table 4: Table 4 shows R-Square for teamwork is 0.651 and for manager performance is 0.603, indicating substantial explanatory power according to Chin (1998): 0.67 substantial/strong, 0.33 moderate, 0.19 weak. So 0.651 close to substantial, indicating strong model. R-Square teamwork 0.651 means 65.1% variance of teamwork is explained by training and employee engagement, remaining 34.9% explained by other variables not examined such as leadership, communication, organizational culture. R-Square performance 0.603 means 60.3% performance variance explained by training, engagement, and teamwork. Comparable with Gultom & Sianturi (2025) adjusted R^2 0.677. Q-Square values are 0.401 for teamwork and 0.354 for performance (>0) indicating model has predictive relevance via blindfolding procedure - model can predict data well. GoF = sqrt(average AVE 0.584 * average R^2 0.627) = 0.605 >0.36 large indicating overall model fit is good (Wetzels et al., 2009).

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Table 5. Inner Model - F-Square

Path	F-Square	Effect Size Criteria	Meaning
Training → Teamwork	0.461	0.35 Large	Dominant determinant – if omitted R2 drops 46.1%
Employee Engagement → Teamwork	0.171	0.15 Moderate	Moderate – R2 drops 17.1%
Teamwork → Performance	0.208	0.15 Moderate	Moderate effect on performance
Employee Engagement → Performance	0.068	0.02 Small	Almost no direct effect – explains H4 rejected
Training → Performance	0.012	<0.02 Very Small	Almost no direct effect – explains H3 rejected

Explanation of Table 5. Table 5 presents the f^2 effect sizes of the structural model. The results indicate that Training has a large effect on Teamwork ($f^2 = 0.461$), suggesting that Training makes a substantial contribution to explaining the variance in Teamwork within the structural model. Employee Engagement has a small-to-moderate effect on Teamwork ($f^2 = 0.171$), while Teamwork has a moderate effect on Employee Performance ($f^2 = 0.208$). In contrast, the direct effects of Training on Employee Performance ($f^2 = 0.012$) and Employee Engagement on Employee Performance ($f^2 = 0.068$) are very small and small, respectively. These findings indicate that Training and Employee Engagement contribute more strongly to Teamwork than directly to Employee Performance. Thus, the rejected direct-effect hypotheses should not be interpreted as evidence that Training and Employee Engagement are unimportant; rather, their contribution to performance appears to be limited when considered as direct predictors in the structural model. The findings suggest that, in the context of early-stage BUMDes, strengthening individual capabilities may need to be accompanied by effective teamwork and organizational support mechanisms to translate these capabilities into improved performance.

Table 6. Hypothesis

Hypothesis	Path	β Original	t-statistic	p-value	t-table	Decision
H1	Training → Teamwork	0.544	4.018	0.000	1.96	Accepted
H2	EE → Teamwork	0.332	2.262	0.024	1.96	Accepted
H3	Training → Performance	0.113	0.559	0.576	1.96	Rejected
H4	EE → Performance	0.267	1.346	0.178	1.96	Rejected
H5	Teamwork → Performance	0.470	2.175	0.030	1.96	Accepted
H6	Training → Teamwork → Performance	0.256	1.726	0.084	1.96	Rejected (No Mediation)
H7	EE → Teamwork → Performance	0.156	1.474	0.141	1.96	Rejected (No Mediation)

Discussion per Hypothesis with Detailed Explanation:

a. H1 Accepted - Training significant on teamwork (β=0.544, t=4.018>1.96, p=0.000). This means when training objectives are clear, materials relevant (pump troubleshooting, pipe leak handling, bookkeeping), methods applicable, trainers qualified, role understanding increases, communication strengthens, trust builds. In BADAY, joint training between BUMDes (administration) and Karang Taruna (field) creates shared language and shared mental model. This supports Chandra & Hastuti (2023) that training is antecedent of teamwork. Managerial implication: continue joint training monthly with 70% field practice, not just theory.

b. H2 Accepted - Employee engagement significant on teamwork (β=0.332, t=2.262, p=0.024). High vigor (enthusiasm despite obstacles), dedication (responsibility for success), absorption (happy when working) encourage active collaboration, helping colleagues, trust and cohesiveness. Tinambunan & Kerja (2022) and Bakker & Albrecht (2018) found similar. In BADAY context, engagement based on social mission to provide clean water maintains collaboration despite limited incentives. However 15% neutral on dedication and absorption items indicates need to strengthen pride and focus via recognition and incentives.

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c. H3 Rejected - Training not significant on manager performance (β=0.113, t=0.559<1.96, p=0.576>0.05). Training aims to improve ability (Elizar & Tanjung, 2018) but in early-stage program, performance more influenced by coordination system, task division, SOPs, and facilities. Training in BADAY still technical basic, not yet team-building and not supported by spare parts. This is consistent with Ruchiyat et al. (2025) who found training does not directly affect performance in early-stage organizations. F-Square 0.012 very small confirms almost no effect. Implication: training alone is not enough, need to evaluate materials to be more applicable and accompanied by system improvement.
d. H4 Rejected - Employee engagement not significant on performance (β=0.267, t=1.346, p=0.178). High engagement reflects enthusiasm, dedication, involvement (Nurhasanah et al., 2023) but not automatically improves performance if not supported by other factors such as time availability, budget, SOPs, leadership. Wulandari et al. (2022) on RSUD Mataram t=1.719<1.987 also found no effect. In BADAY, managers have other activities outside program, so commitment needs to be maintained with incentives IDR 300-500k/month and conducive climate.
e. H5 Accepted - Teamwork significant on performance (β=0.470, t=2.175, p=0.030). Teamwork is important factor in improving organizational effectiveness (Al Salman & Hassan, 2016; Chawla & Jain, 2021). Solid team able to complete work faster, more efficient, better results. In BADAY, water distribution to households, maintenance of pipes, cleaning water sources, and fee collection can only be done with solid teamwork between BUMDes and Karang Taruna. Cooperation 4.42, trust 4.45, cohesiveness 4.58 all high. This is key finding: in early-stage community enterprise, teamwork is independent driver of performance, more important than individual training or engagement.
f. H6 Rejected - Training has no significant effect on manager performance mediated by teamwork (β=0.256, p=0.084>0.05). Training can improve teamwork which ultimately affects performance (Chawla & Jain, 2021) but mediation not significant, in line with Wulandari et al. (2022) and Ruchiyat et al. (2025). Explanation: training in BADAY still technical, not team-building, and spare parts limited, so even though teamwork increases, performance improvement is not yet transmitted due to system barriers. Teamwork is not yet effective transmission mechanism.
g. H7 Rejected - Employee engagement has no significant effect on performance through teamwork (β=0.156, p=0.141>0.05). High EE encourages active teamwork, good communication, mutual support (Tinambunan & Kerja, 2022) but structural barriers unclear task division, limited budget, minimal SOPs (Firjatullah et al., 2026) more dominant. Teamwork important independent driver but not yet effective mediator in early-stage community organization. This supports formative evaluation theory where internal processes need to be strengthened first.

4. Conclusions

Based on the results, it can be concluded: (1) Training has a significant positive effect on teamwork, (2) Employee engagement has a significant positive effect on teamwork, (3) Training has no significant effect on manager performance, (4) Employee engagement has no significant effect on manager performance, (5) Teamwork has a significant positive effect on manager performance, (6) Teamwork does not mediate the effect of training on manager performance, and (7) Teamwork does not mediate the effect of employee engagement on manager performance. Theoretical implication: In early-stage BUMDes, teamwork is independent driver, not mediator, supporting formative evaluation theory (Michael, 2015) and contextual gap (Sekaran & Bougie, 2016). Practical suggestions: (1) Improve coordination system and clarify task division via written SOPs and fixed working hours 08.00-12.00, (2) Design technical training 70% field practice: pump troubleshooting, pipe leak handling, simple financial bookkeeping, customer service, (3) Increase cohesiveness via monthly gotong royong cleaning water sources, outbound, comparative study to successful BUMDes Tirta Mandiri, (4) Village government provide budget for spare parts and incentives IDR 300-500k/month to maintain commitment because managers have other activities, (5) Create conducive climate via recognition best team quarterly. Limitations: Sample limited 40 in one village since November 2025, generalization limited. Cross-sectional one point in time. Self-reported questionnaire with village head assistance potential social desirability bias and coercion (Bougie & Sekaran, 2020) causing ceiling effect. Only 4 variables, other variables leadership, organizational commitment, motivation, compensation not examined. Future research: expand >100 samples, add organizational commitment, transformational leadership, job satisfaction, mixed methods, longitudinal 6 months, multi-group analysis BUMDes vs Karang Taruna, objective performance indicators: number of customers, water discharge, income, service continuity.

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