

## THE EFFECT OF ENGAGEMENT ON EMPLOYEE PERFORMANCE THROUGH THE IMPLEMENTATION OF LEADERSHIP

**Budi Susilo, Syaifuddin, Sofiyan**

<sup>123</sup> Universitas Prima Indonesia

[syaifuddin@unprimdn.ac.id](mailto:syaifuddin@unprimdn.ac.id)

Received: 28-05- 2026

Revised: 20-06-2026

Approved: 28-06-2026

### ABSTRACT

*The decline in the quality of a plantation company is often caused by various factors, both internal and external to the company itself. The main objective of this study is to determine the effect of engagement on leadership implementation and employee performance at PTPN IV Regional 1, both directly and indirectly through the mediation of leadership implementation. The analytical method used in this study was Structural Equation Modeling (SEM) based on SmartPLS version 4.1. The research population is all employees of PTPN IV Regional 1. The sampling technique used was cluster random sampling, and the sample size was calculated using the Slovin formula. This resulted in 391 employees from three employee groups at PTPN IV Regional 1, selected proportionally. The results indicate that engagement directly has a positive and significant effect on leadership implementation and employee performance. Furthermore, leadership implementation plays a significant role in mediating the relationship between the independent variables and employee performance, thereby strengthening the influence of organizational factors on performance. The implications of this study indicate that increasing engagement that supports innovation can strengthen leadership implementation at PTPN IV Regional 1, thereby improving employee performance and supporting the achievement of organizational goals.*

**Keywords:** *Engagement, Leadership, Employee Performance, Agro-industry sector*

### INTRODUCTION

The plantation subsector has consistently played a significant role and contributed to the government and society. PT. Perkebunan Nusantara IV is one of the largest palm oil producers in North Sumatra and plays a significant role in the production of this commodity in the region. Employee engagement at PTPN IV Regional 1 is currently suboptimal, characterized by low levels of enthusiasm, belonging, and commitment to their work and the company. This can be caused by a lack of recognition for employee contributions, an unsupportive work environment, or limited opportunities for self-development. This low employee engagement can lead to employees working solely to fulfill basic obligations without the passion to achieve better results, thus hampering performance improvement.

Research by Danirmala (2022) shows that employees who are engaged with the company have a strong emotional connection and commitment to their workplace. This is because employee engagement is a key factor supporting the company's long-term success, both in terms of performance, innovation, and customer satisfaction. Employee engagement is a crucial aspect determining employee loyalty and motivation. Leaders who are able to interact with and support their employees will create a conducive environment, so employees feel involved and emotionally connected to the company. This employee engagement not only improves productivity but also the quality of employee relationships. In the context of PTPN IV, which operates across multiple regions, employee

engagement is crucial to ensuring coordination and collaboration across dispersed teams.

Effective leadership is also key in mediating the influence of employee engagement on employee performance. Leaders who are able to motivate, guide, and provide clear direction will help employees achieve their best potential. At PTPN IV Regional 1, a strong leadership role is essential in facing various challenges. Based on the description above, this study is important to conduct in order to understand more deeply how employee engagement affects employee performance at PTPN IV Regional 1, as well as the role of leadership implementation as a mediator in this relationship. The results of this study are expected to provide strategic recommendations for PTPN IV management in improving employee performance, creating a conducive work environment, and optimizing leadership implementation to achieve organizational goals. Based on the emerging phenomena and previous research that the researcher has described, the researcher is interested in examining the extent to which Engagement Influences Employee Performance Through Leadership Implementation at PTPN IV Regional 1.

## **LITERATURE REVIEW**

### **Employee Engagenet (X)**

Employee Engagement was first proposed by a group of researchers (Omene, 2021). Employees claim that employee engagement can predict improved employee performance, profitability, employee retention, customer satisfaction, and organizational success (Sarah Cook, 2008). According to Robbins (2012), employee engagement is an individual's involvement with satisfaction and enthusiasm for the work they do. Shi et al. (2024) define employee engagement as a condition expected to have organizational goals, commitment, enthusiasm, and focus on effort. Ahmed et al. (2024) defines employee engagement as a strong emotional and intellectual connection where an employee has with the organization, job, manager, or coworkers that influences them to continue striving in their work.

According to Sarah Cook (2008), research has shown that an individual's psychological well-being is part of their personal resources. Sarah Cook (2008) also states that psychological well-being is one of the factors influencing work engagement. The interaction between psychological well-being and employee engagement can lead to the creation of a state of full employee engagement, resulting in healthy employee psychological well-being and a high level of employee engagement that can last a long time. Based on the explanation above, it can be concluded that psychological well-being is one of the factors that influence work engagement. Psychological well-being, as part of personal resources, if possessed by employees at a high level, will also be high work engagement.

### **Employee Performance (Y)**

A company uses its performance as a measure of the achievement of a set goal. It is the result of employee work, both quantitatively and qualitatively, and is responsible for the termination of employment. Employees work well in accordance with labor standards (Rana , 2015). Performance is the result

achieved by an individual or group of individuals within an organization, each with their respective authority and responsibility, striving to achieve organizational goals that are legal, non-illegal, and morally and ethically sound (Patrick M. Lencioni, 2010). Another opinion states that employee performance is the result of good work performance achieved by an employee in completing their work tasks in accordance with the responsibilities assigned by the company (Mangkunegara, 2017).

Omene (2021) further states that performance is the level of achievement of results from carrying out specific tasks. Company performance is the level of achievement of results in order to realize company goals. Osabiya (2015) states that performance is the results of an individual or group's work functions within an organization over a specific period of time, reflecting how well that individual or group fulfills job requirements in an effort to achieve organizational goals. Ramos et al. (2023) state that performance is the work results achieved by completing assigned tasks and responsibilities within a specific timeframe. Based on the aforementioned opinion, performance is the willingness of an individual or group of individuals to carry out an activity and perfect it according to their responsibilities, resulting in the desired results. Alternatively, performance is the work results achieved by an individual or group of individuals within an organization, within their respective authorities and responsibilities, in an effort to achieve organizational goals legally, legally, and ethically.

### **Leadership (Z)**

In an organization, leadership plays a crucial role because it is the leader who drives and directs the organization in achieving its goals, a task that is not easy. This requires understanding the diverse behaviors of each subordinate. Subordinates are influenced in such a way that they can devote themselves and participate effectively and efficiently to the organization. John-Eke & Akintokunbo (2020) state that leadership is the activity of influencing others to voluntarily strive to achieve group goals. Leadership is the ability of a person to have an impact that can motivate, encourage, and supervise parties or groups under their leadership (Nutrition, 2009). Whether a leader is considered successful or not can be seen from the style in which a person leads their group to jointly achieve predetermined goals.

According to Robbins & Judge (2017), leadership is the ability to influence a group of members to work towards goals and objectives. Leadership is a determining factor in the success of an organization. The success of an organization is also largely determined by the leadership actors, within which there are leaders and followers (Vroom & H. Jago, 2007). Leadership is the ability of a person to influence others or groups to achieve specific goals. According to Griffin (2018), leadership is the process of motivating others to work toward achieving predetermined goals. Leadership is a process in which leaders are described as giving orders or influencing, guiding, or influencing the work of others in selecting and achieving predetermined goals (Liden et al., 2024).

### **RESEARCH METHODS**

This type of research falls into the associative or causal research category, aiming to uncover the relationships and influences between variables. This

research not only aims to explain existing relationships but also to predict possible outcomes if one of the variables changes. Thus, the results of this study can be used to develop broader theories and support better decision-making in practice. The population in this study was 16,953 employees of PTPN IV Regional 1. The sampling technique used in this study was cluster random sampling. The sample size was calculated using the Slovin formula, resulting in a sample size of 391 employees from three employee groups at PTPN IV Regional 1. The following is a proportional sample calculation.

The data collection procedure was carried out by searching, obtaining, collecting, and recording data through a questionnaire. The measurement scale in this study was a Likert scale with a gradient from lowest to highest. In general, validity testing is to determine whether the questionnaire items used are able to measure what is intended. Validity and reliability are measured through evaluation or testing the suitability of the measurement model. The data analysis technique used in this study was statistical analysis, namely partial least squares – structural equation model (PLS SEM), which aims to conduct path analysis with latent variables. The structural model testing in PLS was conducted using Smart PLS version 3 for Windows software.

**Hypothesis**

1. Based on previous research, the hypotheses in this study can be described as follows:
2. There is a positive and significant influence of engagement on leadership at PTPN IV Regional 1.
3. There is a positive and significant influence of engagement on employee performance at PTPN IV Regional 1.
4. There is a positive and significant influence of leadership on employee performance at PTPN IV Regional 1.
5. There is a positive and significant influence of leadership that mediates the influence of engagement on employee performance at PTPN IV Regional 1.

**RESULTS AND DISCUSSION**

**Descriptive Analysis**

The following is a description table of respondents' answers to the questionnaire that was distributed to respondents, namely as follows:

**Engagement Variable (X)**

The description of the frequency of answers from respondents for the engagement variable (X) based on the indicators that have been described in the form of statements is as follows:

**Table 1. Engagement Variable Questionnaire Scores (X)**

Answer	Eg1	Eg2	Eg3	Eg4	Eg5	Eg6	Eg7	Eg8	Eg9
STS	25	13	24	10	22	10	16	12	24
%	6.4	3.3	6.1	2.6	5.6	2.6	4.1	3.1	6.1
TS	51	56	46	55	52	60	50	53	49
%	13.0	14.3	11.8	14.1	13.3	15.3	12.8	13.6	12.5
KS	77	78	75	74	73	69	71	86	72
%	19.7	19.9	19.2	18.9	18.7	17.6	18.2	22.0	18.4

Answer	Eg1	Eg2	Eg3	Eg4	Eg5	Eg6	Eg7	Eg8	Eg9
S	151	133	138	161	152	136	160	144	153
%	38.6	34.0	35.3	41.2	38.9	34.8	40.9	36.8	39.1
SS	87	111	108	91	92	116	94	96	93
%	22.3	28.4	27.6	23.3	23.5	29.7	24.0	24.6	23.8
Average	3,57	3,7	3,66	3,69	3,61	3,74	3,68	3,66	3,62
Percentage	100	100	100	100	100	100	100	100	100
Total	391	391	391	391	391	391	391	391	391

Source: questionnaire tabulation, processed data, 2025

Mean interval score: STS = 0.00 - 1.80 TS = 1.81 - 2.60 N = 2.61 - 3.40 S

= 3.41 - 4.20 SS = 4.21 5.00

The table above explains the following:

1. Statement EG1 "I feel full of energy when carrying out my daily work." Of the 391 respondents, 25 (6.4%) answered Strongly Disagree, 51 (13.0%) answered Disagree, 77 (19.7%) answered Somewhat Agree, 151 (38.6%) answered Agree, and 87 (22.3%) answered Strongly Agree. The average score of 3.57 is in the Agree (S) category.
2. Statement EG2 "I can continue working for long periods without feeling tired." 13 (3.3%) answered Strongly Disagree, 56 (14.3%) answered Disagree, 78 (19.9%) answered Somewhat Agree, 133 (34.0%) answered Agree, and 111 (28.4%) answered Strongly Agree. The average score was 3.70 in the Agree (S) category.
3. Statement EG3 "I feel strong and enthusiastic when facing challenges in my work." A total of 24 respondents (6.1%) answered Strongly Disagree, 46 respondents (11.8%) answered Disagree, 75 respondents (19.2%) answered Somewhat Agree, 138 respondents (35.3%) answered Agree, and 108 respondents (27.6%) answered Strongly Agree. The average score was 3.66 in the Agree (S) category.
4. Statement EG4 "My work gives me deep meaning." A total of 10 respondents (2.6%) answered Strongly Disagree, 55 respondents (14.1%) answered Disagree, 74 respondents (18.9%) answered Somewhat Agree, 161 respondents (41.2%) answered Agree, and 91 respondents (23.3%) answered Strongly Agree. The average score was 3.69 in the Agree (S) category.
5. Statement EG5 "I feel proud of the work I do." A total of 22 respondents (5.6%) answered Strongly Disagree, 52 respondents (13.3%) answered Disagree, 73 respondents (18.7%) answered Somewhat Agree, 152 respondents (38.9%) answered Agree, and 92 respondents (23.5%) answered Strongly Agree. The average score was 3.61 in the Agree (S) category.
6. Statement EG6 "I feel enthusiastic when starting the workday." A total of 10 respondents (2.6%) answered Strongly Disagree, 60 respondents (15.3%) answered Disagree, 69 respondents (17.6%) answered Somewhat Agree, 136 respondents (34.8%) answered Agree, and 116 respondents (29.7%) answered Strongly Agree. The average score was 3.74 in the Agree (S) category.

7. Statement EG7 "I am completely immersed in my work." Sixteen respondents (4.1%) answered Strongly Disagree, 50 respondents (12.8%) answered Disagree, 71 respondents (18.2%) answered Somewhat Agree, 160 respondents (40.9%) answered Agree, and 94 respondents (24.0%) answered Strongly Agree. The average score was 3.68 in the Agree (S) category.
8. Statement EG8 "I feel like I'm constantly trying to work because I'm so focused." Twelve respondents (3.1%) answered Strongly Disagree, 53 respondents (13.6%) answered Disagree, 86 respondents (22.0%) answered Somewhat Agree, 144 respondents (36.8%) answered Agree, and 96 respondents (24.6%) answered Strongly Agree. The average score was 3.66 in the Agree (S) category.
9. Statement EG9 "I feel completely immersed in my work." A total of 24 respondents (6.1%) answered Strongly Disagree, 49 respondents (12.5%) answered Disagree, 72 respondents (18.4%) answered Somewhat Agree, 153 respondents (39.1%) answered Agree, and 93 respondents (23.8%) answered Strongly Agree. The average score was 3.62 in the Agree (S) category.

**Leadership Variables (Z)**

The description of the frequency of answers from respondents for the Leadership variable (Z) based on the indicators that have been described in the form of statements is as follows:

**Table 3. Leadership Variable Questionnaire**

Answer	KN1	KN2	KN3	KN4	KN5	KN6	KN7	KN8	KN9	KN10	KN11	KN12	KN13	KN14	KN15
STS	33	16	19	14	21	10	19	15	24	17	23	20	16	15	19
%	8.4	4.1	4.9	3.6	5.4	2.6	4.9	3.8	6.1	4.3	5.9	5.1	4.1	3.8	4.9
TS	31	56	54	53	45	64	52	54	46	52	41	45	44	49	37
%	7.9	14.3	13.8	13.6	11.5	16.4	13.3	13.8	11.8	13.3	10.5	11.5	11.3	12.5	9.5
KS	82	84	73	80	64	75	74	86	68	92	85	87	83	89	95
%	21.0	21.5	18.7	20.5	16.4	19.2	18.9	22.0	17.4	23.5	21.7	22.3	21.2	22.8	24.3
S	142	132	132	142	154	145	150	131	155	141	139	138	154	149	140
%	36.3	33.8	33.8	36.3	39.4	37.1	38.4	33.5	39.6	36.1	35.5	35.3	39.4	38.1	35.8
SS	103	103	113	102	107	97	96	105	98	99	103	101	94	89	100
%	26.3	26.3	28.9	26.1	27.4	24.8	24.6	26.9	25.1	25.3	26.3	25.8	24.0	22.8	25.6
Average	3,6	3,6	3,7	3,7	3,7	3,7	3,6	3,7	3,7	3,7	3,7	3,7	3,7	3,6	3,7
Percentage	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Total	391	391	391	391	391	391	391	391	391	391	391	391	391	391	391

**Scores (Z)**

Mean interval score: STS = 0.00 - 1.80 TS = 1.81 - 2.60 N = 2.61 - 3.40 S = 3.41 - 4.20 SS = 4.21 5.00

From the table above, it can be explained as follows :

10. For statement KN1: "My leader demonstrates decisiveness in facing challenges," out of 391 respondents, 33 (8.4%) answered Strongly Disagree, 31 (7.9%) Disagree, 82 (21.0%) Somewhat Agree, 142 (36.3%) Agree, and

- 103 (26.3%) Strongly Agree. The average score of 3.64 falls into the Agree category.
11. For statement KN2: "My leader is consistent between words and actions," 16 (4.1%) answered Strongly Disagree, 56 (14.3%) Disagree, 84 (21.5%) Somewhat Agree, 132 (33.8%) Agree, and 103 (26.3%) Strongly Agree. The average score of 3.64 falls into the Agree category.
  12. For statement KN3: "My leader has integrity and is a role model for his subordinates," 19 people (4.9%) answered Strongly Disagree, 54 people (13.8%) Disagree, 73 people (18.7%) Somewhat Agree, 132 people (33.8%) Agree, and 113 people (28.9%) Strongly Agree. The average score was 3.68, categorized as Agree.
  13. For statement KN4: "My leader is always committed to the job," 14 people (3.6%) answered Strongly Disagree, 53 people (13.6%) Disagree, 80 people (20.5%) Somewhat Agree, 142 people (36.3%) Agree, and 102 people (26.1%) Strongly Agree. The average score was 3.68, categorized as Agree.
  14. For statement KN5: "My leader is fair in dividing tasks," 21 people (5.4%) answered Strongly Disagree, 45 people (11.5%) Disagree, 64 people (16.4%) Somewhat Agree, 154 people (39.4%) Agree, and 107 people (27.4%) Strongly Agree. The average score of 3.72 is included in the Agree category.
  15. For statement KN6: "My leader supports the ideas and opinions of subordinates," 10 people (2.6%) answered Strongly Disagree, 64 people (16.4%) Disagree, 75 people (19.2%) Somewhat Agree, 145 people (37.1%) Agree, and 97 people (24.8%) Strongly Agree. The average score of 3.65 is included in the Agree category.
  16. For statement KN7: "My leader is able to inspire the team to work," 19 people (4.9%) answered Strongly Disagree, 52 people (13.3%) Disagree, 74 people (18.9%) Somewhat Agree, 150 people (38.4%) Agree, and 96 people (24.6%) Strongly Agree. The average score was 3.64 in the Agree category.
  17. For statement KN8: "My leader makes wise decisions," 15 people (3.8%) answered Strongly Disagree, 54 people (13.8%) Disagree, 86 people (22.0%) Somewhat Agree, 131 people (33.5%) Agree, and 105 people (26.9%) Strongly Agree. The average score was 3.66 in the Agree category.
  18. For statement KN9: "My leader supports employee self-development," 24 people (6.1%) answered Strongly Disagree, 46 people (11.8%) Disagree, 68 people (17.4%) Somewhat Agree, 155 people (39.6%) Agree, and 98 people (25.1%) Strongly Agree. The average score was 3.66 in the Agree category.
  19. For statement KN10: "My leader is able to provide work motivation," 17 people (4.3%) answered Strongly Disagree, 52 people (13.3%) Disagree, 92 people (23.5%) Somewhat Agree, 141 people (36.1%) Agree, and 99 people (25.3%) Strongly Agree. The average score was 3.72 in the Agree category.
  20. For statement KN11: "My leader is always open to criticism," 23 people (5.9%) answered Strongly Disagree, 41 people (10.5%) Disagree, 85 people (21.7%) Somewhat Agree, 139 people (35.5%) Agree, and 103 people (26.3%) Strongly Agree. The average score is 3.66 in the Agree category.
  21. For statement KN12: "My leader listens to input from subordinates," there are 20 people (5.1%) answered Strongly Disagree, 45 people (11.5%) Disagree, 87 people (22.3%) Somewhat Agree, 138 people (35.3%) Agree, and 101 people (25.8%) Strongly Agree. The average score is 3.65 in the

Agree category.

22. For statement KN13: “My leader gives clear directions,” 16 people (4.1%) answered Strongly Disagree, 44 people (11.3%) Disagree, 83 people (21.2%) Somewhat Agree, 154 people (39.4%) Agree, and 94 people (24.0%) Strongly Agree. The average score is 3.68 in the Agree category.
23. For statement KN14: “My leader is able to handle work pressure,” 15 people (3.8%) answered Strongly Disagree, 49 people (12.5%) Disagree, 89 people (22.8%) Somewhat Agree, 149 people (38.1%) Agree, and 89 people (22.8%) Strongly Agree. The average score is 3.63 in the Agree category.
24. For statement KN15: “My leader always sets a good example”, 19 people (4.9%) answered Strongly Disagree, 37 people (9.5%) Disagree, 95 people (24.3%) Somewhat Agree, 140 people (35.8%) Agree, and 100 people (25.6%) Strongly Agree. The average value is 3.68 in the Agree category.

### **Employee Performance Variables (Y)**

The description of the frequency of answers from respondents for the employee variable (Y) based on the indicators that have been described in the form of statements is as follows:

**Table 4. Employee Performance Variable Questionnaire Scores (Y)**

Answer	KK1	KK2	KK3	KK4	KK5	KK6	KK7	KK8	KK9	KK10	KK11	KK12	KK13	KK14	KK15
STS	14	15	24	10	11	17	18	13	13	16	12	13	9	10	8
%	3.6	3.8	6.1	2.6	2.8	4.3	4.6	3.3	3.3	4.1	3.1	3.3	2.3	2.6	2.0
TS	48	39	33	50	45	40	31	46	34	42	41	41	40	43	37
%	12.3	10.0	8.4	12.8	11.5	10.2	7.9	11.8	8.7	10.7	10.5	10.5	10.2	11.0	9.5
KS	78	78	81	90	94	82	85	76	82	92	85	87	83	89	95
%	19.9	19.9	20.7	23.0	24.0	21.0	21.7	19.4	21.0	23.5	21.7	22.3	21.2	22.8	24.3
S	139	157	147	147	140	137	146	147	146	136	145	141	159	158	149
%	35.5	40.2	37.6	37.6	35.8	35.0	37.3	37.6	37.3	34.8	37.1	36.1	40.7	40.4	38.1
SS	112	102	106	94	101	115	111	110	116	105	108	109	100	91	102
%	28.6	26.1	27.1	24.0	25.8	29.4	28.4	28.1	29.7	26.9	27.6	27.9	25.6	23.3	26.1
Average	3,73	3,75	3,71	3,68	3,7	3,75	3,77	3,76	3,81	3,7	3,76	3,75	3,77	3,71	3,77
Percentage	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Total	391	391	391	391	391	391	391	391	391	391	391	391	391	391	391

Mean interval score: STS = 0.00 - 1.80 TS = 1.81 - 2.60 N = 2.61 - 3.40 S = 3.41 - 4.20 SS = 4.21-5.00

From the table above, it can be explained as follows:

25. For statement KK1: "I always try to produce work that is neat, accurate, and meets standards." Of the 391 respondents, 14 people (3.6%) answered Strongly Disagree, 48 people (12.3%) Disagree, 78 people (19.9%) Somewhat Agree, 139 people (35.5%) Agree, and 112 people (28.6%) Strongly Agree. The average score of 3.73 is included in the Agree category.
26. For statement KK2: "My work rarely requires correction or revision from my superiors." A total of 15 respondents (3.8%) answered Strongly Disagree, 39 respondents (10.0%) Disagree, 78 respondents (19.9%) Somewhat Agree,

- 157 respondents (40.2%) Agree, and 102 respondents (26.1%) Strongly Agree. The average score was 3.75, which falls into the Agree category.
27. For statement KK3: "I pay attention to detail in every task I do," 24 respondents (6.1%) strongly disagreed, 33 respondents (8.4%), somewhat disagreed (81%), somewhat disagreed (20.7%), agreed (147%), and strongly agreed (106%). The average score was 3.71, falling into the Agree category.
  28. For statement KK4: "I am able to quickly resolve information problems," 10 respondents (2.6%) strongly disagreed, 50 respondents (12.8%) disagreed, 90 respondents (23.0%) somewhat disagreed, 147 respondents (37.6%) agreed, and 94 respondents (24.0%) strongly agreed. The average score was 3.68, falling into the Agree category.
  29. For statement KK5: "I always prioritize completing assigned tasks." 11 respondents (2.8%) strongly disagreed, 45 (11.5%) disagreed, 94 (24.0%) disagreed, 140 (35.8%) agreed, and 101 (25.8%) strongly agreed. The average score was 3.70, falling into the Agree category.
  30. For statement KK6: "I always strive to provide new ideas and innovations in my work." Of the 391 respondents, 17 (4.3%) strongly disagreed, 40 (10.2%) disagreed, 82 (21.0%) slightly disagreed, 137 (35.0%) agreed, and 115 (29.4%) strongly agreed. The average score of 3.75 falls into the Agree category.
  31. For statement KK7: "I am able to complete work according to the set deadline." A total of 18 respondents (4.6%) Strongly Disagree, 31 respondents (7.9%) Disagree, 85 respondents (21.7%) Somewhat Agree, 146 respondents (37.3%) Agree, and 111 respondents (28.4%) Strongly Agree. The average score is 3.77 and falls into the Agree category.
  32. For statement KK8: "I always work carefully and responsibly." Respondents answered Strongly Disagree 13 people (3.3%), Disagree 46 people (11.8%), Somewhat Agree 76 people (19.4%), Agree 147 people (37.6%), and Strongly Agree 110 people (28.1%). The average score is 3.76 and falls into the Agree category.
  33. For statement KK9: "I am able to work well in a team," 13 respondents (3.3%) strongly disagreed, 34 respondents (8.7%) disagreed, 82 respondents (21.0%) somewhat disagreed, 146 respondents (37.3%) agreed, and 116 respondents (29.7%) strongly agreed. The average score was 3.81, falling in the Agree category.
  34. For statement KK10: "I always maintain effective communication with my coworkers," 16 respondents (4.1%) strongly disagreed, 42 respondents (10.7%) disagreed, 92 respondents (23.5%), 136 respondents (34.8%), and 105 respondents (26.9%) strongly agreed. The average score was 3.70, falling in the Agree category.
  35. For statement KK11: "I always demonstrate a professional attitude at work." Of the 391 respondents, 12 (3.1%) Strongly Disagree, 41 (10.5%) Disagree, 85 (21.7%) Somewhat Agree, 145 (37.1%) Agree, and 108 (27.6%) Strongly Agree. The average score of 3.76 falls into the Agree category.
  36. For statement KK12: "I always complete tasks according to the directions and orders of my superiors." A total of 13 respondents (3.3%) Strongly Disagree, 41 (10.5%) Disagree, 87 (22.3%) Somewhat Agree, 141 (36.1%) Agree, and 109 (27.9%) Strongly Agree. The average score of 3.75 falls into

- the Agree category.
37. For statement KK13: "I am able to work according to the quality standards set by the organization." Respondents answered Strongly Disagree 9 people (2.3%), Disagree 40 people (10.2%), Somewhat Agree 83 people (21.2%), Agree 159 people (40.7%), and Strongly Agree 100 people (25.6%). The average score is 3.77 and is included in the Agree category.
  38. For statement KK14: "I try to maintain discipline at work." A total of 10 respondents (2.6%) Strongly Disagree, 43 respondents (11.0%) Disagree, 89 respondents (22.8%) Somewhat Agree, 158 respondents (40.4%) Agree, and 91 respondents (23.3%) Strongly Agree. The average score is 3.71 and is in the Agree category.
  39. For statement KK15: "I always evaluate my work results to improve in the future." Respondents who chose Strongly Disagree were 8 people (2.0%), Disagree 37 people (9.5%), Somewhat Agree 95 people (24.3%), Agree 149 people (38.1%), and Strongly Agree 102 people (26.1%). The average value is 3.77 and is included in the Agree category.

### **Requirements Analysis Test Results**

#### **Measurement Model Analysis**

Indicators with loadings below 0.40 should be removed from the model. However, for indicators with loadings between 0.40 and 0.70, we need to analyze their impact on the average variance extracted (AVE) and composite reliability. These indicators can be removed if their removal increases the AVE and composite reliability values above the established minimum threshold, namely an AVE greater than 0.50 and a composite reliability greater than 0.7. Furthermore, it is necessary to consider the impact of indicator removal on the content validity of the construct. Sometimes, indicators with small loadings are retained if they make a significant contribution to the content validity of the construct.

Based on the results of the outer loading validity test, all outer loading values were greater than 0.7, indicating that the model has met the requirements for convergent validity based on the outer loading values. This means that each indicator in the measurement model has a significant contribution to the construct being measured. After meeting the requirements for outer loading validity, the next step is to test construct validity based on the average variance extracted (AVE) values. The AVE test aims to ensure that the variance explained by the indicators within the construct is sufficiently high, with an expected AVE value greater than 0.5, indicating a good measurement model quality.

Furthermore, an Average Variance Extracted (AVE) value greater than 0.5 is considered adequate in a model. According to Mahfud and Ratmono (2013), if the AVE exceeds this value, the indicators within the construct can be considered to have good discriminant validity. In this study, the AVE value for each construct was analyzed to assess the extent to which the latent variables can explain the variance of the indicators that form it. Furthermore, Composite Reliability (CR) was used to measure the internal consistency of the indicators within each variable. A construct is said to have good reliability if its composite reliability value is greater than 0.6. Therefore, the higher the CR value, the

stronger the indicators are in representing the latent variables measured in this research model.

**Table 5. Validity Testing based on Average Variance Extracted (AVE)**

	Average variance extracted (AVE)
Engagement (X)	0.687
Leadership (Z)	0.699
Employee performance (Y)	0.648

The recommended Average Variance Extracted (AVE) value should be greater than 0.5. In this study, all AVE values were greater than 0.5, indicating that the model has met the validity requirements based on AVE. This indicates that the constructs in the model can adequately explain the variance of the indicators that form it. After meeting the validity requirements, the next step is to test the model's reliability based on the composite reliability (CR) value. CR testing aims to assess the internal consistency of indicators in each variable, where a higher CR value indicates better reliability in representing the latent variable.

**Table 6. Reliability Testing Based on Composite Reliability (CR)**

	Composite reliability (rho_c)
Engagement (X)	0.952
Employee performance (Y)	0.965
Leadership (Z)	0.972

The recommended Composite Reliability (CR) value is greater than 0.7. In this study, all CR values were above 0.7, indicating that the constructs met the reliability requirements based on CR. This indicates that the indicators in each variable have good internal consistency and can reliably represent the latent variables. After ensuring reliability through CR, the next step is to test the model's reliability using Cronbach's Alpha (CA). This test aims to assess the extent to which indicators within a construct are consistent with each other, thus supporting the overall reliability of the research model.

**Table 7. Reliability Testing Based on Cronbach's Alpha (CA)**

	Cronbach's alpha
Engagement (X)	0.943
Leadership (Z)	0.969
Employee performance (Y)	0.961

The recommended Cronbach's Alpha (CA) value should be greater than 0.7. In this study, all CA values were greater than 0.7, indicating that the model met the reliability requirements based on Cronbach's Alpha. This indicates that the indicators in the constructs have good internal consistency. Next, discriminant validity testing was conducted using the Heterotrait-Monotrait (HTMT) approach. Table 4.5 presents the results of the discriminant validity test, which indicates the extent to which the constructs in the model can be significantly differentiated.

**Table 8. Discriminant Validity Testing: HTMT**

	Engagement (X2)	Leadership (Z2)	Employee performance (Y)
Engagement (X)			
Leadership (Z)	0.608		
Employee performance (Y)	0.684	0.790	

Based on the results of the discriminant validity test using the HTMT approach, all values are known to be <0.9, which means that it is concluded that the discriminant validity requirements based on the HTMT approach have been met. After evaluating the discriminant validity, an examination is then carried out to determine whether multicollinearity problems occur in the latent variables Engagement (X), Leadership (Z), and Employees (Y). The examination of the occurrence of multicollinearity problems can be carried out using the variance inflation factor (VIF) value approach.

**Structural Model Analysis (Inner Model)**

The measurement of the inner model is explained by the results of the path coefficient test, goodness of fit test and hypothesis test.

**R Square**

Based on the data processing that has been carried out using the smart PLS 4.1 program, the R-Square value obtained is as follows:

**Table 9. R-Square**

	R-square	R-square adjusted
Leadership (Z)	0.540	0.535
Employee performance (Y)	0.769	0.766

The R-Square value for Leadership (Z) is 0.540, meaning the independent variables in this model are able to explain or influence Leadership by 54%. Meanwhile, the R-Square value for Employee Performance (Y) is 0.769, meaning the variables in this model are able to explain or influence Employee Performance by 76.9%.

**Predictive Relevance (Q<sup>2</sup>)**

The Q<sup>2</sup> value has the same meaning as the coefficient of determination (R- Square). A large Q- Square value (Q<sup>2</sup>) of 0 indicates that the model has

predictive relevance, conversely, if a value ( $Q^2$ ) is less than 0, this indicates that the model has less predictive relevance; or in other words, where all  $Q^2$  values are higher, the model can be considered to be a better fit to the data.

**Table 10. Q-Square**

Variabel	$Q^2$
Leadership (Z)	0.466
Employee performance (Y)	0.621

Known value  $Q^2$  of Employee Performance (Y) is  $0.621 > 0$ , which means that the variables in this model, namely Leadership (Z), have strong predictive relevance to Employee Performance (Y). This means that this model has good ability in predicting variations in employee performance. Although the value  $Q^2$  This shows the relevance of the prediction, the level of predictability is lower compared to Employee performance (Y).

**Test t-statistic (Bootstrapping)  
 Direct and Indirect Influence**

Hypothesis testing in this study was conducted by observing the probability value (p-value) and the level of significance of the relationship between the variables analyzed. The decision-making criteria used were: if the probability value (p) is less than 0.05 ( $p < 0.05$ ), then the relationship between the variables is declared statistically significant, thus worthy of further analysis. Conversely, if the p-value exceeds 0.05, then the relationship is considered insignificant. In addition to the p-value, significance can also be determined through the t-statistic value, with the provision that the t-value must be greater than the t-table at a significance level of 5% (i.e.  $> 1.98$ ). Therefore, the influence path between variables in the model is said to be significant if the calculated t-value is greater than 1.98, or if the standardized coefficient value exceeds the same threshold. Details of the complete results of the hypothesis testing are presented in the following table.

**Table 11. Path Coefficient Test & Significance of Direct Indirect Effects**

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics ( O/STDEV )	P values
Engagement (X) -> Leadership (Z)	0.260	0.259	0.062	4.215	0.000
Engagement (X) -> Employee performance (Y)	0.156	0.153	0.041	3.767	0.000
Leadership (Z) -> Employee performance (Y)	0.262	0.263	0.062	4.191	0.000
Engagement (X) -> Leadership (Z) -> Employee performance (Y)	0.068	0.069	0.025	2.756	0.006

Kepemimpinan (Z) signifikan memediasi hubungan antara Engagement (X) dan

1. Based on the results in Table 11, the following results were obtained:
2. Engagement ( $\alpha$ ) has a positive effect on Leadership (Z), with a coefficient value of 0.260, T-statistics of  $4.215 > 1.96$ , and P-values of  $0.000 < 0.05$ , indicating that the sixth hypothesis is accepted. Employee engagement plays

a role in increasing leadership effectiveness in an organization.

3. Engagement (X) has a positive effect on Employee Performance (Y), with a coefficient value of 0.156, T-statistics of  $3.767 > 1.96$ , and P-values of  $0.000 < 0.05$ , indicating that the tenth hypothesis is accepted. High employee engagement can improve employee performance.
4. Leadership (Z) has a positive effect on Employee Performance (Y), with a coefficient value of 0.262, T-Statistics =  $4.191 > 1.96$ , and P-Values =  $0.000 < 0.05$ , indicating that the fourteenth hypothesis is accepted. Good leadership encourages improved employee performance.
5. Leadership (Z) significantly mediates the relationship between Engagement (X) and Employee Performance (Y), with T-Statistics =  $2.756 > 1.96$  and P-Values =  $0.006 < 0.05$ , indicating that the sixth mediation hypothesis is accepted. Strong leadership can increase employee engagement and ensure that employee engagement contributes to better performance.

## **DISCUSSION**

### **The Influence of Engagement on Leadership**

Based on the data processing results, it shows that engagement directly has a positive and significant effect on leadership at PTPN IV Regional 1. Engagement (X2) has a positive and significant effect on leadership (Z2), with a coefficient value of 0.260, and is significant, with a T-statistic of  $4.215 > 1.96$  and a P-value of  $0.000 < 0.05$ . These results support the research (Behavior et al., 2023), which explains that actively engaged and committed employees are more supportive of leaders in achieving the organization's vision. This engagement creates a more productive work environment, which in turn strengthens leadership within the organization. When employees feel connected and have a role in the organization's goals, they are more motivated to contribute to achieving that vision, thus supporting more effective leadership.

Furthermore, Lee (2025) revealed that high engagement contributes to the development of a transformational leadership style. Leaders who have strong engagement with their teams tend to be more inspiring and able to motivate employees to achieve higher goals. Furthermore, research by Aruna and Anitha (2015) showed that employees who feel involved in the decision-making process and empowered by their leaders will provide greater support for organizational policies, thereby increasing leadership effectiveness. Involvement in decision-making makes employees feel more valued, which in turn increases employee commitment to decisions made and facilitates the implementation of existing policies. According to Caesens et al. (2012), in a study of employee engagement and leadership, employee engagement has a direct impact on improving leadership quality.

Based on these findings, PTPN IV Regional 1 needs to focus on improving employee engagement to strengthen leadership within the organization. Several steps that can be taken are: first, creating a work environment that motivates active employee involvement in every decision-making process. Employees who feel involved in strategic decisions tend to be more committed and supportive of the policies implemented. Second, providing opportunities for leaders to interact directly with their teams to build stronger, more trusting relationships. This interaction can strengthen communication and collaboration, ultimately

increasing leadership effectiveness. Third, providing leadership development programs that focus on ways to increase team engagement and motivation. These training programs will equip leaders with the skills to better understand and motivate employees, as well as encourage employees to actively participate in achieving organizational goals. By strengthening engagement, PTPN IV can improve leadership quality, strengthen relationships between leaders and teams, and achieve organizational goals more effectively. High engagement will create a productive and harmonious work atmosphere, improving overall organizational performance and success.

### **The Influence of Engagement on Employee Performance**

Based on the data processing results, it was found that engagement has a positive and significant effect on employee performance at PTPN IV, with a coefficient value of 0.156, a T-statistic of  $3.767 > 1.96$ , and a P-value of  $0.000 < 0.05$ . This means that the higher the level of employee engagement, the higher the performance demonstrated. Research by Agba and Agba (2025) indicates that work engagement plays a significant role in improving employee performance. Through a comprehensive meta-analysis, employees confirmed that work engagement is significantly related to various dimensions of performance, both individual and organizational. The results of this study indicate that employees with high levels of engagement not only excel in task performance but also tend to exhibit organizational citizenship behaviors that positively impact teamwork dynamics.

Research by Budhwar et al. (2023) confirms that engagement plays a crucial role in increasing organizational effectiveness. Work engagement encourages individuals to demonstrate higher performance, be goal-oriented, and adapt to the dynamics of the work environment. In other words, engagement not only benefits personal performance but also builds social energy that encourages cooperation among team members. This social energy is crucial for optimizing collaboration, minimizing conflict, and enhancing innovation. As a result, organizations gain greater competitiveness because they are able to leverage employee engagement as a source of competitive advantage. Therefore, engagement can be viewed as a strategic mechanism that not only influences short-term performance but also supports organizational sustainability in facing global challenges. By integrating these aspects, PTPN IV is able not only to directly improve employee performance but also to create a sustainable work culture that supports the achievement of business targets and strengthens the company's long-term competitiveness.

### **The Influence of Leadership on Employee Performance**

Based on the results of hypothesis testing, leadership (Z) was proven to have a positive effect on employee performance (Y) at PTPN IV Regional 1 with a coefficient value of 0.262. These results were declared significant, indicated by the T-Statistics value = 4.191 which is greater than 1.96 and P-Values = 0.000 which is smaller than 0.05. This finding indicates that the better the quality of leadership demonstrated by managers and organizational leaders, the higher the employee performance. Effective leadership in the PTPN IV Regional 1 environment is able to provide direction, motivation, and support that strengthens the sense of responsibility and commitment of employees in carrying

out their duties. The findings of Jiatong (2022) confirmed that leadership style has a significant impact on work performance. Leadership is seen as a major determining factor that influences the extent to which employees are able to achieve targets set by the organization, where the affirmation of clear expectations from leaders provides direction for employees to understand the expected work standards, thereby reducing the potential for ambiguity in carrying out tasks.

Fahy et al., (2024) found that leadership style directly increases employee motivation, which in turn has a positive impact on organizational performance. This study emphasizes that leaders who are able to build good interpersonal relationships, provide clear direction, and create a supportive work climate will more easily motivate employees to make maximum contributions. The motivation that grows from effective leadership makes employees feel appreciated, have a sense of security in their work, and are more encouraged to exceed set targets. These findings also show that leadership functions not only as a control and supervision tool, but also as a source of inspiration that can move employees towards higher achievements. With strong motivation, employees will tend to increase their dedication, discipline, and loyalty to the organization, thereby increasing productivity and service quality.

Empowering leadership not only encourages employees to perform to standards but also fosters a sense of value and meaning in their work. Furthermore, the support provided by managers in the form of recognition, constructive feedback, and consistent mentoring will create a sense of psychological safety that leads to increased loyalty. In the long term, strong employee engagement will result in higher productivity, commitment to the organization's vision, and readiness to face changes in a dynamic business environment. Therefore, strengthening adaptive and supportive transformational leadership must be a strategic priority for management in today's competitive era.

### **The Influence of Engagement on Employee Performance Through Leadership**

Based on the data analysis, leadership plays a significant role as a mediating variable in the relationship between employee engagement and employee performance at PTPN IV Regional 1. The test results show a T-statistic of  $2.756 > 1.96$  and a P-value of  $0.006 < 0.05$ , confirming the significance of the relationship. These findings indicate that employee engagement cannot directly improve performance without effective leadership. Leadership serves to bridge the gap between engagement and productive performance behavior through guidance, support, and clear direction. Therefore, strong leadership strengthens the influence of engagement on performance and is a key factor for organizations in driving continuous performance improvement. Susanto et al. (2023) demonstrated that engagement plays a positive role in improving performance, both at the individual and team levels. Employees with high levels of engagement tend to demonstrate greater dedication, energy, and commitment to their work, resulting in increased productivity, creativity, and work quality. However, this study also emphasizes that the influence of engagement does not occur in a vacuum but is strongly influenced by the leadership context.

According Diamantidis & Chatzoglou (2019), they reaffirm the close link between work engagement and employee performance. A combined analysis of various studies shows that employees with high levels of engagement consistently demonstrate greater productivity, creativity, and commitment to their work. Engagement, characterized by vigor, dedication, and absorption, has been shown to encourage proactive work behavior and significantly contribute to achieving organizational goals. Meanwhile, Dahri et al. (2019) highlight the role of engagement in encouraging innovative behavior, which in turn strengthens performance, particularly in developing countries. This research shows that employees with high levels of engagement are not only more productive but also more likely to exhibit innovative behaviors, such as seeking new solutions, daring to take initiative, and creating more efficient work methods.

The managerial implications of these findings emphasize that leadership plays a central role in ensuring employee engagement truly translates into optimal performance. Managers must act as facilitators of engagement by channeling positive employee energy, such as dedication, motivation, and work ethic, into tangible contributions to the organization. Transformational leaders are able to inspire and provide a clear vision, while leaders with a servant leadership approach emphasize empathy, support, and individual empowerment. Furthermore, HR policies need to be strategically integrated to align with strengthening leadership capacity. Engagement-enhancing programs, such as coaching, targeted career planning, and performance-based reward systems, must go hand in hand with leadership development initiatives at various levels of the organization. With synergy between HR policies and supportive leadership, engagement becomes not only a positive psychological state but also a managerial instrument capable of increasing company loyalty, productivity, and competitiveness. PTPN IV can leverage this strategy to create a collaborative, adaptive, and results-oriented work culture, thereby ensuring employee engagement truly impacts sustainable performance.

## **CONCLUSION**

Based on the results of the study, it was concluded that engagement has a positive effect on leadership at PTPN IV Regional 1. Likewise, engagement directly has a positive effect on employee performance (Y) at PTPN IV Regional 1. Furthermore, leadership also has a positive effect on employee performance at PTPN IV Regional 1. Indirectly, the test results show that leadership has a significant role in mediating employee engagement and performance at PTPN IV Regional 1. So it can be said that all variables have continuity in creating a better company. However, this study has limited variables and research samples, so further research is needed for further data development.

## **REFERENCES**

- Agba, M. S., & Agba, G. E. M. (2025). The digital economy and the global workforce: Cultivating inclusive leadership and global mindsets for managing diversity at a distance. *Int. J. Public Manag. Soc. Sci. Res*, 1, 28-43.
- Aruna, M., & Anitha, J. (2015). Employee retention enablers: Generation Y employees. *SCMS Journal of Indian Management*, 12(3), 94.
- Ahmed, F., Naqshbandi, M. M., Waheed, M., & Ain, N. U. (2024). Digital leadership

- and innovative work behavior: impact of LMX, learning orientation and innovation capabilities. *Management Decision*, 62(11), 3607-3632.
- Budhwar, P., Chowdhury, S., Wood, G., Aguinis, H., Bamber, G. J., Beltran, J. R., ... & Varma, A. (2023). Human resource management in the age of generative artificial intelligence: Perspectives and research directions on ChatGPT. *Human Resource Management Journal*, 33(3), 606-659.
- Cook, S. (2008). *Customer Care Excellence: How to Create an Effective Customer Focus*. Kogan Page Publishers.
- Caesens, G., Stinglhamber, F., & Luypaert, G. (2014). The impact of work engagement and workaholism on well-being: The role of work-related social support. *Career Development International*, 19(7), 813-835.
- Dahri, A. S., Amin, S., & Waseem, M. (2019). Effect of Strategic Leadership on Organizational Performance through Knowledge Management. *Journal of Managerial Sciences*, 13(2).
- Danirmala, A. (2022). *Strategic Management: Concepts and Implementation in Facing Global Dynamics*. Jakarta: PT. RajaGrafindo Persada.
- Diamantidis, A. D., & Chatzoglou, P. (2019). Factors affecting employee performance: an empirical approach. *International journal of productivity and performance management*, 68(1), 171-193.
- Fahy, J., et al. (2024). *Strategic Marketing and Digital Transformation in Global Markets*. McGraw-Hill Education.
- Griffin, R. W. (2018). *Management: Principles and Practices (12th ed.)*. Cengage Learning.
- John-Eke, E. C., & Akintokunbo, O. O. (2020). Conflict management as a tool for increasing organizational effectiveness: A review of literature. *International Journal of Academic Research in Business and Social Sciences*, 10(5), 299-311.
- Jiatong, W., et al. (2022). The impact of digital technology on entrepreneurial success: The mediating role of digital capability. *Frontiers in Psychology*.
- Lee, J. H. (2025). *Information Space Conflicts: Legal Frameworks and National Security*. Oxford University Press.
- Lencioni, P. M. (2010). *The Five Dysfunctions of a Team: A Leadership Fable*. Jossey-Bass.
- Liden, R. C., et al. (2024). *Leadership and Organizational Behavior: A Critical Review*. Pearson.
- Mangkunegara. (2017). *Corporate Human Resource Management*. Bandung: PT. Remaja Rosdakarya.
- Mahfud, G., & Ratmono, D. (2013). *Regression Analysis with EViews*. Semarang: Diponegoro University Publishing Agency.
- Nutrition. (2009). *Standard Guidelines for Occupational Health and Performance*. (Institutional reference work).
- Osabiya, B. J. (2015). Conflict management and resolution in Nigeria public sector. *Review of Public Administration and Management*, 4(8), 107-120.
- Omene, G. R. (2021). Conflict management strategies as a prerequisite for effective organizational performance: An exploratory analysis. *International Journal of Business & Law Research*, 9(4), 187-199.

- Paiuc, D. (2021). The impact of cultural intelligence on multinational leadership: a semantic review. *Management dynamics in the knowledge economy*, 9(1), 81-93.
- Ramos, A., Koesmono, T., Ellitan, L., & Otok, B. W. (2023). The influence of strategic leadership, organizational learning, and organizational culture on organizational performance through organizational citizenship behavior in Timor-Leste national police using structural equation modeling. *Economics and Business Quarterly Reviews*, 6(1).
- Robbins, S. P. (2012). *Management* (11th ed.). Pearson Education.
- Rana, S. (2015). High-involvement work practices and employee engagement. *Human Resource Development International*, 18(3), 308-316.
- Robbins, S. P., & Judge, T. A. (2017). *Organizational Behavior* (17th ed.). Pearson.
- Sugiyono, (2016). *Quantitative, Qualitative, and R&D Research Methods*. Alfabeta.
- Susanto, H., et al. (2023). *Legal Strategies for National Security in Information Space*. Springer.
- Vroom, V. H., & Jago, A. G. (2007). *The role of the situation in leadership*. American Psychologist.
- Zamzabilla, A., et al. (2022). *Strategic Management: Theory and Implementation*. CV. Widina Mediatam

