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license**LEADERSHIP AS A SOCIAL CATALYST: MODERATING  
THE RELATIONSHIP BETWEEN TALENT  
MANAGEMENT AND JOB SATISFACTION IN  
STRATEGIC INDUSTRIES****Sabrina Febrira<sup>1\*</sup>, Iskandarini<sup>1</sup>, Elisabet Siahaan<sup>1</sup>**<sup>1</sup>Universitas Sumatera Utara, Jalan Dr. T. Mansur No.9, Kota  
Medan 20222, Indonesia\*Correspondence E-Mail: [sabrinafebrira@gmail.com](mailto:sabrinafebrira@gmail.com)DOI: <https://doi.org/10.30598/baileofisipvol3iss1pp171-193>**ABSTRACT**

*Increasing business competition demands that companies manage human resources strategically, particularly through effective talent management and leadership, to enhance employee job satisfaction. This study aims to examine the influence of talent management on job satisfaction with leadership as a moderating variable, and to assess the extent to which leadership strengthens this relationship within the context of a strategic industry. A quantitative approach was applied using Moderated Regression Analysis (MRA) processed with SPSS version 25. The sample comprised 232 employees of PT Pupuk Iskandar Muda who had participated in talent management programs, possessed more than three years of work experience, and had undergone training. Sampling techniques combined proportionate stratified random sampling and judgment sampling. The findings reveal that both talent management and leadership have a positive and significant impact on job satisfaction. Specifically, leadership significantly strengthens the positive influence of talent management on job satisfaction. The study offers a novel contribution by mapping leadership as a social catalyst that reinforces the talent-satisfaction linkage, particularly in strategic industries that require integrated HR management. The research contributes conceptually to the fields of social sciences and humanities, especially in strategic leadership and talent development. Practical implications highlight the need to invest not only in talent programs but also in leadership capacity building.*

**Keywords:** Human Resource Management, Job Satisfaction, Leadership, Strategic Industries, Talent Management

**INTRODUCTION**

In an increasingly dynamic era of strategic industries, human beings are no longer merely seen as factors of production but as key assets that determine the sustainability and competitiveness of organizations. Companies are now expected not only to pursue operational efficiency but also to create work environments that foster individual development within them (Dubey et al., 2023; Dzimbiri & Molefi, 2022). Amidst these demands, employee job satisfaction has become a critical indicator reflecting the extent to which organizations can meet the expectations and psychological needs of their workforce. However, achieving job satisfaction is not a naturally occurring process (Alparslan & Saner, 2020). It must be built through a series of strategic interventions, one of which is a structured and future-oriented talent management

program.

Talent management has been widely recognized as a strategic approach to human resource management that focuses on identifying, developing, and retaining high-potential individuals within an organization (Fauziah & Rachmawati, 2021; Ikhsanuddin et al., 2024). Such programs not only enhance the organization's internal capabilities but also strengthen employees' engagement and satisfaction with their workplace (Jayaraman et al., 2018; Pambudi et al., 2024; Saleh & Atan, 2021). Several studies have demonstrated that effective talent management improves motivation and work commitment (Setia et al., 2022; Wahidah et al., 2024). Moreover, employees tend to gain greater confidence when they feel recognized and supported in their development (Sjarifudin et al., 2025; Van Waeyenberg et al., 2022).

However, the impact of talent management on job satisfaction is not always linear. In many contexts, the quality of the relationship between supervisors and subordinates plays a crucial role in either enhancing or hindering the effects of talent programs on employees' work experiences (Karim et al., 2025; Tumi et al., 2022). In this regard, leadership becomes an essential variable that cannot be overlooked. Previous studies have highlighted that transformational leadership styles help foster trust and a spirit of collaboration within teams, ultimately influencing positive perceptions of internal organizational programs (Wijaya et al., 2023; Xu et al., 2022). Furthermore, responsive and empathetic leadership has been proven to create a supportive work environment, which serves as a foundation for sustainable job satisfaction (Jian, 2022; Nauman et al., 2022; Wibowo & Paramita, 2022).

Although previous research has examined the relationship between talent management and job satisfaction (Arghode et al., 2022; Linvill & Onosu, 2023), as well as between leadership and job satisfaction (Muhdar et al., 2022), there remains a relative scarcity of studies that specifically explore how leadership moderates the relationship between talent management and job satisfaction—especially within the context of strategic industries characterized by large-scale organizations, complex hierarchical structures, and a high demand for innovation. Yet, in such contexts, leadership plays a critical role as a bridge between strategic policies and employees' lived experiences (Mayasari & Nengzih, 2025; Puspitasari & Ayustia, 2025).

Unfortunately, many organizations implement talent management programs formally but neglect the socio-cultural dimensions within them—particularly the role of leadership as the primary facilitator. Without supportive leadership, strategic programs are often reduced to mere documentation with no tangible impact. This is where an important gap remains underexplored—how leadership not only serves as a policy guide but also as a social catalyst that strengthens the connection between strategic policies and employees' personal satisfaction. This study is grounded in the belief that effective leadership is not just about directing but also about creating a space for organizational talent to grow.

Based on this urgency, the aim of this research is to examine the effect of talent management on job satisfaction, with leadership as a moderating variable. The study also seeks to uncover the extent to which leadership can amplify the positive relationship between talent

development programs and employees' perceptions of their work. By using a quantitative approach and testing through moderated regression analysis, this research is expected to offer both practical and theoretical contributions to the field of social sciences and humanities—particularly in strategic leadership and human resource management. The findings of this study may offer new insights for companies in strategic sectors, emphasizing the importance of investing not only in internal policy frameworks but also in strengthening inclusive, inspirational, and psychologically impactful leadership.

## RESEARCH METHOD

This study adopts a quantitative approach for strong and rational reasons. In the context of organizational management—particularly in strategic industries such as PT Pupuk Iskandar Muda—a deep understanding of the relationships between variables must be supported by objective, measurable, and statistically analyzable data. The quantitative approach was selected because it allows for the identification of generalizable patterns that can be empirically tested (Kothari et al., 2023). Moreover, this approach enables researchers to systematically test hypotheses concerning the influence of talent management on job satisfaction and the role of leadership as a moderating variable.

The selection of PT Pupuk Iskandar Muda as the research site is not without reason. This company is one of Indonesia's national strategic industries operating in the production of fertilizers and chemicals and has a well-established human resource management system, including regularly implemented talent management programs. In recent years, the company has demonstrated a strong commitment to employee development through training and long-term career planning programs. This makes PT Pupuk Iskandar Muda an ideal context for simultaneously testing the effectiveness of the relationship between talent management, leadership, and job satisfaction.

Respondents in this study are employees of PT Pupuk Iskandar Muda who have participated in talent management programs, have worked for more than three years, and have undergone formal training within the company. A total of 232 respondents were involved. These criteria were selected under the assumption that employees who have undergone talent development programs and possess sufficient work experience would be better equipped to provide mature and relevant assessments of talent management and leadership practices in their work environment. Sampling was conducted through a combination of proportionate stratified random sampling and judgment sampling to ensure representation across various work units and hierarchical levels, while also considering participation in the program under study.

Data collection was carried out using both primary and secondary sources. Primary data were obtained directly from the field through questionnaires, brief interviews, and limited observation of respondents' work environments. The questionnaire was developed based on theoretical indicators of each research variable and was pre-tested to ensure content validity.

The use of questionnaires was chosen because it allows for efficient reach to a large number of respondents and enables systematic measurement of perceptions related to each variable. In addition, secondary data were gathered from supporting documents such as annual company reports, internal HR policies, and relevant academic literature in the form of journals and books. These secondary sources provided context and reinforcement for the interpretation of the primary data.

Data quality testing was conducted through validity and reliability assessments. Validity was measured using the Pearson Product-Moment correlation technique to determine whether each questionnaire item accurately reflected the intended variable indicators. Instrument reliability was tested using Cronbach's Alpha, with values above 0.70 indicating sufficient reliability (Diemer et al., 2025; Dolnicar et al., 2024). Once the data were confirmed as valid and reliable, classical assumption tests were conducted—including tests for normality, multicollinearity, and heteroscedasticity—to ensure the data met the requirements for regression analysis.

Data analysis was performed using the Moderated Regression Analysis (MRA) method with IBM SPSS Statistics version 25. MRA was chosen because it allows for the examination of interactions between independent and moderating variables in influencing the dependent variable. In this study, the analysis is used to determine whether leadership strengthens the effect of talent management on job satisfaction. The independent variable is talent management, comprising dimensions such as talent identification, competency training, talent development, and employee retention (Zubizarreta et al., 2024). The dependent variable, job satisfaction, is measured using dimensions such as the work itself, salary, promotion opportunities, supervision, and coworker relations. The moderating variable is leadership, constructed from dimensions including innovator, communicator, motivator, and controller.

## **RESULTS AND DISCUSSION**

### **Social and Professional Profiles of Respondents in Strategic Industrial Settings**

A comprehensive understanding of the social and professional backgrounds of respondents serves as a critical foundation for assessing the validity and relevance of this study's findings. In the context of a strategic industry such as PT Pupuk Iskandar Muda, the characteristics of the workforce are closely linked to organizational dynamics, particularly in relation to the implementation of talent management, leadership styles, and job satisfaction. By carefully analyzing demographic and professional data, this research draws not only from quantitative data but also from the social realities that shape how respondents perceive their work environment.

One of the first aspects observed is the gender distribution of respondents. Data analysis shows that the majority of respondents were male—174 individuals or 75% of the total 232 respondents—while female respondents accounted for 58 individuals or 25%.

Table 1 Respondent Characteristics by Gender

No	Gender	Number of Employees	Percentage
1	Male	174	75%
2	Female	58	25%
	Total	232	100%

Source: Processed Primary Data (2024)

The predominance of male respondents is inseparable from the nature of work in the fertilizer industry, which relies heavily on operational plant activities. Working conditions in such environments demand physical readiness, strict shift rotations, and constant alertness to occupational hazards—factors that often lead to a higher recruitment of men for field positions. However, the company continues to provide opportunities for women to contribute, particularly in non-plant units and other strategic functions, in alignment with the broader goal of promoting gender equality in the workplace.

In terms of age, the majority of respondents fall within the mature productive age group. About 30.2% of respondents are aged 37–40, followed by 21.1% in the 33–36 age group. This indicates that most employees are in a stable phase of their careers, equipped with experience, and ready to take on greater responsibilities.

Table 2 Respondent Characteristics by Age

No	Age Group	Number of Employees	Percentage
1	25-28	19	8,2%
2	29-32	31	13,4%
3	33-36	49	21,1%
4	37-40	70	30,2%
5	41-44	31	13,4%
6	45-48	24	10,3%
7	49-52	6	2,6%
8	53-56	2	0,9%
	Total	232	100%

Source: Processed Primary Data (2024)

Employees within this age range typically have undergone various stages of training and development within the company. They are the primary target of talent management programs as they are deemed to have accumulated enough experience to actualize their strategic potential within the organization (Rožman et al., 2023).

Equally important is the respondents' tenure. Most have been working for 3–5 years (22.8%) and 12–14 years (20.7%). This suggests a balanced composition of both relatively new and seasoned employees.

Table 3 Respondent Characteristics by Length of Service

No	Length of Service (Years)	Number of Employees	Percentage
1	3-5	53	22,8%
2	6-8	34	14,7%
3	9-11	7	3,0%
4	12-14	48	20,7%
5	15-17	44	19,0%
6	18-20	6	2,6%
7	21-23	34	14,7%
8	24-27	6	2,6%
	Total	232	100%

Source: Processed Primary Data (2024)

Employees with medium to long tenures typically have undergone multiple performance evaluations, training sessions, and position rotations. They are more exposed to organizational dynamics and are therefore well-positioned to assess the effectiveness of talent management and leadership in enhancing job satisfaction (Shah et al., 2024).

Educational background also plays an essential role in determining respondents' baseline competencies. The data reveals that 67.67% of respondents hold a bachelor's degree (S1), while 15.51% hold a master's degree (S2).

Table 4 Respondent Characteristics by Educational Background

No	Education Level	Number of Employees	Percentage
1	High School / Equivalent	11	4.74%
2	Diploma (D3)	17	7.32%
3	Applied Bachelor (D4)	11	4.74%
4	Bachelor's Degree (S1)	157	67.67%
5	Master's Degree (S2)	36	15.51%
	Total	232	100%

Source: Processed Primary Data (2024)

The dominance of bachelor's degree holders reflects the company's recruitment policy, which typically requires at least an undergraduate degree as a basic criterion. Meanwhile, employees with master's degrees are mostly recipients of internal scholarships, representing the company's long-term investment in the development of strategic human resources (Ferdousi & Abedin, 2023).

Finally, respondents' work areas also reflect the company's core orientation. A majority of respondents (63.8%) work in plant units, while the remaining 36.2% are employed in non-plant units. This finding aligns with the strategic position of PT Pupuk Iskandar Muda as a chemical manufacturing-based company, where production is the core function. Plant employees not only dominate in terms of quantity but also in terms of strategic importance, as they are on the front

lines of implementing workplace safety and production efficiency systems. Therefore, understanding their perceptions of talent management and leadership is crucial (Wang et al., 2024).

Table 5 Respondent Characteristics by Work Area

No	Work Area	Number of Employees	Percentage
1	Plant Employees	148	63.8%
2	Non-Plant Employees	84	36.2%
	Total	232	100

Source: Processed Primary Data (2024)

### Data Quality Assessment: Validity and Reliability Tests

Before proceeding to the inferential analysis stage, it is essential to ensure that the instruments used in this study are of high quality in terms of both validity and reliability. Instrument feasibility not only guarantees accurate measurement but also serves as a crucial foundation for drawing meaningful conclusions. Therefore, a series of data quality tests were conducted to verify whether the items in the questionnaire truly measure what they are intended to measure and whether their consistency is statistically reliable.

Validity testing is an important initial step to determine the extent to which the questionnaire items have a significant correlation with the total score of each variable. In this study, the validity test was conducted by comparing the calculated r-value (r count) with the r table value at a degree of freedom (df) of  $n-2$ , where  $n$  is the number of respondents. With a sample size of 232 respondents, the  $df = 230$ . At a 5% significance level ( $\alpha = 0.05$ ), the r table value used is 0.128.

Table 6 Results of Instrument Validity Test

Research Variable	r Count	r Table	Description
Talent Management (TM)	0.834	0.128	Valid
Leadership (LD)	0.503	0.128	Valid
Job Satisfaction (JS)	0.530	0.128	Valid

Source: Primary Data Processed with SPSS (2025)

The results show that all three research variables—Talent Management (TM), Leadership (LD), and Job Satisfaction (JS)—have r count values greater than the r table. The highest correlation is observed in the Talent Management variable (0.834), followed by Job Satisfaction (0.530), and Leadership (0.503). These results confirm that each item in the questionnaire significantly correlates with the total score of its respective variable, thus validating all items as fit for further use in this research.

To ensure the internal consistency of the instruments, a reliability test using Cronbach's Alpha was conducted. An instrument is considered reliable if the Cronbach's Alpha value exceeds



0.70, indicating that all items within a variable are consistent and trustworthy in measuring the intended construct (Izah et al., 2023).

The results indicate that all research variables meet the reliability criteria. Talent Management recorded the highest Cronbach's Alpha value at 0.959, indicating very strong internal consistency among its items. Job Satisfaction also showed high reliability at 0.821, while Leadership recorded 0.756—both well above the minimum threshold of 0.70.

Table 7 Results of Instrument Reliability Test

Research Variable	Cronbach's Alpha	Description
Talent Management (TM)	0.959 > 0.70	Reliable
Leadership (LD)	0.756 > 0.70	Reliable
Job Satisfaction (JS)	0.821 > 0.70	Reliable

Source: Primary Data Processed with SPSS (2025)

From the table above, it is evident that both the validity and reliability of all research instruments are well within the acceptable criteria. High validity indicates that the questions effectively represent the studied constructs, while high reliability implies that respondent answers are consistent and stable. These robust instrument metrics provide a solid foundation for the subsequent analysis phase, particularly in exploring the relationships between talent management, leadership, and job satisfaction within a strategic environment like PT Pupuk Iskandar Muda. Emphasizing data quality assessment also aligns with rigorous quantitative research methodology principles, as emphasized by Izah et al. (2023) and Trabelsi et al. (2024), which state that data quality must be established before conducting statistical inference. With strong validity and reliability evidence, this research is well-positioned to draw conclusions that are academically and practically accountable.

### **Assessing Regression Assumptions: Normality, Multicollinearity, Heteroscedasticity, and Autocorrelation**

Classical assumption testing is a vital step in multiple linear regression analysis to ensure the model meets the necessary statistical requirements, making the analysis results credible and valid. One key requirement is data normality. In this study, the Kolmogorov-Smirnov (K-S) method was used to test for normality, and the results are shown in Table 8. The Asymp. Sig. (2-tailed) value obtained was 0.200, which is greater than the 0.05 significance level. This indicates that the residuals are normally distributed. A normal distribution of data implies that the sample represents the population's data pattern accurately. Furthermore, the Most Extreme Differences in the Absolute column was 0.030, which is less than the K-S table value of 0.089, further supporting the conclusion. Visualizations such as the Normal P-P Plot and histogram also show residuals closely following a diagonal line and a symmetric bell curve, reinforcing the conclusion of normal distribution (Habibzadeh, 2024).



Table 8 Results of One-Sample Kolmogorov-Smirnov Test

<b>One-Sample Kolmogorov-Smirnov Test</b>		
		<i>Unstandardized Residual</i>
N		232
Normal Parameters	Mean	0.0000000
	Std. Deviation	0.07360373
Most Extreme Differences	Absolute	0.030
	Positive	0.027
	Negative	-0.030
Test Statistic		0.030
Asymp. Sig. (2-tailed)		0.200

Source: Primary Data Processed with SPSS (2025)

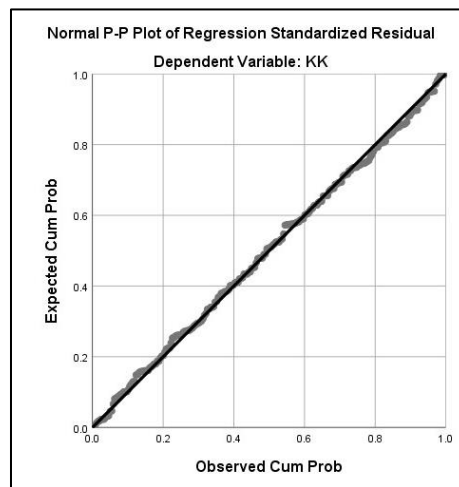


Figure 1 Histogram of Normality Test

Source: Primary Data Processed with SPSS (2025)

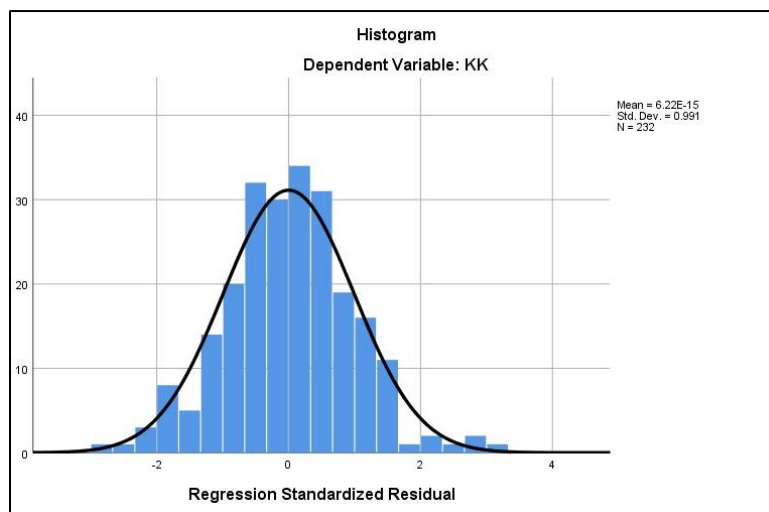


Figure 2 Normal Probability Plot (P-P Plot)

Source: Primary Data Processed with SPSS (2025)

Following the normality test, the next step is to check for multicollinearity—when two or more independent variables in the model have strong linear relationships. Multicollinearity can lead to unstable and inaccurate regression coefficient estimates. This study used the Variance Inflation Factor (VIF) and Tolerance values to test for multicollinearity. According to Table 9, all variables—Talent Management (TM), Leadership (L), their interaction (TML), and Job Category (JC)—have Tolerance values > 0.10 and VIF values < 10. This indicates that there is no strong linear correlation between the independent variables, and the data is free from multicollinearity issues (Habibzadeh, 2024).

Table 9 Results of Multicollinearity Test

Model	<i>Unstandardized Coefficients</i>		<i>Standardized Coefficients</i>	t	Sig.	<i>Collinearity Statistics</i>	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	2.315	0.064		35.961	0.000		
TM	0.299	0.009	0.809	33.082	0.000	0.900	1.112
1 L	0.174	0.014	0.315	12.391	0.000	0.826	1.210
TML	0.098	0.022	0.111	4.490	0.000	0.879	1.138
JC	0.023	0.010	0.052	2.245	0.026	0.983	1.017

Source: Primary Data Processed with SPSS (2025)

Next, to detect heteroscedasticity (unequal variance of residuals), the White Test was used (Table 10). Heteroscedasticity may affect the efficiency of parameter estimates. According to Table 10, the Chi-Square value is 12.407 with a significance level of 0.259 (> 0.05), and the value is also lower than the Chi-Square table value of 18.307 (df = 10). These two indicators confirm that the model does not exhibit heteroscedasticity. The absence of this issue means that residual errors are randomly and evenly distributed, ensuring efficient and trustworthy parameter estimation (Feuerstahler et al., 2024).

The final step in classical assumption testing is the autocorrelation test (Table 11), which detects whether there is a serial relationship between residuals in the regression model. The Durbin-Watson test was applied in this study. The DW value obtained was 2.161, with dU and dL values of 1.824 and 1.722, respectively. Based on Durbin-Watson criteria, a DW value between dU and 4-dU ( $1.824 < 2.161 < 2.176$ ) indicates no positive or negative autocorrelation. The absence of autocorrelation ensures that residuals are independent, which is critical for unbiased and valid regression results (Zubizarreta et al., 2024).

The results of the classical assumption tests show that the dataset used in this study meets all fundamental requirements of regression analysis: normality, no multicollinearity, no heteroscedasticity, and no autocorrelation. With these conditions fulfilled, the regression model is deemed appropriate and capable of producing valid and reliable analytical results to explain the impact of talent management and leadership on job satisfaction.

Table 10 Results of Heteroscedasticity Test

<b>White Test for Heteroskedasticity</b>		
<i>Chi-Square</i>	<i>df</i>	<i>Sig.</i>
12.407	10	0.259

Source: Primary Data Processed with SPSS (2025)

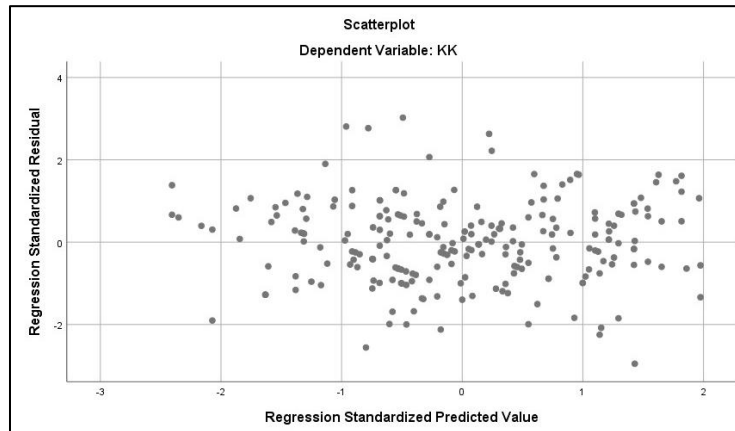


Figure 3 Scatterplot Analysis

Source: Primary Data Processed with SPSS (2025)

Table 11 Results of Autocorrelation Test

<b>Model</b>	<b>R</b>	<b>R Square</b>	<b>Adjusted R Square</b>	<b>Std. Error of the Estimate</b>	<b>Durbin-Watson</b>
1	0.937 <sup>b</sup>	0.879	0.877	0.07425	2.161

Source: Primary Data Processed with SPSS (2025)

### Quantifying Organizational Influence: Main Effects and Moderation through Regression Analysis

To comprehensively understand how talent management and leadership influence employee job satisfaction at PT Pupuk Iskandar Muda, a quantitative approach was employed using multiple linear regression, followed by interaction analysis through Moderated Regression Analysis (MRA). The analysis began by testing the direct effects of talent management and leadership on job satisfaction using multiple linear regression. Based on the results, the Adjusted R Square value reached 0.864, indicating that 86.4% of the variation in employee job satisfaction can be explained by these two variables. This suggests that the model is highly robust, with only 13.6% of the variation attributed to other factors outside the model, such as corporate commitment to gender equality, implementation of Occupational Health and Safety (OHS) principles, and the availability of comprehensive supporting facilities. Although these additional factors were not explicitly included in the model, they evidently contribute to a positive work environment and overall employee well-being.

Table 12 Coefficient of Determination in Multiple Linear Regression

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.930 <sup>a</sup>	0.866	0.864	0.07785

Source: Primary Data Processed with SPSS (2025)

The F-test results reinforced these findings, with an F value of 737.688 far exceeding the F table value of 3.035, and a significance level of 0.000. This indicates that talent management and leadership simultaneously have a significant effect on job satisfaction. Thus, it can be stated that these two variables jointly explain the dynamics of employee job satisfaction.

Table 13 Simultaneous Regression Test Results (F-Test)

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	8.942	2	4.471	737.688	0.000 <sup>b</sup>
Residual	1.388	229	0.006		
Total	10.330	231			

Source: Primary Data Processed with SPSS (2025)

Partially, the t-test results showed that talent management had a coefficient of 0.297 with a t-value of 31.606 and a significance level of 0.000. This indicates that the better the implementation of talent management in the company—covering the identification of talented employees, competency training, and retention strategies—the higher the level of employee job satisfaction. Leadership also showed a positive and significant effect with a coefficient of 0.157, t-value of 11.181, and a significance level of 0.000. This means that leaders who act as communicators, motivators, and directors can also contribute to increasing job satisfaction.

Table 14 Partial Regression Test Results (T-Test)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	2.436	0.062		39.055	0.000		
1 TM	.297	0.009	0.804	31.606	0.000	0.908	1.102
L	.157	0.014	0.284	11.181	0.000	0.908	1.102

Source: Primary Data Processed with SPSS (2025)

Based on these coefficients, the multiple linear regression model is formulated as:

$$JS = 2.436 + 0.297TM + 0.157L + e$$

Where: JS = Job Satisfaction

TM = Talent Management

L = Leadership

e = Error Term

The coefficients suggest that talent management exerts a more dominant influence than leadership on job satisfaction. Hence, if the company seeks to significantly improve employee job satisfaction, enhancing the quality of talent management should be a strategic priority.

To examine whether leadership acts as a moderator that strengthens the relationship between talent management and job satisfaction, a Moderated Regression Analysis (MRA) was conducted. The results showed that the Adjusted R Square value increased from 0.864 in the non-moderated model to 0.877 in the moderated model with the interaction variable TM × L (represented as TML). This indicates that leadership, as a moderator, enhances the relationship between talent management and job satisfaction.

Table 15 Coefficient of Determination ( $R^2$ ) – MRA

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.930 <sup>a</sup>	0.866	0.864	0.07785	
2	0.937 <sup>b</sup>	0.879	0.877	0.07425	2.161

a. Predictors: (Constant), TM, L  
b. Predictors: (Constant), TML, TM, L

Source: Primary Data Processed with SPSS (2025)

The F-test for the moderation model (table 16) also supported these findings. The F value of 411.686 far exceeds the F table value of 2.421, with a significance level remaining below 0.05. This shows that the four variables—talent management, leadership, their interaction, and job category—simultaneously have a significant effect on job satisfaction.

Table 16 Simultaneous Regression Test Results (F-Test) – MRA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	8.942	2	4.471	737.688	0.000 <sup>b</sup>
1 Residual	1.388	229	0.006		
Total	10.330	231			
Regression	9.078	4	2.270	411.686	0.000 <sup>c</sup>
2 Residual	1.251	227	0.006		
Total	10.330	231			

a. Dependent Variable: JS

b. Predictors: (Constant), L, TM

c. Predictors: (Constant), L, TM, TML, JC

Source: Primary Data Processed with SPSS (2025)

Furthermore, the partial t-test results in the moderation model (table 17) showed that all four variables remained significant. Talent management had a coefficient of 0.299 with a t-value of 33.082; leadership 0.1764 with a t-value of 12.391; the TML interaction 0.098 with a t-value of 4.490; and job category 0.023 with a t-value 2.245. All significance level remaining below 0.05,

indicating that the influence of talent management on job satisfaction is not only direct but is also strengthened by the quality of leadership.

The final moderated regression model can be formulated as:

$$JS = 2,315 + 0,299TM + 0,174L + 0,098TML + 0,023JC + e$$

Table 17 Partial Regression Test Results (T-Test) – MRA

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.436	0.062		39.055	0.000		
	TM	0.297	0.009	0.804	31.606	0.000	0.908	1.102
	L	0.157	0.014	0.284	11.181	0.000	0.908	1.102
2	(Constant)	2.315	0.064		35.961	0.000		
	TM	0.299	0.009	0.809	33.082	0.000	0.893	1.120
	L	0.174	0.014	0.315	12.391	0.000	0.824	1.213
	TML	0.098	0.022	0.111	4.490	0.000	0.879	1.138
	JC	0.023	0.010	0.052	2.245	0.026	0.983	1.017

Source: Primary Data Processed with SPSS (2025)

To assess the extent to which leadership strengthens this relationship, a simple slope analysis was conducted. When the leadership score was one standard deviation below the mean (L = -0.383), the effect of talent management on job satisfaction was 0.260. At the mean value of leadership (L = 0.000), the effect was 0.298. When leadership was one standard deviation above the mean (L = 0.383), the effect increased to 0.336. This pattern shows that higher leadership quality strengthens the positive influence of talent management on job satisfaction.

Conditional effects of the focal predictor at values of the moderator(s):						
KP	Effect	se	t	p	LLCI	ULCI
-.383	.260	.012	22.045	.000	.237	.284
.000	.298	.009	33.067	.000	.280	.316
.383	.336	.013	26.270	.000	.311	.361

Figure 4 Conditional Effects

Source: Primary Data Processed with Process by Hayes SPSS (2025)

These findings indicate that leadership at PT Pupuk Iskandar Muda not only independently contributes to job satisfaction but also plays a strategic role in enhancing the effectiveness of talent management. Leaders who can identify, nurture, and empower talented employees further amplify the benefits of talent management in improving employee experiences. This implies that companies aiming to foster a positive and productive work environment should not only invest in structured talent management systems but also in

developing transformative and supportive leadership. The combination of both has proven to be an effective strategy for achieving high and sustainable job satisfaction.

### **Talent Management Strategy as a Pillar of Employee Job Satisfaction**

The results of the study prove that talent management has a positive and significant effect on the job satisfaction of employees at PT Pupuk Iskandar Muda, as evidenced by both the simultaneous (F-test) and partial (T-test) analysis. These findings are supported by statistically significant test results. The positive regression coefficient of talent management (TM) suggests that for every one-unit increase in TM, there is a corresponding increase in job satisfaction (JS). This means that any improvement in the company's talent management practices will directly correlate with an increase in employee job satisfaction. Therefore, the first hypothesis (H1) in this study is accepted.

The crucial role of talent management in creating a satisfying work environment stems from how the company builds a system based on three key indicators. These indicators, derived from descriptive analysis, form the foundation of the company's talent management strategy, namely: identifying talented employees, training and competency development, and aligning skills with organizational needs.

The identification process is structured through internal mapping in a talent pool, considering qualifications and long-term potential. This allows the company to target the development of human resources more effectively. Next, training materials and activities are designed to enhance individual work capacity and productivity. These programs address both technical skills and soft skills, which are essential for teamwork and leadership. Finally, the company ensures that the skills developed in its talent pool remain aligned with strategic organizational needs, enabling practical implementation geared toward optimal performance.

However, the analysis also reveals areas for improvement in talent management. The lowest scores were found in indicators related to consistency in maximizing potential, peer support for individual achievement, reward distribution, and placement of talent in strategic positions. These findings signal the need for deeper evaluation. A talent management system will not yield optimal results if it focuses solely on recruitment and training without ensuring continuity in development and recognition of performance. These findings are consistent with and enrich prior studies. Gül et al. (2023) emphasized that systematic talent management has substantial potential to enhance job satisfaction. Likewise, studies by Beuren et al. (2022), Hakro et al. (2022), and Kumar (2022) confirmed a significant positive correlation between talent management strategies and job satisfaction levels. Companies that understand the importance of long-term investment in human capital gain a competitive advantage through more loyal and motivated employees.

In the national context, Ikhsanuddin et al. (2024) and Saleh & Atan (2021) also support this view. They stress the importance of identifying talent profiles that align with organizational policies and strategic direction. This alignment is crucial to ensure that individual development



not only boosts competencies but also remains relevant to company goals.

Furthermore, Setia et al. (2022) stated that companies must cultivate a culture of continuous training so that talent development programs yield long-term impacts on employee retention. Structured career development plays a vital role in retaining potential talent. Wahidah et al. (2024) reinforced this finding, explaining that talent attraction, training and development, and career planning significantly affect job satisfaction. This shows that talent management requires more than just placing the right person in the right job; it also requires ongoing planning to maintain employee engagement and emotional connection to the organization.

Specifically at PT Pupuk Iskandar Muda, research by Ikhsanuddin et al. (2024) confirmed that employee selection, training, and placement strongly correlate with performance improvement and job satisfaction. This suggests that effective talent management creates a sustainable performance cycle, which in turn enhances overall employee satisfaction.

### **Effective Leadership as a Key Pillar in Enhancing Employee Job Satisfaction**

The hypothesis testing results in this study indicate that leadership, both simultaneously and partially, has a positive and significant effect on employee job satisfaction at PT Pupuk Iskandar Muda. Accordingly, the second hypothesis (H2) is accepted, reinforcing the strategic role of leadership in creating a conducive work environment and supporting employees' psychological well-being. In the fertilizer industry, which is characterized by target pressures, technical precision, and high productivity demands, adaptive and visionary leadership becomes increasingly essential.

Based on descriptive analysis, leadership at PT Pupuk Iskandar Muda has fulfilled its crucial role as both a controller and communicator. The controller role refers to leaders' ability to supervise task implementation, enforce discipline, and ensure all work aligns with company goals. The communicator role is reflected in the clarity of instruction delivery, honesty in communication, and the ability to actively listen to employees. These aspects represent the core dimensions of effective leadership as outlined by Ferdousi & Abedin (2023), where clear communication and fair leadership enhance employees' perception of job satisfaction.

However, the descriptive analysis also indicates room for improvement, particularly in leaders' ability to encourage innovation, introduce new approaches to task completion, and motivate and inspire enthusiasm. Low scores on these indicators highlight the need to strengthen leadership qualities focused on transformation and individual potential development. Inspirational, creative, and visionary leaders can foster a dynamic work climate and drive employees to reach their highest performance.

This study aligns with previous research findings. Trabelsi et al. (2024) found that both transactional and transformational leadership styles significantly impact employee motivation and performance at PT Pupuk Iskandar Muda. Transformational leadership—which emphasizes inspiration, motivation, and empowerment—has proven more effective in improving job satisfaction than authoritarian or bureaucratic styles. This is supported by Setia et al. (2022), who

also confirmed the significant impact of transformational leadership on enhancing employee performance and job satisfaction.

Theoretically, these results support the perspectives of Lawrason et al. (2023) and Ytterstad & Olaisen (2023) on transformational leadership, which not only focuses on achieving organizational goals but also on individual development within the organization. Transformational leaders tend to enhance the intrinsic value of work for employees, ultimately leading to higher job satisfaction. Similar findings are reported by Karim et al. (2025), Sjarifudin et al. (2025), and Tumi et al. (2022), all of whom highlight the significant influence of leadership on job satisfaction across various industries. Wibowo & Paramita (2022) explicitly state that transformational leadership shapes a workplace culture grounded in trust, collaboration, and respect—key psychological factors in building job satisfaction.

From a practical perspective, leadership at PT Pupuk Iskandar Muda needs to be enhanced through holistic managerial competency development, value-based leadership training, and regular evaluations of leadership effectiveness. Additionally, internal mentoring programs designed to disseminate transformative leadership values across organizational levels can amplify their impact. Academically, this finding contributes to enriching contemporary leadership theory, particularly within resource-based industrial sectors. Furthermore, there is a scientific urgency to extend this research using a multilevel analysis approach, examining how leadership at various levels influences job satisfaction both individually and in teams. This approach may provide a more comprehensive understanding of the dynamics between leadership styles and job satisfaction, while distinguishing the roles of frontline, middle, and strategic leaders in fostering a supportive work climate.

### **Leadership Significantly Moderates the Influence of Talent Management on Job Satisfaction**

Based on hypothesis testing, it was found that leadership significantly moderates the influence of talent management on job satisfaction, both simultaneously and partially. Thus, the third hypothesis (H3) of this study is accepted. The findings indicate that leadership as a moderating variable strengthens the positive influence of talent management on job satisfaction. This shows that the more ideal the leadership at PT Pupuk Iskandar Muda, the stronger the positive impact of talent management on job satisfaction. These findings suggest that in an ideal leadership environment, talent management efforts such as recruiting top talent, providing training, and developing employee skills are more effectively perceived by employees, ultimately enhancing overall job satisfaction.

From a theoretical perspective, this finding broadens our understanding of how various aspects of talent management, job satisfaction, and leadership theories interact. Specifically, the study supports the notion that the impact of talent management practices in human resource management is not universal but depends on contextual factors—in this case, leadership. In other words, the positive effect of talent management on job satisfaction is not equally strong or effective across all organizations or teams. This is because the effectiveness depends on

organizational environmental conditions, which in this study refers to leadership. If leadership within the company is ideal, then talent management implementation becomes significantly more effective in increasing job satisfaction. Conversely, if leadership is unsupportive or less ideal, even well-implemented talent management programs may fail to optimally improve employee job satisfaction. This finding supports the contingency theory of leadership, which asserts that there is no one-size-fits-all leadership style; rather, leadership must be adapted to situational factors.

From a literature standpoint, this study enriches the talent management field by introducing leadership as a critical factor for improving the effectiveness of talent management implementation in enhancing job satisfaction. Although many studies have separately shown that effective leadership increases job satisfaction and that well-executed talent management enhances employee satisfaction, there is still a lack of research addressing how leadership moderates the relationship between talent management and job satisfaction. This study also contributes to the understanding that talent management and leadership do not only have direct effects on job satisfaction but also interact to shape it. The significance of the interaction between talent management and leadership provides a direction for future researchers to analyze whether certain leadership styles exert different moderating effects, offering practical insights for companies and HR practitioners.

The study also brings forth important practical implications. Investment in talent management programs such as recruitment, training and development, and employee retention will yield more optimal results in job satisfaction when supported by quality leadership. It is not enough for companies to have excellent talent management programs; they must also ensure the presence of leadership that facilitates their implementation. Since leadership has been proven to strengthen the positive influence of talent management on job satisfaction, leadership training programs must be well-designed and aligned with organizational goals to reinforce the role of leadership in supporting talent management success and enhancing job satisfaction. These findings serve as guidance to prevent talent management failures through the crucial role of leadership.

Based on the sample characteristics of this study, the majority of male employees involved in operational and technical work at the plant have clear expectations regarding career development and recognition. With ideal leadership, leaders can ensure that talent management is effectively implemented, recognizing the need to develop employees' talents and thereby increasing their job satisfaction. Similarly, employees aged 37-40 are in a mature career stage, seeking further development or job stability. Leadership that facilitates talent management programs is crucial for these employees to experience satisfaction and relevance in the workplace.

Employees with 3-5 and 12-14 years of tenure show different needs. Those with 3-5 years are still exploring and building early careers, requiring guidance and opportunities. In contrast, those with 12-14 years of experience seek recognition, further skill development, and career

advancement. Effective leadership acts as a bridge that connects talent management programs with employees' specific needs in each tenure group. Leaders ensure that investments in talent management are genuinely felt and appreciated by employees, ultimately enhancing job satisfaction. The predominance of bachelor's degree holders among employees also supports this finding. Employees with higher education tend to be more analytical, value learning opportunities, and have higher expectations for clear career paths. Good leadership can facilitate employee participation in talent management programs, creating a structured and positive work environment that ultimately leads to job satisfaction.

## **CONCLUSION**

Based on the research findings, it can be concluded that leadership functions as a social catalyst that significantly strengthens the relationship between talent management and job satisfaction in a strategic industry context. This study demonstrates that talent management not only directly contributes to increased employee job satisfaction but that its impact becomes stronger and more meaningful when effective leadership is present as a moderating factor. This addresses the research objective of assessing the extent to which leadership reinforces the relationship between talent management and job satisfaction. The findings reflect the importance of synergy between talent-based HR management and adaptive, collaborative, and contextual leadership capacity in strategic industrial dynamics. The novelty of this research lies in mapping leadership as a social force that not only directs but also amplifies the influence of talent development policies on employees' psychosocial dimensions, particularly in fostering sustainable job satisfaction. These findings enrich the social sciences and humanities literature by expanding the understanding of moderation mechanisms within the talent management–job satisfaction relationship model. They also offer practical implications for industry policymakers to integrate leadership development strategies into a more holistic HR management framework.

## **ETHICAL STATEMENT AND DISCLOSURE**

This study was conducted in accordance with established ethical principles, including informed consent, protection of informants' confidentiality, and respect for local cultural values. Special consideration was given to participants from vulnerable groups to ensure their safety, comfort, and equal rights to participate. No external funding was received, and the authors declare no conflict of interest. All data and information presented were collected through valid research methods and have been verified to ensure their accuracy and reliability. The use of artificial intelligence (AI) was limited to technical assistance for writing and language editing, without influencing the scientific substance of the work. The authors express their gratitude to the informants for their valuable insights, and to the anonymous reviewers for their constructive feedback on an earlier version of this manuscript. The authors take full responsibility for the content and conclusions of this article.

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