

# The Effect of Team Employee Involvement, Work Motivation and Work Life Balance on Employee Innovation at PT Petrokima Gresik

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## ABSTRACT

This study aims to examine the influence of team employee involvement, work motivation, and work-life balance on employee innovation at PT Petrokimia Gresik. Using a quantitative approach, the research involved 132 respondents from employee grades 3 to 7. Data were collected through a Likert-scale questionnaire and analyzed using multiple linear regression. The results show that all independent variables—team involvement (X1), work motivation (X2), and work-life balance (X3)—have a significant and positive effect, both partially and simultaneously, on employee innovation (Y). Among them, work-life balance has the most dominant influence. The coefficient of determination ( $R^2$ ) of 0.676 indicates that 67.6% of innovation is explained by the three variables, while the remaining 32.4% is influenced by other factors not examined in this study. These findings emphasize the importance of fostering a balanced and motivating work environment and strengthening team engagement to enhance employee innovation.

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## 1. INTRODUCTION

In the era of globalization which is characterized by increasingly fierce business competition, companies are required to continue to innovate in order to survive and grow. Innovation is a key element of organizational success in creating a sustainable competitive advantage. In this case, human resources (HR) play a strategic role as the driving force of innovation. Employees are not only required to work professionally, but also must be able to think creatively, collaborate, and generate new ideas that are relevant to market developments (Sitinjau Daniel Dido Jantce TJ & Suwita, 2020).

One of the important factors in supporting innovation is employee engagement in the team. Such engagement includes active participation, effective communication, and solid collaboration between team members. However, the reality is that many organizations still face the challenge of low team engagement due to poor communication, role mismatches, and a lack of ownership from employees

towards their work. This has an impact on decreasing the collaborative potential and creativity of employees in producing innovations (Misui & Wijono, 2022).

In addition to team involvement, work-life balance is also an important factor that affects employees' ability to innovate. Employees who are able to balance personal and work life tend to have lower stress levels, enough energy, and are more focused on completing their tasks. On the other hand, high workloads, excessive working hours, and a work culture that ignores employee welfare can lead to burnout, decreased motivation, and reduced capacity for innovative thinking (Rondonuwu et al., 2018).

Work motivation is also a crucial element in shaping employee morale and performance. High motivation will encourage employees to make their best contributions, so that it has a positive impact on the achievement of organizational goals. Without motivation, productivity decreases and organizational goals are difficult to achieve. On the other hand, motivation is also closely related to job satisfaction, which can increase if the organization pays attention to the needs and life balance of employees (Hidayat & Agustina, 2020).

In practice, many organizations still manage team engagement, work motivation, and work-life balance separately. In fact, these three factors interact with each other and can simultaneously affect the level of employee innovation. Previous research has shown that work-life balance can have a direct effect on professionalism, even without job satisfaction as a mediator (Jumaidah & Nasution, 2024).

PT. Petrokimia Gresik, as a leading fertilizer and petrochemical industry company, also faces the same challenges. Failure to create a work climate that supports team involvement, motivation, and work-life balance can result in stagnation in innovation, operational inefficiency, and a decline in the company's competitiveness. Therefore, it is important for these companies to thoroughly understand how these three factors affect employee innovation.

Based on this background, this study aims to examine the influence of employee involvement in the team, work motivation, and work-life balance on employee innovation at PT Petrokimia Gresik. This research is expected to contribute to the development of a more holistic HR management strategy oriented towards strengthening innovation in the work environment.

## 2. METHOD

This research aims to identify a phenomenon or problem that exists in a research subject. This type of research is quantitative research (Priadana & Sunarsi, 2021). The research method is based on the philosophy of positivism, used to study a specific population or sample, collect data using research tools, analyze quantitative/statistical data (Priadana and Sunarsi, 2021). The research will be carried out in October 2024 at the location of PT. Petrokimia Gresik grades 3-7. The objects studied were 132 respondents, namely employees of PT. Petrokimia Gresik Grade 3-7. Data collection uses observation data collection techniques or looking for problems, conducting Liniature research and analyzing the data that has been received. The data analysis method uses descriptive statistical analysis, instrument test, classical assumption test, and hepotentiary test.

## 3. RESULTS AND DISCUSSION

### Descriptive Statistical Test

This study aims to determine the influence of team employee involvement (X1), work motivation (X2), and work-life balance (X3) on employee innovation (Y) at PT Petrokimia Gresik. The number of respondents was 132 employees who were selected through purposive sampling techniques. The data collection instrument is a Likert scale questionnaire 1-5 that has been tested for validity and reliability.

**Tabel. 3.1 Descriptive Test Results**

Category		Frekuensi	Prosentase (%)
Gender	Men	113	85,6%
	Woman	19	14,4%
Age	20 -25 year	53	40,2%
	26 -35 year	43	32,6%
	36-50 year	36	27,3%
	> 50 year	-	-
Employee Grade	Grade 3	21	15,9%
	Grade 4	27	20,5%
	Grade 5	35	26,5%
	Grade 6	26	19,7%
	Grade 7	23	17,4%
Masa Kerja	< 3 month	13	9,8%
	3 - 11 month	28	21,2%
	1 - 3 year	40	30,3%
	> 3 year	51	38,6%

Source: Data Results processed 2025

In table 3.1 above, there are 132 respondents who are in accordance with the criteria of the researcher, namely Male/Female aged 20 to 50 years old and working in Companies/Industries/Agencies in Gresik. This study was dominated by male gender which amounted to 113 respondents, age 20 - 25 years old which amounted to 53 respondents, dominated by grade 5 employees as many as 35, and > 3 years of service period which amounted to 36 respondents.

### Test Instruments

All statement items are declared valid with the value of  $r$  calculated  $> r$  of the table (0.169). The Cronbach Alpha value for all variables is above 0.6 which indicates that the instrument is reliable:

**Table 3.2 Validity Test Results**

Variabel	$r$ hitung	$r$ tabel	Condition	Conclusion
Employee Engagement	0,948	0,169	$r_{hitung} > r_{tabel}$	Sangat Tinggi
Work Motivation	0,912	0,169	$r_{hitung} > r_{tabel}$	Very High
Work Life Balance	0,719	0,169	$r_{hitung} > r_{tabel}$	Tall
Employee Innovation	0,731	0,169	$r_{hitung} > r_{tabel}$	Tall

Source: Data Results processed 2025

In table 3.2, it is known that all variables are declared valid with the value of  $r$  calculated  $> r$  of the table (0.169). The Cronbach Alpha value for all variables is above 0.6.

### Classic Assumption Test

#### Normality Test

Data normality testing is carried out to see whether in the regression medes, the dependent and independent variables have a normal distribution or not. If the data is spread around the diagonal line and follows the direction of the diagonal line, then the regression model qualifies the normality assumption shown in figure 3.1 (P-Plot as follows:

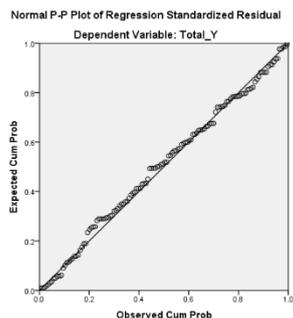


Figure 3.1 Normality of the P-Plot

Figure 3.1 above indicates that the regression model has met the assumptions that have been put forward previously, so the data in the regression model of this study tends to be normal.

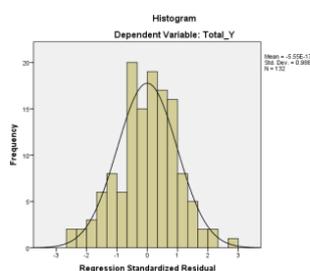


Figure 3.2 Normality of the Histogram

Figure 3.2 above is a histogram graph. Histogram graphs are said to be normal if the data distribution is *bell-shaped*, not tilted to the left or not tilted to the right. The histogram graph above forms a bell and does not tilt to the right or left so that the histogram graph is declared normal.

**Heteroscedasticity Test**

Heterokedasticity is used to test whether in a regression model, there is an unevenness of variance from the residual of another observation.

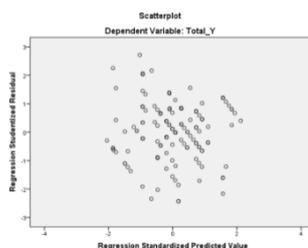


Figure 3.3 Heterokedasticity

Figure 3.3 above shows random scattered points, not forming a clear/regular pattern, and scattered both above and below the number 0 on the Y axis. Thus "no heterokedasticity" occurs in the regression model.

**Multicollinearity Test**

It was used to test whether the regression model found a strong correlation between independent variables. The method used to assess it is by looking at the value of the variant inflation factor (*Variance Inflation Factor/VIF*). The way to assess it is to look at the value of the variant factor that does not exceed 4 or 5.

**Tabel. 3.3 Hasil Uji Multolinieritas**

Variabel	Tolerance	VIF	Information
Employee Engagement (X1)	0,166	6.022	No Multicollinearity
Work Motivation (X2)	0,162	6.173	No Multicollinearity
Work Life Balance (X3)	0,143	6.976	No Multicollinearity

Source: Data Results processed 2025

The results of the calculation of the *Variance Inflation Factor* (VIF) value also show the same thing, there is not a single independent variable that has a VIF < 10. So it can be concluded that there is no multicollinearity between independent variables in the regression model

### Linearity Test

The Linearity Test is to see if the specifications of the model used are incorrect or correct. In this study, the test was carried out using the SPSS 20.0 program.

**Tabel. 3.4 Results of the Linearity Test**

Variabel	Sig	Alpha	Conclusion	Information
Employee Engagement (X1)	0.628	0.05	Sig > Alpha	Linier
Work Motivation (X2)	0.831	0.05	Sig > Alpha	Linier
Work Life Balance (X3)	0.233	0.05	Sig > Alpha	Linier

Source: Data Results processed 2025

The result of the significance value of the data in table 3.5 above for the overall variable is greater than the Alpha value (0.05) which means that the data from the population is linear.

### Multiple Regression Analysis

In this study, more than one variable was used as an indicator, namely employee involvement (X1), work motivation (X2), *work life balance* (X3) and employee innovation (Y). The test was carried out using the SPSS 20.0 program. The following is shown in table 3.5 as follows:

**Table 3.6 Correlation Test Results**

Correlation Values ( R )	R Square ( R <sup>2</sup> )
0.822	0.667

Source: Data processed results 2025

Based on table 4.11, it is shown that the value of the correlation coefficient (R) of 0.822 means that the level of relationship between employee involvement (X1), work motivation (X2), *work life balance* (X3) and employee innovation (Y) is a strong positive. The R<sup>2</sup> (R Square) determinant coefficient of 0.676 means that employee innovation (Y) is influenced by employee involvement (X1), work motivation (X2) and *work life balance* (X3) by 0.676 or 67.6%. While the remaining 32.4% was influenced by other factors/variables outside of this study

### Uji Hypothesis

#### T Test

The t-test is used to test the significance between constants and independent variables.

**Tabel. 3.7 T Test Results**

Variabel	T <sub>hitung</sub>	Sig
Employee Engagement (X1)	4.792	0.000
Work Motivation (X2)	3.251	0.000
Work Life Balance (X3)	9.821	0.000

Source: data processed in 2025

From the data in table 3.7 above, it is shown that the value of  $t$  is calculated  $> t$  table, then the three variables  $X_1$ ,  $X_2$ ,  $X_3$  have a significant effect on the variable ( $Y$ ) of employee innovation.

### Test F

The F test is a simultaneous test (whole, together). This simultaneous test aims to test whether employee involvement ( $X_1$ ), work motivation ( $X_2$ ) and *work life balance* ( $X_3$ ) and together have an influence on the dependent variable, namely employee innovation ( $Y$ ).

**Tabel. 3.8 F Test Results**

F hitung	Sig
89.178	0,000

Source: Data processed in 2025

From table 3.8, it can be seen that the value of  $F$  is calculated as  $89,178 > F$  table 2.67 and the value of  $Sig < 0.05$  which is  $0.000 < 0.05$ , then  $H_0$  is rejected and accepts  $H_a$ . This means that employee engagement, work motivation, and *work-life balance* have a significant effect on employee innovation

### Discussion

#### The influence of employee engagement on employee innovation

Based on the results of the research obtained, the  $H_1$  hypothesis was accepted because of the discovery of a positive relationship between employee involvement in employee innovation at PT. Petrokimia Gresik. This is shown through the results of the  $t$ ,  $t$  calculation ( $4,792 > t$  table ( $1,656$ ) and the sig value  $0.000 < 0.05$ , then  $H_0$  is rejected. This means that employee involvement has a significant effect on employee innovation. The higher the level of employee engagement owned by employees, the higher the level of employee work innovation owned by them.

Further, organizations need to consider factors that can strengthen employee engagement, such as work-life balance, recognition and rewards, and career development opportunities. Employees who feel valued and have opportunities for growth are more likely to engage in their work and contribute with innovative ideas. The implementation of training and development programs that focus on improving creative skills and critical thinking can also support the improvement of *innovative work behavior*. Overall, this study emphasizes the importance of strategies that focus on increasing employee engagement to maximize the potential of employees' *innovative work behavior*. Through a holistic and sustainable approach, organizations can ensure that employees are not only emotionally engaged but also motivated to contribute innovatively, which will ultimately improve the overall performance of the organization (Jumaidah & Nasution, 2024).

#### The effect of work motivation on employee innovation

Work motivation has been shown to significantly influence innovation. This means that the higher the work motivation that employees have, both from internal (intrinsic) and external (extrinsic) factors, the higher their tendency to be innovative. motivation is key to encouraging proactive behavior and the creation of new ideas in the workplace (Sirait et al., 2024). Intrinsic motivations such as job satisfaction, rewards, and recognition, encourage individuals to do more than just their formal duties. Attention to the management environment is important because each element of the environment affects either directly or indirectly managerial activities (Zuhro, 2021).

#### The Influence of Work Life Balance on Employee Innovation

Based on the results of the hypothesis test using multiple linear regression with a  $t$ -test to determine the partial influence of the free variable on the bound variable, there is an influence on all dimensions of *work-life balance* on employee innovation and with the determination coefficient to determine the percentage of influence given by the free variable on the bound variable, there is an

influence of *work-life balance* 67.6% to employee innovation. Thus, it can be concluded that in this study there is a significant influence between *work-life balance variables* and employee performance variables (Utami & Pranitasari, 2020).

### **The simultaneous influence of employee engagement variables, work motivation, and work-life balance on employee innovation**

Simultaneously, the variables of employee involvement, work motivation, and work-life balance together have a significant influence on employee innovation. This shows that these three variables complement each other in creating a conducive work environment for the growth of new ideas. In other words, innovation will not develop optimally from work involvement alone, but must be supported by strong motivation and a good life balance. These three are strategic elements in human resource management to create an innovative workforce that is adaptive to change (Atlennur & Arianto, 2024).

Evidence that there is a connection between variables X and Y carried out on employees of PT. Petrokimia Gresik is shown through the results of multiple analysis research which shows the result of a correlation coefficient (R) value of 0.822, meaning that the level of relationship between employee involvement (X1), work motivation (X2), *work life balance* (X3) and employee innovation (Y) is a strong positive. The R<sup>2</sup> (R Square) determinant coefficient of 0.676 means that employee innovation (Y) is influenced by employee involvement (X1), work motivation (X2) and *work life balance* (X3) by 0.676 or 67.6%. While the remaining 32.4% was influenced by other factors/variables outside of this study

## **4. CONCLUSION**

From the description of the results and the discussion of the research on the influence of employee involvement, work motivation and *work life balance* on the innovation of employees of PT. Petrokimia Gresik can be drawn the following conclusions: Based on the results of the descriptive analysis that has been carried out, it can be concluded that the results of multiple linear regression using SPSS show that the correlation (relationship) between the variables of employee involvement, work motivation, *work life balance* and employee innovation. The value of the correlation coefficient (R) is 0.822 and the Coefficient of the determinant R<sup>2</sup> (R Square) is 0.676. From the results of the t-test for the variables of employee involvement (X1), work motivation (X2) and *work life balance* (X3), it has a t-calculated value greater than the t-table which shows a significant influence on employee performance and can be used for more in-depth prediction purposes. From the results of the determination calculation, an R-Squer value (R<sup>2</sup>) of 0.676 or 67.6% was obtained, which is the influence given by the variables of employee involvement, work motivation, and *work life balance* on the variables of employee innovation. While the remaining 32.4% was influenced by other factors that were not observed in this study. Employee Engagement, Work Motivation, and *Work-Life Balance* simultaneously have a positive and significant effect on innovation in PT. Petrokimia Gresik.

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