

THE EFFECT OF EMPLOYEE WORK MOTIVATION, JOB WORKLOAD, AND JOB TRAINING ON
MCDERMOTT INTERNATIONAL'S PERMANENT EMPLOYEE PERFORMANCEAren Sandiko Pebriarta¹, Dr. Merinda H. Ch. Pandowo, SE., MA², Ricardo Gianluigi Tindi,
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Email: arensandiko17@gmail.com**Abstract**

This study examines the effect of work motivation, job workload, and job training on permanent employee performance at McDermott International Batam. A quantitative explanatory design was applied to 378 respondents selected from 5,558 permanent employees. Data were collected through a five-point Likert questionnaire and analyzed using validity, reliability, classical assumption, multiple regression, t-test, F-test, and R^2 analysis. The results show that work motivation has a positive and significant effect on performance, while job workload has a negative and significant effect. Job training has a positive and significant effect and is the most dominant variable ($B = 0.490$). Simultaneously, the three independent variables significantly affect performance ($F = 106.882$; $p < 0.001$), with $R^2 = 0.462$.

Keywords: Work Motivation, Job Workload, Job Training, Employee Performance

Abstrak

Penelitian ini menganalisis pengaruh motivasi kerja, beban kerja, dan pelatihan kerja terhadap kinerja karyawan tetap McDermott International Batam. Penelitian menggunakan pendekatan kuantitatif eksplanatori terhadap 378 responden dari populasi 5.558 karyawan tetap. Data dikumpulkan melalui kuesioner skala Likert lima poin dan dianalisis melalui uji validitas, reliabilitas, asumsi klasik, regresi linear berganda, uji t, uji F, dan R^2 . Hasil menunjukkan motivasi kerja berpengaruh positif dan signifikan terhadap kinerja, beban kerja berpengaruh negatif dan signifikan, sedangkan pelatihan kerja berpengaruh positif dan signifikan serta menjadi variabel paling dominan ($B = 0,490$). Ketiga variabel secara simultan berpengaruh signifikan terhadap kinerja ($F = 106,882$; $p < 0,001$), dengan R^2 sebesar 0,462.

Kata Kunci: Motivasi Kerja, Beban Kerja, Pelatihan Kerja, Kinerja Karyawan

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1. Introduction

Technological changes, digitalization, and increasing business competition are driving organizations to continuously improve the effectiveness of their human resources. In companies engaged in engineering, procurement, construction, and offshore fabrication, employee performance is a critical factor because work demands precision, adherence to safety standards, technical proficiency, and on-target project completion. McDermott International Batam employs 6,842 people, comprising 5,558 permanent employees and 1,284 contract employees. This situation demonstrates the complexity of workforce management and the

importance of maintaining the performance of permanent employees as a workforce group involved in long-term operational activities.

Employee performance is not only determined by technical skills but is also influenced by psychological and organizational factors. Work motivation drives employees to direct their efforts, maintain commitment, and complete tasks. Conversely, excessive workloads can increase fatigue and stress, thus reducing work effectiveness. Job training serves as a means of developing knowledge, skills, and competencies so that employees are able to meet the ever-changing demands of their jobs.

The Job Demands-Resources (JD-R) perspective explains that job characteristics can be viewed as job demands and job resources. Workload represents job demands that require physical and psychological effort, while motivation and training can be positioned as resources that help employees cope with job demands. An imbalance between demands and resources can increase stress, while adequate resources can support engagement and performance.

Previous studies support this relationship. Motivation has been found to be positively related to performance, while excessive workload tends to decrease performance. Training has also been shown to improve employee knowledge, skills, competencies, and work outcomes. However, many previous studies have examined these variables separately or within different industry contexts. This study integrates all three variables into a single model within the context of a large-scale industrial company, providing more specific empirical evidence regarding the combined effects of motivational factors, job demands, and competency development on permanent employee performance.

Based on this description, this study aims to analyze the influence of work motivation, workload, and job training on the performance of permanent employees at McDermott International Batam, both partially and simultaneously. The research contribution lies in the integrated examination of these three factors in an industrial work environment with high technical and operational demands.

2. Library Review

2.1 Human Resource Management

It is a workforce management framework that encompasses skills development, work conditions management, motivation enhancement, and workload management to support the achievement of organizational goals. In this study, this concept serves as a general foundation linking work motivation, workload, and job training to employee performance.

2.2 Work Motivation

Motivation is the internal and external forces that direct, sustain, and enhance employee effort in carrying out work. Indicators used include intrinsic motivation, extrinsic motivation, work engagement, and effort and persistence. Research by Shkoler and Kimura and Paais and Pattiruhu shows that motivation can increase engagement, commitment, and work outcomes.

2.3 Workload

It is the number, complexity, and pressure of tasks that must be completed within a certain period. Workload in this study was measured by task quantity, task complexity, time pressure, and job stress. Workloads that exceed employee capacity can reduce concentration, increase fatigue, and reduce work effectiveness. Findings by Rolos et al., Putradewa et al., and Spagnoli et al. support a negative or complex relationship between workload and performance.

2.4 Job Training

Is a systematic process to improve the knowledge, skills, and competencies required for work. This variable is measured through the relevance of training

, training effectiveness, training frequency, and skill improvement. Research by Karim et al., Zia-ur-Rehman et al., and Elmi shows that effective training can improve employee skills and performance.

2.5 Employee Performance

Describes the level of employee achievement in completing tasks according to organizational standards. Performance is measured through work quality, work quantity, timeliness, and work effectiveness.

Based on a synthesis of theory and previous research, this study proposes four hypotheses:

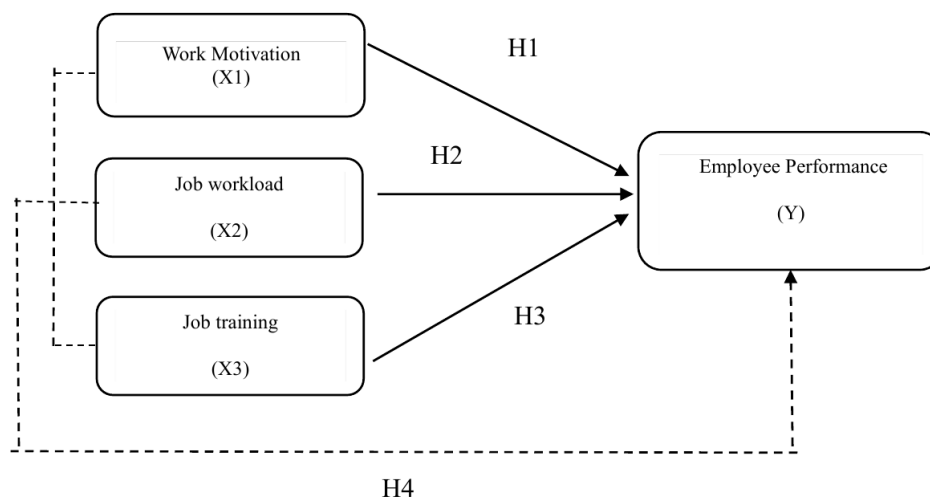
H1: Work motivation has a positive effect on performance

H2: Workload has a negative effect on performance

H3: Job training has a positive effect on performance

H4: Work motivation, workload, and job training simultaneously affect performance.

Figure 1. Research Model



3. Research Methodology

This study uses a quantitative approach with an explanatory design to test the causal relationship between work motivation (X1), workload (X2), and job training (X3) on employee performance (Y). The object of the study is the permanent employees of McDermott International Batam. The population is 5,558 permanent employees. Based on Slovin's calculation with a 5% error rate, the minimum sample size is 374 respondents. In the implementation of the study, 378 respondents were obtained whose data were used in the analysis.

Sampling was conducted using random sampling, taking into account the representation of various departments. Primary data was collected through an online questionnaire using Google Forms with a five-point Likert scale, ranging from 1 = strongly disagree to 5 = strongly agree. Secondary data came from company documents and relevant scientific literature.

The variables of work motivation, workload, job training, and performance were each operationalized through 12 statements. Instrument testing was conducted using Pearson Product-Moment correlation and Cronbach's Alpha. Data analysis included tests for normality, multicollinearity, heteroscedasticity, multiple linear regression, coefficient of determination (R^2), t-test, and F-test using IBM SPSS Statistics. The regression model used was

$$Y = \alpha + B_1X_1 + B_2X_2 + B_3X_3 + \varepsilon.$$

4. Results and Discussion

4.1 Research result

The study involved 378 respondents. Most of the respondents were male (92.3%), in the 36-45 age group (33.6%), from the Welding Department (36.8%), and had more than six years of service (47.6%). The distribution of responses showed that work motivation and job training received predominantly positive responses, while workload was more neutral and performance received a positive response of 92.60%.

4.1.1 Validity Test

Validity testing is used to determine whether each item in the instrument is capable of measuring the variables being studied. Testing is conducted using Pearson Product-Moment correlation. An item is declared valid if the calculated r-value is greater than the table r-value. In this study, the table r-value was 0.101.

Table 1. Validity Test Results

Variable	Item	r-count	r-table	Result
Work Motivation (X1)	X1.1	0.835	0.101	Valid
	X1.2	0.840	0.101	Valid
	X1.3	0.785	0.101	Valid
	X1.4	0.739	0.101	Valid
	X1.5	0.781	0.101	Valid
	X1.6	0.789	0.101	Valid
	X1.7	0.876	0.101	Valid
	X1.8	0.830	0.101	Valid
	X1.9	0.875	0.101	Valid
	X1.10	0.857	0.101	Valid
	X1.11	0.694	0.101	Valid
	X1.12	0.847	0.101	Valid
Job Workload (X2)	X2.1	0.619	0.101	Valid
	X2.2	0.776	0.101	Valid
	X2.3	0.685	0.101	Valid
	X2.4	0.690	0.101	Valid
	X2.5	0.300	0.101	Valid
	X2.6	0.615	0.101	Valid
	X2.7	0.812	0.101	Valid
	X2.8	0.793	0.101	Valid
	X2.9	0.803	0.101	Valid
	X2.10	0.789	0.101	Valid
	X2.11	0.677	0.101	Valid
	X2.12	0.741	0.101	Valid
Job Training (X3)	X3.1	0.850	0.101	Valid
	X3.2	0.888	0.101	Valid
	X3.3	0.902	0.101	Valid

Variable	Item	r-count	r-table	Result
	X3.4	0.892	0.101	Valid
	X3.5	0.909	0.101	Valid
	X3.6	0.929	0.101	Valid
	X3.7	0.832	0.101	Valid
	X3.8	0.808	0.101	Valid
	X3.9	0.839	0.101	Valid
	X3.10	0.884	0.101	Valid
	X3.11	0.898	0.101	Valid
	X3.12	0.905	0.101	Valid
Employee Performance (Y)	Y1.1	0.859	0.101	Valid
	Y1.2	0.895	0.101	Valid
	Y1.3	0.900	0.101	Valid
	Y1.4	0.919	0.101	Valid
	Y1.5	0.932	0.101	Valid
	Y1.6	0.901	0.101	Valid
	Y1.7	0.920	0.101	Valid
	Y1.8	0.927	0.101	Valid
	Y1.9	0.908	0.101	Valid
	Y1.10	0.933	0.101	Valid
	Y1.11	0.930	0.101	Valid
	Y1.12	0.908	0.101	Valid

Source: Processed Primary Data, 2026

4.1.2 Reliability Test

Reliability testing was conducted to determine the consistency of the research instrument. Reliability was measured using Cronbach's Alpha. An instrument is considered reliable if the Cronbach's Alpha value is greater than 0.60.

Table 2. Reliability Test Results

Variable	Cronbach's Alpha	Standard Alpha	Number of Items	Result
Work Motivation (X1)	0.951	0.60	12	Reliable
Job Workload (X2)	0.904	0.60	12	Reliable
Job Training (X3)	0.972	0.60	12	Reliable
Employee Performance (Y)	0.981	0.60	12	Reliable

Source: Processed Primary Data, 2026

The Cronbach's Alpha value for all variables is above 0.60, so the research instrument is declared reliable and suitable for use in further analysis.

4.1.3 Normality Test

Table 3. Normality Test Results

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		378
Normal Parameters ^{a,b}	Mean	0,0000000
	Std. Deviation	5,20474198
Most Extreme Differences	Absolute	0,054
	Positive	0,054
	Negative	-0,053
Test Statistic		0,054
Asymp. Sig. (2-tailed)		0.010 ^c

Source: Processed Primary Data, 2026

The Kolmogorov-Smirnov results show a significance value of 0.010. Visual inspection of the Normal P-P Plot in the thesis shows that the residual points follow the direction of the diagonal line as a supporting basis for assessing the residual distribution.

4.1.4 Multicollinearity Test

A multicollinearity test is conducted to determine whether there is a high correlation between independent variables. A model is declared free of multicollinearity if the tolerance value is greater than 0.10 and the VIF is less than 10.

Table 4. Multicollinearity Test Result

Coefficients ^a			
Model		Collinearity Statistics	
		Tolerance	VIF
1	X1	0,607	1,647
	X2	0,988	1,012
	X3	0,608	1,643

Source: Processed Primary Data, 2026

The tolerance values of X1, X2, and X3 are 0.607; 0.988; and 0.608, respectively, while the VIF is 1.647; 1.012; and 1.643, respectively. All values meet the criteria so there is no multicollinearity problem.

4.1.5 Heteroscedasticity Test

A heteroscedasticity test is performed to determine whether there is inequality in residual variance in the regression model. The test is performed by examining the significance value of each independent variable. Heteroscedasticity is not present if the significance value is greater than 0.05.

Table 5. Heteroscedasticity Test Result

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5,707	1,708		3,341	0,001
	X1	-0,051	0,032	-0,106	-1,600	0,110
	X2	0,021	0,022	0,049	0,948	0,344
	X3	0,005	0,032	0,010	0,157	0,875

Source: Processed Primary Data, 2026

4.1.6 Multiple Linear Regression

Multiple linear regression analysis was used to determine the direction and magnitude of the influence of work motivation, workload, and job training on employee performance. The regression model used was $Y = \alpha + B_1X_1 + B_2X_2 + B_3X_3 + \varepsilon$.

Table 6. Multiple Linear Regression Result

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	19,338	2,675		7,230	0,000
	X1	0,227	0,050	0,220	4,527	0,000
	X2	-0,170	0,034	-0,191	-4,997	0,000
	X3	0,506	0,050	0,490	10,089	0,000

Source: Processed Primary Data, 2026

Based on the regression coefficient, the equation $Y = 19.338 + 0.227X_1 - 0.170X_2 + 0.506X_3$ is obtained. The coefficients of X1 and X3 are positive, while X2 is negative. The largest Beta value is job training at 0.490, making it the most dominant variable.

4.1.7 Coefficient Of Determination (R^2)

The coefficient of determination is used to determine how much the independent variable is able to explain the variation in the dependent variable.

Table 7. Coefficient Of Determination (R^2)

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.679 ^a	0,462	0,457	5,226

Source: Processed Primary Data, 2026

The R Square value of 0.462 indicates that 46.2% of the variation in employee performance can be explained by work motivation, workload, and job training. The remaining 53.8% is explained by factors outside the research model.

4.1.8 Parsial Test (t-Test)

The t-test is used to determine the partial effect of each independent variable on employee performance. The effect is considered significant if the significance value is less than 0.05.

Table 8. Parsial Test (t-Test) Result

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	19,338	2,675		7,230	0,000
	X1	0,227	0,050	0,220	4,527	0,000
	X2	-0,170	0,034	-0,191	-4,997	0,000
	X3	0,506	0,050	0,490	10,089	0,000

Source: Processed Primary Data, 2026

Work motivation has $t = 4.527$ and $\text{Sig.} = 0.000$ so it has a positive effect.

The workload has $t = -4.997$ and $\text{Sig.} = 0.000$ so it has a negative effect.

Job training has $t = 10.089$ and $\text{Sig.} = 0.000$ so it has a positive effect.

4.1.9 Simultaneous Test (F-Test)

The F-test is used to determine whether all independent variables simultaneously influence the dependent variable. A model is considered to have a simultaneous influence if the significance value is less than 0.05.

Table 9. Simultaneous Test (F-Test) Results

Source: Processed Primary Data, 2026

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8755,724	3	2918,575	106,882	.000 ^b
	Residual	10212,681	374	27,307		
	Total	18968,405	377			

The F value of 106.882 with a significance of 0.000 shows that work motivation, workload, and job training simultaneously have a significant effect on employee performance.

4.2 Discussion

4.2.1 The Influence of Work Motivation on Employee Performance

The results of the study indicate that work motivation has a positive and significant effect on the performance of permanent employees at McDermott International Batam. This finding supports the theoretical explanation in the thesis that motivation drives employees to increase their effort, productivity, commitment, and perseverance in completing their responsibilities. McDermott International's working conditions, which demand high standards of quality, safety, and on-target project completion, demonstrate the importance of motivation in maintaining employee effort and responsibility. These results are also in line with the research by Shkoler and Kimura and Paaïs and Pattiruhu used in the thesis.

4.2.2 The Influence of Workload on Employee Performance

Workload has a negative and significant effect on employee performance. This means that increased workload tends to be followed by decreased performance when job demands become too high. This finding is consistent with the research of Rolos et al., Putradewa et al., and Spagnoli et al. discussed in this thesis. From a Job Demands-Resources perspective, workload is a job demand that requires physical and psychological energy, so excessive workload can increase stress and fatigue and reduce work effectiveness.

4.2.3 The Effect of Job Training on Employee Performance

Job training has a positive and significant impact on employee performance and is the most dominant variable. This finding supports research by Karim et al., Zia-ur-Rehman et al., and Elmi, which shows that training can improve employee knowledge, skills, and competencies. In McDermott International's technical work environment, relevant training helps employees understand procedures, use equipment, meet safety standards, and reduce operational errors.

4.2.4 The Influence of Work Motivation, Workload, and Job Training on Employee Performance

The simultaneous test results show that work motivation, workload, and job training collectively have a significant effect on employee performance. The R^2 value of 46.2% indicates

that these three variables are able to explain almost half of the performance variation in the model. Substantively, these results indicate that performance is influenced by a combination of psychological factors in the form of motivation, job demands in the form of workload, and resources in the form of training. These findings reinforce the need for an integrated human resource management approach in organizations with high technical demands.

5. Conclusion

1. Work motivation has a positive and significant impact on the performance of permanent employees at McDermott International Batam. Increased motivation encourages employees to maintain effort, commitment, and responsibility in completing their work.
2. Workload has a negative and significant impact on employee performance. An increased workload without adequate management has the potential to lead to fatigue, stress, and decreased work effectiveness.
3. Job training has a positive and significant impact and is the most dominant variable in explaining performance. Relevant and effective training helps improve employee competence and ability to meet the technical demands of the job.
4. Work motivation, workload, and job training simultaneously significantly influence employee performance, with an R^2 of 46.2%. Practically, companies need to strengthen ongoing training, evaluate workload distribution, and maintain a motivational system through rewards, feedback, and career development.

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