

# Effect of Job Crafting on Employee Performance through Work Engagement in IT Consulting and Software Development Employees in Yogyakarta

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## Abstract

*This study aims to explore and comprehensively examine the effect of job crafting on employee performance mediated by work engagement among employees of IT consulting and software development companies in Yogyakarta. The population of this study comprises employees of IT consulting and software development companies in Yogyakarta, with a sample of 68 employees. The sampling technique employed was purposive sampling, with the following criteria: (1) a minimum tenure of six months, (2) not currently in a training or internship period, (3) having autonomy to adjust work methods or workflows, and (4) frequently working collaboratively in teams or projects. Data were collected through the distribution of offline and online questionnaires using Google Forms. The data were then analyzed quantitatively using path analysis through multiple regression and Sobel testing with the assistance of SPSS. The findings indicate that: (1) job crafting has a direct and significant effect on employee performance, (2) job crafting has a direct and significant effect on work engagement, (3) work engagement has a direct and significant effect on employee performance, and (4) work engagement mediates the effect of job crafting on employee performance.*

**Keywords:** Job Crafting, Work Engagement, Employee Performance.

## Introduction

The development of the digital era has driven transformations in the workplace that require both organizations and employees to be adaptive and innovative. In the information technology industry, rapid job dynamics and high expectations demand employees' ability to adjust, create, and actively contribute. These challenges are evident through repetitive projects, innovation pressure, and the need for work flexibility. One strategy believed to address these challenges is job crafting, defined as the changes employees make in responding to job demands and utilizing available work resources to better align their jobs with their personal abilities and needs (Tims et al., 2012).

The results of a preliminary survey at PT Global Intermedia Nusantara and JMC IT Consultant indicate that some employees have practiced job crafting, although its implementation remains limited due to personal concerns and organizational policies. In addition, variations in performance achievement were mostly categorized as moderate, with major obstacles stemming from a lack of managerial guidance and limited facilities.

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Previous studies have reported inconsistent findings. Shang (2022) found that job crafting has a positive effect on performance, whereas Abira, Jatmiko, and Sutapa (2025) reported that job crafting does not have a significant effect on performance in certain organizational contexts. These inconsistencies suggest the need to examine mediating variables that may explain the relationship.

Work engagement may serve as a relevant mediating variable. Schaufeli and Bakker (2006) define work engagement as a positive, fulfilling, work-related psychological state characterized by vigor, dedication, and absorption. Corbeanu and Iliescu (2023) demonstrated that higher levels of work engagement are positively associated with performance. However, the preliminary survey revealed that employee work engagement in both companies remains at a moderate level, primarily influenced by the quality of coworker relationships and working conditions. This condition indicates the need for factors that can enhance work engagement. Prior studies suggest that job crafting plays an important role in increasing work engagement (Baghdadi et al., 2020). Furthermore, Shang (2022) reported that job crafting can increase work engagement, which in turn improves performance. Nevertheless, empirical evidence examining work engagement as a mediator between job crafting and performance, particularly in Indonesian IT companies, remains limited.

Based on these phenomena and research gaps, further investigation is required to analyze the effect of job crafting on employee performance with work engagement as a mediating variable in information technology companies in Yogyakarta. This study is expected to provide both practical implications for organizations and theoretical contributions to the development of human resource management in the digital era.

## **Literature Review**

### ***Job Crafting***

Tims et al. (2012) define job crafting as employees' efforts to modify their job demands and job resources to better fit their skills and needs. Wrzesniewski and Dutton (2001) describe job crafting as physical and cognitive changes employees make to the boundaries of tasks and work relationships. According to Tims et al. (2012), job crafting consists of four dimensions: increasing structural job resources, decreasing hindering job demands, increasing social job resources, and increasing challenging job demands.

### ***Work Engagement***

Schaufeli and Bakker (2006) define work engagement as a positive and fulfilling psychological state related to work, characterized by high levels of energy, involvement, and concentration. Kahn (1990) explains work engagement as the optimal expression of organizational members' commitment to their work roles, encompassing physical, cognitive, and emotional aspects. Schaufeli et al. (2002) identify three main dimensions of work engagement: vigor, dedication, and absorption.

### ***Employee Performance***

Koopmans et al. (2013) define individual performance as behaviors or actions that are relevant to organizational goals and can be measured objectively or subjectively.

Mangkunegara (2017) describes performance as the quality and quantity of work achieved by employees in carrying out their assigned responsibilities. Meanwhile, Dessler (2015) defines performance as work achievement measured by comparing actual results with predetermined work standards. According to Koopmans et al. (2013), employee performance comprises four main dimensions: task performance, contextual performance, adaptive performance, and counterproductive work behavior.

## ***Hypotheses***

**H1.** Job crafting has a significant effect on employee performance among employees of IT consulting and software development companies in Yogyakarta.

**H2.** Job crafting has a significant effect on work engagement among employees of IT consulting and software development companies in Yogyakarta.

**H3.** Work engagement has a significant effect on employee performance among employees of IT consulting and software development companies in Yogyakarta.

**H4.** Work engagement mediates the effect of job crafting on employee performance among employees of IT consulting and software development companies in Yogyakarta.

## **Methods**

### ***Sample***

This study was conducted at PT Global Intermedia Nusantara and JMC IT Consultant. Data were collected through questionnaires distributed to employees of both companies, with a total of 68 valid responses. Respondents were asked to rate each statement using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The data were analyzed using path analysis through multiple regression and the Sobel test with the assistance of SPSS.

### ***Measurement***

**Job crafting** was measured using the Short Form of the Job Crafting Scale (JCS) developed by Sora et al. (2018) based on Tims et al. (2012). The instrument consists of 12 items measured on a five-point scale ranging from 1 (never) to 5 (always).

**Work engagement** was measured using the Utrecht Work Engagement Scale-9 (UWES-9) developed by Schaufeli and Bakker (2006). The instrument consists of 9 items measured on a five-point scale ranging from 1 (never) to 5 (always).

**Employee performance** was measured using the Individual Work Performance Questionnaire (IWPQ) developed by Koopmans et al. (2013). The instrument consists of 14 items measured on a five-point scale ranging from 1 (never) to 5 (always).

### ***Data Analysis***

The data were analyzed using path analysis through multiple regression. This analysis was employed to examine the direct effects of the independent variable on the dependent variable, as well as the indirect effects through the mediating variable.

To test the mediating role of work engagement in the relationship between job crafting and employee performance, the Sobel test was applied.

## Results and Discussion

### Results

#### Respondents Characteristics

Based on Table 1, the majority of respondents are male, accounting for 60 respondents (88%), while female respondents total 8 individuals (12%). In terms of

Table 1. Respondents Characteristics

<b>Respondent Characteristics</b>	<b>Category</b>	<b>Frequency Percentage</b>	
<b>Gender</b>	Female	8	12%
	Male	60	88%
	<b>Total</b>	68	100%
<b>Age (Years)</b>	18–26	28	41%
	27–35	25	37%
	36–44	12	18%
	45–53	3	4%
	54–62	0	0%
	<b>Total</b>	68	100%
<b>Highest Education Level</b>	Senior High School/Vocational High School	21	31%
	Diploma (D3)	12	18%
	Bachelor's Degree (S1)	33	49%
	Master's/Doctoral Degree (S2/S3)	2	3%
	<b>Total</b>	68	100%
<b>Length of Service</b>	< 4 years	41	60%
	4–6 years	15	22%
	7–10 years	7	10%
	> 10 years	5	7%
	<b>Total</b>	68	100%

age, most respondents are in the 18–26 years age group, comprising 28 respondents (41%), followed by those aged 27–35 years with 25 respondents (37%). Respondents aged 36–44 years account for 12 individuals (18%), while those aged 45–53 years comprise 3 respondents (4%). No respondents are in the 54–62 years age group.

Regarding educational background, most respondents hold a bachelor's degree (S1), totaling 33 respondents (49%). This is followed by senior high school/vocational high school graduates with 21 respondents (31%), diploma (D3) holders with 12 respondents (18%), and master's/doctoral degree holders with 2 respondents (3%).

In terms of length of service, the majority of respondents have worked for less than four years, totaling 41 respondents (60%). Respondents with 4–6 years of tenure account for 15 individuals (22%), those with 7–10 years of tenure total 7 respondents (10%), and those who have worked for more than 10 years comprise 5 respondents (7%).

### Regression Model 1

Based on the results of data processing regarding the effect of job crafting on work engagement, the findings are presented in Table 2.

According to Table 2, the regression equation for Regression Model 1 can be formulated as follows:

$$WE = 14.505 + 0.392 JC$$

Where:

JC = Job Crafting

WE = Work Engagement

According to Table 2, the beta value or regression coefficient for the job crafting variable is 0.392 with a positive direction. This indicates that higher levels of employee job crafting are associated with higher levels of work engagement. The coefficient of determination ( $R^2$ ) of 0.123 suggests that job crafting explains 12.3% of the variance in work engagement, while the remaining variance is explained by other factors.

Table 2. Results of Regression Analysis for Model 1

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig	Note
	B	S	Beta			
Constant	14.505	6.166		2.352	0.022	
Job Crafting	0.392	0.129	0.351	3.048	0.003	Significant
R Square	: 0.123					
F Hitung	: 9.288					0.003

Dependent Variable: Work Engagement

Table 3. Results of Regression Analysis for Model 2

Model	Coefficient			t	Sig	Note
	Unstandardized	Standardized				
	Coefficients	Coefficients				
B	S	Beta				
Constant	20.174	4.574		4.411	0.000	
Job Crafting	0.575	0.098	0.550	5.879	0.000	Significant
Work Engagement	0.276	0.088	0.294	3.147	0.002	Significant
R Square	: 0.502					
F Hitung	: 32.775				0.000	

Dependent Variable: Performance

### Regression Model 2

The results of data processing regarding the effects of job crafting and work engagement on employee performance are presented in Table 3.

According to Table 3, the regression equation for Regression Model 2 can be formulated as follows:

$$EP = 20.174 + 0.575 JC + 0.276 WE$$

Where:

JC= Job Crafting

WE= Work Engagement

EP= Employee Performance

Table 3 presents the results of testing the simultaneous effects of job crafting and work engagement on employee performance. Based on the regression analysis of Model 2, the regression coefficients ( $\beta$ ) for job crafting and work engagement are 0.575 and 0.276, respectively, both with positive directions. This indicates that higher levels of job crafting and work engagement are associated with higher employee performance. The coefficient of determination ( $R^2$ ) of 0.502 indicates that these two variables explain 50.2% of the variance in employee performance, while the remaining 49.8% is explained by other factors not included in this research model.

### Path Analysis

Based on the results of Regression Models 1 and 2, two regression equations are obtained as follows:

$$WE = 14.505 + 0.392 JC \quad R^2 = 0.123 \quad F = 9.288 \text{ (sig.)}$$

$$EP = 20.174 + 0.575 JC + 0.276 WE \quad R^2 = 0.502 \quad F = 32.775 \text{ (sig.)}$$

The residual errors are calculated as:

$$e_1 = \sqrt{1 - 0.123} = 0.936$$

$$e_2 = \sqrt{1 - 0.502} = 0.705$$

The results of the path analysis are visualized in a path diagram presented in Figure 1. In Figure 1, the p-values (regression coefficients) for each variable represent the magnitude of the effect of the independent variables on the dependent variable.

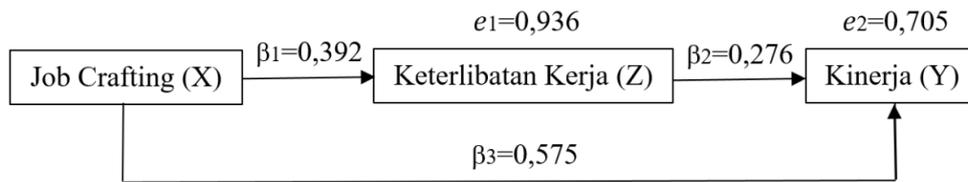


Figure 1. Path Analysis Model

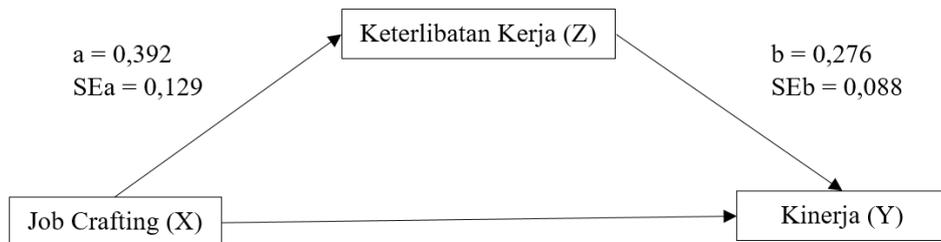


Figure 2. Sobel Test Result

Based on Figure 1, a calculation model was developed to test the fourth hypothesis in this study.

$$\begin{aligned}
 \text{Direct effect of JC on EP} &= 0.575 \\
 \text{Indirect effect of JC on EP} &= 0.392 \times 0.276 \\
 &= 0.108 \\
 \text{Total effect (correlation JC} \rightarrow \text{EP)} &= 0.575 + 0.108 \\
 &= 0.683
 \end{aligned}$$

Where:

JC = Job Crafting

EP = Employee Performance

### Sobel Test

The Sobel test was employed to examine the mediating effect of work engagement on the relationship between job crafting and employee performance. The Sobel test calculation is presented in Figure 2.

The sobel test calculation is as follows:

$$Z = \frac{a \times b}{\sqrt{(b^2 \times sa^2) + (a^2 \times sb^2)}}$$

$$Z = \frac{0,392 \times 0,276}{\sqrt{(0,276^2 \times 0,129^2) + (0,392^2 \times 0,088^2)}} = \frac{0,108192}{0,04957} = 2,183$$

Based on the Sobel test results, the calculated t-value is 2.183, which is greater than the critical t-value at a 5% significance level ( $\alpha = 0.05$ ), namely 1.68. Therefore, it can be concluded that job crafting (X) has an indirect effect on employee performance (Y) through work engagement (Z). This finding indicates that the presence of work engagement as a mediating variable strengthens the effect of job crafting on employee performance.

## **Discussion**

### *The Effect of Job Crafting on Employee Performance among Employees of IT Consulting and Software Development Companies in Yogyakarta*

Based on the analysis results, job crafting has a significant effect on employee performance, with a significance value of 0.000, which is below the threshold of 0.05. In addition, the standardized coefficient beta value of 0.550 indicates a strong positive relationship between the analyzed variables. This suggests that an increase in employees' job crafting activities will be followed by an improvement in their performance. This finding is consistent with the study conducted by Shang (2022), which found that job crafting has a positive effect on performance.

### *The Effect of Job Crafting on Work Engagement among Employees of IT Consulting and Software Development Companies in Yogyakarta*

The results indicate that the significance value of the effect of job crafting on work engagement is 0.003, which is below 0.05, with a standardized coefficient beta of 0.351. This finding demonstrates that job crafting has a direct, positive, and significant effect on work engagement. In other words, higher levels of job crafting are associated with higher levels of employee engagement in their work. This result is consistent with the findings of Baghdadi et al. (2020), who reported that job crafting positively influences work engagement.

### *The Effect of Work Engagement on Employee Performance among Employees of IT Consulting and Software Development Companies in Yogyakarta*

The findings show that employees' active involvement in their work significantly contributes to improved performance, as indicated by a significance value of 0.002, which is lower than 0.05, and a positive standardized coefficient beta of 0.294. This indicates that increased work engagement is associated with higher employee performance. This finding supports the study by Corbeanu and Iliescu (2023), which found that work engagement has a positive effect on performance.

### *The Mediating Role of Work Engagement in the Relationship between Job Crafting and Employee Performance among Employees of IT Consulting and Software Development Companies in Yogyakarta*

Based on the findings of this study, work engagement serves as a mediating variable that significantly influences the relationship between job crafting and employee performance, with a calculated t-value of 2.183, which exceeds the critical value of 1.68 at a 0.05 significance level. Job crafting has a direct effect on employee performance of 0.575 and an indirect effect of 0.108 through work engagement. Thus, the total effect of job crafting on employee performance is 0.683. These results indicate that work engagement functions as a mediator linking job crafting and employee performance. This finding is consistent with Shang (2022), who reported that work engagement mediates the effect of job crafting on performance.

## **Conclusion**

Based on the results of the analysis and discussion regarding the effect of job crafting on employee performance through work engagement among employees of IT

consulting and software development companies in Yogyakarta, the following conclusions can be drawn:

- ☑ Job crafting has a direct and significant effect on employee performance.
- ☑ Job crafting has a direct and significant effect on work engagement.
- ☑ Work engagement has a direct and significant effect on employee performance.
- ☑ Work engagement mediates the effect of job crafting on employee performance.

### **Suggestions**

Based on the conclusions and analysis, it is recommended that PT Global Intermedia Nusantara and JMC IT Consultant enhance job crafting by fostering more open two-way communication between supervisors and employees, enabling employees to feel heard and to express ideas and work-related needs. The companies should also provide clear, regular, and constructive feedback mechanisms to encourage employees to actively adjust and improve their work. To enhance work engagement, organizations may assign challenging tasks aligned with employees' capabilities and grant employees greater autonomy in determining the best ways to complete their tasks. In addition, companies are encouraged to provide both financial and non-financial rewards as recognition of employees' contributions.

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