

# The Effect of Job Crafting and Resilience on the Adaptive Performance of Start-Up Developer Employees in Malang City

**Diyah Sulistyorini**

Department of Psychology, Faculty of Psychology, Universitas Negeri Malang  
Semarang Street No. 5, Malang, East Java, Indonesia 65145  
[diyah.sulistiyorini.fppsi@um.ac.id](mailto:diyah.sulistiyorini.fppsi@um.ac.id)

**Dewi Octaria Safitri**

Department of Psychology, Faculty of Psychology, Universitas Negeri Malang  
Semarang Street No. 5, Malang, East Java, Indonesia 65145  
[dewi.octaria@gmail.com](mailto:dewi.octaria@gmail.com)

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## Abstract

The primary objective of this study is to investigate the impact of job crafting and resilience on adaptive performance within the context of start-up developers. The research methodology employed in this study is quantitative research. The study subjects consisted of a sample of 37 software developers residing in Malang City, ranging in age from 20 to 40 years old and possessing a minimum of one year of professional experience in the field. The hypothesis is tested using multiple linear regression. Based on statistical research findings, it has been determined that a significant relationship exists between job crafting and adaptive performance at a significance level of 0.05. Additionally, a significant relationship has been observed between resilience and adaptive performance at the same significance level. Furthermore, it has been established that there is a significant relationship between job crafting and resilience and adaptive performance, also at a significance level of 0.05. Based on recommendations for developers in start-up environments, employees can foster personal growth independently or by enrolling in courses focused on resilience and job creation. Employees can proactively modify workplace settings to enhance their performance, increasing their performance levels and overall job satisfaction.

## Abstrak

Tujuan utama dari penelitian ini adalah untuk melihat pengaruh *job crafting* dan resiliensi terhadap kinerja adaptif, khususnya pada pengembang *start-up*. Metodologi penelitian yang digunakan dalam penelitian ini adalah penelitian kuantitatif. Subjek penelitian terdiri dari 37 orang pengembang *start-up* yang tinggal di Kota Malang, dengan rentang usia antara 20 hingga 40 tahun dan memiliki pengalaman profesional minimal satu tahun di bidangnya. Hipotesis diuji dengan menggunakan regresi linier berganda. Berdasarkan temuan penelitian secara statistik, telah ditentukan bahwa terdapat hubungan yang signifikan antara *job crafting* dan kinerja adaptif pada tingkat signifikansi 0,05. Selain itu, hubungan yang signifikan telah diamati antara resiliensi dan kinerja adaptif pada tingkat signifikansi yang sama. Lebih lanjut, telah ditetapkan bahwa ada hubungan yang signifikan antara *job crafting* dan resiliensi dengan kinerja adaptif, juga pada tingkat signifikansi 0,05. Berdasarkan rekomendasi untuk para pengembang di lingkungan *start-up*, karyawan dapat mendorong pertumbuhan pribadi secara mandiri atau dengan mengikuti kursus yang berfokus pada resiliensi dan *job creation*. Karyawan dapat secara proaktif memodifikasi pengaturan tempat kerja untuk meningkatkan kinerja mereka, meningkatkan tingkat kinerja, dan kepuasan kerja secara keseluruhan.



## INTRODUCTION

Most individuals allocate much of their time to engaging in work-related activities. In the context of employment, individuals are expected to demonstrate commendable job performance due to the significant impact that employee performance has on the overall success of a firm. The evaluation of employee performance within the workplace is commonly characterized by a singular comprehensive measure accompanied by criteria encompassing achievements in one's professional endeavors (Charbonnier-Voirin & Roussel, 2012). In contemporary times, performance is now widely acknowledged as a multi-dimensional concept encompassing the entirety of an individual's behaviors or actions necessary for attaining organizational objectives. In addition, several environmental changes, including teamwork, project management, and customer-oriented procedures, have impacted the nature of work. The alteration mentioned above has resulted in the emergence of a novel concept known as adaptable performance.

Adaptive performance is defined as the quality of performance that pertains to the ability of people or groups of workers to modify their cognitive processes and actions in response to dynamic work conditions (Heinze & Heinze, 2020; Sweet, Witt, & Shoss, 2015). Indeed, it is evident that both little and significant events possess the capacity to exert an influence on the workplace within the context of reality. One notable instance of a substantial advancement is the emergence of COVID-19, which precipitated an economic catastrophe in Indonesia. In the current circumstances, firms, especially start-ups, are facing a critical position where they must be able to adjust and endure the alterations. Employees must possess problem-solving and adaptability skills to effectively navigate unforeseen circumstances and emergencies in an unpredictable work environment (Charbonnier-Voirin & Roussel, 2012).

A digital business is commonly linked with a start-up organization. Concurrently with the

proliferation of the digital realm, start-ups have rapidly expanded in Indonesia. Businesses' reliance on technology necessitates the development of websites, software, and applications. Consequently, the role of a developer emerges as one of the indispensable professions within a firm. Developers are required to adapt consistently, similar to professionals in various industries. The continuous evolution of platforms and technologies is a prominent characteristic. Numerous platforms, languages, and tools are frequently introduced for additional functionalities, improvements, and heightened efficiency. In order to remain relevant and effective, developers must consistently adjust and respond to the dynamic and ever-changing technology environment, as failure to do so may render their skills and knowledge outdated. Factors outside technological improvements influence consumer preferences. During the COVID-19 pandemic, numerous developers were compelled to adjust their products to meet the market's demands. This transition has the potential to take place throughout a single night. For a new enterprise to ensure its longevity and viability amidst a dynamic global landscape, it is imperative to employ developers who possess robust adaptive performance capabilities.

Previous research has established a significant correlation between job crafting and the manifestation of adaptive performance among employees. The study conducted by Park, Lim, Kim, and Kang (2020) investigated the structural relationship between organizational support, job crafting, work engagement, and employee adaptive performance. The findings of this research indicate a favorable correlation between job crafting and employee adaptive performance (Park et al., 2020). The notion of "job crafting" was established by Wrzesniewski and Dutton (2001) within the literature on work redesign and occupational psychology.

Wrzesniewski and Dutton (2001) propose that job crafting encompasses three behaviors

that enhance the sense of purpose in employees' lives. The following three instances exemplify how employees can augment performance through task-related structural, interpersonal, and cognitive growth. The term "job crafting" pertains to the phenomenon when employees modify their work procedures. This paper explores the potential impact of altering workers' interpersonal interactions and their approach to job tasks on enhancing their creativity in the workplace, as suggested by (Wrzesniewski & Dutton, 2001).

Building upon the work of Wrzesniewski and Dutton, some scholars have directed their attention toward investigating the potential impact of job crafting on the perceived relevance of work. Their findings indicate that a considerable number of employees attribute job crafting to heightened levels of self-esteem and job satisfaction. Wrzesniewski, LoBuglio, Dutton, and Berg (2013) conducted a study. Over the past twenty years, numerous research investigations have established a correlation between job crafting and a diverse array of favorable consequences, including but not limited to work engagement, motivation, health, and job performance (Demerouti, 2014). Numerous empirical investigations have explored the correlation between work crafting and job performance, revealing a significant association between job crafting and adaptive performance. Nevertheless, the existing empirical research on the relationship between work design and performance adaptability is limited (Soyer, 2018).

The impact of employee resiliency on adaptive performance should also be considered. According to Zhu, Zhang, and Shen (2019), employee resilience effectively adjusts and thrives in a demanding and dynamic context. An organization must possess a resilient workforce to navigate a dynamic and ever-evolving business environment effectively. To achieve adaptability, an individual must possess the capability and willingness to change in response to specific circumstances. Resilience is characterized by the

capacity to endure and overcome challenging circumstances, exhibit prompt recovery, and consistently demonstrate adaptability in the face of change.

A research investigation exploring the impact of burnout and mindfulness on the adaptive performance of employees has revealed that mindfulness has the potential to enhance employee resilience. According to Asheghi and Hashemi (2019), empirical evidence suggests that fostering employee resilience can enhance their adaptability and overall job performance across various work environments. Additional research has also identified a correlation between resilience and employee performance. The relationship above is emphasized in a scholarly investigation that explores the impact of resilience capability on CEO performance within the pharmaceutical industry. According to the findings of Kumari and Sangwan (2015), it is evident that an individual's level of resilience can serve as a reliable indicator of their future performance.

The existing literature presents a need for more research on the impact of job crafting and resilience on adaptive performance. To the author's knowledge, no existing empirical research has directly investigated the interrelationships among the three variables mentioned. The researcher was compelled to do a study on "The Impact of Job Crafting and Resilience on the Adaptive Performance of Start-Up Developer Employees in Malang City" after recognizing the significance of adaptive performance, job crafting, and resilience for organizations and individuals.

## **METHODS**

This study employed a quantitative methodology to examine the correlations between variables and test hypotheses. The variables examined in this study include job crafting (X1), resilience (X2), and adaptive performance (Y). This research aims to determine job crafting and resilience's individual and combined effects on adaptive performance. The study's participants

are developers employed by start-ups in Malang City. They fall within the age range of 20 to 40 and possess a minimum work experience of one year. The study utilized a sample size of 37 employees, with purposive sampling as the preferred method.

The data collection methodology employed in this study involved the distribution of research instruments comprising three scales that were converted using the back-to-back translation approach. The three scales included in this study are the job crafting scale derived from the scale developed by Tims, Bakker, and Derks (2012), the resilience scale modified from the scale created by Näswall, Malinen, Kuntz, and Hodliffe (2019), and the adaptive performance scale taken from the scale developed by Charbonnier-Voirin and Roussel (2012).

The research uses item validity as a validity assessment. Item validity can be established by calculating the correlation between individual and total items. Item 12 of the adaptive performance scale was excluded from the analysis due to its significance value exceeding 0.05 and a Pearson correlation coefficient of only 0.185. Items 3, 10, 12, 13, and 14 were excluded from the job crafting scale due to their statistical insignificance ( $p > 0.05$ ) and low Pearson correlation coefficients ( $r < 0.35$ ). No items were deleted from the resilience scale, as all items demonstrated statistical significance with  $p$ -values below 0.05 and Pearson correlation coefficients above 0.35. After completing item validity testing, the results indicate that 16 items demonstrate satisfactory performance on the job crafting scale, nine exhibit satisfactory performance on the resilience scale, and 18 demonstrate satisfactory performance on the adaptive performance scale.

The researcher used Cronbach's alpha formulation to perform a reliability test based on the provided items. The Cronbach's alpha coefficients for the adaptive performance scale ranged from 0.625 to 0.831 for each dimension. For each dimension, the Cronbach's alpha coeffi-

cients reported for the job crafting scale ranged from 0.628 to 0.831. The Cronbach's alpha coefficient reported for the resilience scale was 0.734.

The last phase of data analysis involves the classification of research findings to ascertain the extent of job crafting, resilience, and adaptive performance exhibited by employees. Subsequently, the researchers conducted prerequisite tests for multiple linear regression, including normality, linearity, multicollinearity, and heteroscedasticity assessments. These tests were followed by hypothesis testing for multiple regression analysis, utilizing IBM Statistic 26 as a supportive tool. This research encompasses three hypotheses, specifically:

1. *H1*: There is an influence of job crafting on the adaptive performance of start-up developer employees in the city of Malang.
2. *H2*: There is an influence of resilience on the adaptive performance of start-up developer employees in the city of Malang.
3. *H3*: There is a positive influence of job crafting and resilience on the adaptive performance of start-up developer employees in the city of Malang.

## RESULTS

According to the findings from the value categorization analysis, it has been determined that a group of 17 employees exhibit high levels of job crafting. In comparison, another group of 20 employees demonstrates low levels of job crafting. According to the findings, 46% of the sample exhibits high levels of work crafting, while the remaining 54% have low levels of job crafting. The resilience variable comprises 17 employees exhibiting high resilience and 20 displaying low resilience. According to the findings, 46% of the sample exhibits high levels of resilience, while the remaining 54% have poor levels. About the adaptive performance variable, it is observed that 18 employees are exhibiting adaptive solid performance, while 19 employees display low adaptive performance. According to the findings, around 49% of the sample exhibits high levels of

adaptive performance, while the remaining 51% demonstrates low levels. Following the understanding of the job crafting level, resilience, and adaptive performance of start-up developer personnel in Malang, the subsequent phase involves conducting hypothesis testing.

The hypothesis test examining the impact of job crafting on adaptive performance yielded a significance value of 0.00, which is below the conventional threshold of 0.05. Therefore, job crafting significantly influences the adaptive performance of start-up developer employees in Malang. The hypothesis test results examining the relationship between resilience and adaptive performance yielded a significance value of 0.00, below the predetermined threshold of 0.05. This indicates that resilience statistically influences adaptive performance among employees working in start-up development in Malang. Following establishing the separate influence of work crafting and resilience on adaptive performance, the subsequent hypothesis test is conducted to ascertain the combined impact of job crafting and resilience on adaptive performance. The achieved significance value from the test is 0.00, indicating that it is below the conventional threshold of 0.05. Therefore, the combined effects of job crafting and resilience significantly influence adaptive performance. The computed  $r^2$  value of 0.692 indicates that job crafting and resilience variables collectively accounted for 69.2% of the variance in adaptive performance. In contrast, the remaining 30.8% of the data exhibited influences from elements that were not considered within the scope of this particular study.

Table 1.  
Hypothesis Testing Results

Variables	$\beta$	$r^2$	Sig (p)
Constant	3.437	0.692	0.000
Job Crafting	0.700		
Resilience	1.385		

## DISCUSSION

This study's primary objective is to ascertain job crafting's impact on adaptive performance. The research findings demonstrate a positive link between job crafting and adaptable performance, supporting hypothesis H1. This suggests that job crafting significantly influences the adaptive performance of employees working as start-up developers in Malang City. The hypothesis test findings suggest a positive relationship between an individual's level of job crafting and their adaptive performance. The study conducted by Park et al. (2020) examined the structural relationship between job crafting and adaptive performance, and their findings align with the results of the present study. This study provides evidence that when employees in start-up development roles proactively modify the parameters of their work, they experience improvements in their cognitive abilities and behavioral patterns. This enables them to effectively adapt to the dynamic nature of their work environment and meet the demands of their job.

The findings from the regression analysis conducted on the relationship between resilience and adaptive performance indicate a significant impact of resilience on the adaptive performance of individuals working in start-up development within the context of Malang City. The findings of the hypothesis test indicate that there is a positive relationship between an employee's level of resilience and their adaptive performance. The results of the present study validate the previous research conducted by Asheghi and Hashemi (2019), which established a clear and significant relationship between resilience and adaptive performance, both directly and indirectly. This study provides evidence to support the notion that employees who possess a higher level of adaptability, resilience, and ability to thrive in challenging and ever-changing circumstances are more likely to exhibit cognitive and behavioral adjustments that enable them to effectively meet the demands of their work within a dynamic and evolving environment.

The concurrent impact of job crafting and resilience on adaptive performance suggests that job crafting and resilience play a significant role in influencing the adaptive performance of employees working as start-up developers in Malang City. In this inquiry, the coefficient of determination, denoted as  $r^2$ , was determined to be 0.692% or 0.692. The findings of this study indicate that a significant proportion of the variance in adaptive performance may be accounted for by job crafting and resilience, amounting to 69.2%. However, it is worth noting that other independent variables beyond the scope of this study explain 30.8% of the variance in adaptive performance. The analysis results on the effective contribution reveal that the job crafting variable accounts for 35.7% of the variance in the adaptive performance variable, while the resilience variable accounts for 33.3%. The findings of this study indicate that job crafting exhibits a considerably higher level of predictive power for adaptable performance among start-up developer personnel compared to resilience. Based on the comparison between the standard error of the estimate and the standard deviation, it is evident that the standard deviation of the job crafting value (8,024) exceeds the value of the standard estimation error (6,524). The magnitude of the resilience deviation is smaller than that of the standard deviation. The estimation error is calculated to be within the range of 3,898 to 6,524. This finding illustrates that job crafting exhibits a robust predictive relationship with adaptable performance, while low levels of resilience are employed as a predictor of adaptive performance.

## CONCLUSION

This study provides evidence that when employees in start-up development roles create changes to their work boundaries, they experience concurrent enhancements in their cognitive abilities and behavioral patterns, enabling them to effectively adapt and fulfill job demands within a dynamic and evolving context. Moreover, individuals who possess more excellent profi-

ciency in effectively adjusting to, surmounting, and developing in the face of challenges, conflicts, and dynamic contexts will have a corresponding enhancement in their cognitive abilities and behavioral patterns, enabling them to successfully accommodate and meet the ever-evolving demands of the work environment and its fluctuating circumstances. Furthermore, the implementation of job crafting techniques and the cultivation of resilience have been found to enhance the adaptive performance of employees. In this case, job crafting has a higher predictive accuracy concerning adaptive performance than resilience.

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