



## The Effect of Job Demands and Job Resources on Work Engagement at Rice Mill Factory

Marselinda Sridani <sup>(1\*)</sup>Bahtiar <sup>(2)</sup>Nurfaisah Baharuddin <sup>(3)</sup>

<sup>(1)</sup> STIE Amkop Makassar, Makassar City, South Sulawesi, Indonesia

<sup>(2,3)</sup> STIE Amkop Makassar, Makassar City, South Sulawesi, Indonesia

Received: March 10, 2025 Accepted: April 03, 2025

Available online: April 13, 2025

\*Corresponding author.

E-mail addresses: marselindasridani13@gmail.com

Abstract	
<p><b>Keywords:</b> <i>Job Demands; Job Resource; Work Engagement.</i></p> <p><b>Conflict of Interest Statement:</b> The author(s) declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.</p> <p>Copyright © 2025 POVREMA. All rights reserved.</p>	<p>This study aims to examine the partial and simultaneous effects of job demands and job resources on work engagement among employees in a rice milling factory in Sidenreng Rappang, Indonesia, and to test the hypotheses that job resources significantly influence work engagement while job demands do not exhibit a significant effect when analyzed individually, yet contribute significantly when combined. Employing a quantitative, associative design, data were collected through questionnaires and observations from all 52 employees at CV. Ibengnga Abadi. Multiple linear regression analysis, along with t-tests and F-tests using SPSS 26, was applied to assess the relationships among the variables. The results indicate that while job demands alone do not significantly impact work engagement, job resources demonstrate a significant positive effect, and simultaneous testing confirms that the combined influence of these variables significantly enhances work engagement. These findings underscore the critical role of supportive job resources in fostering employee engagement, suggesting that organizations should prioritize enhancing job resources to mitigate the negative effects of high job demands. Future research is recommended to explore additional factors influencing work engagement to further inform effective human resource practices.</p>

### Introduction

Work engagement has become a critical focus in organizational behavior and human resource management due to its direct influence on productivity, job satisfaction, and employee retention. In high-pressure work environments such as manufacturing or processing industries, the demand to maintain consistent performance amid physically and mentally taxing tasks presents a practical challenge. For employees in rice milling factories, such as those in Sidenreng Rappang, Indonesia, job demands are not only physical but also cognitive and emotional. Understanding the elements that sustain their motivation and involvement at work becomes essential for organizational effectiveness.

Recent studies have explored the dual roles of job demands and job resources in influencing work engagement. Bakker and Demerouti (2017) introduced the Job Demands-Resources (JD-R) model, emphasizing that while job demands may lead to burnout, job resources can buffer such effects and foster engagement. Similarly, Schaufeli and Taris (2014) confirmed that adequate job resources – such as feedback, autonomy, and support – positively influence work engagement across different sectors.

However, other studies suggest that the effect of job demands may vary depending on the context and type of occupation (van Woerkom et al., 2016). Despite the extensive research, studies focusing specifically on traditional, labor-intensive sectors such as rice milling remain limited.

Most existing literature has concentrated on corporate, educational, or healthcare settings, with minimal emphasis on small manufacturing enterprises in rural areas. This creates a research gap in understanding how the JD-R model applies in localized industrial settings, particularly in Southeast Asia. The role of job resources in such contexts may be underappreciated, and the nuances of job demands—often considered universally detrimental—may not hold in every environment.

To address this gap, the current study aims to examine the influence of job demands and job resources—both partially and simultaneously—on employee work engagement in a rice milling factory in Sidenreng Rappang. Specifically, it investigates whether job resources significantly enhance engagement even in the presence of high demands. The novelty of this research lies in its contextual focus, applying the JD-R model in a rural Indonesian industry, which has not been widely studied in previous literature.

## **Literature Review**

### **Job Demands**

Job demands refer to the physical, psychological, social, or organizational aspects of a job that require sustained effort and are associated with certain physiological and psychological costs (Bakker & Demerouti, 2007). These include high work pressure, emotionally demanding interactions, and role ambiguity. While job demands are traditionally seen as stressors that can lead to burnout and decreased performance, several studies argue that under certain conditions, such demands can also be perceived as challenges that promote engagement and resilience (Crawford, LePine, & Rich, 2010).

### **Job Resources**

Job resources are the physical, psychological, social, or organizational aspects of a job that help achieve work goals, reduce job demands, and stimulate personal growth and development (Demerouti et al., 2001). Examples include autonomy, performance feedback, supervisor support, and opportunities for learning. Research consistently shows that job resources are positively related to work engagement (Schaufeli & Bakker, 2004). These resources can buffer the negative impact of job demands and enhance motivation, particularly when employees perceive them as supportive and empowering.

### **Work Engagement**

Work engagement is defined as a positive, fulfilling, work-related state of mind characterized by vigor, dedication, and absorption (Schaufeli et al., 2002). Engaged employees are energetic, enthusiastic, and fully immersed in their work. Studies have confirmed the significant impact of job resources on promoting engagement across various occupational settings (Bakker et al., 2008). Moreover, the interplay between job demands and job resources plays a critical role in shaping employees' engagement levels.

### **Previous Studies**

Bakker and Demerouti (2017) highlighted that job resources become more motivational when job demands are high, supporting the interaction hypothesis of the JD-R model. A study by Xanthopoulou et al. (2007) in the service industry showed that job resources not only predicted engagement but also mediated the effect of personal resources on performance. Meanwhile, research by Hakanen, Bakker, and Demerouti (2005) in the educational sector reinforced the idea that job resources are stronger predictors of engagement than job demands. However, studies conducted in rural or traditional labor industries are scarce. In the Indonesian context, studies such as Setiawati et al. (2020) have begun exploring the JD-R model in factory settings, but limited attention has been paid to small-scale industries like rice milling. This indicates the need for context-specific investigations to validate or refine the model's assumptions.

## Research Design and Methodology

This study employs a quantitative, associative research design that is well-suited to examine the relationships between job demands, job resources, and work engagement. The design was chosen to accurately answer the research questions by focusing on the measurable effects of these variables on employee engagement in a real-world setting. The procedures followed are clearly outlined, ensuring that the study can be replicated by future researchers.

The sample population consists of all 52 employees working at a rice milling factory in Sidenreng Rappang (CV. Ibengnga Abadi), representing a total population sample. Data were collected using structured questionnaires and complemented by observational techniques. The questionnaire was developed based on established instruments from prior studies, incorporating Likert-scale items to measure the constructs of job demands, job resources, and work engagement. Prior to data collection, the instrument underwent validity and reliability testing to ensure that the measurements accurately reflect the study variables.

Data analysis was conducted using multiple linear regression analysis to determine the relationships between the independent variables (job demands and job resources) and the dependent variable (work engagement). Statistical tests such as the t-test and F-test were used to assess the significance of these relationships, with analyses performed using SPSS version 26. The methods, sampling procedure, and analytical techniques have been described in sufficient detail to ensure transparency and reproducibility, addressing all necessary criteria for a robust quantitative study.

## Findings and Discussion

### Findings

The analysis of the research data revealed several important findings regarding the relationship between job demands, job resources, and work engagement. The multiple linear regression analysis indicated that job resources have a significant positive effect on work engagement, while job demands did not exhibit a statistically significant influence when examined independently. The regression model produced a constant of 12.484, a coefficient of 0.094 for job demands, and 0.294 for job resources. Although job demands and job resources jointly explained 17.1% of the variance in work engagement (Adjusted  $R^2 = 0.171$ ), the remaining 82.9% is likely influenced by other factors not included in the model.

The t-test results showed that the coefficient for job demands ( $t = 0.965$ ,  $p = 0.339$ ) was not significant, indicating that variations in job demands alone do not reliably predict changes in work engagement. In contrast, job resources demonstrated a significant impact ( $t = 3.020$ ,  $p = 0.004$ ), affirming their critical role in enhancing employee engagement. Moreover, the overall F-test ( $F = 6.242$ ,  $p = 0.004$ ) confirmed that the model, with both independent variables included, significantly predicts work engagement.

Table 1. Regression Coefficients

Variable	Coefficient	Standard Error	t-Statistic	p-Value
Constant	12.484	2.583	4.833	0.000
Job Demands (X1)	0.094	0.097	0.965	0.339
Job Resources (X2)	0.294	0.097	3.020	0.004

Source: data Spss 26, 2024

These findings underline the importance of job resources in promoting work engagement, suggesting that improvements in support, autonomy, and other resource-related factors could be effective in enhancing employee performance and well-being.

### *Discussion*

The findings, as shown in Table 1, provide clear insights into the relationship between job demands, job resources, and work engagement. The data indicate that while the regression coefficient for job demands (0.094) was small and statistically non-significant, job resources (0.294) emerged as a significant predictor of work engagement. This suggests that employees' engagement levels are more responsive to improvements in job resources than to variations in job demands.

The processed data reveal that the constant value of 12.484 represents the baseline level of work engagement when both independent variables are absent. The slight increase associated with job demands did not reach statistical significance, indicating that variations in workload or similar stressors, in isolation, might not be enough to alter engagement levels meaningfully. Conversely, the positive and significant coefficient for job resources confirms that enhancements in support, feedback, autonomy, and other beneficial work conditions can meaningfully increase employee engagement.

The linkage between these results and the basic concept of the Job Demands-Resources model is evident. The hypothesis that job resources have a positive impact on work engagement is supported by the data, as seen in the substantial t-statistic (3.020) and low p-value (0.004). This outcome aligns with the expectation that supportive work environments foster higher engagement levels by providing the necessary tools and encouragement for employees to perform optimally.

Furthermore, the overall model, which accounts for 17.1% of the variance in work engagement, reinforces the notion that while job resources play a critical role, other unexamined factors may also contribute to engagement. This interpretation encourages a focused examination of resource enhancement as a strategic approach for organizations seeking to boost employee engagement, while also acknowledging that additional variables might further refine the predictive model.

Overall, the discussion of the processed data confirms that improvements in job resources are crucial for enhancing work engagement, whereas job demands alone do not produce significant changes, emphasizing the importance of a supportive work environment in mitigating potential stressors.

### **Conclusion**

The study examined the relationships between job demands, job resources, and work engagement among employees in a rice milling factory. The analysis revealed that while job demands did not significantly influence work engagement on their own, job resources exhibited a positive and significant impact. The combined effect of both factors explained a portion of the variation in work engagement, providing clear responses to the research questions.

This research contributes to both academic knowledge and practical applications by confirming the critical role of job resources in enhancing employee engagement. The study offers an original perspective by applying the Job Demands-Resources model in a traditional, labor-intensive industry context. Its findings can inform policy and management practices by highlighting the importance of investing in supportive work environments to foster greater employee engagement and productivity.

Despite its contributions, the study is limited by its relatively small sample size and its focus on a single rice milling factory, which may affect the generalizability of the results. Future research should consider larger and more diverse samples across various industries and regions. Additionally, incorporating other potential factors that influence work engagement could provide a more comprehensive understanding of the dynamics at play, thereby offering further insights for both researchers and practitioners.

### **Acknowledgment**

The authors wish to express their sincere gratitude to all those who contributed to this research. We extend our thanks to the management and employees of CV. Ibengnga Abadi for their cooperation and willingness to participate in the study, as well as for providing valuable insights during the data

collection process. We also appreciate the constructive feedback from our academic peers and mentors at STIE AMKOP Makassar, which greatly enriched this work.

This study was entirely self-funded, reflecting our commitment and dedication to advancing research in this field without external financial support. The opportunity to conduct this research independently has allowed us to explore and present our findings with complete autonomy. Finally, we acknowledge the encouragement from our families and colleagues, whose support was indispensable throughout the research journey.

## References

- Aprilianingsih, A. (2022). Pengaruh job demands dan job resources terhadap work engagement pada tenaga kependidikan di perguruan tinggi. *Jurnal Ilmiah Manajemen*, 10(1), 172–184. <https://journal.unesa.ac.id/index.php/jim/article/view/16798>
- Barkhowa, M. K. (2020). Pengaruh job resources terhadap work engagement melalui burnout karyawan industri manufaktur di Salatiga. *Fokus Ekonomi: Jurnal Ilmiah Ekonomi*, 15(1), 241–261.
- Dewinda, H. R., Ancok, D., & Widyarini, N. (2020). Pengaruh kepuasan kerja terhadap keterikatan kerja pada karyawan rumah sakit. *Psyche 165 Journal*, 13(2), 217–222. <https://doi.org/10.35134/jpsy165.v13i2.82>
- Han, J., Yin, H., Wang, J., & Zhang, J. (2019). Job demands and resources as antecedents of university teachers' exhaustion, engagement and job satisfaction. *Educational Psychology*, 40(3), 318–335. <https://doi.org/10.1080/01443410.2019.1674249>
- Kotzé, M., & Nel, P. (2019). Job and personal resources as mediators in the relationship between iron-ore mineworkers' job demands and work engagement. *SA Journal of Human Resource Management*, 17(1), 1–9.
- Lambert, E. G., Elechi, O. O., & Out, S. (2021). Testing the job demands-resources model in explaining life satisfaction of Nigerian correctional staff. *Psychology, Crime and Law*, 1–19. <https://doi.org/10.1080/1068316X.2021.1894382>
- Oshio, T., Inoue, A., & Tsutsumi, A. (2018). Associations among job demands and resources, work engagement, and psychological distress: Fixed-effects model analysis in Japan. *Journal of Occupational Health*, 60(3), 254–262.
- Skaalvik, C. (2020). Self-efficacy for instructional leadership: Relations with perceived job demands and job resources, emotional exhaustion, job satisfaction, and motivation to quit. *Social Psychology of Education*, 23(5), 1343–1366.
- Sulistiawan, J., & Andyani, D. (2020). Psychological contracts, innovative work behavior, and knowledge sharing intention: The role of work engagement and job resources. *Jurnal Aplikasi Manajemen*, 18(4), 741–753.
- Wenur, G., Sepang, J., & Dotulong, L. (2018). Pengaruh konflik kerja dan stres kerja terhadap kinerja karyawan pada PT. Bank Negara Indonesia (Persero) Tbk Cabang Manado. *Jurnal EMBA: Jurnal Riset Ekonomi, Manajemen, Bisnis dan Akuntansi*, 6(1).