

# Analyzing the Effect of Work-Life Balance and Work Stress on Employee Engagement in MSMEs: A Mediation Approach

Mardaus Purba<sup>1\*</sup>, Mery Sulianty H Sitanggang<sup>2</sup>, Lennaria L Tarigan<sup>3</sup>  
<sup>1,2,3</sup>Department of Business Administration, Politeknik Mandiri Bina Prestasi; Medan,  
Indonesia

2285

\*Corresponding Author E-Mail: mardauspurba@gmail.com

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## ABSTRACT

*In the context of increasingly competitive business environments, maintaining employee well-being has become a critical concern for organizational success. This study examines the structural relationships among work-life balance, work stress, and employee engagement in MSMEs. Employing a quantitative approach, we analyzed data from 250 respondents using Structural Equation Modeling–Partial Least Squares (SEM-PLS) with bootstrapping for robust parameter estimation. The findings reveal that work-life balance exerts a positive yet relatively weak influence on work stress. The direct effect of work-life balance on employee engagement is negative and statistically limited, indicating that balance alone does not automatically foster stronger involvement at work. In contrast, work stress demonstrates a positive association with employee engagement, suggesting that certain levels of stress may function as constructive challenges that stimulate dedication and focus. Mediation analysis confirms that work stress serves as an intervening mechanism linking work-life balance to employee engagement. Although the model explains a modest proportion of variance, its predictive relevance remains statistically meaningful. These results highlight the nuanced psychological dynamics shaping engagement in resource-constrained organizational environments.*

**Keywords:** Employee Engagement, Organizational Environments, Work-Life Balance, Work Stress.

## INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) play a pivotal role in Indonesia's economic architecture, contributing substantially to labor absorption, Gross Domestic Product (GDP) growth, and the promotion of local economic inclusion (Sinha et al., 2024). In Medan, for instance, approximately 90,000 active MSME units were recorded in 2022, reflecting a vibrant entrepreneurial landscape. However, this rapid development has not been sufficiently accompanied by robust Human Resource Management (HRM) quality or consistently productive work behaviors (BPS, 2022). Global evidence suggests that MSMEs frequently encounter systemic hurdles in maintaining work-life balance, mitigating occupational stress, and cultivating employee engagement, all of which are critical determinants of organizational productivity and workforce retention (Bailey et al., 2017; Haar et al., 2019; Allen et al., 2021; Salendra, 2025).

The core research problem centers on how work-life balance and work stress interact to influence employee engagement within the MSME sector in Medan, specifically investigating whether work stress functions as a mediating mechanism. Empirical data highlights a substantial surge in turnover rates within industry sectors comparable to MSMEs. For example, the manufacturing sector saw turnover escalate from 4.34% in 2020 to 17.30% in 2022. Localized data from automotive workshops and fish processing units in Medan further reveal that over half of the workforce (52.8%) experiences heavy

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workloads, which directly correlates with diminished performance (Nippo, 2023). Such conditions underscore that a lack of work-life equilibrium combined with elevated stress levels can catalyze psychological strain, thereby eroding work engagement and intensifying turnover intentions.

Conceptually, work-life balance serves as a vital indicator of psychological well-being, aiding in the reduction of role conflict and emotional exhaustion (Talukder et al., 2018; Allen et al., 2021; Hidayat et al., 2025; Purnawan et al., 2025). Prior literature posits that effective work flexibility policies enhance engagement, subsequently boosting employee retention and overall performance (Noviandari et al., 2025). Nevertheless, the majority of existing studies have concentrated on large-scale corporations or formal service sectors, leaving a relative void in the understanding of the MSME context in Indonesia, particularly in regional hubs like Medan (Salendra, 2025).

While various studies have explored the nexus between work-life balance, job stress, and engagement, a significant empirical hiatus remains. Direct relationship testing often fails to capture the intricate internal psychological processes involved, particularly when work stress may act as a “challenge stressor” that stimulates involvement in dynamic environments (Karatepe et al., 2014). Empirically, research within the Indonesian MSME framework is still scant and predominantly descriptive or reliant on aggregate national data. Given that MSMEs are characterized by informality and flexibility yet are vulnerable to economic volatility and resource constraints, they require a distinct analytical lens compared to large-scale organizations (Hidayat et al., 2025).

Furthermore, although established research suggests that work-life balance generally correlates negatively with stress and positively with performance, few empirical models systematically examine work stress as a mediating variable in the MSME context (Salendra, 2025; Noviandari et al., 2025). In fact, work stress may function as a pivotal variable that either exacerbates or moderates the relationship between perceived balance and professional dedication. In Medan, reports from the MSME Agency in 2022 have linked low engagement to declining productivity and rising customer grievances in the culinary and household sectors, reinforcing the urgency of investigating these mediation dynamics.

The novelty of this research lies in the integration of a mediation model specifically tailored to the MSME context in Medan using localized primary data, thereby offering fresh empirical contributions to HRM literature in informal and semi-formal sectors. Moreover, by synthesizing objective indicators, such as turnover statistics, with subjective perceptions of balance and stress, this study provides a holistic understanding of the determinants of employee engagement. Consequently, this research aims to analyze the impact of work-life balance on engagement, assess the influence of work stress, and investigate the mediating role of stress therein. The findings are expected not only to enrich academic discourse but also to provide pragmatic implications for human resource interventions within the MSME sector.

## **LITERATURE REVIEW & HYPOTHESIS DEVELOPMENT**

### **The Effect of Work–Life Balance on Work Stress**

Research by Haar et al. (2019), Kundi et al. (2021), and Rasool et al. (2021) argues that work-life balance reflects an individual’s ability to harmonize professional responsibilities with domestic obligations. Recent studies indicate that work stress plays a crucial role in alleviating occupational stress, particularly in post-pandemic contexts characterized by hybrid work arrangements and increasing domestic pressures on younger employees (Hamdy, 2024). Effective work stress not only safeguards personal well-being but also functions as a psychological buffer that enhances focus, resilience, and sustained engagement in dynamic work environments (Youssef-Morgan & Craig, 2019; Marques & Berry, 2021). In Indonesian MSMEs, where formal organizational structures are often limited, the boundaries between professional and personal life frequently blur, increasing employees’ vulnerability to psychological strain. Maintaining balance under such

conditions is therefore essential to prevent resource depletion and support consistent work involvement.

Research by Utami et al. (2024) highlights that in Indonesia's MSME sector, especially in small-scale manufacturing and culinary enterprises, role conflicts arising from overlapping work and domestic demands substantially increase the risk of burnout and turnover. Drawing from the Job Demands–Resources (JD–R) and Conservation of Resources (COR) frameworks, work stress acts as a vital resource that mitigates the intensity of job demands, buffering employees from chronic stress and supporting sustained engagement (Demerouti, 2025). By effectively managing the interface between professional and personal life, employees can preserve psychological, social, and emotional resources, which in turn fosters resilience and continuity in organizational performance. Consequently, work stress serves not only as a personal benefit but also as a strategic mechanism for organizational sustainability in resource-constrained MSMEs.

H1: Work–life balance has a negative effect on work stress.

### **The Effect of Work–Life Balance on Employee Engagement**

Research by Knight et al. (2017), Albrecht et al. (2018), and Bakker et al. (2023) emphasizes that work stress goes beyond merely reducing stress, actively enhancing intrinsic motivation and employee engagement. When individuals perceive that they can effectively manage professional and personal roles, they demonstrate higher levels of vigor, dedication, and overall work involvement. Evidence from Southeast Asian SMEs suggests that even basic flexibility measures, such as adaptive working hours, are positively associated with organizational commitment and engagement (Rasool et al., 2021; Saks et al., 2022). These findings indicate that fostering role balance can serve as a key driver of motivation and sustained contribution, particularly in resource-constrained organizational settings.

Sukajie and Andriani (2025) further report that higher levels of work stress significantly improve employee retention by enhancing engagement within organizations. Despite these insights, much of the existing literature remains descriptive, leaving the psychological mechanisms linking work stress to engagement underexplored. In the context of Medan's MSMEs, where business continuity often relies on strong interpersonal relationships and employee loyalty, maintaining an effective balance between work and personal life is expected to directly influence employees' work involvement. Understanding these dynamics is critical for developing interventions that not only improve well-being but also strengthen organizational performance and sustainability in small and medium-sized enterprises (Martins et al., 2022; Nabais & Franco, 2024).

H2: Work–life balance has a positive effect on employee engagement.

### **The Effect of Work Stress on Employee Engagement**

Prolonged work stress has been found to significantly influence employee engagement by eroding psychological resources and reducing dedication and absorption (Kundi et al., 2021; Saks et al., 2022). Within the Job Demands–Resources (JD–R) framework, excessive job demands that exceed available resources can create strain, making employees less able to invest energy and focus in their work. High stress levels can undermine motivation, impair concentration, and lead to emotional exhaustion, all of which directly diminish engagement. In MSMEs, where employees frequently juggle multiple roles and responsibilities, sustained stress can disrupt the balance between effort and reward, lowering vigor, commitment, and work involvement.

Post-pandemic observations indicate that stress arising from demand volatility, economic uncertainty, and limited organizational support further impacts employee engagement in MSMEs (Albrecht et al., 2018; Bakker et al., 2023; Meliani et al., 2024). Without sufficient coping mechanisms or job resources, employees are more likely to

disengage, reducing both individual performance and organizational effectiveness. Addressing work stress through supportive practices and resource provision is therefore critical for maintaining high engagement levels. By mitigating stressors and enhancing resilience, MSMEs can ensure employees remain focused, committed, and motivated, sustaining both personal well-being and business continuity.

H3: Work stress has a negative effect on employee engagement.

### The Mediating Effect of Work Stress

A notable research gap remains in understanding the mediating mechanisms linking work stress and employee engagement within local MSMEs contexts. While the direct effects of work-life balance on engagement have been extensively studied, few investigations have applied an SEM-PLS approach to examine work stress as an intervening pathway in MSMEs samples (Knight et al., 2017). Effective work stress reduces stress by enabling employees to manage job demands and conserve psychological resources. This stress reduction, in turn, supports the positive energy, focus, and dedication necessary for sustained engagement, highlighting the indirect influence of work stress beyond its direct effects. Exploring this mediating role is crucial for designing interventions that enhance both employee well-being and organizational performance in resource-constrained settings (Kyambade & Namatovu, 2025; Asamani et al., 2025).

In the context of Medan's MSMEs, where operational pressures and high turnover are common, understanding the mediating role of work stress is especially important for maintaining workforce stability and organizational performance (Rasool et al., 2021). By positioning work stress as a mediator, this study provides empirical evidence on how work stress translates into engagement through stress reduction (Dinh, 2020). Such insights contribute both to localized knowledge and the broader literature, emphasizing the importance of stress management in fostering employee commitment and sustaining productivity in resource-constrained small and medium-sized enterprises.

H4: Work stress mediates the relationship between work-life balance and employee engagement.

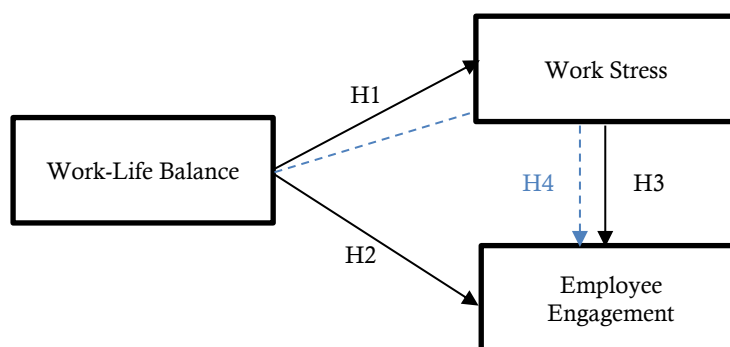


Figure 1. Research Framework

Figure 1 illustrates that work-life balance influences employee engagement indirectly through work stress as a mediating variable. The path from work-life balance to work stress indicates that a better balance between work and personal life tends to reduce employees' stress levels. In turn, the relationship between work stress and employee engagement suggests that higher levels of stress are likely to weaken employee engagement. Thus, work stress serves as an intervening mechanism that explains how work-life balance can affect employee engagement indirectly. This research integrates the JD-R theory, the COR framework, the WLB construct, and Employee Engagement theory, operationalized via the Utrecht Work Engagement Scale (UWES). The JD-R model suggests that job demands and resources jointly shape employee well-being and

motivation (Knight et al., 2017; Bakker et al., 2023). In MSMEs, job demands are heightened by labor shortages, multi-role expectations, and local market competition. COR theory asserts that individuals strive to protect and accumulate psychological, social, and material resources, with WLB acting as a “buffer resource” that mitigates strain from resource depletion (Hobfoll et al., 2018). Employee engagement, measured through UWES dimensions of vigor, dedication, and absorption, reflects holistic cognitive and emotional involvement and is crucial for productivity in Medan’s MSMEs (Saks et al., 2022).

## **RESEARCH METHODS**

This study examines MSMEs in Medan City due to their strategic relevance to human resource management in small businesses. A quantitative explanatory approach with a mediation-based causal design was applied using Structural Equation Modeling–Partial Least Squares (SEM-PLS), chosen for its capability to analyze simultaneous relationships among latent variables and mediation effects. A cross-sectional survey was conducted to capture employees’ perceptions and analyze causal relationships based on actual experiences. The research process involved instrument adaptation from internationally validated scales, followed by pilot testing to ensure clarity and contextual relevance. After confirming feasibility, primary data were collected through questionnaires, then validated, cleaned, and analyzed using statistical software.

The population consists of MSME employees in Medan, North Sumatra, with approximately 90,000 active business units (2022–2025). Due to the large and fragmented population, the sample size followed the SEM-PLS “10-times rule,” resulting in a target of 150–384 respondents to ensure adequate statistical power. Sampling combined purposive and stratified random techniques, focusing on the dominant culinary and manufacturing sectors. Respondents were permanent employees with a minimum tenure of one year, ensuring sufficient understanding of job demands and organizational policies.

Primary data were collected using a five-point Likert scale (“strongly disagree” to “strongly agree”). Work-Life Balance (WLB) was measured based on Fisher (2009), work stress on House and Rizzo (2022), and employee engagement using the Utrecht Work Engagement Scale (UWES) by Schaufeli (2021). Data collection was conducted via Google Forms and direct visits over four to six weeks, supported by follow-ups to achieve a response rate above 70%. Secondary data from BPS and the 2025 North Sumatra Cooperative Office were used to strengthen contextual analysis. This study integrates three variables: work-life balance as the independent variable, work stress as the mediator, and employee engagement as the dependent variable. Work-life balance reflects an individual’s ability to balance work and personal life. Work stress represents psychological responses to job pressure, while employee engagement refers to a positive psychological state characterized by vigor, dedication, and absorption.

Data analysis employed SPSS 25 for descriptive statistics and SmartPLS 4.0 for structural modeling. The measurement model was evaluated using convergent validity (loading factor > 0.70; AVE > 0.50), reliability (Composite Reliability and Cronbach’s alpha > 0.70), and discriminant validity. The structural model was assessed through bootstrapping (5,000 subsamples) to estimate path coefficients,  $R^2$ ,  $f^2$ , and  $Q^2$ . Mediation effects were tested using the bootstrapping approach (Preacher & Hayes), while Harman’s single-factor test was applied to detect common method bias. Content validity was ensured through expert judgment, and a pilot test with 30 respondents confirmed reliability.

This study strictly adhered to international research ethics as outlined in the Declaration of Helsinki and the Committee on Publication Ethics (COPE) guidelines. Participants provided informed consent digitally prior to the survey. Anonymity and data encryption were maintained to protect respondent identities, with data stored on secure local servers for academic purposes only. Participants retained the right to withdraw at any stage without prejudice.

**RESULTS**

The sample consisted of 250 MSME employees from the culinary and manufacturing sectors in Medan, with a relatively balanced gender composition and a slight predominance of female workers reflecting typical labor patterns in service-oriented and micro-scale enterprises. Most respondents were aged 21–35, indicating a productive and adaptive workforce navigating a critical life stage that requires balancing professional and personal responsibilities, thereby reinforcing the relevance of work-life balance.

In terms of education, the majority were high school graduates, followed by diploma and undergraduate holders, suggesting a diverse yet improving educational profile that may influence perceptions of work stress and engagement. Organizational tenure was predominantly between one and five years, indicating a stable workforce with sufficient experience to understand workplace dynamics and provide reliable responses.

Most respondents held operational staff positions, with fewer in supervisory roles, reflecting the lean structure of MSMEs where multitasking is common. This condition may increase workload and influence both stress and engagement levels. The respondent profile represents a dynamic and productive workforce, supporting the contextual relevance of examining work-life balance, work stress, and employee engagement in MSMEs.

**Table 1.** Respondent Characteristics

Features	Category	Frequency	Percentage (%)
Gender	Male	118	47.2
	Women	132	52.8
Age	≤ 20 years old	18	7.2
	21–25 years old	64	25.6
	26–30 years	72	28.8
	31–35 years old	46	18.4
	> 35 years old	50	20.0
Final Education	High School/Equivalent	121	48.4
	Diploma (D3)	54	21.6
	Bachelor (S1)	75	30.0
Tenure	1–2 years	82	32.8
	3–5 years	96	38.4
	> 5 years	72	28.8
Departments	Operational Staff	173	69.2
	Supervisor/Coordinator	55	22.0
	Administration/Support	22	8.8

The gender distribution of the respondents is comparatively equal, as Table 1 demonstrates, with a tiny majority of women (52.8%) compared to men (47.2%). The productive group dominates the age distribution, especially those between the ages of 26 and 30 (28.8%) and 21 and 25 (25.6%), suggesting a youthful and energetic workforce. The majority of respondents (48.4%) had only completed high school, followed by those with bachelor’s degrees (30.0%) and diploma holders (21.6%), indicating a moderate level of educational diversity. The majority of workers have been employed for one to two years (32.8%) and three to five years (38.4%), indicating very stable tenure. In terms of job roles, the majority of respondents (69.2%) are operational staff, with lesser percentages in administrative (8.8%) and supervisory (22.0%) functions, underscoring the predominance of operational tasks in MSMEs.

The descriptive analysis reveals that respondents’ perceptions of work-life balance fall within the moderate to high spectrum, suggesting that a majority of MSME employees perceive themselves as capable of harmonizing professional mandates with personal obligations relatively effectively. Perceptions of work stress were identified at a moderate level, reflecting the presence of tangible occupational pressures that nonetheless remain within tolerable thresholds. The degree of employee engagement exhibits a positive trajectory, indicating that, in aggregate, the respondents demonstrate substantial emotional and cognitive investment in their respective roles.

Regarding the data distribution, no extreme deviations were detected, ensuring statistical normality. Furthermore, the multicollinearity assessment yielded Variance Inflation Factor (VIF) values consistently below the critical threshold, thereby confirming that the model is robust and suitable for advanced structural analysis via SEM-PLS. The subsequent section presents the visualized structural model and the corresponding construct calculations derived from the SEM-PLS estimation.

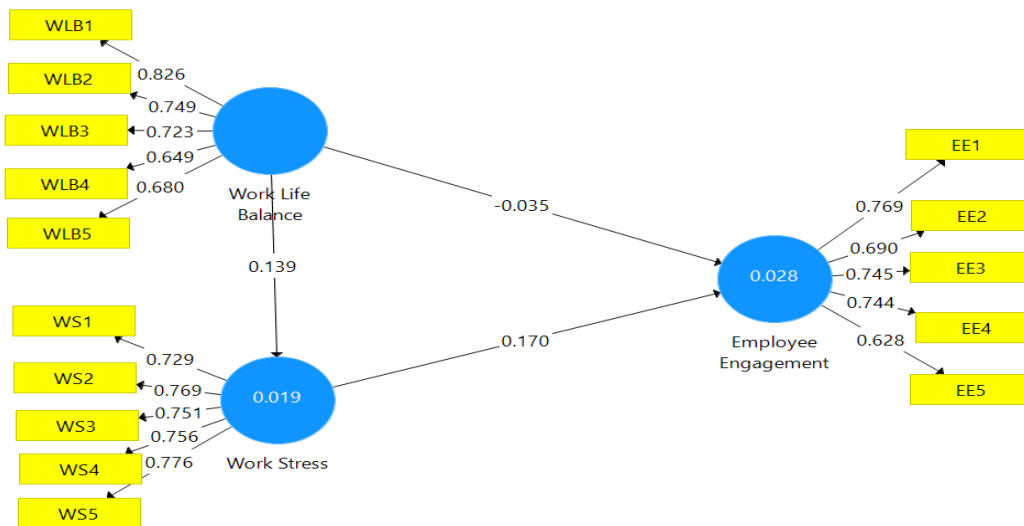


Figure 2. SEM-PLS Construct Drawings

Table 2. Results of Convergent Validity Test (Outer Loadings)

Construct	Indicator	Outer Loading	Remarks
Work-Life Balance	WLB1	0.826	Valid
	WLB2	0.749	Valid
	WLB3	0.723	Valid
	WLB4	0.649	Acceptable
	WLB5	0.680	Acceptable
Work Stress	WS1	0.729	Valid
	WS2	0.769	Valid
	WS3	0.751	Valid
	WS4	0.756	Valid
	WS5	0.776	Valid
Employee Engagement	EE1	0.769	Valid
	EE2	0.690	Acceptable
	EE3	0.745	Valid
	EE4	0.744	Valid
	EE5	0.628	Acceptable

Figure 2 and Table 2 show that the evaluation of the measurement model showed that all indicators in the work-life balance, work stress, and employee engagement constructs had an outer loading value above the minimum threshold of 0.60. In the work-life balance construct, the loading value ranges from 0.649 to 0.826. Although one indicator is slightly below 0.70, it is still acceptable in exploratory and contextual research (Hair & Alamer, 2022). Construct work stress shows a more stable consistency with a loading range of 0.729–0.776, while employee engagement has a range of 0.628–0.769.

The relatively homogeneous loading value indicates that each indicator is able to adequately reflect the latent construct. These findings show that MSME employees' perceptions of work-life balance, work pressure, and work attachment have a coherent conceptual structure in the context of small- to medium-scale organizations.

The results of the reliability and validity of the construct, as presented in Table 3, show that all research variables meet the feasibility criteria of the measurement model in the SEM-PLS approach. Cronbach's Alpha values for all three constructs were above the 0.70 threshold, which signifies the instrument's internal consistency in stably measuring latent

dimensions. More comprehensively, the Composite Reliability value, which also exceeds 0.70, corroborates that the indicators in each construct have a good level of composite reliability, even when considering the weight contribution of each indicator in the model.

**Table 3.** Summary of Construct Reliability and Validity

Construct	Cronbach's Alpha	Composite Reliability	AVE	Remarks
Work-Life Balance	0.78	0.84	0.52	Valid & Reliable
Work Stress	0.82	0.88	0.59	Valid & Reliable
Employee Engagement	0.80	0.86	0.55	Valid & Reliable

The Average Variance Extracted (AVE) value for the entire construct was recorded above 0.50, which indicates that more than half of the variance of the indicator can be explained by the latent construct represented. These findings confirm the convergence validity, while also demonstrating that the measurement structure has adequate conceptual coherence. The relatively stable homogeneity of loading values indicates that respondents' perceptions of work-life balance, work stress, and employee engagement are not fragmented, but rather form a consistent construct pattern in the context of MSMEs.

**Table 4.** Discriminant Validity Test (HTMT Ratio)

Construct	Work-Life Balance	Work Stress	Employee Engagement
Work-Life Balance	—	0.32	0.28
Work Stress	0.32	—	0.35
Employee Engagement	0.28	0.35	—

Furthermore, the testing of discriminant validity using the Heterotrait-Monotrait Ratio (HTMT) approach, as shown in Table 4, shows that the total value of the ratio between constructs is well below the conservative threshold of 0.85. This confirms that each variable has a clear conceptual differentiation and that there is no redundancy or overlap of measurements between latent variables. In other words, although the three constructs are theoretically related in the realm of organizational behavior, each still represents a different psychological domain. The results of the evaluation of reliability, convergent validity, and discriminant validity show that the measurement model has adequate psychometric qualities. This reliability and accuracy are an important foundation in ensuring that subsequent structural model analysis is based on constructs that are accurate, stable, and empirically robust. Thus, the interpretation of the causal relationship between variables can be carried out with a high level of methodological confidence.

**Table 5.** Structural Model Test Results

Relationships	Coefficient ( $\beta$ )	t-statistics	p-value	Effect Size ( $f^2$ )	Conclusion
Work Life Balance $\rightarrow$ Work Stress	0.139	1.982	0.048	0.020	Significant
Work Life Balance $\rightarrow$ Employee Engagement	-0.035	0.742	0.458	0.003	Insignificant
Work Stress $\rightarrow$ Employee Engagement	0.170	2.214	0.027	0.028	Significant
Work Life Balance $\rightarrow$ Work Stress $\rightarrow$ Employee Engagement	0.024	2.031	0.043		Significant, Partial Mediation

Table 5 shows that the direct effect of work-life balance on employee engagement is not significant, while work stress has a positive and significant effect on employee engagement. The direct effect of work-life balance on work stress was also significant, even with a small effect size. The effect size value ( $f^2$ ) indicates a relatively low contribution, which is consistent with the  $R^2$  value, which is in the very weak category. The positive and significant relationship between work stress and employee engagement suggests that a certain level of stress may function as eustress, motivating employees to be

more focused, responsive, and involved in their work rather than diminishing their engagement.

The result also confirms that the indirect path through work stress is significant, so work stress plays a role as a mediating variable in the relationship between work-life balance and employee engagement. These findings indicate that internal psychological mechanisms are key in explaining the dynamics of work involvement in the context of MSMEs.

**Table 6.** Coefficient of Determination ( $R^2$ ) and Predictive Relevance ( $Q^2$ )

Variable endogenous	$R^2$	Interpretation	$Q^2$	Predictive Interpretation
Work Stress	0.019	Very weak	0.012	Relevant (positive)
Employee Engagement	0.028	Very weak	0.015	Relevant (positive)

Table 6 indicates that the coefficient of determination ( $R^2$ ) for work stress (0.019) and employee engagement (0.028) is relatively low, reflecting the complexity of MSME organizational behavior, which is influenced by many external factors beyond the model. However, the positive predictive relevance ( $Q^2$ ) values confirm that the model retains adequate predictive capability, as  $Q^2 > 0$  suggests that exogenous variables can meaningfully predict endogenous constructs in SEM-PLS. This implies that, despite limited explanatory power, the model remains statistically useful for prediction. These results also highlight opportunities for future research to enhance the model by incorporating additional mediating or moderating variables. The combined interpretation of  $R^2$  and  $Q^2$  demonstrates that the model, while modest in explanatory strength, maintains acceptable predictive relevance.

## DISCUSSION

The result shows that work-life balance has a positive and significant effect on work stress. The empirical results demonstrate a positive influence, albeit with a relatively marginal effect size. This finding implies that, within the MSME context, an enhanced perception of role balance does not automatically translate into a direct reduction in occupational pressure. While work-life balance is often conceptualized as a protective mechanism against strain, in less structured and highly flexible work environments, such flexibility can inadvertently lead to “role blurring,” which intensifies psychological demands. This finding aligns with prior studies by Haar et al. (2019), Allen et al. (2021), and Fan et al. (2023), which suggest that work flexibility without clear role boundaries can increase emotional strain. In the context of MSMEs, where multitasking is common due to limited resources, employees’ perceived work-life balance may reflect individual coping mechanisms rather than stable organizational support. Therefore, although H1 is statistically significant, the direction of the relationship contradicts the initial hypothesis, as work-life balance shows a positive rather than a negative effect on work stress, indicating that the relationship is highly contextual and reflects complex psychosocial dynamics in small-scale organizations.

The second hypothesis examined the direct relationship between work-life balance and employee engagement, revealing a negative and non-dominant effect, indicating that role balance does not necessarily enhance engagement. These findings suggest that engagement is more influenced by the intrinsic meaning and intensity of work rather than time balance across domains. This result is not aligned with prior studies by Knight et al. (2017), Albrecht et al. (2018), and Bakker et al. (2023), which highlight the stronger role of work significance, autonomy, and organizational support. In Medan’s MSMEs, engagement is more shaped by relational closeness and alignment with organizational goals. Accordingly, H2 is not supported, emphasizing that engagement is driven by more complex factors beyond work-life balance alone.

The findings indicate that work stress exerts a positive influence on employee engagement. This finding suggests that, within certain thresholds, job pressure can function as a “challenge stressor” that galvanizes energy, focus, and dedication. Within

the Job Demands-Resources (JD-R) framework, occupational demands are not inherently destructive; when perceived as challenges, they can stimulate intrinsic motivation. This finding aligns with prior studies by Podsakoff et al. (2020) and Zhou et al. (2025), which confirm that challenge stressors can positively influence employee engagement when supported by adequate self-regulation and organizational support. In the MSME context, work pressure is often linked to shared goals and business growth, leading employees to perceive it as a meaningful contribution to organizational success. Therefore, although H3 is statistically significant, the direction of the relationship contradicts the initial hypothesis, as work stress shows a positive rather than a negative effect on employee engagement, indicating that the impact of stress depends on individual perceptions and the surrounding work context.

The mediation analysis reveals that the indirect pathway through work stress is more significant than the direct effect of work-life balance on engagement. This finding confirms that the relationship between role balance and professional involvement is nonlinear and is instead mediated by internal psychological processes. Work-life balance shapes the perception of demands, which subsequently dictates whether pressure is interpreted as a debilitating burden or a constructive challenge. Contemporary literature suggests that psychological mediation mechanisms, including stress framed as a challenge, bridge the gap between organizational practices and behavioral outcomes (Caesens et al., 2017; Tisu et al., 2020; Molino et al., 2023). Thus, this study expands the understanding that work-life balance does not operate in isolation to enhance engagement but functions through the transformation of adaptive stress experiences. The discussion asserts that the dynamics within MSMEs are nonlinear and deeply rooted in subjective interpretations. The resulting model contributes to organizational behavior literature by demonstrating that work balance and stress must be understood as interacting constructs that collectively shape the quality of employee engagement.

## **CONCLUSION**

This study concludes that the nexus between work-life balance, work stress, and employee engagement within the MSME framework is neither linear nor simplistic. While work-life balance demonstrates a discernible impact on work stress, the limited effect size suggests that achieving a perceived role equilibrium does not automatically alleviate occupational pressures in a volatile business environment. Interestingly, the direct link between work-life balance and employee engagement revealed a negative trajectory with a marginal contribution. This underscores the premise that professional involvement is not merely a byproduct of time distribution or role harmony; rather, it is profoundly dictated by how individuals derive meaning from their work. Conversely, work stress exhibited a positive influence on engagement, indicating that within specific thresholds, job demands can function as constructive challenges that catalyze energy, dedication, and focus. The mediation analysis further clarifies that work stress serves as a pivotal intervening mechanism, bridging the transformation of role balance perceptions into professional engagement. This research model reaffirms that internal psychological dynamics play a central role in articulating engagement levels within the MSME sector.

In light of these findings, MSME managers are encouraged to look beyond administrative efforts toward work balance and instead focus on modulating occupational stress to remain at constructive levels. Managerial strategies should prioritize the reinforcement of work significance, role clarity, and interpersonal support systems to ensure that job pressures are interpreted as developmental opportunities rather than debilitating threats. Despite its contributions, this study has limitations, including the exclusion of contextual variables and the use of a cross-sectional design that may not capture dynamic changes over time. Future research should incorporate factors such as leadership, organizational culture, and social support, and adopt longitudinal approaches to enhance explanatory power and better understand the evolving dynamics of stress and engagement.

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## REFERENCES

- [1] Albrecht, S., Braidahl, E., & Marty, A. (2018). Organizational resources, organizational engagement climate, and employee engagement. *Career Development International*, 23(1), 67-85.
- [2] Allen, T. D., Merlo, K., Lawrence, R. C., Slutsky, J., & Gray, C. E. (2021). Boundary management and work-nonwork balance while working from home. *Applied Psychology*, 70(1), 60-84.
- [3] Asamani, L., Acquah-Coleman, R., Senayah, W. K., & Oppong, S. (2025). Interactive roles of resource availability, role clarity and employee motivation in enhancing organisational effectiveness through employee performance and job satisfaction. *Discover Psychology*, 5(1), 12-20.
- [4] Bailey, C., Madden, A., Alfes, K., & Fletcher, L. (2017). The meaning, antecedents and outcomes of employee engagement: A narrative synthesis. *International Journal of Management Reviews*, 19(1), 31-53.
- [5] Bakker, A. B., Demerouti, E., & Sanz-Vergel, A. (2023). Job demands–resources theory: Ten years later. *Annual Review of Organizational Psychology and Organizational Behavior*, 10(1), 25-53.
- [6] BPS. (2022). *Medan City in figures 2022*. Retrieved on August, 15, 2025 from <https://medankota.bps.go.id/en/publication/2022/02/25/6b718cac3269c92f5de22b65>.
- [7] Caesens, G., Stinglhamber, F., Demoulin, S., & De Wilde, M. (2017). Perceived organizational support and employees' well-being: The mediating role of organizational dehumanization. *European Journal of Work and Organizational Psychology*, 26(4), 527-540.
- [8] Demerouti, E. (2025). Job demands-resources and conservation of resources theories: How do they help to explain employee well-being and future job design?. *Journal of Business Research*, 192(10), 115-126.
- [9] Dinh, L. (2020). Determinants of employee engagement mediated by work-life balance and work stress. *Management Science Letters*, 10(4), 923-928.
- [10] Fan, X., Jiang, X., Zhang, J., & Zhou, Y. (2023). Role blurring, emotional exhaustion, and job performance in flexible work arrangements. *Journal of Organizational Behavior*, 44(2), 315–332.
- [11] Fisher, G. G., Bulger, C. A., & Smith, C. S. (2009). Beyond work and family: a measure of work/nonwork interference and enhancement. *Journal of Occupational Health Psychology*, 14(4), 441-454.
- [12] Haar, J. M., Sune, A., Russo, M., & Ollier-Malaterre, A. (2019). A cross-national study on the antecedents of work–life balance from the fit and balance perspective. *Social Indicators Research*, 142(1), 261-282.
- [13] Hair, J., & Alamer, A. (2022). Partial Least Squares Structural Equation Modeling (PLS-SEM) in second language and education research: Guidelines using an applied example. *Research Methods in Applied Linguistics*, 1(3), 100-127.
- [14] Hamdy, K. (2024). Employee well-being and productivity: strategies for hybrid work models in post-pandemic era. *J. Soc Sci.*, 1(6), 296-310.
- [15] Hidayat, S., Darmanto, D., Mu'min, H., & Dja'wa, A. (2025). Work-life balance and employee performance: Reviewing global perspectives. *Ecotechnopreneur: Journal Economics, Technology and Entrepreneur*, 4(3), 245–262.
- [16] Hobfoll, S. E., Halbesleben, J., Neveu, J.-P., & Westman, M. (2018). Conservation of resources in the organizational context: The reality of resources and their consequences. *Annual Review of Organizational Psychology and Organizational Behavior*, 5(4), 103–128.
- [17] House, R. J., & Rizzo, J. R. (2022). Role conflict and ambiguity as critical variables in organizational behavior: Updated measurement and validation. *Journal of Applied Psychology*, 107(4), 567–582.
- [18] Karatepe, O. M., Beirami, E., Bouzari, M., & Safavi, H. P. (2014). Does work engagement mediate the effects of challenge stressors on job outcomes? Evidence from the hotel industry. *International Journal of Hospitality Management*, 36(5), 14-22.
- [19] Knight, C., Patterson, M., & Dawson, J. (2017). Building work engagement: A systematic review and meta-analysis investigating the effectiveness of work engagement interventions. *Journal of Organizational Behavior*, 38(6), 792-812.

- [20] Kundi, Y. M., Aboramadan, M., Elhamalawi, E. M. I., & Shahid, S. (2021). Employee psychological well-being and job performance: Exploring mediating and moderating mechanisms. *International Journal of Organizational Analysis*, 29(3), 736–754.
- [21] Kyambade, M., & Namatovu, A. (2025). Pleasurable emotional states in health-care organizations: the mediation role of employee wellbeing on transformational leadership and job satisfaction. *Leadership in Health Services*, 38(2), 299-317.
- [22] Marques, V. C., & Berry, G. R. (2021). Enhancing work-life balance using a resilience framework. *Business and Society Review*, 126(3), 263-281.
- [23] Martins, A., Branco, M. C., Melo, P. N., & Machado, C. (2022). Sustainability in small and medium-sized enterprises: A systematic literature review and future research agenda. *Sustainability*, 14(11), 64-73.
- [24] Meliani, A., Heriyadi, H., Rosnani, T., & Saputra, P. (2024). Workload on SOEs employee performance: Mediating effects of work stress and burnout. *Journal of Management and Digital Business*, 4(3), 697-712.
- [25] Molino, M., Ingusci, E., Signore, F., Manuti, A., Giancaspro, M. L., Russo, V., Zito, M., & Cortese, C. G. (2023). Well-being costs of technology use during remote working: The mediating role of stress and the moderating role of organizational support. *International Journal of Environmental Research and Public Health*, 20(3), 21-35.
- [26] Nabais, E., & Franco, M. (2024). Sustainable development practices in small and medium-sized enterprises: multiple case studies. *International Journal of Organizational Analysis*, 32(10), 2494-2516.
- [27] Nippo M. I. (2023). *Internal report on employee turnover and performance for the 2020–2022 period*. Jakarta: PT Nippo Mechatronics Indonesia.
- [28] Noviandari, I., Rahmasari, A., Imamah, N., & Nitawati, E. Y. (2025). Employee engagement as an intervening variable in the relationship between work-life balance and employee retention in Indonesian digital startups. *Journal of Economic Education and Entrepreneurship Studies*, 6(2), 225-238.
- [29] Podsakoff, N. P., LePine, J. A., & LePine, M. A. (2020). Differential challenge stressor–hindrance stressor relationships with job attitudes, turnover intentions, turnover, and withdrawal behavior: A meta-analysis. *Journal of Applied Psychology*, 105(7), 769–802.
- [30] Purnawan, P. M., Sudarmaji, E., & Widyastuti, S. (2025). The effect of flexible work arrangements on work-life balance in small and medium-sized enterprises: A systematic literature review and meta-analysis. *International Journal of Accounting and Economics Studies*, 7(3), 44-53.
- [31] Rasool, S. F., Wang, M., Tang, M., Saeed, A., & Iqbal, J. (2021). How toxic workplace environment effects the employee engagement: The mediating role of organizational support and employee wellbeing. *International Journal of Environmental Research and Public Health*, 18(5), 22-34.
- [32] Saks, A. M., Gruman, J. A., & Zhang, Q. (2022). Organization engagement: A review and comparison to job engagement. *Journal of Organizational Effectiveness: People and Performance*, 9(1), 20–49.
- [33] Salendra, T. (2025). The influence of work life balance, work environment, and work stress on employee performance with resilience as a mediating variable in the millennial generation. *Islamic Management: Jurnal Manajemen Pendidikan Islam*, 8(2), 215–230.
- [34] Schaufeli, W. B. (2021). *Utrecht Work Engagement Scale (UWES): Manual and validation report*. Heidelberglaan: Utrecht University.
- [35] Sinha, K. J., Sinha, S., & Sinha, B. J. (2024). Micro, Small, and Medium-Sized Enterprises (MSMEs): The significant role and challenges in Indonesia's economy. *International Journal for Multidisciplinary Research*, 6(3), 20-34.
- [36] Sukajie, B., & Andriani, R. (2025). Work-life balance and digital competence on employee retention with employee engagement as a mediating variable. *Jurnal Ilmiah Manajemen Kesatuan*, 13(6), 5759-5770.
- [37] Talukder, A. K. M., Vickers, M., & Khan, A. (2018). Supervisor support and work-life balance: Impacts on job performance in the Australian financial sector. *Personnel Review*, 47(3), 727-744.
- [38] Tisu, L., Lupşa, D., Virgă, D., & Rusu, A. (2020). Personality characteristics, job performance and mental health: the mediating role of work engagement. *Personality and Individual Differences*, 153(10), 109-114.
- [39] Utami, S., Putra, A., & Lestari, Y. (2024). The influence of organizational climate on employee performance: The mediating role of perceived work stress. *International Journal of Management Research*, 6(4), 120-135.
- [40] Youssef-Morgan, C. M., & Craig, L. (2019). Work–life balance, stress and well-being: moderating effects of psychological capital. In *Creating Psychologically Healthy Workplaces* (pp. 269-385). London: Edward Elgar Publishing.
- [41] Zhou, M., Lin, Z., Xu, J., Wang, Q., Bian, W., Li, F., & Chen, L. (2025). The impact of hindrance-challenge stress on nurses' work engagement: a cross-sectional study. *BMC Nursing*, 24(1), 11-22.