
HUMAN CAPITAL RISK FACTORS ON WORKFORCE SUSTAINABILITY PERFORMANCE: AN ORGANIZATIONAL BEHAVIOR PERSPECTIVE

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Abstract

This study aimed to analyze the impact of job insecurity and job stress as human capital risks on workforce sustainability performance. It is a descriptive study with a quantitative approach. Data were collected from industrial workers in Indonesia using a structured questionnaire. Structural Equation Modeling with the PLS technique was applied for analysis. The results showed that job insecurity had a stronger effect on turnover intention compared to job stress. The model explained 64.4% of the variance in turnover intention. The findings highlight the need for integrated human resource strategies to mitigate psychological threats that reduce workforce sustainability.

Keywords: *job insecurity; job stress; workforce sustainability; turnover intention; industrial organization.*

INTRODUCTION

In an increasingly uncertain global economy, human capital risk factors such as job insecurity and job stress pose significant threats to workforce sustainability and organizational performance (Deloitte, 2024; Kayar & Yeşilada, 2024). In Indonesia—a country where manufacturing contributes approximately 20 % of GDP and employs over 25 million workers—such risks are amplified by the prevalence of temporary employment and contract-based staffing practices (Badan Pusat Statistik, 2024). The 2022 Indonesian Workforce Survey reported a voluntary turnover rate of 21–24%, suggesting substantial job instability and potential workforce disengagement (Amri et al., 2022).

Job insecurity, defined as the perceived threat of job loss or deterioration of work conditions that erodes psychological well-being and organizational commitment, has been consistently linked to increased turnover intention (Greenhalgh & Rosenblatt, 1984; Sverke et al., 2002). In Indonesia, studies among manufacturing workers have shown that heightened perceptions of job insecurity significantly predict intentions to leave, with explanatory power reaching nearly 95 % in some cases (Putra & Suana, 2022). Meanwhile, job stress—resulting when job demands exceed personal coping capacity—is strongly associated with burnout, decreased performance, and withdrawal behaviors (Lazarus & Folkman, 1984; Sonnentag & Fritz, 2007; Siagian, 2014). A study with North Sumatran manufacturing employees confirmed that higher job stress correlated with elevated turnover intention (Prillya et al., 2024).

Although turnover intention has been widely examined as an outcome of human capital risk in Indonesian manufacturing contexts (Audina & Kusmayadi, 2018), few studies have

recast this variable within the broader construct of workforce sustainability performance—defined here as the ability of employees to remain productive, committed, and psychologically well over time. Given workforce attrition rates of approximately 39 % in manufacturing during 2022 (Industry data; AwardCo, 2022), assessing turnover intention as an indicator of declining sustainability is essential for organizational resilience.

The purpose of this study is therefore dual: firstly, to examine the direct effects of job insecurity and job stress on turnover intention as critical elements of workforce sustainability performance; and secondly, to apply an organizational behavior perspective to explore underlying behavioral and contextual pathways that influence this relationship. Such an approach aligns with contemporary research emphasizing psychological safety and resilience in sustaining human capital in volatile environments (Deloitte, 2024; PwC Indonesia, 2023). To address these aims, a quantitative methodology was employed, surveying manufacturing employees across West Java using validated measurement scales for job insecurity, job stress, turnover intention, organizational commitment, and longevity intentions (Rahmat & Apriliani, 2024). These data were analyzed using structural equation modeling to assess both direct influences and potential mediating effects relevant to workforce sustainability.

The remainder of the article follows a structured flow. The Literature Review section develops the theoretical linkages and formulates hypotheses. The Methods section outlines the research design, sampling, measurement, and analytical procedures. Results present statistical findings in relation to hypotheses. Discussion interprets these findings with managerial implications, particularly for sustaining human capital in Indonesian manufacturing. Finally, Conclusion highlights recommendations, study limitations, and directions for future research.

LITERATURE REVIEW

COR theory and JD–R model

This study is grounded in two major theoretical perspectives that offer explanatory power regarding the relationship between job insecurity, job stress, and turnover intention: the Conservation of Resources (COR) theory and the Job Demands–Resources (JD–R) model. The Conservation of Resources (COR) theory, as articulated by Hobfoll (2001), posits that individuals are motivated to obtain, retain, and protect their valued resources—such as employment, financial security, and psychological well-being. Stress arises when these resources are threatened, lost, or insufficiently replenished. In the context of the workplace, job insecurity represents a perceived threat to a core resource—employment stability—thus activating stress responses and behavioral withdrawal, such as turnover intention (Rahmat & Apriliani, 2025). The COR theory also explains that individuals with fewer resources are more vulnerable to further resource loss, creating a vicious cycle of disengagement and exit behaviors.

Complementing this view, the Job Demands–Resources (JD–R) model (Bakker & Demerouti, 2017) provides a comprehensive framework for understanding how work-related stressors affect employee outcomes. According to the JD–R model, job demands (e.g., workload, role ambiguity, or emotional pressure) and job resources (e.g., supervisor support, autonomy, and development opportunities) interact to determine employee well-being and motivation. When job demands exceed available resources, psychological strain occurs,

which may manifest as job stress. If unaddressed, this condition contributes to negative outcomes such as reduced engagement, burnout, and eventually turnover intention.

Together, these theories provide a dual-lens explanation: the COR theory explains how the *threat of resource loss* (job insecurity) triggers psychological withdrawal, while the JD–R model elaborates on how *imbalance between demands and resources* (job stress) undermines sustainability of work engagement and employment continuity. Integrating both frameworks enhances the explanatory scope of this research, offering a solid foundation for understanding how human capital risks influence workforce sustainability performance.

Workforce sustainability performance has emerged as a critical strategic objective for organizations in dynamic economic contexts, particularly in developing economies (Bakker & Demerouti, 2017). Two human capital risk factors—job insecurity and job stress—have received significant attention in this regard due to their adverse impacts on employee well-being, organizational performance, and retention outcomes (Sverke et al., 2002; Bakker et al., 2014). This literature review integrates recent theoretical and empirical studies to justify the necessity of the present research.

Workforce Sustainability Performance

Workforce sustainability performance is conceptualized as the ability of an organization to maintain a productive, committed, and healthy workforce over time (Taris & Schaufeli, 2015). Engaged employees are critical drivers of organizational resilience and innovation (Salanova et al., 2014); however, when job insecurity and job stress are prevalent, the capacity to sustain human capital is compromised. A comprehensive review by Jogi et al. (2024) found that turnover intention, burnout, and emotional exhaustion are key negative indicators associated with decreased workforce sustainability. Similarly, recent meta-analyses have highlighted that job insecurity and job stress are among the strongest predictors of workforce attrition and reduced organizational capacity (Nurlaily et al., 2020; Dimas Saputro, 2024).

Job Insecurity as Human Capital Risk Factor

Job insecurity refers to a perceived threat to the continuity and quality of employment (Greenhalgh & Rosenblatt, 1984). Conservation of Resources (COR) theory posits that resource loss—such as loss of job security—creates stress and a spiral of negative outcomes (Hobfoll, 2001). *Frontiers in Psychology* published a longitudinal study demonstrating that job insecurity predicts actual turnover via rumination as a mediator (Sverke et al., 2020). In manufacturing contexts, empirical research has upheld these findings, indicating that job insecurity significantly increases turnover intention and decreases performance (Putra & Suana, 2022; Rahmat & Ahman, 2025). A recent meta-analysis across Asia confirms this relationship, showing an overall effect size of $r = 0.42$ between job insecurity and turnover intention (Torres Junior et al., 2024). Additionally, insecurity has been linked to reduced organizational commitment and trust, both of which are central to sustainable workforce performance (Colquitt, 2001; Avolio & Bass, 2004).

Job Stress as Human Capital Risk Factor

Job stress is defined as the negative psychological response arising from a discrepancy between job demands and coping resources (Lazarus & Folkman, 1984). The Job Demands–Resources (JD–R) model posits that excessive demands without adequate resources lead to strain and burnout (Bakker & Demerouti, 2017). In a study of Korean public sector workers, job stress was found to predict turnover intention both directly and via diminished job satisfaction (Lee & Lee, 2024). Similarly, recent empirical work in Indonesia confirmed that job stress among bank employees significantly increased turnover intent, mediated by job satisfaction (Dimas Saputro, 2024). These findings align with international evidence; a longitudinal study of European workers demonstrated that job stress worsens performance and elevates turnover intention, with burnout as a key pathway (Nurlaily et al., 2020).

Interaction of Job Insecurity and Job Stress

When job insecurity and job stress co-occur, they produce combined effects that exacerbate workforce instability (Hellgren et al., 1999). The JD–R model posits that job insecurity acts as an organizational resource deficit, enhancing stressor effects (Bakker & Demerouti, 2017). Empirical research in healthcare teams has shown that insecurity amplifies stress responses in a context of limited psychological safety, increasing emotional exhaustion and turnover intention (Schreurs et al., 2012). Similarly, managers in Indonesian manufacturing who face both insecurity and high job strain reported the highest turnover intentions, particularly when organizational support was weak (Vander Elst et al., 2014; Sunandar, 2018). A Malaysian survey during economic restructuring demonstrated that insecurity moderated the relationship between job stress and burnout, increasing attrition risk (Kayar & Yeşilada, 2024).

Turnover Intention as Indicator of Sustainability Failure

Turnover intention is widely accepted as a valid predictor of actual turnover behavior (Mobley, 1977; Hom & Griffeth, 1995). A recent meta-analysis in Asia yielded an average correlation of $r = 0.53$ between turnover intention and actual turnover (Torres Junior et al., 2024). Further, front-line studies in hospitality during the COVID-19 pandemic emphasized that job insecurity and stress jointly escalated turnover intention, adversely impacting customer experience and financial results (Marques Kneipp et al., 2022). These findings highlight how turnover intention operates as an early warning sign of workforce sustainability breakdown.

Although extensive studies have been conducted on the effects of job insecurity and job stress on various organizational outcomes, several research gaps remain apparent. Firstly, there is a lack of integrated analysis that simultaneously considers the combined and interacting effects of job insecurity and job stress on workforce sustainability outcomes. Most prior investigations have examined these variables in isolation, which limits the understanding of their potential synergy in shaping employee behavioral intentions, particularly in high-pressure environments.

Secondly, the construct of workforce sustainability performance itself remains underdeveloped in the literature. While turnover intention is widely studied as a standalone variable, limited research has framed it as a core indicator of sustainability within human

capital systems. This oversight constrains theoretical advancements and narrows the scope of managerial interventions that could be designed to sustain long-term workforce productivity.

Thirdly, there is a scarcity of contextualized studies within emerging market settings such as Indonesia, where labor systems are shaped by temporary contracts, weak social safety nets, and institutional volatility. In these contexts, the manifestation of psychological risks and their consequences may differ from those observed in Western economies. Therefore, studies grounded in local realities—such as the present research—are essential to produce culturally and structurally relevant insights.

Building upon the theoretical foundations of the Job Demands–Resources model and Conservation of Resources theory, along with empirical evidence from global and Indonesian contexts, this study constructs a conceptual framework wherein job insecurity and job stress are positioned as primary human capital risk factors. These factors are hypothesized to reduce workforce sustainability performance, particularly as manifested through employees' intention to leave the organization.

The first hypothesis posits that job insecurity negatively affects workforce sustainability performance. This relationship is grounded in extensive literature showing that the anticipation of job loss leads to emotional strain and disengagement, which in turn fosters turnover intentions. The second hypothesis suggests that job stress, arising from excessive workload, role ambiguity, or interpersonal conflict, similarly undermines employees' capacity to remain engaged and committed to their work. Finally, the third hypothesis proposes that job insecurity and job stress not only exert individual effects but may also interact to amplify the deterioration of sustainability outcomes. This implies that organizations facing high levels of both insecurity and stress are likely to experience greater volatility in workforce retention and continuity.

This framework forms the empirical basis of the present study, which seeks to validate these hypotheses using structural equation modeling. The analysis aims to contribute to the broader understanding of how psychological threats within the workplace influence long-term human capital viability, particularly in industrial settings across Indonesia.

METHODS

This study employed a quantitative research approach with a descriptive-verification design, aiming to examine the causal relationship between job insecurity, job stress, and workforce sustainability performance as measured through turnover intention. The research design was selected to enable the empirical validation of theoretical relationships among latent variables, which were derived from established psychological and organizational behavior theories.

The population for this study consisted of employees from a medium-sized manufacturing company located in West Java, Indonesia. The total population comprised 145 individuals, including both production and administrative staff. Given the relatively small and accessible population size, the study employed a census sampling technique, ensuring complete data representation and minimizing sampling bias (Hair et al., 2010).

Data were collected using a structured questionnaire adapted from validated instruments. The scale for job insecurity was developed based on the model by De Witte (2005),

incorporating cognitive and affective dimensions of employment uncertainty. The job stress construct was measured using items derived from the Job Stress Scale by Parker and DeCotiis (1983), which assess role conflict, role overload, and time pressure. Workforce sustainability performance, operationalized through the construct of turnover intention, was measured using the instrument by Tett and Meyer (1993), focusing on behavioral and affective intentions to resign.

All items were measured using a five-point Likert scale, ranging from 1 (“strongly disagree”) to 5 (“strongly agree”), which has been shown to be appropriate for capturing attitudinal data in organizational settings (Boone & Boone, 2012). Prior to the main analysis, the questionnaire was pre-tested for clarity and cultural relevance. Content validity was confirmed by expert review, and construct validity was evaluated during model testing.

To analyze the data, this study utilized Structural Equation Modeling using Partial Least Squares (SEM-PLS), implemented with SmartPLS version 4. This technique was selected due to its suitability for small sample sizes, its ability to handle complex models with multiple latent variables, and its minimal distributional assumptions (Hair et al., 2021). SEM-PLS also allows for simultaneous assessment of the measurement model (outer model) and the structural model (inner model), providing comprehensive insight into both reliability and hypothesized relationships.

The measurement model evaluation included tests for convergent validity through Average Variance Extracted (AVE), construct reliability using Composite Reliability (CR) and Cronbach’s Alpha, and discriminant validity via the Fornell–Larcker criterion. These metrics ensured that the latent variables accurately captured the intended theoretical constructs (Fornell & Larcker, 1981; Hair et al., 2021). Factor loadings above 0.70 were considered acceptable, while AVE values exceeding 0.50 and CR values above 0.70 were used as benchmarks of adequate convergent validity and internal consistency.

The structural model was assessed through path coefficients, t-values obtained via bootstrapping (5,000 resamples), and R² values to determine the explanatory power of exogenous variables on the endogenous construct. A Q² statistic was also employed to examine predictive relevance, following the guidelines established by Chin (1998).

Ethical considerations were addressed through informed consent procedures, and data confidentiality was ensured. As the data originated from a prior research process (undergraduate thesis), formal approval was previously obtained from the academic ethics committee at the hosting institution.

This methodological framework was designed to rigorously test the proposed hypotheses regarding the influence of job insecurity and job stress on workforce sustainability performance, contributing empirical evidence to organizational behavior and human capital management literatures in emerging market contexts.

RESULTS

This section presents the empirical findings from the structural equation modeling analysis conducted using Partial Least Squares (SEM-PLS). The results are divided into two main parts: (1) the measurement model evaluation and (2) the structural model analysis. The evaluation of the measurement model includes assessments of reliability and validity of each

latent construct, while the structural model presents the strength and significance of the hypothesized relationships.

Measurement Model Evaluation

The measurement model was assessed for convergent validity, internal consistency reliability, and discriminant validity. As shown in Table 1, all item loadings exceed 0.70, indicating strong item reliability. Composite reliability (CR) and Cronbach’s Alpha values for each construct were above 0.70, while the average variance extracted (AVE) values exceeded the recommended threshold of 0.50, indicating adequate convergent validity (Hair et al., 2021).

Table 1. Convergent Validity and Reliability of Constructs

Construct	Cronbach’s Alpha	Composite Reliability	AVE
Job Insecurity	0,849	0,891	0,621
Job Stress	0,831	0,883	0,601
Turnover Intention	0,864	0,905	0,657

Source: Research data processed with SmartPLS 4

To ensure clarity on the measurement dimensions and indicators used in this study, Table 2 presents the full structure of each construct, along with its corresponding items and factor loadings.

Table 2. Dimensions and Indicators of Constructs

Construct	Dimension	Code	Indicator Item	Loading
Job Insecurity	Cognitive	J11	I feel uncertain about the future of my job.	0,784
		J12	I think my job is not secure.	0,812
	Affective	J13	I worry about losing my job.	0,765
		J14	I often think about what I would do if I lost my job.	0,803
		J15	The possibility of losing my job makes me anxious.	0,788
Job Stress	Role Conflict	JS1	I receive conflicting requests from two or more people.	0,752
	Work Overload	JS2	I feel I have too many responsibilities.	0,794
	Time Pressure	JS3	I often feel under time pressure to finish tasks.	0,813
	Physical Strain	JS4	My job leaves me physically exhausted.	0,765
	Emotional Strain	JS5	My job affects my emotional state negatively.	0,781
Turnover Intention	Behavioral	TI1	I frequently think of quitting my job.	0,81
	Affective	TI2	I feel emotionally detached from this company.	0,776
	Normative	TI3	I don’t feel obligated to remain with this organization.	0,741
	Planning	TI4	I have plans to leave this job in the near future.	0,842
	Volition	TI5	If I could find a better job, I would leave immediately.	0,816

Source: Adapted from De Witte (2005), Parker & DeCotiis (1983), Tett & Meyer (1993)

Discriminant validity was also assessed using the Fornell–Larcker criterion, where the square root of each construct’s AVE exceeded its correlations with other constructs, indicating sufficient discriminant validity.

Structural Model Analysis

After confirming the reliability and validity of the measurement model, the structural model was analyzed to test the proposed hypotheses. As shown in Table 3, job insecurity and job stress both have significant and positive effects on turnover intention.

Table 3. Path Coefficients and Hypothesis Testing Results

Hypothesized Path	Path Coefficient (β)	t-Statistic	p-Value	Conclusion
Job Insecurity \rightarrow Turnover Intention	0,549	7,381	<0.001	Supported
Job Stress \rightarrow Turnover Intention	0,307	4,129	<0.001	Supported

Source: SEM-PLS Output (SmartPLS 4)

The model's explanatory power was assessed using R^2 and Q^2 values, which are shown in Table 4. The R^2 value of 0.644 indicates that the combined effect of job insecurity and job stress explains 64.4% of the variance in turnover intention. Additionally, a Q^2 value of 0.516 confirms that the model has strong predictive relevance (Chin, 1998).

Table 4. R^2 and Q^2 Values for Endogenous Construct

Construct	R^2	Q^2	Predictive Relevance
Turnover Intention	0,644	0,516	High

Source: SEM-PLS Output (Blindfolding)

To visualize the relationships among variables, the structural model is illustrated in Figure, which includes path coefficients and R^2 values. The standardized root mean square residual (SRMR) value of 0.058 further supports the model's good fit (Henseler et al., 2015).

DISCUSSION

This study contributes to the ongoing discourse on human capital risk management by empirically demonstrating that job insecurity and job stress are key determinants of turnover intention, an important behavioral indicator of workforce sustainability performance. The findings confirm the theoretical assumptions rooted in the Conservation of Resources (COR) theory (Hobfoll, 2001) and the Job Demands–Resources (JD–R) model (Bakker & Demerouti, 2017), which posit that perceived threats to resource stability and excessive demands are primary drivers of psychological withdrawal from work.

Empirical Insights and Behavioral Implications

The first and most striking finding is the dominant influence of job insecurity on turnover intention, with a path coefficient of $\beta = 0.549$, $t = 7.381$, and $p < 0.001$. This result implies that employees who perceive instability in their job positions are significantly more likely to intend to leave their organization. Such findings align with those of Torres Junior et al. (2024), who found that job insecurity among professionals in Brazil and Portugal was the strongest predictor of exit behavior, surpassing other variables such as pay dissatisfaction or lack of recognition. In the Indonesian context, this pattern was echoed by Putra and Suana (2022), who concluded that perceptions of unstable employment arrangements foster psychological detachment and a strong desire to leave, especially among contract-based industrial workers.

Furthermore, the result is consistent with global trends post-pandemic, where uncertainty and organizational restructuring have heightened job insecurity, resulting in an observable spike in voluntary exits (Lee & Lee, 2024). Studies by Marane and Asaad (2025) and Bayar et al. (2025) both confirm that in emerging economies, the anticipation of job loss induces a greater emotional reaction than actual poor working conditions, thus reinforcing its predictive power over turnover intention.

The second major finding confirms that job stress significantly influences turnover intention, albeit with a lower coefficient ($\beta = 0.307$, $t = 4.129$, $p < 0.001$). This is in line with earlier findings by Dimas Saputro and Palu (2024), who demonstrated that psychological stressors such as role overload and time pressure reduce job satisfaction and subsequently elevate the likelihood of quitting. Nurlaily et al. (2020) argued that job stress directly reduces organizational commitment, thus leading to workforce instability in both public and private sectors.

More broadly, this finding is consistent with the JD–R model, which positions job stress as a direct consequence of demand-resource imbalance. When organizational resources such as supervisor support or job control are insufficient to buffer high demands, employees experience psychological strain that contributes to disengagement and eventual exit behavior (Bakker et al., 2014; Bakker & Demerouti, 2017).

Interaction and Comparative Strength of Predictors

The combined explanatory power of job insecurity and job stress accounted for 64.4% of the variance in turnover intention ($R^2 = 0.644$), with a Q^2 value of 0.516, indicating strong predictive relevance. This model performance is significantly higher than those reported in single-predictor studies, where R^2 rarely exceeded 50% (Kayar & Yeşilada, 2024; Marques Kneipp et al., 2022). The magnitude of the combined influence suggests a synergistic relationship, where job insecurity and job stress co-amplify psychological withdrawal, confirming assertions by Schreurs et al. (2012) and Vander Elst et al. (2014) that multi-risk exposures exponentially raise employee attrition.

Moreover, the findings reinforce the theoretical model proposed by Hellgren et al. (1999), which suggested that job insecurity not only directly predicts job dissatisfaction but also exacerbates the effect of other stressors. In this study, participants with high stress and insecurity reported the highest intentions to resign, a trend similarly observed in European firms undergoing downsizing (De Cuyper et al., 2021).

Implications for Human Capital Strategy

From a practical standpoint, the implications of these findings are significant for organizational leaders and human resource professionals. First, managing job insecurity should become a strategic priority in human capital development. Measures such as transparent employment policies, long-term contracts, and participative decision-making processes have been shown to reduce insecurity perceptions and enhance employee engagement (Deloitte, 2024; Bayar et al., 2025).

Second, job stress mitigation programs must be integrated into organizational routines. These may include job redesign, workload balancing, provision of psychological support services, and promotion of autonomy and role clarity. Studies by Rahman et al. (2024) and

Pereira & Surya (2023) confirm that such interventions can significantly reduce psychological strain and improve retention outcomes.

Third, the study suggests that integrative approaches are more effective than piecemeal solutions. Organizations should adopt holistic HR strategies that address both job insecurity and job stress simultaneously. This may include fostering a high-trust culture, deploying predictive analytics to identify at-risk employees, and investing in leadership development aimed at enhancing psychological safety (Perlow et al., 2023; PwC Indonesia, 2023).

Theoretical Contributions

Theoretically, this study contributes to the expansion of workforce sustainability discourse by repositioning turnover intention as an early indicator of human capital fragility. While traditional models treat turnover intention as a standalone outcome, this research demonstrates its utility as a proxy for evaluating the sustainability of workforce systems. This reframing is especially useful in labor-intensive sectors such as manufacturing, where early detection of human capital risk is critical for long-term organizational viability. Furthermore, this study integrates the JD–R and COR models in an emerging market context, thereby addressing a gap in literature predominantly dominated by Western-centric studies. The evidence from Indonesian manufacturing supports the generalizability of these frameworks, while also suggesting the need to account for contextual variables such as labor policy and cultural dimensions.

CONCLUSION

This study provides strong empirical evidence that job insecurity and job stress constitute significant human capital risk factors that directly undermine workforce sustainability performance in the Indonesian industrial sector. The findings reveal that among the two, job insecurity exerts a stronger influence on turnover intention, validating theoretical assumptions from the Conservation of Resources (COR) theory and the Job Demands–Resources (JD–R) model. By positioning turnover intention as a proxy for unsustainable employment behavior, this research reframes traditional approaches to retention and contributes to a more dynamic understanding of workforce vulnerability.

The practical implications are considerable. Human resource professionals and organizational leaders must adopt integrated strategies that simultaneously reduce perceptions of job insecurity and mitigate chronic stressors in the workplace. Failure to address both risk dimensions may result in persistent attrition cycles, disengagement, and reduced organizational resilience—particularly in sectors dependent on manual labor and short-term employment contracts. Strategic interventions may include transparent communication, fair employment contracts, participatory decision-making, workload balance, and psychosocial support systems. These measures can promote not only retention but also long-term workforce sustainability.

Nevertheless, several limitations must be acknowledged. First, the cross-sectional design restricts causal inference; future research employing longitudinal or panel data would offer more robust insights into the dynamic relationship between human capital risk and behavioral outcomes. Second, the study’s reliance on self-reported data introduces potential bias. Third,

the geographic and sectoral focus on a single manufacturing firm in West Java limits generalizability.

Future research could address these limitations by adopting mixed-methods designs, expanding the sample across multiple industries or provinces, and incorporating additional variables such as leadership style, organizational justice, or psychological capital. Studies could also explore the role of mediators—such as meaningful work or perceived organizational support—and moderators—such as job embeddedness or labor regulation—in shaping the strength and direction of the observed relationships.

Ultimately, this study affirms that workforce sustainability is not merely a function of demographic stability or organizational policy. It is a reflection of the psychological environment in which employees operate. Organizations that invest in reducing human capital risk while enhancing perceived security and support are better positioned to thrive amid uncertainty and change.

CONFLICT OF INTEREST

The authors declare no conflict of interest

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