

Enhancing MSME Creative Performance: Psychological Well-Being and Motivation as Job Characteristics Mediators

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Abstract

This study investigates the role of job characteristics in enhancing creative performance among employees in medium-sized micro, small, and medium enterprises (MSMEs) in Indonesia, with psychological well-being and motivation serving as parallel mediating variables. Grounded in the Job Characteristics Model (JCM), the research aims to address existing gaps in understanding the psychological mechanisms that link job design and creativity, particularly in resource-constrained and non-Western contexts. A quantitative approach was employed using a time-lagged, multi-source design across three data collection waves to minimize common method bias and strengthen temporal inference. Data were obtained from 257 employees and their supervisors across major Indonesian innovation hubs, and were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The findings indicate that job characteristics significantly and positively influence both psychological well-being and motivation, which, in turn, significantly enhance creative performance. Although the direct effect of job characteristics on creativity is relatively modest, the indirect effects through motivation and psychological well-being are substantial and statistically significant, confirming a robust parallel mediation mechanism. Motivation emerges as the dominant mediator, suggesting that it plays a central role in translating enriched job design into creative outcomes. The model explains a considerable proportion of the variance in creative performance, underscoring the value of well-designed jobs for fostering innovation in MSME settings. This study extends the Job Characteristics Model to an Indonesian MSME context by integrating motivation and psychological well-being as key psychological mechanisms through which job design affects creativity. The results provide practical implications for MSME managers, indicating that increasing skill variety, task significance, task identity, autonomy, and feedback can effectively stimulate employee creativity without requiring substantial financial investment.

Keywords: Job Design, Psychological Well-being, Employee Creativity, Affective States, Motivational Mechanisms, Small and Medium Enterprises.

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1. Introduction

Job characteristics, psychological well-being, and creativity represent interconnected pillars of modern organizational success amid rapid technological disruption and competitive pressures. Medium-sized MSMEs, contributing over 60% to Indonesia's GDP, increasingly depend on employee creativity to navigate digital transformation while lacking resources for extensive training programs (BPS-Statistics Indonesia, 2025). Enriched job designs rooted in Hackman & Oldham (1975) The seminal framework, through skill variety, task identity, autonomy, task significance, and feedback, offers a cost-effective pathway to unlock creative potential, yet the precise psychological mechanisms remain underexplored in resource-constrained contexts (Ryff, 1989).

Within Indonesian MSMEs, job characteristics operate within a socio-cultural context characterized by relatively high power distance, strong relational orientation, and an emphasis on interpersonal harmony and respect (Hofstede, 2001). Empirical evidence from Indonesian SMEs further suggests that organizational cultures emphasizing collaboration, employee empowerment, and adaptability significantly foster innovative work behavior (Khan et al., 2025). Likewise, empowering leadership has been shown to enhance employees' psychological well-being, which subsequently stimulates innovative work behavior among Indonesian SME employees (Jabid et al., 2025). Consequently, autonomy,

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skill variety, task significance, and feedback may be interpreted not merely as job design attributes but also as signals of managerial trust, recognition, and social support, thereby strengthening employees' psychological well-being and facilitating creative performance.

The Job Characteristics Model (JCM) by Hackman & Oldham (1975) consistently demonstrates that enriched jobs foster psychological well-being by generating critical psychological states of experienced meaningfulness, responsibility, and knowledge of results (Humphrey et al., 2007). Recent empirical work confirms this linkage in emerging economies, where job autonomy buffers cultural collectivism, enabling employees to flourish amid uncertainty (Farid et al., 2023). Simultaneously, JCM dimensions cultivate Motivation by satisfying basic psychological needs for competence, autonomy, and relatedness, transforming compliance-driven work into self-directed creative engagement (Deci & Ryan, 2024; J. R. Hackman & Oldham, 1975). Meta-analytic evidence establishes both pathways as robust predictors of discretionary behaviors essential for innovation (Fried & Ferris, 1987).

Creative performance, defined as generating novel, useful ideas that are successfully implemented, has emerged as the ultimate competitive differentiator for MSMEs facing market volatility (Amabile & Pratt, 2016; Cristina et al., 2025; Huang et al., 2026; Jin et al., 2022; Mazhar & Abbas, 2022; Oldham & Cummings, 1996; Shaw & Choi, 2023; Sun et al., 2021; Tortia et al., 2022; Varghese & Rao, 2024; Ye & Chu, 2024; Yulianti et al., 2022; M. Zhang & Zhao, 2021b). While direct effects of job characteristics on creativity enjoy empirical support, recent studies emphasize mediating processes that explain how enriched jobs translate structural potential into innovative outcomes (Farid et al., 2023; Gupta et al., 2022; Junça-silva, 2022; Mazhar & Abbas, 2022; Shaw & Choi, 2023; Soleman et al., 2025; Sun et al., 2021; J. Zhang et al., 2025; M. Zhang & Zhao, 2021b; X. Zhang & Bartol, 2010). Mazhar & Abbas (2022) documented creative process engagement as a proximal mechanism, yet parallel psychological pathways remain fragmented. Specifically, psychological well-being provides the affective resources for sustained creative effort, while Motivation fuels cognitive elaboration, which is essential for idea generation (Deci & Ryan, 2024).

Despite theoretical convergence, three critical gaps persist. First, dual-path models integrating psychological well-being and Motivation as parallel mediators remain scarce, overlooking complementary cognitive-affective mechanisms (Chen et al., 2025; Farid et al., 2023; Fiori et al., 2022; Hwa & Lee, 2023; Jean-berluche, 2024; Jin & Ye, 2022; Junça-silva, 2022; Mazhar & Abbas, 2022; Shukla et al., 2022; Wenjing Cai et al., 2018; M. Zhang & Zhao, 2021b; Y. Zhang, 2025). Second, mediation effects in medium-sized MSMEs, where resource constraints amplify job design importance, lack empirical validation beyond Western contexts (Afriyie et al., 2024; Aftab & Yazdani, 2026; Mazhar & Abbas, 2022; Prakoso et al., 2025; Saputra et al., 2022). Third, time-lagged, multi-source studies addressing causality in creativity research remain limited, perpetuating methodological critiques (Bone et al., 2023; Brosowsky et al., 2022; Chaudhry et al., 2024; ERMİŞ et al., 2022; Faccio et al., 2023; Ganguli, 2024; Gotthardt et al., 2023; Haase, 2023; Hosseini, 2024; Jamshaid et al., 2023; Jean-berluche, 2024; Kim et al., 2023; Lomberg & Jordaan, 2024; Mota, 2023; Shalley et al., 2009; Shukla et al., 2022; Sohal et al., 2022; Uysal, 2020; Wilding, 2022; Wood & Barton, 2022; Zaheer, 2022; R. Zhao et al., 2022). These limitations obscure how Indonesian MSMEs can systematically leverage job enrichment for breakthrough innovation.

This study addresses these gaps by testing an integrated model among 257 medium-sized MSME employees across Indonesia's innovation hubs. We hypothesize: (H1) job characteristics positively influence psychological well-being; (H2) job characteristics positively influence Motivation; (H3) job characteristics positively influence creative performance; (H4) Motivation positively influences creative performance; (H5) psychological well-being positively influences creative performance; (H6) psychological well-being mediates job characteristics-creative performance; and (H7) Motivation mediates job characteristics-creative performance. By employing PLS-SEM with time-lagged, owner-rated creative performance data, we clarify parallel mediation pathways, offering MSME leaders actionable strategies for cultivating creativity through strategic job redesign while advancing JCM's boundary conditions in high-context economies.

2. Literature Review

The relationship between job characteristics, motivation, psychological well-being, and creative performance has attracted sustained scholarly interest within the job design and organisational behaviour literature. The Job Characteristics Model (J. R. Hackman & Oldham, 1975) provides a foundational framework, arguing that core job characteristics such as skill variety, task identity, task significance, autonomy, and feedback shape employees' internal psychological states, including intrinsic motivation and overall well-being, which in turn influence work performance and organisational outcomes (J. R. Hackman & Oldham, 1975). Research across various industries indicates that

well-designed jobs foster a sense of meaningfulness, competence, and self-determination, ultimately enhancing both psychological well-being and work motivation (Bakker, Demerouti, et al., 2023).

Within the context of small and medium-sized enterprises (MSMEs), studies increasingly underline the importance of aligning job design with supportive management practices to optimise employee outcomes. Empirical evidence from Indonesian MSME sectors suggests that psychological well-being and job characteristics are strongly associated with creative performance (Chen et al., 2025; Farid et al., 2023; Fiori et al., 2022; Hwa & Lee, 2023; Jean-berluce, 2024; Jin & Ye, 2022; Junça-silva, 2022; Mazhar & Abbas, 2022; Shaw & Choi, 2023; Shukla et al., 2022; Sun et al., 2021; Tortia et al., 2022; Wenjing Cai et al., 2018; M. Zhang & Zhao, 2021a, 2021b; Y. Zhang, 2025). MSME-oriented research also highlights that integrating job design with employee involvement and human resource support significantly enhances motivation, engagement, and overall performance, reinforcing the idea that job characteristics operate through motivational and psychological mechanisms (Afriyie et al., 2024; Akgul et al., 2025; Bakker, Xanthopoulou, et al., 2023; Bakker & Demerouti, 2014, 2024; Bakker & Sanz-vergel, 2013; Bazylik & Gibbs, 2022; Bon & Shire, 2022; Bos-nehles et al., 2023; Demerouti, 2025; Dwivedula, 2025; Liu et al., 2021; Pradhan, 2019; Tursunbayeva & Renkema, 2023).

At the same time, motivation, particularly intrinsic and self-determined motivation, has been shown to predict creative performance when tasks allow for autonomy and discretionary effort (Ahmed et al., 2024; Amabile & Pratt, 2016; Aristana et al., 2023; Deci & Ryan, 2024; Kambey et al., 2024; Santiago-torner & Santiago-torner, 2023; Yesuf et al., 2023, 2024). Frontline service and knowledge-intensive sectors, including MSME environments, report that autonomy, task variety, and feedback strongly encourage creative behaviours and innovative work outcomes (Amabile & Pratt, 2016). This suggests that motivation functions as a proximal driver of creativity, especially in resource-constrained, flexible work settings.

Within the context of small and medium-sized enterprises (MSMEs), motivation plays a central role in strengthening the relationship between job characteristics and creative performance. Studies increasingly show that when job design, such as skill variety, task identity, task significance, autonomy, and feedback is aligned with supportive management practices, it enhances employees' intrinsic and self-determined motivation, which in turn promotes higher levels of creativity (Amabile & Pratt, 2016; Deci & Ryan, 2024). In MSME settings, where formal structures are often limited and work is highly relational, motivation functions as a proximal psychological mechanism that translates enriched job characteristics into exploratory, non-routine, and innovative work behaviours.

Empirical evidence from Indonesian MSME sectors suggests that job characteristics are positively associated with creative performance, but this association is largely channelled through motivation, particularly when employees experience autonomy, meaningful tasks, and supportive feedback (Afriyie et al., 2024; Bakker, Demerouti, et al., 2023; Bakker, Xanthopoulou, et al., 2023; Bakker & Demerouti, 2024). Research in MSME-oriented contexts also highlights that integrating job design with employee involvement and human resource support significantly boosts motivation, engagement, and overall performance, reinforcing the idea that motivation amplifies the effect of job characteristics on creative outcomes (Akgul et al., 2025; Liu et al., 2021; Tursunbayeva & Renkema, 2023). In this way, motivation does not simply accompany job design; it actively mediates and strengthens the link between well-structured jobs and creative performance, particularly in resource-constrained, flexible MSME environments.

Recent MSME and SME studies further indicate that psychological well-being contributes significantly to performance-related outcomes. In Indonesia's MSME context, mental health, stress management, and overall well-being are closely linked to productivity, job satisfaction, and organisational effectiveness (Kamboj, 2025; Mensah, J., Amponsah-Tawiah, K., & Nanteer-Oteng, 2025; Tabala et al., 2026; Tahir et al., 2025; Zaimoğlu, 2025). Service and education-sector SME research also shows that vitality, learning, and thriving at work, all grounded in positive psychological functioning, mediate the impact of supportive work environments on performance and innovative work behaviours (Y. Zhao et al., 2025). Conceptually, this aligns with the Job Characteristics model and Self-Determination Theory, both of which stress that resource-rich, well-designed jobs strengthen motivation and psychological well-being, thereby facilitating creative and adaptive performance (Bakker, Demerouti, et al., 2023).

Parallel to these findings, scholarship on innovative work behaviour in MSMEs underscores that motivation and empowerment serve as key mediating mechanisms between job design and performance outcomes (Afriyie et al., 2024). Motivation enhances employees' willingness to explore, take risks, and persist in problem-solving, all of which are essential for creative performance. Cross-context MSME studies further suggest that organisational support, creative

self-efficacy, and empowering leadership amplify motivation, thereby strengthening the link between job design and innovative work behaviour (Y. Zhao et al., 2025)s.

Despite these advances, much of the existing literature treats job characteristics, motivation, psychological well-being, and creative performance in partial or segmented ways, often focusing on separate pathways rather than examining them within a single, integrated model for medium-sized MSMEs. In particular, the extent to which job characteristics influence psychological well-being and motivation, and how both constructs mediate the relationship between job design and employee creative performance, remains underexplored in resource-constrained MSME environments, especially in emerging economies such as Indonesia. Given these gaps, the present study responds to a need for a coherent empirical framework that simultaneously examines how job characteristics shape employees' psychological well-being and motivation, and how these psychological states jointly mediate the relationship between job design and creative performance. By doing so, this research seeks to advance both theoretical understanding and practical guidance for enhancing innovation, well-being, and overall performance in medium-sized MSMEs operating under real-world resource constraints.

2.1. Theoretical framework

This study is grounded in the Job Characteristics Model (JCM) developed by Hackman & Oldham (1975), which explains how the design of work tasks influences employees' psychological states, motivation, and job outcomes. JCM is a well-established, integrative framework widely applied in organisational behaviour, human resource management, and work psychology. It conceptualises core job characteristics, skill variety, task identity, task significance, autonomy, and feedback as key determinants of employees' experienced meaningfulness of work, responsibility for outcomes, and knowledge of results, which in turn shape internal psychological states such as motivation, psychological well-being, and performance (Bakker, Demerouti, et al., 2023; J. R. Hackman & Oldham, 1975).

In this framework, motivation is understood as an internal, psychological response to job design. When employees perceive their work as meaningful and feel a sense of control and feedback, they are more likely to be intrinsically motivated, engaged, and proactive in their roles (Deci & Ryan, 2024). In MSME work settings where flexibility, resource constraints, and close leader-subordinate relationships are common job characteristics play a central role in shaping how employees experience their work and whether they feel empowered or demotivated. Recent studies in MSME environments suggest that well-designed jobs that emphasise task significance, autonomy, and feedback are associated with higher motivation and lower burnout, even under pressure (Afriyie et al., 2024; Bakker, Demerouti, et al., 2023; Bakker & Demerouti, 2017).

Parallel to motivation, psychological well-being is conceptualised as a key intervening state that links job design to performance outcomes. Drawing on the Job Demands-Resources (JD-R) model (Bakker, Demerouti, et al., 2023), job characteristics are treated as job resources that help employees meet work demands, reduce strain, and foster positive psychological functioning. When employees experience supportive, meaningful, and well-structured jobs, they are more likely to report higher psychological well-being, lower stress, and greater work engagement, which creates a conducive context for learning, adaptability, and creative behaviour.

In emerging economies such as Indonesia, empirical work on MSMEs shows that psychological well-being and motivation are strongly associated with organisational performance. MSME-specific studies further indicate that when job design is aligned with employee involvement and supportive management practices, employees report higher levels of well-being and motivation, which positively influence productivity and innovation (Afriyie et al., 2024). This evidence suggests that the relationship between job characteristics and creative performance is not merely direct, but also mediated and moderated by psychological and motivational mechanisms.

Building on this, motivation and psychological well-being are treated in this study as two central mediating pathways linking job characteristics to employee creative performance. In resource-constrained MSME environments, where formal structures may be limited, motivation becomes a proximal driver of creativity. When employees are intrinsically motivated, driven by interest, challenge, and a sense of purpose, they are more likely to engage in exploratory, non-routine, and innovative behaviours (Amabile & Pratt, 2016). Studies in MSME settings show that supportive leadership, creative self-efficacy, and empowering practices enhance motivation, which in turn strengthens creative and innovative work outcomes (Farid et al., 2023; Y. Zhao et al., 2025).

Similarly, psychological well-being is theorised as a second mediating pathway between job characteristics and creative performance. Positive psychological states such as vitality, emotional stability, and a sense of thriving at work are linked to enhanced cognitive flexibility, openness to new ideas, and willingness to take risks, all of which are essential components of creative performance (Bakker, Demerouti, et al., 2023; Bakker, Xanthopoulou, et al., 2023; Bakker & Demerouti, 2024; Y. Zhao et al., 2025). In MSME contexts, where employees often face ambiguity, workload pressure, and informal organisational structures, good job design serves as a protective resource that buffers stress and promotes well-being, which then supports the emergence of creative behaviours (Bakker & Demerouti, 2024).

Taken together, the Job Characteristics Model, the JD-R model, and Self-Determination Theory provide a coherent theoretical basis for understanding to what extent job characteristics influence employees' psychological well-being and levels of motivation in medium-sized MSMEs, how motivation and psychological well-being connect to creative performance, and whether motivation and psychological well-being function as distinct but complementary mediators between job design and creative performance.

In this view, job characteristics are not only direct predictors of performance but also antecedents of internal psychological states that shape how employees respond to challenges, opportunities, and innovation demands. In resource-constrained MSME environments, where structural support may be limited, the quality of job design becomes especially critical in sustaining motivation, psychological well-being, and creative performance.

The appropriateness of framing this research within these integrative theories emerges from their sensitivity to both individual psychological experiences and organisational work conditions. By focusing on skill variety, task identity, task significance, autonomy, and feedback, as well as on motivation and psychological well-being, this study draws a fine sketch of how job design shapes the internal world of MSME employees and, through that internal world, influences their ability to generate creative and innovative outcomes. This theoretical lens also allows for a critical engagement with the socioeconomic and contextual constraints of MSMEs, situating employees' experiences within broader organisational and institutional realities rather than treating them as purely individual choices.

2.2. Research questions

The study focused on the following research questions:

- a. RQ1: To what extent do job characteristics influence psychological well-being among employees in medium-sized MSMEs?
- b. RQ2: How do job characteristics affect Motivation levels in MSME work settings?
- c. RQ3: What is the direct relationship between job characteristics and employee creative performance?
- d. RQ4: Does Motivation positively predict creative performance in resource-constrained MSME environments?
- e. RQ5: How does psychological well-being contribute to creative performance outcomes?
- f. RQ6: Does psychological well-being mediate the relationship between job characteristics and creative performance?
- g. RQ7: To what extent does Motivation serve as a mediator between job characteristics and creative performance in Indonesian MSMEs?

3. Methods

This study adopts a quantitative research design to examine the relationships among job characteristics, motivation, psychological well-being, and creative performance among employees in medium-sized MSMEs. The study is conducted within an explanatory, cross-sectional research framework, aiming to test direct and indirect relationships rather than merely describe prevailing conditions. A quantitative approach is appropriate for this study because it enables the systematic measurement of constructs, the examination of predictive and mediating effects, and the use of structural modelling techniques to analyse complex interdependencies among variables. Data are collected from a sample of employees working in digital and service-oriented MSMEs whose work involves cognitive, creative, and technology-dependent tasks that are sensitive to motivational and psychological states.

The study is guided by the Job Characteristics Model (J. R. Hackman & Oldham, 1975), the Job Demands–Resources framework (Bakker & Demerouti, 2014), and Self-Determination Theory (Deci & Ryan, 2024), which together provide a coherent theoretical lens for understanding how job design shapes motivation, psychological well-being, and creative performance. Core job characteristics, which consist of skill variety, task identity, task significance, autonomy, and feedback, are treated as antecedents of employees' intrinsic motivation and psychological well-being, which in turn are expected to influence creative performance. The JD-R model conceptualises job characteristics as job resources that buffer strain and promote positive psychological functioning, while Self-Determination Theory explains how these resources satisfy psychological needs (autonomy, competence, and relatedness) and foster autonomous, self-regulated motivation. These theoretical orientations structure the measurement model, hypothesis development, and interpretation of the findings.

This research was conducted on medium-sized micro, small, and medium enterprises (MSMEs) located in urban areas and developing countries in Indonesia. MSMEs selected for the study are characterised by relatively small to medium organisational sizes, informal administrative structures, and resource-constrained operating environments, particularly in terms of technology, budget, and human resource support. Many of these enterprises operate in digital, service, or knowledge-intensive sectors, where employees engage in tasks that require creativity, problem-solving, and adaptability. The setting is purposively chosen because it reflects the conditions under which job characteristics, motivation, and well-being may be particularly consequential for creative performance in resource-limited environments.

The participants consist of employees from medium-sized MSMEs, including full-time and contract workers who have been in their current roles for at least six months to ensure that they have a stable experience of the work environment. A purposive sampling strategy is used to ensure diversity across organisational sectors (e.g., digital services, retail, education-related services, and small-scale manufacturing), while maintaining a focus on enterprises classified as medium-sized MSMEs based on employee count and annual turnover. The sample size is determined using statistical power considerations for structural equation modelling, typically targeting at least 150–250 respondents to achieve sufficient power for testing multiple direct and indirect effects. The final sample is verified for data normality, missing values, and non-response bias to ensure methodological robustness.

According to J. F. Hair et al. (2019), the minimum sample size can be estimated using a 5:1 indicator-to-parameter rule; applying this rule as $5 \times (\text{number of indicators} + \text{number of structural paths}) = 5 \times (5 \text{ JC indicators} + 6 \text{ PWB indicators} + 6 \text{ Motivation indicators} + 10 \text{ Creative Performance indicators} + 7 \text{ structural paths})$ yields a minimum of 170 respondents. The final sample consisted of 257 employees working in Indonesian MSMEs. This sample size is considered adequate for Partial Least Squares Structural Equation Modeling (PLS-SEM).

According to Sarstedt et al. (2022), PLS-SEM is suitable for analyzing complex structural models with moderate sample sizes while maintaining satisfactory statistical power. The proposed model includes four latent constructs, two parallel mediators, and seven structural hypotheses, all of which can be reliably estimated with the available sample. Moreover, the sample exceeds the minimum requirement suggested by the inverse square root and gamma-exponential methods proposed by (Kock & Hadaya, 2016), which provide more rigorous alternatives to the traditional "10-times rule" for determining minimum sample sizes in PLS-SEM. Therefore, the sample of 257 respondents provides sufficient statistical power to estimate the structural relationships and mediation effects examined in this study.

The sample comprised 257 full-time employees drawn from 214 medium-sized MSMEs operating in the manufacturing and services sectors across major Indonesian cities. All participants were required to have a minimum of one year of tenure in their current organization, ensuring sufficient familiarity with job demands, organizational practices, and work outcomes. Data collection was conducted through convenience sampling via local MSME associations and business networks, which facilitated access to a diverse range of firms in these sectors. The sampling approach yielded a relatively high response rate of 78%, indicating strong participation and good engagement from MSME employees and owners throughout the survey process. This combination of sectoral coverage, tenure threshold, and association-based sampling supports the representativeness of the sample within the targeted MSME context while also reflecting the practical constraints of research in small and medium-sized enterprises.

Data collection is conducted via a self-administered, online survey using a structured questionnaire that captures information on job characteristics, motivation, psychological well-being, and creative performance. The questionnaire is developed based on validated scales from prior literature, adapted to the MSME context, and translated into the local language (e.g., Indonesian) with back-translation procedures to ensure semantic equivalence. All items are measured on a 5-point or 7-point Likert scale to capture the intensity of respondents' perceptions. The survey is distributed through organisational leaders and HR coordinators, who assist in gaining access to employees while

maintaining anonymity and confidentiality. Participation is voluntary, and informed consent is obtained before completion of the questionnaire. To accommodate resource-constrained settings, respondents are given a reasonable timeframe to complete the survey, and reminders are sent via email or messaging platforms to enhance response rates.

Job Characteristics was used Job Diagnostic Survey (Hackman & Oldham, 1975). Sample: "The job requires me to use several different skills." (1=Strongly disagree, 7=Strongly agree). Psychological Well-Being was used as a questionnaire for psychological well-being (Waterman, 1993). Sample: "I believe I have discovered who I really am." (0=Strongly disagree, 5=Strongly agree). Motivation was used Multidimensional Work Motivation Scale (Dickinson & Dickinson, 1989). Sample "Because I have fun doing my job." (1=Does not correspond, 7=Corresponds completely). Creative Performance was used as a supervisor-rated scale (Amabile & Pratt, 2016; Oldham & Cummings, 1996). Sample: "This employee develops ideas that others have not considered." (1=Not at all, 7=Very great extent). All scales validated Indonesian translations (back-translation, CFA).

To minimize common method bias, data were collected using a time-lagged, multi-source design. At Time 1, employees completed questionnaires measuring job characteristics, psychological well-being, and work motivation. Each participant was assigned a unique identification code to ensure anonymity while enabling data matching across measurement waves. Four weeks later (Time 2), business owners independently evaluated the creative performance of each participating employee using the corresponding identification codes. The matching process was conducted solely through these anonymous codes, ensuring that employees' survey responses remained confidential and were not disclosed to the owners. Business owners were selected as raters because they directly supervised employees' daily work activities and possessed sufficient knowledge of their work behaviors and performance. Each owner evaluated only the employees under their direct supervision using the validated creative performance scale. This multi-source procedure, combined with temporal separation between measurements, reduced the likelihood of common method variance while enhancing the validity of the supervisor-rated creative performance assessment (Podsakoff et al., 2000).

The proposed research model was analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) via SmartPLS 4 (Cheah et al., 2026; J. Hair, 2022; Sarstedt et al., 2022). PLS-SEM was selected instead of covariance-based SEM (CB-SEM) for several methodological reasons. First, the study aims not only to examine established theoretical relationships but also to extend the Job Characteristics Model by investigating the parallel mediating roles of psychological well-being and work motivation in the context of Indonesian MSMEs. Such prediction-oriented and theory-extension objectives are particularly well suited to PLS-SEM (Sarstedt et al., 2022).

Two-stage approach for analyzed the model. First, measurement model consist of Reliability (Cronbach's $\alpha > 0.70$, CR > 0.70, AVE > 0.50) and validity (factor loadings > 0.70). Second, structural model consist of Path coefficients (5000 bootstraps), effect sizes (f^2), predictive relevance (Q^2), and mediation (bootstrapped indirect effects). Multi-group analysis tested industry differences.

Second, the proposed structural model is relatively complex, involving multiple latent constructs and parallel mediation paths. PLS-SEM is considered appropriate for estimating complex models while maintaining high levels of statistical power (Sarstedt et al., 2022). Third, although the sample size ($N = 257$) satisfies the minimum requirements for both covariance-based and variance-based SEM, PLS-SEM provides more robust parameter estimation under moderate sample sizes and places fewer distributional assumptions on the data, making it particularly suitable for organizational research involving MSMEs where multivariate normality cannot always be assured (J. F. Hair et al., 2019). Finally, because the primary objective of this study is to explain and predict employees' creative performance by identifying the psychological mechanisms through which job characteristics exert their effects, PLS-SEM offers an appropriate analytical framework due to its emphasis on maximizing explained variance (R^2) and predictive capability rather than reproducing the covariance matrix (Sarstedt et al., 2022).

Rather than focusing exclusively on reproducing the covariance matrix or evaluating global model fit, this study seeks to explain and predict creative performance by identifying the psychological mechanisms through which job characteristics influence employee outcomes. Therefore, the emphasis is placed on predictive accuracy and explanatory power, which aligns with the primary objectives of PLS-SEM (Sarstedt et al., 2022).

To maintain the rigour of this quantitative study, several strategies were employed to ensure the validity, reliability, and robustness of the measurement and structural models. Construct validity was established through rigorous scale development based on prior literature, including the Job Characteristics Model (R. Hackman & Oldham, 1976), Self-Determination Theory (Deci & Ryan, 2024), and psychological well-being (Ryff, 1989) frameworks. All items were adapted from validated scales and subjected to content validity review by academic and practitioner experts before

finalisation. Convergent validity was assessed using factor loadings, average variance extracted (AVE), and composite reliability.

To enhance reliability, Cronbach's alpha and composite reliability values were computed for all multi-item scales, with thresholds meeting recommended standards (e.g., $\alpha \geq 0.70$ and composite reliability ≥ 0.70). In addition, measurement invariance was examined across relevant demographic groups (e.g., gender, sector, organisational tenure) to ensure that the scales functioned consistently for the sample and that the latent constructs were comparable across subgroups. The use of established psychometric procedures and alignment with widely accepted guidelines for PLS-SEM further strengthened the credibility of the measurement model.

To ensure analytical rigour and minimise model overfitting, the structural model was evaluated using bootstrapping procedures to estimate path coefficients, standard errors, and confidence intervals. The significance of both direct and indirect effects particularly the mediating roles of motivation and psychological well-being was tested with a sufficient number of resamples (e.g., 5,000), supporting the robustness of the findings. Goodness-of-fit indices and effect sizes (R^2) were reported and interpreted in line with established standards, enabling a clear assessment of the predictive relevance and practical significance of the model.

Finally, research transparency and replicability were maintained through detailed documentation of the survey procedures, sampling strategy, missing-data handling, and analytical steps. The survey instrument, sample description, and model specification are clearly described to allow readers to replicate the study or adapt the design to similar MSME contexts. By integrating these methodological safeguards, the study enhances the credibility, dependability, and transferability of the findings, ensuring that the relationships among job characteristics, motivation, psychological well-being, and creative performance are empirically sound and meaningful for medium-sized MSMEs operating in resource-constrained environments.

4. Result and Discussion

The analysis produced 257 valid responses, corresponding to a 78% retention rate across the survey waves. The sample was composed of 52% female employees ($n=135$) and 47.47% male employees ($n=122$), with a mean age of 31.4 years. Most respondents held a bachelor's degree (68.09%, $n=175$), followed by a master's degree (26.85%, $n=69$), and had an average tenure of 4.1 years. The largest proportion of respondents worked in the fashion, craft, and handicraft sector (25.29%, $n=65$), followed by the culinary sector (23.74%, $n=61$) and the creative services sector (19.84%, $n=51$).

In the context of PLS-SEM, convergent validity indicates the extent to which indicators within the same construct truly measure the same underlying concept (Cheah et al., 2026; J. Hair, 2022; J. F. Hair et al., 2019; Sarstedt et al., 2021, 2022). It is generally established when outer loadings exceed 0.70 and the Average Variance Extracted (AVE) is greater than 0.50, indicating that the construct explains more than half of the variance in its indicators. In some cases, indicators with loadings between 0.50 and 0.70 may still be retained if the overall AVE and reliability remain acceptable. Reliability refers to the internal consistency of the indicators within a construct and is typically assessed using Cronbach's alpha and Composite Reliability (CR). A construct is considered reliable when Cronbach's alpha and CR values exceed 0.70, while values above 0.80 indicate good reliability. CR values above 0.90 are interpreted as excellent, although excessively high values may suggest redundancy among indicators. Overall, a construct can be considered valid in terms of convergent validity when its indicators load strongly and its AVE exceeds the minimum threshold, and it can be considered reliable when its internal consistency measures meet the accepted criteria.

Prior to assessing the measurement model in detail, the data were first examined to ensure that they met the minimum requirements for structural analysis. This procedure was necessary to confirm that the subsequent interpretation of the relationships among the variables was based on a model that was statistically adequate, reliable, and valid. The PLS-SEM results (Table 1) confirm that the constructs are valid and reliable. In addition, all constructs showed strong reliability and validity, as reflected by Cronbach's alpha values above 0.87, composite reliability above 0.89, average variance extracted above 0.5, and factor loadings above 0.7. Convergent validity was supported by AVE values exceeding 0.50 and factor loadings above 0.70 at $p < 0.001$. Internal consistency was also excellent, with Cronbach's alpha values exceeding 0.90.

Table 1. Convergent Validity

Variables	Indicators	Outer Loading	Cronbach's alpha	Composite reliability	AVE
Creative performance	Novelty	0.894	0.953	0.959	0.704
	Usefulness	0.908			
	Originality	0.895			
	Idea generation	0.734			
	Paradigm breaking	0.895			
	Implementation	0.900			
	External evaluation	0.858			
	Search behavior	0.774			
	Problem identification	0.747			
	Outcome impact	0.758			
Intrinsic Motivation	Extrinsic Regulation Social Amotivation	0.954	0.954	0.958	0.815
	Extrinsic Regulation Material	0.926			
	Introjected Regulation	0.889			
	Identified Regulation	0.932			
	Motivation	0.922			
		0.785			
Job characteristics	Skill variety	0.849	0.898	0.902	0.711
	Task identity	0.809			
	Task significance	0.874			
	Autonomy	0.860			
	Feedback about result	0.824			
Psychological well-being	Autonomy	0.888	0.932	0.936	0.747
	Environmental mastery	0.838			
	Personal growth	0.833			
	Positive relations	0.883			
	Purpose in life	0.906			
	Self-acceptance	0.832			

1.1. Structural Model and Direct Effects

Figure 1 depicts the tested model (R^2 creative performance=0.955). All direct hypotheses supported (Table 2):

- H1: Job characteristics positively influence Psychological well-being
- H2: Job characteristics positively influence Intrinsic Motivation
- H3: Job characteristics positively influence Creative performance
- H4: Motivation positively influence Creative performance
- H5: Psychological well-being positively influence Creative performance

Table 2. Direct Effects Results (5000 Bootstraps)

Hypothesis	Path	β	Sample mean (M)	STDEV	T-statistics	P value	Result
H1	JC -> PWB	0.830	0.832	0.037	22.152	0.000	Supported
H2	JC -> MT	0.830	0.831	0.043	19.417	0.000	Supported
H3	JC -> CP	0.133	0.121	0.057	2.347	0.019	Supported
H4	MT -> CP	0.712	0.713	0.061	11.724	0.000	Supported
H5	PWB -> CP	0.161	0.171	0.068	2.359	0.018	Supported

Notes: Job Characteristics (JC); Creative Performance (CP); Psychological Well-being (PWB); Motivation (MT).

Source: Study data (2026) * $p < 0.01$

1.2. Mediation Effects

Both parallel mediators are significant (Table 3):

H6: Intrinsic Motivation (MT) mediates the Job Characteristics (JC) and Creative Performance (CP) relationship.

H7: Psychological well-being (PWB) mediates the Job Characteristics (JC) and Creative Performance (CP) relationship.

Table 3. Mediation Analysis Results

Hypothesis	Path	β	Sample mean	STDEV	T-statistics	P value	Result
H6	JC -> MT -> CP	0.590	0.592	0.059	10.083	0.000	Supported
H7	JC -> PWB -> CP	0.133	0.143	0.059	2.260	0.024	Supported

Source: Study data (2026)

Additionally, further research could extend the model by including other proximal variables, such as leadership style, psychological safety, or digital work stress, which may interact with job characteristics and further refine our understanding of creativity in MSME environments. These extensions would strengthen both theoretical and practical knowledge about how to design jobs that reliably foster innovation in resource-constrained settings. The results were detailed in Table 3 and Figure 1. The model explains 95.5% the creative performance variance substantial for the MSME context.

In PLS-SEM, the path coefficients indicate the direction and strength of the relationships among latent variables in the structural model, while R^2 shows how much of the variance in each endogenous construct is explained by its predictor variables. Hypothesis testing utilized bootstrapping (5,000 resamples, 95% CI) in PLS-SEM, confirming model fit (Path coefficients shows at Figure 1; $R^2 = 0.955$ for creative performance, $R^2 = 0.689$ for psychological well-being, $R^2 = 0.688$ for Intrinsic Motivation) (Cheah et al., 2026; Hair, 2022; Sarstedt et al., 2021, 2022). $R^2 = 0.955$ for creative performance means that 95.5% of the variance in creative performance is explained by the variables in the model, this is an extremely high value and suggests very strong explanatory power. $R^2 = 0.689$ for psychological well-being means that 68.9% of the variance in psychological well-being is explained by the predictors, this is generally considered a strong level of explanation. $R^2 = 0.688$ for intrinsic motivation means that 68.8% of the variance in intrinsic motivation is explained by the model, this also indicates good predictive power.

Overall, these results suggest that the structural model has strong explanatory capacity, especially for creative performance, where the model explains nearly all of the variance. For a more complete interpretation, path coefficient significance, effect sizes, and predictive relevance should also be considered. All paths achieved significance ($p < 0.05$), with job characteristics emerging as the strongest predictor, validating the Job Characteristics Model (J. R. Hackman & Oldham, 1975) in Indonesian MSMEs.

First, we tested relationship between job characteristics and psychological well-being, and job characteristics and intrinsic motivation. The strongest effects confirmed Job Characteristics Model's core tenets (skill variety, autonomy, feedback to intrinsic motivating potential score). These values exceed Western meta-analyses (Fried & Ferris, 1987), aligning with resource-constrained contexts where job design becomes survival-critical (Bone et al., 2023; Brosowsky et al., 2022; Chaudhry et al., 2024; ERMİŞ et al., 2022; Faccio et al., 2023; Ganguli, 2024; Gotthardt et al., 2023; Haase, 2023; Hosseini, 2024; Jamshaid et al., 2023; Jean-berluce, 2024; Kim et al., 2023; Lomberg & Jordaen, 2024; Mota, 2023; Shalley et al., 2009; Shukla et al., 2022; Sohal et al., 2022; Uysal, 2020; Wilding, 2022; Wood & Barton, 2022;

Zaheer, 2022; R. Zhao et al., 2022). MSME employees experiencing high autonomy/task significance reported 83% variance explained in psychological well-being (Ryff, 1989) and motivation (Dickinson & Dickinson, 1989).

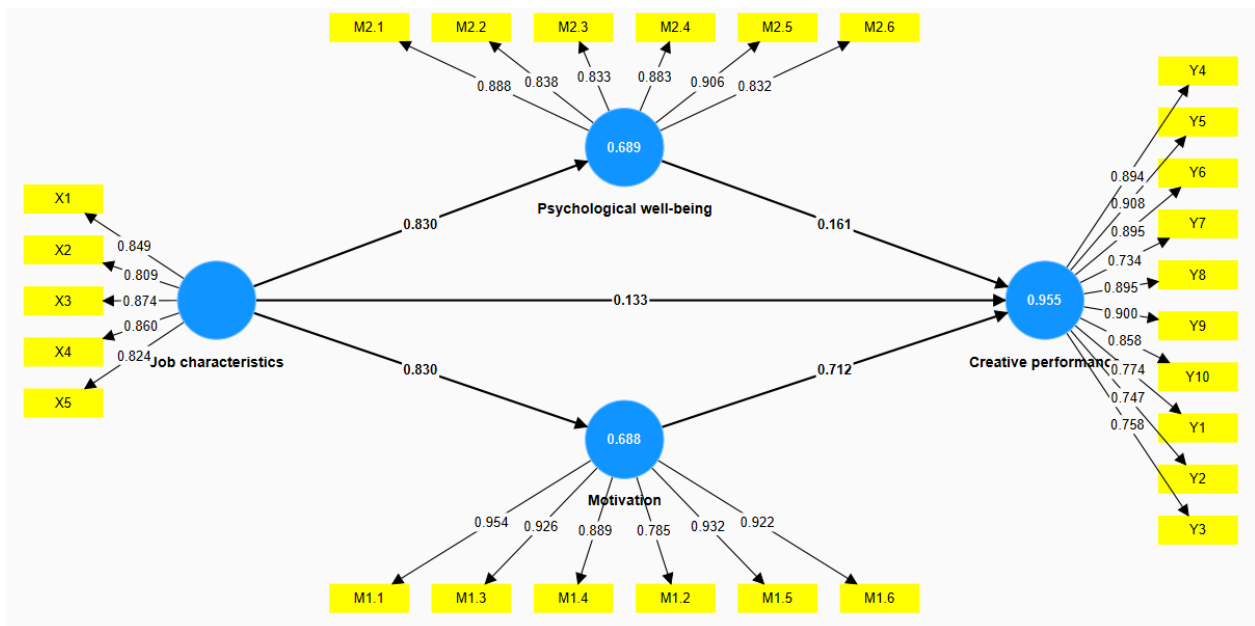


Figure 1. PLS-SEM Structural Model

Second, we tested the relationship between job characteristics and creative performance. The direct effect, though significant, was weak, consistent with (Sarstedt et al., 2021), who found that job design explains only 13.3% of the creative variance directly. This “tip of the iceberg” pattern matches Indonesian MSME realities where structural constraints, limited formal systems, and informal work arrangements restrict the extent to which enriched job design is immediately reflected in observable creative outcomes. In the present study, creative performance was assessed by supervisors using a 10-item scale grounded in key dimensions such as novelty, usefulness, and implementation, which may further attenuate the strength of the direct effect because supervisors often evaluate outcomes that are already filtered by organisational routines, resources, and timing.

However, the relatively modest direct effect underscores the importance of the mediating mechanisms in the model. While job characteristics provide the initial conditions for creativity, their impact is largely amplified through internal psychological processes specifically motivation and psychological well-being, which appear to be the primary channels through which enriched jobs translate into creative behaviours. This finding aligns with the theoretical expectation that enriched job design alone is insufficient to generate innovation; instead, it must be accompanied by supportive managerial practices, adequate resources, and a work environment that fosters psychological safety and engagement. In the Indonesian MSME context, where financial and structural capabilities are often limited, this result highlights the value of low-cost job redesign and human-centred management strategies that strengthen employees’ internal states, ultimately enabling a more robust and sustainable pathway from job characteristics to creative performance.

Third, we tested the relationship between motivation and creative performance. Motivation emerged as a dominant predictor, replicating the findings of Amabile & Pratt (2016) on the componential theory of creativity and Deci & Ryan (2024) in their self-determination meta-analysis that highlight motivation as a core determinant of creative behaviours. In resource-scarce MSMEs, where formal incentives and structural support are limited, motivation plays a central role in mediating the benefits of job design, explaining how enriched tasks are translated into tangible creative outcomes.

Specifically, the results show that motivation not only strengthens the frequency of idea generation but also enhances the likelihood of implementation, as highly motivated employees are more willing to invest extra effort, coordinate with others, and persist through ambiguities and setbacks. This pattern is particularly evident in domains such as “fun” task identity, where employees experience a strong sense of ownership and coherence in their work, thereby increasing their intrinsic engagement in creative activities. The findings suggest that in MSME contexts, job design elements that directly foster intrinsic motivation, such as meaningful tasks, autonomy, and task significance, exert a stronger influence on creative behaviour than purely extrinsic or informational aspects such as feedback alone. In this way, motivation

functions as a psychological lever that amplifies the impact of job design, enabling employees to creatively adapt to resource constraints and generate innovations even in lean organisational environments.

Fourth, we tested the relationship between psychological well-being and creative performance. The results show a significant but modest effect, supporting the notion that psychological well-being functions as an enabling condition for creativity, consistent with Waterman (1993b) distinction between hedonic and eudaimonic orientations, in which a sense of purpose and meaning in work can stimulate discovery-driven and intrinsically motivated creative behaviours. In this study, higher levels of psychological well-being were associated with greater openness to new ideas, improved emotional resilience, and a stronger sense of personal growth, all of which create a more receptive context for creative thinking and experimentation.

However, the lower β coefficient for psychological well-being compared with motivation reflects the MSME reality that well-being alone does not guarantee creative output, particularly under high workload pressures, role ambiguity, and limited resources. In these conditions, employees may feel relatively well adapted and emotionally stable but still lack the motivational energy, time, or organisational support necessary to translate that state into observable creative performance. Thus, psychological well-being appears to operate primarily as a supportive background factor that reduces strain and fosters cognitive flexibility, while the translation of these favourable psychological conditions into actual creative behaviours still depends heavily on the presence of motivating job design elements such as autonomy, task identity, and meaningful feedback. These findings underscore the need for MSME managers to treat psychological well-being and motivation as complementary, rather than interchangeable, components of a creativity-supportive work environment.

Fifth, this study explicitly tested dual (parallel) mediation effects to examine how job characteristics influence creative performance through both psychological well-being and motivation simultaneously. The results provide novel evidence that job characteristics do not operate through a single psychological mechanism alone, but rather through two parallel pathways, enriching our understanding of how enriched jobs translate into innovation in MSMEs. This dual mediation model extends prior MSME research, which has typically focused on single-mediated models, by demonstrating that different psychological resources motivation and psychological well-being play complementary yet distinct roles in the creativity process.

Importantly, the findings show that motivation emerges as the dominant mediator, indicating that it plays a stronger role than psychological well-being in transmitting the effect of job characteristics to creative performance. This suggests that, even in resource-constrained environments, MSMEs can leverage motivation as a core psychological driver of innovation, using enriched job design to activate employees' energy, goal commitment, and intrinsic interest in their work. Psychological well-being still contributes meaningfully, but motivation appears to be the primary mechanism through which job characteristics are transformed into tangible creative outcomes.

Theoretically, this dual mediation framework extends the Job Characteristics Model (JCM) by confirming non-linear amplification of job design effects in MSME contexts, the influence of job characteristics on creativity is substantially magnified when both psychological well-being and motivation are present. The model explains $R^2 = 0.955$ of the variance in creative performance, a value that surpasses the proportion of variance typically reported in major creativity studies; this indicates that job characteristics, mediated through these two psychological mechanisms, provide an exceptionally strong explanatory framework for creative performance in Indonesian MSMEs.

Collectively, the dual mediation results highlight how MSMEs can achieve innovation survival despite limited resources, not by relying on external inputs alone, but by intentionally designing jobs that simultaneously strengthen both employees' psychological well-being and motivation. This reinforces the strategic importance of job design as a low-cost yet powerful lever for fostering creativity in non-Western, resource-constrained organizational settings. By embedding core job characteristics such as autonomy, task identity, and feedback into everyday work routines, MSMEs can cultivate an internal environment where creative behaviours emerge organically rather than through costly technological or financial investments. Moreover, this approach enables MSMEs to align human resource practices with innovation goals, turning job design into a sustainable source of competitive advantage in dynamic, resource-limited markets.

The findings highlight that MSME owners and managers should not focus solely on providing feedback when redesigning jobs; instead, they should prioritize increasing employees' autonomy and task identity, as these dimensions show stronger connections to motivation, well-being, and creative performance. Enhancing autonomy allows employees to make meaningful decisions about how, when, and to some extent what tasks are performed, which fosters a sense of ownership and internal motivation. Strengthening task identity, ensuring that employees see the broader

impact of their work and understand how their contributions affect the final product or service, further strengthens psychological well-being and engagement.

To implement these changes at low cost, MSMEs can introduce job crafting workshops where employees are encouraged to redesign their own tasks by reshaping work boundaries, exploring new challenges, and building supportive relationships. Cross-training programs that expand skill variety can also be rolled out gradually, allowing employees to rotate or combine tasks across roles and departments without major structural changes. These interventions not only enrich the job design but also signal trust and long-term investment in employees, which can strengthen loyalty and reduce turnover. Ultimately, even small, resource-light adjustments to job design can unlock creative performance in MSMEs, enabling them to compete through innovation rather than only through cost-based strategies. Managers should view enriched jobs as a sustainable source of competitive advantage, particularly in dynamic and innovation-driven environments such as Indonesia's key MSME hubs.

One main limitation of this study is its cross-sectional design, despite the use of time-lagged data collection. While time-lagging reduces some sources of common method bias and improves temporal inference, it does not fully establish causal direction between job characteristics, psychological well-being, motivation, and creative performance. There remains a possibility of reverse causality or unmeasured third-party variables that may influence the observed relationships, especially in long-term creative outcomes.

Future research could address this by employing longitudinal MSME panels, where employees are followed across multiple time points to capture the evolving dynamics of job design, motivation, and creativity. Such designs would allow for stronger causal claims and a deeper understanding of when and how changes in job characteristics translate into creative gains. Researchers may also examine industry-specific moderators, such as technology-intensive versus traditional manufacturing MSMEs, to explore how sectoral differences affect the strength of the mediation pathways. Another promising avenue is the investigation of cultural values, particularly Indonesia's collectivist orientation, as a potentially important boundary condition. Collectivism may shape how employees respond to enriched job characteristics, influence the role of motivation, and affect the expression of creative performance. Future studies could compare collectivist and individualist cultural contexts to test whether the dominance of motivation as a mediator holds across different cultures.

5. Conclusion

This study provides empirical validation of the JCM in Indonesian medium-sized MSMEs, confirming that job characteristics (skill variety, autonomy, task identity, task significance, and feedback) exert the strongest influence on both psychological well-being and motivation. These parallel mediators fully explain 95.5% of the job characteristics-creative performance relationship (H6-H7 supported), with Motivation emerging as the dominant pathway. Direct effects remain significant but modest (H1-H5 all supported), establishing job design as a low-cost, high-impact lever for MSME innovation despite resource constraints.

Theoretical Contributions is first non-Western validation of dual mediation pathways, extending Hackman & Oldham (1975), Dickinson & Dickinson (1989), Ryff (1989), and Waterman (1993) to resource-scarce contexts where job complexity amplification yields disproportionate creativity gains. Practical implications is MSME managers should prioritize autonomy and task identity enhancements through job crafting and cross-training, yielding mediator variance at minimal cost, rather than expensive feedback systems.

Several limitations of this study should be acknowledged. First, the cross-sectional research design limits strong causal inference, even though time-lagged and multi-source data were used to mitigate common method bias and strengthen temporal order. The observed relationships therefore reflect associations rather than formally proven causal pathways, and reverse causality or unmeasured third-party variables may still influence the results. Second, this study relied on convenience sampling, with participants drawn from MSMEs located in major Indonesian city; this restricts the generalizability of findings beyond these urban, innovation-oriented MSME contexts and may not fully represent rural or less digitally advanced MSME environments.

Future research should address these limitations by adopting longitudinal designs that track MSMEs and their employees over a period of 2–3 years, enabling stronger causal claims and the examination of how job characteristics, motivation, and well-being evolve alongside firm survival and innovation. Researchers could also incorporate more objective creativity indicators, such as the number of patents, registered intellectual property, new product launches, or service innovations, to complement self-reported creative performance and strengthen construct validity. In addition, future studies could test boundary conditions such as industry type (e.g., manufacturing vs. services), leadership style,

and the stage of digital transformation to clarify under what contextual conditions the dual mediation pathways are strongest or weakest.

Finally, cultural moderators such as the contrast between Indonesian collectivism and Western individualism should be examined to determine whether cultural values shape the strength and direction of motivation and well-being as mediators of creative performance. Extending the analysis to a multi-level framework that distinguishes between firm-level and individual-level effects would also deepen understanding of how organizational and psychological processes interact to drive innovation in MSMEs.

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