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DOES JOB CRAFTING MEDIATE DIGITAL TRANSFORMATION AND EMPLOYEE PERFORMANCE? EVIDENCE FROM INDONESIAN STATE-OWNED BANKS

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Abstract

This study examines the mediating role of Job Crafting in the relationship between Digital Transformation and Job Performance among employees of Indonesian State-Owned (BUMN) Banks, guided by the Job Demands-Resources (JD-R) Theory. Using a quantitative survey design, data were collected from 97 employees across four Himbara banks (Bank Mandiri, BRI, BNI, and BTN) through a validated questionnaire measuring three variables: Digital Transformation, Job Crafting, and Job Performance. Data were analyzed using PROCESS Macro Model 4 with a robust HC4 estimator and 5,000-resample bootstrapping to accommodate heteroscedasticity identified during assumption testing. The results show that Digital Transformation has a significant positive effect on Job Performance and on Job Crafting. However, Job Crafting does not have a significant effect on Job Performance, and consequently does not mediate the relationship between Digital Transformation and Job Performance. These findings point to a direct-effect-only model, in which employee performance gains stem primarily from the maturity of organizational digital infrastructure rather than from individual job crafting behavior. The study recommends that BUMN banks prioritize the continued maturation of digital systems as the primary performance lever, while still supporting job crafting as a means of sustaining employee engagement and long-term adaptability rather than treating it as a direct driver of performance.

Keywords: Digital Transformation, Job Crafting, Job Performance, JD-R Theory, BUMN Banks.

INTRODUCTION

Digital transformation has become a strategic imperative in the global financial services sector, as financial institutions increasingly adopt cloud computing, artificial intelligence-driven analytics, and mobile banking platforms (Vial, 2019). However, its success depends not only on technological sophistication but also on employees' ability to adapt to digitally transformed work environments (Cosa & Torelli, 2024; Vial, 2019). In Indonesia, this shift is clearly visible among the four Himbara state-owned banks, Bank Mandiri, Bank Rakyat Indonesia (BRI), Bank Negara Indonesia (BNI), and Bank Tabungan Negara (BTN), which collectively dominate the national banking sector and have invested substantially in digital infrastructure. Regional evidence, such as the rapid growth of QRIS transactions in the Banyumas area, further illustrates how banking digitalization has reshaped employees' daily work demands (Bank Indonesia, 2025).

This phenomenon reflects what may be termed the human factor paradox of digital transformation: digital tools can function as job resources that ease task execution, but the pace of technological change can simultaneously generate new demands, such as pressure to master unfamiliar systems and the risk of technostress (Bakker et al., 2023; Khalequzzaman et al., 2025). Whether digital transformation ultimately improves or hinders performance may therefore depend on how employees actively respond to these demands and resources, a process captured by the

concept of job crafting, through which employees proactively adjust their tasks, resources, and work strategies (Wrzesniewski & Dutton, 2001; Tims et al., 2012).

Guided by the Job Demands-Resources (JD-R) Theory (Bakker et al., 2023; Demerouti et al., 2001), this study positions job crafting as the behavioral mechanism through which digital transformation may be translated into employee performance outcomes. While prior research has extensively examined digital transformation at the organizational level (Cosa & Torelli, 2024; Shwedeh et al., 2023), limited attention has been paid to the individual-level mechanism linking digital change to performance, particularly the mediating role of job crafting within the context of Indonesian state-owned banks.

This study therefore aims to examine the effect of Digital Transformation on Job Performance, both directly and through the mediating role of Job Crafting, among employees of Indonesian BUMN banks. Theoretically, the study contributes to JD-R Theory by testing job crafting as a transmission mechanism within an institutionally regulated banking context. Practically, the findings are expected to inform BUMN bank management on the relative importance of digital infrastructure investment versus behavioral-adaptation programs in driving employee performance.

LITERATURE REVIEW AND HYPOTHESIS FORMULATION

Job Demands-Resources Theory

JD-R Theory, first formulated by Demerouti et al. (2001) and subsequently refined by Bakker et al. (2023), posits that employee outcomes are shaped by the interplay between job demands, which drain energy, and job resources, which support goal achievement and personal growth. The theory identifies two pathways: a health impairment process, in which excessive demands lead to exhaustion and reduced performance, and a motivational process, in which resources foster engagement and performance. A key extension of JD-R Theory recognizes job crafting as the behavioral mechanism through which employees proactively rebalance demands and resources to sustain engagement and performance (Bakker et al., 2023). In this study, Digital Transformation is conceptualized as a work condition that introduces both new demands and new resources, while Job Crafting represents the proactive individual response that determines whether these changes translate into improved Job Performance.

Digital Transformation

Digital Transformation refers to the process of triggering significant organizational change through the integration of information, computing, and communication technologies (Vial, 2019), extending beyond mere technical tool adoption toward dynamic changes in how organizations operate (Cosa & Torelli, 2024). At the individual level, this study defines Digital Transformation as employees' experience of how organizational digital-change initiatives influence their work demands, tools, and daily work processes. It was measured using the Digital Transformation Scale (Pettersson et al., 2024), which captures three progressive levels: digitization, digitalization, and organizational-level digital transformation.

Job Performance

Job performance refers to employee behaviors relevant to organizational goals (Campbell, 1990) that are under the direct control of the individual (Motowidlo & Kell, 2012). This study focuses on In-Role Behavior (IRB), the formally recognized core-task performance dimension, distinguished from discretionary organizational citizenship behaviors (Williams & Anderson, 1991), given the KPI-driven nature of performance evaluation in the banking sector (López-Cabarcos et al., 2021).

Job Crafting

Job crafting is defined as the self-initiated, proactive behavior through which employees adjust their job demands and resources to align work with their capabilities and goals (Wrzesniewski & Dutton, 2001; Tims et al., 2012), a process particularly relevant amid digital change (Chen, 2025). This study focuses on two promotion-oriented dimensions, increasing structural job resources and increasing challenging job demands, which meta-analytic evidence associates more consistently with performance outcomes than prevention-oriented crafting dimensions (Boehnlein & Baum, 2020).

Hypothesis Development

H1: Digital Transformation has a positive and significant effect on Job Performance.

Within JD-R Theory, digital transformation functions as a job resource that facilitates goal attainment and reduces workload (Bakker et al., 2023). Prior studies show that digital transformation enhances employee performance through process optimization and productivity gains (Lou et al., 2024; Shwedeh et al., 2023; Guzmán-ortiz et al., 2020). In the context of institutionally driven digital transformation within BUMN banks, employees are systematically exposed to digital tools and standardized processes designed to enhance task execution.

H2: Digital Transformation has a positive and significant effect on Job Crafting.

Digital transformation can also function as a novel job demand that compels employees to mobilize personal resources through job crafting (Zeshan et al., 2025). Empirical evidence shows that digital-AI transformation has a significant positive effect on job crafting behavior (Sha & Chai, 2025), reflecting employees' proactive restructuring of tasks and work approaches in response to technological change (Zhang & Liu, 2020).

H3: Job Crafting has a positive and significant effect on Job Performance.

Through the motivational process of JD-R Theory, job crafting is expected to enhance work meaningfulness and engagement, thereby improving job performance (Van Wingerden et al., 2017). Prior research shows that job crafting enhances performance through increased social capital (Zhang & Liu, 2020) and supports employee engagement amid digitalization in the banking sector (Zeshan et al., 2025).

H4: Job Crafting mediates the effect of Digital Transformation on Job Performance.

Job crafting is theorized to function as a mediator that converts the potential of digital resources into tangible performance gains (Chen, 2025). Without active employee adjustment, digital-technology adoption risks becoming a burden rather than a performance driver (Zeshan et al., 2025).

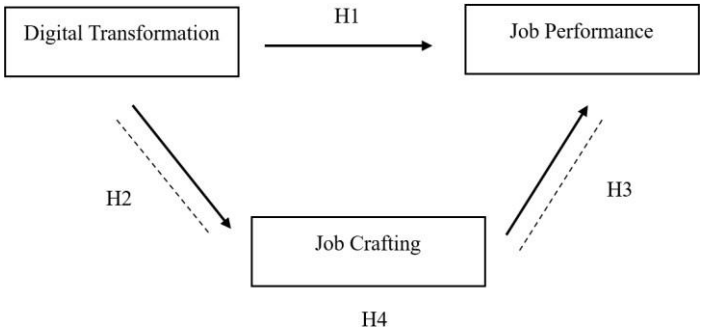


Figure 1. Research Model

RESEARCH METHODS

This study employed a quantitative survey design to examine the effect of Digital Transformation on Job Performance, with Job Crafting as a mediating variable (Sugiyono, 2023). Data were collected from employees of Indonesian State-Owned (BUMN) Banks affiliated with the Himbara network (Bank Mandiri, BRI, BNI, and BTN) through an online questionnaire distributed via Google Forms in May 2026.

The population comprised active, non-outsourced employees (permanent or fixed-term) of BUMN banks. A purposive sampling technique was applied, with inclusion criteria requiring a minimum tenure of six months to ensure sufficient exposure to organizational digital transformation. The minimum sample size was determined using Cochran's formula ($Z = 1.96, p = q = 0.5, e = 0.10$), yielding a requirement of 96 respondents; data collection produced 97 valid responses, consistent with Fritz and MacKinnon's (2007) recommendation of 71–100 respondents for bootstrapping-based mediation analysis.

All variables were measured using validated five-point Likert-scale instruments. Digital Transformation was measured with a 17-item scale adapted from Pettersson et al. (2024). Job Crafting was measured with a 6-item scale adapted from Tims et al. (2012) and validated by Ingusci et al. (2021), focusing on increasing structural job resources and increasing challenging job demands. Job Performance was measured with a 7-item In-Role Behavior scale adapted from Williams and Anderson (1991) and validated by López-Cabarcos et al. (2022).

Instrument validity was tested using Pearson Product Moment correlation, and reliability was assessed using Cronbach's Alpha. Classical assumption tests, normality, multicollinearity, and heteroscedasticity, were conducted to verify the suitability of the regression model. Hypothesis testing was conducted using PROCESS Macro Model 4 (Hayes, 2018), with robust HC4 standard errors applied to correct for heteroscedasticity, and the indirect effect was tested using percentile bootstrapping with 5,000 resamples at a 95% confidence interval.

RESULTS AND DISCUSSION

Data were obtained from 97 respondents, distributed relatively evenly across the four Himbara banks (Bank Mandiri 28.9%, BRI 27.8%, BTN 22.7%, BNI 20.6%), with a near-balanced gender composition (51.5% male, 48.5% female) and a predominantly tenured workforce (77.3% with three or more years of service). All research instruments were declared valid, as every item's r-count exceeded the r-table value of 0.1996, and reliable, with Cronbach's Alpha values of 0.961 (Digital Transformation), 0.827 (Job Crafting), and 0.857 (Job Performance).

Classical assumption testing indicated that the residuals departed from normality and that heteroscedasticity was present in the Job Crafting variable, both attributable to a ceiling effect arising from respondents' self-reported scores clustering toward the upper end of the scale, a pattern consistent with social desirability bias in KPI-driven work settings (Podsakoff et al., 2003). No multicollinearity was detected ($Tolerance = 0.236 > 0.10$; $VIF = 4.229 < 10$). To address these conditions, hypothesis testing was conducted using robust HC4 standard errors combined with 5,000-resample bootstrapping, which does not depend on the assumption of normality.

The overall model demonstrated strong explanatory power: Digital Transformation explained 76.35% of the variance in Job Crafting ($R^2 = 0.7635, F = 243.42, p < 0.001$), while Digital Transformation and Job Crafting jointly explained 62.43% of the variance in Job Performance ($R^2 = 0.6243, F = 69.87, p < 0.001$).

Table 1. Summary of Hypothesis Testing Results

Hypothesis	Path	Coefficient	t-value	P-value	95% Bootstrap CI	Conclusion
H1	Digital Transformation → Job Performance	0.20222	2.2734	0.0253	-	Accepted
H2	Digital Transformation → Job Crafting	0.3220	15.6019	0.0000	-	Accepted
H3	Job Crafting → Job Performance	0.2862	1.1567	0.2503	-	Rejected
H4	Digital Transformation → Job Crafting → Job Performance (indirect)	0.0921	-	-	[-0.0090, 0.2347]	Rejected

Source: PROCESS Macro Model 4 output, HC4 robust estimator, 5,000-resample bootstrap.

Digital Transformation directly enhances Job Performance (H1 accepted). Digital Transformation showed a significant positive direct effect on Job Performance that remained robust after HC4 correction. This is consistent with JD-R Theory, in which digital tools and infrastructure function as job resources that support task completion and productivity (Bakker et al., 2023), and aligns with Lou et al. (2024), who reported a positive digital transformation–performance relationship in ICT companies. The finding is reinforced by the sample's tenure profile, in which employees with more than five years of service (47.4%) have experienced the full progression of BUMN banks' digital rollout and are therefore well positioned to benefit directly from mature, institutionally embedded infrastructure. Open-ended responses corroborated this pattern, with employees attributing sustained performance to organizational systems and support rather than personal initiative.

Digital Transformation significantly enhances Job Crafting (H2 accepted). Digital Transformation also showed a strong, significant positive effect on Job Crafting. Rather than implying that new digital demands automatically expand employees' resource pools, this finding suggests that digitally changing work environments create conditions that encourage employees to adjust their tasks and work methods to align with emerging requirements, consistent with recent evidence that digitalization increases job crafting in the banking sector (Zeshan et al., 2025; Sha & Chai, 2025). Respondents' predominant tenure and near-balanced gender composition suggest this adaptive response is broadly shared across the BUMN banking workforce rather than confined to a particular group, and open-ended responses pointed to continuous self-directed learning as the dominant adaptation strategy.

Job Crafting does not significantly enhance Job Performance (H3 rejected). After robust HC4 correction, Job Crafting did not have a statistically significant effect on Job Performance, diverging from the marginal significance suggested under conventional OLS estimation, a discrepancy attributable to an underestimated standard error caused by heteroscedasticity and restricted variance in the Job Crafting data. This is better interpreted as a context-specific boundary condition of JD-R Theory rather than a contradiction of it: performance in Himbara banks is evaluated against predetermined KPIs and formal job descriptions, so proactive self-adjustment among a predominantly tenured workforce may be normalized into daily routine rather than translating into measurable incremental performance gains. Open-ended responses supported this interpretation, as employees consistently attributed sustained performance to organizational and structural supports rather than individual crafting initiative.

Job Crafting does not significantly mediate the effect of Digital Transformation on Job Performance (H4 rejected). The bootstrapped indirect effect was not significant, as the 95% confidence interval crossed zero, a logical consequence of H3's rejection: because Job Crafting does not significantly predict Job Performance, it cannot function as a valid transmission channel regardless of the strength of the Digital Transformation–Job Crafting path confirmed under H2. This

diverges from Chen (2025), who found that job crafting mediated the relationship between openness to digital transformation and adaptive performance, suggesting that the mediating role of job crafting may be contingent on outcome type and work context rather than universally generalizable. Taken together, these results indicate a direct-effect-only model, in which Digital Transformation enhances Job Performance predominantly through mature organizational infrastructure rather than through employees' proactive job crafting.

CONCLUSION

This study examined the effect of Digital Transformation on Job Performance, with Job Crafting as a mediating variable, among employees of Indonesian BUMN Banks. Digital Transformation was found to have a significant positive direct effect on Job Performance (H1 accepted) and on Job Crafting (H2 accepted). However, Job Crafting did not significantly affect Job Performance once robust HC4 estimation was applied (H3 rejected), and consequently did not mediate the relationship between Digital Transformation and Job Performance (H4 rejected). Together, these findings confirm a direct-effect-only model, in which employee performance improvements in BUMN banking stem predominantly from mature organizational-level digital infrastructure rather than from individual behavioral adaptation.

Theoretically, this study identifies a boundary condition of JD-R Theory: in institutionally mature and highly regulated digital environments, organizational resources may enhance performance directly, without depending on employees' proactive job-crafting behavior. It also offers a methodological contribution by demonstrating how conventional OLS estimation can produce false-positive significance under ceiling effects and heteroscedasticity, conditions common in Likert-scale self-report data, and how robust HC4 estimation corrects such bias.

Practically, BUMN bank management is encouraged to continue prioritizing investment in mature, user-friendly digital infrastructure and sustained technical training, given its demonstrated capacity to directly improve performance. Job crafting initiatives should not be relied upon as a primary lever for improving KPI-based performance, but remain valuable for sustaining employee engagement, well-being, and long-term adaptability. Organizations are further encouraged to complement self-report instruments with objective performance indicators to reduce the influence of social desirability bias in future evaluation.

This study is limited by its cross-sectional design, reliance on self-report data susceptible to social desirability bias, a purposive sample confined to four Himbara banks that limits generalizability, and the use of a reduced Job Crafting scale covering only two of its four original dimensions. Future research is encouraged to employ longitudinal designs, incorporate objective performance measures, and examine both in-role and extra-role performance dimensions across a broader range of organizational and industry contexts.

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