



Digital leadership and innovation performance in MSMEs: The mediating roles of job crafting and organizational commitment

 Reijeng Tabara¹

 Udin Udin²⁺

 Radian Dananjoyo³

¹Faculty of Social Sciences and Education, Universitas Nani Bili Nusantara, 98414 West Papua, Indonesia.

¹Email: regentabara@gmail.com

^{2,3}Faculty of Economics and Business, Universitas Muhammadiyah Yogyakarta, Daerah Istimewa Yogyakarta 55183, Indonesia.

²Email: udin@umy.ac.id

³Email: radian.dananjoyo@umy.ac.id



(+ Corresponding author)

ABSTRACT

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Innovation performance (IP) has become a critical determinant of competitiveness for Micro, Small, and Medium Enterprises (MSMEs), particularly in regions undergoing rapid digital transformation such as Southwest Papua, Indonesia. Despite growing interest in digital leadership (DL), empirical evidence explaining how DL translates into innovation outcomes in MSMEs remains limited. This study aims to examine the effect of DL on IP by investigating the mediating roles of job crafting (JC) and organizational commitment (OC). Using a quantitative cross-sectional research design, data were collected from 144 MSME actors and analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The results demonstrate that DL significantly and positively influences IP, JC, and OC, highlighting the strategic role of leadership in promoting digital-oriented work behaviors and strengthening employees' psychological attachment to their organizations. However, JC does not show a significant effect on IP and therefore does not mediate the relationship between DL and IP. In contrast, OC emerges as a significant predictor of IP and serves as a key mediating mechanism through which DL enhances IP. These findings extend the leadership and innovation literature by clarifying the internal organizational processes that enable digital leadership to generate innovation outcomes within MSMEs. From a practical standpoint, the study suggests that strengthening DL capabilities and fostering OC are crucial strategies for improving IP. Policymakers and development agencies are encouraged to design targeted training programs and digital transformation initiatives that reinforce DL capacity and employee OC in MSMEs.

Contribution/Originality: This study advances DL research by demonstrating that OC is the key mechanism through which DL enhances IP in MSMEs, while JC plays a limited role. Evidence from MSMEs in Southwest Papua, Indonesia, further refines innovation models within the context of a developing economy.

1. INTRODUCTION

In both developed and developing countries, Micro, Small, and Medium-Sized Enterprises (MSMEs) are essential to sustaining economic growth (Ndiaye, Razak, Nagayev, & Ng, 2018). Data indicate that MSMEs contribute about 50% to the Gross Domestic Product (GDP) and employ roughly 70% of the workforce (Yahaya & Nadarajah, 2023). In India, MSMEs make up 8% of GDP, produce 45% of manufacturing output, and account for 40% of exports, employing over 60 million people (Singh, Chandrashekar, Hillemane, Sukumar, & Jafari-Sadeghi, 2022). In Indonesia,

MSMEs dominate the business structure, representing 99.9% of total business units, contributing 60.34% to GDP, and employing 97.22% of the workforce (Surya et al., 2021). Nevertheless, MSMEs often face sustainability and competitiveness challenges due to limited human resources, inadequate managerial skills, and poor adaptability to changing business conditions (Nudurupati et al., 2022). From this perspective, human resource-related factors such as digital leadership (DL), job crafting (JC), and organizational commitment (OC) are crucial in enhancing the innovation performance (IP) of MSME actors, enabling them to endure and prosper in a constantly shifting market environment (Eyiusta & Esen, 2026; Hyrkkänen, Vanharanta, Kuusisto, Polvinen, & Vartiainen, 2023).

This phenomenon is also evident among MSME actors in Sorong City, Southwest Papua, Indonesia, which has emerged as one of the growth centers for MSMEs in Eastern Indonesia. Although the number of MSMEs has increased in the post-COVID-19 period, many entrepreneurs continue to face difficulties in sustaining their businesses (Agussalim, Santosa, Roza, & Asmeri, 2019). Common challenges include low levels of digital literacy and insufficient training to foster proactive and inclusive work roles (Rachmadana, Pahmi, Sabaria, Hamsiah, & De Fretes, 2024). This situation underscores the need to understand key factors influencing IP, such as DL, JC, and OC (Achmad & Wiratmadja, 2025; Bokhari, Ali, Yaqub, Salam, & Park, 2024).

Avolio, Kahai, and Dodge (2000) and Zeike, Bradbury, Lindert, and Pfaff (2019) highlight DL as a strategic competency that enables organizations to manage digital transformation, foster creativity, and enhance IP (Antara, Martini, & Sugianingrat, 2024; Romero & Mammadov, 2025). Leaders with strong digital competencies not only understand technology but also inspire others, facilitate cross-functional collaboration, and leverage data-driven strategies to create sustainable innovation (Çetinkaya & Sürücü, 2025). On the other hand, IP is influenced not only by strategy and technology but also by employees' active engagement in redesigning their jobs in line with their potential and personal aspirations, a process referred to as JC (Wrzesniewski, LoBuglio, Dutton, & Berg, 2013). This practice helps employees modify their work relationships, which boosts intrinsic motivation, creativity, and innovative efforts (Han, Chen, Wang, & Xu, 2025). Within this context, JC may serve as a mechanism linking DL to innovation outcomes, as effective digital leaders tend to provide space for employees to achieve innovative success (Piao & Hahn, 2025).

The success of digital transformation broadly depends on OC (Qiao, Li, & Hong, 2024; Ye, 2025). Moreover, Braojos, Weritz, and Matute (2024) investigated how DL, along with a sustainable learning environment, influences OC in medium and large enterprises in Spain. Strong OC can reinforce employees' dedication to realizing the innovation vision promoted by digital leaders (Shao, Xiong, & Shao, 2025). Meanwhile, Mollah, Ibrahim, Al Masud, and Chowdhury (2024) revealed that DL does not exert a significant direct effect on competitive performance (CP). In other words, the presence of DL alone is not sufficient to directly enhance competitiveness. However, DL can foster employees' emotional bonds with the organization, thereby strengthening commitment and positively influencing CP (Mollah, et al., 2024). Employees are more likely to invest their energy, creativity, and time in achieving common goals when they feel emotionally attached and part of the organization (Morin, Vandenberghe, Lee, & Gillet, 2025). Thus, OC can effectively mediate the relationship between DL and IP (Qiao et al., 2024; Shao et al., 2025).

Although prior studies have examined DL and IP, most have focused on large organizations, while empirical evidence from MSMEs remains limited, with minimal integration of mediating mechanisms (Sagala & Öri, 2024; Wojtczuk-Turek, 2025). To address this gap, the present study integrates Dynamic Capabilities Theory (DCT) and the Job Demands–Resources (JD-R) model to explain how DL enhances IP among resource-constrained MSMEs (Ahmed, 2024; Cadrazco-Parra, Zapata-Domínguez, & Lombana-Coy, 2020). DL is conceptualized as a higher-order dynamic capability that enables organizational reconfiguration, whereas JC and OC function as key employee-level resources that facilitate innovation. This integrated theoretical lens provides a novel explanation of innovation in MSMEs undergoing continuous digital transformation, particularly in underexplored regional contexts such as Sorong City, Southwest Papua, Indonesia.

2. LITERATURE REVIEW

2.1. *Dynamic Capabilities Theory (DCT)*

DCT, developed by Teece, Pisano, and Shuen (1997), is a strategic management framework that explains how firms sustain and achieve competitive advantage in dynamic environments. DCT emphasizes that, beyond ordinary operational capabilities, organizations require dynamic capabilities, namely the abilities to sense threats and opportunities, seize opportunities through effective resource mobilization, and reconfigure assets and processes to respond to environmental change (Al-Moaid & Almarhdi, 2024). These capabilities enable firms to engage in continuous innovation, integrate new technologies, and realign internal and external resources to maintain strategic flexibility (Bindeeba, Tukamushaba, & Bakashaba, 2025; Liu, Chung, Chiu, & Chen, 2024).

Within organizational contexts, DCT offers a rigorous analytical viewpoint for understanding how leadership and managerial practices affect IP (Helfat, 2011; Teece et al., 1997). Leaders who cultivate a digital mindset, encourage strategic experimentation, and allocate resources effectively can strengthen a firm's dynamic capabilities, thereby enhancing its capacity for adaptation and innovation (Helfat, 2011). Recent studies further suggest that in resource-constrained environments such as MSMEs, DL functions as a higher-order dynamic capability, enabling organizations to leverage limited technological and human resources to foster innovation and sustain competitiveness (Benitez, Arenas, Castillo, & Esteves, 2022; Wang, Park, & Gao, 2025).

2.2. *Job Demands–Resources (JD-R) Model*

The JD-R model proposed by Bakker and Demerouti (2008) explains how job resources and job demands jointly shape employee engagement, motivation, and proactive behavior. Job resources, such as autonomy, social support, feedback, and access to technology, enable employees to achieve work goals, mitigate job strain, and promote personal development (Scholze & Hecker, 2023; Velásquez, 2026). Within the JD-R lens, digital leadership can be conceptualized as a strategic job resource that empowers employees to engage in job crafting, namely the proactive adjustment of tasks, relationships, and work-related cognitions to better align work with their capabilities and aspirations (Zhu, Zhang, Xie, & Cao, 2022).

DCT and the JD-R model jointly provide a coherent theoretical foundation for explaining MSME innovation performance in resource-constrained digital transformation contexts (Bakker & Demerouti, 2008; Teece et al., 1997). From a DCT perspective, DL is conceptualized as a higher-order dynamic capability that enables MSMEs to sense digital opportunities, reoptimize human resources, and foster innovation. Complementing this view, the JD-R model positions DL as a strategic job resource that activates employee motivational processes through JC and OC. Integrating these two mediating constructs offers a comprehensive multilevel explanation of how leadership capabilities and employee motivational mechanisms, represented by JC and OC, jointly drive MSME innovation performance in digitally transforming environments.

2.3. *Innovation Performance*

Innovation performance (IP) is a key indicator for assessing an organization's success in responding to market dynamics and external environments through the implementation of new ideas (Gunday, Ulusoy, Kilic, & Alkan, 2011). Saunila (2017) defines IP as an organization's ability to generate and implement innovations in the form of processes, services, products, or business models that create added value and enhance organizational competitiveness. IP reflects the extent to which innovation is effectively utilized within an organization and is therefore critical for competitiveness and profitability (Prokhorova, Prodanova, Reznichenko, Vasiliev, & Kireev, 2016).

At the individual level, IP represents employees' success and ability to generate ideas, take action, and make contributions that support workplace innovation (Wang et al., 2025). From a strategic perspective, DCT emphasizes that organizations must develop the capacity to reconfigure internal resources and adapt in response to environmental

shifts (Teece et al., 1997). Drawing on these definitions and theoretical foundations, IP can be understood as the extent to which organizations strategically manage their innovation processes to generate value-creating changes and foster competitiveness. In the context of rapid technological change, IP serves as a vital indicator for achieving competitiveness and sustainability, particularly for MSMEs (Kő, Mitev, Kovács, Fehér, & Szabó, 2022).

2.4. Digital Leadership

Digital leadership (DL) is a leadership approach developed to address the rapidly accelerating digital transformation occurring within organizations (Avolio et al., 2000; Sawy, Amsinck, Kræmmergaard, & Vinther, 2016). It has evolved from both traditional and contemporary leadership theories, including transformational leadership (Bass, 2008), which emphasizes vision, inspiration, and organizational change, as well as from competency-based perspectives on technology and change management. The concept of DL has increasingly attracted scholarly attention as a critical determinant of organizational success in the digital era.

For example, Araujo, Priadana, Paramarta, and Sunarsi (2021) and Turyadi, Zulkifli, Tawil, Ali, and Sadikin (2023) define DL as a leader's capacity to effectively manage and utilize digital technologies in decision-making and organizational innovation. DL is further conceptualized as a leadership style that leverages digital communication channels to create value for stakeholders, thereby enabling organizations to implement necessary digital transformations Morgül and Findikli (2023). Digital leaders are expected to possess practical skills for leading individuals, teams, or organizations. While they do not need to be technical experts, they should develop a foundational understanding of digital technologies to shape and clearly communicate their vision (Gutkowski, 2022).

2.5. Job Crafting

According to Wrzesniewski et al. (2013), job crafting (JC) is a proactive process in which individuals voluntarily modify aspects of their work, including tasks, social interactions, and perceptions of their jobs, to better align with their interests and values. Similarly, Tims and Bakker (2010) define JC as employees' voluntary modification of job characteristics to better suit their personal needs and preferences. Wang et al. (2025) further conceptualize JC as a proactive process whereby employees independently and voluntarily alter job characteristics in terms of tasks, social interactions, and work-related perceptions. To maintain a balance between workplace demands and available resources, Ngo and Badri (2025) also describe JC as a proactive activity through which employees adjust their work in accordance with their needs and aspirations.

2.6. Organizational Commitment

Organizational commitment (OC) is defined by Meyer and Allen (2012) as an individual's inclination to remain with an organization and exert substantial effort to achieve its objectives. Meyer, Stanley, Herscovitch, and Topolnytsky (2002) further emphasize an individual's willingness to stay due to psychological attachment to the organization, its values, and its goals. Such commitment significantly influences key outcomes at both the individual and organizational levels (Bodhi, Chaturvedi, & Purohit, 2025).

OC encompasses investments made in the organization, reflected in continuance commitment, a sense of obligation, reflected in normative commitment, and emotional attachment, reflected in affective commitment. Together, these dimensions support an organizational climate that encourages green innovation and sustainable practices (Zhao, Sanmugam, & Aravindan, 2025). This form of commitment motivates both employees and leaders to actively engage in green initiatives and support corporate sustainability goals.

Crespo, Domínguez, and Guzmán (2025) describe OC as the degree of employee dedication and involvement with the organization, which is essential for enhancing organizational resilience. Accordingly, OC is regarded as a critical factor that strongly influences an organization's capacity to respond to crises and contributes to improved overall resilience. Consistent with prior literature, Meyer et al. (2002) and Solinger, van Olffen, and Roe (2008) identify three

primary dimensions of OC: normative commitment, reflecting a moral obligation to remain and contribute; continuance commitment, reflecting the perceived costs of leaving; and affective commitment, reflecting emotional attachment to the organization.

3. HYPOTHESES DEVELOPMENT

3.1. *The Digital Leadership Effect on Innovation Performance, Job Crafting, and Organizational Commitment*

Wang et al. (2025) indicate that DL not only facilitates the digitalization of platforms and processes but also directly influences the level of corporate innovation. Similarly, earlier studies by Wang, Hong, Li, and Gao (2020) demonstrate that digital leaders promote innovation through the effective use of technology, data-driven decision-making, and the development of an organizational culture that is receptive to digital transformation. DL is therefore considered to play a significant role in enhancing IP by advancing digital transformation and cultivating an innovation-oriented organizational culture (Mollah et al., 2024).

Moreover, digital leaders are expected to possess a transformational vision as well as the capability to effectively lead technological change in order to optimize innovation outcomes (Sawy et al., 2016). Empirical evidence further shows that DL significantly improves IP by driving digital transformation within organizations, encompassing both the adoption of new technologies and the promotion of employees' innovative work behaviors (Benitez et al., 2022). Conversely, Kane, Phillips, Copulsky, and Andrus (2019) find that a lack of skilled digital leaders can substantially hinder the success of digital transformation and innovation initiatives.

According to DCT, to maintain competitiveness in a changing environment, businesses must develop dynamic capabilities that enable them to integrate, adapt, and reconfigure both external and internal assets (Teece et al., 1997). Furthermore, DL enhances IP by facilitating the digitalization of organizational platforms. Empirical evidence from Benitez et al. (2022) and Wang et al. (2025) indicates that DL significantly improves corporate IP.

H₁: DL has a positive effect on IP.

DL promotes effective resource allocation, knowledge sharing, and collaboration, thereby creating a work environment that motivates employees to proactively adjust their jobs in response to evolving work demands (Edelmann, Boen, & Fransen, 2020; Zhu et al., 2022). JC reflects employees' proactive efforts to modify their tasks, relationships, or work-related cognitions in alignment with both personal and organizational goals. The JD-R model (Bakker & Demerouti, 2008; Scholze & Hecker, 2023) posits that job resources, such as social support, access to technology, and autonomy, enable employees to engage in proactive behaviors, including JC. Within this framework, DL can be conceptualized as a strategic job resource that facilitates and empowers employees to craft their work more effectively (Zhu et al., 2022).

H₂: DL has a positive effect on JC.

Qiao et al. (2024) demonstrate that DL substantially improves employee outcomes by promoting digital transformation and serving as an important mechanism that amplifies the positive effects of leadership. Similarly, Li, Li, Ma, and Liu (2025) report that digital leaders foster employees' emotional attachment to their organizations by adopting leadership practices that strategically leverage digital technologies. Their findings further indicate that DL facilitates positive organizational changes aligned with the needs and characteristics of younger generations of employees, particularly their aspirations for respect, autonomy, and self-actualization.

From a DCT perspective (Teece et al., 1997), DL constitutes an organizational capability that enables the effective adoption of digital technologies while shaping work practices and organizational cultures that reinforce shared values, emotional engagement, and resilience (Crespo et al., 2025; Mollah, et al., 2024; Raja, Rozaini, Prasetya, Setiawan, & Bachtiar, 2024). Alignment between leadership practices and employee aspirations, especially among MSME actors who value autonomy, recognition, and self-actualization, further strengthens OC. Crespo et al. (2025) also emphasize that OC is a central factor in building resilience and achieving long-term success, particularly for

MSMEs. In this regard, DL enhances employee commitment by fostering shared values, strengthening emotional engagement, and cultivating an inclusive work environment (Edelmann et al., 2020; Qiao et al., 2024).

H₃: DL has a positive effect on OC.

3.2. The Effect of Job Crafting on Innovation Performance

Previous research indicates that JC, particularly through seeking resources and challenges, significantly enhances performance, whereas reducing job demands tends to negatively affect performance, especially when such reductions are poorly managed (Dubbelt, Demerouti, & Rispens, 2019). Consistent with this view, Wang et al. (2025) find that JC positively influences employees' innovative performance, primarily through task and cognitive crafting. In contrast, relational crafting is not significantly associated with innovation, possibly due to centralized and rigid organizational structures, especially in manufacturing contexts, which constrain communication and collaboration and thereby limit the influence of relational crafting on innovation.

From the JD-R perspective (Bakker & Demerouti, 2008; Scholze & Hecker, 2023), job resources such as autonomy, feedback, and access to technology stimulate proactive behaviors, including JC, which in turn enhance IP. From a DCT perspective, JC enables employees to leverage organizational digital capabilities to optimize work processes, effectively utilize digital tools, and foster creativity, thereby translating effective DL into improved IP (Dubbelt et al., 2019; Lee & Lee, 2018; Slemp & Vella-Brodrick, 2013; Wang et al., 2025).

H₄: JC has a positive effect on IP.

3.3. The Effect of Organizational Commitment on Innovative Performance

OC has been shown to exert a significant positive influence on IP (Tian, Iqbal, & Akhtar, 2023; Udin, Sukirno, & Dananjoyo, 2023). For instance, a survey of 250 MSMEs in Aguascalientes revealed that OC significantly affected learning orientation, which in turn enhanced innovation levels (Martínez, Vega, & Eternod, 2018). Although OC does not always exert a direct effect on innovation, it shapes planning and control processes that stimulate process innovation and subsequently product innovation, thereby improving overall operational performance (De Clercq, Thongpapanl, & Dimov, 2011; Iqbal et al., 2021; Tarigan, 2018).

From a DCT perspective, OC represents an organizational capability that enables employees and teams to effectively leverage digital resources (Teece et al., 1997). Highly committed employees are more likely to engage in behaviors that support digital adoption, innovative activities, and knowledge sharing, through which OC is translated into enhanced IP.

H₅: OC has a positive effect on IP.

3.4. Job Crafting as a Mediator

Wrzesniewski and Dutton (2001) noted that JC is a proactive activity in which employees willingly modify their task responsibilities, social relationships, and work-related cognitions to better align their jobs with their interests and values. They emphasized that forms of JC, such as task and cognitive crafting, enhance work meaning and identity, which in turn foster innovative behaviors. Moreover, Rudolph, Katz, Lavigne, and Zacher (2017) confirmed that JC significantly influences a range of work outcomes, including creativity and innovation, by serving as a mechanism linking work environment factors to these outcomes. Similarly, Zhang and Parker (2019) argued that JC enhances creativity and performance by promoting intrinsic motivation and a sense of autonomy. These findings indicate that JC can function as an effective mechanism linking external factors, such as DL, to employee innovation. For instance, Zhu et al. (2022) demonstrated that DL enhances JC by providing resources and technological support, which subsequently increases creativity and innovative outcomes. Wang et al. (2025) further found that JC mediates the effect of DL on IP, offering additional empirical support for this relationship.

Because employees engaged in JC modify their job duties to better match their interests and strengths, they are typically more creative and innovative. Earlier, Bakker and Demerouti (2008), through the JD-R model, explained that job resources provided by leaders, such as autonomy, feedback, and technological support, enable employees to engage in JC, which in turn enhances creativity and innovation. This process is further facilitated by digital leaders who provide essential resources and ongoing support (Wang et al., 2025; Xin, Yu, Gao, Liu, & Luo, 2024).

H₅: JC mediates the relationship between DL and IP.

3.5. Organizational Commitment as a Mediator

DCT, as proposed by Teece et al. (1997), posits that OC enables organizations to optimally leverage DL and digital resources, thereby creating an environment that supports employees in deploying digital capabilities to achieve IP (Jeng & Pak, 2016). Gunawan, Yuniarsih, Sobandi, and Muhidin (2023) demonstrate that DL may not directly influence IP; rather, its effect becomes significant when mediated by OC. This finding underscores the importance of fostering commitment within organizations to achieve innovation goals (Gunawan et al., 2023; Sunarsi et al., 2020). Similarly, Amankona, Yi, Tackie, Tweneboa Kodua, and Odai (2025) note that commitment to digital principles is a key factor linking responsible digital innovation (RDI) to IP, suggesting that OC strengthens the relationship between a supportive digital environment and innovative outcomes. In addition, Qiao et al. (2024) find that OC amplifies the positive effects of leadership on employee outcomes by serving as a mediating mechanism between DL and employee performance.

H₆: OC mediates the relationship between DL and IP.

4. RESEARCH METHODS

A quantitative research approach was employed to examine the proposed model (Creswell & Creswell, 2018). A cross-sectional design was adopted to collect data at a single point in time, and path analysis was used to investigate the proposed relationships among variables (Eden & Nielsen, 2020). Primary data were collected through questionnaires administered to MSME owners, managers, and leaders in Sorong City, Indonesia. The data reflect respondents' perceptions of the key variables under investigation.

The questionnaire was adapted from previously validated measurement scales and consisted of multiple items representing the core constructs of the study. Purposive sampling was applied to ensure data relevance and quality, with respondents selected based on the following criteria: (1) the business met the official MSME classification, (2) it had been in operation for at least six months, (3) it had adopted digital technology in its daily business activities, and (4) the respondent held a role in organizational decision-making. Based on these criteria, 150 questionnaires were distributed, and 144 valid responses were collected over a two-month period, resulting in a response rate of 96%, which is considered adequate for subsequent analysis.

Table 1. Demographic characteristics of respondents.

Respondent characteristics	Frequency	Percent
Gender		
Male	65	45.1
Female	79	54.9
Age (Years)		
< 25	10	6.9
26-35	49	34.0
36-45	38	26.4
46-55	32	22.2
>55	15	10.4
Education level		
Primary/Junior high school	13	9
Senior high school/Vocational high school	41	28.5

Respondent characteristics	Frequency	Percent
Diploma	18	12.5
Bachelor's degree	62	43.1
Master's degree	10	6.9
Business age		
Less than 1 year	8	5.6
1–3 years	44	30.6
4–6 years	37	25.7
More than 6 years	55	38.2
Technology usage		
Not yet using technology	56	38.9
Using basic technology (Mobile phones, social media)	82	56.9
Using intermediate technology (Websites, marketplaces)	6	4.2
Total	144	100%

The majority of respondents in this study, as presented in Table 1, were female (54.9%), while males accounted for 45.1%. This finding underscores the significant role of women in managing MSMEs in Sorong City and reflects a broader national trend in which women are increasingly prominent in entrepreneurial activities. In terms of age, most respondents were within the productive age range, particularly 26–35 years (34.0%) and 36–45 years (26.4%). This distribution indicates that MSME actors in Sorong City are predominantly young and middle-aged individuals, who generally exhibit higher energy levels and greater adaptability to technological change.

Respondents aged over 55 years accounted for 10.4% of the sample, suggesting that although smaller in proportion, senior entrepreneurs continue to play an active role and contribute to the MSME sector. With respect to educational background, a substantial proportion of respondents possessed higher education qualifications, with 43.1% holding university degrees and 12.5% holding diplomas. This indicates that many MSME actors have sufficient academic knowledge and managerial capabilities to support their business operations. Regarding technology usage, most respondents (56.9%) reported using basic digital tools, such as social media platforms and mobile phones, to support their businesses. This finding suggests that simple digital technologies constitute the primary means of marketing and business promotion among MSME owners in Sorong City.

Table 2. Measurement of constructs.

Constructs	Number of items	Sample item	Source
Digital leadership (DL)	6	I am able to inspire others' enthusiasm for digital transformation.	Wang, Lin, and Sheng (2022) and Zeike et al. (2019)
Job crafting (JC)	15	I try to view my job as an important part of a larger purpose.	Slemp and Vella-Brodrick (2013)
Organizational commitment (OC)	9	I feel a strong emotional attachment to this organization.	Allen and Meyer (1990)
Innovation performance (IP)	9	Transforming innovative ideas into useful applications.	Janssen (2000) and Wang et al. (2025)

4.1. Research Instrument

DL, as shown in Table 2, was assessed with six items adapted and validated from Wang et al. (2022) and Zeike et al. (2019). One example item is, “*I am able to inspire others' enthusiasm for digital transformation.*” The construct showed high internal consistency, with a Cronbach's alpha (CA) of 0.95, indicating excellent reliability.

JC was assessed with fifteen perception-based items developed and validated by Slemp and Vella-Brodrick (2013). One example item is, “*I try to view my job as an important part of a larger purpose.*” The construct showed high internal consistency, with a CA of 0.96.

OC was assessed with nine items developed and validated by Allen and Meyer (1990). One example item is, “*I feel a strong emotional attachment to this organization.*” The construct showed high internal consistency, with a CA of 0.95.

IP was assessed with a nine-item scale developed by Janssen (2000) and Wang et al. (2025). One example item is “*Transforming innovative ideas into useful applications.*” The construct showed high internal consistency, with a CA of 0.97.

A five-point Likert scale, from 1 (strongly disagree) to 5 (strongly agree), was utilized to examine all items in this study.

4.2. Data Analysis Tool

To examine the relationships among variables in the proposed research model, this study employed the Structural Equation Modeling–Partial Least Squares (PLS-SEM) approach. PLS-SEM is widely recognized as a robust path modeling technique, particularly appropriate for studies with relatively small sample sizes (Hair, Risher, Sarstedt, & Ringle, 2019). In addition, PLS-SEM does not require the assumption of multivariate normality and provides comprehensive insights into the strength and direction of relationships, as well as the relative contribution of individual indicators in justifying latent constructs.

Accordingly, the analysis was conducted using SmartPLS version 4.1 (Hair et al., 2019). As emphasized by Ghazali (2018), SmartPLS has become a widely adopted analytical tool in academic research due to its robustness compared with conventional regression techniques. The analysis proceeded in two stages: (1) evaluation of the outer (measurement) model, and (2) evaluation of the inner (structural) model. Furthermore, the bootstrapping procedure was applied to assess indirect impacts and examine the mediating roles of the variables.

5. RESULTS

5.1. Measurement Model Assessment

To assess validity and reliability in this quantitative study, average variance extracted (AVE), composite reliability (CR), and factor loadings were examined. As presented in Table 3, all indicators exhibited factor loadings above 0.50, indicating that each item adequately represents its corresponding latent construct. Moreover, the AVE and CR values for all research variables exceeded the recommended thresholds of 0.50 and 0.70, respectively, as suggested by Hair, Black, Babin, and Anderson (2014), thereby confirming satisfactory convergent validity and internal consistency reliability.

Table 3. Factor loadings, CA, CR and AVE.

Variables	Item	Loading	CA	CR	AVE
Digital leadership	DL01	0.891	0.959	0.96	0.828
	DL02	0.931			
	DL03	0.910			
	DL04	0.916			
	DL05	0.903			
	DL06	0.921			
Job crafting	JC01	0.877	0.964	0.967	0.668
	JC02	0.884			
	JC03	0.863			
	JC04	0.838			
	JC05	0.827			
	JC06	0.831			
	JC07	0.857			
	JC08	0.769			
	JC09	0.710			
	JC10	0.749			

Variables	Item	Loading	CA	CR	AVE
	JC11	0.776			
	JC12	0.843			
	JC13	0.834			
	JC14	0.804			
	JC15	0.779			
Organizational commitment	OC01	0.882	0.957	0.957	0.743
	OC02	0.860			
	OC03	0.839			
	OC04	0.864			
	OC05	0.885			
	OC06	0.875			
	OC07	0.833			
	OC08	0.854			
	OC09	0.865			
Innovation performance	IP01	0.898	0.973	0.975	0.824
	IP02	0.860			
	IP03	0.904			
	IP04	0.910			
	IP05	0.901			
	IP06	0.933			
	IP07	0.907			
	IP08	0.926			
	IP09	0.930			

To examine discriminant validity, the Fornell–Larcker criterion (Fornell & Larcker, 1981) was employed by estimating the square root of the AVE for each construct and comparing it with the correlations between latent variables (Hulland, 1999). As shown in Table 4, the square roots of the AVE values for all constructs exceed their corresponding inter-construct correlations, indicating satisfactory discriminant validity.

Table 4. Discriminant validity (Fornell-Larcker Criterion).

Constructs	Digital leadership	Innovation performance	Job crafting	Organizational commitment
Digital leadership (DL)	(0.911)			
Innovation performance (IP)	0.748	(0.908)		
Job crafting (JC)	0.839	0.720	(0.817)	
Organizational commitment (OC)	0.830	0.776	0.780	(0.862)

Subsequently, the Heterotrait–Monotrait (HTMT) ratio was evaluated due to concerns regarding the performance of the Fornell–Larcker criterion. The significance of this test lies in ensuring that the correlations between latent variables do not exceed 0.90. As presented in Table 5, the HTMT results indicate that no correlation between latent variables exceeded 0.90. This confirms that, based on the HTMT assessment, the latent variables in this study exhibit satisfactory discriminant validity. Therefore, these results provide robust support for the discriminant validity of the measurement model.

Table 5. Discriminant validity (Heterotrait-Monotrait ratio (HTMT)).

Constructs	Digital leadership	Innovation performance	Job crafting
Innovation performance (IP)	0.770		
Job crafting (JC)	0.870	0.738	
Organizational commitment (OC)	0.866	0.803	0.810

5.2. Structural Model Assessment

The study's results show that the R^2 values for JC, OC, and IP surpass the moderate benchmark (Hair et al., 2019; Legate, Ringle, & Hair, 2024). Specifically, JC, OC, and IP record R^2 values of 0.704, 0.690, and 0.646, respectively. These numbers indicate that a substantial portion of the disparity in the endogenous constructs can be explained by the model.

5.3. Direct and Indirect Effects

Using bootstrapping with 5,000 resamples, the results presented in Table 6 demonstrate the direct and indirect impacts of the suggested model. IP ($T = 16.968$, $P = 0.000$), JC ($T = 22.631$, $P = 0.000$), and OC ($T = 20.183$, $P = 0.000$) were all found to be positively and significantly impacted by DL. Interestingly, JC did not have a significant direct effect on IP ($T = 1.034$, $P = 0.301$) and did not mediate between DL and IP ($T = 1.025$, $P = 0.306$). In contrast, OC positively affected IP ($T = 2.736$, $P = 0.006$) and was a significant mediator linking DL and IP ($T = 2.588$, $P = 0.010$). These results imply that whereas DL directly increases IP, it also indirectly increases IP through the improvement of OC, but JC does not seem to play a mediating function.

Table 6. Path coefficients.

Hypotheses	Original sample	Standard deviation	T-statistics	P-values
DL $\rightarrow$ IP	0.748	0.044	16.968	0.000
DL $\rightarrow$ JC	0.839	0.037	22.631	0.000
DL $\rightarrow$ OC	0.830	0.041	20.183	0.000
JC $\rightarrow$ IP	0.188	0.182	1.034	0.301
OC $\rightarrow$ IP	0.451	0.165	2.736	0.006
DL $\rightarrow$ JC $\rightarrow$ IP	0.158	0.154	1.025	0.306
DL $\rightarrow$ OC $\rightarrow$ IP	0.375	0.145	2.588	0.010

6. DISCUSSION

6.1. The Digital Leadership's Influence on Innovation Performance

The findings indicate that DL exerts a significant and positive effect on IP. Specifically, higher levels of DL capabilities among MSME leaders are associated with greater organizational creativity. Digitally literate leaders generate tangible benefits by motivating their teams and organizations to engage in more effective innovation. These results align with the principles of DCT (Teece et al., 1997), which posit that an organization's ability to sense opportunities, seize them, and reconfigure resources effectively underpins sustainable competitive advantage. In this context, DL plays a pivotal role in strengthening dynamic capabilities.

These findings align with Wang et al. (2025), who note that digital leaders encourage employees to generate and implement creative ideas by serving both as facilitators and guides. Through this approach, digital leaders motivate and empower employees to develop competencies in utilizing digital technologies, ultimately enhancing innovative performance. DL thus emerges as a critical driver of innovation within MSMEs (Jufri & Hadiwibowo, 2025). By cultivating digital capabilities, fostering strategic agility, and leveraging social media, digital leaders can substantially enhance innovation and competitiveness in the digital era (Arip, Hartono, Kristiyana, & Setiawan, 2025). For MSMEs to thrive amid rapid technological advancement and shifting consumer demands, it is particularly essential to integrate DL with transformational leadership approaches and dynamic capabilities (Arip et al., 2025; Borah, Iqbal, & Akhtar, 2022; Huong, Hoang, Minh, & Hien, 2024; Jufri & Hadiwibowo, 2025; Muchtar, Muchtar, & Putra, 2024; Setiawan, Pamungkas, Mekaniwati, & Kusuma, 2025).

6.2. The Influence of Digital Leadership on Job Crafting

The findings indicate that DL has a positive and significant effect on JC. This suggests that DL acts as a catalyst, enabling MSME actors to reshape their task scope (task crafting), expand work relationships (relational crafting), and adjust their perceptions of work (cognitive crafting). These results are consistent with Ye (2025), who found that

DL in MSMEs is shaped by changes in organizational structures and work practices resulting from digitalization, including enhanced agility, reduced hierarchical emphasis, and closer inter-organizational collaboration.

The results further indicate that digital leaders prioritize human resource development through coaching and delegated responsibilities, while managing change in an open and flexible manner (Wang et al., 2025; Ye, 2025; Zhu et al., 2022). By cultivating a supportive work environment that encourages proactive job redesign, digital leaders enhance both employee adaptability and organizational performance, enabling MSMEs to navigate the challenges of digital transformation more effectively (Wang et al., 2025).

6.3. The Influence of Digital Leadership on Organizational Commitment

The findings indicate that DL has a positive and significant effect on OC. This underscores that DL extends beyond the technical management of technology to include social and emotional dimensions that motivate employees and MSME actors to contribute optimally to their organizations. Digitally competent leaders foster open communication, ensure transparent access to information, and guide the effective use of technology to support a shared organizational vision.

This outcome aligns with the findings of Navas, Suarez, Montañez, and Quintero (2025), who reported that DL enhances training initiatives, which in turn support OC and facilitate digital transformation. Similarly, Jufri and Hadiwibowo (2025) found that a DL approach enables SMEs to remain adaptive to market and technological changes, thereby promoting sustainable innovation and strengthening OC. Consistent with this, Gunawan et al. (2023) observed that DL significantly affects OC; notably, their findings indicate that DL substantially enhances OC even when it does not have a direct significant impact on performance outcomes. This increased commitment subsequently contributes to improved organizational performance, particularly in e-commerce businesses in Indonesia (Gunawan et al., 2023; Jufri & Hadiwibowo, 2025).

6.4. The Influence of Job Crafting on Innovation Performance

The findings indicate that JC does not have a significant effect on IP. This suggests that, among SMEs in Sorong, forms of JC, including task, relational, and cognitive crafting, do not directly enhance employees' ability to develop innovative products, services, or processes. Although JC is often viewed as a proactive practice that enables individuals to align their work with personal interests and needs in the context of Sorong SMEs, these adjustments appear to be primarily focused on internal adaptation to business conditions rather than fostering innovation. This is largely attributable to SME operators in Sorong prioritizing short-term operational needs and maintaining established work routines, which positions innovation as a secondary consideration in the JC process.

This finding is aligned with Ariani (2023), who reported that JC does not significantly influence extra-role performance in SMEs, where employee-initiated changes in their tasks do not directly translate into behaviors beyond core responsibilities. Conversely, emphasized that JC can encourage self-initiated modifications to enhance job design and better match work with personal preferences and needs. Similarly, Din, Khan, Farid, and Rodrigo (2023) explained that JC can positively affect IP by enhancing employee engagement, creativity, and adaptability. However, depending on other organizational characteristics and the particular circumstances of the SME, its effect on overall business success may differ (Singh, 2019; Yaskun, Sudarmiati, Hermawan, & Rahayu, 2023).

6.5. The Influence of Organizational Commitment on Innovation Performance

The study indicates that OC has a significant impact on IP. Empirically, this demonstrates that employees' commitment to the organization not only supports its sustainability but also serves as a catalyst for SME actors in Sorong to effectively adapt to changes in the business environment. This finding aligns with the perspectives of Meyer and Allen (2012) and Udin, Dananjoyo, Shaikh, and Vio Linarta (2022), who argue that high levels of OC motivate individuals to engage in extra-role behaviors, including creative and innovative efforts.

Martínez et al. (2018) also reported that OC positively affects learning orientation within SMEs, which in turn significantly enhances their innovation levels. Additionally, Bashir and Venkatakrishnan (2022) discovered that good HRM methods, like hiring, training, and career development, greatly increase employees' affective commitment, which is essential for increasing IP in SMEs. Further studies (Dewi, Ghalib, Said, & Sopiana, 2025; Mohamed et al., 2023; Tian et al., 2023) confirm that OC positively affects innovation capabilities, which subsequently translates into improved overall performance of SMEs.

6.6. The Mediating Role of Job Crafting in the Relationship Between Digital Leadership and Innovation Performance

This study found that JC does not significantly mediate the effect of DL on IP. This suggests that the DL demonstrated by SME owners in Sorong directly influences their IP without relying on the intermediary role of JC. Although DL creates an environment that supports change and adaptation, it does not automatically lead SME owners to modify tasks, roles, or work processes as a mechanism for enhancing innovation.

This outcome reflects the simple work structures and results-oriented focus of SMEs in Sorong, where immediate, tangible solutions take precedence over comprehensive work redesign. The finding aligns with Geldenhuys, Bakker, and Demerouti (2021), who demonstrated that the relational crafting dimension of JC does not mediate improvements in in-role performance. Conversely, other studies (Sun, Li, Li, & He, 2024; Wang et al., 2025; Ye, 2025) have highlighted JC as an important mediator linking DL to IP. These conflicting findings suggest that the effectiveness of JC as a mediator depends on the specific types of crafting and the outcomes being assessed. Consequently, SME owners should identify and prioritize the forms of JC that are most relevant and effective in their business context to enhance both productivity and employee work satisfaction (Geldenhuys et al., 2021).

6.7. The Mediating Role of Organizational Commitment in the Relationship Between Digital Leadership and Innovation Performance

The results of this study indicate that OC effectively mediates the relationship between DL and IP. This suggests that strong DL enhances IP both directly and indirectly by strengthening OC. Digitally competent leaders foster a collaborative and supportive work environment that reinforces employees' sense of connection, loyalty, and belonging. Employees or business owners with high OC are more likely to demonstrate intrinsic motivation and proactively engage in driving innovation processes within the organization (Meyer & Allen, 2012).

This finding aligns with Mollah et al. (2024), who propose that OC acts as a psychological mechanism linking DL to enhanced innovation capacity, emphasizing that behavioral and affective factors among business actors are critical determinants of innovation success. Furthermore, Mollah et al. (2024) and Qiao et al. (2024) explain that DL promotes innovation by cultivating an environment supportive of digital transformation. The effectiveness of this process is substantially amplified when employees are highly committed to the organization, as dedicated employees are more likely to engage in creative activities, thereby enhancing overall innovation outcomes (Tian et al., 2023).

The mediating role of OC aligns with Jun et al. (2022) and Li, Zhu, Lu, and Zhang (2025), who highlight the importance of internal organizational factors, such as readiness and integration, in translating leadership into performance outcomes. Consequently, SMEs seeking to enhance IP through DL should prioritize the development of OC. To effectively leverage digital transformation and innovation initiatives, leaders should focus on cultivating a committed workforce. This approach not only ensures competitiveness and sustainable growth in the digital era but also strengthens the organization's intellectual property.

7. CONCLUSION

The study results demonstrate that DL has a positive and significant impact on IP, JC, and OC. However, JC was found not to significantly influence IP. Notably, OC exerts a positive and significant effect on IP, highlighting its crucial role in driving innovative outcomes. Moreover, while the mediating role of JC was not supported, OC was

confirmed as a full mediator in the relationship between DL and IP. These findings suggest that the effectiveness of DL in enhancing innovation is largely realized through strengthening employees' commitment to the organization rather than through changes in JC behaviors.

The findings of this study offer several important managerial implications. First, organizations should strengthen DL competencies across all managerial levels. MSMEs leaders who are proficient in digital technologies and capable of integrating them into work processes can foster an innovative environment, promote collaboration, and accelerate change adoption. Second, although JC did not show a significant impact on IP, organizations should still provide opportunities for employees to tailor tasks according to their skills and interests. This can enhance motivation and job satisfaction, which in turn supports the achievement of organizational goals. Third, high OC has been identified as a key driver of IP. Therefore, management and business owners should cultivate an inclusive work culture, recognize achievements, and foster a strong sense of belonging among employees. Fourth, given that OC functions as a full mediator between DL and IP, efforts to enhance innovation should focus on strategies that strengthen individual commitment to the organization, such as involvement in decision-making processes and open communication.

This study offers important insights into the roles of DL, JC, and OC in driving IP. Nevertheless, several avenues remain open for future research. Given that JC did not show a significant direct effect on IP, subsequent studies could delve deeper into contextual factors, such as organizational culture (Din, Ahmad, Samad, Lee, & Han, 2025) and industry characteristics (Chakrabarty, Norbu, & Mall, 2020), which may strengthen or weaken this relationship. The finding that OC serves as a full mediator between DL and IP also highlights a critical pathway warranting further investigation. Longitudinal research designs could be employed to trace the causal direction and temporal dynamics of this mediating mechanism. Additionally, future research could consider incorporating other mediating or moderating variables, such as psychological empowerment (Helmy, Adawiyah, & Banani, 2019), cognitive trust (Gu, Ardito, & Natalicchio, 2022), or happiness at work (Astuty, Astuti, Mahmud, & Widodo, 2025), to develop a more comprehensive understanding of how DL contributes to IP in MSMEs. Since this study focuses on a specific sample and context, extending the research to diverse industries and cultural settings would improve the findings' generalizability. Cross-cultural comparative studies could further reveal whether the identified relationships hold in environments with varying levels of digital maturity. Finally, adopting qualitative approaches, such as in-depth interviews, could deliver richer knowledge into how business actors experience and respond to DL practices and how these experiences shape their commitment, JC behaviors, and IP.

Moreover, one limitation of this study is the strong correlation between DL and JC, which may reflect contextual overlap within MSMEs and give rise to potential multicollinearity concerns. Therefore, future research should consider alternative model specifications of the constructs employed in this study, preferably using longitudinal designs, to further strengthen discriminant validity. Nevertheless, the Fornell–Larcker criterion and the HTMT ratio indicate acceptable discriminant validity.

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Transparency: The authors state that the manuscript is honest, truthful, and transparent, that no key aspects of the investigation have been omitted, and that any differences from the study as planned have been clarified. This study followed all writing ethics.

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