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RESEARCH ARTICLE

Unraveling the Pathway from Digital Leadership to Employee Creativity: The Strategic Roles of Intrinsic Motivation and Job Engagement

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ABSTRACT

This study develops a theoretical model explaining how digital leadership fosters employee creativity through the psychological mechanisms of intrinsic motivation and job engagement, addressing inconsistent prior findings and the limited evidence from Indonesia's private banking sector. Using a quantitative survey of 250 private bank employees in the Special Region of Yogyakarta, data were analyzed with PLS-SEM to evaluate both the measurement and structural models, including reliability, validity, predictive power, and path relationships.

The results confirm all hypothesized direct and indirect effects, indicating that digital leadership positively influences intrinsic motivation and job engagement, which in turn enhance employee creativity. Both variables function as significant mediators, and the model demonstrates moderate predictive relevance without multicollinearity issues. The study contributes to organizational and human resource management literature by extending digital leadership research in highly regulated, technology-intensive contexts and reinforcing the explanatory role of Self-Determination Theory in the digital era. Practically, the findings emphasize the importance of developing digital leadership capabilities, promoting autonomy and continuous skill development, and leveraging job engagement as a strategic driver of sustainable creativity in Indonesia's banking sector.

Keywords: Digital leadership; Intrinsic motivation; Job Engagement; Employee creativity; Self-Determination Theory

1. Introduction

The concept of Industry 5.0, introduced by the European Commission in January 2021, marks a paradigm shift from the automation-driven logic of Industry 4.0 toward a human-centric, resilient, and sustainable industrial model. It emphasizes employee well-being, social value creation, and human–machine collaboration [27]. Within this evolving context, digital leadership has become a strategic capability for organizations to manage digital transformation by fostering collaboration, establishing digital visions and

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integrating technological and human dimensions [1];[7] Recent studies have highlighted the crucial role of digital leadership in enhancing innovation, creativity, and virtual team performance [29];[23]. Empirical evidence also indicates that digital leadership improves employee creativity and performance by cultivating a supportive and innovative work environment [22]. However, there is still limited understanding of the underlying psychological mechanisms explaining how digital leadership fosters creativity, particularly the mediating effects of intrinsic motivation, and job engagement [36];[31]

Grounded in the Self-Determination Theory (SDT) [8], this study proposes that proactive behaviors such as intrinsic motivation function as critical mediating mechanisms linking digital leadership to employee creativity.

Recent empirical work has investigated *Digital Leadership* as a significant antecedent for individual creativity in organizational settings, highlighting how leadership practices oriented toward digital transformation can enhance employees' innovative capacities through acceptance and innovative attitudes toward technology adoption [37]

Digital leadership should be conceptually distinguished from traditional transformational leadership, as it encompasses unique competencies related to navigating digitally driven organizational environments, including digital vision, technological awareness, and the ability to lead strategic change under conditions of digital complexity. Unlike transformational leadership, which primarily focuses on motivation and value-based influence, digital leadership integrates leadership behaviors with digital strategy and technological capability as core elements of organizational transformation [29]

Accordingly, this research develops a mediation model to examine the relationship between digital leadership and employee creativity through intrinsic motivation and job engagement. This integrative framework extends prior work [36] by incorporating motivational and affective pathways that have been rarely tested in digital leadership research.

The Indonesian banking sector, particularly in the Yogyakarta Special Region, offers a relevant context for this study. The sector is currently undergoing rapid digital transformation, yet research exploring digital leadership and creativity remains limited. Most previous studies have focused on the manufacturing and technology sectors, creating a significant empirical gap in understanding how digital leadership drives creativity and engagement within financial institutions.

Theoretically, this study contributes by integrating Digital Leadership Theory and SDT to provide a comprehensive understanding of how digital leadership promotes creativity through motivational and relational mechanisms. Practically, the findings are expected to guide organizations especially private banks in developing adaptive leadership strategies that foster creativity, engagement and digital readiness in the Industry 5.0 era.

2. Materials and methods

2.1. Materials

Based on the integration of the Job Demands–Resources (JD-R) model [5] and Self-Determination Theory (SDT) [8], this study proposes a mediation framework that explains how digital leadership influences employee creativity through a set of motivational and behavioral mechanisms.

In this framework, digital leadership serves as an antecedent that provides employees with digital resources, autonomy, and empowerment, thereby fostering proactive behaviors and psychological engagement. Intrinsic motivation represents a motivational mediator that captures the internal drive to

engage in work out of genuine interest and satisfaction rather than external rewards. Intrinsic motivation are expected to increase an affective state characterized by vigor, dedication, and absorption, which in turn promotes employee creativity [36].

This alignment enhances employees' psychological safety, sense of belonging, and willingness to innovate within the organization.

Accordingly, the proposed framework positions digital leadership as a key driver of creativity through a motivational process, in which intrinsic motivation, and job engagement serve as sequential mediators. The model provides a comprehensive view of how leadership behaviors interact with individual and contextual factors to shape creative outcomes in digitally transforming organizations, particularly within the Indonesian private banking sector.

2.1.1. Digital leadership has a positive effect on intrinsic motivation

Digital leadership is posited to positively influence intrinsic motivation by fostering an environment conducive to psychological fulfillment and autonomous action [4];[8] This contemporary leadership style, characterized by embracing digital technologies and agile methodologies [7]; [10], enhances employee autonomy through the provision of flexible work arrangements and digital tools.

By leveraging digital platforms, leaders facilitate swift feedback, skill development, and collaboration, addressing the fundamental psychological needs for competence and relatedness [31]. Consequently, the enhanced perceived autonomy and mastery under effective digital leadership translate into higher intrinsic motivation, leading to improved outcomes such as creativity and innovation [6]; [33]. This mechanism underscores the strategic importance of digital leadership in cultivating a motivated, digitally-competent workforce [22].

2.1.2. Digital Leadership has a positive effect on Job Engagement

Digital leadership, defined as the effective guidance of an organization through digital transformation [4]; [7], significantly fosters job engagement. Drawing upon the Job Demands-Resources (JD-R) model, digital leadership acts as a crucial job resource [5].

Specifically, digital leaders leverage technology to provide employees with the autonomy, support, and necessary tools or digital competence to navigate complex work environments [22]. This enhanced resource provision, coupled with the leader's focus on promoting an agile and collaborative digital culture, directly contributes to higher levels of vigor, dedication, and absorption, which constitute job engagement [9];[23]. Furthermore, digital leadership encourages employee empowerment [13];[36], allowing individuals to proactively optimize their roles, a process strongly linked to boosting engagement and overall positive work outcomes [28].

2.1.3. Intrinsic Motivation positively affects Employee Creativity

Intrinsic motivation is widely recognized as a primary antecedent of employee creativity, representing the deep-seated drive to engage in work for the inherent satisfaction, interest, and challenge it offers [8]. This internal locus of causality directly fosters the cognitive flexibility and persistence necessary for generating novel and useful ideas [31].

When employees are intrinsically motivated, they are more willing to expend the extra cognitive effort, take intellectual risks, and explore diverse perspectives, which are critical elements of the creative process [33]. Consequently, organizations seeking to boost innovation must cultivate an environment that supports and nurtures the fundamental psychological needs that underpin intrinsic motivation [6]; [26]

2.1.4. Job engagement positively affects employee creativity

Research shows that high job engagement promotes deeper and more flexible cognitive processing, thereby strengthening the emergence of creative ideas [5], Engagement, characterized by vigor, dedication, and absorption, enables employees to think innovatively and find new solutions to work challenges. Employees who are emotionally engaged also demonstrate higher psychological satisfaction, which acts as a catalyst for creativity [28], furthermore, strong engagement fosters a sense of ownership and the drive to experiment with new approaches [9]. The study by Decuypere& Schaufeli (2020) [9] confirms that job engagement is positively related to innovative work behavior through enhanced collaboration and knowledge sharing. Thus, job engagement plays a strategic role not only in improving performance but also in fostering sustainable creativity within the organization.

2.1.5. Intrinsic motivation mediates the relationship between digital leadership and employee creativity

The relationship between digital leadership and employee creativity is not typically direct, but rather is significantly mediated by intrinsic motivation [28]. Digital leaders foster a work environment characterized by technological support, autonomy, and psychological safety, which aligns with the core tenets of Self-Determination Theory [8];[4]. Specifically, effective digital leadership provides the necessary job resources such as flexible structures, digital tools, and a culture that tolerates calculated risk that satisfy employees' fundamental needs for competence and autonomy [32]. This fulfillment, in turn, enhances their internal drive and genuine interest in their work, which is the definition of intrinsic motivation. Only once intrinsically motivated are employees willing to dedicate the sustained, deep cognitive effort required to generate novel and useful creative outcomes [33];[6]. Consistent with Self-Determination Theory, leadership behaviors emphasizing autonomy and psychological need satisfaction significantly impact employees' psychological states and subsequent innovative outcomes[38]. Thus, intrinsic motivation acts as the crucial psychological mechanism translating digital leadership practices into tangible creative performance.

2.1.6. Job engagement mediates the relationship between digital leadership and employee creativity

Job engagement acts as a vital psychological mechanism, mediating the relationship between digital leadership and employee creativity. Digital leadership, characterized by embracing agility and providing strategic digital resources [10];25], initially boosts job engagement by providing valuable job resources that promote vigor, dedication, and absorption, consistent with the JD-R model [5];[9]. This heightened state of engagement subsequently empowers employees to pursue creative endeavors. Engaged employees are more persistent, cognitively flexible, and willing to invest discretionary effort in generating and implementing novel ideas, which is essential for creative performance [28];[33]. Therefore, digital leadership's positive influence on employee creativity is primarily channeled through, and amplified by, the employee's resulting deep involvement and psychological connection to their work. This highlights that digital leaders enhance creativity indirectly by cultivating an engaged workforce [6];[26].

Based on the discussion above, the model is shown in Figure 1

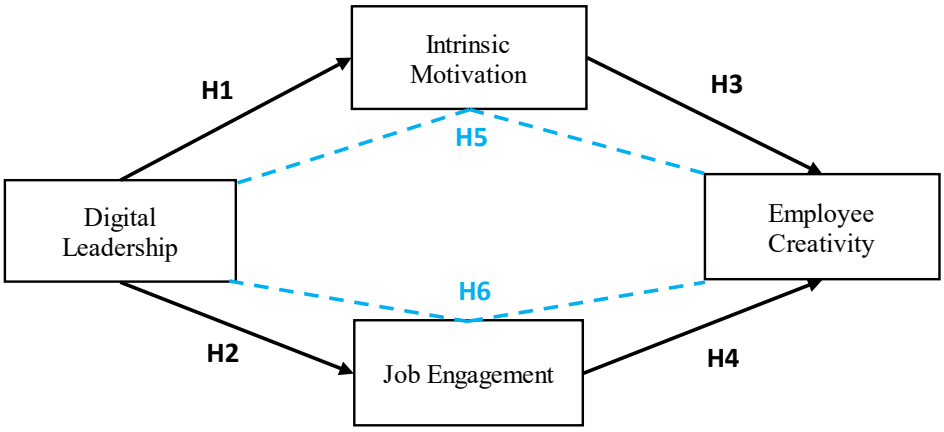

Figure 1. Research Framework

2.2. Research method

This study applied non-probability sampling using the purposive sampling technique, which involves deliberately selecting respondents based on criteria relevant to the research objectives. The non-probability approach was chosen because the characteristics of the population cannot be accurately identified due to limited access to internal banking data. Information about the number of employees per division, tenure, and job structure is generally categorized as confidential to maintain operational security and organizational confidentiality.

2.2.1. Respondents and setting

The respondents in this study were employees of private banks that have branch offices in the Special Region of Yogyakarta. Data collection from respondents was conducted from November 1, 2025, to December 15, 2025. Questionnaires were distributed to 6 main branch offices of national private banks to be distributed to their subordinate branches in coordination, in order to meet the sample size requirements according to Hair et al., 2022, where the minimum sample size is 200 respondents as per SEM guidelines, with the proportion of each unit/division maintained at ≥ 30% if the population is limited, to ensure representation and validity of the analysis [14]. The sample was determined by having approximately 5-10 samples per parameter [2]. Since there are 28 indicators in this study, the required sample size is between 140 and 280 respondents. A total of 261 questionnaires were successfully returned from the 300 target samples set at the initial stage of data collection. This return rate reached 87%, which according to [3];[11] have met an adequate response rate standard in survey research using a self-administered questionnaire design. The high return rate indicates that respondents were well engaged and showed strong interest in the digital transformation issues raised in this study. Subsequently, a data screening process was conducted by checking the completeness of responses, consistency of response patterns, and compliance with the established sample criteria. This verification process is important to ensure that the analyzed data have strong internal validity and are free from potential response bias. After a thorough examination, a total of 250 questionnaires were deemed suitable for further analysis. This number not only meets the minimum requirements for Structural Equation Modeling (SEM) analysis but also provides a strong empirical basis for testing the relationships among variables in the research model. The results of the research questionnaire will be presented in two analyses, namely descriptive analysis and inferential analysis. The descriptive analysis will explain the respondents' profiles, the location of the respondents' banks, age, and tenure in their positions. This analysis

is considered important because the selection of respondents follows the theoretical basis of information-rich cases [26], which involves choosing individuals who have the highest relevance to issues of digital leadership and employee creativity and meet the criteria of at least four years of work experience in their last position, so that their competence and understanding can be accounted for. It is also based on a structured sample model applied by involving respondents from various divisions and job levels to ensure diversity in backgrounds, roles, and perspectives. Respondents in this study have certain characteristics presented in table 1.

Table 1. Respondent Characteristics

Respondent Characteristics	f	%
Gender :		
Male	96	38.4
Female	154	61.6
Age :		
< 25 years	6	2.4
25-30 years	38	15.2
31-35 years	45	18
36-40 years	39	15.6
41-45 years	42	16.8
> 45 years	80	32
Educations		
High Scholl	5	2
Diploma	44	17.6
Bachelor”s degree	176	70.4
Master’s degree	25	10
Tenure		
5-10 years	127	50.8
11-15 years	46	18.4
16-20 years	40	16
> 25 years	37	14.8
Total	250	100

In this study, data processing was conducted on 250 respondents to understand the demographics and characteristics of employees in the banking sector. The results obtained provide an overview of the respondents' gender composition, age, education, length of service, and workplace. Based on the data analysis results, it was found that the majority of respondents in this study were female, totaling 154 individuals or 61.6%, while male respondents numbered 96, or 38.4%. Next, the demographic analysis based on age shows that most respondents are aged over 45 years, totaling 80 people or 32%. Respondents aged 31-35 years numbered 45 people or 18%, those aged 41–45 years were 42 people or 16.8%, aged 25–30 years were 38 people or 15.2%, and only a small portion were under 25 years old (6 people or 2.4%). In terms of the highest level of education, the majority of respondents have a Bachelor's degree (S1), totaling 176 people or 70.4%. Respondents with a Diploma numbered 44 people or 17.6%, while those with a Master's degree (S2) were 25 people or 10%, and high school graduates only 5 people or 2%. Higher

education is often associated with better analytical skills and is important in making decisions related to investment and risk management. In terms of length of service, most respondents have worked for 5–10 years, totaling 127 people or 50.8%. Respondents with 11–15 years of service numbered 46 people (18.4%), 16–20 years totaled 40 people (16%). Respondents with more than 25 years of service numbered 37 people (14.8%).

2.2.2. Measures

This research uses measurements based on dimensions and indicators proposed by experts as follows

Table 2. Indicators of research variables

Variables	Indicators
Digital Leadership [10];[36];[21]	1. My leader increases employee awareness of technologies that can be used to improve work (DL1) 2. My leader proactively encourages digital transformation in the work unit (DL 2) 3. My leader can get others excited about digital transformation in the workplace (DL 3) 4. My leader is knowledgeable about digitalization (DL 4) 5. My leader is able to influence employees to adapt to changes and advancements in digital technology (DL 5) 6. My leader is able to carry out digital innovation, develop employee skills, and implement digitalization in the workplace (DL 6)
Job Engagement [20];[16]	1. At work, I am fully focused on my tasks (JE 1) 2. Time feels like it passes quickly when I am working (JE 2) 3. At work, I feel strong and energized (JE 3) 4. I am enthusiastic about doing my work (JE 4)
Intrinsic Motivation [19];[36]	1. I enjoy creating new procedures to complete work tasks (IM 1) 2. I enjoy being able to find solutions to complex problems at work (IM 2) 3. I enjoy my current job (IM 3) 4. My job is enjoyable (IM 4)
Employee Creativity [28];[36];[35]	1. I found a better way to do my work (EC 1) 2. I created better work processes and routines (EC 2) 3. I proposed many creative ideas that could improve working conditions in the workplace (EC 3) 4. I often come up with creative solutions to problems at work (EC 4) 5. With the support of digital technology, I can propose new ideas in my work (EC 5) 6. I proposed new ways to carry out work tasks (EC 6)

This study uses four main variables, namely Digital Leadership, Job Engagement, Intrinsic Motivation, Employee Creativity. Each variable is adapted from previously validated studies, then adjusted to the context of digital transformation in national private banking and selected because they have theoretical and empirical relevance to the digital leadership model that influences employee creativity through psychological mechanisms. Digital leadership plays a crucial role in creating an adaptive and innovative work environment [33];[21]. Job engagement, and intrinsic motivation act as psychological mechanisms that reinforce this relationship [20];[16];[19].

2.2.3. Data analysis method

The present study employs an empirical and systematic scientific methodology using an explanatory research approach to analyze causal relationships between independent and dependent variables, as well as the mediating effects within the proposed model. The methodological framework follows the guidelines established by Hair et al.2022 [14], which provide clear procedures for Structural Equation Modeling (SEM) testing using SmartPLS, along with transparent criteria for evaluating construct validity and reliability.

A purposive sampling method was applied, wherein respondents were selected based on specific criteria such as tenure, position, and involvement in digital transformation initiatives. The research population

comprises employees of national private banking institutions in Yogyakarta, with a minimum sample size of 250 respondents to ensure statistical validity [17]. The variables measured include digital leadership, job engagement, intrinsic motivation, and employee creativity, all adapted from prior validated studies relevant to the context of digital transformation [17];[32].

Data analysis was conducted using Partial Least Squares–Structural Equation Modeling (PLS-SEM) through SmartPLS 4.0 software. The analytical process involved the collection of primary data via questionnaires, followed by the validation and reliability assessment of the instruments, and the testing of both the measurement and structural models. Convergent validity and construct reliability were examined to ensure the robustness and quality of the data [26].

Common Method Bias (CMB) in SmartPLS can be assessed by introducing an additional latent variable with randomly generated values and connecting it to all constructs in the research model. The presence of CMB is then evaluated by examining the Inner Variance Inflation Factor (VIF) values. If all Inner VIF values are below the threshold of 3.3, the results indicate that the data are not affected by Common Method Bias.

Table 3. Inner VIF CMB

	CMB	**DL**	**EC**	**IM**	**JE**
CMB					
	CMB	DL	EC	IM	JE
DL	**2.209**			1.000	
EC	**2.777**				
IM	**2.973**				1.000
JE	**1.818**		1.106		

The results indicate that digital leadership exerts a positive influence on both intrinsic motivation and job engagement, which subsequently enhance employee creativity. Mediation testing reveals that intrinsic motivation and job engagement function as mediators in the relationship between digital leadership and employee creativity [26].

Overall, this study provides comprehensive insights into the dynamic interplay among the studied variables within the context of digital leadership and employee creativity. It highlights the critical role of psychological and motivational factors in fostering innovation and adaptability within modern organizations [26];[33].

3. Results

3.1. Measurement model results

Table 4. Measurement Result

	CA	**CR**	**AVE**
Digital Leadership	0.963	0.970	0.846
Employee Creativity	0.942	0.954	0.778
Intrinsic Motivation	0.878	0.915	0.729
Job Engagement	0.897	0.928	0.764

Note : *CA: Cronbach's Alpha; CR : Composite Reliability; AVE : Average Variance Extracted*

The table presents the results of construct reliability and convergent validity testing for six latent variables used in the study, namely Digital Leadership, Employee Creativity, Intrinsic Motivation and Job Engagement. The values of Cronbach's Alpha (CA), Composite Reliability (CR), and Average Variance Extracted (AVE) all exceed the recommended methodological thresholds, indicating that the measurement model demonstrates strong internal consistency and valid construct representation. Specifically, all CA values are above 0.87, surpassing the minimum criterion of 0.70, which suggests that the items within each construct exhibit high reliability. Similarly, CR values range from 0.915 to 0.970, exceeding the acceptable benchmark of 0.70 and confirming the stability and consistency of the indicators in measuring their respective constructs.

Furthermore, the AVE values fall between 0.729 and 0.846, significantly higher than the standard requirement of 0.50. This indicates that each construct successfully explains more than half of the variance of its indicators, thereby supporting adequate convergent validity. Notably, Digital Leadership and Employee Creativity demonstrate the highest AVE values, implying strong conceptual coherence among their measurement items. These findings suggest that the constructs are not only statistically sound but also substantively meaningful, reflecting well-defined theoretical concepts. In particular, the high reliability and validity of Digital Leadership and Employee Creativity indicate that these constructs can provide robust explanatory power in the subsequent structural analysis. Overall, the results confirm that the measurement model is both reliable and valid, ensuring suitability for further structural analysis.

3.1.1. Convergent validity

Based on the results of the convergent validity test, Figure 2 appears,

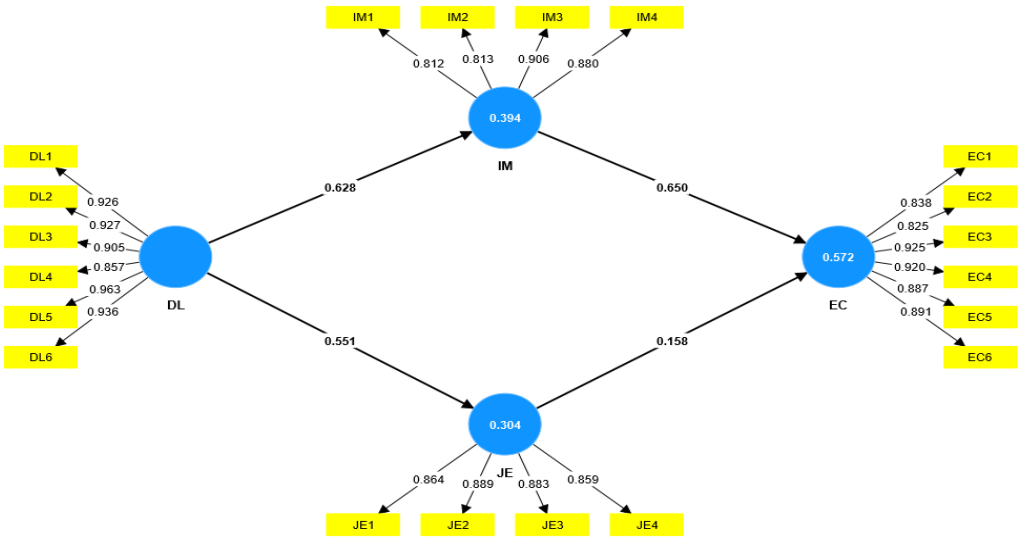

Figure 2. Convergent Validity

Furthermore, based on the table, it shows that the AVE values of each variable are higher than 0.5, so it can be concluded that the latent variables in this study are considered to meet convergent validity. Therefore, from the two results above, it can be concluded that there are no issues with convergent validity in the tested model.

3.1.2. Discriminant validity

In the Discriminant Validity Test, the basis used to state that discriminant validity is met is the Fornell-Larcker value and cross loading for each measured variable, which should be > 0.7 and must be higher when compared to the correlation values among other variables.

Table 5. Cross Loading

Item Indicators	DL	EC	IM	JE
DL1	**0.926**	0.602	0.559	0.473
DL2	**0.927**	0.622	0.622	0.480
DL3	**0.905**	0.587	0.575	0.510
DL4	**0.857**	0.550	0.471	0.459
DL5	**0.963**	0.631	0.618	0.567
DL6	**0.936**	0.667	0.604	0.544
EC1	0.466	**0.838**	0.626	0.446
EC2	0.455	**0.825**	0.622	0.425
EC3	0.590	**0.925**	0.675	0.462
EC4	0.655	**0.920**	0.684	0.491
EC5	0.701	**0.887**	0.683	0.542
EC6	0.628	**0.891**	0.654	0.556
IM1	0.371	0.596	**0.812**	0.403
IM2	0.419	0.536	**0.813**	0.396
IM3	0.628	0.704	**0.906**	0.577
IM4	0.661	0.688	**0.880**	0.649
JE1	0.518	0.496	0.601	**0.864**
JE2	0.421	0.379	0.390	**0.889**
JE3	0.522	0.568	0.600	**0.883**
JE4	0.445	0.460	0.498	**0.859**

Note: *Digital Leadership : DL; Employee Creativity : EC; Intrinsic Motivation : IM; Job Engagement : JE.*

It can be seen in the table of Cross-Loadings results in the Discriminant Validity Test that the Fornell-Larcker values obtained are > 0.7 and, when compared to the correlations between variables, they are the highest. Furthermore, from the 28 indicator items tested, each indicator item has a cross-loading value > 0.7 and is higher compared to the cross-loading of other variables. Therefore, in terms of discriminant validity, the 28 indicator items in this study can be considered valid.

Table 6. Fornel Lacker

	DL	EC	IM	JE
DL	**0.920**			
EC	0.665	**0.882**		
IM	0.628	0.746	**0.854**	
JE	0.551	0.554	0.609	**0.874**

Table 5 shows the Fornell-Larcker criterion values used to test discriminant validity. The results show that all research variables have values (square root of AVE) that are higher than the correlations between the variables.

3.1.3. Inner Model Testing

Table 7. Hypothesis Testing (Direct Effect)

Hypothesis	Estimate	T Statistics	P Value	Description
Digital Leadership → Intrinsic Motivation	0.628	11.069	0.000	H1, Supported
Digital Leadership → Job Engagement	0.551	9.710	0.000	H2, Supported
Intrinsic Motivation → Employee Creativity	0.650	10.278	0.000	H3, Supported
Job Engagement → Employee Creativity	0.158	2.254	0.024	H4, Supported

The research paper presents findings from hypothesis testing concerning the relationships among digital leadership, intrinsic motivation, job engagement, and employee creativity. All four hypotheses tested were found to be significant and supported.

1. The results of the first hypothesis regarding the effect of digital leadership on intrinsic motivation show a t-statistic value of (11.069 > 1.96) and a p-value (0.000) < 0.05. The estimate value is positive at 0.628, indicating that if digital leadership increases, intrinsic motivation will also increase. Therefore, it can be concluded that the hypothesis is significant. Thus, the hypothesis stating that 'Digital leadership has a positive and significant effect on intrinsic motivation' is accepted.
2. The results of the second hypothesis regarding the influence of digital leadership on job engagement show a t-statistic value of (9.710 > 1.96) and a p-value (0.000) < 0.05. The estimate value is positive at 0.551, indicating that if digital leadership increases, job engagement will also increase. Therefore, it can be concluded that the hypothesis is significant. Thus, the hypothesis stating that 'Digital leadership has a positive and significant effect on job engagement' is accepted.
3. The results of the third hypothesis regarding the effect of intrinsic motivation on employee creativity show a t-statistic value of (10.278 > 1.96) and a p-value (0.000) < 0.05. The estimate value is positive at 0.650, indicating that if intrinsic motivation increases, employee creativity will also increase. Thus, it can be concluded that the hypothesis is significant. Therefore, the hypothesis stating that "Intrinsic motivation has a positive and significant effect on employee creativity" is accepted.
4. The results of the fourth hypothesis regarding the effect of job engagement on employee creativity show a t-statistic value of (2.254 > 1.96) and a p-value (0.024) < 0.05. The estimate value is positive at 0.158, indicating that if job engagement increases, employee creativity will also increase. Thus, it can be concluded that the hypothesis is significant. Therefore, the hypothesis stating that "job engagement has a positive and significant effect on employee creativity" is accepted.

Based on the results of the hypothesis testing calculations in Table of Direct effect above, it shows that out of the 4 directly related hypotheses, all hypotheses are significant and supported.

Table 8. Hypothesis Testing (Indirect Effect)

Hypothesis	Estimate	T Statistics	P Value	Description
Digital Leadership → Intrinsic Motivation → Employee Creativity	0.408	6.397	0.000	H5, Supported
Digital Leadership → Job Engagement → Employee Creativity	0.087	2.075	0.038	H6, Supported

1. The result of the fifth hypothesis regarding the effect of digital leadership on employee creativity, mediated by intrinsic motivation, shows a t-statistic of (6.397 > 1.96) and a p-value of (0.000) < 0.05. Therefore, it can be concluded that the hypothesis is significant. Thus, the hypothesis stating that 'Intrinsic motivation is able to mediate the effect of digital leadership on employee creativity' is accepted.
2. The results of the sixth hypothesis regarding the effect of digital leadership on employee creativity, mediated by job engagement, show a t-statistic value of (2.075 > 1.96) and a p-value of (0.038) < 0.05. Therefore, it can be concluded that the hypothesis is significant. Hence, the hypothesis stating that "Job engagement can mediate the effect of digital leadership on employee creativity" is accepted.

Based on the results of the hypothesis testing calculations in Table of Indirect effect above, it shows that of the 2 hypotheses that are indirectly related, they are stated to be significant.

4. Discussion

4.1. The influence of digital leadership on intrinsic motivation

Digital leadership positively influences intrinsic motivation by actively shaping a work environment that aligns with key psychological needs. This modern leadership approach leverages technology and agile methodologies to enhance employee autonomy, competence, and relatedness, serving as a vital resource for fostering self-driven engagement. Consequently, digital leaders effectively catalyze the internal desire to pursue work tasks for their inherent satisfaction. The study found that digital leadership significantly positively influences intrinsic motivation, evidenced by a t-statistic of 11.069 and a p-value of 0.000. This indicates that higher quality digital leadership correlates with increased employee creativity in intrinsic motivation.

Digital leadership is increasingly recognized as a critical antecedent to positive organizational behaviors in the contemporary workspace [4];[7]. Grounded in Self-Determination Theory [8], this leadership style directly influences intrinsic motivation by strategically deploying digital tools and processes to enhance employee autonomy and competence. Effective digital leaders provide flexible structures, fostering an environment where individuals feel empowered and driven by their innate interest in the work itself.

4.2. The influence digital leadership on job engagement

Digital leadership critically enhances job engagement by transforming the work environment into a resource-rich ecosystem. Leaders utilize digital tools and agile practices to empower employees, thereby fostering greater vigor, dedication, and absorption in their roles. The study reveals a positive and significant effect of digital leadership on job engagement, with a t-statistic of 9.710 and a p-value of 0.000. Higher levels of job engagement enhance employees' capacity to generate creative ideas by allowing them to explore new approaches and workflows.

Digital leadership is posited as a significant antecedent of heightened job engagement, fundamentally shifting how work is experienced [4]. By employing strategic digital practices and fostering organizational agility [7];[10], digital leaders provide crucial job resources that empower employees. This resource provision directly cultivates the psychological state of vigor, dedication, and absorption characteristic of high job engagement [5].

4.3. The influence of intrinsic motivation on employee creativity

Intrinsic motivation, defined as the internal drive to engage in activities that are interesting and meaningful, is crucial for employee creativity and performance. The study indicates that digital leadership significantly enhances intrinsic motivation, with a t-statistic of 10.278 and a p-value of 0.000. Effective digital leaders create environments that support autonomy, competence, and social connectedness, leading to higher levels of intrinsic motivation among employees.

Intrinsic motivation serves as a vital psychological fuel for employee creativity, driving individuals to pursue tasks out of genuine interest and enjoyment [8]. This internal drive fosters the deep cognitive engagement, persistence, and risk-taking essential for generating novel and useful ideas [31].

4.4. The influence of job engagement on employee creativity

Job engagement is characterised by enthusiasm, dedication, and concentration at work. The study found that job engagement positively influences employee creativity, evidenced by a t-statistic of 2.254 and a p-value of 0.024. Employees with high job engagement exhibit greater energy and commitment, which significantly enhances their creativity.

Job engagement significantly predicts higher employee creativity because engaged individuals exhibit the necessary energy (vigor) and focus (absorption) to explore, persist through challenges, and generate novel solutions [9]. This deep commitment channels effort toward creative outcomes [28].

4.5. The role of intrinsic motivation in mediating the influence of digital leadership on employee creativity

Intrinsic motivation serves as a significant mediator between digital leadership and employee creativity. The study found that digital leadership influences creativity through intrinsic motivation, evidenced by a t-statistic of 6.397 and a p-value of 0.000. This suggests that digital leaders who create supportive work environments enable intrinsic motivation of employee, leading to enhanced creativity.

Intrinsic motivation acts as the crucial mediator [31], translating effective digital leadership practices such as providing autonomy and resources into enhanced employee creativity [8];[33].

4.6. The role of job engagement in mediating the influence of digital leadership on employee creativity

Job Engagement mediates the relationship between digital leadership and employee creativity. The study indicates a significant mediation effect, with a t-statistic of 2.075 and a p-value of 0.038. Job engagement functions as the critical mechanism , mediating the digital leadership and employee creativity link. Digital leaders provide job resources that cultivate employee engagement [5]. This high engagement then provides the persistent energy and focus necessary for employees to pursue and realize creative outputs [28].

5. Conclusion

This research investigates the impact of digital leadership on employee creativity within the context of the national private banking sector, focusing on the psychological mechanisms of intrinsic motivation and

job engagement. Employing a mediation model, the study integrates the Self-Determination Theory (SDT), and Digital Leadership Theory to elucidate employee behaviour amid rapid digital transformation.

The findings reveal that digital leadership serves as a critical job resource, fostering proactive behaviour, engagement, and creativity among employees. Leaders equipped with digital skills, such as technological literacy and strategic vision, cultivate a supportive work environment conducive to innovation.

Intrinsic motivation is identified as a secondary mediator, enhancing the connection between digital leadership and creativity. Employees who can tailor their work experience report increased engagement and creative output, driven by a sense of purpose and interest in their tasks. Job engagement further mediates this relationship, with engaged employees demonstrating heightened dedication and absorption, essential for fostering creativity in a digital context.

The research underscores that successful digital transformation in private banking relies on strengthening digital leadership competencies, developing psychological mechanisms to enhance intrinsic employee development. Moreover, this study extends Digital Leadership Theory and Self-Determination Theory by demonstrating how a dual-mediator model of intrinsic motivation and job engagement explains the mechanisms linking digital leadership to employee creativity in a highly regulated financial context [39]

Practical implications should be more explicitly linked to managerial actions in banking institutions, highlighting how leaders can implement digital strategies, enhance employee engagement programs, and foster a culture that systematically supports creativity and innovation. Such actionable guidance provides a clear roadmap for managers to translate theoretical insights into tangible organizational practices.

The study contributes to the theoretical understanding of creativity in organisations and offers practical recommendations for banking management to bolster digital leadership and cultivate a culture of sustainable innovation.

However, this study has certain limitations, including its focus on a single national private banking context, which may limit the generalizability of the findings. Future research could address these limitations by examining multiple banking institutions across different countries or sectors to validate and extend the observed relationships.

Author contributions

Conceptualization and methodology, Maria Valeria Roellyanti, Muafi Muafi and Dessy Isfianadewi; formal analysis, Maria Valeria Roellyanti; writing—original draft preparation, Muafi Muafi and Dessy Isfianadewi; writing—review and editing, Maria Valeria Roellyanti and Muafi Muafi; visualization, Maria Valeria Roellyanti and All authors have read and agreed to the published version of the manuscript.

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Conflict of interest

The authors declare no conflict of interest

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Special thanks for the reviewer's comment (1st reviewer)

No	Reviewer's Comment	Author's Response
R1.1	The theoretical positioning of Digital Leadership could be strengthened by more clearly distinguishing it from general transformational leadership concepts.	The manuscript has been revised to explicitly differentiate Digital Leadership from transformational leadership by emphasizing its unique focus on digital vision, technological competence, and digital resource orchestration (We have completed, Introduction, Line no. 57-67).
R1.2	The sampling strategy requires clearer justification, particularly the use of non-probability purposive sampling.	The sampling rationale has been clarified by explaining the confidentiality constraints within the banking sector and the need to target information-rich respondents involved in digital transformation initiatives (We have completed, Section Respondents and Setting, Line no. 221-227).
R1.3	Please clarify how common method bias was addressed given the self-reported survey design.	To address this concern, we added a procedural explanation regarding anonymity assurance and indicator randomization. Additionally, multicollinearity diagnostics (VIF values) were reported to indicate the absence of severe common method bias (We have completed, Dtata Analysis Methods section, Line no. 286-292)
R1.4	The measurement model section would benefit from clearer interpretation rather than repetition of threshold values.	We revised the measurement model discussion to focus on substantive interpretation of reliability and validity results, particularly highlighting constructs with the strongest explanatory power. (We have completed, Section 3.1 Line no. 321-325).
R1.5	The theoretical contributions should be stated more explicitly and concisely.	We have refined the theoretical contributions by clearly outlining how this study extends Digital Leadership Theory and SDT through a dual-mediator model in a highly regulated financial context (We have completed, Conclusion section. Line no. 496-499).

Special thanks for the reviewer's comment (2nd reviewer)

No	Reviewer's Comment	Author's Response
R2.1	The abstract is informative but slightly lengthy and could be more concise.	The abstract has been revised to reduce redundancy and sharpen its focus on objectives, methodology, key findings, and contributions while maintaining clarity and completeness (We have completed, Abstract Section. Line no.19-36)
R2.2	Some grammatical inconsistencies and typographical errors are present throughout the manuscript.	We carefully proofread the entire manuscript and corrected grammatical inconsistencies, typographical errors, and stylistic issues to meet international academic writing standards. (We have completed)
R2.3	The hypotheses labels (e.g., "Proven") are unconventional for international journals.	All hypothesis results have been revised using standard international terminology such as "supported" and "not supported" to align with Scopus-indexed journal conventions (We have completed, Inner Model Testing Line no. 361 and 394).
R2.4	Practical implications should be more	The practical implications section has been

No	Reviewer's Comment	Author's Response
	explicitly linked to managerial actions in banking institutions.	strengthened by translating findings into concrete managerial actions, such as digital leadership development programs and engagement-based performance indicators (We have completed, Conclusion section. Line no. 500-504).
R2.5	The study's limitations are not sufficiently discussed.	We have added a brief limitations subsection addressing cross-sectional design, self-report measures, and contextual boundaries, along with suggestions for future longitudinal and cross-sector research (We have completed, Conclusion section. Line no. 508-511).

(*Continued*)

Additional ESP journal articles.

No.	Journal Article	Details
[37]	Xu, X., & Zainal, S. R. B. M. (2025). *Relative advantage, technology innovativeness: Digital transformation acceptance attitude and employee creativity*. ESP Journal, 10(3), 3435. https://doi.org/10.59429/esp.v10i3.3435	Recent empirical work has investigated *Digital Leadership* as a significant antecedent for individual creativity in organizational settings, highlighting how leadership practices oriented toward digital transformation can enhance employees' innovative capacities through acceptance and innovative attitudes toward technology adoption [37] (We have completed, Introduction section. Line no. 57-60).
[38]	Li, X., & Wang, J.-F. (2025). *The impact of leadership style on employee voice behavior in the context of digital transformation: An exploration of the psychological mechanism based on self-determination theory*. Environment and Social Psychology, ESP Journal, 10(7). https://doi.org/10.59429/esp.v10i7.3899	Consistent with Self-Determination Theory, leadership behaviors emphasizing autonomy and psychological need satisfaction significantly impact employees' psychological states and subsequent innovative outcomes[38] (We have completed, Material and Methods section. Line no. 165-168).