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The Influence of Digital Leadership on Employee Innovation and Agility: The Mediating Role of Social Media Use

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Abstrak
Penelitian ini bertujuan untuk menguji pengaruh *digital leadership* terhadap *employee innovation* dan *employee agility* dengan *social media use* sebagai variabel mediasi. Penelitian ini menggunakan pendekatan kuantitatif dengan desain *explanatory survey* yang melibatkan 217 responden. Responden merupakan karyawan yang menggunakan media sosial dalam aktivitas kerjanya, dipilih melalui teknik *non-probability sampling* dengan pendekatan *purposive sampling*. Data dikumpulkan melalui kuesioner dengan skala Likert 1–5 dan dianalisis menggunakan Partial Least Squares Structural Equation Modeling (PLS-SEM) dengan bantuan SmartPLS 4. Analisis dilakukan melalui dua tahap, yaitu evaluasi model pengukuran dan evaluasi model struktural. Hasil penelitian menunjukkan bahwa *digital leadership* berpengaruh positif dan signifikan terhadap *social media use*, *employee innovation*, dan *employee agility*. Penggunaan media sosial juga berpengaruh positif dan signifikan terhadap *employee innovation* dan *employee agility*. Selain itu, *social media use* memediasi secara parsial hubungan antara *digital leadership* dan *employee innovation*, serta hubungan antara *digital leadership* dan *employee agility*. Temuan ini menunjukkan bahwa *digital leadership* dapat mendorong karyawan untuk menggunakan media sosial secara lebih produktif, menghasilkan ide-ide baru, dan merespons perubahan di tempat kerja secara lebih adaptif. Organisasi perlu mengarahkan penggunaan media sosial sebagai alat kerja yang mendukung inovasi dan kelincahan karyawan.
Kata Kunci: inovasi karyawan, kelincahan karyawan, kepemimpinan digital, penggunaan media sosial

Abstract
This study aims to examine the influence of digital leadership on employee innovation and employee agility, with the use of social media as a mediating variable. This study uses a quantitative approach with an explanatory survey design involving 217 respondents. Respondents are employees who use social media in their work activities, selected through non-probability sampling with a purposive sampling approach. Data were collected through questionnaires using a Likert scale of 1–5 and analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4. The analysis was conducted in two stages, namely the evaluation of the measurement model and the evaluation of the structural model. The results show that digital leadership has a positive and significant effect on social media use, employee innovation, and employee agility. The use of social media also has a positive and significant effect on employee innovation and employee agility. In addition, social media use partially mediates the relationship between digital leadership and employee innovation, as well as the relationship between digital leadership and employee agility. These findings suggest that digital leadership can encourage employees to use social media more productively, generate new ideas, and respond to changes in the workplace more adaptively. Organizations need to direct the use of social media as a work tool that supports employee innovation and agility.
Keywords: digital leadership, employee agility, employee innovation, social media use

1. Introduction

The development of digital technology has changed the way organizations carry out work, especially in communication, information retrieval, coordination, and decision-making. These changes require organizations to not only provide technology, but also ensure that employees are able to use it productively in their daily work activities. Technological developments such as artificial intelligence, big data, cloud computing, and 5G have driven major changes in organizational management practices. Technological changes make the role of digital leadership very important because leaders are not only required to understand technology, but also be able to direct employees to be ready to face digital changes. Digital leadership has an important role in supporting digital transformation and building organizational agility(AlNuaimi et al., 2022; Mollah et al., 2024).

In the context of digital work, social media is starting to play a role as a tool to support work. Social media has increasingly become part of organizational practices by supporting communication, information access, relationship management, and knowledge sharing among employees. Social media can help individuals in an organization to connect with each other and share information more quickly. In organizational practices , the use of social media on digital platform like Instagram and Tiktok has proven effective in accelerating information dissemination, although its management requires high consistency to optimize work and business interaction (Yusi et al., 2022) However, the use of social media in the workplace still needs to be directed properly because social media can be a productive work tool, but it can also cause distractions if not used according to work needs (Awwab & Fontana, 2022).

In this context, the role of digital leadership is becoming increasingly relevant. Digital leaders can help employees use technology and social media in a more targeted way, for example to seek information, build communication, get input, and develop new ideas. Digital leadership has a positive effect on innovation and creativity of human resources, especially when leaders are able to utilize technology, maintain communication, and encourage continuous learning. Digital leadership has a positive influence on innovation, so digital leadership can be one of the factors that encourage employees to be more open to updates. In addition, companies are not only required to encourage innovation, but also to build employee agility, which refers to the ability of employees to adapt, make decisions, and respond quickly to changes. Previous studies have shown that digital leadership can support innovation and employee performance, particularly when leaders are able to utilise technology, maintain effective communication, and encourage continuous learning (Dewi, 2024; Muniroh et al., 2022). Employee agility is also related to the ability of individuals to accept change, make decisions, collaborate, learn, and adapt in dynamic work situations (Petermann & Zacher, 2022).

Previous research has mostly discussed digital leadership on innovation, agility, or organizational performance. Previous studies have shown that digital leadership contributes to employee innovation by supporting digital culture, organizational learning, and technology adoption (Dewi, 2024; Muniroh et al., 2022). In addition, digital leadership has also been associated with agility by enabling organizations to respond to technological changes (AlNuaimi et al., 2022). Previous studies have also shown that enterprise social media can support employee agility through knowledge sharing and work communication (Pitafi et al., 2025). However, limited attention has been given to how the use of general

social media for work-related purposes functions as a mediating mechanism that connects digital leadership with employee innovation and employee agility at the individual employee level. Unlike previous studies that mainly examine the direct influence of digital leadership on employee outcomes, This study takes a different perspective by placing social media use as a mechanism that explains how digital leadership can encourage employee innovation and employee agility at the individual employee level. Thus, this study seeks to fill the study gap regarding the role of social media as a link between digital leadership and employee work behavior in the digital era. Therefore, this study aims to analyze the influence of digital leadership on employee innovation and employee agility with social media use as a mediating variable.

2. Literature Review and Hypothesis Development

2.1 Digital Leadership

Digital leadership refers to the ability of leaders to provide direction, support, and coordination in utilizing digital technology to achieve organizational goals. In the context of digital transformation, leaders are expected to develop a clear digital vision, support employees' digital capabilities, and facilitate organizational adaptation to technological change (AlNuaimi et al., 2022). Digital leadership is therefore important in creating a work environment that encourages the effective use of digital technology and supports employee innovation (Muniroh et al., 2022). In this study, digital leadership focuses on digital vision, digital skill development, digital change management, digital coordination, and digital technology integration, adapted from AlNuaimi et al. (2022)

2.2 Employee Innovation

Employee innovation refers to employees' behavior in generating, promoting, and implementing new ideas to improve work processes or outcomes. Innovation is increasingly important in digitally changing work environments because employees need to identify problems, develop new approaches, and apply ideas in practice (Muniroh et al., 2022; Rahman et al., 2022). This study adopts the dimensions of idea generation, idea championing, and idea implementation based on Rahman et al. (2022) and De Jong & Den Hartog (2010)

2.3 Employee Agility

Employee agility refers to employees' ability to respond effectively to changes in work situations, particularly those arising from technological and organizational changes. Agile employees are able to adapt to change, perform different roles flexibly, and make decisions in dynamic situations (Petermann & Zacher, 2022). Employee agility is important in digital work environments because changes in technology, procedures, and work demands require employees to respond quickly and flexibly. This study adopts adaptability, role flexibility, and decision-making as the dimensions of employee agility (Petermann & Zacher, 2022).

2.4 Social Media Use

Social media use refers to the utilization of social media as a work tool for maintaining relationships, accessing information, and sharing knowledge. In organizational contexts, social media can facilitate communication with customers and colleagues, provide access to

relevant information, and support knowledge sharing (Parveen et al., 2016). Previous studies also indicate that social media use can support innovation capabilities and organizational performance (Borah et al., 2022). Therefore, this study positions social media use as a mediating variable between digital leadership and employee outcomes. The measurement is adapted from Parveen et al. (2016), covering customer relationship, information accessibility, and information sharing.

2.5 Theoretical Framework and Hypothesis Development

This research explains that digital leadership plays a key factor that can encourage employees to use technology and social media more productively at work. Digital leaders are able to provide direction, support the use of technology, and help employees face digital work changes (AlNuaimi et al., 2022; Mollah et al., 2024). In this study, social media use is positioned as a mediating variable because social media can be a means for employees to maintain relationships with outside parties, obtain relevant information, and share knowledge. Productive use of social media can help employees discover new ideas, support the implementation of innovations (Borah et al., 2022). In addition, social media can facilitate knowledge exchange and communication that help employees respond to work changes more effectively Pitafi et al. (2025). Therefore, this study examines the direct influence of digital leadership on employee innovation and employee agility, as well as the indirect influence through social media use as a mediating variable. Based on this framework, the hypothesis of this study is as follows:

H1: Digital leadership has a positive effect on social media use.
H2: Digital leadership has a positive effect on employee innovation.
H3: Digital leadership has a positive effect on employee agility.
H4: Social media use has a positive effect on employee innovation.
H5: Social media use has a positive effect on employee agility.
H6: Social media use mediates the influence of digital leadership on employee innovation.
H7: Social media use mediates the influence of digital leadership on employee agility.

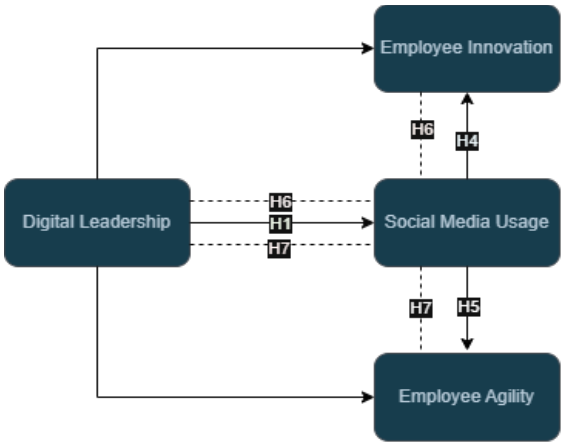


Figure 1 Research Framework

3. Methods

This research was conducted on employees in Indonesia who use social media in work activities. The study did not limit respondents to specific industry sectors, as the focus of the research was directed at individual employee experiences in utilizing social media to support work. The unit of analysis in this study is individual active workers who use social media for communication, information searching, maintaining relationships with external parties, and knowledge sharing in their work activities.

The number of respondents in this study was 217 people. The sampling technique used was non-probability sampling with a purposive sampling approach, because respondents were selected based on certain criteria. The criteria for respondents in this study include: (1) employees or active workers, (2) domiciled or working in Indonesia, (3) using social media in work activities, and (4) willing to fill out a research questionnaire. The data collection process was carried out during the period from March to May 2026 through the distribution of online questionnaires.

In general, the respondents represented active workers who used social media as a work-supporting tool. Social media was used for work-related communication, information searching, maintaining relationships with external parties, and sharing knowledge with colleagues. Therefore, the respondent profile is considered relevant to the objective of this study, which is to examine how digital leadership and social media use influence employee innovation and employee agility at the individual employee level.

The research instrument was compiled in the form of a questionnaire with a Likert scale of 1–5, ranging from 1 = strongly disagree to 5 = strongly agree. The measurement items were adapted from (AlNuaimi et al., 2022) for digital leadership, (Parveen et al., 2016) for social media use, (Rahman et al. 2022) for employee innovation, and (Petermann & Zacher, 2022) for employee agility. Details of the measurement items are presented in Table 1A (Appendix).

The collected data was analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with the help of SmartPLS 4. The analysis is carried out through two stages, namely the evaluation of the measurement model and the evaluation of the structural model. Evaluation of the measurement model was carried out to test the validity and reliability of the construct through the outer loading values, Cronbach's alpha, composite reliability, Average Variance Extracted (AVE), and HTMT. Meanwhile, structural model evaluation was carried out to test the relationship between variables through R-square values, path coefficients, t-statistics, p-values, and specific indirect effects. Significance testing was performed through a bootstrapping procedure to find out whether direct and indirect influences in the research model were proven to be significant. In addition, common method bias was assessed because the data were collected using a self-reported questionnaire from the same respondents. This study used the full collinearity VIF approach to identify potential common method bias and multicollinearity issues. The VIF values were examined to ensure that the constructs did not suffer from serious collinearity problems before interpreting the structural model.

4. Results and Discussion

4.1 Results

The study involved 217 respondents with diverse demographic and employment

characteristics. Female respondents accounted for 54.4% of the sample, while male respondents accounted for 45.6%. Most respondents were aged 20–30 years (59.4%), followed by those aged 31–40 years (19.8%). In terms of education, the respondents were predominantly bachelor's degree graduates (42.4%) and senior high school or vocational school graduates (41.5%). More than half of the respondents were staff or operational employees (53.5%), while 27.6% were interns and 18.9% were freelancers or part-time workers. Regarding work experience, the largest proportion of respondents had 3–6 months of work experience (29.5%), followed by respondents with 3 years of work experience (26.7%). Overall, these characteristics indicate that the respondents had varied demographic, educational, and employment backgrounds.

Although 46.5% of the respondents in this study were non-permanent workers, including interns, freelancers, and part-time workers, their inclusion remains relevant to the context of digital leadership. Different employment arrangements do not necessarily eliminate interactions with supervisors or organizational leaders. Interns and part-time workers may interact with supervisors or organizational leaders through task assignment, work coordination, and communication during their involvement in organizational activities. Similarly, freelancers in this study were involved in project-based or structured work arrangements that required coordination with individuals responsible for providing direction and overseeing their work. Through these interactions, non-permanent workers may experience leadership practices such as digital communication, coordination, information sharing, and the use of digital technologies in work activities. This argument is also consistent with Djibo et al. 2010 , who found that perceived leader behavior remains relevant among temporary employees, particularly in relation to supportive leadership and organizational citizenship behavior. In addition, research on gig workers indicates that workers in non-traditional employment arrangements can still engage in citizenship behaviors despite having different work relationships from traditional employees Moorman et al. 2024 . Therefore, although not all respondents had permanent employment relationships, they remained exposed to leadership practices within their work activities, making their perceptions relevant for examining digital leadership and its relationship with social media use, employee innovation, and employee agility.

This section presents the results of data analysis from 217 respondents using PLS-SEM through SmartPLS 4. The analysis is carried out through two stages, namely the evaluation of the measurement model and the evaluation of the structural model. Evaluation of measurement models is used to look at the validity and reliability of indicators, while structural model evaluation is used to test the direct and indirect relationships between variables in the research model.

Table 1 Descriptive Statistics

Name	Mean	Standard deviation	Observed min	Observed max
DL1	4.157	0.927	1.000	5.000
DL2	4.244	0.875	1.000	5.000
DL3	4.111	0.919	1.000	5.000
DL4	4.161	0.873	1.000	5.000
DL5	4.157	0.907	1.000	5.000

IN1	4.171	0.907	1.000	5.000
IN2	4.092	0.965	1.000	5.000
IN3	4.037	1.011	1.000	5.000
AG1	4.060	0.941	1.000	5.000
AG2	3.982	1.043	1.000	5.000
AG3	3.972	0.979	1.000	5.000
SM1	4.083	0.947	1.000	5.000
SM2	4.221	0.790	1.000	5.000
SM3	4.194	0.950	1.000	5.000

Source: Data processed with SmartPLS 4

Based on the results of descriptive statistics, the average value of all indicators is in the range of 3.972 to 4.244. This shows that most respondents tend to give a positive answer to the statements in the questionnaire. In the digital leadership variable, the highest mean value was found in DL2 of 4.244, which shows that respondents consider leaders to be sufficiently supportive of developing employees' digital skills. Meanwhile, the lowest mean value was found in DL3 of 4.111, but it was still in the positive category. In the employee innovation variable, the highest mean value was found at IN1 of 4.171, which shows that respondents tend to be able to come up with new ideas to solve work problems. The lowest mean value was found at IN3 of 4.037, which shows that efforts to find support to realize innovative ideas can still be improved.

In the employee agility variable, the highest mean value was found at AG1 of 4.060, which indicates that respondents felt able to adapt quickly to the work situation. Meanwhile, the lowest mean value was found at AG3 of 3.972, which shows that the courage to make quick decisions in uncertain situations is still a relatively lower aspect. In the social media use variable, the highest mean value was found at SM2 of 4.221, which shows that social media is considered to help accelerate access to information relevant to work. In general, descriptive results show that respondents have a positive perception of digital leadership, social media use, employee innovation, and employee agility.

4.1.1 Measurement Model

Table 2 Outer Loading Results

Variable	Indicator	Outer Loading	Criteria	Remarks
Digital Leadership	DL1	0.886	> 0.70	Valid
	DL2	0.865	> 0.70	Valid
	DL3	0.861	> 0.70	Valid
	DL4	0.882	> 0.70	Valid
	DL5	0.871	> 0.70	Valid
Employee Innovation	IN1	0.884	> 0.70	Valid
	IN2	0.897	> 0.70	Valid
	IN3	0.912	> 0.70	Valid

Employee Agility	AG1	0.887	> 0.70	Valid
	AG2	0.863	> 0.70	Valid
	AG3	0.870	> 0.70	Valid
Social Media Use	SM1	0.885	> 0.70	Valid
	SM2	0.901	> 0.70	Valid
	SM3	0.901	> 0.70	Valid

Source: Data processed with SmartPLS 4

The evaluation of the measurement model was carried out through the outer loading values, Cronbach's alpha, composite reliability, Average Variance Extracted (AVE), and HTMT. Based on the results of the outer loading in Table 2, all indicators have a value above 0.70, so all indicators are declared valid. In the digital leadership variable, the value of outer loading is in the range of 0.861 to 0.886. In the employee innovation variable, the value of outer loading is in the range of 0.884 to 0.912. In the employee agility variable, the outer loading value is in the range of 0.863 to 0.887. Meanwhile, in the social media use variable, the outer loading value is in the range of 0.885 to 0.901. These results show that all indicators have a strong contribution in measuring their respective variables.

Table 3 Construct Reliability and Validity

Variable	Cronbach's Alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
AG	0.845	0.848	0.906	0.763
DL	0.922	0.922	0.941	0.762
IN	0.880	0.882	0.926	0.806
SM	0.877	0.878	0.924	0.802

Source: Data processed with SmartPLS 4

The reliability results also show that all variables meet the reliability criteria. Cronbach's alpha value in employee agility is 0.845, digital leadership is 0.922, employee innovation is 0.880, and social media use is 0.877. All of these values are above 0.70. In addition, the composite reliability value is also above 0.70, namely 0.906 in employee agility, 0.941 in digital leadership, 0.926 in employee innovation, and 0.924 in social media use. The AVE value of all variables is also above 0.50, so it can be concluded that the entire construct has met the convergent validity.

4.1.2 Discriminant Validity

Table 4 HTMT Confidence Interval Results

Relationship	Original sample (O)	Sample average (M)	2.5%	97.5%
DL <-> AG	0.878	0.875	0.771	0.954
IN <-> AG	0.937	0.936	0.865	0.989
IN <-> DL	0.897	0.894	0.818	0.951

SM <-> AG	0.899	0.897	0.806	0.964
SM <-> DL	0.874	0.870	0.770	0.938
SM <-> IN	0.850	0.845	0.736	0.923

Source: Data processed with SmartPLS 4

Discriminant validity is used to ensure that each variable in this study measures a different concept. In PLS-SEM, discriminant validity can be evaluated using the Heterotrait-Monotrait Ratio or HTMT. Henseler et al. (2015) explained that HTMT is a more sensitive approach in detecting possible overlap between constructs than traditional approaches such as the Fornell-Larcker Criterion and cross-loadings. In addition, Hair et al. (2021) explain that discriminant validity indicates the extent to which a construct is empirically different from another, and HTMT can be used as a primary criterion in the evaluation of discriminant validity in reflective measurement models.

Based on Table 4, most of the HTMT values between variables are below 0.90. The value of HTMT digital leadership with employee agility is 0.878, employee innovation with digital leadership is 0.897, social media use with employee agility is 0.899, social media use with digital leadership is 0.874, and social media use with employee innovation is 0.850. However, there is one HTMT value that is above 0.90, namely the relationship between employee innovation and employee agility of 0.937. This value shows that the two variables have a fairly strong conceptual closeness, because both are related to the ability of employees to respond to job changes.

However, the HTMT confidence interval results show that the entire upper limit of the interval is still below 1. The upper limit value of the confidence interval for digital leadership with employee agility is 0.954, employee innovation with employee agility is 0.989, employee innovation with digital leadership is 0.951, social media use with employee agility is 0.964, social media use with digital leadership is 0.938, and social media use with employee innovation is 0.923. Henseler et al. (2015) explained that if the HTMT confidence interval does not include the number 1, then the construct can still be stated to be empirically different. Thus, even though there is one HTMT value that exceeds 0.90, all constructs in this study still meet the discriminant validity based on the HTMT confidence interval approach.

4.1.3 Structural Model

After the measurement model is declared valid and reliable, the analysis is continued on the evaluation of the structural model. This section is used to see whether the relationship between variables in the research model is proven to be significant or not. The test is carried out by looking at the value of the original sample, t-statistic, and p-value. The relationship between variables is declared significant if the t-statistic value is greater than 1.96 and the p-value is less than 0.05. Before interpreting the structural model, collinearity was evaluated using the Variance Inflation Factor (VIF). The results showed that the VIF values ranged from 1.947 to 3.252, which were below the recommended threshold of 3.3. This indicates that the indicators did not show serious collinearity problems. Therefore, the structural model can be further interpreted through the R-square values, effect size (f^2), predictive relevance (Q^2), path coefficients, t-statistics, p-values, and indirect effects.

Table 5 R-Square Results

Variable	R-Square	Adjusted R-Square
Employee Agility	0.675	0.672
Employee Innovation	0.687	0.684
Social Media Use	0.618	0.616

Source: Data processed with SmartPLS 4

Based on Table 5, the R-square values were interpreted using the thresholds of 0.25, 0.50, and 0.75, which indicate weak, moderate, and substantial explanatory power, respectively. the R-square value shows that the research model has a fairly good explanatory ability. The social media use variable has an R-square value of 0.618, which means that digital leadership is able to explain 61.8% of the variation in social media use. Furthermore, employee innovation has an R-square value of 0.687, so that digital leadership and social media use are able to explain 68.7% of the variation in employee innovation.

Employee agility has an R-square value of 0.675, which indicates that digital leadership and social media use are able to explain 67.5% of employee agility variations. These results show that the variables in the model have a considerable contribution in explaining social media use, employee innovation, and employee agility.

Table 6 F-Square Results

Path	F^2
Digital Leadership → Employee Agility	0,221
Digital Leadership → Employee Innovation	0,407
Digital Leadership → Social Media Use	1,618
Social Media Use → Employee Agility	0,223
Social Media Use → Employee Innovation	0,105

Source: Data processed with SmartPLS 4

Effect size (f^2) was evaluated based on the thresholds of 0.02, 0.15, and 0.35, which indicate small, medium, and large effects, respectively**.** The results show that digital leadership has a medium effect on employee agility (f^2 = 0.221), a large effect on employee innovation (f^2 = 0.407), and a large effect on social media use (f^2 = 1.618). Meanwhile, social media use has a medium effect on employee agility (f^2 = 0.223) and a small effect on employee innovation (f^2 = 0.105). These results indicate that digital leadership provides a relatively substantial contribution to employee innovation and social media use, while social media use contributes moderately to employee agility.

Table 7 Q-Square Result

Variable	SSO	SSE	Q^2
Employee Agility (AG)	651.000	319.726	0,509
Digital Leadership (DL)	1085.000	1085.000	-

Employee Innovation (IN)	651.000	294.655	0,547
Social Media Use (SM)	651.000	330.625	0,492

Source: Data processed with SmartPLS 4

Predictive relevance (Q^2) was assessed using the criterion that Q^2 values greater than zero indicate predictive relevance, with values of 0.02, 0.15, and 0.35 commonly interpreted as small, medium, and large predictive relevance, respectively. The results show that employee innovation has a Q^2 value of 0.547, employee agility has a Q^2 value of 0.509, and social media use has a Q^2 value of 0.492. All Q^2 values are greater than zero and exceed the 0.35 threshold, indicating large predictive relevance for all endogenous constructs in the model. Digital leadership is an exogenous construct and therefore does not have a Q^2 value.

Table 8 Direct and Indirect Effects

Relationship	Original Sample	Average Sample	Standard Deviation	T-Statistics	P-Value	Remarks
DL → SM	0.786	0.781	0.049	16.099	<0.001	Positive and significant
DL → IN	0.578	0.578	0.064	9.061	<0.001	Positive and significant
DL → AG	0.434	0.439	0.088	4.928	<0.001	Positive and significant
SM → IN	0.294	0.291	0.066	4.476	<0.001	Positive and significant
SM → AG	0.436	0.428	0.088	4.950	<0.001	Positive and significant
DL → SM → IN	0.231	0.228	0.056	4.144	<0.001	Positive and significant
DL → SM → AG	0.342	0.334	0.068	5.010	<0.001	Positive and significant

Source: Data processed with SmartPLS 4

Based on Table 8, all direct effects show positive and significant results. Digital leadership has a positive and significant effect on social media use, employee innovation, and employee agility. In addition, social media use also has a positive and significant effect on employee innovation and employee agility. Thus, H1, H2, H3, H4, and H5 are declared accepted.

The results of indirect influence also show that social media use mediates the influence of digital leadership on employee innovation and employee agility. The indirect influence of digital leadership on employee innovation through social media use has an original sample value of 0.231 with a p-value of < 0.001. Furthermore, the indirect influence of digital leadership on employee agility through social media use has an original sample value of 0.342 with a p-value of < 0.001. Thus, H6 and H7 were declared accepted.

Because the direct influence of digital leadership on employee innovation and employee agility remains significant, while the indirect influence through social media use is also significant, the mediation in this study is included in the category of partial mediation. This means that social media use acts as a mediation channel, but digital leadership still has a direct influence on employee innovation and agility.

4.2 Discussion

The first findings show that digital leadership has a positive effect on social media use. The coefficient value of 0.786 indicates that this relationship is the strongest direct influence in the research model. This means that leaders who are able to provide digital direction, support technology skills, and coordinate work through digital platforms can encourage employees to use social media more productively at work. A likely reason for this strength is that digital leaders remove the ambiguity employees often face about whether social media belongs to work or personal space; by embedding it into digital coordination, leaders effectively legitimize it as a work tool rather than a distraction. In this context, social media not only serves as an informal communication tool, but can also be used to seek information, maintain relationships with outsiders, and share knowledge. However, previous studies mainly discussed the role of digital leadership in supporting organizational technology adoption and social media utilization in business contexts (Awwab & Fontana, 2022). This study extends previous research by examining how digital leadership influences employees' daily use of social media as a work-related tool and explaining its role as a mechanism that affects individual employee outcomes.

Digital leadership has also been proven to have a positive effect on employee innovation with a coefficient value of 0.578. These results show that the better digital leadership employees feel, the greater the opportunity for employees to generate, champion, and implement new ideas at work. Digital leaders can create a work environment that is more open to technology, communication, and learning, so employees are encouraged to try more effective ways of working. This effect likely operates less through formal innovation programs and more through a psychological signal, when leaders visibly model comfort with new technology and tolerate experimentation, employees interpret this as permission to try untested ideas without fear of being penalized for failure. Unlike previous studies that mainly examined the direct relationship between digital leadership and innovation outcomes (Dewi, 2024; Muniroh et al., 2022), this study provides additional insight by explaining the mechanism through which digital leadership contributes to employee innovation through social media use. The findings suggest that digital leadership encourages innovation not only by creating a supportive environment but also by shaping how employees utilize digital platforms for information exchange and knowledge sharing.

In addition to influencing innovation, digital leadership also has a positive effect on employee agility, with a coefficient value of 0.434. These findings suggest that digital leaders can help employees become more adaptive, flexible, and ready to face job changes. In an increasingly digital work environment, employees need clear direction to understand technological changes and respond quickly. A plausible explanation is that ambiguity, not lack of skill, is often what slows employees down when facing change; by providing consistent digital direction, leaders reduce this ambiguity and free employees to respond faster. AlNuaimi et al. (2022) explain that digital transformational leadership is related to organisational agility because digital leaders can help organisations build a digital mindset and respond to disruptions. Albannai et al., (2026) also explain that digital leadership plays a role in building agility, innovation, and resilience through technology integration, continuous learning, and a culture of change.

Social media use has a positive effect on employee innovation with a coefficient value

of 0.294. These findings suggest that the use of social media in work can help employees gain information, input, and inspiration that supports the emergence of new ideas. Social media allows employees to interact with colleagues, customers, and external parties, so that the sources of information obtained become wider. Borah et al. (2022) explain that social media use can provide relevant information, support two-way communication, and strengthen knowledge sharing. Parveen et al. (2016) also explain that social media facilitates communication and knowledge sharing among individuals, which can support the exchange of information needed in innovation processes. Thus, social media can support employee innovation when used to obtain input, seek work references, and share knowledge relevant to solving work problems. This finding is also supported by (Rizkiya et al., 2026), who found that work-related social media use positively influences innovative work behavior among employees. Their study explains that social media can stimulate employee innovation by facilitating information exchange, collaboration, and idea development.

Social media use was also proven to have a positive effect on employee agility with a coefficient value of 0.436. These results show that social media can help employees get information faster, coordinate more easily, and adjust to job changes. In dynamic work conditions, the speed of information is important so that employees can make decisions and respond to changes better. These findings are in line with (Pitafi et al., 2025), who found that enterprise social media is related to employee agility through knowledge sharing and work communication. Thus, social media can support employee agility because it helps them become more responsive, flexible, and adaptive in dealing with changes in the work environment. The notably stronger effect here compared to innovation (0.436 versus 0.294) makes sense in light of what agility actually requires: unlike innovation, which needs time to move from idea to implementation, agility is largely about the speed of response, information obtained from social media can be acted on almost immediately, without needing to pass through additional stages of evaluation or approval. This positions social media as a faster-acting resource for agility than for innovation, a distinction Pitafi et al. (2025) do not explicitly draw out.

The results of the mediation show that social media use mediates the influence of digital leadership on employee innovation. The indirect influence value of 0.231 shows that digital leadership not only encourages employee innovation directly, but also through the use of social media. Digital leaders can lead employees to use social media as a means of seeking information, obtaining input, and sharing knowledge. When social media is used productively, employees have a greater chance of discovering new ideas, seeking support, and implementing those ideas in their work. These findings reinforce the view that social media can be an important mechanism linking digital leadership to employees' innovative behaviors. Because the direct effect of digital leadership on innovation remains significant alongside this indirect path, leadership is evidently shaping innovative behavior through more than just social media — likely also through other unmeasured channels such as modeling risk tolerance or allocating time for exploration, which this study did not capture directly.

Social media use also mediates the influence of digital leadership on employee agility. The indirect influence value of 0.342 shows that the use of social media is an important path in explaining how digital leadership can improve employee agility. When compared to the mediation path for employee innovation, the indirect influence on employee agility has a

greater value. This can happen because social media more directly helps employees get information quickly, coordinate, and adjust to job changes. Meanwhile, employee innovation requires a longer process, starting from finding ideas, seeking support, to implementing the idea. Thus, the use of social media in this study is more visible as a tool that accelerates work response and employee flexibility. This gap between the two indirect effects is consistent with the pattern observed throughout the discussion: social media functions as a fast, low-friction channel well suited to speeding up response and coordination, but only a partial contributor to the longer, more deliberate process by which ideas are generated, championed, and implemented into innovation.

Overall, the results of this study show that digital leadership and social media use have an important role in shaping employee work behavior in the digital era. Digital leadership provides direction and support so that technology can be used effectively, while social media use is a means that helps employees obtain information, share knowledge, and respond to job changes. These findings confirm that social media needs to be seen not only as a communication tool, but also as part of a work mechanism that can support employee innovation and agility when used with the right direction.

4.2.1 Theoretical Implications

Theoretically, this study strengthens the study of digital leadership in the context of employee work behavior. Previous research has discussed a lot of digital leadership in relation to digital transformation, organizational agility, innovation, and organizational performance. This study expands the discussion by placing social media use as a mediation mechanism that connects digital leadership with employee innovation and employee agility at the individual employee level (AlNuaimi et al., 2022; Mollah et al., 2024).

This research also contributes to the literature on social media use. Previous studies have mostly discussed social media use in relation to innovation capabilities and organisational performance in the context of organisations or SMEs. This study shows that social media use can also help explain employee innovation and employee agility at the individual level. Thus, social media use can be understood not only as a digital communication tool, but also as part of a work mechanism that supports innovative and adaptive behaviour (Pitafi et al., 2025; Borah et al., 2022).

4.2.2 Practical Implications

Practically, the results of this study show that organizations need to strengthen the role of digital leaders. It is not enough for leaders to just encourage the use of technology, but they also need to provide direction on how social media can be used productively in their work. Leaders can provide clear direction regarding the appropriate use of social media for work-related communication, information searching, customer interaction, and knowledge sharing. For example, social media can be directed to speed up communication, seek market information, maintain relationships with customers, receive input, and share knowledge between employees. In practice, organizations can establish simple guidelines that explain how employees can use social media to support their work while maintaining professional communication and organizational ethics. Organizations also need to create a balanced social media use policy. Social media should not only be seen as a source of distraction, but also as a work tool that can support innovation and agility when used with a clear purpose. Therefore, organizations can provide simple training or guidelines so that employees are

able to use social media professionally, be relevant to work, and remain in accordance with organizational ethics. In addition, leaders can encourage employees to share ideas, exchange knowledge, and communicate experiences related to work through appropriate digital platforms. Organizations can also provide opportunities for employees to explore digital tools and experiment with new ways of completing their tasks. Such practices can help employees become more responsive when facing changes in work processes, customer needs, or technological developments. At the same time, organizations should not rely on social media use alone to generate employee innovation. Social media needs to be accompanied by opportunities for employees to develop ideas, receive feedback, collaborate with colleagues, and implement useful ideas in their work. Managers can therefore create regular knowledge-sharing sessions, provide channels for employee suggestions, and give support when employees propose improvements to existing work processes. By combining clear digital leadership, purposeful social media use, employee learning, knowledge sharing, and opportunities for experimentation, organizations can make social media a more meaningful part of everyday work and support employees in becoming more innovative and adaptive.

5. Conclusions and Recommendations

5.1 Conclusion

This study aims to analyze the influence of digital leadership on employee innovation and employee agility with social media use as a mediating variable. Based on the results of the analysis of 217 respondents using PLS-SEM, all hypotheses in this study were declared accepted. The results of the study show that digital leadership has a positive and significant effect on social media use, employee innovation, and employee agility. These findings show that digital leaders have an important role to play in driving the use of technology, encouraging employees to generate new ideas, and helping employees become more adaptive in the face of job changes.

This study also found that social media use has a positive and significant effect on employee innovation and employee agility. This means that the use of social media in work not only serves as a communication tool, but can also be a means to obtain information, maintain relationships with outsiders, share knowledge, and support the emergence of new ideas. In addition, the results of the study show that social media use mediates the influence of digital leadership on employee innovation and employee agility. Because the direct influence of digital leadership on employee innovation and employee agility remains significant, the mediation that occurs is partial mediation. Overall, the study confirms that digital leadership and productive use of social media can be important factors in shaping more innovative and agile employees in a digital work environment.

5.2 Recommendations

This research has several limitations. First, this study uses cross-sectional data, so that the relationship between variables is only seen at one specific time. The next research can use a longitudinal approach so that changes in digital leadership, social media use, employee innovation, and employee agility can be observed over a longer period of time.

Second, this study uses a questionnaire based on respondent perception. This method is appropriate for looking at employee experiences and assessments, but it still has the

possibility of subjective bias. Further research can combine questionnaire data with interviews, observations, or assessments from superiors to make the research results more in-depth.

Third, this study only places social media use as a mediation variable. The next research can add other variables such as digital literacy, digital culture, knowledge sharing, intrinsic motivation, or job satisfaction. Job satisfaction is relevant because previous research has shown that it can explain the relationship between work-related factors and employee performance (Wulandari & Hadi, 2021). Thus, further research can expand the understanding of the psychological factors that support employee innovation and agility in the digital work environment.

Fourth, this research still focuses on employees who use social media in work activities. The next research can compare different industry sectors, such as the service sector, education, tourism, MSMEs, or technology companies, so that the results of the research can provide a broader picture of the role of digital leadership and social media use in the digital world of work.

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