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Digital Leadership and Innovative Work Behaviour through Knowledge Sharing Capability

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ABSTRACT

Digital leadership can facilitate the innovation of employees by enhancing access to valuable knowledge in the workplace. This paper focuses on analysing the connection between digital leadership and innovative work behaviour with knowledge-sharing capability acting as a mediator. We examine the 510 responses of questionnaires by partial least squares structural equation modelling. There are eight, six and seven indicators that measure digital leadership, knowledge-sharing capability and innovative work behaviour, respectively. The measurement scores demonstrate the good internal consistency, convergent and discriminant validity. Knowledge-sharing capability and innovative work behaviour are positively linked with digital leadership. There is a positive correlation between knowledge-sharing capability and innovative work behaviour as well. The direct relationship is positive, but the indirect relationship is important, which suggests complementary partial mediation. The model accounts 37.77 percent of the variation in the knowledge-sharing capability and 46.83 percent of the innovative work behaviour. Additional estimations of the individual dimensions of leadership are volatile, and they do not make up concrete findings with regard to their unique contribution. The results place knowledge-sharing ability as a valuable organisational process bridging leadership and innovation among employees. Managers ought to integrate online guidance alongside real-life plans to share and enact knowledge. The interpretation of causation by cross-sectional self-reports is limited. Future studies ought to look at the temporal order and evaluate dimensions of leadership with more extensive measures over time in organisations and groups.

INTRODUCTION

Digital technologies transform the way employees interact, arrange work and address work-related issues. The behaviour of their supervisors who determine how they are used determines their organisational value (Donate *et al.*, 2022). The employees might possess advanced platforms but no clear guidance, applicable help or a chance to share helpful findings. Digital leadership is thus about the behavior where leaders align technological resources and day-to-day work. It involves the articulation of digital priorities, employee learning, and reasonable experimentation. Such practices could assist the employees to stop their routine use of technology and come up with and execute improvements.

The key aspect of this process is innovative work behaviour. Innovation is enhanced by employees when they identify problems, generate helpful ideas, get support, and put suggestions into action. This behaviour will not need a formal research functioning or a significant technological cost to enhance the existing processes. Nevertheless, workers, seldom know everything that is necessary to analyze and use their ideas on their own (Eberl & Drews, 2021). They tend to rely on peers who have been exposed to various tasks, customer issues or technical specifications. The potential of locating, sharing, combining, and reusing this knowledge can determine whether an initial idea leads to a practical improvement.

This paper explores the concept of knowledge-

sharing capability as the intermediary that connects digital leadership and innovative work behaviour. The relationship proposed is based on the interaction between the supervisory practices and the availability of the usable knowledge to the employees (Wang *et al.*, 2022). An explanatory supervisor can develop a common goal. An encouraging supervisor can make their employees more eager to be assisted. The promotion of helpful interactions may also assist employees to determine who has pertinent knowledge. Such conditions can enhance knowledge-sharing potential, which can assist in generating, promoting, and enforcing new ideas.

The difference between access to technologies and the ability to share knowledge is great. Digital communication platform has the ability to deliver information at a fast rate, yet speed is not a determinant of understanding. The employees should be aware of what information is relevant, to whom they should consult, and how to utilize the experience of another person (Pilav-Velić *et al.*, 2021). This practical ability is encapsulated by knowledge-sharing capability. Its role in innovation must thus be analysed along with leadership behaviour instead of gauged by the availability of digital infrastructure. Digital leadership could also be connected to the innovative work behaviour directly, with the help of the framework, by promoting it, giving it independence, and responding to experimentation in a constructive way.

There are three related questions that we answer.

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Does digital leadership have a positive association with employees' knowledge-sharing capability? Is this ability connected to innovative work behaviour when digital leadership is taken into consideration? Is there a statistical mediation of the relationship between leadership and innovation through knowledge-sharing capability? These questions are converted into a model that has three constructs and an indirect pathway by using four major hypotheses (Al-Ahmad Chaar & Easa, 2021). An additional model analyses digital vision, digital communication as well as learning and experimentation support. This further discussion separates the general leadership construct and some specific elements of supervisory behaviour.

The research examines 510 responses of employees in various sectors and organisational roles. It has added value by formulating a behavioural pathway that perceived digital leadership has on the innovation at the work place. We evaluate the measurement properties prior to assessing structural relationships (Pratiwi, 2022). We also draw a line between the clear primary model and the fluctuating additional estimates. This distinction is required since an overall leadership construct, which has statistically credible relationships, does not necessarily provide credible estimates of each dimension. The analysis then leads to a detailed explanation of the main relations and leaves the necessary uncertainty of the additional model.

The results are practically applicable to the supervisors involved in digital work processes. Plans to invest in platforms should come with provisions that will simplify access to and utilization of workplace knowledge. The model offers a foundation of considering these arrangements along with leadership practices. Its meaning is still limited with the cross-sectional design and self-reports by employees (SUPRIYANTO *et al.*, 2020). Statistical mediation is an association that is in line with the mechanism proposed. It fails to prove that there were changes in leadership prior to the ameliorations of knowledge-sharing or that ameliorations of knowledge-sharing caused innovation. In the subsequent sections, the framework is developed, the methods are elaborated on, results are presented, and their implications are discussed. This emphasis also appreciates that employees can bring things to practice in terms of practical improvements through duties, with responsibilities where supervision and access to the expertise of the colleagues interact every day.

LITERATURE RIREVIEW

Digital leadership in everyday work

Digital leadership defines the supervisor behaviors that assist employees to comprehend and apply the digital technologies in their practice (Saleem *et al.*, 2023). Construct involves a clear articulation of direction, demonstration of practical benefits, effective communication and facilitation of learning. It also deals with the freedom of the employees to experiment and how this is responded by the supervisor to the challenges. These behaviours are important since digital work may mean that employees have to re-evaluate well-known routines (Imhof & Gatzu Grivas, 2022).

The employees will have to make decisions on whether the current process is appropriate or a new tool will be a beneficial alternative. Leadership can offer the guidance and encouragement to make such judgements without dictating all the actions to be taken by the individuals.

The digital leadership framework considers digital leadership to be a general construct which is manifested in various behaviours. An effective vision determines the goal of digital initiatives (Nugraha *et al.*, 2021). Successful communication bridges that intent and day-to-day duties. Learning support assists employees to develop the needed competence. Positive reactions to challenges may alleviate reluctance to get help. The benefits of individual learning are spread to colleagues through encouragement of knowledge exchange (Dayanti & Yulianti, 2023). These behaviours are related to each other conceptually, but the distinct impacts might vary. The key model thus evaluates their general rapport with the ability to share knowledge and innovative work behaviour prior to viewing the chosen dimensions separately.

Knowledge sharing capability

The knowledge-sharing capability relates to practical capacity of the employees to find the appropriate expertise, share helpful insights and use what colleagues know (Huu, 2023). It involves putting the ideas of various individuals together and storing the information of the past. Communicating is effective whereby the recipients are able to interpret and apply the presented information. A team can chat quite often yet struggles to locate credible guidance. The construct thus goes beyond the quantity of messages and the desire to communicate (Le & Le, 2021). It shows the availability of knowledge in the workplace when it is required or desired by employees in the situation when they have to solve an unusual problem or enhance an already existing process.

This relationship can be helped by an explanation of organisational behaviour based on knowledge (Xu & Suntrayuth, 2022). Workers possess specialised knowledge which is enhanced by experience of others. This mix can be facilitated by digital leadership which creates shared priorities and makes cooperation acceptable as part of normal work. Supervisors can assist staff in determining which digital practices are useful and which are good sources of help. Social learning is also manifested in the proposed relationship (Izwar Ibrahim *et al.*, 2020). Employees will see how their bosses talk, express themselves in times of ambiguity, and answer questions. Such observations may impact the attitude of employees who may consider knowledge sharing as part of their duties as a normal and valuable undertaking.

Innovative work behaviour

Innovative work behaviour involves seeking opportunities, generating ideas, marketing ideas, introducing change and perfecting change through experience. Such activities call on various types of knowledge (Arsawan *et al.*, 2022). Familiarity with operational problems may be a key in

recognising an opportunity. The conception of an idea can take technical knowledge or a different approach. Action can be taken based on the colleagues who are aware of the organisational restrictions (Heubeck & Meckl, 2022). These activities can be enabled with the help of knowledge-sharing capability that will link the employees to the appropriate knowledge. It also can assist them in determining the feasibility of an idea prior to seeking wider approval. Innovation can therefore be said to be a series of willful workplace behaviours.

Innovative work behaviour can also be directly related with digital leadership (Kayapalı Yıldırım, 2020). With an explicit digital focus, employees will be able to recognize improvements that can have a positive impact on the organisational priorities. Experimentation can be possible with due autonomy (Gul *et al.*, 2023). Positive reactions to challenges can empower employees to pursue an idea that is not perfect instead of letting go of it right away. Such relations need not imply an exchange of knowledge in between (Shaikh *et al.*, 2021). The theoretical framework thus has a direct line of leadership. The specification enables the analysis to determine if knowledge-sharing capability explains any portion of the relationship, and other leadership-relevant processes are still pertinent to employee innovation.

The capability perspective also acknowledges that there are ways to have the knowledge that is still useful even once it has been exchanged (Yepes & López, 2023). Maintaining some useful lessons will enable employees to reuse previous solutions, weigh alternatives, and apply previous experience when a new task creates a similar but novel challenge.

Mediation and primary hypotheses

These arguments are a combination of the mediation proposition. A greater ability to find and utilize the knowledge of colleagues can also be linked to digital leadership (Lapsomboonkamol *et al.*, 2022). The ability may in turn have a correlation with more creative behaviour. The indirect route outlines a possible organisational process, and the direct route acknowledges the possibility that leadership can act via other processes. A positive direct coefficient and a positive indirect coefficient would be in line with complementary partial mediation (Işık *et al.*, 2021). This trend is not temporal but statistical evidence in a cross-sectional survey. It is in favour of the suggested explanation but does not define the sequence of

development of underlying behaviours.

H1: Digital leadership is positively associated with employees' knowledge-sharing capability.

H2: Knowledge-sharing capability relates positively to innovative work behaviour of the employees.

H3: Digital leadership has a positive relationship with innovative work behaviour of employees.

H4: Knowledge-sharing ability mediates the digital leadership-innovative work behaviour relationship.

Supplementary hypotheses and framework

The supplementary model discusses the choice of elements of digital leadership as individual predictors of knowledge-sharing capability. DL1 and DL2 are the digital vision. DL4 is a representation of digital communication. DL5, DL6, and DL7 are support of learning and experimentation. DL3 and DL8 are considered within the framework of the prime leadership construct, but not these supplementary dimensions. In the extra model, this distribution casts the issue of leadership in a more limited picture. It also provides the one indicator to communication. The interpretation of dimensions dimension-specifically, in turn, demands special focus on measures coverage, overlapping predictors, and bootstrap estimate stability.

H5: Digital vision positively correlates with the ability of the employees to share knowledge.

H6: There is a positive relationship between digital communication and the ability of the employees to share their knowledge.

H7: Employees are positively linked to the knowledge-sharing capability through digital support to learning and experimentation.

The main conceptual framework is outlined in figure 1. The exogenous construct is digital leadership, the mediator is knowledge-sharing capability, and the last outcome is innovative work behaviour (Zehir & Celebi, 2022). The model has three direct relationships and one indirect relationship. The additional hypotheses are tested independently of each other since their predictors are similar to the ones used to determine the overall leadership construct (Harjanti & Halim, 2022). The fact that these paths are further independent tests in the same simple mediation model would confound the measurement relationship between these paths. The model thus isolates the main explanatory question and the exploring evaluation of individual leadership constructs.

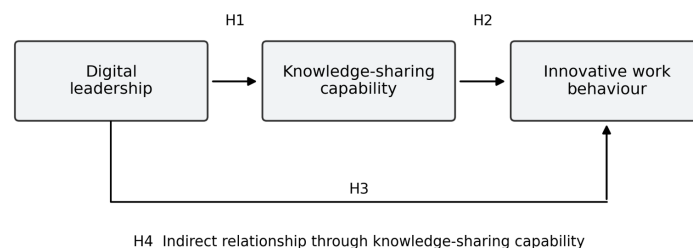


Figure 1: Conceptual framework of the primary mediation model.

MATERIALS AND METHODS

Design and analytical sample

The researcher adopts a quantitative survey design to test the correlation between the perceived digital leadership, knowledge-sharing capability, and the innovative work behaviour (Kmieciak, 2021). The unit of analysis is the employee. The demographic frequencies set the number of respondents in the analytic sample to 510. Eligibility criteria used in the questionnaire include warrants such as current employment, a minimum of six months working under the immediate supervisor and organisational application of digital technologies. These criteria match experience of respondents and the leadership questions. The time frame is the last six months and this way participants can think about a long-term pattern of workplace behavior and not a recent event.

The sample consists of the employees of manufacturing, financial services, education, healthcare, information technology, retail, the public sector and others. It also covers non-managerial staffs and a number of levels. This coverage offers diversity in work-life and online presence. The sample is not analyzed as being representative of a defined population of employees in a nation. The virtual lack of a documented probability sampling frame would make inappropriate population-level prevalence estimates. Demographic attributes explain the participants in the model. They fail to determine that the relationships that they observe are universal in industries, positions or other groups of employees.

Questionnaire and measurement

The tool starts with details about the participants and a consent question. It says that the participation is voluntary, responses are confidential and the data is to be used in academic research. Those individuals who reject will be asked to discontinue. Screening questions determine the job and supervisory experience (Özay & Kaymaz, 2023). Background questions capture age, sex, education, role, industry, organisational experience and the frequency of use of digital tools. These variables present a background to how to interpret the sample. The primary model that is reported does not carry them as control predictors. There are no comparisons of subgroups based on their descriptive frequencies.

Digital leadership is quantified using eight measures, coded DL1-DL8. They cover digital vision, descriptions of digital effort, promotion of new solutions, communication, learning support, experimentation, and positive reactions and sharing of helpful practices. The knowledge-sharing capability employs six indicators which are coded KSC1 to KSC6. This cover finding expertise, exchanging and acquiring knowledge, enhancing work, integrating the insights of colleagues and sustaining experience (Donate *et al.*, 2022). There are seven indicators of innovative work behaviour with the code IWB1 to IWB7. They deal with the discovery of opportunities, formulation and marketing of ideas, support, implementation and refinement of ideas. Each

item has five categories of responses, strongly disagree to strongly agree.

Measurement model assessment

We assess the three constructs using the reflective measurement statistics that we are provided to in the analysis. Outer loadings show how each indicator is related to the corresponding construct. Cronbach alpha, the rho A and composite reliability are used to test internal consistency (Wang *et al.*, 2022). Mean variance extracted is a measure of convergent validity. Heterotrait-monotrait ratio evaluates the ability of the constructs to be empirically distinct. These criteria have to be read collectively since a single satisfactory statistic will not determine the quality of measurement alone. A relatively lower loading of an indicator is then taken into consideration with its conceptual role and the reliability and convergence of the entire scale.

Structural model and mediation

Partial least squares structural equation modelling approximates the primary paths and indirect relationship. Structural assessment takes into account coefficients of determination, adjusted coefficients, effect sizes and bootstrap uncertainty. The direction of the coefficient and whether it includes (or excludes) a 95% confidence interval of the coefficient are used to test hypotheses (Wang *et al.*, 2022). Values which are exported as bootstrap probability values are given below.001. They are not supposed to be strict zero probabilities. Product of the leadership-to-knowledge, and the knowledge-to-innovation coefficient is known as the indirect coefficient. Its bootstrap confidence interval offers the foundation of determining mediation as opposed to discrimination of individual significance tests.

The entries of the collinearity in the workbook are reported transparently since the labels of the predictors are numerical. To check the primary equation of innovation, one more algebraic test is employed based on the reported knowledge sharing R2 and to estimate the variance inflation factor that is being implied by one leadership predictor. This test is assumed to be based on the standardised primary score model, and the resulting diagnostic is based on both correlated predictors. It is differentiated with the entry exported. The H5-H7 are estimated in the supplementary model with the help of the groups of items assigned. The results of it are measured individually and especially, single-item communication measurement and unusually wide confidence activity are considered.

Scope of inference

The design facilitates study of current associations. It cannot give precedence in time or erase other interpretations. There could be common respondent reporting affecting the observed relationships (Pilav-Velić *et al.*, 2021). Reported R2 values explain the variance in the analysed sample; these values do not determine the

predictive behaviour of new employees. There are no out-of-sample prediction results. As a result, the evidence of prediction, industry variability, or the effects of causal intervention falls beyond the range of evidence. The analytical method does not discard any of the main indicators and reports the additional uncertainty instead of choosing only favourable coefficients. Such limits inform the analysis of the results.

The absence of reporting bias is not proven by either

a strong reliability or a significant indirect path. These diagnostics answer various questions and need to be interpreted separately.

RESULTS AND DISCUSSION

Respondent characteristics

The table 1 displays the features of 510 respondents. Employees between 25 and 34 are the highest with that between 35-44 being the next highest. The sample is

Table 1: Respondent profile

Characteristic	Category	n	%
Age group	25–34	166	32.55
	35–44	154	30.20
	45–54	92	18.04
	55 or above	41	8.04
	Under 25	57	11.18
Gender	Man	268	52.55
	Prefer not to say	6	1.18
	Prefer to self-describe	2	0.39
	Woman	234	45.88
Education	Bachelor's degree	202	39.61
	Doctoral degree	16	3.14
	Higher secondary	62	12.16
	Master's degree	194	38.04
	Other	17	3.33
	Secondary or below	19	3.73
Position	Middle manager	85	16.67
	Non-managerial employee	262	51.37
	Other	19	3.73
	Senior manager	36	7.06
	Team leader/supervisor	108	21.18
Industry	Education	73	14.31
	Financial services	78	15.29
	Healthcare	60	11.76
	Information technology	84	16.47
	Manufacturing	84	16.47
	Other	27	5.29
	Public sector	49	9.61
	Retail	55	10.78
Organisational tenure	1–3 years	152	29.80
	4–6 years	134	26.27
	7–10 years	82	16.08
	Less than 1 year	65	12.75
	More than 10 years	77	15.10
Digital tool use	Every working day	159	31.18
	Often	107	20.98
	Rarely	18	3.53
	Sometimes	56	10.98
	Very often	170	33.33

52.55% male and 45.88% female.

Master and bachelor degrees are prevalent. Employees that are not managers comprise slightly more than half the participants. IT and manufacturing are each 16.47 %and the financial services 15.29% The sample is thus not a single occupational group but comprised of a few employment settings. These frequencies place the model in perspective and do not make comparative effects between categories.

The majority of the respondents indicate frequent digital activity. The proportions of every-working-day and very-often users collectively to 64.51% increase to

85.49% when often users are also considered. The tenure of organisation is diverse with the 1-3 years and 4-6 years occupying 29.80% and 26.27% respectively. This distribution means that the relationships are based on employees who have varying organisational experience days. It does not indicate the frequency or tenure of digital use has an impact on the structural coefficients because it is not tested in the reported model.

Construct correlations

Construct correlations are positive as demonstrated in Table 2.

Table 2: Construct correlations

Construct	DL	KSC	IWB
DL	1.000	0.566	0.494
KSC	0.566	1.000	0.606
IWB	0.494	0.606	1.000

The highest reported correlation is with knowledge-sharing capability and innovative work behaviour (.606). Digital leadership has a correlation with knowledge-sharing capability of =.566 and innovative work behaviour of =.494. These directional relations are in accordance with the suggestions. The definitions of correlation scores are not specified. They cannot be automatically equated with model scores especially since the coefficient of leadership to a mediator is not equal

to its reported bivariate correlation. The scoring method should be clarified before these statistics are treated as being directly comparable.

Indicator quality and construct validity

The outer loadings of all 21 indicators are given in Table 3. The range of digital leadership loadings is between .673 to.866.

Table 3: Indicator outer loadings.

Construct	Indicator	Outer loading
DL	DL1	0.786
DL	DL2	0.831
DL	DL3	0.866
DL	DL4	0.673
DL	DL5	0.759
DL	DL6	0.712
DL	DL7	0.736
DL	DL8	0.823
KSC	KSC1	0.837
KSC	KSC2	0.811
KSC	KSC3	0.795
KSC	KSC4	0.812
KSC	KSC5	0.788
KSC	KSC6	0.777
IWB	IWB1	0.736
IWB	IWB2	0.808
IWB	IWB3	0.828
IWB	IWB4	0.762
IWB	IWB5	0.751
IWB	IWB6	0.720
IWB	IWB7	0.742

The range of knowledge-sharing capability is between .777 to.837 and the range of innovative work behaviour is between.720 to.828. The loading of DL4 is minimal with the full leadership scale having satisfactory convergence

and reliability. Communication indicator thus stays in the primary model. The table reports give only assigned loadings; structural zeros at other points in the export are not regarded as tested cross- loadings.

Table 4: Internal consistency and convergent validity

Construct	Cronbach α	rho_A	rho_C	AVE
DL	0.924	0.926	0.923	0.601
KSC	0.916	0.917	0.916	0.646
IWB	0.908	0.909	0.908	0.585

Table 4 shows that there is high internal consistency of the three scales. Alpha ranges from .908 to .924, rho_A from .909 to .926, and composite reliability from .908 to .923. There is an average variance extracted between.585 and.646. Each of the constructs, on average, then accounts for over half of the variation in their indicators. These findings are in line with the reflective measurement interpretation involved in the primary analysis. They do not stand-alone to validate the more narrowly specified dimensions of leadership in the supplementary model.

Table 5: Discriminant validity using HTMT

Construct pair	HTMT
DL and KSC	0.612
DL and IWB	0.536
KSC and IWB	0.663

Table 5 shows that the values of HTMT are between 0.536 and 0.663. The highest value is related to capability of sharing knowledge and innovative work behaviour. The ratios facilitate the empirical segregation process of

the major constructs although they are positively related. The ability to share knowledge and innovativeness and leadership can hence be viewed as connected but separate aspects within the framework. Since no reported HTMT confidence intervals, the evaluation is based on point estimates. It cannot be called a finished bootstrap test of discriminant validity.

Collinearity and explained variance

Table 6 separates the collinearity entries that are exported versus a reconstruction with the primary model. The innovation equation has a VIF of 1.472 in both the two non-labeled rows of exports. The labels they carry bar an independently ascertained assignment to predictors. The mediator R² is used to calculate the standardised primary model implying that the VIF of leadership and knowledge sharing capability are 1.607. The two diagnostics show that there is a limited overlap of predictors in that equation. Both of them cannot solve the instability of the separate supplemental model, the predictor collinearity statistics of which are not available.

Table 6: Collinearity diagnostics and primary model reconstruction

Diagnostic	Predictor	Outcome	VIF
Exported	Row 1 unnamed	IWB	1.472
Exported	Row 2 unnamed	IWB	1.472
Reconstructed	DL	IWB	1.607
Reconstructed	KSC	IWB	1.607

Table 7 indicates that digital leadership is useful in explaining 37.77% of the variance in knowledge-sharing capability. The combination of digital leadership and knowledge-sharing capability makes 46.83% of innovative work behaviour. The adjusted R² estimates are 0.376 and 0.466 respectively, which are not too far away as compared

to the unadjusted estimates. The findings suggest a significant explanatory power within the sample. There is much unaccounted variance especially in knowledge-sharing ability. The findings enable other organisational and individual influences to be left in play and do not create performance on non-sample observations.

Table 7: Explained variance in endogenous constructs

Endogenous construct	R ²	Adjusted R ²
KSC	0.378	0.376
IWB	0.468	0.466

Effect sizes of the three given paths are indicated in table 8. The f² is significant at.607 with digital leadership having a significant contribution to knowledge-sharing capability. The role of sharing of knowledge in innovation is larger

than that of direct leadership path and f² of sharing of knowledge and direct leadership path are 0.334 and 0.051 respectively. This trend confirms the significance of mediator in the given model. Effect sizes explain the

differences in the explained variance when a predicate is not taken into account. They cannot be construed as percentages of employees influenced by leadership or to causal effects of interventions.

Table 8: Effect sizes for specified structural paths

Specified relationship	f ²
DL → KSC	0.607
DL → IWB	0.051
KSC → IWB	0.334

Table 9: Bootstrap results for primary direct relationships

Path	β	Bootstrap mean	SD	t	95% CI	p
DL → KSC	0.615	0.615	0.033	18.707	[0.549, 0.676]	< .001
KSC → IWB	0.535	0.536	0.050	10.789	[0.441, 0.631]	< .001
DL → IWB	0.210	0.211	0.053	3.945	[0.107, 0.316]	< .001

Table 10: Bootstrap results for the indirect relationship

Indirect path	β	Mean	SD	t	95% CI	p
DL → KSC → IWB	0.329	0.330	0.037	8.975	[0.260, 0.404]	< .001

Table 10 supports H4. The indirect coefficient is .329 with a confidence interval of .260 to .404. The positive direction of it equalizes the direct leadership coefficient. The findings are agreeable to complementary partial mediation since the two relationships are significant. The sum of the direct and indirect coefficients is the total

Primary paths and mediation

Table 9 supports H1, H2, and H3. The relationship between digital leadership and knowledge-sharing capability is positive, $\beta = .615$ with a confidence interval of .549 to .676. Both of these are positively correlated with innovation with the value of $\beta = .535$ and the interval of .441-.631. The direct leadership relationship is smaller, $\beta = .210$, however, its interval between .107 and .316 also does not include 0. Bootstrap resemble closely with the original estimates indicating central estimates of these major relationships are stable in the resampling results reported.

association which is approximately .539. On a descriptive basis, the indirect component is just a bit over 61.0 percent of this total. There is no available confidence interval of the total or this proportion, and hence, neither is given a separate claim of significance.

Table 11: Primary hypothesis decisions

Hypothesis	Relationship	β	95% CI	Decision
H1	DL → KSC	0.615	0.549 to 0.676	Supported
H2	KSC → IWB	0.535	0.441 to 0.631	Supported
H3	DL → IWB	0.210	0.107 to 0.316	Supported
H4	DL → KSC → IWB	0.329	0.26 to 0.404	Supported

The table (Table 11) summarises evidence of the four main hypotheses. The positive coefficients and confidence intervals with zero ruled out lead them to their decisions. This trend gives consistent support to the mediation framework suggested. It lays statistical resonance with the argument knowledge-sharing capability links leadership and innovation. Nonetheless, the joint support fails to eliminate the shortcomings of the survey design or even to determine that employees are more innovative due to the change in leadership behaviour of their supervisors. A similar relationship between point estimates and interval bounds is also evident in the primary decisions.

All the intervals are positive and none of them is too near to zero such that it can alter the decision reported at the given level of confidence. This uniformity enhances the statistical interpretation, but leaves unexplained questions of omitted variables and source of measurement. The only importance that matters when it comes to establishing practical importance is significance, and the extent of the effects.

Supplementary dimension estimates

Table 12 does not favor H5, H6 and H7. Digital vision is negatively estimated, communication is near zero and

Table 12: Supplementary leadership dimension estimates.

H	Dimension and items	β	SD	95% CI	p	Decision
H5	Digital vision	-0.843	48.267	[-10.656, 9.608]	0.2396	Not supported
H6	DL1-DL2	-0.046	2.992	[-0.506, 0.471]	0.7128	Not supported
H7	Digital communication	1.480	50.118	[-8.776, 11.429]	0.1716	Not supported

learning support is above one. They have zero confidence intervals which are uncharacteristically wide, especially regarding vision and support. The standard deviations of 48.267 and 50.118 obtained using bootstraps are extremely unstable in terms of estimation. These coefficients are incapable of ranking the dimensions in

a credible manner and proving negative outcomes of vision. The single-item measurement of communication and non-dimension coverage also restrict interpretation. The extra results are therefore inconclusive and do not negate the more consistent mediation results.

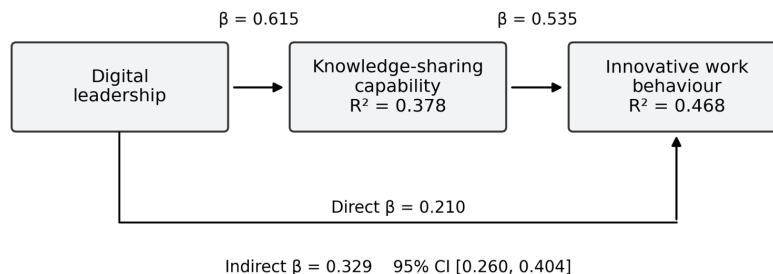


Figure 2: primary structural model.

Discussion

Leadership and knowledge sharing

The main findings endorse a positive connection between digital leadership and the ability of employees to share their knowledge. This correlation is the biggest structural coefficient in the model (Pratiwi, 2022). It indicates that employees who feel more strongly directed digitally, as well as supported, also claim the possibility to gain and utilize the knowledge of colleagues. The result is in line with a leadership process that renders expertise in the workplace more accessible. Employees can be put on the same page through clear explanations and to motivate them to seek other people whenever they have challenges in digital processes, they are not well versed with. The outcome is the collective leadership construct and would not be able to tell which of the individual behaviour is the most significant.

This definition makes the digital work social organisation the core of the framework. Access to communication channels is not all that employees require. He or she must be assured that other employees have the necessary expertise and that seeking help is not inappropriate. Supervisory encouragement can provide a recognised site of knowledge exchanges in day-to-day work (SUPRIYANTO *et al.*, 2020). An exchange of helpful digital practices is also a part of the leadership scale, establishing conceptual proximity to the mediator. Despite the fact that the results of discriminant validity indicate a separation of the constructs, this level of content overlap should be considered in the next stage of measurement development. Future measurement tools may be able to delineate the difference between enabling leadership behaviour and actual capability of employees in sharing-knowledge.

Innovation and the mediated relationship

After controlling the factor of digital leadership, knowledge-sharing capability is positively related to innovative work behaviour. It gives more contribution to the innovation equation than does the direct

leadership pathway. When employees are able to pool the knowledge of colleagues, they might be in a better standpoint to evaluate issues that are new and come up with solutions that can be implemented (Saleem *et al.*, 2023). The implementation can also be supported with the help of knowledge gained by others, who can help understand what constraints are practical. The discovery, in turn, correlates with a description of innovation as a group activity. Although an idea may be generated by an employee, the process of refining and adopting the idea may require the inputs of knowledge shared among the staff members.

The huge indirect association makes this account specific. Digital leadership is associated with innovation partially by the ability of sharing knowledge and a lesser direct connection still exists. Complementary partial mediation is favored by this trend. It implies that an explanation that is based solely on either a leadership or a knowledge sharing would not capture a portion of the relationship observed (Imhof & Gatzu Grivas, 2022). Nonetheless, the mediation estimate will not be able to tell whether knowledge sharing spawned following exposure to leadership. Innovative workers can desire more information or assess their bosses in a better light. All of the three constructs may also be affected by other factors such as the team climate or availability of resources. The results thus reveal a viable mechanism as opposed to an established sequence of causation.

Theoretical implications

The study adds to a behavioural knowledge of digital leadership by relating the supervisory practices to an employee capacity and a piece of work. It has a more limited explanatory scope than a statement that digital transformation invariably results in innovation. Leadership deals with the direction and support of technology use. Knowledge-sharing capability is the ability to share useful expertise (Dayanti & Yulianti, 2023). Innovative work behaviour deals with the efforts of the employee to come up with and put to practice improvements. These

components can be treated independently as the results of the measurements provide support. Their structural relationship subsequently testifies to the fact that the suggested organisational mechanism is similar to the identified employee reactions.

Another illustration of an evidential boundary is explained by the supplementary model. The overall leadership construct support fails to generate dependable independent contributions towards vision, communication, and the provision of learning support. The changing coefficients are unable to determine whether these dimensions are reinforcing each other or their observed impacts are due to coincident measurement (Huu, 2023). The coverage of construct is particularly limited with one communication item. The findings thus incline toward keeping the main interpretation and developing more measurements before furthering dimension-specific explanations. This retains the conceptual worth of investigating the elements of leadership without utilizing technically unstable estimates as material results.

Managerial implications

Managers ought to relate online priorities with tangible opportunities where employees can share and apply knowledge. An explanation of a new platform should clearly define the work problem that it involves as well as those colleagues who can offer help (Le & Le, 2021). Teams are able to develop freely available records of the solutions that are practiced in real life, upkeep current expertise directories and devote time to deliberating over challenging tasks. These plans deal with the capacities embodied on the part of the mediator. They also provide a broader path to the employees on how they can get advice and use it in their respective duties. Their performance ought to be determined by the improvement in the work and not by the volume of messages only.

Supervisors are also able to provide experimentable opportunities that are manageable. After experiencing some challenges, employees might be allowed to test a different procedure, consult, and rewrite their proposal. Positive feedback may assist them in differentiating a productive change, and an unsuitable one (Xu & Suntrayuth, 2022). Managers ought to maintain the right operating safety but allow staff to innovate. The additional outcomes do not warrant the preference of one aspect of leadership over another. The practical decisions ought to then look at the local work requirements and evaluate the integrated approach. The current associations do not guarantee an estimate of the benefits of the interventions, only a reason to do such evaluation.

Limitations and further research

Interpretation is limited by a number of constraints. Cross-sectional self-reports fail to provide time sequence and might be typical in terms of response trend. The subjects cut across various areas though the measurement invariance and subgroup relations are not measured. The clustering of organisations is inestimable due to

the summaries presented since the similar bosses or the workplace are not detected (Izwar Ibrahim *et al.*, 2020). The documentation of recruitment procedures, geographic coverage, fieldwork dates, about missing-response treatment, and bootstrap settings should be more thoroughly documented to enhance reproducibility. Repeated observations, independent evaluation of innovation and a well-defined process of sampling should be used in future work. Their individual effects should be interpreted in more comprehensive dimensions of leadership and confirmed estimation diagnostics.

An even better design would be able to measure supervisor behaviour and then test the knowledge-sharing capability and then note innovation later in the design (Arsawan *et al.*, 2022). The connection to employees to teams would also allow the investigation of the collective conditions in the workplaces. This would assist in differentiating personal perceptions and group abilities and determine whether the suggested course of action can be sustained over a period of time or not.

CONCLUSION

This paper will explore the relationship between digital leadership and innovative work behaviour in the form of knowledge-sharing capability. The four major hypotheses are supported by the analysis of 510 responses made by the employees. Knowledge-sharing capability and innovation are positively linked with digital leadership. Innovation is positively related to knowledge-sharing capability with leadership considered. The prominent indirect relationship, along with the rest of the direct relationship, is in line with complementary partial mediation. Relevant measurement findings indicate reliability, convergence and empirical differentiation of the three measures.

The results indicate that digital leadership only becomes explanatory when it is viewed with the capability of the employees to access and implement workplace knowledge. Supervisors can also assist employees in knowing their priority in technology and provide an environment of beneficial interactions. Distributed expertise can then be used to draw on expertise by employees in developing and implementing improvements. This meaning is still just a suggested organisational system backed up by the current associations. It does not define a causal order and does not ensure that a leadership intervention will lead to a certain enhancement of innovation.

The additional dimension estimates are inconclusive. Their excessive vagueness does not allow making credible statements regarding the autonomous activities of vision, communication or learning support. Measurement coverage and checking the model stability must be enhanced by further research, and then the comparison of these dimensions can be made. To practice, the results assist in integrating the digital direction and arrangements that render expertise available and reusable. In the case of research, they offer a narrowed mediation framework, which could be evaluated using longitudinal research designs and independent measures of behaviour. More

information on sampling and estimation methods would enhance the reproducibility and applicability of the future studies.

Assessment should be conducted to assess whether the workers are able to find support, combine the ideas of coworkers, and implement the enhancements. These observable practices provide a more specific point of managerial learning, than overall assertions of digital maturity. Recreation among well-established workplace groups would determine the extent to which the main relationships are consistent and define the organisational situations in which the ability to share knowledge is most applicable.

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