

# How is the role of Digital Leadership and Knowledge Sharing on Performance? An Empirical Study on SMEs in Bandung West Java

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## ABSTRACT

The purpose of this study was to analyze the effect of Digital Leadership on the performance of SMEs and the effect of Knowledge Sharing on the Performance of SMEs in Bandung West Java. The research was conducted using a quantitative approach through a survey. The population of this study were all SMEs employees in Bandung, while the number of samples in this study was 400 people who were selected using simple random sampling. Testing the hypothesis in this study using SEM (Structural Equation Modeling) with the PLS program. The research data was obtained through the distribution of online questionnaires through social media. The results of this study are that Digital Leadership has a positive and significant effect on the performance of SMEs and the variable Knowledge Sharing has a positive and significant effect on Performance SMEs in Bandung West Java.

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## I. Introduction

Along with the development of the company, and the greater the effort made by the company to improve the quality of human resources and the quality of employee performance, it is better for human resources who have been accepted as employees to be equipped with knowledge or other expertise according to their fields of work. But beyond that, employees still need a learning process and also adjustments to the tasks and jobs that will be given by the company. Because the knowledge and expertise or skills obtained from formal educational institutions are not necessarily aligned and always in accordance with what is happening in the real world in the future. According to Mihardjo et al. (2019) Knowledge sharing has considerable benefits for the company if it is implemented and implemented properly by its employees. The benefits include the company having employees (especially new employees in the company) who are ready to carry out their work so that with the formation of a quality workforce, the company can achieve company goals more easily.

Developments in the digital era have encouraged digitization and brought positive changes in all fields, including the world of work. In facing readiness in the digital era, leaders from various companies or organizations around the world are required to have digital and leadership skills. According to Amelda et al. (2021) Leadership in the digital era is an important ability that must be possessed by individuals to create solutions to various problems in the digital era. The leadership style in the digital era does not only understand the concept of leadership but must be able to master soft skills (non-technical skills) and hard skills (technical skills). Soft skills (non-technical skills) are needed by everyone in order to improve performance at work, because they are related to the ability to adapt, interact, and regulate oneself. According to de Araujo et al. (2021); Johan et al. (2021) Digital leadership is not someone who is an expert in assembling computers, operating computers, to programmers. However, digital leadership is someone who has the ability to lead an organization or

company by utilizing information and communication technology in the digital era so as to achieve the target of the organization or company.

With the implementation of good knowledge sharing in the company, it is hoped that employees will be able to learn well and carry out their functions within the company. In addition, it is also hoped that the development of attitudes, attitudes, knowledge and also the ability of human resources in the company can help achieve the company's goals. Knowledge sharing for employees is a process or step to provide space for members of a group within the company to share their knowledge and information with other members. With the implementation of knowledge sharing properly, it will be able to help the company to achieve its goals. According to Benitez et al. (2022); de Araujo et al. (2021) the application of knowledge sharing for employees is also useful for strengthening the relationship between employees, namely employees who are more senior and have more work experience and are also longer in the company, with new employees who may have just been accepted into the company and still have little experience and experience. also knowledge about the realities that occur in the company.

The importance of performance appraisal in an organization provides an overview of the progress that has been successfully achieved by the organization. According to de Araujo et al. (2021); Johan et al. (2021); Mihardjo et al. (2019) performance is the result of work in terms of quality and quantity achieved by employees which is achieved by employees in carrying out their duties in accordance with the responsibilities that have been given to them. Employee performance is a benchmark used by companies to determine the right strategy in order to compete with other companies. The role of human resources in companies that have high performance will support the success of the company. To be able to improve employee performance, management support is needed to improve learning capabilities and become a learning organization for the company's success.

According to Amelda et al. (2021); Antonopoulou et al. (2020); Asbari et al. (2021)) there are two factors that can affect the ability in knowledge sharing, the first factor is technical factors (technology), and also non-technical factors (including individual factors, organizational culture, and also organizational structure). The two factors above are also influenced by education, work experience, and also position in the organization. Based on the results of interviews with researchers with the company, there are several factors that influence the application of knowledge sharing in the company. In line with the theory above, when viewed from the technical factors (technology) above, new employees with a young age are more knowledgeable and have more skills in technology than old employees who have an old age. Old employees who still have an attitude of not wanting to learn with the development of technology are increasingly rapid and tend to be prestige towards new employees who are considered not to have much experience in the world of work. These things cause communication between employees to run less effectively, so that it also affects the performance of employees within the company. The purpose of this study was to analyze the influence of Digital Leadership on the performance of SMEs and the influence of Knowledge Sharing on the Performance of SMEs in Bandung West Java.

## II. Method

The research was conducted using a quantitative approach through a survey. The population of this study were all SMEs employees in Bandung, while the number of samples in this study was 400 people who were selected using simple random sampling. Testing the hypothesis in this study using SEM (Structural Equation Modeling) with the PLS program. The research data was obtained through the distribution of online questionnaires through social media.

The instrument will be measured using a Likert scale with intervals of 1 to 5. A scale of 1 to 2 explains that respondents do not agree with the statements contained in the questionnaire ranging from strongly disagree (1), to disagree (2). Meanwhile, scale 3 explains that respondents are neutral to the questions contained in the questionnaire. On the other hand, scales of 4 and 5 explain that respondents agree with the statements contained in the questionnaire, ranging from agree (4) to strongly agree (5). Data analysis was carried out using the Partial Least Square (PLS) method using SmartPLS version 3. PLS is a method of solving Structural Equation Modeling (SEM) which in this case is more than other SEM techniques. SEM has a higher degree of flexibility in research that connects theory and data, and is able to perform path analysis with latent variables so it is often used

by researchers focusing on social sciences. Partial Least Square (PLS) is a fairly strong analytical method because it is not based on many assumptions. The data also does not have to have a multivariate normal distribution (indicators with categorical, ordinal, interval to ratio scales can be used in the same model), the sample does not have to be large (Purwanto et al., 2020.) In this study, data analysis used the Partial Least Square (PLS) approach using smartPLS software. Partial Least Square (PLS) is a structural equation model (SEM) based on variance components. The PLS approach is distribution free (not using certain distributed data, which can be in the form of nominal, categorical, ordinal, interval or ratio. In addition, PLS can also be used to measure small samples. The following are the steps for using the Least Square (PLS) approach using smartPLS software: Validity test used to assess whether or not a questionnaire is valid. A questionnaire is said to be valid if the questions the questionnaire is able to reveal something that is measured by the questionnaire. Validity testing is applied to all question items in each variable. There are several stages of testing to be carried out, namely through convergent validity, average variance extracted (AVE), and discriminant validity. a. Content Validity The validity of the questionnaire can be obtained by using a questionnaire that has been widely used by researchers. The questionnaire used in this study is the result of a literature study with modifications as necessary to avoid the tendency of respondents to certain preferences.

The hypothesis of this research is:

H1: There is a positive and significant influence between Digital Leadership on performance

H2: There is a positive and significant effect between Knowledge Sharing on performance

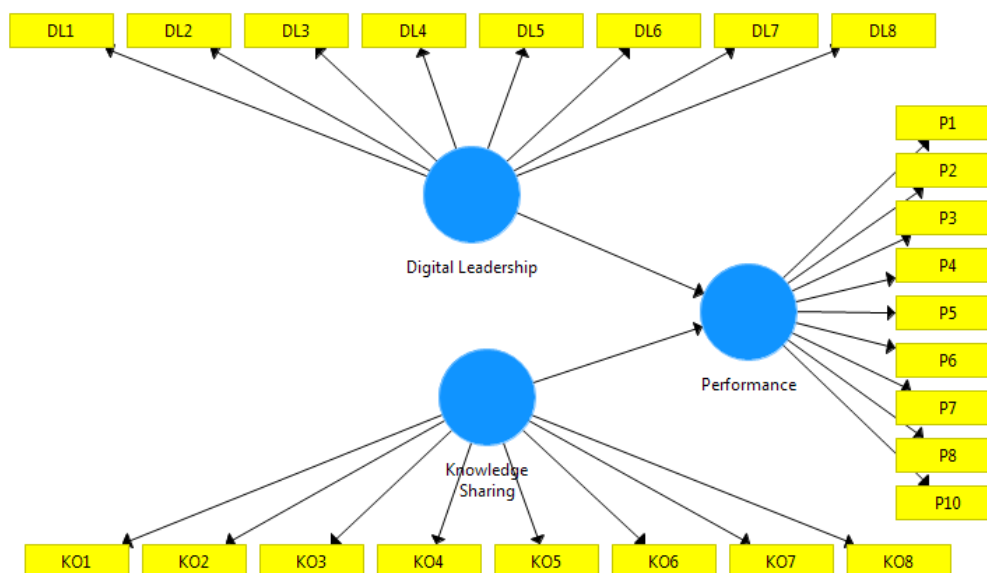


Fig. 1. Research Model

### III. Results

In this study, data analysis uses the Partial Least Square (PLS) approach using smartPLS software. Partial Least Square (PLS) is a structural equation model (SEM) based on variance components. The PLS approach is distribution free (does not use data with a certain distribution, it can be nominal, category, ordinal, interval or ratio). In addition, PLS can also be used to measure small samples. The following are the steps for using the Least Square (PLS) approach using the smartPLS software: Validity test is used to assess whether a questionnaire is valid or not. A questionnaire is said to be valid if the questionnaire questions are able to reveal something that is measured by the questionnaire. Validity testing is applied to all question items in each variable. There are several stages of testing to be carried out, namely through convergent validity, average variance extracted (AVE), and discriminant validity. a. Content Validity The validity of the questionnaire can be obtained by using a questionnaire that has been widely used by researchers. The questionnaire used in this study is the result of a literature study with modifications as necessary to avoid the tendency of respondents to certain preferences.

This convergence measurement shows whether each question item measures the similarity of the dimensions of the variable. Therefore, only the question items have a high level of significance, which is greater than 42 times the standard error in the measurement of the research variable question items. Convergent validity can be met when each variable has an AVE value above 0.5, with the loading value for each item also has a value greater than 0.5. the estimated loading factor values have been obtained as follows:

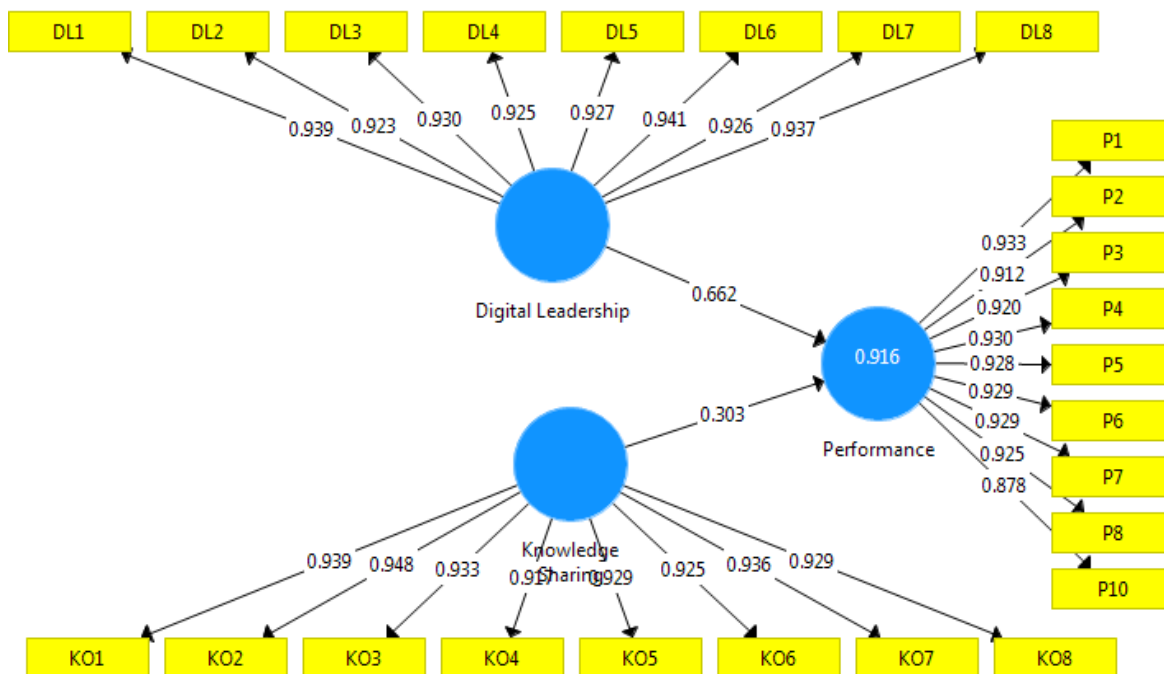


Fig. 2. Validity Testing

Based on the table above, it can be seen that the results have met convergent validity because all loading factors > 0.5. Thus, it can be concluded that the convergent validity of all groups of endogenous constructs is valid.

This validity test explains whether the two variables are quite different from each other. The discriminant validity test can be met if the correlation value of the variable to the variable itself is greater than the correlation value of all other variables. In addition, another way to fulfill the discriminant validity test can be seen in the cross loading value, if the cross loading value of each variable statement item to the variable itself is greater than the correlation value of the statement item to other variables (Ghozali, 2012). This validity test is to assess the validity of the question items by looking at the average variance extracted (AVE) value. AVE is the average percentage value of variance extracted (AVE) between question items or indicators of a variable which is a summary of the convergent indicator. For good requirements, if the AVE of each question item is greater than 0.5 (Purwanto, 2022).

Table 1. Reliability test

	Alpha Cronbach	rho_A	Composite reliability	(AVE)
<b>Digital leadership</b>	0,814	0,816	0,812	0,831
<b>Knowledge sharing</b>	0,906	0,832	0,813	0,713
<b>Performance</b>	0,812	0,914	0,934	0,711

In general, reliability is defined as a series of tests to assess the reliability of statement items. Reliability test is used to measure the consistency of measuring instruments in measuring a concept or measuring the consistency of respondents in answering statement items in questionnaires or

research instruments. To test the reliability can be done through composite reliability, a variable can be said to be reliable when it has a composite reliability value of 0.7 (Purwanto et al. 2021).

Table 2. Evaluation of R Square

	R Square	R Square Adjusted
<b>Performance</b>	0,916	0,904

Based on Table 5 the adjusted R-square value for the Performance variable is 0.916. This means that the performance variable is explained by the digital marketing and knowledge sharing variable of 91.6%. While the remaining 8.4% is explained by other variables not discussed in this study.

Hypothesis test

Hypothesis testing using full model structural equation modeling (SEM) analysis with smartPLS. In the full model, structural equation modeling, in addition to confirming the theory, also explains whether or not there is a relationship between latent variables (Purwanto et al., 2020). Hypothesis testing by looking at the calculated value of the Path Coefficient on the inner model test. The hypothesis is said to be accepted if the T statistical value is greater than T table 1.96 ( $\alpha$  5%) which means that if the T statistical value for each hypothesis is greater than T table then it can be declared accepted or proven

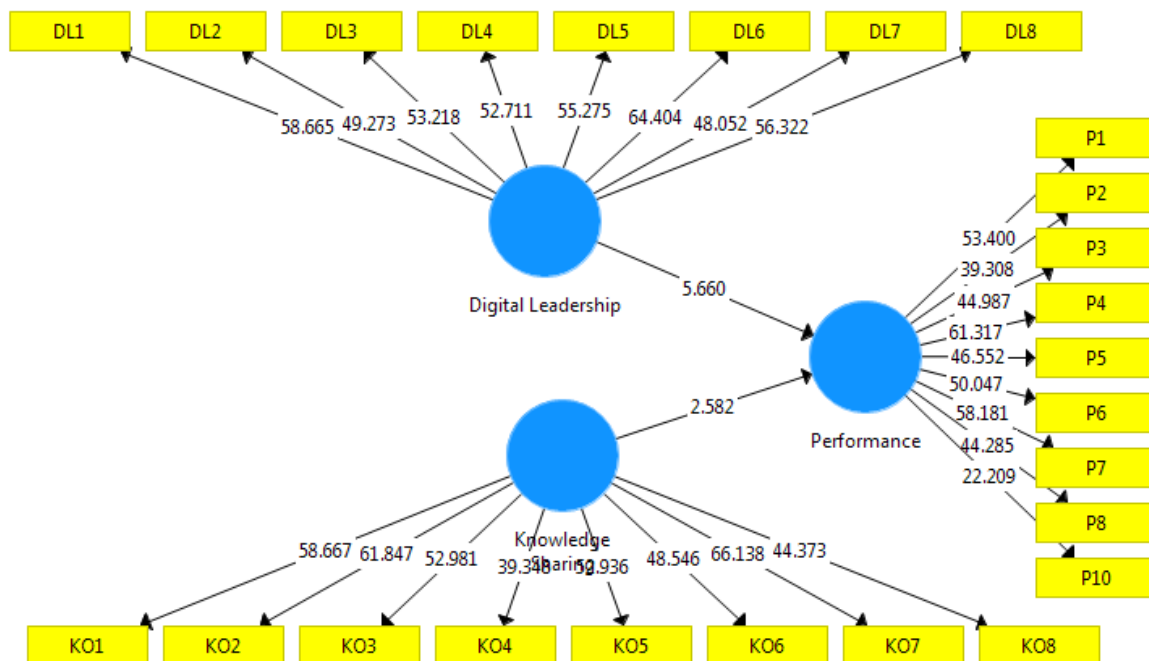


Fig. 3. Hypothesis Testing

Table 3. Size and significance of path coefficient

Path	Standardized Path Coefficient	p-values	Result
Digital leadership->Performance	0.662	0.000	Supported
Knowledge sharing ->Performance	0.303	0.000	Supported

Note: p-values <  $\alpha$  (=0.05); one-tailed test

Role of Digital Leadership on performance

Based on the results of data processing, a p value of  $0.000 < 0.050$  was obtained, so it was concluded that digital leadership has an effect on performance, this result is in line with Benitez et al. (2022); de Araujo et al. (2021); Johan et al. (2021); Mihardjo et al. (2019) that digital leadership affects employee performance and Amelda et al. (2021); Antonopoulou et al. (2020); Asbari et al. (2021); Benitez et al. (2022) which states that digital leadership affects employee performance

#### The role of knowledge sharing on performance

Based on the results of data processing, a p value of  $0.000 < 0.050$  was obtained, so it was concluded that knowledge sharing has an effect on performance, this result is in line with Fikri et al. (2021); Purwanto et al. (2021); Purwanto et al. (2021); Purwanto, A. (2022); Widodo et al. (2022) that knowledge sharing affects employee performance and Purwanto, A. (2022); Widodo et al. (2022) which states that knowledge sharing affects employee performance

Based on the findings in this study, the role of leaders in adapting digital technology will play an important role in the implementation of technology within the company. Therefore, when a leader feels uncomfortable with uncertainty in the digital era, this is not a good thing because companies need leaders who are flexible to any changes so that the company can continue to grow. Because leaders who are ready with uncertainty in this digital era will always try to learn new things, keep abreast of current developments (up to date) so that they can be an example for the employees they lead and will always be ready and alert to help their employees adapt in the face of challenges. those changes. The thing that a company leader can do to deal with uncertainty in this digital era is to always study the development trends that occur and collaborate with other companies that specialize in the field of digital technology.

Digital leadership or also known as e-Leadership is digital leadership that arises as a result of the development of an electronic-based environment or e-Environment. According to de Araujo et al. (2021); Johan et al. (2021) There are four characteristics that distinguish ordinary leadership from e-Leadership. First, related to communication skills, where digital leaders have been able to communicate effectively using social media tools to continue to be connected with members inside and outside the organization. The second characteristic, digital leaders must be able to think and work together without any limitations of time, space, and cultural barriers where face-to-face supervision and interaction is no longer necessary. Then third, digital leaders also have the ability to monitor and manage work effectively virtually. The fourth characteristic that distinguishes ordinary leaders from digital leaders is the ability to adapt to changes in the technological environment. The rapid development of technology demands adjustments to changes that run quickly so that organizational goals can still be achieved.

According to Amelda et al. (2021); Antonopoulou et al. (2020) Digital leadership is a form of leadership that utilizes and uses digital technology in an effort to achieve company goals. The ability of a leader to master and understand the digital world that continues to develop is absolutely necessary so that the company's performance and prospects can grow faster and bigger through digital leadership. As a leader based on digital leadership, we will not only rely on input from colleagues or important people, but also use data as a benchmark to make the right and accurate decisions for the company. Long ago, when the digital world was not what it is today, information - Information related to market tastes, promotions, to product development must go through the traditional way by going directly to the field. However, now the presence of digital technology makes it easy for a leader to be able to access all of this information only through the digital world. It is very important that a leader has digital leadership skills in order to meet the company's targets in the digital era.

The first ability that is absolutely mastered by a leader in the digital era is having the skills or understanding of technology that continues to develop. A leader must understand and be sensitive to what technology is needed by the company to achieve its targets, including familiarizing older generation employees to start adapting to the existence of technology. This skill is already well-known to be possessed by a leader, especially if it is based on digital leadership which demands intense communication through the latest available technology. As a result, direct communication with employees will decrease and be replaced by virtual means, so that a leaders must be able to have the ability to convey effective messages so that they can be understood by employees. Technologically literate leaders must always be innovative in developing ideas for products or services offered to consumers, and encourage employees to continue to be creative in developing

their products and services. generate brilliant ideas. Without innovation, a company will be easily abandoned by its customers, so it needs a leader who is always innovative and willing to develop in the midst of increasingly fierce competition in the digital world. According to Amelda et al. (2021); Antonopoulou et al. (2020); Johan et al. (2021); Mihardjo et al. (2019) Leaders who have digital leadership must always have a strong and clear vision in order to be able to influence employees to believe in the goals and plans built by the company. Transmitting strong belief to employees in the company's vision is the task of a digital leader in order to unite the vision together between employees and the company into a solid unit. Leaders who have a digital leadership orientation must be able to adapt to changes in work systems that are increasingly influenced by digital technology developments. Strong adaptability makes leaders in the digital era able to capture moments and make strategies and decisions right in the midst of the rapid development of the digital world.

#### IV. Conclusion

The results of this study are that Digital Leadership has a positive and significant effect on the performance of SMEs and the Knowledge Sharing variable has a positive and significant effect on the Performance of SMEs in Bandung West Java. A leader must be able to keep up with the times. But following the times does not mean just being a follower. Keep in mind, a leader is someone who leads. Therefore, he must have the ability to lead his subordinates. One of the factors that determine whether a leader is worthy of being followed or not, can all be seen from the vision he has. A leader should not just follow. He must have his own goals or vision to be achieved. Vision determines the direction in which the company will be taken. If a leader does not have a vision, there is no way he will be able to determine the direction of the company. In the end, the company will just be tossed around without a direction. Having a vision is only the beginning. Just having it is not enough. A leader must also be able to influence his subordinates to want to work together to realize this vision. This is where the ability of a leader to convince subordinates is needed. If there is one thing that distinguishes traditional leaders from digital leaders, it must be their capability in utilizing technology, especially data and information technology. needed. It is also easy to adapt to the new technology that the company uses. Change will continue to occur. However, technology is accelerating these changes. Many companies sink into the feeling that everything is going to be all right. Instead of adapting and undergoing digital transformation, many of the big companies are sticking with their old style. If the leader is not willing to change, it is difficult for the company to change. Remember, change is happening much faster now than ever before. Therefore, adaptability is one of the mandatory skills to master digital leadership. In addition to vision, a leader must also have a strategy to realize that vision. How the company's goals can be achieved, it certainly requires the right strategy.

Digital transformation is the same. Companies must change in order to remain relevant to the times. But in order for these changes to be carried out smoothly, a leader must be able to involve the corporate culture. The world is constantly changing. For the company to survive and thrive, the only option is to embrace the change. A digital leader must be creative. He must be open to change and have a strong drive to innovate. Digital leaders understand that innovation is a fixed price. If a company stops innovating, that's when its position will be replaced. The choice is not always between good and bad. When leading a company, sometimes a leader will be faced with choices that are equally uncomfortable. Both have risks. But if you don't make a decision, the consequences can be much worse. No decision is risk free. In every decision, there must be a risk. However, digital leaders don't just dare to take risks. The risks taken must also be measured. The quality of a leader is not formed overnight. There is a process to go through to master the art of leading people. Even for a leader though, they must continue to learn new things to be a leader that is relevant to the times. That is why a leader must not stop learning and continue to develop himself. Want to be a leader in this digital era? Now anyone has the same opportunity to become a leader, especially in today's digital era.

#### References

- [1] Amelda, B., Alamsjah, F., & Elidjen, E. (2021). Does The Digital Marketing Capability of Indonesian Banks Align with Digital Leadership and Technology Capabilities on Company Performance?. *CommIT (Communication and Information Technology) Journal*, 15(1), 9-17.

- [2] Antonopoulou, H., Halkiopoulos, C., Barlou, O., & Beligiannis, G. N. (2020). Leadership types and digital leadership in higher education: behavioural data analysis from university of Patras in Greece. *International Journal of Learning, Teaching and Educational Research*, 19(4), 110-129.
- [3] Asbari, M., Novitasari, D., Purwanto, A., Fahmi, K., & Setiawan, T. (2021). Self-leadership to Innovation: The Role of Knowledge Sharing. *International Journal of Social and Management Studies*, 2(5), 21–36. <https://doi.org/10.5555/ijosmas.v2i5.68>
- [4] Benitez, J., Arenas, A., Castillo, A., & Esteves, J. (2022). Impact of digital leadership capability on innovation performance: The role of platform digitization capability. *Information & Management*, 103590.
- [5] de Araujo, L. M., Priadana, S., Paramarta, V., & Sunarsi, D. (2021). Digital leadership in business organizations. *International Journal of Educational Administration, Management, and Leadership*, 45-56.
- [6] Johan, M. (2021). The Effect of Knowledge Sharing and Interpersonal Trust on Innovation: An Empirical Study in Indonesia Higher Education . *International Journal of Social and Management Studies*, 2(3), 106–122. <https://doi.org/10.5555/ijosmas.v2i3.38>
- [7] Mihardjo, L., Sasmoko, S., Alamsjah, F., & Elidjen, E. (2019). Digital leadership role in developing business model innovation and customer experience orientation in industry 4.0. *Management Science Letters*, 9(11), 1749-1762.
- [8] Novitasari, D., Supriatna, H., Asbari, M., Nugroho, Y. A., & Nadeak, M. (2021). Exploring the Impact of Trust in Leader and Knowledge Sharing on Employee Innovation. *International Journal of Social and Management Studies*, 2(3), 47–62. <https://doi.org/10.5555/ijosmas.v2i3.30>
- [9] Novitasari, D., Haque, M. G., Supriatna, H., Asbari, M., & Purwanto, A. (2021). Understanding the Links between Charismatic Leadership, Intrinsic Motivation and Tacit Knowledge Sharing among MSME Employees. *International Journal of Social and Management Studies*, 2(3), 1–13. <https://doi.org/10.5555/ijosmas.v2i3.29>
- [10] Fikri, M. A. A. ., Pramono, T. ., Nugroho, Y. A., Novitasari, D., & Asbari, M. (2021). Leadership Model in Pesantren: Managing Knowledge Sharing through Psychological Climate. *International Journal of Social and Management Studies*, 2(3), 149–160. <https://doi.org/10.5555/ijosmas.v2i3.44>
- [11] Purwanto, A., & Sudargini, Y. (2021). Partial Least Squares Structural Suation Modeling (PLS-SEM) Analysis for Social and Management Research: A Literature Review. *Journal of Industrial Engineering & Management Research*, 2(4), 114-123.
- [12] Purwanto, A., Purba, J. T., Bernarto, I., & Sijabat, R. (2021). Peran Organizational Citizenship Behavior (OCB), Transformational and Digital Leadership Terhadap Kinerja Melalui Mediasi Komitmen Organisasi Pada Family Business. *JENIUS (Jurnal Ilmiah Manajemen Sumber Daya Manusia)*, 4(3), 256-272
- [13] Purwanto, A. (2022). The Role of Digital Leadership, e-loyalty, e-service Quality and e-satisfaction of Indonesian E-commerce Online Shop. *International Journal of Social and Management Studies*, 3(5), 51-57.
- [14] Widodo, A. ., Putra, F., Nadeak, M., Novitasari, D., & Asbari, M. (2022). Information Technology Adoption and Knowledge Sharing Intention: The Mediating Role of Leadership Style. *International Journal of Social and Management Studies*, 3(1), 258–268. <https://doi.org/10.5555/ijosmas.v3i1.105>
- [15] Sa'adah, N., & Rijanti, T. (2022). The Role of Knowledge Sharing , Leader-Member Exchange (LMX) on Organizational Citizenship Behavior and Employee Performance : An Empirical Study on Public Health Center of Pati 1, Pati 2 and Trangkil in Central Java. *International Journal of Social and Management Studies*, 3(1), 112–131. <https://doi.org/10.5555/ijosmas.v3i1.87>
- [16] Soon, C. C., & Salamzadeh, Y. (2021). The Impact of Digital Leadership Competencies on Virtual Team Effectiveness in MNC Companies in Penang, Malaysia. *Journal of Entrepreneurship, Business and Economics*, 8(2), 219-253.
- [17] Quddus, A., Nugroho, B. S., Hakim, L., Ritaudin, M. S., Nurhasanah, E., Suarsa, A., ... & Sudargini, Y. (2020). Effect of ecological, servant dan digital leadership style influence university performance? evidence from indonesian universities. *Systematic Reviews in Pharmacy*, 11(10), 408-417.
- [18] Zhong, L. (2017). Indicators of digital leadership in the context of K-12 education. *Journal of Educational Technology Development and Exchange (JETDE)*, 10(1), 3.