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Digital Agility and Knowledge Sharing to Increase MSMEs Performance : An Empirical Study in MSMEs in Semarang City

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Abstract

This study investigates how digital agility and knowledge-sharing culture affect the performance of Micro Small and Medium Enterprises (MSMEs) in Semarang City, with innovation performance as a mediating factor. In today's rapidly evolving technological and business landscape, digital agility enables organizations and individuals to adapt swiftly, maintaining relevance and competitiveness. Knowledge-sharing culture facilitates the exchange of expertise and experiences, fostering new ideas through the combination of diverse knowledge. The research proposes seven hypotheses. First, digital agility's effect on innovation performance. Second, knowledge sharing's impact on innovation performance. Third, digital agility's influence on MSMEs performance. Fourth, knowledge sharing's effect on MSMEs performance. Fifth, innovation performance's impact on MSMEs performance. The indirect effect, digital agility has a positive and significant effect on MSMEs performance through innovation performance as a hypothesis 6, then knowledge sharing has a positive and significant effect on MSMEs performance through innovation performance as a hypothesis 7. The study surveyed 100 MSMEs owners in Semarang City, categorized by their business net income. Data analysis was conducted using SMART-PLS 4 software. Results indicate that both digital agility and knowledge sharing positively and significantly influence innovation performance. While digital agility has a positive but insignificant direct effect on MSMEs performance, knowledge sharing demonstrates a positive and significant direct impact. Importantly, the study reveals that digital agility and knowledge sharing indirectly enhance MSMEs performance through innovation performance. This research emphasizes the importance of digital agility and knowledge-sharing culture in improving MSMEs performance. As MSMEs reach critical growth stages, implementing more productive methods through digital agility and knowledge sharing becomes crucial. These practices generate new ideas, fostering creativity and innovation within the organization. The resulting innovation competitiveness allows MSMEs to develop unique products or services, creating a competitive advantage and attracting new customers.

Keywords:
Digital agility; Knowledge sharing; Innovation performance; MSMEs performance.

1. INTRODUCTION

In today's digital age, the ability to adapt quickly to technological changes and foster a culture of knowledge sharing are crucial for enhancing the performance of Micro Small and Medium Enterprises (MSMEs). Many challenges faced by MSMEs stem from internal factors, including underdeveloped human resources, insufficient skills, lack of entrepreneurial drive, and limited digital proficiency in management and market intelligence (Latifi et al., 2021). To thrive, especially during challenging times, MSMEs must focus on maximizing their innovation performance. Key factors in achieving this include productivity, effectiveness, and efficiency, which can be significantly bolstered by a culture of knowledge sharing. When

individuals within an organization exchange knowledge and experiences, it can spark new ideas, facilitate problem-solving, and streamline work processes.

Digital agility is the capacity to swiftly adapt to technological changes and digital trends is equally vital for MSMEs to maintain competitiveness. This agility enables them to capitalize on new opportunities, expand their market reach, and boost operational efficiency. MSMEs often grapple with resource constraints, informal strategies, and flexible structures that can make them vulnerable to increased competition. In response, many have turned to innovation as a strategic approach (Konsti-Laakso et al., 2012). Responding to these challenges, innovation has become a strategic choice for this sector (Rosenbusch et al., 2011). Leveraging digital technologies, such as management systems, online marketing tools, and collaboration platforms, can enhance efficiency, broaden marketing scope, and drive product or service innovation. In our increasingly digital world, organizations must harness and optimize all their potential and competent resources to improve innovation performance (Estensoro et al., 2021). While digital agility is crucial, knowledge sharing also plays a pivotal role in fostering innovation within MSMEs.

Knowledge sharing plays a crucial role in enhancing MSMEs performance. Within organizations, knowledge sharing positively influences innovation by fostering new ideas, creativity, and problem-solving techniques, leading to more efficient and innovative work practices (Ahokangas et al., 2021). This culture promotes better collaboration and teamwork. As individuals exchange knowledge, they learn from one another, combine expertise, and develop innovative solutions to business challenges. Knowledge sharing enables MSMEs to identify new opportunities for innovation in products, services, or business processes. By sharing insights on market trends, customer preferences, and technological advancements, MSMEs can create innovative ideas that align with customer needs and boost their competitiveness.

Research indicates that MSMEs with strong relationships, supported by collaboration and information sharing, tend to demonstrate good innovation (Estensoro et al., 2021). This study builds on (Mubarakah, 2020) recommendation to explore additional variables influencing MSMEs performance across different sectors or locations. The research aims to enhance MSMEs performance through innovation in the digital era, focusing on MSMEs in Semarang City. Further investigation is necessary to improve the performance of MSMEs in this specific location. So, there is a need for further research to improve the performance of MSMEs in Semarang City. Based on the background of the problem described above, the formulation of this research problem is " What is the role of digital agility and knowledge sharing in improving MSMEs performance through innovation performance." Then the research questions that emerge are as follows:

a. How does digital agility influence innovation performance?
b. How does knowledge sharing influence innovation performance?
c. How does digital agility influence MSMEs performance?
d. How does knowledge sharing influence MSMEs performance?
e. How does innovation performance influence MSMEs performance?
f. What is the role of innovation performance as a mediator between digital agility and knowledge sharing on MSMEs performance?

1.1. MSMEs performance

The effectiveness of MSMEs is often evaluated based on their income and profit generation. According to (Alnawas & Abu Farha, 2020) define MSMEs performance as the extent to which they achieve their organizational objectives, highlighting their capacity to generate profits from operations. According to (Dwitya, 2016) describes it as an individual's work accomplishments within the company's timeframe and standards. Innovation is another crucial performance indicator, encompassing the ability to create new products, services, business processes, and marketing strategies. Sustainability is also key; high-performing MSMEs are those that can maintain long-term business continuity rather than experiencing only short-lived success. In essence, strong MSMEs performance is characterized by successful income generation, market share expansion, growth and development, productivity, innovation, and long-term sustainability.

1.2. Digital Agility and Innovation Performance

An organization's digital agility refers to its capacity to swiftly and effectively address digital-era challenges and opportunities (Saputra et al., 2021). This encompasses embracing new technologies, implementing adaptable work processes, and fostering a change-supportive culture. Innovation performance also involves cultural shifts within organizations, promoting experimentation, risk-taking, and interdepartmental collaboration. This cultivates an environment conducive to individual innovation and digital adoption of new practices (Cenamor et al., 2019). Employees who are adept and flexible in using digital technologies enable organizations to rapidly adjust to market shifts and capitalize on emerging opportunities. Consequently, digital agility and innovation performance are mutually reinforcing. To survive and prosper in the digital age, organizations must effectively incorporate both elements into their business strategies and human resource management approaches. The text concludes by stating that digital agility has a positive and significant impact on innovation performance, which is presented as hypothesis 1.

1.3. Knowledge Sharing and Innovation Performance

Knowledge sharing is an organizational process focused on learning and knowledge creation (Ahokangas et al., 2021). According to (Singh et al., 2021) categorize knowledge sharing into two types: tacit and explicit. Tacit knowledge encompasses innate human qualities, intuition, judgments, values, and beliefs that are unique to individuals and cannot be replicated. Explicit knowledge, on the other hand, is formal, easily disseminated through media, and readily communicated and shared with others in various formats. There is a strong connection between knowledge sharing and an organization's innovation performance. According to (Singh et al., 2021) note a significant relationship between these two factors. Open knowledge sharing enables individuals to learn from one another, gain new perspectives, and enhance their abilities. This fosters creativity and generates innovative ideas for addressing challenges or developing novel solutions. Knowledge sharing is a crucial element in promoting organizational innovation performance. As more knowledge is shared and utilized, the potential for producing innovative solutions and maintaining a competitive edge increases. The hypothesis suggests that knowledge sharing has a positive and significant impact on innovation, which is presented as hypothesis 2.

1.4. Digital Agility and MSMEs performance

Technology adaptation is an important part of improving performance (Mubarakah, 2020). According to (Khin & Ho, 2019) by increasing competitiveness by utilizing digital technology, MSMEs can increase efficiency, reduce costs, and provide better products or services to customers. Implementing digital agility also requires investment in human resource training, digital infrastructure, and adapting an organizational culture that supports change. Thus, MSMEs that are able to utilize digital agility well will have greater opportunities to improve their overall business performance. This helps MSMEs to compete with large companies that have more resources. Digital agility has a positive and significant effect on MSMEs performance, hypothesis 3.

1.5. Knowledge Sharing and MSMEs Performance

Sharing knowledge is very important for the performance and sustainability of MSMEs (Ben Arfi et al., 2018). To achieve effective knowledge exchange, it is important to encourage workers to share knowledge in the best interests of the company. According to (Kim & Shim, 2018) states that knowledge sharing has a positive and significant effect on performance. Sharing experiences, skills and best practices can help other MSMEs overcome similar challenges and increase productivity. Knowledge sharing can facilitate the formation of networks and partnerships between MSMEs, which can provide access to new markets, resources and business opportunities. By sharing knowledge, employees and owners of MSMEs can improve their skills and competencies, which can ultimately increase the productivity and performance of MSMEs. Knowledge sharing has a positive and significant effect on MSMEs performance, hypothesis 4.

1.6. Innovation Performance and MSMEs Performance

Innovation performance is the result of a company bringing new products or new methods (reach) to the market (Ismanu & Kusmintarti, 2019). Then (Tian et al., 2020) stated that HR innovation can be measured by looking at changes starting from processes, services, products, etc. MSMEs that are able to innovate, whether in products, services or business processes, tend to be more competitive and have greater opportunities to develop. By innovating, MSMEs can increase operational efficiency, find new market opportunities, and increase the value of the products or services offered. Innovation performance is a company's ability to bring new products or new product lines to the market (Rosenbusch et al., 2011). According to (Zainal, 2023) states that innovation performance have a significant impact on MSMEs performance. The more often you create innovations by providing new ideas in business, the greater the opportunity to be able to achieve targets and be able to compete. Innovation performance has a positive and significant effect on MSMEs performance, hypothesis 5.

1.7. The Mediating Role of Innovation Performance

1.7.1. Digital Agility on MSMEs Performance Through Innovation Performance

The development of digital technology and a knowledge-based economy has encouraged MSMEs to improve digital agility and knowledge sharing in order to improve their performance. This research has the novelty that innovation performance plays an important mediating role in this relationship. Digital agility refers to an organization's ability to adapt quickly to changes in digital technology. According to (Chan et al., 2019) found that digital agility allows MSMEs to respond to market changes more quickly. Then according to (Li et al., 2021) shows that digital agility increases the operational efficiency of MSMEs. However, this relationship is not always direct. Several studies show the mediating role of innovation performance. According to (Adeel et al., 2022) found that digital agility drives the innovation process, which in turn improves the MSMEs performance. Organizations that want to survive and develop in the digital era need effective human resource innovation. By u innovating trendy ideas, it will improve the performance of MSMEs. Digital agility has a positive and significant effect on MSMEs performance through innovation performance, hypothesis 6.

1.7.2. Knowledge Sharing on MSMEs Performance Through Innovation Performance

Then knowledge sharing involves the exchange of information and expertise between members of the organization. study shows that knowledge sharing increases the productivity of MSMEs employees. According to (Cenamor et al., 2019) found a positive correlation between the intensity of knowledge sharing and the profitability of MSMEs. Then, (Sudarti & Wasitowati, 2021) reveal that knowledge sharing encourages product innovation, which then increases the market share of MSMEs. Innovation performance includes the ability of MSMEs to generate new ideas and implement them. The study of (Ahn et al., 2022) proposed a model where digital capability and knowledge sharing interact to improve innovation performance, which then impacts the overall performance of MSMEs. The more knowledge that is shared and utilized, the greater the opportunity to produce innovative ideas and solutions so as to improve the performance of MSMEs. Knowledge sharing has a positive and significant effect on MSMEs performance through innovation, hypothesis 7.

2. RESEARCH METHOD

The method used in this research is a quantitative method using the SMART-PLS 4 software analysis technique. The population in this research is MSMEs in Semarang City. The sampling technique used was purposive sampling, with criteria. The criteria for respondents in this study include; MSMEs business in Semarang City, domiciled in Semarang City, have been in business for at least 2 years, experienced an increase in sales for 2 consecutive years. The number of samples used was 100 respondents. The data collection distribution method uses a questionnaire by distributing Google Forms using a scale of 1-5 and research instruments include:

Table 1. Indicators and Research Instruments

No	Variables	Indicators	Questionnaire Statements
1.	Digital agility	agility of using the website	I am agile in using websites for business continuity
		agility using mobile applications	I am agile in using mobile applications for business continuity
		agility to keep pace with cultural change	I can track changes in digital culture for business continuity
		agility to meet digital challenges	I am agile in overcoming digital challenges for business continuity
2.	Knowledge sharing	collect knowledge from other individuals	I often collect knowledge from other employees
		collect successful experiences from other individuals	I often collect successful experiences from other workers
		share knowledge without being asked	I often share the knowledge they have voluntarily
		share experiences between company individuals	I often share experiences with other people in completing work
3.	Innovation performance	create new products	my business can launch new products in running a business
		creating new work processes	my business can create innovative new work processes in running a business
		create new services	my business can provide new model services in running a business
4.	MSMEs performance	increased sales	my business can increase product sales
		increase in profits	my business can get bigger profits than before
		increase in business capital	my business can raise larger business capital
		increase in customers	my business can increase the number of customers
		business goals and targets are achieved	my efforts can achieve the targets that have been determined
		profit ability to meet needs	I can meet my needs from business profits

3. RESULTS AND DISCUSSION

3.1. Outer Model

Outer model testing is used to determine the results of validity and reliability tests. Evaluation of the measurement model uses convergent validity, internal consistency and discriminant validity as a benchmark. The results of the outer model can be seen in the image and table below:

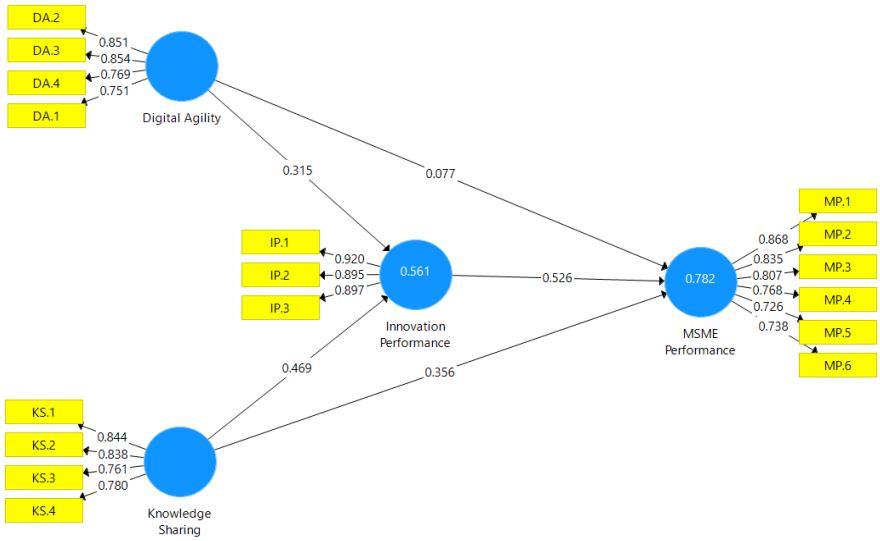

Figure 1. Outer Model (Source: SmartPLS 4 output, data processed 2024).

Table 2. Measurement Evaluation Model

Latent Variables	Indicators	Convergent Validity		Internal Consistency Reliability		Descriminant Validity
		Loadings	AVE	Composite Reliability	Cronbanch Alpha	HTMT
		>0.70	>0.50	>0.70	>0.70	<1
Digital agility	DA.1	0.751	0.652	0.882	0.822	YES
	DA.2	0.851				
	DA.3	0.854				
	DA.4	0.769				
Knowledge sharing	KS.1	0.884	0.651	0.881	0.825	YES
	KS.2	0.838				
	KS.3	0.761				
	KS.4	0.780				
Innovation performance	IP.1	0.920	0.931	0.931	0.888	YES
	IP.2	0.895				
	IP.3	0.897				
MSMEs performance	MP.1	0.868	0.627	0.909	0.880	YES
	MP.2	0.835				
	MP.3	0.807				
	MP.4	0.768				
	MP.5	0.726				
	MP.6	0.738				

Source: SmartPLS 4 output, data processed (2024).

In the table above, it can be seen that convergent validity is measured using the outer loadings and AVE parameters. The results of the loading factor are >0.7 and the AVE value is >0.5, meaning the data meets convergent validity. Then for the Cronbach's Alpha value > 0.7 and the composite reliability value > 0.7, this means that the data meets internal consistency reliability. And the Fornell-Larkcer results, it is said that a variable meets discriminant validity when the root of AVE square (diagonal) value is greater than all the latent variable values and the HTMT value < 1 which can be seen in the table 3.

Table 3. Fornell-Larcker Criterion

	Digital Agility	Innovation Performance	Knowledge Sharing	MSMEs Performance
Digital Agility	0,808			
Innovation Performance	0,699	0,904		
Knowledge Sharing	0,819	0,727	0,807	
MSMEs Performance	0,736	0,838	0,801	0,792

Source: SmartPLS 4 output, data processed (2024)

3.2. Inner Model

3.2.1. R-Square (R2)

Table 4. R-Square (R2)

	R Square	R Square Adjusted
Innovation Performance	0,561	0,552
MSMEs Performance	0,782	0,775

Source: SmartPLS 4 output, data processed (2024)

Based on the table above, it can be concluded that the endogenous innovation performance variable has a strong ability (0.552) and MSMEs performance has a strong ability (0.775) in predicting the model.

3.2.2. Predictive Relevance (Q-square)

Table 5. Predictive Relevance (Q-square)

	CV Communality	*CV Redundancy*
Digital agility	0.419	
Knowledge sharing	0.404	
Innovation performance	0.594	0.448
MSMEs performance	0.474	0.475

Source: SmartPLS 4 output, data processed (2024)

Based on the above, it shows that the Q-square value of all variables is more than 0, which means the model has predictive relevance. This research provides the same and appropriate validity of the predictive model (fit model) because all latent variables have cross-validation (CV) redundancy and communality values that are positive and more than 0.

3.2.3. Effect Size (F2)

Table 6. Effect Size (F2)

	Digital Agility	Innovation Performance	Knowledge Sharing	MSMEs Performance
Digital Agility		0,075		0,018
Innovation Performance				0,558
Knowledge Sharing		0,165		0,164
MSMEs Performance				

Source: SmartPLS 4 output, data processed (2024)

The effect size or f-square indicates that the exogenous variable has a large influence on the endogenous variable, with the criteria (0.02 = weak, 0.15 = moderate, and 0.35 strong).

3.2.4. Normed Fit Index

Table 7. Normed Fit Index

Saturated Model	Estimated Model
SRMR	0,044	0,044
d_ULS	1,533	1,533
d_G	1,911	1,911
Chi-Square	476,186	476,186
NFI	0,674	0,674

Source: SmartPLS 4 output, data processed (2024)

The SRMR value is 0.044 indicates that the model tested has a good fit. In general, SRMR values ≤ 0.08 are considered to indicate good model fit. The lower the SRMR value (closer to 0), the better the model fits the observed data. The SRMR value of 0.044 indicates that there is little residual in the model, so the model can be accepted and is considered to adequately represent the observed data.

3.3. Hypothesis Testing

Table 8. Path Coefficient (Direct Effect and Indirect Effect)

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Digital Agility -> Innovation Performance	0,315	0,320	0,151	2,085	0,038
Digital Agility -> MSMEs Performance	0,077	0,083	0,096	0,798	0,426
Innovation Performance -> MSMEs Performance	0,526	0,534	0,093	5,633	0,000
Knowledge Sharing -> Innovation Performance	0,469	0,474	0,140	3,340	0,001
Knowledge Sharing -> MSMEs Performance	0,356	0,345	0,107	3,313	0,001
Digital Agility -> Innovation performance -> MSMEs Performance	0,166	0,168	0,081	2,039	0,042
Knowledge Sharing -> Innovation performance ->MSMEs Performance	0,247	0,256	0,095	2,589	0,010

Source: SmartPLS 4 output, data processed (2024).

The results of this research showed that digital agility has a positive and significant influence on innovation performance, the results of this research hypothesis test refer to previous studies which have identified that digital agility can influence innovation performance (Calabrese et al., 2021). The meaning of hypothesis 1 is accepted.

Then knowledge sharing has a positive and significant effect on innovation performance, the results of this research hypothesis test refer to previous studies which have identified that digital agility can influence innovation performance (Singh et al., 2021). The meaning of hypothesis 2 is accepted.

Digital agility has a positive but not significant effect on MSMEs performance, the results of this research hypothesis test are in contrast to previous studies which have identified digital agility as a factor influencing MSMEs performance (Khin & Ho, 2019). However, it is in line with that digital agility have an insignificant impact on MSMEs performance (Tutty Nuryati et al., 2023). The meaning of hypothesis 3 is rejected.

Then knowledge sharing has a positive and significant effect on the performance of MSMEs, the results of this research hypothesis test are in contrast to previous studies which have identified knowledge sharing as a factor influencing MSMEs performance (Kim & Shim, 2018). The meaning of hypothesis 4 is accepted.

Innovation performance has a positive and significant effect on MSMEs performance, the results of this research hypothesis test refer to previous studies which have identified that innovation performance as a factor influencing MSMEs performance (Zainal, 2023). The meaning of hypothesis 5 is accepted.

The indirect relationship in the table above can be concluded that digital agility has a positive and significant effect on MSMEs performance through innovation performance. The results of this research hypothesis test refer to previous studies which have identified that innovation performance as a mediator between digital agility on MSMEs performance (Ahn et al., 2022). The meaning of hypothesis 6 is accepted.

Then knowledge sharing also has a positive and significant influence on MSMEs performance through innovation performance. The results of this research hypothesis test research results can prove the previous research which have identified that innovation performance as a mediator between knowledge sharing on MSMEs performance (Ahn et al., 2022). The meaning of hypothesis 7 is accepted.

4. CONCLUSION

The problem formulation in this research is "What is the role of digital agility and knowledge sharing in improving MSMEs performance through innovation performance?" The research results show that digital agility has a positive and significant effect on innovation performance, but experience is not significant on MSMEs performance. Knowledge sharing has a positive and significant effect on innovation performance and MSMEs performance. Then innovation performance also has a positive effect on MSMEs performance. Furthermore, the indirect relationship also shows that the role of digital agility and knowledge sharing has a positive and significant effect on MSMEs performance through innovation performance. MSMEs can create digital agility and knowledge sharing culture as well as create innovation to improve the performance of MSMEs in Semarang City. With the ability to use digital agilely and actively share knowledge in the business world, you will get new things or new ideas so that you can improve the performance of MSMEs. MSMEs stakeholders must be capable. MSMEs performance can be implemented by creating new products, new work processes and new services in MSMEs. When MSMEs are able to innovate, customers will not get bored with the variations provided, so customers will have sustainability to buy which will result in MSMEs being able to increase sales and achieve targets. The limitation of this research is that the sample taken in this research is not very broad in scope, namely only MSMEs in Semarang City, for the next agenda it can be carried out more widely and with various types of MSMEs. Then the research can still be developed for further research by developing new models that suit existing problems, for example adding exogenous variables or changing intervening variables in the research hypothesis.

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REFERENCES

Adeel, A., Sabeen, H., Ismail, G., & Ahmad, A. (2022). Digital platform capability and organizational agility of emerging market manufacturing SMEs: The mediating role of intellectual capital and the moderating role of environmental dynamism. Technological Forecasting and Social Change, 177. https://doi.org/10.36782/jemi.v4i4.2181

Ahn, S., Kim, K. S., & Lee, K. H. (2022). Technological Capabilities, Entrepreneurship and Innovation of Technology-Based Start-Ups: The Resource-Based View. Journal of Open Innovation: Technology, Market, and Complexity, 8(3). https://doi.org/10.3390/joitmc8030156

Ahokangas, P., Haapanen, L., Golgeci, I., Arslan, A., Khan, Z., & Kontkanen, M. (2021). Knowledge sharing dynamics in international subcontracting arrangements: The case of Finnish high-tech SMEs. Journal of International Management, May, 100888. https://doi.org/10.1016/j.intman.2021.100888

Alnawas, I., & Abu Farha, A. (2020). Strategic orientations and capabilities' effect on SMEs' performance. Marketing Intelligence and Planning, 38(7), 829–845. https://doi.org/10.1108/MIP-11-2019-0548

Ben Arfi, W., Hikkerova, L., & Sahut, J. M. (2018). External knowledge sources, green innovation and performance. Technological Forecasting and Social Change, 129(September), 210–220. https://doi.org/10.1016/j.techfore.2017.09.017

Calabrese, M., Sala, A. La, Fuller, R. P., & Laudando, A. (2021). Digital platform ecosystems for sustainable innovation: Toward a new meta-organizational model? Administrative Sciences, 11(4). https://doi.org/10.3390/admsci11040119

Cenamor, J., Parida, V., & Wincent, J. (2019). How entrepreneurial SMEs compete through digital platforms: The roles of digital platform capability, network capability and ambidexterity. Journal of Business Research, 100(March), 196–206. https://doi.org/10.1016/j.jbusres.2019.03.035

Chan, C. M. L., Teoh, S. Y., Yeow, A., & Pan, G. (2019). Agility in responding to disruptive digital innovation: Case study of an SME. Information Systems Journal, 29(2), 436–455. https://doi.org/10.1111/isj.12215

Dwitya, A. (2016). Pengaruh Literasi Keuangan Terhadap Kinerja dan Keberlangsungan Umkm di Jawa Tengah. Jurnal Siasat Bisnis, 20, 1–13. https://doi.org/10.1007/s10006-013-0431-4

Estensoro, M., Larrea, M., Müller, J. M., & Sisti, E. (2021). A resource-based view on SMEs regarding the transition to more sophisticated stages of Industry 4.0. European Management Journal, xxxx. https://doi.org/10.1016/j.emj.2021.10.001

Ismanu, S., & Kusmintarti, A. (2019). Innovation and Firm Performance of Small and Medium Enterprises. Review of Integrative Business and Economics Research, 8(2), 312-.

Khin, S., & Ho, T. C. F. (2019). Digital technology, digital capability and organizational performance: A mediating role of digital innovation. International Journal of Innovation Science, 11(2), 177–195. https://doi.org/10.1108/IJIS-08-2018-0083

Kim, N., & Shim, C. (2018). Social capital, knowledge sharing and innovation of small- and medium-sized enterprises in a tourism cluster. International Journal of Contemporary Hospitality Management, 30(6), 2417–2437. https://doi.org/10.1108/IJCHM-07-2016-0392

Konsti-Laakso, S., Pihkala, T., & Kraus, S. (2012). Facilitating SME innovation capability through business networking. Creativity and Innovation Management, 21(1), 93–105. https://doi.org/10.1111/j.1467-8691.2011.00623.x

Latifi, M. A., Nikou, S., & Bouwman, H. (2021). Business model innovation and firm performance: Exploring causal mechanisms in SMEs. Technovation, 107(February), 102274. https://doi.org/10.1016/j.technovation.2021.102274

Li, H., Wu, Y., Cao, D., & Wang, Y. (2021). Organizational mindfulness towards digital transformation as a prerequisite of information processing capability to achieve market agility. Journal of Business Research, 122, 700–712. https://doi.org/10.1016/j.jbusres.2019.10.036

Mubarakah, S. (2020). Efektifitas Kinerja Umkm: Pentingnya Pengendalian Internal Dan Adopsi Teknologi Pajak. Jurnal Akuntansi, 20(1), 43–54.

Rosenbusch, N., Brinckmann, J., & Bausch, A. (2011). Is innovation always beneficial? A meta-analysis of the relationship between innovation and performance in SMEs. Journal of Business Venturing, 26(4), 441–457. https://doi.org/10.1016/j.jbusvent.2009.12.002

Saputra, N., Sasanti, N., Alamsjah, F., & Sadeli, F. (2021). Strategic role of digital capability on business agility during COVID-19 era. Procedia Computer Science, 197(2021), 326–335. https://doi.org/10.1016/j.procs.2021.12.147

Singh, S. K., Mazzucchelli, A., Vessal, S. R., & Solidoro, A. (2021). Knowledge-based HRM practices and innovation performance: Role of social capital and knowledge sharing. Journal of International Management, 27(1), 100830. https://doi.org/10.1016/j.intman.2021.100830

Sudarti, K., & Wasitowati, W. (2021). Islamic excellence achievement spirit: a strategy to drive knowledge sharing behaviour and adaptive selling capability. Jurnal Siasat Bisnis, 25(1), 41–56. https://doi.org/10.20885/jsb.vol25.iss1.art4

Tian, H., Dogbe, C. S. K., Pomegbe, W. W. K., Sarsah, S. A., & Otoo, C. O. A. (2020). Organizational learning ambidexterity and openness, as determinants of SMEs' innovation performance. European Journal of Innovation Management, 24(2), 414–438. https://doi.org/10.1108/EJIM-05-2019-0140

Tutty Nuryati, Dewi Puspaningtyas Faeni, Nabilla, & Ery Teguh Prasetyo4. (2023). Digital Transformation, Work From Home On The Performance Of Culinary MSMES In Indonesia After The Pandemic. Conference on Economic and Business Innovation (CEBI), 3(1), 520–540. https://doi.org/10.31328/cebi.v3i1.403

Zainal, A. (2023). Proceedings of the International Conference on Language, Education, and Social Science (ICLESS 2022). In Proceedings of the International Conference on Language, Education, and Social Science (ICLESS 2022). Atlantis Press SARL. https://doi.org/10.2991/978-2-494069-15-2