

The Impact of Knowledge Management on Digital Innovation in Time of Covid-19 Pandemic: The Role of Digital Capability and Digital Orientation

SYARIFAH HUDAYAH^a, MELDA AULIA RAMADHANI^b, SUGENG RAHARJO^c,
NITA PRISKA AMBARITA^d, HIDAYANI HIDAYANI^e, RIZKY YUDARUDDIN^f

Department of Management,
Mulawarman University,
Samarinda,
INDONESIA

^aORCID: <https://orcid.org/0000-0003-0691-8595>

^bORCID: <https://orcid.org/0000-0002-2203-9470>

^cORCID: <https://orcid.org/0000-0003-1822-3096>

^dORCID: <https://orcid.org/0000-0002-6294-8898>

^eORCID: <https://orcid.org/0000-0002-2507-4888>

^fORCID: <https://orcid.org/0000-0002-0850-9747>

Abstract: - This study examines the relationship between knowledge management, digital capabilities, digital orientation, and digital innovation by focusing on small and medium enterprises (SMEs) in Indonesia during the COVID-19 pandemic. Data collection used survey data from SME managers during the period July to December 2021. Data analysis used Structural Equation Modeling with the Partial Least Square method by focusing on 247 managers. The findings in this study are that knowledge management has a positive effect on digital capability and digital orientation. Meanwhile, digital competence and digital orientation mediate the impact of knowledge management on digital innovation. These findings underline the importance of digitalization during periods of crisis for SMEs.

Key-Words: - SME, Knowledge management, crisis, digital capability, COVID-19, digital innovation, digital orientation.

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1 Introduction

Knowledge Management (KM) is crucial for promoting digital innovation, particularly in the difficult circumstances of the Covid-19 pandemic. In the face of disruptions and the requirement for remote collaboration, organizations must prioritize effective knowledge management to make the most of existing expertise and cultivate a culture of ongoing learning. KM facilitates agile adaptation, opportunity identification, and challenge resolution in the digital realm by systematically organizing, sharing, and applying knowledge, [1].

During the pandemic, small and medium enterprises (SMEs) need to have the ability and focus on increasing digital capabilities. This is because SMEs with strong digital capabilities will be in a better position to use technology to share so they can collaborate on various knowledge. Digital

orientation focuses on the deliberate synchronization of organizational processes with digital technology, allowing for the integration of knowledge management activities into daily operational activities. During the pandemic with social distancing, work from home and virtual collaboration has become more common, so the effective use of digital tools will improve communication, enable real-time information sharing, and encourage innovation by creating a dynamic and flexible work environment, [2].

The symbiotic relationship between Knowledge Management, Digital Capability, and Digital Orientation is evident in their collective impact on digital innovation. KM acts as the fundamental basis, while digital capability and orientation serve as the essential infrastructure and mindset for innovation to thrive. This collaboration allows

organizations to adjust to the swiftly evolving digital environment amidst the pandemic, cultivating a culture of ingenuity that is crucial for enduring resilience and achievement in the digital era. Overall, the combination of Knowledge Management, Digital Capability, and Digital Orientation forms a robust framework that facilitates digital innovation, allowing organizations to effectively address the difficulties presented by the COVID-19 pandemic and beyond.

Undoubtedly, the COVID-19 pandemic has caused a multitude of adverse consequences on global economies and businesses. The COVID-19 pandemic has caused significant disruptions in multiple economic sectors, [3]. Reports were indicating a Russian incursion into Ukraine, [4]. From an economic perspective, the crisis has caused a substantial decline, resulting in recessions and contractions in multiple sectors. Businesses, particularly small and medium enterprises (SMEs), have faced significant challenges, including disrupted supply chains, decreased consumer demand, and closures caused by lockdown measures. These difficulties have resulted in a decrease in income, declining profits, and, in certain instances, bankruptcy. The travel, hospitality, and retail sectors have been especially vulnerable, experiencing unprecedented decreases in income and a significant drop in customer traffic. Furthermore, the presence of market uncertainty, fluctuating financial markets, and unpredictable consumer behavior has resulted in an atmosphere of increased risk and diminished investor confidence. Referring to data from the Ministry of Cooperatives and SMEs in 2019, the Indonesian government needs to focus on SMEs because they have a big impact on supporting the Indonesian economy. In terms of presentation, this amount dominates around 60.51% or around IDR 9.58 trillion of gross domestic product (GDP). Apart from that, small and medium businesses also have a significant impact on employment, by employing around 119.56 million people or 96.92% of the total workforce in Indonesia. The Indonesian government through the Ministry of Cooperatives and Small and Medium Enterprises has targeted 30 million SMEs to go digital by 2024, a quite fantastic figure. If you look at the data until June 2022, the latest developments show that 19.5 million SMEs, or 30.4% of the total, use e-commerce. Even though these figures have been relatively stable over the years, this gives an idea of how resilient SME businesses are in facing fluctuations in the country's economy, including during times of crisis.

However, the health crisis, namely the Covid-19 pandemic, has had a surprising impact, including on Micro, Small and Medium Enterprises (MSMEs). During the pandemic, mobility restrictions forced many MSMEs to close their businesses so that the virus could be prevented from spreading. Small business growth also fell by 17.63 percent during the COVID-19 period. This negative growth trend has never occurred in previous times of crisis. Many SMEs continue to struggle with this decline in performance to survive the onslaught of the virus. This is made worse by the implementation of Large-Scale Social Restrictions (PSBB). Based on the results of the Mandiri Institute Survey, many MSMEs experienced business closures (19.3 percent) due to policies during the COVID-19 pandemic. Not only that, operational restrictions were also implemented which reduced MSME income by 72.04 percent.

Empirical studies show that there is hope for the sustainability of SME businesses while facing COVID-19, [5]. Digital innovation is part of the strategy for SMEs to maintain the survival of SMEs so that business growth can be maintained by using a new business model approach through involvement in digital activities. Although this change is not easy with several obstacles faced, the shift in consumer preferences forces SMEs to adapt to adapt their operations to online platforms. Not only that, digital innovation opens up opportunities for SMEs during the pandemic to continue serving customers, opening up opportunities to add new customers and maintaining revenue stability. Furthermore, digital innovation allows SMEs to simplify business activities by moving manual work to be more efficient. Geographical limitations are also eliminated to reach a wider business area without worrying about increasing costs.

This study aims to analyze the impact of KM on digital innovation in SMEs in Indonesia during the COVID-19 pandemic. Not only that, this study also examines how digital capabilities and digital orientation can play a mediating role in the impact of KM on digital innovation. It is important to see how the simultaneous knowledge management, digital capabilities, and digital orientation of SMEs in Indonesia influence digital innovation. Therefore, overall, the focus of this study highlights the importance of knowledge management and digitalization in helping SMEs in Indonesia face the major shocks caused by the COVID-19 pandemic.

2 Literature Review and Hypothesis Development

2.1 Knowledge Management

An important factor that is one of the competitive advantages that an organization can have is KM. KM can bring organizations efficient, innovative, and stable growth, [6]. Various strategic approaches can be implemented by companies, especially in the digital era. The application of KM in the context of digitalization supported by the company's digital capabilities will lead companies to more efficient technology management, including the development of innovative products, [7]. Organizations need to collaborate between knowledge assets and human resources so that the company's technological capabilities and potential to innovate are always there, [8]. This will foster dynamic skills so that digital disruption can be faced, [9], [10], while increasing competitive advantage, [11], [12], [13] and success in the digital era, [14], [15]. Therefore, KM's strategic priorities need to be built in a dynamic business landscape, [16]. To encourage digital capabilities that enable rapid digital transformation for companies, [15]. Organizations with strong Digital capability understand and utilize digital technologies effectively, transforming customer experiences, operational processes, and business models, [7], [17]. Knowledge Management also shapes a company's strategic position in leveraging digital technology, a key aspect of Digital capability, [16]. Proper KM practices enable companies to identify solutions, develop dynamic training programs, and make effective decisions, [18]. Empirical studies consistently demonstrate the significant influence of Knowledge Management on Digital capability, [14], [19]. Effective KM practices positively correlate with improved Digital capability, enhancing a company's ability to manage digital technology for new product development, [6].

Hypothesis 1 (H1): *During the COVID-19 pandemic, knowledge management improved SMEs' digital capabilities.*

Digital orientation, driven by Knowledge Management, is pivotal in shaping a company's strategic position towards digital technology adoption, [20]. Integrating internal and external elements, organizations align technology with processes to drive digital innovation and market insight generation, [21]. Such a proactive attitude towards digital technology is essential to thrive in

the digital landscape and maintain a competitive edge, [13]. Knowledge Management's positive relationship with Digital orientation is evident in various studies, [16], [18], [20]. By fostering a digital-oriented strategic position, KM practices facilitate the integration of digital technology and drive digital innovation, [14]. Knowledge Management's impact on innovation is supported by studies emphasizing the role of knowledge acquisition, sharing, and application in promoting innovative activities, [19], [22], [23], [24], [25]. Effective KM practices stimulate idea generation and transformation of knowledge into innovative outcomes, [12].

Hypothesis 2 (H2): *During the COVID-19 pandemic, knowledge management has a beneficial impact on SMEs' digital orientation.*

2.2 Digital Capability

Digital innovation is a critical factor in modern organizations' success, and two key variables, digital capability and digital orientation, play pivotal roles in driving this innovation. Many economic sectors have benefited from digitization. Digital capability empowers organizations with the necessary skills and resources to effectively manage digital technology, while digital orientation shapes an organization's strategic position towards embracing digital innovation, [14], [20], when combined, these variables create a powerful synergy that fosters continuous digital innovation, enabling organizations to thrive in the dynamic and rapidly changing digital landscape. Companies need to encourage increased digital capabilities and digital orientation so that a culture of creativity and innovation can be realized so that the digital transformation expected by companies in this digital era, [14], [18]. However, companies need to understand that creating this is not easy. Companies need to provide digital skills and knowledge to employees, [7], [13], to create a culture that changes employee mindsets with innovative ideas, [20], that provide customer satisfaction, [14], [21]. Therefore, the collaboration of digital capabilities and digital orientation creates a digital strategy that leads companies to strong digital innovation, [16], [18].

Digital capabilities and digital orientation need to be collaborated to accelerate digital innovation in companies. Companies with digital capabilities and high digital orientation will be able to produce innovative products and services. One of the characteristics of strong digital capability can be seen from digital capability which includes the skills possessed by employees in managing technology

efficiently, [16], while digital orientation is characterized by openness to digital information and courage in taking risks, [18], a competitive advantage in the digital world, [14]. In contrast to digital capabilities which are oriented towards processes and transformation supported by digital capabilities, knowledge, and talent, [7], [16]. Strong capabilities will lead to improvements in customer experience, [20] and the creation of digital innovations, [6], [14]. Therefore, digital capabilities will increase the company's capabilities to the point where a digital culture and sustainable learning are created [14], [26].

Hypothesis 3 (H3): *Digital innovation was positively influenced by their digital capabilities during the COVID-19 pandemic.*

2.3 Digital Orientation

The company's strategy to dedicate to digital innovation is part of the company's digital orientation in its corporate strategy, [14], [15]. It encompasses the organization's willingness to embrace and actively pursue technological advancements and digital transformation. Organizations that have a favorable digital orientation prioritize the investigation of novel digital possibilities, promote taking risks, and cultivate a culture of innovation, [13], [14]. An innovative digital approach allows companies to better meet customer needs and market demands, leading to the creation of new and improved products and services, [18]. Furthermore, a robust emphasis on digital technology enables organizations to be flexible and responsive, allowing them to succeed in the ever evolving and swiftly changing digital environment, [20].

Hypothesis 4 (H4): *SMEs' digital innovation is positively influenced by their digital orientation during the COVID-19 pandemic.*

2.4 The Role of Digital Capability in Mediating the Effect of Knowledge Management on Digital Innovation

KM plays a pivotal role in driving digital innovation within organizations by facilitating knowledge creation, sharing, and application, [6], [24]. However, the relationship between KM and digital innovation is further influenced by the mediating effect of Digital Capability. Digital Capability refers to a firm's capacity to effectively manage digital technologies for new product development and innovative processes, [7], [27]. Organizations with

strong Digital capabilities are better equipped to leverage knowledge assets acquired through KM to drive digital innovation, [28]. Therefore, Digital Capability acts as a mediator, amplifying the impact of Knowledge Management on digital innovation outcomes.

Hypothesis 5 (H5): *During the COVID-19 pandemic, SMEs' digital capabilities mediated the effect of knowledge management on digital innovation.*

2.5 The Role of Digital Orientation in Mediating the Effect of Knowledge Management on Digital Innovation

The positive relationship between Knowledge Management and digital innovation highlights the role of Digital orientation in driving innovation and product development, [14]. A digitally oriented company, with a broader vision and commitment to new technology, is more likely to produce innovative outcomes, [14]. By harnessing knowledge resources and implementing dynamic capabilities, Knowledge Management practices contribute to driving digital innovation and achieving competitive advantage, [14], [19], [29], [30]. Integrating KM practices leads to a more proactive attitude, fostering a positive relationship between KM and innovation, [13].

Hypothesis 6 (H6): *During the COVID-19 pandemic, SMEs' digital orientation mediated the effect of knowledge management on digital innovation.*

3 Method

The study focuses on examining the relationship between various variables in the context of small and medium-sized enterprises (SMEs) in Indonesia. The independent variable under investigation is knowledge management (KMN), while the dependent variable is digital innovation (DII). To measure the knowledge management (KMN) variable, the study adapted question items from instruments developed by various researchers, including, [19], [22], [23], [24], [29], [30]. For the variable digital innovation (DII), the study employed a five-item scale developed by [14], [29], [31], [32], [33]. The study also considers digital capability (DIC) and digital orientation (DIO) mediating variables. The digital capability (DIC) variable was measured using a seven-item scale developed by [14], [33], [34], [35].

Table 1. Measurement Item

Variables	Item	References
Knowledge Management (KMN)	I believe that I have easy access to relevant knowledge and information (KMN1)	[19], [22], [23], [24], [29], [30]
	Working together with business partners or other pertinent stakeholders to share knowledge and experiences is something I think works well (KMN2).	
	My business operations have benefited from the incorporation of new knowledge and innovations (KMN3).	
	I make use of platforms or systems that enable knowledge-sharing cooperation with business partners (KMN4)	
	To increase my knowledge, I actively participate in training or self-improvement projects (KMN5)	
	I believe that I have easy access to relevant knowledge and information (KMN6)	
Digital capability (DIC)	I think I have enough experience and understanding to use digital technology to grow my company (DIC1)	[14], [29], [31], [32], [33]
	I actively incorporate digital technologies into my business operations, such as social media, websites, e-commerce, and business software (DIC2)	
	I possess adequate hardware and internet connectivity, as well as digital infrastructure, to enable the use of digital technology (DIC3)	
	I consistently participate in digital training and development programs to enhance my abilities and understanding of digital technology (DIC4)	
	I can adapt to emerging market trends and technological advancements with ease (DIC5)	
	Either I engage in electronic commerce or I manage a digital platform for the promotion of goods and services (DIC6).	
	My clientele engages in active interaction and participation via digital platforms, including social media and websites (DIG7).	
Digital orientation (DIO)	I acknowledge that adopting digital technology has the potential to enhance the efficiency and competitiveness of my organization (DIO1).	[14], [33], [34], [35]
	I conscientiously pursue opportunities to implement digital technology in various aspects of my enterprise (DIO2).	
	I proactively integrate developments in digital technology into my products, services, and business operations (DIO3).	
	I have adequate resources and strategies to overcome challenges encountered during the digitalization process of my organization (DIO4).	
	I am prepared to adapt to the changes that will occur as a result of the incorporation of digital technology into our organization (DIO5).	
Digital Innovation (DII)	I support my business operations by utilizing limited digital resources creatively and innovatively (DII1).	[14], [12], [15]
	I implement cost-effective and pertinent digital technologies to facilitate my business operations	

Variables	Item	References
	(DII2).	
	I establish partnerships or collaborate with others to obtain digital resources at reasonable prices (DII3).	
	I leverage open-source solutions or freely available software to exploit the potential of digital technologies while minimizing financial outlays (DII4).	
	I effectively synchronize my business strategies with digital trends while avoiding substantial financial outlays (DII5)	

Meanwhile, the digital orientation (DIO) variable, which also serves as the mediating variable, was measured using a five-item scale developed by [14], [35], [36], [37]. A 5-point Likert scale, ranging from strongly disagree to agree strongly, was employed to measure each variable (Table 1). All these variables were measured using item scales developed by previous scholars from existing literature, with necessary modifications to suit the specific context of SMEs in Indonesia.

This study collected data using a questionnaire that was distributed to managers of small and medium enterprises (SMEs) in Indonesia. The distribution period is 6 months from July to December 2021 by distributing keosiner using Google Forms. The selection of respondents as samples used purposive random sampling. 247 respondents provided valid responses. The questionnaire is divided into 2 pieces of information. First, respondent characteristics include demographic information such as age and education level. The second part contains information on the condition of SMEs. Other information includes responses related to research variables. The collected data was analyzed using Structural Equation Modeling (SEM) Partial Least Squares (PLS). First, look at the inner model, to ensure the model is valid and reliable, validity and reliability testing is carried out by paying attention to the cross-loading, composite reliability and average variance extracted (AVE) values. Second is, outer model. In this section, the magnitude of the influence of the dependent variable on the independent will be assessed. Apart from that, the direction of the variables and their significance are also looked at to determine whether the results support or reject the hypothesis.

4 Result

The research methodology encompassed the distribution of a survey among managers of Small and Medium Enterprises (SMEs) in Indonesia within the timeframe of July to December 2021.

This survey employed purposive random sampling to ensure a representative sample.

A total of 247 responses were collected and subsequently subjected to preliminary processing to ascertain data accuracy and adequacy. The survey was structured into two parts: the initial section focused on collecting participant profile information, encompassing gender, age, education level, length of business operation, and the number of employees within the organization. The subsequent section contained data pertinent to the study variables. Table 2 encapsulates a concise summary of the demographic composition of the sample.

It underscores how respondents were distributed based on specific characteristics. The table highlights that 52.2% of participants identified as male, while 48.8% were female. Moreover, the majority of respondents (51.4%) fell within the age bracket of 25 to below 50 years. This was followed by 35.2% in the 18 to below 25 range and 13.4% aged above 50. Education-wise, 60.3% of respondents held university or college degrees, 35.2% completed senior high school, and 4.5% attended junior high school. Furthermore, the table delineates the distribution of respondents based on the duration of their business operations and the number of employees in their respective companies. These comprehensive demographic insights significantly contextualize the participant characteristics within the study, thereby providing valuable implications for interpreting the research outcomes.

Table 2. Sample demographic (n = 247).

Characteristics	Group	Frequency	Percentage
Gender	Male	129	52.2
	Female	118	48.8
Age	18 - <25	87	35.2
	25 - <50	127	51.4
	>50	33	13.4
Education	University/Collage	149	60.3
	Senior high school	87	35.2
	Junior high school	11	4.5
Length of business operation	3 – <5 Years	82	33.2
	5 – 10 Years	108	43.7
	> 10 Years	57	23.1
Employee	<10	153	61.9
	10 - <25	61	24.7
	25 - <50	24	9.7
	> 50	9	3.6

Source: Author Calculation (2023)

Table 3. Validity and Reliability Result

Construct	Item	Item Loadings	Cronbach's Alpha	Comp. Reliability	AVE
Digital capability (DIC)	DIC1	0.920	0.977	0.981	0.881
	DIC2	0.940			
	DIC3	0.942			
	DIC4	0.947			
	DIC5	0.946			
	DIC6	0.956			
	DIC7	0.917			
Digital orientation (DIO)	DIO1	0.935	0.954	0.964	0.844
	DIO2	0.938			
	DIO3	0.932			
	DIO4	0.934			
	DIO5	0.852			
Digital Innovation (DII)	DII1	0.961	0.968	0.975	0.887
	DII2	0.969			
	DII3	0.968			
	DII4	0.943			
	DII5	0.862			
Knowledge Management (KMN)	KMN1	0.922	0.905	0.928	0.724
	KMN2	0.939			
	KMN3	0.926			
	KMN4	0.707			
	KMN5	0.730			

Beginning with the outer model (Table 3), the focus was on evaluating the reliability and validity of the variables. This assessment involved several criteria, including convergent and discriminant validity, as well as composite reliability. Each construct's factor loadings were critically examined to ensure that they surpassed the recommended threshold of 0.70, indicating a strong association between the latent variable and its corresponding observed indicators. Apart from that, the value of the average variance extracted (AVE) is more than 0.50, which shows that the variable indicator is valid. The reliability of each indicator for all variables shows reliability. For example, Digital Capability (DIC) has a Cronbach's Alpha coefficient of 0.977 which shows the reliability of this variable. The same thing is also shown in the Knowledge Management (KMN), Digital orientation (DIO), and Digital Innovation (DII) orientation variables as in Table 3.

Table 4 displays the R-square results, which quantify the degree to which the substantial variability in the constructs can be explained by the variables in the model. The aforementioned estimates demonstrate the extent to which the model accounts for the variability observed in DIC, DIO, and DII. In particular, DIC, DIO, and DII have respective R-square values of 0.128 (12.8%), 0.068 (6.8%), and 0.274 (27.4%). Other extant external factors account for the remaining variance of 87.2% for DII, 95.2% for DIO, and 72.2 percent for DIC, respectively, as reported in the present study. These results indicate that DIC, DIO, and KMN have a significant impact on the construct DII.

Table 4. The Results of the R-square.

Structural Model	Dependent Variable	R Square
1	Digital capability (DIC)	0.128
2	Digital orientation (DIO)	0.068
3	Digital Innovation (DII)	0.274

The assessment of the inner model was additionally informed by the Q-square test size, the magnitude of the structural path coefficients, and the R-square values of the dependent variables. A crucial indicator in Partial Least Squares (PLS) analyses is the Q-square test size. In the current study, Q-Square was calculated as $1 - (1 - 0.128) * (1 - 0.068) * (1 - 0.274) = 0.409$. This value indicates that the model explains around 40.9% of the variance in the constructs DIO, DIC, and KMN with precision. The variance of 59.1% is ascribed to additional factors that were not accounted for in the model. Through the utilization of R-square and Q-square as supplementary metrics, the research guarantees a thorough evaluation of the model's explanatory capability and offers valuable insights into the interconnections among the constructs being examined.

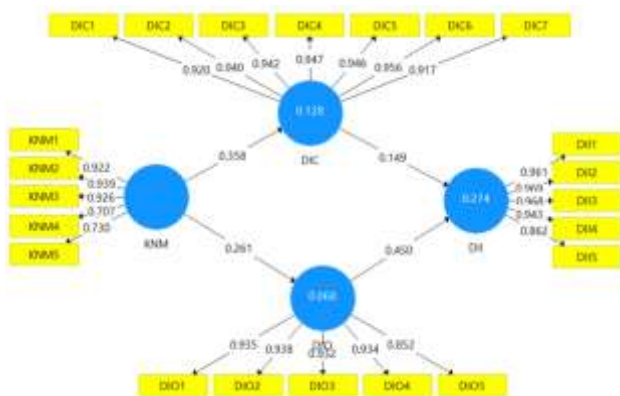


Fig. 1: Result of conceptual framework

Table 5. Summary of Path Coefficient

Hypothesis	Path coefficient	T Statistic	P-Value	Result
H1: KMN -> DIC	0.358	6.252	0.000	Supported
H2: KMN -> DIO	0.261	4.353	0.000	Supported
H3: DIC -> DII	0.149	2.544	0.011	Supported
H4: DIO -> DII	0.450	7.494	0.000	Supported

The utilization of structural equation modeling to evaluate hypotheses is succinctly summarized in Figure 1 and Table 5, which provides an exhaustive synopsis of the results. The results illuminate the connections among the variables, offering an understanding of the degree to which empirical data supports each hypothesis. The findings support the initial hypothesis (H1) that KMN has an effect on DIC. The path coefficient is recorded as 0.358, and

its corresponding T statistic is 6.252, with a p-value below 0.000. The compelling evidence highlights the significant and favorable influence of KMN on DIC, thus indicating the validation of H1. The following hypothesis, denoted as H2, posits that KMN has a beneficial impact on DIO. The obtained path coefficient of 0.261, in conjunction with the T statistic of 4.353 and a p-value below 0.000, provides additional evidence in favor of H2. This result strengthens the positive correlation between KMN and DIO, providing evidence for their interconnectedness. Subsequently, the examination advances to hypothesis H3, which delves into the correlation between DII and DIC. The acceptance of H3 is supported by the path coefficient of 0.149, the T statistic of 2.544, and the p-value of 0.011. These values collectively establish the impact of DIC on DII. This discovery highlights the beneficial influence of DIC in promoting DII. Finally, hypothesis H4 is accepted. This is shown by the coefficient value of 0.450 the calculated p-value of less than 0.000 and the T statistic of 7.494. This means that there is an influence of DIO on DII.

Table 6. Summary of Mediation Effects

Hypothesis	Path coefficient	T Statistic	P-Value	Result
H5: KMN -> DIC -> DII	0.053	2.216	0.027	Supported
H6: KMN -> DIO -> DII	0.117	3.578	0.000	Supported

Table 6 shows the mediating role of the DII and DIC variables. The analysis results show that DIC functions as a mediator between DII and KMN is 0.053. The t-statistic value obtained is 2.216 which exceeds the critical value of 1.96, combined with a P value of 0.027, Hypothesis 5 (H5) is accepted. Furthermore, the DII variable shows a value of 0.117 with a t-statistic of 3.578 and a P value of less than 0.001, which means Hypothesis 6 is accepted.

5 Discussion and Implications

This study shows that knowledge management has had a positive and significant impact on the digital capacity and digital orientation of small and medium enterprises in Indonesia during the COVID-19 pandemic. Apart from that, knowledge management also has a positive influence on two mediating variables, namely digital competence and digital orientation. These results show support for hypotheses 1 and 2. This indicates that knowledge management plays an important role in encouraging increased digital competence and digital orientation of SMEs in Indonesia. These

results support previous empirical studies, [14], [19], [22], [23], [24], [25], which show that knowledge management boosts the digitalization of SMEs in terms of digital capabilities and orientation. Therefore, knowledge management has helped SMEs amidst the negative impacts of the COVID-19 pandemic.

Apart from examining the impact of knowledge management, this study also investigates the impact of digital capabilities and digital orientation on SME digital innovation during the COVID-19 pandemic. The results show that there is a positive and significant impact of digital capabilities and digital orientation on digital innovation. These results support hypotheses 3 and 4. These results underline the role of digital capabilities in encouraging digital innovation of SMEs in Indonesia during the COVID-19 pandemic period, including the role of digital orientation. Therefore, digital capabilities and digital orientation during the pandemic period can be considered an important part of increasing digital innovation for SMEs.

The results of the analysis above provide an idea of whether the results support the proposed hypothesis. Based on the analysis results, hypotheses 1 and 2 are supported. The same thing applies to hypotheses 3 and 4. The support for this hypothesis is in line with empirical studies conducted by [14], [16], [18], [20]. The same thing was also found by [7], [13] which showed that there was a role for digital capabilities during the crisis period. Meanwhile, for the mediation variable, it was found that there was an impact that was in line with the hypothesis regarding the existence of mediation played by the digital capability and digital orientation variables on the influence of knowledge management and digital innovation for SMEs during the COVID-19 pandemic period. This shows that hypotheses 5 and 6 are supported.

This means that these findings support previous empirical studies that underline digital innovation, [6], [12]. Apart from that, these results are also consistent with previous studies which show that knowledge management will be effective in increasing digital innovation through increasing digital capabilities and orientation, [7], [27], [28]. including the incorporation of digital technology [14] for SMEs during the COVID-19 pandemic.

6 Conclusion and Recommendations

This research aims to examine the impact of knowledge management on digital innovation with

digital capability and digital orientation as mediating variables. Focusing the study on SMEs during the COVID-19 pandemic period, the survey was conducted during the period July to December 2021 involving 247 SME respondents. The research results found that knowledge management has a positive and significant impact on digital capabilities and digital orientation. The same thing was also found in the digital capability and digital orientation variables towards digital innovation. In addition, digital capabilities and digital orientation act as mediating variables between knowledge management and digital innovation.

This study has provided a comprehensive picture of the impact of knowledge management and digitalization on SMEs in the COVID-19 period. These findings have a big impact on policy formulation, especially regarding how digitalization plays an important role for SMEs in facing the crisis. However, this study still has limitations, namely the focus on quantitative approaches rather than qualitative or mixed methods. In addition, the area is limited to only one country for a short period providing opportunities for further research to explore different approaches.

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