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The Influence of Knowledge Management Capability Dimensions on the Competitive Advantage of MSMEs Through Entrepreneurial Orientation

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Abstract. *The concept of knowledge management as the mainstay for building the competitive advantage of large companies has been highly emphasized in the strategic management literature, but similar studies are still rare in the realm of MSMEs. To fill this gap, this paper empirically examines the relationship between the dimensions of knowledge management capability and competitive advantage through the entrepreneurial orientation of Micro, Small and Medium Enterprises (MSMEs). The knowledge management dimensions used include knowledge management infrastructure and knowledge management processes. The analysis technique uses Structural Equation Model (SEM) with SmartPLS. Research respondents are owners/managers in 75 MSME sentra in Jakarta, Indonesia. Statistical tests show that knowledge management infrastructure has a significant effect on entrepreneurial orientation but does not have a significant effect on competitive advantage. The knowledge management process has a significant effect on entrepreneurial orientation and also on competitive advantage. Meanwhile, entrepreneurial orientation has a significant effect on competitive advantage. This reality confirms that when there is high pressure on MSMEs, it will cause actions and reactions among companies in the industry. To emphasize the important role of knowledge management in facing future pressures, wider research is needed on the consequent variables of the application of knowledge management in MSMEs, such as digital capabilities, business agility and business performance.*

Keywords: *Knowledge Management Infrastructure, Knowledge Management Processes, Competitive Advantage, Entrepreneurial Orientation, MSME*

Abstrak. *Konsep knowledge management sebagai andalan untuk membangun keunggulan kompetitif perusahaan besar sudah sangat ditekankan dalam literatur strategic management, namun studi serupa masih jarang dilakukan di ranah UMKM. Untuk mengisi kesenjangan tersebut, makalah ini mengkaji secara empiris hubungan antara dimensi kapabilitas manajemen pengetahuan dan keunggulan kompetitif melalui orientasi kewirausahaan Usaha Mikro, Kecil dan Menengah (UMKM). Dimensi manajemen pengetahuan yang digunakan meliputi infrastruktur manajemen pengetahuan dan proses manajemen pengetahuan. Teknik analisis menggunakan Structural Equation Model (SEM) dengan SmartPLS. Responden penelitian adalah pemilik/pengelola di 75 sentra UMKM di Jakarta, Indonesia. Uji statistik menunjukkan bahwa knowledge management infrastructure berpengaruh signifikan terhadap orientasi kewirausahaan namun tidak berpengaruh signifikan terhadap keunggulan kompetitif. Proses knowledge management berpengaruh signifikan terhadap orientasi kewirausahaan dan juga keunggulan bersaing. Sedangkan orientasi kewirausahaan berpengaruh signifikan terhadap keunggulan bersaing. Realitas ini menegaskan bahwa ketika terjadi tekanan yang tinggi terhadap UMKM akan menimbulkan aksi dan reaksi antar perusahaan dalam industri tersebut. Untuk menekankan peran penting knowledge management dalam menghadapi tekanan masa depan, diperlukan penelitian yang lebih luas terhadap variabel-variabel konsekuen penerapan knowledge management pada UMKM, seperti kapabilitas digital, business agility dan business performance.*

Keywords: *Knowledge Management Infrastructure, Knowledge Management Processes, Competitive Advantage, Entrepreneurial Orientation, MSME*

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Introduction

Competition is an eternal phenomenon that will be faced by entrepreneurial companies (Diugwu, 2011; Grimm et al., 2006). Diugwu (2011) explains that the more companies that offer similar goods and services to consumers, the more competition will increase. Increasingly fierce competition provides advantages for companies in the form of creating company advantages compared to competitors or competitive advantages.

Currently, competitive advantage is very important because competition is very dramatic due to globalization, technological innovation, and the business environment that changed due to the Covid-19 pandemic (Fitriasari, 2020; Grimm, 2006; López et al., 2020; Muditomo & Wahyudi, 2021). The situation caused action and reaction between companies to occur quickly. It is empirically known that entrepreneurial companies are more responsive to rapid environmental changes (Dethine et al., 2020; Hu et al., 2009; Lumpkin &Decs, 1996). Entrepreneurial companies are also able to identify opportunities and create competitive advantages to exploit those opportunities (Ireland et al., 2003).

According to experts, managing knowledge-based resources will give a company a competitive advantage in the era of knowledge, which is characterized by today's intense competition and dynamic business climate. (For example, Lee et al., 2016; Nguyen, 2010; Pérez et al., 2016; Ramona &Alexandra, 2020; Roaldsen, 2014; Shirokova et al., 2013; Teece, 2012; Weerawardena & Mavondo, 2011). The phenomenon of the organization itself is a heterogeneous entity filled with knowledge (Hoskisson et al., 1999). Resource-based organizations are ultimately knowledge asset-based organizations (Teece et al., 2007; Zaichkowsky et al., 2010).

Knowledge is different from conventional resources that are tangible, more accessible, imitated, reduced when used, and easily substituted. Knowledge has distinct, intangible qualities that keep growing when applied and are very challenging for competitors to imitate (Bagnoli &Vedovato, 2014; Teece, 2012). The same opinion was stated by Grimm et al. (2006); Karia (2018); Ramona &Alexandra (2020) who affirmed that in the age of knowledge, knowledge in an organization serves as a unique resource to achieve a competitive advantage.

Micro and small businesses (MSEs) are one form of entrepreneurial company (Teece, 2012). The study of achieving competitive advantage in MSEs is still being debated until the last decade (Escandón et al., 2016; Nguyen, 2010; Salimi &Rezaei, 2018). The quantity of the study results is still less than the study results of competitive advantage on large companies (Nguyen, 2010). There are at least two reasons that explain this, namely the competitive advantages in small and medium-sized micro enterprises (MSMEs) more often considered as accidental due to certain operating conditions surrounding the company (Beaver &Jennings, 2005) and the economy of small-scale businesses that do not allow to have a competitive advantage (Chawinga &Chipeta, 2017; O'Donnell et al., 2002; Ong et al., 2010). Large companies are supported by the ability to identify the core skills, resources and management to achieve a position of excellence. Meanwhile, the general condition of MSEs usually has the characteristics of a lack of resources, facing uncertain market conditions and being reactive in marketing (Panuwatwanich & Nguyen, 2017).

Based on the view of Sambamurthy et al. (2003) and Grimm et al. (2006), the process of building knowledge management capabilities is a combination of dimensions, namely knowledge management infrastructure and knowledge management processes. Gold et al. (2001) asserts that knowledge management infrastructure will not become a knowledge

management capability without a knowledge management process. At this stage, Ferreira & Azevedo (2007) added the construct of entrepreneurial orientation as an important resource and capability in small businesses to build competitive advantage. Research on MSMEs shows that MSMEs that survive in a competitive environment are MSMEs that adopt an entrepreneurial orientation (Ibrahim & Mahmood, 2016; Qosasi et al., 2019; Rosli Mahmood et al., 2013; Sirivanh et al., 2014; Tajeddini et al., 2013).

In Indonesia, MSMEs make a major contribution to the economy, including contributing 61.07% to GDP, absorbing 97.00% of the workforce, and contributing 14% to exports (katadata, 2020). The presence of the Covid-19 pandemic has had a significant impact on MSMEs. Based on the report by the Coordinating Ministry of Finance for UKMM, as many as 56% of MSMEs experienced a decrease in sales turnover due to the Covid-19 pandemic. Based on the sector, it was reported that MSME exporters were the most affected, namely around 95.4% of the total exporters. 89.9% of the affected MSEs engaged in the craft and tourism support sectors. Meanwhile, the sector that was the least affected by the Covid-19 pandemic was the agricultural sector, which was 41.5% (Trimahanani, 2020). Recognizing the strategic role of MSMEs in the national economy, the government is carrying out the National Economic Recovery (PEN) due to the pandemic, one of the targets is to mobilize MSMEs. If MSMEs rise, the economy will be leveraged because MSEs are the engines of economic growth (Nainggolan, 2020; Windarto, 2021).

In line with government programs to drive the economy, this study aims to analyze competitive advantage based on knowledge management skills in MSEs during the Covid-19 pandemic by utilizing entrepreneurial orientation as a mediated construct. This research contributes to answering the need for MSEs to win the competition in the midst of a competitive and dramatic climate due to the pressure of the Covid-19 pandemic. It is hoped that this research can become an empirical basis for academics, owners/leaders and managers of MSEs in industrial centers to continue to have an advantage in the Covid-19 pandemic situation.

Literature Review and Hypothesis

Knowledge Management Capability

Knowledge management capability is the ability to identify, optimize, and enable the management of intellectual assets to create value, improve productivity, and competitive advantage (Agostini et al., 2016; Agranoff, 2003; Chang et al., 2018; Crammond et al., 2018; Merali, 2010; Ramona & Alexandra, 2020). Gold (2001) stated that theoretically two single dimensions contruct knowledge management infrastructure dan management process.

Knowledge management infrastructure is the ability of knowledge management support facilities in small and medium enterprises in the industry center to act as a memory of organizational knowledge that can be used dynamically when competing in the market. The knowledge management infrastructure in this study consists of four indicators, namely culture, leadership support, and technology and benchmarking (Wong &Aspinwall, 2005; Valmohammadi & Ahmadi, 2015).

Cultural indicators are supporting facilities that become a source of knowledge in MSEs in the form of values, norms, and habits that organize the behavior of every business person. Values are defined as a shared belief that managing knowledge is the strength of the company (Purnomo &Suharyono, 2011). Norm is important for everyone to share their knowledge into organizational knowledge. The cultural indicator has four items. *First*, believe the error as a source of learning. This item relates to everyone's belief that making mistakes when trying is a valuable learning resource for the company. *Second*, trust each other. This item describes everyone trusts each other in sharing the various knowledge that the company needs. *Third*, the company

encourages asking questions, i.e. the company encourages everyone to ask questions to improve understanding in the learning process in the company. *Fourth*, believe in imitation as a source of learning. This item reflects everyone's belief that better imitation of other companies is a learning resource for competing.

support from owners in employees in practicing knowledge management within their organization (Purnomo &Suharyono, 2011). The leadership indicator has three items. First, the example of practicing. This item shows the importance of the example of the company's leadership to practice the knowledge management process. Second, commitment. This illustrates the commitment of the company owner to the application of knowledge management. Third, the clear target. This item reflects that the owner sets a clear goal.

Benchmarking indicators relate to the activities of small and medium-sized businesses in the industry center to model the best practice of fellow small businesses or competitors, as an action and reaction in competition. The benchmarking indicator has two items. First, the company encourages imitation. This item reflects the company's encouragement to everyone to emulate the best practices that competitors do when doing business. Second, the manners to imitate. This item shows that the company pays attention to manners in imitating the best practices performed by competitors when doing business.

Technology indicator is information and communication technology or social media on the internet that the company uses to win the competition. The technology indicator has three items. First, it's easy to learn. This item is related to easy-to-learn communication technology and information used in the company. Second, technology serves as a source of learning information. This item describes the company utilizes communication technology (digital) as a source of information for learning.

Third, utilize technology to compete. This item reflects company utilizes communication technology to win the competition when doing business, such as social media: Twitter, Whatsapps, Facebook, email, etc.

The knowledge management process is the function of knowledge management within the MSE organization consisting of knowledge acquisition, knowledge sharing, and knowledge application (Chen &Huang, 2009). Knowledge acquisition indicator is the process of exploring the knowledge needed in the MSE organization from customers, business partners, and employees to become the knowledge of the organization. The knowledge acquisition indicator has three items. *First*, dig into customer knowledge. This item reflects the company's efforts to acquire knowledge by exploring the knowledge needed in the efforts of the company's customers. Second, explore the knowledge of partners. This item describes the company's efforts to acquire knowledge by exploring the knowledge needed in running the business from the company's partners. Third, explore employee knowledge. This item shows the company's efforts to gain knowledge by exploring the knowledge needed in doing business from the experience of employees while being employees.

Knowledge sharing indicator is the process of disseminating organizational knowledge that has been obtained openly within the organization as well as to business partners (Purnomo &Suharyono, 2011). The knowledge sharing indicator has two items. First, employees share knowledge openly. This item describes the process of knowledge sharing when everyone in the company shares knowledge openly full of trust. Second, share knowledge with partners. This item reflects the company sharing the knowledge needed to do business openly with business partners.

An indicator of knowledge application is to carry out the knowledge that has been obtained in the company's activities and competition (Purnomo & Suharyono, 2011). The knowledge application indicator has three items. *First*, it's easy to practice. This item reflects the application of knowledge in which everyone in the company finds it easy to practice the knowledge that has been learned. *Second*, save the activities. This item shows that the company uses the knowledge it has gained to save money in every business activity. *Third*, improve the ability to compete. This item illustrates that practicing the knowledge that has been learned will improve the ability to compete with other businesses.

Entrepreneurial Orientation

Entrepreneurial orientation is the willingness of organizations to innovate, take risks, and be more proactive (Wiklund & Shepherd, 2005). So, entrepreneurial orientation is not the ability of the organizations to innovate, take risks, and be more proactive. Entrepreneurial orientation creates a good situation for organizations to explore and exploit opportunities and create competitive advantages for several reasons: First, innovativeness makes it easier for organizations to explore and exploit new ideas and help adjust to change (Ahuja & Lampert, 2001; Lumpkin & Decs, 1996; Rauch et al., 2009). Second, proactiveness provides direction into the future and the search for opportunities (Ahuja & Lampert, 2001; Rauch et al., 2009). This reflects the attitude to anticipate and act to be aware of market changes (Baker & Sinkula, 2009), as well as being a pioneer in using new methods, techniques, and products (Lee et al., 2001; Li & Zhang, 2010). Third, risk-taking, this aspect represents the willingness to spend resources to pursue believed opportunities even though the results are uncertain (Ahuja & Lampert, 2001; Baker & Sinkula, 2009).

Lumpkin & Dess (2001) added two dimensions of entrepreneurial orientation, namely autonomy and competitive aggressiveness. Autonomy is a company's independent action to realize a vision or idea (Hussain et al., 2015; Lumpkin & Dess, 2001; Purnomo et al., 2019).

Autonomy in the context of entrepreneurial orientation is strategic autonomy (Kuratko, 2010) meaning that to have a high entrepreneurial orientation, a company's autonomy must exist at a strategic level. *Competitive aggressiveness*. Lumpkin & Dess (2001) defined the willingness to be aggressive in competing (competitive aggressiveness) as a tendency to be willing to compete directly and strongly in the market. This is evident from the level of enthusiasm of the company to surpass competitors one step ahead. For example, the willingness to use tactics that are not commonly done by similar companies to be at the forefront. Thus, in this study, entrepreneurial orientation is measured by five dimensions, namely: *autonomy, innovativeness, risk-taking, proactiveness,* and *competitive aggressiveness* (Lumpkin & Dess, 2001; Qosasi et al., 2019; Sirmon et al., 2011).

Competitive Advantage

Competitive Advantage in small businesses according to Nguyen (2010) is a unique advantage owned by a small business that distinguishes it from other similar small businesses so that it can be used to win the competition. A competitive advantage is gained when a company develops or controls a group of attributes (to execute actions) that enable the company to stand out above its competitors (Wang, 2014). Competitive advantage is the uniqueness of MSEs because they can build knowledge management capabilities and become entrepreneurial oriented to be utilized to win the competition and maintain business continuity in industrial centers. Competitive Advantage is a knowledge-based uniqueness or uniqueness caused by the company's ability to manage knowledge.

The competitive advantage developed by Newbert (2008) has six indicators. The first indicator is the more efficient operational costs. This indicator shows that the company has more cost-effective operations than other similar companies. Second, selling power. This indicator describes the company can sell more products than other similar companies.

Third, product diversity. This indicator reflects the company has a variety of products that are more diverse than the products of other companies. Fourth, product availability. This indicator indicates that the company has a greater inventory of products than other small businesses. Fifth, better management practices. This indicator indicates that the company has better management practices than other businesses. Sixth, cheap price. This indicator shows that the company can set prices cheaper than similar small businesses.

Hypothetical Framework

Wong & Aspinwall (2005) stated that the need to study the knowledge management capabilities of MSEs is driven by two complementary views, namely "*pull perspective*" and "*push perspective*". Pull Perspective explains the potential benefits of knowledge management which are very important for internal MSEs such as increasing competence, efficiency, innovation and learning. While the push perspective explains that knowledge management is important for MSEs to face external or environmental pressures, such as competitive pressures, competition, pressure from large companies that are increasingly agile in adopting knowledge-based organizations, including pressure due to the Covid-19 pandemic. Knowledge Management in MSEs provides new tools to survive, grow, and maintain competitive advantage because knowledge is a new organizational resource in the knowledge economy era (Sheikh, 2008; Vazquez, 2012). This study uses the two dimensions of knowledge management capability that have been stated, namely knowledge management infrastructure and knowledge management processes (Gold et al., 2001).

Organizational infrastructure can increase social capital by providing a mechanism for social interaction between individuals as a basis for the knowledge management process (Nguyen, 2010). Grant (1996) explained that elements of the organization's infrastructure can enable companies to effectively manage their knowledge by coordinating individual activities and integrating individual knowledge so that it can be converted into organizational knowledge. The opinion refers to Nonaka (1994) who explained that knowledge can be created, shared, improved, reproduced, and accepted in an organization through social processes and collaborations, especially individual cognitive processes. Previous research has proven that knowledge management infrastructure produces an entrepreneurial orientation (Li et al., 2009; Wales et al., 2013; Williams & Lee, 2009) and comparative excellence (Grimm et al., 2006; Karia, 2018). Research in the field of MSEs shows that the success of MSEs to survive in a competitive environment is due to MSEs having an entrepreneurial orientation of innovativeness, proactiveness, and risk-taking (Wiklund and Shepherd, 2003; Bouchard and Basso, 2011; Akbari and Boharestan, 2013) and autonomy and competitive aggressiveness (Hussain et al., 2015; Lumpkin &Decs, 2001; Purnomo et al., 2019).

Empirically, Mahmood et al., (2013) found that the knowledge management process relates positively to entrepreneurial orientation. So, there is a tendency that the entrepreneurial orientation will increase when the knowledge management process is well processed in an organization. The company's entrepreneurial orientation thereby enhances competitive excellence (Escandón et al., 2016; Ibrahim & Mahmood, 2016; Liu et al., 2011; Qosasi et al., 2019). Based on the explanation, the following is the framework of hypotheses and research hypotheses:

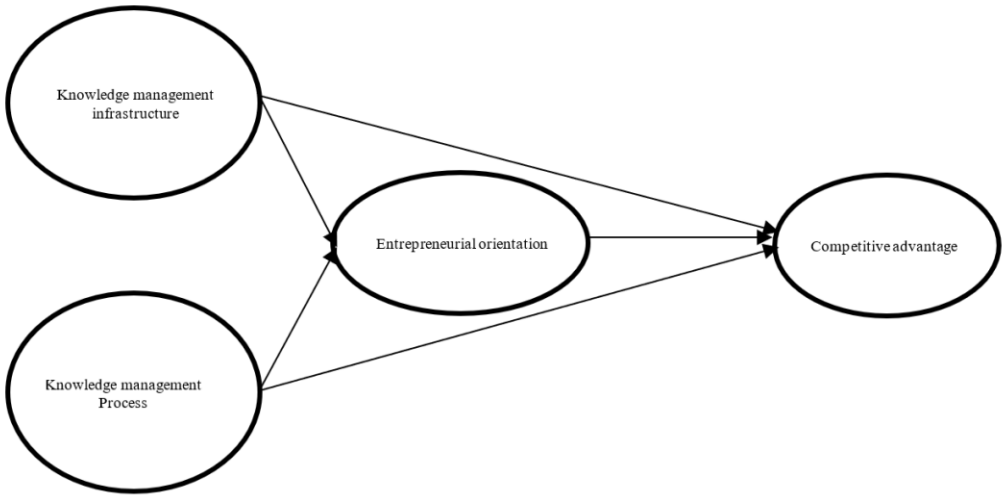

Figure 1.
Hypothetical Framework

Research hypotheses:

H1: Knowledge management infrastructure has a significant impact on entrepreneurial orientation

H2: Knowledge management infrastructure has a significant impact on competitive advantage

H3: Knowledge management process has a significant impact on entrepreneurial orientation

H4: Knowledge management process has a significant impact on competitive advantage

H5: Entrepreneurial orientation has a significant impact on competitive advantage

Research Methodology

First, conducting a literature review to define and identify the dimensions/constructs of variable building knowledge management capabilities, entrepreneurial orientation, and competitive advantage in SMEs. *Second*, creating a research questionnaire. The questionnaire consists of two parts, the first part contains the profile of research respondents, while the second part contains a list of questions representing research variables. Based on the results of the literature review of research variables, a total of 31 questions were obtained. All question items are made in the Indonesian language. Scale measurement uses Likert scale: 1 = Strongly Disagree; 2 = Disagree; 3 = Hesitation; 4 = Agree and 5 = Strongly Agree (Joshi et al., 2015; Kim, 2011). *Third*, research respondents. The respondents of this research were UMK in 75 UMK industrial centers in Jakarta. Business actors in the MSEs industrial center in Jakarta have included technology infrastructure and utilized digital media in business processes both for learning and e-commerce purposes such as barcodes.

Referring to Hair et al. (2006) for quantitative research the number of good respondents should be between five to ten times the number of research items. So, the number of research respondents is between 155 and 310 respondents. The distribution of the initial questionnaire was carried out via social media, successfully obtaining 47 respondents (30.32% of the minimum target of respondents). To increase the number of respondents, efforts to distribute questionnaires were carried out offline by meeting respondents at several MSEs industrial centers in Jakarta. This effort succeeded in getting an additional 50 respondents. Even though it requires greater effort, this method illustrates that offline participation of respondents is better than online. Total respondents obtained were 97 people.

Referring to the opinion of experts that a total of 97 respondents have met the standards to be used as a quantitative research sample, for example Sekaran & Bougie (2016) put forward the rule that for most studies, the sample size ranges from 30 respondents to 500 respondents. This figure is in line with Chin et al. (2016), which states that the statistical test using the structural equation model (SEM) with Partial Least Square (PLS) with a total of 100 respondents is feasible to use. SEM-PLS can be used to perform confirmatory analysis (Ringle et al., 2005). Confirmatory factor analysis (CFA) is a statistical technique used to find the construct form of a set of manifest variables, or test a variable on the manifest assumptions that build it (Ghozali, 2014). Consideration of using SmartPLS because SmartPLS was developed based on modeling and bootstrap paths, and is recommended by Tenenhaus & Esposito (2005).

Results and Discussion

Profile Of Research Respondents

The profile of the research respondent provides information about the respondents involved in the study. Here is table 1, the profile of research respondents.

Table 1.
Profile Of Research Respondents

	Item	Quantity	Percentage
Gender	Men	56	57.73
	Women	41	42.27
	Total	97	100
Status	Manager	14	14.4
	Owner	83	85.6
	Total	97	100.00
Business age	< 5 years	13	13.40
	5-10 years	27	27.84
	11-15 years	36	37.11
	> 15 years	21	21.65
	Total	97	100
Product	Furniture	12	12.37
	Fashion	21	21.65
	Printing	5	5.15
	Tofu and tempeh	18	18.56
	Handicrafts	6	6.19
	Apparel	21	21.65
	Salted fish	5	5.15
	other products	9	9.28
	Total	97	100
Learning media	Digital Media-Socmed	86	89%
	Community	13	13%
	Courses	25	26%
	Previous work experience	37	38%
	Family	43	44%

Model Conformity Test

Referring to Chin (1998) the suitability of the SEM research analysis model with PLS is carried out in three stages, namely outer model analysis, inner model analysis, and hypothesis testing.

Outer Model Analysis

Based on the results of running with smarPLS, the suitability of the research model is obtained that meets the criteria required for the smart PLS outer model, namely the reflective model as measured by the outer loading indicator (> 0.5); Cronbach's alpha & rho_A with composite reliability values > 0.6 with values > 0.7 and AVE > 0.5 (Cheung & Rensvold, 2002). The following is table 2 of the output loading factors of all constructs.

Table 2 shows that all outer loading values have values above >0.5; therefore, all question items can be retained. Here are table 3 values of validity and reliability of constructs.

Tabel 2.
Outer Loading

	Competitive advantage	Entrepreneurial Orientation	Knowledge Management Infrastructure	Knowledge Management Process
CA1	0.918			
CA2	0.909			
CA3	0.941			
CA4	0.915			
CA5	0.936			
CA6	0.943			
EO1		0.883		
EO2		0.951		
EO3		0.958		
EO4		0.971		
EO5		0.966		
KMI1			0.928	
KMI2			0.912	
KMI3			0.911	
KMI4			0.922	
KMI5			0.939	
KMI6			0.925	
KMI7			0.904	
KMI8			0.915	
KMI9			0.905	
KMI10			0.943	
KMI11			0.936	
KMI12			0.942	
KNP1				0.955
KNP2				0.954
KNP3				0.960
KNP4				0.911
KNP5				0.891
KNP6				0.941
KNP7				0.935
KNP8				0.861

Table 3.
Validity Value and Construct Reliability

	Cronbach's Alpha	rho_A	Composite reliability	Average Variance Extracted (AVE)
Competitive advantage	0.967	0.968	0.973	0.859
Entrepreneurial Orientation	0.971	0.972	0.977	0.895
Knowledge Management Infrastraucture	0.984	0.985	0.986	0.853
Knowledge management Process	0.976	0.978	0.98	0.858

Table 4.
Values of $R2^2$

	R Square	Adjusted R Square
Competitive advantage	0.933	0.930
entrepreneurial orientation	0.942	0.941

Table 4 shows that all Cronbach alpha values > 0.6 composite reliability with values of >0.7 and AVE > 0.5 (Cheung & Rensvold, 2002), thus, all outer model criteria met the standard.

Inner Model Analysis
According to Chin (1998) the inner model analysis can be seen from several indicators, including: coefficient of determination (R2); Predictive Relevance (Q2); Goodness of Fit Index (GoF). The following is a calculation for each indicator.

1. Coefficient of Determination (R2)
   The following shows the output value of the R2 smartPLS software.

According to Chin (1998), R square above 0.67 is strong, between 0.67 to 0.19 is moderate, and below 0.19 is weak. Sarwono (2010) adds that R2 > 0.7 is strong. It can be seen that all the variables involved in this study are categorized as having a strong relationship.

2. Predictive Relevance (Q^2)
   To calculate Q^2 the following formula can be used
   $Q^2 = 1-(1-R1^2)\,(1-R2^2)\ldots\ldots(1-Rn^2)$
   $Q^2 = 1-((1-0.930)\,(1-0.941))$
   $Q^2 = 0.9958$

This test was conducted to determine the predictive ability with a blindfolding procedure. According to Chin (1998), if the value obtained is between 0.02 and 0.15 then the model has little predictability. If the value obtained is between 0.15 and 0.35 then the model has moderate predictability. Finally, if the value obtained is above 0.35, then the model has high predictability. The calculation of the Q2 value obtained a result of 0.9958, so the model has great predictability.

3. Goodness of Fit Index (GoF)
   GoF value in SEM with PLS is calculated manually (Tenenhaus & Esposito, 2005) with the following formula
   $GoF = \sqrt{x}$
   GoF= 0.838

The GoF value of 0.1 is of small value, 0.25 is of medium value and 0.38 is of great value (Tenenhaus & Esposito, 2005). The results of this study show that the calculation of the GoF value is 0.83. So it was concluded that the research model can capture the real phenomenon of the influence of knowledge management processes and knowledge management infrastructure on the competitive advantage of MSEs through entrepreneurial orientation. Thus, the inner model test proves that all criteria of the research results meet the relevant criteria.

Hypothesis Testing

Structural models in SEM-PLS are carried out by a bootstrapping process that produces t-statistical values. According to Asparouhov & Muthén (2009) if the t-statistic value is greater than the t-table value with a 95% confidence level (> 1.96), the effect is significant. The loading factor value from the original sample (O) output is used to determine the degree of interdependence between variables. The following presented in figure 2 which shows the Test results of the research hypothesis model.

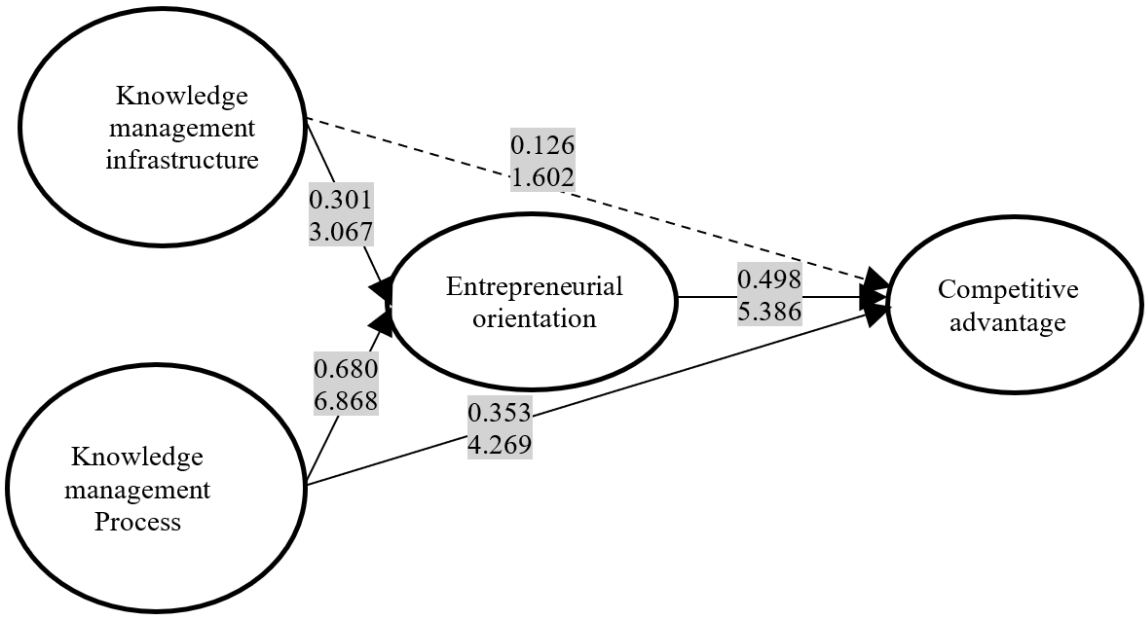

Figure 2.
Test Results Of The Research Model.
(Source: Research data, 2021)

Figure 2 presents the influence between research variables with 4 proven significant hypotheses at a confidence level of 95%, namely knowledge management infrastructure has a significant effect on the orientation of entrepreneurship; knowledge management process has a significant impact on the orientation of entrepreneurship; knowledge management process has a significant effect on competitive excellence and entrepreneurial orientation has a significant effect on competitive excellence.

While 1 hypothesis is insignificant, namely knowledge management infrastructure has no significant effect on competitive excellence. The following presented in table 6 is hypothetical test results:

Table 5.
Hypothetical Test Results

	Loading factor	T Statistik	Conclusion
Knowledge management infrastructure -> entrepreneurial orientation	0.301	3.067	Accepted
Knowledge management infrastructure - > competitive advantage	0.126	1.602	Rejected
Knowledge management process - > competitive advantage	0.353	4.269	Accepted
Entrepreneurial orientation -> competitive advantage	0.498	5.386	Accepted
Knowledge management process -> entrepreneurial orientation	0.680	6.868	Accepted

Discussion

This study seeks to analyze the infrastructure of knowledge management and knowledge management process on competitive excellence through entrepreneurial orientation in MSEs in small and medium-sized industry centers in Jakarta, Indonesia. The test results on the research model, it is proven knowledge management infrastructure has a significant effect on the orientation of entrepreneurship; knowledge management process has a significant impact on the orientation of entrepreneurship; knowledge management process has a significant effect on competitive excellence and entrepreneurial orientation has a significant effect on competitive excellence. Meanwhile, knowledge management infrastructure has no significant effect on competitive excellence. That is, competitive action mediates the influence between knowledge management infrastructure and knowledge management process on the sustainability of the competitive advantage of MSEs during the Covid-19 pandemic. Based on these results, here are some things that can be summarized:

First, the calculation of statistics over the entire research construct found a high value, no weak value construct (<0.5) in compiling research variables.

This reality confirms that if there is high pressure on MSEs, it will cause action and reaction among companies in the industry. At the same time, this fact confirms that SMEs are responsive entrepreneurial companies addressing rapid environmental changes (Dethine et al., 2020; Hu et al., 2009; Lumpkin & Dess, 1996). High-value constructs show a serious response to the pressures during the Covid-19 pandemic. Although the general condition of SMEs has decreased in terms of turnover, there is a blessing behind the covid-19 pandemic in the form of improved learning. Wong & Aspinwall (2005) stated that the potential benefits of knowledge management capabilities that are very important for SMEs include competency improvement, efficiency, innovation, and learning. The knowledge-based resource management company is the basis for the creation of competitive advantage. It relates to the company's main role in the era of the knowledge economy, namely to create, store, and apply knowledge in the framework of long-term survival (Chawinga & Chipeta, 2017; Grant, 1996; Jardon, 2015; Novak, 2017; Valkokari & Helander, 2007). Knowledge becomes a strategic resource to build capabilities so that organizations can perform entrepreneurial actions to achieve competitive advantage (Teece, 2012). Besides, SMEs that manage knowledge as organizational capabilities tend to be more

proactive and able to adapt to environmental changes and competition (Nguyen, 2010). Consequently, strategic knowledge management will be the capability for small business organizations to exist long-term (James, 2004).

Second, table 1 data illustrate that in terms of gender, SME owners/managers in industrial sentra are relatively balanced between men (57.73%) and women (42.27). This reality refutes previous studies in the field of management and social psychology literature which suggest that men and women feel the risk differently; male executives are more proactive, more interested in risk, and implement strategic business activities that are relatively more aggressive in competing (Li, 2017; Yang &Wang, 2014).

The small and medium industry world has perfect competitive characters. This can be seen from the number of companies recorded which reaches 7.221 SMEs in the small and medium-sized industry. The condition of competition becomes more drastic during the pandemic. As it turns out, from a gender perspective the competitive advantage of SMEs is generated by male and female actors if the competitive advantage leverages knowledge management capabilities and entrepreneurial orientation. That is, there is no different risk between men and women in building the competitive advantage of SMEs. Meanwhile, in terms of age, the majority of SMEs involved in the study were 11-15 years old (37.11%), the next 5-10 years old (27.84%) while the age of > 15 years (21.65%) and the least <5 years old (13.40%). This reality shows that the age of 11-25 years is the ideal age for SMEs to utilize knowledge management capabilities and entrepreneurial orientation to build a competitive advantage. In line with the results of the previous research which stated that the age of > 7 years is the mature age of a company (Ayyagari et al., 2011; Fort et al., 2012; Permana et al., 2020). Digital media is the most widely used learning media by the majority of SMEs (89%).

This confirms that the arrival of pandemics increases digital utilization so massively (Livari, Sharma, & Ventä-Olkkonen, 2020); therefore, it is recommended that business sectors carry out digital transformation at high speed (Soto-Acosta, 2020), including the SME sector which includes, furniture, fashion, printing, tofu and tempeh, handicrafts, apparel, salted fish, and other products involved in this research.

Third, the results show that the only hypothesis that is not proven is the influence between knowledge management infrastructure and competitive advantage. These results are different from those of Chuang's (2004) research and support Nguyen's research (2010) which stated that knowledge management infrastructure is not directly related to competitive advantage. These results are also in line with the results of other studies that state that knowledge management infrastructure is an entrepreneurial resource that allows companies to have the will to innovate, to be proactive, and to take risks (e.g., Açıkdilli & Ayhan, 2013; HU et al., 2009).

Knowledge Management Infrastructure is a supporting tool to achieve the effectiveness of knowledge management serves as the memory of organizational knowledge. Grant (1996) explains that organizational infrastructure elements can enable companies to effectively manage their knowledge through coordinating individual activities and integrating individual knowledge so that it can be converted into organizational knowledge. Experts in the field of knowledge management generally view that the availability of adequate knowledge management infrastructure allows organizations to acquire better Knowledge (e.g., Gold et al., 2001; Kogut & Zander, 1996; Merali, 2010; Mithas et al., 2011; Novak, 2017). The existence of a good Knowledge Management Infrastructure not only can stimulate the creation of knowledge but also can facilitate the process of sharing knowledge and experience (Novak, 2017; Singh, Chan, & McKeen, 2006).

Conclusion

This research develops a theoretical framework that can guide the competitive advantages of MSEs based on knowledge management capabilities during the covid-19 pandemic. The results showed that entrepreneurial orientation plays a strategic role in converting knowledge management infrastructure and knowledge management process into competitive excellence of MSEs in the MSE industry sentra in Jakarta. Thus, this research supports the idea that knowledge management capabilities are relevant intangible resources to build competitive advantages in MSEs in the future. The results of this study can be used as a reference for academics, practitioners, and related regulators to pay more attention to knowledge management capabilities. This research also recommends that future studies need to make adjustments to technological indicators, such as involving digital capabilities (Dethine et al., 2020; Khin & Ho, 2019; Permana et al., 2019; Sambamurthy et al., 2003).

References

Açıkdilli, G., & Ayhan, D. Y. (2013). Dynamic capabilities and entrepreneurial orientation in the new product development. *International Journal of Business and Social Science,* 4(11), 144–150.

Agostini, L., Filippini, R., & Nosella, A. (2016). Protecting intellectual property to enhance firm performance: Does it work for SMEs. *Knowledge Management Research and Practice,* 14(1), 96–105. doi: 10.1057/kmrp.2014.20

Agranoff, R. (2003). *Leveraging networks: A guide for public managers working across organizations*. Collaboration: Using Networks and Partnerships.

Ahuja, G., & Lampert, C. M. (2001). Entrepreneurship in the large corporation: A longitudinal study of how established firms create breakthrough inventions. *Strategic Management Journal,* 22(6–7), 521–543. doi: 10.1002/smj.176

Asparouhov, T., & Muthén, B. (2009). Exploratory structural equation modeling. Structural Equation Modeling. doi: 10.1080/10705510903008204.

Ayyagari, M., Demirguc-Kunt, A., & Maksimovic, V. (2011). *Small vs. Young Firms Across the World: Contribution to Employment, Job Creation, and Growth. Washington: The World Bank*. Retrieved October 9, 2013, from Http://Ssrn.Com/Abstract=1807732.

Bagnoli, C., & Vedovato, M. (2014). The impact of knowledge management and strategy configuration coherence on SME performance. *Journal of Management and Governance,* 18(2), 615–647. doi: 10.1007/s10997-012-9211-z

Baker, W. E., & Sinkula, J. M. (2009). The complementary effects of market orientation and entrepreneurial orientation on profitability in small businesses. *Journal of Small Business Management,* 47(4), 443–464. doi: 10.1111/j.1540-627X.2009.00278.x

Beaver, G., & Jennings, P. (2005). Competitive advantage and entrepreneurial power: The dark side of entrepreneurship. *Journal of Small Business and Enterprise Development*. doi: 10.1108/14626000510579617.

Chang, Y.-Y., Chao, W.-C., Chang, C.-Y., & Chi, H.-R. (2018). Transformational leadership influence on unit performance: Cross-level moderated mediation evidence. *Leadership & Organization Development Journal,* 39(4), 554–571. doi: 10.1108/LODJ-08-2017-0224

Chawinga, W. D., & Chipeta, G. T. (2017). A synergy of knowledge management and competitive intelligence. *Business Information Review,* 34(1), 25–36. doi: 10.1177/0266382116689171

Chen, C. J., & Huang, J. W. (2009). Strategic human resource practices and innovation performance - The mediating role of knowledge management capacity. *Journal of Business Research*. doi: 10.1016/j.jbusres.2007.11.016

Cheung, G. W., & Rensvold, R. B. (2002). Evaluating goodness-of-fit indexes for testing measurement invariance. *Structural Equation Modeling*. doi: 10.1207/S15328007SEM0902_5

Chin, W. W. (1998). T*he partial least squares approach to structural equation modeling*. In Modern methods for business research. doi:10.1016/j.aap.2008.12.010

Chin, W. W., Mills, A. M., Steel, D. J., & Schwarz, A. (2016). Multi-group invariance testing: An illustrative comparison of PLS permutation and covariance-based SEM invariance analysis. *In Springer Proceedings in Mathematics and Statistics*. doi: 10.1007/978-3-319-40643-5_20

Chuang, S. H. (2004). A resource-based perspective on knowledge management capability and competitive advantage: An empirical investigation. *Expert Systems with Applications*. doi: 10.1016/j.eswa.2004.05.008

Crammond, R., Omeihe, K. O., Murray, A., & Ledger, K. (2018). Managing knowledge through social media: Modelling an entrepreneurial approach for Scottish SMEs and beyond. *Baltic Journal of Management*. doi: 10.1108/BJM-05-2017-0133.

Dethine, B., Enjolras, M., & Monticolo, D. (2020). Digitalization and SMEs' export management: Impacts on resources and capabilities. *Technology Innovation Management Review*. doi: 10.22215/TIMREVIEW/1344

Diugwu, I. (2011). *Knowledge Acquisition and Sharing: A Sustainable Source of Competitive Advantage in Supply Chains*. Proceedings of the International Conference on Intellectual Capital, Knowledge Management & Organizational Learning, (1970), 157–163. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=bth&AN=69713394&lang=pt-br&site=ehost-live

Escandón-Barbosa, D., Hernandez-Espallardo, M., & Rodriguez, A. (2016). International Market Orientation and International Outcomes. *Global Economy Journal,* 16(4), 669–696. doi: 10.1515/gej-2015-0037

Ferreira, J. J., & Azevedo, S. G. (2007). *Entrepreneurial orientation as a main resource and capability on small firm's growth*. Munich Personal RePEc Archieve.

Fitriasari, F. (2020). How do Small and Medium Enterprise (SME) survive the COVID-19 outbreak? *Jurnal Inovasi Ekonomi*. doi: 10.22219/jiko.v5i3.11838

Fort, T., Haltiwanger, J., Jarmin, R., & Miranda, J. (2012). *How Firms Respond to Business Cycles: The Role of the Firm Age and Firm Size*. In 13th Jacques Polak Annual Research Conference (pp. 1–65). Washingtong, United States.

Ghozali, I. (2014). *SEM Metode Alternatif dengan menggunakan Partial Least Squares (PLS)*. Semarang: Badan Penerbit Universitas Diponegoro.

Gold, A. H., Malhotra, A., & Segars, A. H. (2001). Knowledge management: An organizational capabilities perspective. *Journal of Management Information Systems,* 18(1), 185–214.

Grant, R. (1996). Toward a knoweldge-based theory of the firm. *Strategic Management Journal,* 17(S2), 109–122. doi: 10.1002/smj.4250171110

Grimm, C. M., Lee, H., & Smith, K. G. (2006). Strategy as action: Competitive dynamics and competitive advantage. *Management,* 79–118.

Grimm Curtis M. , Hun Lee, K. G. S. (2006). *Strategy as Action: Competitive Dynamics and Competitive Advantage*. Oxford University Press, Inc.

Grimm, S. R. (2006). Is understanding a species of knowledge? *British Journal for the Philosophy of Science*. doi: 10.1093/bjps/axl015

Hair, Money, Samouel, & Page. (2006). Research Methods for Business. *Education and Training*. doi: 10.1108/et.2007.49.4.336.2

Hoskisson, R. E., Hitt, M. A., Wan, W. P., & Yiu, D. (1999). Theory and research in strategic management: Swings of a pendulum. *Journal of Management,* 25(3), 417–456. doi: 10.1177/014920639902500307

HU, W., ZHANG, Y., & Niu, F. (2009). *The Relationship among Entrepreneurial Orientation, Dynamic Capabilities and Firm Growth of New Ventures in China* [J]. China Soft Science, 4, 107–118.

Hussain, J., Ismail, K., & Akhtar, C. S. (2015). Linking entrepreneurial orientation with organizational performance of small and medium sized enterprises: A conceptual approach. *Asian Social Science,* 11(7), 1–10. doi: 10.5539/ass.v11n7p1

Ibrahim, N. M. N., & Mahmood, R. (2016). Mediating role of competitive advantage on the relationship between entrepreneurial orientation and the performance of small and medium enterprises. *International Business Management. Retrieved from file:///C:/Users/Erwin/AppData/Local/Mendeley Ltd./Mendeley Desktop/Downloaded/Ibrahim, Mahmood - 2016 - Mediating role of competitive advantage on the relationship between entrepreneurial orientation and the perfor.pdf*

Iivari, N., Sharma, S., & Ventä-Olkkonen, L. (2020). Digital transformation of everyday life – How COVID-19 pandemic transformed the basic education of the young generation and why information management research should care? *International Journal of Information Management*. doi: 10.1016/j.ijinfomgt.2020.102183

Ireland, R. D., Hitt, M. A., & Sirmon, D. G. (2003). A Model of Strategic Entrepreneurship: The Construct and its Dimensions R. *Journal of Management,* 29(6), 963–989. doi: 10.1016/S0149-2063

Jardon, C. M. (2015). The use of intellectual capital to obtain competitive advantages in regional small and medium enterprises. *Knowledge Management Research and Practice,* 13(4), 486–496. doi: 10.1057/kmrp.2014.4

Joshi, A., Kale, S., Chandel, S., & Pal, D. (2015). Likert Scale: Explored and Explained. *British Journal of Applied Science & Technology*. doi: 10.9734/bjast/2015/14975

Karia, N. (2018). Knowledge resources, technology resources and competitive advantage of logistics service providers. *Knowledge Management Research and Practice.* doi: 10.1080/14778238.2018.1496570

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.* doi: 10.1108/IJIS-08-2018-0083

Kim, K. (2011). Likert Scale. *Korean Journal of Family Medicine*. doi: 10.4082/kjfm.2011.32.1.1

Kogut, B., & Zander, U. (1996). What Firms Do? Coordination, Identity, and Learning. *Organization Science*. doi: 10.1287/orsc.7.5.502

Kuratko, D. F. (2010). Corporate Entrepreneurship: An Introduction and Research Review. In Handbook of Entrepreneurship Research (pp. 129–163). doi: 10.1007/978-1-4419-1191-9_6

Lee, C., Lee, K., & Pennings, J. M. (2001). Internal capabilities, external networks, and performance: A study on technology-based ventures. *Strategic Management Journal,* 22(6–7), 615–640. doi: 10.1002/smj.181

Lee, V. H., Foo, A. T. L., Leong, L. Y., & Ooi, K. B. (2016). Can competitive advantage be achieved through knowledge management? A case study on SMEs. *Expert Systems with Applications,* 65, 136–151. doi: 10.1016/j.eswa.2016.08.042

Li, P.-Y. (2017). The impact of the top management teams' knowledge and experience on strategic decisions and performance. *Journal of Management & Organization,* 23(04), 504–523. doi: 10.1017/jmo.2016.24

Li, Q., & Zhang, Z. (2010). A theoretical and empirical research on the mediating effect of internal entrepreneurial environment. *Journal of Chinese Entrepreneurship,* 2(1), 5–18. doi: 10.1108/17561391011018998

Li, Y. H., Huang, J. W., & Tsai, M. T. (2009). Entrepreneurial orientation and firm performance: The role of knowledge creation process. *Industrial Marketing Management.* doi: 10.1016/j.indmarman.2008.02.004

Liu, H., Hou, J., Yang, P., & Ding, X. (2011). Entrepreneurial orientation, organizational capability, and competitive advantage in emerging economies: Evidence from China. *African Journal of Business Management,* 5(10), 3891–3901.

López-Santos, Y., Sánchez-Partida, D., & Cano-Olivos, P. (2020). Strategic model to assess the sustainability and competitiveness of focal agri-food smes and their supply chains: A vision beyond COVID 19. *Advances in Science, Technology and Engineering Systems.* doi: 10.25046/aj0505147

Lumpkin, G. T., & Dess, G. G. (1996). Clarifying the entrepreneurial orientation construct and linking it to performance. *Academy of Management Review,* 21(1), 135–172. doi: 10.5465/AMR.1996.9602161568

Lumpkin, G. T., & Dess, G. G. (2001). Linking two dimensions of entrepreneurial orientation to firm performance: The moderating role of environment and industry life cycle. *Journal of Business Venturing,* 16(5), 429–451. doi: 10.1016/S0883-9026(00)00048-3

Margo Purnomo, Suharyono, I. S. & H. N. U. D. (2011). Strategic Entrepreneurship with Knowledge Management Capability Base: Study on Small Business of Garment Retail in Bandung Traditional Market West Java Province, Indonesia. International Journal of Management and Administrative Sciences (IJMAS).

Merali, Y. (2010). Building and Developing Capabilities: A Cognitive Congruence Framework. In Knowledge Management and Organizational Competence. https://doi.org/10.1093/acprof:oso/9780199259281.003.0002

Mithas, S., Ramasubbu, N., & Sambamurthy, V. (2011). How Information Management Capability Influences Firm Performance. MIS Quarterly, 35(1), 137-A15. https://doi.org/10.2307/23043496

Muditomo, A., & Wahyudi, I. (2021). CONCEPTUAL MODEL FOR SME DIGITAL TRANSFORMATION DURING THE COVID-19 PANDEMIC TIME IN INDONESIA: R-DIGITAL TRANSFORMATION MODEL. BASKARA : Journal of Business and Entrepreneurship. https://doi.org/10.24853/baskara.3.1.13-24

Nainggolan, E. U. (2020). UMKM Bangkit, Ekonomi Indonesia Terungkit. Retrieved from https://www.djkn.kemenkeu.go.id/artikel/baca/13317/UMKM-Bangkit-Ekonomi-Indonesia-Terungkit.html

Newbert, S. L. (2008). Value, rareness, competitive advantage, and performance: A conceptual-level empirical investigation of the resource-based view of the firm. Str, 29(7), 745–768. https://doi.org/10.1002/smj.686

Nguyen, T. N. Q. (2010). Knowledge management capability and competitive advantage: an empirical study of Vietnamese enterprises.

Novak, A. (2017). Knowledge Management and Organizational Performance – Literature Review. Management, Knowledge and Learning International Conference 2017.

O'Donnell, A., Gilmore, A., Carson, D., Cummins, D., O'Donnell, A., Gilmore, A., … Cummins, D. (2002). Competitive advantage in small to medium-sized enterprises. *Journal of Strategic Marketing,* 10(3), 205–223. doi: 10.1080/09652540210151388

Ong, J. W., Ismail, H. Bin, & Goh, G. G. G. (2010). The Competitive Advantage of Small and Medium Enterprises (SMEs): The Role of Entrepreneurship and Luck. *Journal of Small Business and Entrepreneurship*. doi: 10.1080/08276331.2010.10593491

Panuwatwanich, K., & Nguyen, T. T. (2017). Influence of Total Quality Management on Performance of Vietnamese Construction Firms. *In Procedia Engineering*. doi: /10.1016/j.proeng.2017.03.151

Pérez-Luño, A., Saparito, P., & Gopalakrishnan, S. (2016). Small and Medium-Sized Enterprise's Entrepreneurial versus Market Orientation and the Creation of Tacit Knowledge. *Journal of Small Business Management,* 54(1), 262–278. doi: 10.1111/jsbm.12144

Permana, E., Bambang Purwoko, Sri Widyastuti, Widarto Rachbini, & Achsanul Qosasi. (2020). Analisis Terhadap Diversitas Top Manajeman Tim (TMT) Pada BUMN Holding Di Indonesia. *Jurnal Manajemen Dan Keuangan*. doi: 10.33059/jmk.v8i3.2091

Permana, E., Maulina, E., Purnomo, M., Qosasi, A., & Miftahuddin, A. (2019). *The Impact Of Information Technology Capability to A Company Agility*. doi:10.4108/eai.8-12-2018.2284040

Purnomo, M., Permana, E., Qosasi, A., Febrian, A. F., & Miftahuddin, A. (2019). Entrepreneurial Orientation in Micro and Small Enterprises of Traditional Food Centers in Bandung, West Java. *Binus Business Review*. doi: 10.21512/bbr.v10i3.5611

Qosasi, A., Maulina, E., Purnomo, M., Muftiadi, A., Permana, E., & Febrian, A. F. (2019a). The Impact of Information and Communication Technology Capability on the Competitive Advantage of Small Businesses. *International Journal of Technology,* 10(1), 167. doi: 10.14716/ijtech.v10i1.2332

Qosasi, A., Maulina, E., Purnomo, M., Muftiadi, A., Permana, E., & Febrian, F. (2019b). The impact of Information and Communication Technology capability on the competitive advantage of small businesses. *International Journal of Technology*. doi: 10.14716/ijtech.v10i1.2332

Ramona, T., & Alexandra, B. (2020). Knowledge retention within small and mediumsized enterprises. *Studies in Business and Economics*. doi: 10.2478/sbe-2019-0056

Rauch, A., Wiklund, J., Lumpkin, G. T., & Frese, M. (2009). Entrepreneurial orientation and business performance: An assessment of past research and suggestions for the future. Entrepreneurship *Theory and Practice,* 33(3), 761–787.

Ringle, C. M., & Wende, S. Will, A. (2005). SmartPLS 2.0.

Roaldsen, I. (2014). Dynamic capabilities as drivers of business model innovation - from the perspective of SMEs in mature industries. *International Journal of Entrepreneurship and Innovation Management,* 18(4), 349. doi: 10.1504/IJEIM.2014.064212

Rosli Mahmood, Mahmood, R., Aarakit, S. M., Alarape, A. A., Al-swidi, A. K., Al-Hosam, A., … Me, N. (2013). Entrepreneurial orientation and business performance of women-owned small and medium enterprises in Malaysia: Competitive advantage as a mediator. *International Journal of Business and Social Science*. doi: 10.1177/0266242612455034

Salimi, N., & Rezaei, J. (2018). Evaluating firms' R&D performance using best worst method. *Evaluation and Program Planning,* 66, 147–155. doi: 10.1016/j.evalprogplan.2017.10.002

Sambamurthy, Bharadwaj, & Grover. (2003). Shaping Agility through Digital Options: Reconceptualizing the Role of Information Technology in Contemporary Firms. *MIS Quarterly,* 27(2), 237. doi: 10.2307/30036530

Sarwono, Y. (2010). Pengertian Dasar Structural Equation Modeling (SEM). *Jurnal Ilmiah Manajemen Bisnis Ukrida.*

Sekaran, U., & Bougie, R. (2016). *Research Method for Business Textbook: A Skill Building Approach.* John Wiley & Sons Ltd.

Shirokova, G., Vega, G., & Sokolova, L. (2013). Performance of Russian SMEs: exploration, exploitation and strategic entrepreneurship. *Critical Perspectives on International Business,* 9(1/2), 173–203. doi: 10.1108/17422041311299941

Singh, S., Chan, Y. E., & McKeen, J. D. (2006). *Knowledge management capability and organizational performance: A theoretical foundation.* In OLKC 2006 Conference at the University of Warwick (pp. 1–54). Citeseer.

Sirivanh, T., Sukkabot, S., & Sateeraroj, M. (2014). The Effect of Entrepreneurial Orientation and Competitive Advantage on SMEs ' Growth: A Structural Equation Modeling Study. International *Journal of Business and Social Science,* 5(6), 189–195.

Sirmon, D. G., Hitt, M. A., Ireland, R. D., & Gilbert, B. A. (2011). Resource orchestration to create competitive advantage: Breadth, depth, and life cycle effects. *Journal of Management.* doi: 10.1177/0149206310385695

Soto-Acosta, P. (2020). COVID-19 Pandemic: Shifting Digital Transformation to a High-Speed Gear. *Information Systems Management.* doi: 10.1080/10580530.2020.1814461

Tajeddini, K., Elg, U., & Trueman, M. (2013). Efficiency and effectiveness of small retailers: The role of customer and entrepreneurial orientation. *Journal of Retailing and Consumer Services,* 20(5), 453–462. doi: 10.1016/j.jretconser.2013.05.004

Teece, D. J. (2012). Dynamic Capabilities: Routines versus Entrepreneurial Action. *Journal of Management Studies.* doi: 10.1111/j.1467-6486.2012.01080.x

Teece, D. J., Pisano, G., & Shuen, A. (2007). MANAGEMENT. *Strategic Management Journal,.*

Tenenhaus, M., & Esposito, V. (2005). PLS path modeling. Computational Statistics & Data Analysis, 48, 159–205. doi: 10.1016/j.csda.2004.03.005

Trimahanani, E. (2020). *Outlook UMKM 2021, Pandemi Covid-19 Dorong Percepatan UMKM Go Digital.* Retrieved from https://www.beritadaerah.co.id/2020/12/29/umkm-2021-tekanan-covid-19-dorong-percepatan-umkm-go-digital/

Valkokari, K., & Helander, N. (2007). Knowledge management in different types of strategic SME networks. *Management Research News,* 30(8), 597–608. doi: 10.1108/01409170710773724

Valmohammadi, C., & Ahmadi, M. (2015). The impact of knowledge management practices on organizational performance: A balanced scorecard approach. *Journal of Enterprise Information Management.* doi: 10.1108/JEIM-09-2013-0066

Wales, W. J., Parida, V., & Patel, P. C. (2013). Too much of a good thing? Absorptive capacity, firm performance, and the moderating role of entrepreneurial orientation. *Strategic Management Journal.* doi: 10.1002/smj.2026

Wang, H.-L. (2014). *Theories for competitive advantage. Being Practical with Theory:* A Window into Business Research, 33–43.

Weerawardena, J., & Mavondo, F. T. (2011). Capabilities, innovation and competitive advantage. *Industrial Marketing Management.* doi: 10.1016/j.indmarman.2011.10.012

Wiklund, J., & Shepherd, D. (2005). Entrepreneurial orientation and small business performance: a configurational approach. *Journal of Business Venturing,* 20(1), 71–91.

Williams, C., & Lee, S. H. (2009). Resource allocations, knowledge network characteristics and entrepreneurial orientation of multinational corporations. *Research Policy*. doi: 10.1016/j.respol.2009.05.007

Windarto. (2021). *Menghidupkan Lagi UMKM Sebagai "Engine" Pertumbuhan Ekonomi.* Retrieved from https://investor.id/business/menghidupkan-lagi-umkm-sebagai-engine-pertumbuhan-ekonomi

Wong, K. Y., & Aspinwall, E. (2005). An empirical study of the important factors for knowledge-management adoption in the SME sector. *Journal of Knowledge Management*. doi: 10.1108/13673270510602773

Yang, L., & Wang, D. (2014). The impacts of top management team characteristics on entrepreneurial strategic orientation: The moderating effects of industrial environment and corporate ownership. *Management Decision (*Vol. 52). doi: 10.1108/MD-03-2013-0140

Zaichkowsky, J. L., Parlee, M., & Hill, J. (2010). Managing industrial brand equity: Developing tangible benefits for intangible assets. *Industrial Marketing Management,* 39(5), 776–783. doi: 0.1016/j.indmarman.2010.02.017