Jurnal Manajemen Universitas Bung Hatta
Vol. 20, No. 01, January 2025
ISSN : 1907-6576 (print)
ISSN : 2615-5370 (online)

Digitalization and Competitive Advantage of SMEs: The Moderating Role of Entrepreneurial Competence

Endi Sarwoko[1]
[1]*Magister Manajemen, Universitas Ciputra Surabaya, Indonesia*

Abstract

The rapidly changing business environment encourages small and medium enterprises (SMEs) to adopt business digitalization. Research to explore factors influencing the competitive advantage of SMEs, specifically the role of digitalization, as well as examine the interaction of entrepreneurial competence on the influence of digitalization on the competitive advantage of SMEs. The research sample was owners/managers of 125 SMEs in the tourism sector in Malang City, East Java, which were taken using purposive sampling techniques. A questionnaire was used to collect data, then analyzed using PLS-SEM. The results of the study revealed that digitalization of SMEs provides benefits in the form of increasing the competitive advantage, another factor that contributes to competitive advantage is entrepreneurial competence. Other findings explain that entrepreneurial competence will strengthen the influence of SME digitalization on competitive advantage. This research has theoretical implications that competitive advantage will be achieved if SMEs have resource advantages, namely digitalization, as well as practical implications for the importance of adopting digitalization to increase the competitive advantage of SMEs.

Keywords: digitalization; entrepreneurial competence; competitive advantage

Received: October 25, 2024 *Revised: December 3rd, 2024* *Accepted: December, 20, 2024*
**Corresponding author: endi.sarwoko@ciputra.ac.id*

Introduction

Since 2020 the Indonesian government through the Ministry of Cooperatives and SMEs has been encouraging the digitalization of SMEs, by 2024 it is targeted to achieve the digitization of 30 million MSMEs (CNN, 2021), and based on the Asosiasi E-commerce Indonesia (idEA) by mid-2021 there will be 13.7 million micro small medium entreprises (MSMEs) or 21% entered the digital ecosystem (Hidranto, 2021). Initially, the push for digitalization was a strategy so that MSMEs could compete, but it is also important to encourage innovation for MSMEs in digitalizing their businesses.

The Ministry of Cooperatives and SMEs has acknowledged that efforts to digitize SMEs require collaboration with aggregators and incubators (CNN, 2021), and in 2021 the government has even launched a national digital literacy program. The government has a big role in building partnerships with aggregators as liaison and collecting parties as well as with incubators as parties involved in raising business pioneers in realizing the digitalization of SMEs. Digitalization readiness in SMEs is still a matter of debate. In addition, there are limited research results on SMEs' mechanisms and strategies to achieve business model scale through digitalization. In general, SMEs in running a business still face obstacles, such as lack of resources and technical skills (Isensee et al., 2020), or facing entrepreneurial competency problems.

Digitalization will be beneficial for SMEs that are oriented towards achieving growth in international markets (Westerlund, 2020), other studies reveal that digitalization in SMEs has an impact on achieving competitive advantage (LeÃ£o & da Silva, 2021; Y. Y. Lee & Falahat, 2019; Wahyuningtyas et al., 2021). Digital transformation will be a key driver towards innovation and business renewal, especially for

ISSN : 1907-6576 (print)
ISSN : 2615-5370 (online)

SMEs (Denicolai et al., 2021). Therefore to achieve digitalization it is necessary to develop a series of capabilities in terms of business process management as well as invest in information technology (Westerlund, 2020). However, SMEs generally have limited resources to experiment with their business models and limitations in implementing new strategies, especially digitalization. Although the role of digitalization is recognized to create competitive advantage, researchers often ignore the role of entrepreneurial competence, especially in the context of digitalization in SMEs. This study attempts to fill this gap by testing the moderating role of entrepreneurial competence on the influence of digitalization on competitive advantage.

Changes in the business environment, especially technological developments and social changes, require organizations to innovate in order to create business competitiveness (Denicolai et al., 2021; Falahat et al., 2020), on the other hand, on the other hand, SMEs have limited resources to experiment with their business models and limitations in implementing new strategies. SMEs owner/manager need to be prepared to adapt to these changes by increasing their competence (entrepreneurial competence).

The success of digitalization in SMEs is not only related to the use of technology but also requires alignment of internal capabilities (Isensee et al., 2020), including human resources (L. Li et al., 2018). In general, many researchers have investigated the importance of entrepreneurial competence on business performance, but few studied in the context of technology adoption (digitalization) to create competitive advantage. This study was conducted to answer the role of entrepreneurial competence of SME owners/managers, especially in adopting digital technology; therefore, the purpose of the study is to analyze the effect of digitalization on competitive advantage and the role of entrepreneurial competence to support SME digitalization.

Literature Review

Competitive Advantage

Competitive advantage is achieved through resource superiority, with resource superiority it will make it easier for organizations to select and implement different strategies from competitors so that all resources will become a competitive advantage (T. Lee & Chu, 2011). The key to the successful implementation of strategies to gain competitive advantage will be determined by the company's ability to optimize the superior resources it has (Hana, 2013; Kim & Hoskisson, 2015).

The Resource-Based View (RBV) approach explains that companies that have superior (technology and innovation, human resources, and organizational structure) resources will have a competitive advantage over competitors, superior in terms of capabilities, processes, attributes, and knowledge. Superior resources are resources that are rare and valuable, and difficult to imitate or replace (Barney, 1991a; Wang et al., 2011). Business success is obtaining a sustainable competitive advantage, where the company's performance is better than its competitors (Knudsen et al., 2021).

Resources are a vital component that will determine the success of an organization compared to others (Karia *et al*., 2012), because managing resources will create new opportunities (Alvarez & Barney, 2005). To develop competitiveness, SMEs must have different or unique resources (Mansion & Bausch, 2020). As stated by Barney (1991b) in the RBV concept, unique or different resources are needed to achieve sustainable competitive advantage. Chengwu (2020) proposes three dimensions for measuring competitive advantage, namely: efficiency, quality, and customer response. If these three criteria can be achieved by the company, then it can be stated that the company has a competitive advantage compared to competitors.

ISSN : 1907-6576 (print)
ISSN : 2615-5370 (online)

Digitalization and Digital Transformation

Digital refers to technical processes, namely the integration of digital technology into daily activities (Bican & Brem, 2020), while digitalization emphasizes digital technology as a socio-technological process that adopts technology into the context of individuals, organizations, and wider society (Legner et al., 2017). The term digital will describe the transformation of information due to advances in information technology, through changes from conventional (analog) information to digital format (Bican & Brem, 2020). Digitalization is inevitable due to advances in information and communication technology, causing fundamental changes in business models (Isensee et al., 2020), as well as building a broader digital technology infrastructure (Bican & Brem, 2020). There is a fundamental difference between the terms digital and digitalization, digital refers to the process of changing analog data into digital format, while digitalization is the broader process of applying digital technology including digital technology infrastructure, business models, and innovation in both institutional and organizational contexts.

Digital technology has changed how work is done, creating virtual work types that did not exist. Digitalization has transformed entrepreneurial opportunities and practices, offering internationalization opportunities for SMEs (Joensuu-Salo et al., 2018). The digitalization drives the company's internal processes to purchase equipment with digital capabilities (Gavrila & de Lucas Ancillo, 2021). Furthermore, the term digital transformation is also known, namely the use of various technologies implemented in human resource management, production, and even customer service, thus digital transformation is the application of technology throughout the management chain (Kilimis et al., 2019). Transformation refers to the state of using digital technology that enables new ways of doing business and leaves behind traditional ways (F. Li, 2020). Digital transformation is not only about utilizing technology but is broader than that, which includes handling managerial issues such as business efficiency, redesigning business processes, and human resources (L. Li et al., 2018).

The success of digitalization will be determined by strategic orientation factors and internal capabilities and environmental sustainability (Isensee et al., 2020). The use of digital technology, especially in the marketing sector, is largely determined by the structure of the SME itself (Ziolkowska, 2021), therefore, the success of digital transformation requires aligning and adapting activities according to each company's business model (Bican & Brem, 2020), demands strategies, desires, and awareness of market players and investments based on Information Technology (Okfalisa et al., 2021). Digitalization will provide the benefits of more personalization choices for customers, and efficient production processes, both for products and services (Arnold et al., 2016), so that it will create new business opportunities (Fitzgerald et al., 2014). Digitalization is also related to sustainability and both will be needed when companies internationalize themselves (Denicolai et al., 2021).

Researchers have revealed the role of digitalization innovation in SMEs on competitive advantage, Wahyuningtyas et al. (2021) stated that digital innovation influences competitiveness both nationally and internationally. Different findings from Y. Y. Lee and Falahat (2019) reveal that stated that digitalization has an impact on achieving product excellence and service excellence as a competitive advantage. Digital transformation impact on finansial financial performance (Mangifera et al., 2022), sustainability (Desiyanti et al., 2023), company competitiveness, especially on innovation, efficiency, cost reduction, and impacts on the value chain (LeÃ£o & da Silva, 2021).

H1. Digitalization has a positive effect on competitive advantage

Entrepreneurial Competence

Competency is a term used in strategic management literature (Tehseen et al., 2019). Entrepreneurial competence is recognized as an underlying characteristic of entrepreneurs Entrepreneurial competence is recognized as an underlying characteristic of entrepreneurs (Osman & Rahim, 2014), and is a vital resource for organizations. With the combination of certain competencies, entrepreneurs can take advantage of opportunities from their external environment and then exploit these opportunities for the success of their business (Sajilan & Tehseen, 2015). Entrepreneurial competency refers to a set of characteristics of knowledge, motivation, self-concept, personality, skills, attitudes, behavior, expertise, and a mindset that emerge from the initiation of a job (Ataei et al., 2020).

Entrepreneurial competence is critical for the success of SMEs in a competitive business environment (Sajilan & Tehseen, 2015). Research has revealed that the entrepreneurial competence of founders is related to their innovation, and leads to the competitiveness of SMEs (Letonja et al., 2016). SME owners/managers need to have entrepreneurial competence to increase company innovation (Mangifera et al., 2022; Ng & Kee, 2018), especially if it is strengthened by competence in building networking (Tehseen et al., 2019). Company competencies consisting of strategic, communicative, psychological, and opportunistic competencies are important factors that encourage entrepreneurship (Ataei et al., 2020). Business internationalization will increase complexity and demand entrepreneurial competence (Hervé et al., 2020).

H2. Entrepreneurial competence positively influences competitive advantage

Many business owners want their companies to work faster and more flexibly as a result of digitalization. However, most do not yet understand working with data, organizing digitalization, or achieving better cooperation between various functions (Björkdahl, 2020), as a result of which optimal benefits from digitalization will not be achieved. Therefore digitalization is not only a matter of adopting digital technology but demands competencies from business leaders including digital competencies and decision-making competencies (Erro-Garcés & Hernández Palaceto, 2021). Digital literacy must become one of the main competencies of entrepreneurship (Dudin et al., 2021). Digitalization will require digital skills and entrepreneurial skills, as well as the need to integrate new digital elements with entrepreneurial competencies (Zhao et al., 2021).

The resources and capabilities associated with digital technology are determining factors in the role a company takes (Iansiti & Levien, 2004; Jacobides et al., 2018). Digitalization will produce competitive advantages whose success is determined by the technology, resources and capabilities possessed (Knudsen et al., 2021).

H3. Entrepreneurial competence plays a role in strengthening the effect of digitalization on competitive advantage

Methods

Research was conducted on tourism supporting SMEs in Malang City, East Java. SMEs data was obtained from the Malang City government's Office of Cooperatives and UMKM. The sampling technique uses Purposive Sampling where criteria are determined for SMEs that have been established for 2 years or more and have utilized digital technology in running their business. Based on these criteria, 125 SMEs were obtained that met the requirements as samples.

Digitalization was measured with four items adapted from Shehadeh et al. (2023) includes the availability of information technology, use of technology, technology integration, and business process networking. Entrepreneurial competence was measured with six items adapted from Mitchelmore and Rowley (2010) Respondents were asked to answer related to niche market identification, product/service development, idea development, environmental scanning,

ISSN : 1907-6576 (print)
ISSN : 2615-5370 (online)

recognizing and exploiting opportunities, and formulating strategies. Competitive advantage was measured with 3 items adapted from Chengwu (2020), respondents were asked to answer about efficiency, quality excellence, and response.

Data was collected using an online questionnaire using email and communication via social media. The questionnaire was prepared using a 5-point Likert scale, ranging from strongly agree given a score of 5 to disagree given a score of 1. The data analysis technique uses a Structural Equation Model (SEM) utilizing Smart-PLS software. The research hypothesis was tested using an error level of 5% ($\alpha = 0.05$).

Results and Discussion

Measurement Model (Outer Model)

Evaluation of measurement models (outer model) is used to test the validity and reliability of indicators and constructs. The first measurement is testing the indicator reability, if the loading factor value is greater than 0.7 then the construct is declared to meet the reliability criteria (Hair et al., 2011). The results of the outer model evaluation in Table 1 show that each indicator has a loading factor value greater than 0.7. This shows that each construct has a satisfactory level of reliability. Table 1 explains that each construct has a Cronbach Alpha value greater than 0.7 (Hair et al., 2011), so it can be stated that each construct has satisfactory internal reliability.

Table 1. Outer Model Evaluation

Contruct and Indicator	Loading Factor	Cronbach's Alpha	AVE
Digitalization		0,838	0,672
Information Technology	0,805		
Utilization of technology	0,840		
Technology integration	0,827		
Business process networking	0,806		
Entrepreneurial competence		0,860	0,587
Identify niche markets	0,807		
Developing products/services according to niche market	0,742		
Idea development	0,723		
Environmental scan	0,721		
Recognize and exploit opportunities	0,805		
Formulate a strategy	0,793		
Competitive advantage		0,751	0,668
Efficiency	0,866		
Quality excellence	0,810		
Response speed	0,733		

Source: Output Smart-PLS, 2023

Convergent validity testing uses average variance extracted (AVE), while discriminant validity uses Fornell–Larcker. The AVE value for each construct is greater than 0.05 (Table 1), thus the convergent validity criteria are met (Hair et al., 2011). Table 2 show that each construct has discriminant validity, indicated by the AVE value (sign*) being greater than the correlation value between constructs.

ISSN : 1907-6576 (print)
ISSN : 2615-5370 (online)

Table 2. Discriminant Validity

	Digitalization	Entrepreneurial Competence	Competitive Advantage
Digitalization	0,820*		
Entrepreneurial Competence	0,673	0,817*	
Competitive advantage	0,713	0,794	0,766*

* AVE root value
Source: PLS-SEM output

Structural Model (Inner Model)

Structural model testing (Inner Model) is used to test research hypotheses (Table 3 and Figure 2), the test results explain that the three hypotheses tested are supported. The efect of SME digitalization on competitive advantage obtained P value <0.05, revealing that SME digitalization has a positive and significant effect on competitive advantage, so H1 is supported. Entrepreneurial competency has a positive and significant effect on competitive advantage, as shown by the P value <0.05, thus H2 is supported. The interaction between SME digitalization and entrepreneurial competence on competitive advantage obtained P value < 0.05, this reveals that entrepreneurial competence plays a role in strengthening the influence of SME digitalization on competitive advantage, thus H3 is supported.

Based on Figure 1, it can be explained that digitalization has a positive and significant effect on competitive advantage, as well as entrepreneurial competence has a positive and significant effect on competitive advantage. Furthermore,the interaction between digitalization and entrepreneurial competence or the moderation effect shows a positive coefficient value of 0.151, so it can be stated that entrepreneurial competence has a role in strengthening the influence of digitalization on competitive advantage.

Table 3. Hypothesis testing

Path	Original Sample (O)	P Value	Hypothesis
Digitalization → Competitive advantage	0,282	0,004	H1 supported
Entrepreneurial Competence → Competitive advantage	0,696	0,000	H2 supported
Digitalization * Entrepreneurial Competence → Competitive advantage	0,151	0,041	H3 supported

Source: PLS-SEM output

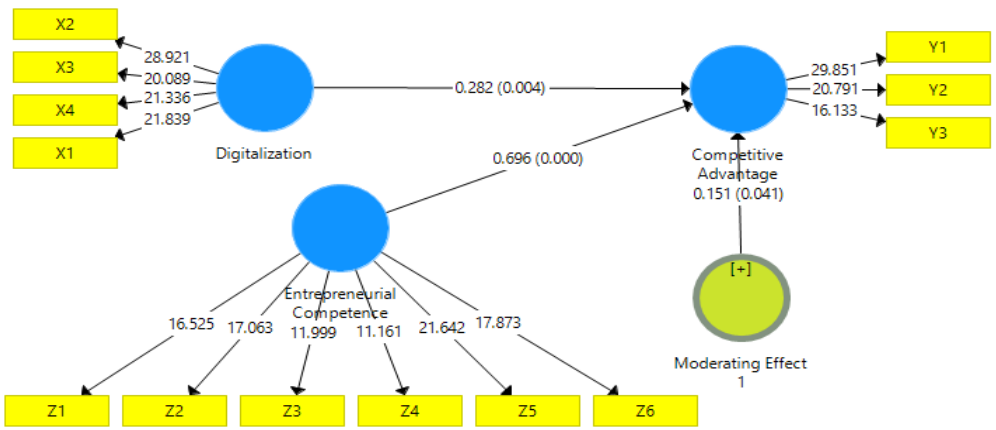

Figure 1. Structural Model

ISSN : 1907-6576 (print)
ISSN : 2615-5370 (online)

Model Fit Evaluation

The use of PLS-SEM requires that model fit be met to ensure that the model has a satisfactory level of prediction accuracy (Hair et al., 2011). Evaluation of the fit model used is the coefficient of determination (R^2) and *effect size* (f^2). The analysis results in Table 4 show an R square value of 0.693, thus the model tested has a moderate level of accuracy (Hair et al., 2011). Furthermore, the effect size value (f^2) for digitalization of SMEs on competitive advantage is 0.121, so the effect size is in the medium category (Cohen, 2013), the effect size value of entrepreneurial competence on competitive advantage is 0.745, so the effect size is in the high category (Cohen, 2013). The moderation effect has an effect size value of 0.121, so it can be stated that the size of the influence is in the medium category (Cohen, 2013).

Discussion

Effect of SMEs Digitalization on Competitive Advantage

The analysis results reveal the role of SME digitalization as a factor that contributes to increasing competitive advantage. Digitalization will encourage SME business processes by utilizing integrated information technology, both mobile platforms and social media, to interact with consumers and customers and develop networking. The effect of the use of information technology is to increase competitiveness or competitive advantage because SMEs can work more efficiently, and obtain information more quickly so that they can produce product/service quality that is superior to competitors, as well as speed of response to changes in consumer desires and expectations. As stated by Arnold et al. (2016) digitalization will provide the benefits of more personalized choices for customers, and efficient production processes, both for products and services. This finding also supports the opinion Y. Y. Lee and Falahat (2019); LeÃ£o and da Silva (2021) who state that the impact of digitalization will create competitiveness because it has product advantages and service advantages.

SME digitalization includes four aspects, namely the availability of information technology, the use of technology, technology integration, and business process networks (Shehadeh et al., 2023). Current technological developments provide great opportunities for SME digitalization, various e-commerce channels and social media can be utilized by SMEs, not only for marketing purposes, but also to expand their business process networks.

Effect of Entrepreneurial Competence on Competitive Advantage

The research results also reveal that competitive advantage can be achieved if SMEs have entrepreneurial competence. This is reasonable as stated by Sajilan and Tehseen (2015) that entrepreneurial competence is very important for SMEs because the business environment is competitive and changes rapidly. Entrepreneurial competence will lead to the competitiveness of SMEs (Letonja et al., 2016), because competence will increase company innovation (Ng & Kee, 2018), and its influence will even strengthen in building networking (Tehseen et al., 2019). Capabilities in developing ideas, scanning the environment, recognizing and utilizing opportunities are important aspects of entrepreneurial competence in order to increase the competitiveness of SMEs.

The Moderating Effect of Competitive Advantage

Other findings from this research reveal that entrepreneurial competence will strengthen the role of SME digitalization in competitive advantage. Awareness of the importance of digitalization to increase competitive advantage needs to be supported by the competence of

ISSN : 1907-6576 (print)
ISSN : 2615-5370 (online)

SMEs. In line with the opinion of Knudsen et al. (2021) that digitalization in the long term will produce competitive advantages, but its success is determined by the resources and capabilities it has.

The success of digital transformation requires alignment and adjustment of the company's business model (Bican & Brem, 2020), the strategy of demands, awareness of SME owners/managers, and IT-based investments (Okfalisa et al., 2021). Therefore, the capability to formulate strategies and detect changes in the business environment is needed as a reflection of entrepreneurial competence.

Conclusion

The research findings can increase understanding of the importance of digitalization of SMEs to increase their competitive advantage in a dynamic business environment. Competitive advantage is also determined by the competence of SMEs in running their business. An interesting finding from this research is that the role of SME digitalization in competitive advantage will be stronger if it is supported by entrepreneurial competence, in other words, the interaction between SME digitalization and entrepreneurial competence will create a greater competitive advantage.

The research provides implications for the resource-based view theory, where to achieve competitive advantage, SMEs must have superior resources. Digitalization is one of the technological resources that can be chosen because the business environment is changing rapidly so it requires more information and speed of processing data and information from the market. Regarding the role of entrepreneurial competence, strengthening the role of digitalization in competitive advantage is relevant to dynamic capability theory where SMEs must have dynamic capabilities, namely the ability to adopt digitalization. The research also has practical implications for the sustainability of SMEs regarding the importance of adopting digital technology to achieve competitive advantage, and for this reason, it is necessary to increase entrepreneurial competence. The contribution of research to improving the competitiveness of SMEs is the importance of adopting technological changes as one of its business strategies. The use of e-commerce and social media marketing is an alternative for SMEs for competitive strategies, expanding markets and networks so as to create sustainable competitive advantages. To support digital transformation, SMEs must improve their competence, especially in digital technology.

Research is limited to a research area of only one city, of course, a wider research area will provide more accurate results and greater generalizability. Apart from that, the measurement of competitive advantage in this research is only based on the perceptions of SME owners/managers regarding efficiency, quality excellence, and speed of response after digitalization.

References

Alvarez, S. A., & Barney, J. B. (2005). How do entrepreneurs organize firms under conditions of uncertainty? *Journal of Management, 31*(5), 776-793. doi:https://doi.org/10.1177/0149206305279486

Arnold, C., Kiel, D., & Voigt, K.-I. (2016). How the industrial internet of things changes business models in different manufacturing industries. *International Journal of Innovation Management, 20*(08), 1640015. doi:https://doi.org/10.1142/S1363919616400156

Ataei, P., Karimi, H., Ghadermarzi, H., & Norouzi, A. (2020). A conceptual model of entrepreneurial competencies and their impacts on rural youth's intention to launch SMEs. *Journal of Rural Studies, 75*, 185-195.

ISSN : 1907-6576 (print)
ISSN : 2615-5370 (online)

doi:https://doi.org/10.1016/j.jrurstud.2020.01.023

Barney, J. (1991a). Firm Resources and Sustained Competitive Advantage. *Journal of Management*, *17*(1), 99-120. doi:https://doi.org/10.1177/014920630527 9486

Barney, J. (1991b). Special theory forum the resource-based model of the firm: origins, implications, and prospects. *Journal of Management*, *17*(1), 97-98. doi:https://doi.org/10.5465/amr.2001.4011 938

Bican, P. M., & Brem, A. (2020). Digital business model, digital transformation, digital entrepreneurship: Is there a sustainable digital? *Sustainability*, *12*(13), 5239. doi:https://doi.org/10.3390/su12135239

Björkdahl, J. (2020). Strategies for digitalization in manufacturing firms. *California Management Review*, *62*(4), 17-36. doi:https://doi.org/10.1177/000812562092 0349

Chengwu, S. U. N. (2020). The research and evaluation of customer relationship management and social responsibility on competitive advantage. *Revista de Cercetare ÅŸi IntervenÅ£ie SocialÄƒ*(69), 131-142. doi:https://doi.org/10.33788/rcis.69.8

CNN. (2021). Kemenkop UKM Sebut Digitalisasi UMKM Butuh Agregator dan Inkubator. Retrieved from https://www.cnnindonesia.com/ekonomi/20211029140612-97-714077/kemenkop-ukm-sebut-digitalisasi-umkm-butuh-agregator-dan-inkubator

Denicolai, S., Zucchella, A., & Magnani, G. (2021). Internationalization, digitalization, and sustainability: Are SMEs ready? A survey on synergies and substituting effects among growth paths. *Technological Forecasting and Social Change*, *166*, 120650. doi:https://doi.org/10.1016/j.techfore.2021.120650

Desiyanti, R., Husin, N. A., Elvira, R., Sefnedi, S., Putri, T. D., & Chrismondari, C. (2023). The Influence of Financial Literacy, Financial Management, and Financial Technology on Business Performance And Sustainability of Micro, Small, and Medium Enterprises In Sumatera, Indonesia. *Jurnal Manajemen Universitas Bung Hatta*, *18*(2), 231-244. doi:https://doi.org/10.37301/jmubh.v18i2.23238

Dudin, M. N., Shakhov, O. F., Ivashchenko, N. P., & Shakhova, M. S. (2021). Development of entrepreneurial competencies in the economy (evidence from digital entrepreneurship). *Revista Inclusiones*, 54-69.

Erro-Garcés, A., & Hernández Palaceto, C. (2021). Competencies in Digitalization: An Experiment in an International Course. *Education Research International*, *2021*. doi:https://doi.org/10.1155/2021/1873278

Falahat, M., Ramayah, T., Soto-Acosta, P., & Lee, Y.-Y. (2020). SMEs internationalization: The role of product innovation, market intelligence, pricing and marketing communication capabilities as drivers of SMEsâ€™ international performance. *Technological Forecasting and Social Change*, *152*, 119908. doi:https://doi.org/10.1016/j.techfore.2020.119908

Fitzgerald, M., Kruschwitz, N., Bonnet, D., & Welch, M. (2014). Embracing digital technology: A new strategic imperative. *MIT Sloan Management Review*, *55*(2), 1.

Gavrila, S. G., & de Lucas Ancillo, A. (2021). Spanish SMEs digitalization enablers: E-Receipt applications to the offline retail market. *Technological Forecasting and Social Change*, *162*, 120381. doi:https://doi.org/10.1016/j.techfore.2020.120381

Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of marketing theory and practice*, *19*(2), 139-152. doi:https://doi.org/10.2753/MTP1069-6679190202

ISSN : 1907-6576 (print)
ISSN : 2615-5370 (online)

Hana, U. (2013). Competitive advantage achievement through innovation and knowledge. *Journal of Competitiveness*, *5*(1), 82-96. doi:https://doi.org/10.7441/joc.2013.01.06

Hervé, A., Schmitt, C., & Baldegger, R. (2020). Internationalization and Digitalization: Applying digital technologies to the internationalization process of small and medium-sized enterprises. *Technology Innovation Management Review*, *10*(7). doi:https://doi.org/10.22215/timreview/1373

Hidranto, F. (2021). Mengoptimalkan Digitalisasi UMKM. Retrieved from https://indonesia.go.id/kategori/editorial/2890/mengoptimalkan-digitalisasi-umkm

Iansiti, M., & Levien, R. (2004). Strategy as ecology. *Harvard business review*, *82*(3), 68-78.

Isensee, C., Teuteberg, F., Griese, K.-M., & Topi, C. (2020). The relationship between organizational culture, sustainability, and digitalization in SMEs: A systematic review. *Journal of Cleaner Production*, *275*, 122944. doi:https://doi.org/10.1016/j.jclepro.2020.122944

Jacobides, M. G., Cennamo, C., & Gawer, A. (2018). Towards a theory of ecosystems. *Strategic Management Journal*, *39*(8), 2255-2276. doi:https://doi.org/10.1002/smj.2904

Joensuu-Salo, S., Sorama, K., Viljamaa, A., & VaramÃ¤ki, E. (2018). Firm performance among internationalized SMEs: The interplay of market orientation, marketing capability and digitalization. *Administrative sciences*, *8*(3), 31. doi:https://doi.org/10.3390/admsci8030031

Kilimis, P., Zou, W., Lehmann, M., & Berger, U. (2019). A survey on digitalization for SMEs in Brandenburg, Germany. *IFAC-PapersOnLine*, *52*(13), 2140-2145.

Kim, H., & Hoskisson, R. E. (2015). A Resource Environment View of Competitive Advantage. In *Emerging Economies and Multinational Enterprises* (pp. 95-140). England: Emerald Group Publishing Limited.

Knudsen, E. S. h., Lien, L. B., Timmermans, B., Belik, I., & Pandey, S. (2021). Stability in turbulent times? The effect of digitalization on the sustainability of competitive advantage. *Journal of Business Research*, *128*, 360-369. doi:https://doi.org/10.1016/j.jbusres.2021.02.008

LeÃ£o, P., & da Silva, M. M. (2021). Impacts of digital transformation on firms' competitive advantages: A systematic literature review. *Strategic Change*, *30*(5), 421-441. doi:https://doi.org/10.1002/jsc.2459

Lee, T., & Chu, W. (2011). Entrepreneurial orientation and competitive advantage: The mediation of resource value and rareness. *African Journal of Business Management*, *5*(33), 12797. doi: https://doi.org/10.5897/AJBM11.1179

Lee, Y. Y., & Falahat, M. (2019). The Impact of Digitalization and Resources on Gaining Competitive Advantage in International Markets: The Mediating Role of Marketing, Innovation and Learning Capabilities. *Technology Innovation Management Review*, *9*(11), 26-38.

Legner, C., Eymann, T., Hess, T., Matt, C., BÃ¶hmann, T., Drews, P., . . . Ahlemann, F. (2017). Digitalization: opportunity and challenge for the business and information systems engineering community. *Business & information systems engineering*, *59*(4), 301-308. doi:https://doi.org/10.1007/s12599-017-0484-2

Letonja, M., Jeraj, M., & MariÄ• , M. (2016). An empirical study of the relationship between entrepreneurial competences and innovativeness of successors in family SMEs. *Organizacija*, *49*(4), 225-239. doi:https://doi.org/10.1515/orga-2016-0020

Li, F. (2020). The digital transformation of business models in the creative industries:

ISSN : 1907-6576 (print)
ISSN : 2615-5370 (online)

A holistic framework and emerging trends. *Technovation, 92*, 102012. doi:https://doi.org/10.1016/j.technovation.2017.12.004

Li, L., Su, F., Zhang, W., & Mao, J. Y. (2018). Digital transformation by SME entrepreneurs: A capability perspective. *Information Systems Journal, 28*(6), 1129-1157. doi:https://doi.org/10.1111/isj.12153

Mangifera, L., Wajdi, F., Amalia, F., & Uswatun Khasah, A. (2022). The Role of Digital Innovation in SMEs: A Financial Performance Perspective. *Jurnal Manajemen Universitas Bung Hatta, 17*(2), 157-170. doi:https://doi.org/10.37301/jmubh.v17i2.20184

Mansion, S. E., & Bausch, A. (2020). Intangible assets and SMEs export behavior: a meta-analytical perspective. *Small Business Economics, 55*, 727-760. doi:https://doi.org/10.1007/s11187-019-00182-5

Mitchelmore, S., & Rowley, J. (2010). Entrepreneurial competencies: a literature review and development agenda. *International Journal of Entrepreneurial Behavior & Research, 16*(2), 92-111. doi:https://doi.org/10.1108/13552551011026995

Ng, H. S., & Kee, D. M. H. (2018). The core competence of successful owner-managed SMEs. *Management Decision, 56*(1), 252-272. doi:https://doi.org/10.1108/MD-12-2016-0877

Okfalisa, O., Anggraini, W., Nawanir, G., Saktioto, S., & Wong, K. (2021). Measuring the effects of different factors influencing on the readiness of SMEs towards digitalization: A multiple perspectives design of decision support system. *Decision Science Letters, 10*(3), 425-442. doi:http://dx.doi.org/10.5267/j.dsl.2021.1.002

Osman, C. A., & Rahim, H. L. (2014). The relationship of entrepreneurial competencies and entrepreneurial intention of disabled youth: A study on behavioural and managerial competencies. *Australian Journal of Basic Applied Sciences, 8*(23), 62-69.

Sajilan, S., & Tehseen, S. (2015). Cultural orientations, entrepreneurial competencies and SMEs business success: The contingent roles of environmental turbulence and network competence. *Review of Integrative Business and Economics Research, 4*(2), 20.

Shehadeh, M., Almohtaseb, A., Aldehayyat, J., & Abu-AlSondos, I. A. (2023). Digital Transformation and Competitive Advantage in the Service Sector: A Moderated-Mediation Model. *Sustainability, 15*(3). Retrieved from doi:https://doi.org/10.3390/su15032077

Tehseen, S., Ahmed, F. U., Qureshi, Z. H., Uddin, M. J., & Ramayah, T. (2019). Entrepreneurial competencies and SMEs growth: the mediating role of network competence. *Asia-Pacific Journal of Business Administration*. doi:https://doi.org/10.1108/APJBA-05-2018-0084

Wahyuningtyas, R., Disastra, G. M., & Rismayani, R. (2021). Digital innovation and capability to create competitiveness model of cooperatives in Bandung, Indonesia. *Jurnal Manajemen Indonesia, 21*(2), 171-182. doi:https://doi.org/10.25124/jmi.v21i2.3633

Wang, W.-C., Lin, C.-H., & Chu, Y.-C. (2011). Types of competitive advantage and analysis. *International Journal of Business and Management, 6*(5), 100. doi:https://doi.org/10.5539/ijbm.v6n5p100

Westerlund, M. (2020). Digitalization, internationalization and scaling of online SMEs. *Technology Innovation Management Review, 10*(4).

Zhao, Y., Hu, N., & Cao, J. (2021, 2021). *Research on entrepreneurial competency model under the background of digital economy*.

ISSN : 1907-6576 (print)
ISSN : 2615-5370 (online)

Ziolkowska, M. J. (2021). Digital transformation and marketing activities in small and medium-sized enterprises. *Sustainability*, *13*(5), 2512. doi:https://doi.org/10.3390/su13052512