

THE EFFECT OF DIGITAL TECHNOLOGY USAGE ON COMPETITIVE ADVANTAGE WITH THE MEDIATION OF ORGANIZATIONAL LEARNING AND ORGANIZATIONAL STRATEGIC AGILITY IN MICRO, SMALL, AND MEDIUM ENTERPRISES

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Abstract: The era of digital disruption, accelerated by the COVID-19 pandemic, has driven Micro, Small, and Medium Enterprises (MSMEs) to adopt digital technology to survive and compete. The use of technologies such as online platforms and digital payments has become a solution for MSMEs to continue operating. However, technology adoption alone does not automatically guarantee the achievement of competitive advantage. This research was conducted with the aim of knowing the effect of digital technology usage on competitive advantage with organizational learning and organizational agility as mediating variables. The research method used is explanatory research, which tests proposed hypotheses to explain the relationships between variables. This research was conducted on a sample of 104 MSMEs in Surabaya that have actively adopted digital payment systems and online ordering services since the beginning of the COVID-19 pandemic in Indonesia or have been operating with such technologies for at least 3 years. This study uses Partial Least Square-Structural Equation Modeling (PLS-SEM) as a data analysis tool. The findings of this study reveal that digital technology usage has a positive effect on both organizational agility and organizational learning. Furthermore, both organizational agility and organizational learning also have a positive effect on competitive advantage. Another important finding is that digital technology usage does not have a direct effect on competitive advantage, indicating that organizational agility and organizational learning fully mediate this relationship. This implies that for MSMEs, investment in digital technology alone will not lead to competitive advantage without simultaneous development of agile and learning-oriented internal organizational capabilities.

Keywords: Digital Technology Usage, Organizational Agility, Organizational Learning, Competitive Advantage, MSMEs

1. Introduction

The rapid growth of digital technology has reshaped the global business environment, pushing organizations to transform their strategies and operations. In this digital era, business interactions increasingly rely on online platforms that offer speed, convenience, and borderless reach. The COVID-19 pandemic accelerated this transformation, forcing Micro, Small, and Medium Enterprises (MSMEs) to adopt e-commerce platforms, social media marketing, and digital payment systems as survival strategies.

MSMEs play a vital role in emerging economies, including Indonesia, where they contribute more than 60% to national GDP and employ nearly the entire workforce. In Surabaya, one of Indonesia's main business hubs, MSMEs expanded rapidly during and after the pandemic, illustrating both the opportunities and challenges of digital disruption. However, evidence shows that technology adoption alone does not automatically lead to sustainable competitiveness. While some MSMEs leverage digital platforms to expand markets, others struggle to retain customers, innovate, or operate efficiently. Scholars increasingly argue that

organizational capabilities determine whether digital adoption enhances performance. In particular, organizational agility—the ability to adapt rapidly to change—and organizational learning—the capacity to acquire, share, and apply knowledge—are viewed as critical mediators. Studies have found mixed results regarding the direct impact of digital technology usage on competitive advantage, suggesting that these mediating capabilities are essential. Yet research on their combined role remains limited, especially in the context of Indonesian MSMEs.

This study addresses that gap by examining the effect of digital technology usage on competitive advantage with organizational agility and organizational learning as mediators. Focusing on MSMEs in Surabaya that have adopted digital payment systems and online ordering platforms, the research applies the dynamic capability perspective to explain how digital adoption contributes to competitiveness.

2. Literature Review

Dynamic Capability Theory

The Dynamic Capability Theory (DCT), developed by Teece et al. (1997), provides the theoretical foundation for this study. DCT explains how firms sustain competitive advantage in rapidly changing environments by integrating, building, and reconfiguring resources. It highlights three core processes: sensing opportunities and threats, seizing them through effective resource allocation, and transforming organizational routines to maintain long-term competitiveness (Teece, 2007). For MSMEs, digital technologies act as enablers of sensing, agility reflects seizing, and organizational learning drives transformation. Thus, DCT offers a suitable lens for analyzing how MSMEs translate digital adoption into sustainable competitive advantage.

Digital Technology Usage

Digital Technology Usage (DTU) refers to the adoption of digital tools such as e-commerce platforms, digital payment systems, cloud-based applications, and social media for operational and strategic purposes. For MSMEs, DTU enables broader market reach, efficiency improvements, and customer engagement (Affandi et al., 2024). However, research has shown that DTU alone does not guarantee competitive advantage. Qosasi, Permana, et al. (2019) found that digital adoption in Indonesian SMEs did not directly improve competitiveness without complementary capabilities. Similarly, Lee & Falahat (2019) reported insignificant direct effects in Malaysian SMEs. This suggests that DTU may act as a trigger, but its effectiveness depends on organizational mediators.

Organizational Agility

Organizational agility (OA) is the ability to rapidly sense and respond to environmental changes. It encompasses adaptability, flexibility, and responsiveness in adjusting strategies, processes, and structures (Troise et al., 2022). Agility is widely recognized as a critical capability for firms in turbulent markets. Felipe et al. (2019) emphasize that agile organizations continuously reconfigure resources to remain competitive. In the MSME context, agility allows quick adaptation to shifts in consumer behavior, technology, and competition. Prior studies confirm that agility mediates the relationship between technology adoption and firm performance (Ottemoesoe et al., 2021).

Organizational Learning

Organizational learning (OL) refers to the process of acquiring, sharing, integrating, and applying knowledge to enhance organizational capabilities (Shahzadi, 2021). OL is particularly critical in digital contexts where technology adoption requires continuous knowledge updating and integration (Livari et al., 2020). Effective OL fosters innovation, strategic renewal, and knowledge-based competitiveness (Leal-Rodríguez et al., 2015). Khan et al. (2020) demonstrated that OL mediates the effect of information technology on organizational performance, while Ratnawati et al. (2022) found that learning organizations positively affect competitive advantage among Indonesian MSMEs. These findings highlight OL as an essential pathway from DTU to competitiveness.

Competitive Advantage

Competitive advantage (CA) is a firm's ability to deliver superior value compared to rivals, achieved through cost leadership, differentiation, or focus strategies (Porter, 1985). For MSMEs, CA may manifest in improved efficiency, market expansion, product uniqueness, or customer loyalty. Research indicates that digital transformation enhances CA when supported by organizational capabilities (Kahveci, 2025). Without such capabilities, digitalization may create destabilizing effects that erode existing strengths (Amesho et al., 2022). Thus, understanding how MSMEs develop CA in digital contexts requires examining the mediating roles of OA and OL.

MSMEs and the Research Gap

MSMEs are critical drivers of economic growth, employment, and innovation, particularly in developing economies. In Indonesia, MSMEs represent over 60% of GDP and employ nearly the entire workforce (Nur Kholifah et al., 2024). Despite their importance, MSMEs often face challenges such as limited digital literacy, resource constraints, and uneven adoption of digital tools. Existing studies provide fragmented insights into DTU and competitiveness, often focusing on a single mediator or reporting inconsistent direct effects. Comprehensive investigations of the dual mediating roles of OA and OL remain scarce, particularly in the context of Indonesian MSME.

Hypotheses Development

Prior studies suggest that digital technology usage (DTU) enhances organizational agility (OA) by improving responsiveness and flexibility (Ciampi et al., 2022; Kusumawati & Anik, 2023). Agile organizations, in turn, foster continuous learning, feedback sharing, and knowledge transformation (Do & Mai, 2022; Yıldırım et al., 2022). Digital technologies also directly support organizational learning (OL) by enabling collaboration and knowledge integration (Manzano et al., 2019; Tsou & Chen, 2023); Both agility and learning are widely recognized as sources of competitive (Khan et al., 2020; Ottemoesoe et al., 2021; Ratnawati et al., 2022). However, the direct effect of DTU on competitive advantage (CA) remains inconclusive, with some studies finding significance (Kusumo et al., 2024; Rayhan et al., 2024) and others not (Qosasi, Maulina, et al., 2019) Based on this reasoning, the following hypotheses are proposed:

Table 1. Research Hypotheses

Code	Hypothesis
H1	Digital technology usage (DTU) has a positive effect on organizational agility (OA).
H2	Organizational agility (OA) has a positive effect on organizational learning (OL).

Code	Hypothesis
H3	Digital technology usage (DTU) has a positive effect on organizational learning (OL).
H4	Organizational agility (OA) has a positive effect on competitive advantage (CA).
H5	Organizational learning (OL) has a positive effect on competitive advantage (CA).
H6	Digital technology usage (DTU) has a positive effect on competitive advantage (CA).

Sources: Devised by the author

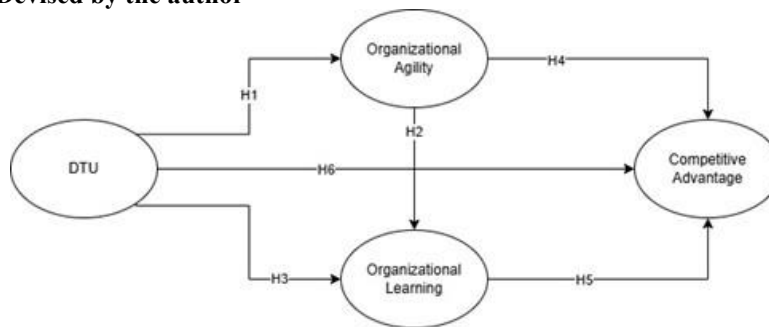


Figure 1: Theoretical Framework
 Sources: Adjusted by Author

3. Method

This study applied a quantitative explanatory research design to examine the effect of digital technology usage on competitive advantage with organizational agility and organizational learning as mediating variables. The research focused on Micro, Small, and Medium Enterprises (MSMEs) in Surabaya, Indonesia, that have adopted digital payment systems and online ordering services for at least three years. A purposive sampling technique was used, and data were collected from 104 MSME owners and managers exclusively from the Food and Beverage (F&B) sector in Surabaya.

Data were obtained through a structured questionnaire distributed online using Google Forms. The questionnaire employed a five-point Likert scale ranging from 1 (“strongly disagree”) to 5 (“strongly agree”). Measurement items were adapted from validated instruments in previous studies, covering digital technology usage, organizational agility, organizational learning, and competitive advantage. The data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4.0. The analysis included assessment of the measurement model—indicator reliability, convergent validity, discriminant validity—and the structural model, which tested path coefficients, R^2 , f^2 , and predictive relevance (Q^2). Mediation analysis was conducted using the bootstrapping method with 5,000 resamples to examine the indirect effects of organizational agility and organizational learning.

4. Results and Discussion

Results

Data from 104 MSME respondents were analyzed using PLS-SEM in SmartPLS 4.0. The measurement model showed that all constructs met the reliability and validity requirements. Indicator loadings exceeded the recommended threshold of 0.70, with composite reliability (CR) values above 0.80, confirming internal consistency. Average Variance Extracted (AVE) values were all greater than 0.50, indicating convergent validity. Table 2 presents the general validity statistics (CR and AVE)

Table 2. Validity and Reability Test

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
CA	0.95	0.96	0.96	0.50
DTU	0.94	0.95	0.94	0.56
OA	0.95	0.96	0.96	0.63
OL	0.91	0.92	0.93	0.53

Sources: Data Output.

Discriminant validity was also established through the Fornell–Larcker criterion and HTMT ratios below 0.85. These results confirm that the measurement model was both reliable and valid for hypothesis testing. Table 3 presents the HTMT Results (discriminant validity) for each construct

Table 3. HTMT Results

	CA	DTU	OA
DTU	0.59		
OA	0.79	0.63	
OL	0.86	0.61	0.84

Sources: Data Output

The structural model assessment demonstrated strong explanatory power. The R^2 value for organizational agility was 0.38, for organizational learning was 0.62, and for competitive advantage was 0.69, indicating moderate and strong explanatory power by the independent variables. Predictive relevance (Q^2) values were also greater than zero, confirming the model's predictive capability.

Table 4. R-Square

	R-Square	R-Square Adjusted	Q²
OA	0.38	0.38	0.23
OL	0.62	0.65	0.29
CA	0.69	0.68	0.31

Sources: Data Output

To further assess the practical importance of each path, effect size (f^2) analysis was conducted. According to Hair et al. (2014), f^2 values of 0.35, 0.15, and 0.02 represent large, medium, and small effects, respectively

Table 5. F-Square

	f²	Remarks
DTU → CA	0.00	Negligible effect
DTU → OA	0.62	Large effects
DTU → OL	0.05	Small effects
OA → CA	0.11	Small effects
OA → OL	0.86	Large effects
OL → CA	0.3	Medium effects

Sources: Data Output

The effect size analysis indicates that the most substantial contributions in the model come from organizational agility to organizational learning ($f^2 = 0.86$) and digital technology usage to organizational agility ($f^2 = 0.62$), both representing large effects. Conversely, the direct contribution of DTU to competitive advantage was negligible ($f^2 = 0.00$), supporting the finding that its impact on competitiveness operates fully through organizational agility and organizational learning.

Hypothesis testing results showed that digital technology usage (DTU) had a significant positive effect on organizational agility (H1, $\beta=0.62$, $p < 0.001$) and organizational learning (H3, $\beta=0.17$, $p < 0.05$). Organizational agility also significantly influenced organizational learning (H2, $\beta=0.69$, $p < 0.001$) and competitive advantage (H4, $\beta=0.32$, $p < 0.001$). Organizational learning further exhibited a strong positive effect on competitive advantage (H5, $\beta=0.52$, $p < 0.001$). However, the direct path from DTU to competitive advantage was not significant (H6, $\beta=0.04$, $p = 0.562$), indicating that digital adoption alone does not enhance competitiveness.

Instead, DTU influences competitive advantage only through organizational agility and organizational learning. Mediation testing confirmed that both OA and OL significantly mediated the relationship between DTU and CA, supporting a full mediation effect.

The mediation analysis confirmed that both organizational agility and organizational learning fully mediated the relationship between DTU and competitive advantage. The results of hypothesis testing are summarized in Table 6.

Table 6. Structural Model Results

Direct Effects	Original Sample (O)	Standard Deviation (STDEV)	T Statistics	P Values	Remarks
DTU → CA	0.04	0.07	0.58	0.56	Hypothesis rejected
DTU → OA	0.62	0.05	11.9	0	Hypothesis supported
DTU → OL	0.17	0.08	2.23	0.03	Hypothesis Supported
OA → CA	0.32	0.09	3.56	0	Hypothesis supported
OA → OL	0.69	0.05	15.05	0	Hypothesis supported
OL → CA	0.52	0.07	7.06	0	Hypothesis supported
Indirect Effects					
DTU → OA → CA	0.2	0.06	3.52	0	Significant Mediation
DTU → OL → CA	0.09	0.04	2.39	0.02	Significant Mediation
OA → OL → CA	0.36	0.06	5.86	0	Significant Mediation
DTU → OA → OL → CA	0.23	0.05	5	0	Significant Mediation
DTU → OA → OL	0.43	0.05	8.77	0	Significant Mediation

Sources: Data Output

The indirect effects were significant, indicating that MSMEs gain sustainable competitive advantage primarily when digital adoption is accompanied by agility and learning capabilities

Discussion

This study's findings support the Dynamic Capability Theory (Teece, 2007), which argues that firms must continuously sense, seize, and transform resources to sustain competitiveness in dynamic environments. The significant influence of digital technology usage (DTU) on organizational agility and organizational learning confirms that digital tools enhance responsiveness and knowledge acquisition, consistent with prior studies (Ciampi et al., 2022; Tsou & Chen, 2023). MSMEs in Surabaya that actively use online marketplaces, social media, and digital payments are better able to adapt to shifts in consumer demand while fostering internal learning processes.

The role of organizational agility is particularly important. Agile MSMEs demonstrated stronger capacity to reconfigure resources, innovate, and respond quickly to market turbulence, which in turn improved competitive advantage. This finding is in line with Ottemoesoe et al. (2021) and Qosasi, Permana, et al. (2019), who emphasize agility as a driver of customer value creation and differentiation. Furthermore, the positive relationship between agility and learning highlights that flexible and adaptive organizations are more capable of generating and integrating new knowledge into decision-making (Do & Mai, 2022; Yildiran et al., 2022).

Organizational learning also showed a strong effect on competitive advantage, reinforcing the argument that learning-oriented organizations are better at sustaining innovation and improving performance (Khan et al., 2020; Ratnawati et al., 2022). This suggests that MSMEs that promote knowledge sharing, experimentation, and continuous improvement are more likely to secure long-term success.

Interestingly, the direct relationship between DTU and competitive advantage was positive but weaker compared to the mediated effects. This implies that digital adoption alone is insufficient for sustained competitiveness, echoing the view of Qosasi, Maulina, et al. (2019) that technology must be complemented by dynamic capabilities. The mediation analysis confirms that agility and learning act as essential channels through which digital tools are transformed into competitive outcomes. These findings extend the application of Dynamic Capability Theory to MSMEs in Indonesia by showing how digital adoption activates agility and learning as dynamic capabilities. Practically, they highlight the need for MSME managers to complement digital initiatives with organizational practices that promote adaptability and learning—such as flexible decision-making, employee training, and knowledge sharing—in order to fully capture the benefits of digital transformation.

5. Conclusions

This study analyzed how digital technology usage influences competitive advantage among MSMEs in Surabaya, with organizational agility and organizational learning as mediating variables. The findings show that digital adoption improves competitiveness primarily when supported by agile practices and learning-oriented capabilities.

Theoretically, the study extends Dynamic Capability Theory by demonstrating that digital tools strengthen competitiveness through the development of agility and learning. Practically, it suggests that MSMEs should not only invest in digital technologies but also build adaptive cultures, encourage knowledge sharing, and foster flexible decision-making to maximize the benefits of digital transformation. The study is limited to MSMEs in Surabaya, which may constrain generalizability. Future research should expand to different regions or sectors, apply longitudinal designs, and explore additional mediating factors such as innovation capability or leadership style.

Acknowledgements

The author would like to express sincere gratitude to the Faculty of Business, Widya Mandala Catholic University Surabaya, for the support provided throughout this research. Special appreciation is also extended to the MSME owners and managers in Surabaya who participated in this study by sharing their valuable time and insights. Finally, the author wishes to thank colleagues and mentors for their guidance, encouragement, and constructive feedback during the preparation of this paper.

References

- Affandi, Y., Ridhwan, M. M., Trinugroho, I., & Hermawan Adiwibowo, D. (2024). Digital adoption, business performance, and financial literacy in ultra-micro, micro, and small enterprises in Indonesia. *Research in International Business and Finance*, 70, 102376. <https://doi.org/10.1016/j.ribaf.2024.102376>
- Amesho, K. T. T., Edoun, E. I., Naidoo, V., Poee, S., & Amesho, K. (2022). *Africa's Public Service Delivery and Performance Review*. <https://doi.org/10.4102/apsdpr>
- Ciampi, F., Faraoni, M., Ballerini, J., & Meli, F. (2022). The co-evolutionary relationship between digitalization and organizational agility: Ongoing debates, theoretical developments and future research perspectives. *Technological Forecasting and Social Change*, 176, 121383. <https://doi.org/10.1016/j.techfore.2021.121383>
- Do, T. T., & Mai, N. K. (2022). Organizational learning and firm performance: a systematic review. *International Journal of Productivity and Performance Management*, 71(4), 1230–1253. <https://doi.org/10.1108/IJPPM-02-2020-0051>
- Felipe, C. M., Leidner, D. E., Roldán, J. L., & Leal-Rodríguez, A. L. (2019). *Impact of IS Capabilities on Firm Performance: The Roles of Organizational Agility and Industry Technology Intensity* (Vol. 0).
- Hair, J. F., Ringle, C. M., Sarstedt, M., & Hult, G. T. M. (2014). *A Primer on Partial Least Squares Structural Equation Modeling*. SAGE Publications.
- Kahveci, E. (2025). Digital Transformation in SMEs: Enablers, Interconnections, and a Framework for Sustainable Competitive Advantage. *Administrative Sciences*, 15(3). <https://doi.org/10.3390/admsci15030107>
- Khan, U., Zhang, Y., & Salik, M. (2020). The Impact of Information Technology on Organizational Performance: The Mediating Effect of Organizational Learning. *Journal of Asian Finance, Economics and Business*, 7(11), 987–998. <https://doi.org/10.13106/jafeb.2020.vol7.no11.987>
- Kusumawati, D. A., & Anik, S. (2023). KELINCAHAN ORGANISASI: PERAN KETERAMPILAN DIGITAL DAN KEPEMIMPINAN AGILE PADA UMKM. *JMM UNRAM - MASTER OF MANAGEMENT JOURNAL*, 12(1), 74–87. <https://doi.org/10.29303/jmm.v12i1.763>
- Kusumo, H., Solechan, A., Susatyo, J. D., Andriana, M., Novianto, R., Sains, U., Komputer, T., & Tlogorejo, S. (2024). *Peran Transformasi Digital dan Orientasi Pasar Dalam Mempengaruhi Keunggulan Bersaing dan Kinerja Pemasaran UMKM*. 4(2), 207–215. <http://journal.stiestekom.ac.id/index.php/dinamika>

- Leal-Rodríguez, A. L., Eldridge, S., Roldán, J. L., Leal-Millán, A. G., & Ortega-Gutiérrez, J. (2015). Organizational unlearning, innovation outcomes, and performance: The moderating effect of firm size. *Journal of Business Research*, 68(4), 803–809. <https://doi.org/10.1016/j.jbusres.2014.11.032>
- 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).
- Livari, 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*, 55, 102183. <https://doi.org/10.1016/j.ijinfomgt.2020.102183>
- Manzano, O., Peñaranda, M., & Páez, H. (2019). Impact of information and communication technologies on organizational learning. *Journal of Physics: Conference Series*, 1409(1). <https://doi.org/10.1088/1742-6596/1409/1/012019>
- Nur Kholifah, A., Trie Andini, C., Ekonomi dan Bisnis, F., & Studi Manajemen, P. (2024). Peran Umkm Terhadap Perekonomian Di Indonesia. *Mufakat Jurnal Ekonomi Manajemen Dan Akuntansi*, 3(2), 459–466. <http://jurnal.anfa.co.id/index.php/mufakat>
- Ottomoesoe, R. S. D., Lovely, L., & Devie, D. (2021). Information Technology Capabilities, Organizational Agility, and Competitive Advantage: A Study of Micro, Small, and Medium Enterprises in Indonesia. *Petra International Journal of Business Studies*, 4(2), 131–141. <https://doi.org/10.9744/ijbs.4.2.131-141>
- Porter, M. E. (1985). *The Competitive Advantage: Creating and Sustaining Superior Performance* (C. Macmillan, Ed.). Free Press.
- Qosasi, A., Maulina, E., Purnomo, M., Muftiadi, A., Permana, E., & Febrian, F. (2019). The impact of Information and Communication Technology capability on the competitive advantage of small businesses. *International Journal of Technology*, 10(1), 167–177. <https://doi.org/10.14716/ijtech.v10i1.2332>
- Qosasi, A., Permana, E., Muftiadi, A., Purnomo, M., & Maulina, E. (2019). Building SMEs' Competitive Advantage and the Organizational Agility of Apparel Retailers in Indonesia: The role of ICT as an Initial Trigger. *Gadjah Mada International Journal of Business*, 21(1), 69–90. <http://journal.ugm.ac.id/gamaijb>
- Ratnawati, M, T. N. R., & Sintyasari, I. (2022). Competitive Advantage as a Mediation of the Influence of Learning Organizations on SME Performance in Malang City. *International Research Journal of Economics and Management Studies*, 1(3), 58–64. <https://doi.org/10.56472/25835238/IRJEMS-V1I2P109>
- Rayhan, M. R., Hendrayati, H., & Furqon, C. (2024). ADAPTASI TRANSFORMASI TEKNOLOGI DIGITAL DAN KETERAMPILAN WIRAUSAHA TERHADAP KEUNGGULAN BERSAING PADA UMKM KULINER: STUDI KASUS TIKTOK SHOP. *BUANA ILMU*, 8(2), 156–171. <https://doi.org/10.36805/bi.v8i2.7251>
- Shahzadi, S. (2021). The Indicators of Organizational Learning and their Correlation with Organizational Innovation Strategies. *Ilkogretim Online-Elementary Education Online*, Year, 20(2), 420–427. <https://doi.org/10.17051/ilkonline.2021.02.45>

- Teece, D. J. (2007). Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal*, 28(13), 1319–1350. <https://doi.org/10.1002/smj.640>
- Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509–533. [https://doi.org/10.1002/\(SICI\)1097-0266\(199708\)18:7<509::AID-SMJ882>3.0.CO;2-Z](https://doi.org/10.1002/(SICI)1097-0266(199708)18:7<509::AID-SMJ882>3.0.CO;2-Z)
- Troise, C., Corvello, V., Ghobadian, A., & O'Regan, N. (2022). How can SMEs successfully navigate VUCA environment: The role of agility in the digital transformation era. *Technological Forecasting and Social Change*, 174, 121227. <https://doi.org/10.1016/j.techfore.2021.121227>
- Tsou, H.-T., & Chen, J.-S. (2023). How does digital technology usage benefit firm performance? Digital transformation strategy and organisational innovation as mediators. *Technology Analysis & Strategic Management*, 35(9), 1114–1127. <https://doi.org/10.1080/09537325.2021.1991575>
- Yıldiran, C., Önalın, O., Yıldıran, C., & Önalın, G. O. (2022). *RELATIONSHIP BETWEEN THE LEARNING ORGANIZATION AND ORGANIZATIONAL AGILITY Chapter 2- Relationship between the Learning Organization and Organizational Agility*. <http://www.istes.org>