Volume 3, No. 7 July 2024 (1549-1561)
p-ISSN 2980-4868 | e-ISSN 2980-4841
https://ajesh.ph/index.php/gp

Increasing Digital Transformation Readiness in Small and Medium Apparel Enterprises Through Maturity Model Evaluation

Latifa Mardhiyah[1*], Novandra Rhezza Pratama[2]
[1,2]Universitas Indonesia, Depok, West Java, Indonesia
Emails: Latifamardhiyah012@gmail.com

ABSTRACT:
Small and Medium Enterprises (SMEs) play a pivotal role in the Indonesian economy, contributing significantly to Gross Domestic Product (GDP) and employment. However, the COVID-19 pandemic has diminished SMEs' GDP contribution. Digital transformation emerges as a crucial solution amidst these challenges. While many SMEs have adopted digitalization, they face obstacles such as product marketing, access to capital, raw material supplies, and effective application of digital technologies. Nevertheless, digitalization presents opportunities to enhance efficiency and expand global market access via the Internet in Indonesia. This study utilizes the Analytic Hierarchy Process (AHP) to formulate a digital transformation strategy, focusing specifically on optimizing internal business processes within apparel SMEs. Key findings from the AHP analysis highlight the critical importance of integrated production management systems, document scanning and digitization, customer data analysis, and basic digital skills training. These findings underpin strategic recommendations aimed at enhancing efficiency, productivity, and adaptability through technology adoption, employee training, and organizational restructuring. The strategy outlines short-term (6-12 months) and long-term (5 years) goals to guide SMEs toward achieving advanced digital transformation maturity. By prioritizing internal business processes, these initiatives aim to propel SMEs in the apparel sector towards greater success in the digital era.
Keywords: Digitalization, SMEs, Digital Transformation, AHP, Maturity Model.

INTRODUCTION

SMEs are a type of small business owned by the people which has certain limits on wealth ownership (Amaral & Peças, 2021). This type of business is being intensively promoted because it makes a lot of contributions to the economy. SMEs have become the backbone of the country's economy because they have contributed to GDP or Gross Domestic Product and increased community employment opportunities. According to data from the Coordinating Ministry for the Economy (2022), there are 65.4 million SMEs in Indonesia which employ 114.7 million people or

around 56% of the workforce in Indonesia. Apart from that, SMEs also contribute more than 60% to the country's GDP.

Data from the Ministry of Cooperatives and Small and Medium Enterprises also shows that the contribution of SMEs to GDP continued to increase before the pandemic. However, this contribution decreased to 37.3% during the pandemic (Figure 1). According to data from the Ministry of Industry (Kemenperin), challenges for small and medium textile and garment businesses will continue. Demand from export destination countries such as the United States (US) and Europe has fallen drastically and is even predicted to reach 50% in 2023. Entering the industrial revolution 4.0 as a transformation effort towards Advanced Indonesia 2030, the Indonesian government continues to support 5 priority sectors, one of which is the textile and clothing industry sector. With great opportunities, this industry is expected to be able to utilize technological potential from upstream to downstream processes, such as implementing multi-material processing, sensor-driven, and other digitalization processes.

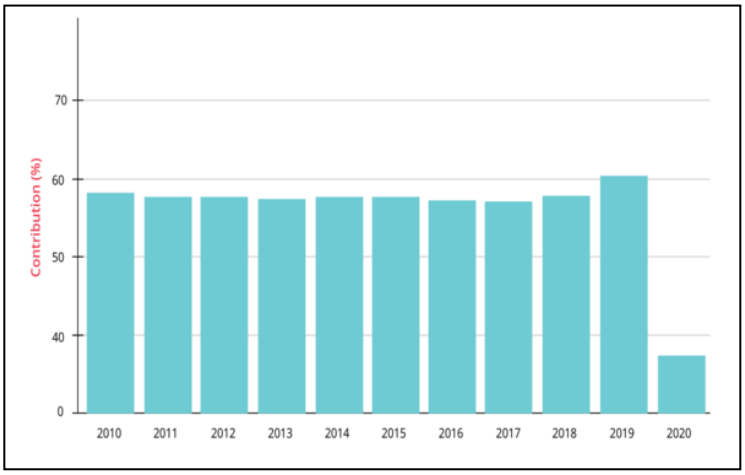

Figure 1. Data from the MSME Empowerment Report (2022)

Based on data from the MSME Empowerment Report (2022), there are 83.8% of SMEs digitalize or utilize technology to support their business operations. Digitalization is an opportunity for SMEs to shift from traditional trading to new trends that apply technology. When transforming to digitalization, SMEs will face several challenges. Based on a survey conducted by DSInnovate of 1,500 SME owners, several obstacles were found experienced by SMEs. Generally, 70.2% of SME owners have problems marketing their products. The next problems are related to access to capital (51.2%), fulfillment or supply of raw materials (46.3%), and digital adoption (30.9%).

Digitalization in SMEs brings many opportunities for SMEs so that they can dominate the domestic market (Canhoto et al., 2021). First, digitalization can help SMEs to increase their efficiency and productivity. digitalization can help SMEs open new markets and customers.

According to a report from the Indonesian Internet Service Providers Association (APJII), it shows that internet users in Indonesia will reach more than 210 million in 2022 (MSME Empowerment Report, 2022). With many internet users, SMEs can reach a wider audience and sell their products or services outside their region. Digitalization can enable SMEs to compete better with large companies.

The digital era has encouraged companies of all sizes, from large businesses to Small and Medium Enterprises (SMEs), to adopt digital technology in their operations and marketing strategies. Digital transformation (Chanias et al., 2019) is a necessity for companies that want to remain relevant and competitive in an increasingly globally connected market. An SME engaged in the production and sale of apparel, located in Ciledug, Tangerang. By having its own brand and 7 employees, Samecca has demonstrated success in maintaining its business through offline marketing. Samecca has not yet carried out digital transformation, which is currently considered important to expand market reach and increase competitiveness. SMEs like Samecca often face various obstacles in carrying out digital transformation. Some common obstacles faced include a lack of knowledge and skills regarding digital technology, limited budget for investment in new technology, and uncertainty regarding how to start and implement digital strategies(Frishammar et al., 2018). These obstacles prevent Samecca from adopting digital technology which can actually provide many benefits, such as operational efficiency, increased market access, and better customer experience.

Several studies on development and digital transformation strategies have been carried out in various manufacturing sectors. Kim and Park (2019) conducted research on the textile industry in Uzbekistan. The research examined sustainable, concrete and effective development strategies using the analytic hierarchy process (AHP) and strengths, weaknesses, opportunities and threats (SWOT) method(Ghorbani et al., 2022; Lee & Lee, 2022; Wu et al., 2022). Based on this research, the weaknesses and opportunities (WO) strategy has the highest importance. It can be suggested that priority should be given to this strategy for the development of the textile industry. The results further show that the weak points of the country's textile industry are due to the lack of improvements in technology, expensive raw materials and the low level of education of workers.

Development strategy and digital transformation are related aspects that can help increase company growth ((Chen & Lin, 2021; Pauliuk et al., 2022). Pauliuk et al. 's (2022) research mapped digital transformation (DT) and sustainable development goals (SDG) on a hierarchy and found large gaps in system coverage. DT strategies mostly focused on product, process, and cluster process levels, while SDGs predominantly targeted the economic level at large. This research informs decision-makers about how the two transformational formations can be aligned to achieve overarching social goals.

According to Zhang, Xin et al. (2023a), digital transformation is considered a strategic response to trends that include major changes in society and industry caused by the application

of digital technology. Zhang's research results show that information technology infrastructure positively impacts digital transformation.

(Galindo-Martín et al., 2019; Kırmızı & Kocaoglu, 2022; Kolagar et al., 2022; Li, 2022; Verhoef et al., 2021; Zhang et al., 2023b) conducted research to understand how digital services enable the internationalisation process for industrial SMEs by interviewing 26 industrial SMEs related to the manufacturing industry in Sweden and Finland. (Domingues et al., 2016; Kolagar et al., 2022; Santos & Martinho, 2019) identified three gradual phases related to SME digital service maturity: digital awareness, digital service innovation, and mass customization of digital services.

Previous research carried out further design of digital transformation and maturity models. In this research, researchers designed a maturity model for digital transformation starting from level 0 or when digital transformation has not yet started in apparel SMEs.

Based on a literature study regarding digital transformation development strategies for small and medium apparel businesses, it was found that aligning digital transformation with development strategies enhances strategic alignment (Gökalp & Martinez, 2021). The aim of this research is to analyze how digital transformation can optimize development strategies for these businesses. Practically, this study seeks to provide a structured approach for businesses to assess their competitive landscape through SWOT analysis and prioritize key factors influencing strategy using maturity models and the analytic hierarchy process (AHP). Theoretical benefits include contributing to the understanding of how digital transformation can be strategically integrated into small and medium enterprise (SME) development frameworks, enhancing their resilience and competitiveness in the market.

RESEARCH METHODS

This research was conducted on small and medium apparel businesses with the Samecca brand. Samecca is engaged in the production and sales of ready-made clothing. This company was founded with the aim of providing quality clothing with trendy and comfortable designs for various groups. With an entrepreneurial spirit, Samecca has succeeded in building its own brand, which is known around Ciledug, Tangerang. Samecca has a simple organizational structure with 7 employees. Currently, Samecca is marketing offline through physical stores. Samecca is facing several obstacles in running its business, especially in terms of digital transformation. The obstacles faced by Samecca are a lack of skills in digital technology, limited budget for investment in technology and uncertainty about how to start and implement a digital strategy.

The author's first step was to carry out the initial data collection process, which involved observing and analyzing document studies and collecting relevant data that could be used to identify problems. The method used was to observe the organization's situation and conditions, then continue with document analysis and interviews.

This research will use the Maturity Model as a framework for evaluating the level of data processing maturity in various organizations (Li, 2022). Maturity Model is used to identify maturity levels and determine necessary improvement steps. The steps taken in implementing the Maturity Model involve surveys and interviews with key stakeholders in the organization, document analysis, and direct evaluation of existing data processing processes.

This research will also use the AHP method to assess the priority and weight of various relevant criteria in data processing. AHP helps in decision making by taking into account the preferences and weights given by stakeholders. The steps in applying AHP involve identifying relevant criteria, weighting criteria, comparing pairs of criteria, and consistency analysis.

The resulting recommendations are based on an evaluation of the maturity level of small and medium apparel businesses as well as the results of determining priority criteria using the Analytic Hierarchy Process (AHP) method. By combining the results of the maturity evaluation of apparel SMEs and the priority criteria that have been determined, researchers will be able to provide appropriate and targeted recommendations for these SMEs. These recommendations will be based on a deep understanding of the strengths, weaknesses, opportunities and challenges faced by apparel SMEs in adopting digital transformation. The main aim of these recommendations is to help SMEs increase their level of maturity in facing the challenges faced in this digital era, so that they can increase their competitiveness and long-term success.

RESULTS AND DISCUSSION

This section focuses on analyzing data collected in research on data processing, discussing the use of the Maturity Model in the context of digital transformation, and making recommendations for digital transformation strategies based on the results of data processing. This chapter summarizes the main findings that emerged from the data collected and presents an in-depth analysis of the level of digital transformation maturity in the organization.

Maturity Model's Framework Dimensions

In determining a framework or indicators for assessing the maturity level of digital transformation in small and medium apparel businesses, this research conducted a literature study of previous research. After in-depth analysis of the literature and characteristics of small and medium-sized apparel businesses, relevant indicators have been determined for this research. Next, a special framework has been formulated to measure the maturity level of apparel SMEs in adopting digital transformation, which can be seen in the table below.

This framework for measuring the maturity level of small and medium apparel businesses in adopting digital transformation has gone through a validation process by five experts, consisting of three internal experts and two external experts. The five experts have broad and deep experience in the field of small and medium apparel businesses, with each having a minimum of five years of experience. This validation was carried out to ensure that the framework formulated can provide an accurate and relevant understanding of apparel SMEs'

readiness and progress in digital transformation. By involving multiple perspectives and diverse knowledge, this validation process ensures that the framework has high reliability and validity in the context of small and medium-sized apparel businesses.

Initial data was collected through a series of interviews with users representing various levels and functions within the organization. The interviews focused on understanding the use of technology, awareness of digital transformation, and perceptions of digital change. Interview data was analyzed qualitatively to identify common themes and emerging trends related to digital transformation. This analysis involves identifying key statements, emerging patterns, and perspectives expressed by users. The results of measuring the maturity level of digital transformation can be seen in Table 1.

Table 1. Measuring The Maturity Level of Digital Transformation Results

Dimensions	Sub-dimensions	Description	Description level of maturity
Organization	Digital Skills	Presence of appropriate digital skills and capabilities from staff (Are there any employees who specialize in digital transformation?)	None (Level 0)
Technology	Technology adoption / Technology presence	Which of the following technologies is present in your company?	Does not have supporting technology (Level 0)
Business Process	Internal	Does your company have an information system that supports internal business processes?	Does not have a supporting information system (Level 0)
	External	Does your company have an information system that supports external business processes?	Does not have a supporting information system (Level 0)
Customer	Digital marketing activities	Which marketing activities do you do (internally or externally)?	no digital marketing (Level 0)
Digital Transformation Strategy	Strategy	Is there a strategic plan for digital innovation?	do not have a strategic plan for digital innovation (Level 0)
	Investment	Is your company investing in digital activities?	no investment in digital activities (Level 0)

After conducting interviews with SME users, the maturity level of digital transformation of apparel SMEs was obtained, namely:

1. Zero maturity level: Based on preliminary data analysis, it was found that the digital transformation maturity level from interviews with users was at zero level. This shows that there are no clear signs of digital transformation in the organization yet.
2. Characteristics of Zero Maturity Level: At this level, organizations tend to lack awareness of the importance of digital transformation, adequate technological infrastructure, and initiative to adopt digital change.

Analytic Hierarchy Process (*AHP*)

Based on the selected maturity model, relevant criteria for assessing the maturity level of digital transformation will be identified, as can be seen in Table 2. Aspects include such as technological infrastructure, organizational culture, digital strategy, and business processes. The AHP method will be applied to assess the relative weight of each criterion that has been identified. Determining the weight of the criteria is carried out through direct interviews with SME apparel users. In the interview process, respondents were evaluated in depth regarding their perceptions and priorities for each criterion relevant to digital transformation.

Table 2. Relevant Criteria for Assessing the Maturity Level of Digital Transformation

Digitalization Strategy	
Criterion	**Sub Criteria**
Technology	Digital Modeling
	Technological Infrastructure (equipment)
	Data Archive
Business Process	Internal
	External
Customer	Customer Recapitulation
	Evaluate digital customer experience
Product	Data collection and processing in production
	Production plan
	Market Analysis
Organization	Digital Skills Possessed
	Skill (User)
	Knowledge management
Digital Transformation	Digital Transformation Strategy
	Digital Transformation Investments

External experts also weight the criteria. Once the relevant criteria have been identified, external experts with experience and knowledge in the apparel industry will assign relative

weights to each criterion based on their assessment. This weight reflects the level of importance of each criterion in achieving digital transformation goals in apparel SMEs.

Next, a pairwise matrix is used to measure the relative relationship between each pair of criteria. In a pairwise matrix, external experts compare the two criteria in each pair and assign a relative value based on their preferences. This process allows for the establishment of clear priority levels and ensures consistency in assessment.

Pairwise comparisons are performed using comparative judgment, where each criterion is compared to the other criteria in a pairwise matrix. Ratings are given on how important or how big the relationship is between the two criteria in each pair.

After relative weights are given to each criterion and a pairwise matrix has been created, the next step is to calculate or normalize the criterion matrix. This process aims to convert the given values into a matrix that can be used for further analysis, such as calculating the relative priority of each criterion.

For example, for each pair of criteria, a rating will be given about how more important one criterion is compared to the other. This assessment is usually expressed on a relative scale, such as 1 (equally important), 3 (slightly more important), 5 (more important), 7 (very much more important), and 9 (very much more important). There is also the option to provide a reverse grade if one of the criteria is deemed lower than another.

After the relative assessment matrix between criteria is created, the next step is to calculate the consistency ratio to validate the suitability and consistency of the assessments given. The consistency ratio calculation is carried out using the values contained in the relative assessment matrix between criteria.

Calculating this consistency ratio ensures the reliability and validity of the relative assessment between criteria, allowing more accurate and convincing decision-making regarding the relative weight of each criterion. After calculating the consistency ratio and validating the relative assessment between criteria, priority criteria were obtained (Table 3), which provide a clearer picture of the most important criteria for evaluating the maturity level of digital transformation of apparel SMEs.

Table 3. Digital Transformation Indicators

Criterion	Priority Values	Sub Criteria	Priority Values
Technology	0,21	Digital Modeling	0,11
		Technological Infrastructure (equipment)	0,26
		Data Archive	0,63
Business Process	0,27	Internal	0,83
		External	0,17
Customer	0,17	Customer Recapitulation	0,75

		Evaluate digital customer experience	0,25
Product	0,12	Data collection and processing in production	0,57
		Production plan	0,29
		Market Analysis	0,14
Organization	0,16	Digital Skills Possessed	0,57
		Skill (User)	0,29
		Knowledge management	0,14
Digital Transformation	0,07	Digital Transformation Strategy	0,75
		Digital Transformation Investments	0,25

Digital Transformation Strategy Recommendations

Data processing identified a number of challenges that organizations face in achieving digital transformation. These include a lack of investment in technology, an inability to integrate systems, and a lack of awareness of the benefits of digital transformation. These findings indicate the importance of further evaluation using the Maturity Model to systematically assess the maturity level of digital transformation and identify necessary improvement steps.

Digital transformation is a necessity for small and medium apparel businesses to be able to compete and survive amidst increasingly fierce competition. Based on the results of the Analytic Hierarchy Process (AHP) calculations, recommendations for digital transformation strategies that can be implemented include the use of an integrated production management system to increase operational efficiency, the development of e-commerce and digital marketing strategies to expand market reach, employee training in digital skills, implementation of the Internet of Things (IoT) for optimizing production processes, as well as utilizing data analysis for strategic decision making. By implementing these recommendations, it is hoped that apparel SMEs can strengthen their position in the digital market and face the challenges that continue to develop in this modern era. Recommendations for digital transformation strategies can be seen in Table 4.

Table 4. Recommendations for digital transformation

Development Strategy	Purpose	Action Plan	Criterion
Implementation of an integrated production management system	- Optimize resource use - Improve operational efficiency	Carry out more efficient production planning based on customer demand, production capacity, and raw material availability.	Internally-focused business processes

Document scanning and digitization	- Accelerate workflow and information processing - Better data analysis and management	- Review business processes and identify what documents need to be digitized. - Evaluate the software to be used	Adoption of technology by archiving data
Analyze customer data	- Improves marketing efficiency - Understand customer desires or market trends	- Recapitulation of customer data - Identify sales patterns or trends - Conducting an analysis of customer satisfaction	Customer criteria by conducting customer recapitulation
Basic digital skills training	- Improve employee abilities and competencies - Increase employee productivity and efficiency	Socialize training programs to employees and company management	Organizations by improving the digital skills of employees

Target for Implementation of Digital Transformation Strategy Recommendations

Based on the data processing results, including measuring model maturity and determining priority criteria, several strategic recommendations were obtained to improve digital transformation in apparel SMEs. These recommendations are then used to determine digital transformation implementation targets, which are divided into two categories: long-term and short-term. The process of determining this target involves in-depth discussions with SMEs and experts in the apparel industry.

The resulting strategy recommendations cover various aspects, from adopting new technology to changing business processes and developing employee skills. This recommendation aims to provide concrete and focused direction for apparel SMEs facing the challenges of digital transformation. After the strategy recommendations have been determined, the next step is to determine concrete and measurable implementation targets. The gap between the maturity level of digital transformation and the specified targets can be seen in Table 5. Long-term targets refer to achieving big goals in the next few years, while short-term targets focus more on achievements that can be achieved in a shorter time, for example, in a few years, month or one year.

CONCLUSION

This research highlights the significant role of SMEs in the Indonesian economy, which has faced substantial challenges due to the COVID-19 pandemic, resulting in reduced GDP

contributions. Digitalization is identified as a crucial solution for SMEs to overcome obstacles such as product marketing, access to capital, and operational efficiency, albeit encountering barriers like skills gaps and technology integration. Using the Analytic Hierarchy Process (AHP), the study formulates a digital transformation strategy focusing on internal business processes within apparel SMEs. Findings indicate that SMEs in this sector exhibit a low level of digital transformation maturity, with strategic recommendations including the implementation of integrated production management systems, digital marketing strategies, employee digital skills training, and leveraging the Internet of Things (IoT). The research underscores the importance of enhancing internal business processes to improve efficiency and productivity in efforts to achieve higher digital transformation maturity among apparel SMEs in Indonesia.

BIBLIOGRAPHY

Amaral, A., & Peças, P. (2021). A Framework for Assessing Manufacturing SMEs Industry 4.0 Maturity. *Applied Sciences*, *11*(13), 6127. https://doi.org/10.3390/app11136127

Canhoto, A. I., Quinton, S., Pera, R., Molinillo, S., & Simkin, L. (2021). Digital strategy aligning in SMEs: A dynamic capabilities perspective. *The Journal of Strategic Information Systems*, *30*(3), 101682. https://doi.org/10.1016/j.jsis.2021.101682

Chanias, S., Myers, M. D., & Hess, T. (2019). Digital transformation strategy making in pre-digital organizations: The case of a financial services provider. *The Journal of Strategic Information Systems*, *28*(1), 17–33. https://doi.org/10.1016/j.jsis.2018.11.003

Chen, B., & Lin, J. Y. (2021). Development strategy, resource misallocation and economic performance. *Structural Change and Economic Dynamics*, *59*, 612–634. https://doi.org/10.1016/j.strueco.2021.10.003

Domingues, P., Sampaio, P., & Arezes, P. M. (2016). Integrated management systems assessment: a maturity model proposal. *Journal of Cleaner Production*, *124*, 164–174. https://doi.org/10.1016/j.jclepro.2016.02.103

Frishammar, J., Cenamor, J., Cavalli-Björkman, H., Hernell, E., & Carlsson, J. (2018). Digital strategies for two-sided markets: A case study of shopping malls. *Decision Support Systems*, *108*, 34–44. https://doi.org/10.1016/j.dss.2018.02.003

Galindo-Martín, M.-Á., Castaño-Martínez, M.-S., & Méndez-Picazo, M.-T. (2019). Digital transformation, digital dividends and entrepreneurship: A quantitative analysis. *Journal of Business Research*, *101*, 522–527. https://doi.org/10.1016/j.jbusres.2018.12.014

Ghorbani, M. K., Hamidifar, H., Skoulikaris, C., & Nones, M. (2022). Concept-Based Integration of Project Management and Strategic Management of Rubber Dam Projects Using the SWOT–AHP Method. *Sustainability*, *14*(5), 2541. https://doi.org/10.3390/su14052541

Gökalp, E., & Martinez, V. (2021). Digital transformation capability maturity model enabling the assessment of industrial manufacturers. *Computers in Industry*, *132*, 103522. https://doi.org/10.1016/j.compind.2021.103522

Kim, Y.-J., & Park, J. (2019). A Sustainable Development Strategy for the Uzbekistan Textile Industry: The Results of a SWOT-AHP Analysis. *Sustainability*, *11*(17), 4613. https://doi.org/10.3390/su11174613

Kırmızı, M., & Kocaoglu, B. (2022). Digital transformation maturity model development framework based on design science: case studies in manufacturing industry. *Journal of Manufacturing Technology Management*, *33*(7), 1319–1346. https://doi.org/10.1108/JMTM-11-2021-0476

Kolagar, M., Reim, W., Parida, V., & Sjödin, D. (2022). Digital servitization strategies for SME internationalization: the interplay between digital service maturity and ecosystem involvement. *Journal of Service Management*, *33*(1), 143–162. https://doi.org/10.1108/JOSM-11-2020-0428

Lee, D., & Lee, S. (2022). A Study of the Competitiveness and Development Strategy of Korean Venture Companies in the Fourth Industrial Revolution Using SWOT/AHP. *Sustainability*, *14*(9), 5154. https://doi.org/10.3390/su14095154

Li, L. (2022). Evaluation of Digital Transformation Maturity of Small and Medium-Sized Entrepreneurial Enterprises Based on Multicriteria Framework. *Mathematical Problems in Engineering*, *2022*, 1–11. https://doi.org/10.1155/2022/7085322

Pauliuk, S., Koslowski, M., Madhu, K., Schulte, S., & Kilchert, S. (2022). Co-design of digital transformation and sustainable development strategies - What socio-metabolic and industrial ecology research can contribute. *Journal of Cleaner Production*, *343*, 130997. https://doi.org/10.1016/j.jclepro.2022.130997

Santos, R. C., & Martinho, J. L. (2019). An Industry 4.0 maturity model proposal. *Journal of Manufacturing Technology Management*, *31*(5), 1023–1043. https://doi.org/10.1108/JMTM-09-2018-0284

Verhoef, P. C., Broekhuizen, T., Bart, Y., Bhattacharya, A., Qi Dong, J., Fabian, N., & Haenlein, M. (2021). Digital transformation: A multidisciplinary reflection and research agenda. *Journal of Business Research*, *122*, 889–901. https://doi.org/10.1016/j.jbusres.2019.09.022

Wu, P., Zhao, G., & Li, Y. (2022). Green Mining Strategy Selection via an Integrated SWOT-PEST Analysis and Fuzzy AHP-MARCOS Approach. *Sustainability*, *14*(13), 7577. https://doi.org/10.3390/su14137577

Zhang, X., Xu, Y. Y., & Ma, L. (2023a). Information technology investment and digital transformation: the roles of digital transformation strategy and top management. *Business Process Management Journal*, *29*(2), 528–549. https://doi.org/10.1108/BPMJ-06-2022-0254

Zhang, X., Xu, Y. Y., & Ma, L. (2023b). Information technology investment and digital transformation: the roles of digital transformation strategy and top management. *Business Process Management Journal*, *29*(2), 528–549. https://doi.org/10.1108/BPMJ-06-2022-0254