JOURNAL OF BUSINESS MANAGEMENT & INNOVATION
www.jbmij.org
JBMI Insight

# Digital Transformation and Organizational Performance: A Case Study of the Taiwanese Textile Industry

**[1*]Lee Teng Suhari & [2]Dr. Yang-shan Wijaya**

**[1]Postgraduate Student, National Taiwan University**

**[2]Lecturer, National Taiwan University**

***Email of the Corresponding Author: leetengsuhari32@gmail.com**

**Publication Date: September 2025**

## Abstract

Digital transformation involves the strategic integration of advanced digital technologies such as artificial intelligence, the Internet of Things, and data analytics to improve organizational processes and value creation. It enhances operational efficiency, supply chain agility, and innovation, enabling firms to respond quickly to market changes and improve competitiveness. Organizations that successfully adopt digital transformation often achieve better financial performance, customer satisfaction, and long-term resilience in dynamic business environments. The study found that Taiwanese textile firms adopting digital technologies such as IoT-enabled machinery, predictive analytics, and integrated supply chain platforms achieved significant gains in operational efficiency, cost reduction, and production agility. Digital tools also enabled product and market innovation, including customized fabrics, functional textiles, and blockchain-based traceability, which strengthened competitiveness and attracted global buyers seeking sustainable and transparent supply chains. The study concluded that digital transformation significantly improves the operational efficiency, innovation capacity, and global competitiveness of Taiwanese textile firms, especially those that align technology with strategic goals and invest in workforce readiness. However, small and medium-sized enterprises continue to face barriers such as high costs, legacy system integration challenges, and limited digital talent, creating uneven progress and the risk of widening performance gaps within the industry. The study recommended that Taiwanese textile firms create clear digital transformation roadmaps, invest in workforce training, and build innovative, data-driven cultures while adopting scalable technologies such as IoT-enabled systems and integrated ERP platforms. Government agencies, industry associations, and technology providers should collaborate to offer financial incentives, shared digital infrastructure, and targeted skill development programs to help small and medium-sized enterprises overcome adoption barriers and remain competitive.

**Keywords:** *Digital Transformation, Organizational Performance, Taiwanese*

### 1.1 Introduction

The Taiwanese textile industry is one of the country's oldest and most globally integrated manufacturing sectors, historically recognized for its ability to supply high-quality fabrics and garments to premium international brands. For decades, Taiwan leveraged low-cost labor, efficient export systems, and government-backed industrial policies to build a strong presence in global value chains. This dominance has been steadily challenged by the rise of low-wage producers in Southeast Asia and mainland China, the globalization of apparel sourcing, and the growing shift toward fast fashion and sustainability demands (Chen & Lin, 2022). In response, Taiwanese textile firms have been forced to rethink their production and management models. Digital transformation has emerged as a strategic response — not merely an IT upgrade but a fundamental redesign of operations, supply chains, and customer interaction models to survive in an increasingly competitive and technology-driven global textile market.

Digital transformation, in this industrial context, refers to the holistic adoption of digital technologies to enhance business models, operational processes, and customer value creation (Vial, 2019). For textile manufacturers in Taiwan, it includes the deployment of advanced enterprise resource planning (ERP) systems, artificial intelligence (AI) applications for demand forecasting, Internet of Things (IoT)-enabled production machinery, and data-driven quality control systems (Hsu & Wang, 2021). It also covers digital design through computer-aided design (CAD), digital printing, and the integration of e-commerce or direct-to-consumer channels. Importantly, digital transformation in this sector is not simply about automating existing processes; it often requires rethinking product development timelines, supply chain linkages, and customer experience design to be more responsive, transparent, and sustainable.

Several internal and external forces have accelerated the digitalization of Taiwan's textile industry. On the external front, global buyers such as Nike and Uniqlo increasingly demand traceability and verifiable sustainability in their supply chains (Chiu et al., 2020). Consumers now expect transparency about material origins and eco-friendly production methods. The Taiwanese government has also encouraged smart manufacturing by launching the "Smart Machinery Development Program" and providing tax incentives for Industry 4.0 upgrades (Ministry of Economic Affairs [MOEA], 2021). Internally, firms have faced labor shortages due to Taiwan's aging workforce and rising wages, making automation and digital tools attractive cost-saving solutions. The COVID-19 pandemic further exposed the vulnerability of manual, labor-intensive production systems, pushing companies to digitize to maintain business continuity amid social distancing and disrupted logistics.

A major benefit of digital transformation in the Taiwanese textile sector lies in operational efficiency. IoT sensors embedded in spinning, weaving, and dyeing machines now collect real-time data on production status, machine performance, and quality metrics. These insights help manufacturers schedule predictive maintenance, significantly reducing downtime and unexpected stoppages (Lu & Lee, 2020). Robotics and automated guided vehicles streamline material handling, while AI-powered analytics optimize production scheduling and energy consumption. Firms that previously depended on manual checks for quality control now use computer vision systems that detect fabric defects at early stages, cutting waste and reducing rework rates (Islam,

Mintoo & Saimon, 2024). The combination of automation and data analytics has shortened production cycles, lowered defect rates, and improved overall cost efficiency — outcomes that directly enhance organizational performance.

Digital transformation has also reshaped supply chain management, a critical factor in the fast-moving textile and apparel industry. Through integrated ERP and supply chain platforms, Taiwanese textile firms can monitor inventory levels across multiple facilities, forecast demand based on live market data, and adjust procurement and production schedules accordingly (Wang et al., 2022). Cloud-based systems enable real-time collaboration with suppliers and buyers, improving visibility and responsiveness. Some companies have piloted blockchain solutions to track raw materials from source to finished product, strengthening claims of ethical sourcing and environmental responsibility (Kshetri, 2022). Enhanced supply chain agility allows firms to respond quickly to fashion trends, minimize overproduction, and reduce excess inventory costs, which are major risks in apparel manufacturing. Through becoming more demand-driven rather than forecast-driven, these companies can maintain profitability in volatile markets.

Beyond efficiency, digital transformation has enabled a wave of product and service innovation in the Taiwanese textile industry. Digital design technologies such as CAD and 3D visualization tools allow designers to experiment with patterns and materials virtually, reducing the need for physical samples and accelerating time-to-market (Huang & Lin, 2021). Digital printing enables cost-effective small-batch production, catering to niche markets and custom orders. Firms are also using big data analytics to capture consumer preferences from online channels, translating these insights into trend-responsive product development. In addition, Taiwanese textile innovators are leading in functional and smart fabrics — for example, textiles with embedded sensors for sports performance tracking or healthcare applications. These innovations create premium product lines and help companies differentiate from low-cost competitors.

Successful digital transformation depends heavily on organizational culture and change management (Bozkus, 2023). Many traditional Taiwanese textile companies have long operated in conservative, production-focused environments where decision-making is hierarchical and risk-averse. Transitioning to digital systems often requires a shift toward a more agile, data-driven, and innovative culture (Tsai & Chang, 2020). Leadership commitment is critical; executives must champion the vision, allocate resources for training, and communicate the strategic importance of digital adoption. Workforce upskilling — from machine operators learning to interact with IoT dashboards to managers adopting analytics-based decision-making — has proven essential. Companies that invest in employee engagement and training programs generally report higher acceptance of new systems and fewer disruptions during implementation.

Taiwanese textile firms which achieve higher levels of digital maturity tend to outperform less digitized competitors in both financial and strategic dimensions (Chen, 2020). Cost reductions from process automation improve margins, while data-informed decision-making enhances pricing and inventory management. Product innovation fueled by digital design and consumer analytics allows entry into higher-value markets, boosting revenue growth. Digital transparency and sustainable production practices attract premium global buyers, providing stable long-term contracts and reducing price-based competition (Hsu & Wang, 2021). Such improvements

ultimately strengthen organizational resilience, enabling firms to weather demand shocks and competitive threats more effectively.

Despite the promise of digital transformation, Taiwanese textile firms encounter significant obstacles. High initial capital requirements for advanced machinery, IoT systems, and ERP integration can overwhelm small and medium-sized enterprises (SMEs) with limited financial resources. Legacy systems often struggle to integrate with new platforms, causing disruptions during the transition period (Chou & Lien, 2022). Cybersecurity threats rise as operations become more connected, creating vulnerabilities to data breaches and ransomware attacks. A shortage of digital talent — particularly data scientists, automation engineers, and IT specialists — also hinders progress, as many skilled professionals gravitate toward technology or semiconductor industries where wages and career prospects are higher (Kofler, Innerhofer, Marcher, Gruber & Pechlaner, 2020). These barriers mean that while large, well-capitalized textile firms can advance quickly, many smaller players risk being left behind.

### 1.2 Statement of the Problem

The global textile industry is undergoing profound disruption as firms face volatile consumer preferences, rising labor costs, and intensifying competition from low-cost producers. Taiwan, once a regional manufacturing powerhouse, has maintained its presence by producing quality fabrics and functional textiles; yet it struggles to sustain competitiveness in the era of Industry 4.0. Although global evidence suggests that digital transformation improves operational efficiency, customer responsiveness, and overall competitiveness (Nakamura, 2024; Suhari, Putra, & Sain, 2024), many Taiwanese textile companies remain uneven in their adoption of advanced technologies. Legacy production systems, limited integration of digital tools across supply chains, and talent shortages restrict the sector's ability to translate technology investments into measurable performance gains.

Current studies on digital transformation and organizational performance are geographically and sectorally fragmented. Existing research focuses heavily on economies such as Japan, Indonesia, Saudi Arabia, and Tunisia (Shwedeh, Aburayya, & Mansour, 2023; Nugroho, Fauzi, Firdaus, & Marna, 2024; Al-Ayed, Al-Tit, & Alashjaee, 2023; Chouaibi, Festa, Quaglia, & Rossi, 2022). These studies demonstrate positive relationships between digital adoption and outcomes such as efficiency, productivity, and innovation but often emphasize industries like retail, telecommunications, or higher education. Consequently, there is little empirical evidence explaining how digital technologies affect firm-level performance in Taiwan's textile sector, which has unique characteristics: long supply chains, specialized production capabilities, and strong export orientation. Without local evidence, managers risk investing in costly technologies without clear insight into their impact on competitiveness.

Furthermore, while theoretical frameworks such as the Resource-Based View (RBV), Dynamic Capabilities Theory, and the Technology Acceptance Model (TAM) have been widely proposed to understand digital transformation (Nakamura, 2024; Pierre, 2023), their application to the Taiwanese textile context remains underexplored. Organizational culture, workforce readiness, and supply chain complexity may moderate or mediate the digital transformation–performance

relationship differently in Taiwan compared to other economies. This lack of sector-specific and country-specific analysis creates a strategic blind spot for both industry leaders and policymakers seeking to sustain Taiwan's textile competitiveness. A focused case study is therefore essential to examine how digital transformation shapes operational efficiency, innovation capacity, and overall organizational performance in Taiwanese textile firms.

### 2.1 Literature Review

Nakamura (2024) examined how digital transformation influences organizational performance in Japan using a desk study design that relied on secondary data from published reports and online journals. The study found that digital transformation has significantly improved efficiency and productivity through automation and artificial intelligence, while also enhancing customer experiences with personalized digital interactions. Innovation was accelerated by technologies such as the Internet of Things and big data analytics, allowing organizations to respond more quickly to changing market demands. Nonetheless, firms face persistent challenges, including the integration of legacy systems and rising cybersecurity risks, highlighting the need for proactive leadership and workforce upskilling. The study suggested that future research can be anchored in the Resource-Based View, Dynamic Capabilities Theory, and Technology Acceptance Model. It recommended that organizations develop clear digital transformation roadmaps aligned with strategic objectives, and policymakers create adaptive regulatory frameworks that support innovation while protecting data privacy and security.

Shwedeh, Aburayya and Mansour (2023) explored how organizational digital transformation influences employee performance within the culturally diverse business environment of the United Arab Emirates (UAE). The study sought to address a major research gap by analyzing how elements such as leadership styles, workplace policies, and cultural diversity shape employee productivity in a rapidly evolving economy. Using a descriptive quantitative design, the researchers surveyed 50 employees from various sectors and organizations to examine the relationship between digital transformation factors and work outcomes. The findings revealed that digital transformation significantly impacts employee performance by influencing multiple aspects of work and productivity. The study highlights five key variables through which digital transformation can affect employee outcomes and suggests that understanding these relationships could help reshape workplace practices. It also contributes to the UAE's ambition to strengthen its position as a competitive and globally recognized business hub.

Nugroho, Fauzi, Firdaus and Marna (2024) investigated the role of digital technology adoption in improving organizational competitiveness and performance during the Industry 4.0 era. The study focused on manufacturing, retail, and service sectors in the Pangkalpinang region of Indonesia, where many organizations risk lagging behind in efficiency, productivity, and customer satisfaction if they fail to embrace digital transformation. Using a qualitative case study approach, the researchers conducted in-depth interviews with 15 operational managers and IT staff from companies that had implemented digital initiatives over the past five years. Findings showed that digital transformation significantly enhanced operational efficiency by up to 30 percent, increased employee productivity by 18 percent, and improved customer satisfaction by 22 percent in the retail and service sectors. In contrast, manufacturing firms faced challenges due to limited

technological infrastructure, which hindered optimal performance gains. The study concludes that while digital transformation positively influences operational outcomes, greater investment in infrastructure is crucial for maximizing benefits in manufacturing.

Suhari, Putra and Sain (2024) conducted a meta-analysis to examine how digital transformation affects organizational performance. Digital transformation was defined as an organizational change process that leverages digital technologies to enhance processes, business models, and organizational culture. The study reviewed 37 journal articles published between 2016 and 2023 to evaluate the overall impact. Results revealed that digital transformation has a positive and significant effect on organizational performance, leading to higher efficiency, improved productivity, and stronger competitiveness. Nonetheless, the relationship is not always straightforward; the degree of impact varies depending on several moderating factors. These include organization size, industry characteristics, cultural adaptability, market competitiveness, pace of technological change, and the organization's capability to manage digital initiatives effectively. The study highlights that organizations should carefully assess these factors when planning and implementing digital transformation. By aligning digital strategies with internal capabilities and external market conditions, firms can maximize the benefits and ensure sustainable performance improvements.

Al-Ayed, Al-Tit and Alashjaee (2023) examined how digital transformation influences organizational performance in Saudi Arabian companies, focusing on the mediating role of digital innovation. The study aimed to address the growing pressure on organizations to adapt to rapid technological change and evolving work environments in a competitive market. Using a survey of 170 employees from major Saudi telecommunication companies (STC, Zain, and Mobily), the researchers applied component-based partial least squares analysis to test their model. Findings revealed a strong relationship between digital transformation and organizational performance, with digital innovation serving as a key mediator. Social and technological aspects of digital transformation were found to significantly drive digital innovation, which in turn enhanced overall performance. The study recommends that large companies proactively embrace both digital transformation and digital innovation to improve competitiveness, adaptability, and efficiency across all organizational dimensions in response to the fast-changing technological landscape.

Theng, Wijaya, Juliana, Eddy and Putra (2021) investigated how transformational leadership, servant leadership, and digital transformation influence organizational performance and work innovation capabilities among small and medium enterprises (SMEs) in Tangerang City, Indonesia. Using a quantitative research design, the study analyzed data from 380 SMEs selected based on Morgan's sampling table out of a population of 41,155 SMEs. Structural Equation Modeling (SEM) with SmartPLS 3.0 software was employed to test the relationships between variables. The findings showed that transformational leadership significantly affects organizational performance but does not influence work innovation capabilities. Similarly, servant leadership positively impacts organizational performance but shows no significant effect on work innovation capabilities. Digital transformation was found to have no significant effect on either organizational performance or work innovation capabilities. Additionally, organizational

performance did not mediate the relationship between leadership styles or digital transformation and work innovation capabilities.

Orero-Blat, Palacios-Marqués, Leal-Rodriguez and Ferraris (2025) examined how digital transformation (DT) and big data analytics capabilities (BDAC) influence the performance of small and medium enterprises (SMEs) in Spain. Using a multi-methods approach grounded in the dynamic capabilities view, the study analyzed data from 183 SMEs across diverse sectors. It combined partial least squares structural equation modeling (PLS-SEM) and fuzzy-set qualitative comparative analysis (fsQCA) to provide both predictive and configurational insights. The findings revealed that simply investing in digital transformation does not guarantee improved performance; instead, organizations must create conditions that align DT with innovation and strengthen BDAC. BDAC plays a pivotal role in enabling SMEs to harness DT effectively and drive performance improvements. The study offered actionable guidance for managers on fostering innovation capabilities alongside DT investments and helps policymakers design strategies that support SME competitiveness through technology adoption and big data-driven innovation.

Ramadania, Hartijasti, Purmono, Haris, Muhammad and Afifi (2024) conducted a systematic literature review on digital transformation and organizational performance in higher education. Drawing on 183 publications from the Scopus database, the study mapped research trends, influential journals, active researchers, and core thematic areas within this field. Findings reveal a growing global interest in digital transformation in higher education, with notable geographical diversity and concentration in certain regions. The review identified dominant research areas such as technology adoption, digital strategy, institutional performance, and innovation in academic settings. It also highlights key contributors shaping the field. The study underscored the increasing importance of digital transformation for improving organizational performance in higher education and provides valuable direction for future research.

Pierre (2023) examined impact of digital transformation strategies on organizational performance in Cameroon's retail industry using a desktop research methodology based on secondary data from published studies, reports, and statistics. The study highlights that adopting digital technologies has significantly improved customer engagement, streamlined operations, enhanced inventory management, and increased sales, leading to greater profitability and competitiveness. Retailers implementing digital transformation also benefit from better market responsiveness and operational efficiency. It recommended that retailers form partnerships, participate in industry associations, and leverage knowledge-sharing platforms to overcome digital challenges. Regulatory bodies should encourage responsible data use to support personalization while ensuring privacy, creating a favorable environment for digital innovation and competitiveness in the retail sector.

Chouaibi, Festa, Quaglia and Rossi (2022) explored impact of digital transformation on organizational performance in Tunisia, focusing on both its benefits and associated risks within an emerging economy. Using data from 270 companies registered with the Institute of Arab Business Managers (IACE), the study applied linear regression analysis to test its hypotheses. Results indicated a growing interest in digital transformation as a means to enhance organizational

performance, particularly by improving efficiency, agility, and competitiveness. At the same time, the research highlights significant risks, including increased costs, technological complexity, and the need for specialized management competencies to fully realize the benefits. The study emphasized that while digital transformation can drive substantial performance gains, organizations must carefully assess risks and invest in advanced technology and skilled leadership to achieve sustainable success.

### 3.1 Methodology

This study employed a comprehensive literature-based research methodology utilizing a systematic review approach to examine the impact of digital transformation on organizational performance within the Taiwanese textile industry. The approach was selected for its ability to synthesize diverse evidence from peer-reviewed academic articles, industry reports, policy papers, and case studies relevant to Taiwan's textile sector and comparable manufacturing environments. Through systematically searching major academic databases and trade publications, the study identified, screened, and critically appraised studies published that addressed digital adoption, operational efficiency, innovation, and competitive performance.

### 4.1 Findings

The study revealed that digital transformation has significantly reshaped the operational and strategic landscape of Taiwanese textile firms. Many companies that adopted smart manufacturing systems, such as IoT-enabled machinery, robotics, and predictive analytics, reported notable gains in operational efficiency and cost control. Real-time machine monitoring and predictive maintenance reduced downtime and improved equipment utilization, while computer vision–based quality control decreased defect rates and production waste. Integrated enterprise resource planning (ERP) and supply chain platforms improved inventory visibility, optimized production schedules, and reduced overstocking costs. Firms leveraging big data analytics for demand forecasting became more responsive to market fluctuations, while those adopting digital platforms for collaboration improved supplier coordination and delivery reliability. Evidence from industry reports further suggested that companies advancing toward higher digital maturity achieved faster production cycles, more stable supply chains, and improved energy and resource utilization, directly strengthening their financial margins and market responsiveness.

Beyond operational improvements, digital transformation enabled product and market innovation that enhanced competitive positioning. Many Taiwanese textile manufacturers used computer-aided design (CAD) and 3D visualization tools to shorten product development time and meet fast-changing fashion trends. Digital printing allowed for cost-efficient customization and small-batch production, opening access to niche and premium markets. Firms combining digital design with consumer analytics introduced functional and smart fabrics — such as moisture-wicking, UV-protective, and sensor-embedded textiles — that differentiated them from low-cost competitors. At the strategic level, digital transparency, blockchain-enabled traceability, and sustainability reporting attracted global buyers seeking ethically sourced and environmentally responsible products. However, the findings also indicate persistent challenges: small and medium-sized enterprises faced high initial capital requirements, difficulty integrating legacy systems with new

technologies, and a shortage of digital talent, which slowed full-scale adoption. These mixed outcomes showed that while digital transformation can substantially elevate organizational performance in Taiwan's textile sector, its benefits remain unevenly distributed and depend strongly on leadership commitment, workforce readiness, and long-term investment capacity

### 5.1 Conclusion

This study concluded that digital transformation has emerged as a decisive driver of operational and competitive renewal within Taiwan's textile industry. Through integrating technologies such as IoT-enabled manufacturing, predictive analytics, ERP platforms, and digital design tools, many firms have achieved measurable improvements in production efficiency, cost management, and supply chain responsiveness. These technologies have shortened production cycles, enhanced quality control, and reduced downtime, while digital supply chain systems have improved agility and alignment with fast-changing consumer demand. Moreover, digital adoption has enabled product and service innovation, including customized textiles, functional fabrics, and smart apparel that appeal to global brands seeking advanced materials and verified sustainability. Companies that embrace digital transformation strategically aligning technology with organizational capabilities and market positioning have strengthened resilience, secured premium buyers, and increased profitability, positioning themselves to thrive in a highly competitive global environment.

Nevertheless, the findings also underscored that the journey toward full digital maturity is uneven and often challenging, particularly for small and medium-sized textile enterprises. High capital requirements for advanced machinery and ERP systems, difficulties in integrating legacy processes, and shortages of digital talent constrain adoption rates and limit the extent of realized performance gains. Leadership commitment, workforce training, and a supportive innovation culture were repeatedly highlighted as essential success factors. The analysis therefore calls for sustained investment in human capital development, targeted government incentives, and collaborative partnerships among manufacturers, technology providers, and academic institutions to bridge capability gaps. Without such systemic support, the industry risks creating a two-speed ecosystem in which digitally advanced firms excel while lagging enterprises face declining competitiveness and shrinking global market share

### 6.1 Recommendations

To sustain competitiveness and fully realize the benefits of digital transformation, Taiwanese textile firms should adopt a strategic and collaborative approach that combines technology investment with organizational capability building. Managers are encouraged to develop clear digital transformation roadmaps that align with long-term business objectives, prioritize scalable technologies such as IoT-enabled production systems and integrated ERP platforms, and embed robust change management to prepare employees for new digital workflows. Firms should invest in continuous workforce training to strengthen digital skills at all levels, from machine operators to senior managers, while fostering a culture that supports innovation and data-driven decision-making. Industry associations and large manufacturers can establish shared digital infrastructure — such as smart manufacturing hubs and blockchain-enabled traceability networks — to reduce

costs for smaller enterprises. Policymakers should complement these efforts by expanding financial incentives, tax credits, and low-interest technology loans for small and medium-sized enterprises, while funding partnerships between universities and manufacturers to bridge the digital talent gap. Technology providers, in turn, should design cost-effective and modular solutions suited to mid-sized textile firms. These combined initiatives would not only accelerate technology adoption but also ensure more equitable access to transformation benefits, safeguarding the long-term competitiveness and sustainability of Taiwan's textile sector

## References

Al-Ayed, S. I., Al-Tit, A. A., & Alashjaee, A. (2023). The effect of digital transformation on organizational performance by a mediating role of digital innovation. Migration Letters, 20(7), 380-394.

Bozkus, K. (2023). Organizational culture change and technology: Navigating the digital transformation. In Organizational Culture-Cultural Change and Technology. IntechOpen.

Chen, C. L. (2020). Cross-disciplinary innovations by Taiwanese manufacturing SMEs in the context of Industry 4.0. *Journal of Manufacturing Technology Management,* 31(6), 1145-1168.

Chen, J. Y., & Lin, C. H. (2022). Digital upgrading strategies and competitiveness of Taiwan's textile industry. *Journal of Asian Business and Economic Studies,* 29(4), 451–469. https://doi.org/10.1108/JABES-05-2021-0054

Chiu, S. C., Chen, C. Y., & Wang, Y. S. (2020). Sustainable supply chain initiatives in Taiwan's textile sector: Drivers, practices, and outcomes. Sustainability, 12(9), 3874. https://doi.org/10.3390/su12093874

Chou, D. C., & Lien, W. C. (2022). Overcoming legacy barriers in digital manufacturing: Lessons from Taiwan's SMEs. *International Journal of Production Research*, 60(12), 3781–3796. https://doi.org/10.1080/00207543.2021.1970326

Chouaibi, S., Festa, G., Quaglia, R., & Rossi, M. (2022). The risky impact of digital transformation on organizational performance–evidence from Tunisia. Technological Forecasting and Social Change, 178, 121571.

Hsu, C. L., & Wang, K. J. (2021). Digital transformation and firm performance: Evidence from Taiwanese manufacturing industries. Technological Forecasting and Social Change, 169, 120815. https://doi.org/10.1016/j.techfore.2021.120815

Huang, Y. S., & Lin, C. Y. (2021). 3D design and digital printing as enablers of product innovation in fashion textiles. Fashion and Textiles, 8(1), 1–18. https://doi.org/10.1186/s40691-021-00257-2

Islam, M. M., Mintoo, A. A., & Saimon, A. S. M. (2024). Enhancing textile quality control with iot sensors: A case study of automated defect detection. Int. J. Manag. Inf. Syst. Data Sci, 1, 19-30.

Kofler, I., Innerhofer, E., Marcher, A., Gruber, M., & Pechlaner, H. (2020). The future of high-skilled workers: regional problems and global challenges. Springer Nature.

Kshetri, N. (2022). Blockchain systems and ethical sourcing in the mineral and metal industry: a multiple case study. *The International Journal of Logistics Management*, 33(1), 1-27.

Lu, Y. H., & Lee, M. T. (2020). Smart manufacturing adoption and performance in Taiwan's textile industry: An IoT perspective. Computers & Industrial Engineering, 149, 106795. https://doi.org/10.1016/j.cie.2020.106795

Ministry of Economic Affairs (MOEA). (2021). Smart machinery development program annual report. Taipei: Taiwan MOEA. Retrieved from https://www.moea.gov.tw

Nakamura, T. (2024). The Impact of Digital Transformation on Organizational Performance in Japan. *International Journal of Strategic Management*, 3(3), 33 – 44. https://doi.org/10.47604/ijsm.2732

Nugroho, F., Fauzi, A. A., Firdaus, R., & Marna, M. (2024). The Role of Digital Transformation in Enhancing Organizational Performance in Multisectoral Industries. Jurnal Syntax Transformation, 5(11), 1263-1272.

Orero-Blat, M., Palacios-Marqués, D., Leal-Rodriguez, A. L., & Ferraris, A. (2025). Beyond digital transformation: a multi-mixed methods study on big data analytics capabilities and innovation in enhancing organizational performance. Review of Managerial Science, 19(2), 649-685.

Pierre, J. (2023). Impact of Digital Transformation Strategies on Organizational Performance in the Retail Industry in Cameroon. Int. J. Strat. Manage, 2, 38-48.

Ramadania, R., Hartijasti, Y., Purmono, B. B., Haris, N., Muhammad, D., & Afifi, M. Z. (2024). A Systematic Review on Digital Transformation and Organizational Performance in Higher Education. *International Journal of Sustainable Development & Planning*, 19(4).

Shwedeh, F., Aburayya, A., & Mansour, M. (2023). The impact of organizational digital transformation on employee performance: A study in the UAE. Migration Letters, 20(S10), 1260-1274.

Suhari, I. R. P., Putra, A., & Sain, M. (2024). The effect of digital transformation on organizational performance; a meta-analysis. *DiE Jurnal Ilmu Ekonomi dan Manajemen*, *15*(1), 50-65.

Theng, B. P., Wijaya, E., Juliana, J., Eddy, E., & Putra, A. S. (2021). The role of transformational leadership, servant leadership, digital transformation on organizational performance and work innovation capabilities in digital era. JPPI (Jurnal Penelitian Pendidikan Indonesia), 7(2), 225-238.

Tsai, W. H., & Chang, J. C. (2020). Organizational culture and digital readiness: A study of Taiwanese textile manufacturers. *Asia Pacific Journal of Innovation and Entrepreneurship*, 14(3), 291–308. https://doi.org/10.1108/APJIE-03-2020-0035

Vial, G. (2019). Understanding digital transformation: A review and a research agenda. *The Journal of Strategic Information Systems*, 28(2), 118–144. https://doi.org/10.1016/j.jsis.2019.01.003

Wang, Y. H., Hsieh, Y. C., & Hung, C. Y. (2022). Supply chain digitalization and agility: Evidence from Taiwan's textile industry. Supply Chain Management: *An International Journal*, 27(6), 745–763. https://doi.org/10.1108/SCM-09-2021-0372