INTERNATIONAL JOURNAL OF ACADEMIC RESEARCH IN BUSINESS & SOCIAL SCIENCES

Vol 15, Issue 12, (2025) E-ISSN: 2222-6990

Digital Transformation and Sustainable Performance in Chinese Manufacturing: A Systematic Review

Tang Lin[1*], Norhayati Zakuan[2] and Mohd Zulfabli Hasan[3]

[1*,2,3]Faculty of Management, Universiti Teknologi Malaysia, Johor, Malaysia

Email: cannonlin713@gmail.com

[1*]Corresponding Authors Email: lin20@graduate.utm.my

DOI Link: http://dx.doi.org/10.6007/IJARBSS/v15-i12/27260

Published Date: 18 December 2025

Abstract

This study systematically reviews literature published between 2022 and 2025 on digital transformation in China's manufacturing sector, focusing on its impact on sustainable performance. This paper analyzed 52 Web of Science articles across four disciplines to identify critical success factors in digital transformation. Our findings reveal five key dimensions: digital capabilities, digital technology application, digital strategy, product value adding and information system analysis. The review highlights promising developments in circular energy systems, big data-driven sustainable performance, consumer empowerment and value co-creation, circular economy practices, sustainable consumption initiatives, and socially responsible business models. However, it also uncovers significant barriers, such as rising e-waste, increased energy use and carbon emissions, a widening digital divide, job insecurity, market monopolization, and data privacy risks that threaten sustainable development outcomes. To realize the sustainable performance potential of digital transformation, Chinese manufacturers must proactively address these challenges. By applying a rigorous methodology and offering a comprehensive synthesis of recent findings, this study contributes to digital management literature and advances understanding of how digital transformation strategies can enhance corporate sustainable performance in China's manufacturing industry.

Keywords: Digital Transformation, Sustainable Performance, Opportunistic, Challenges

Introduction

The global manufacturing industry faces mounting sustainable performance (SP) challenges: environmental degradation, resource depletion, and climate change which driven by rapid industrialization, particularly in China, which significantly contributes to global emissions (Wang & Wang, 2020). The fusion of digital economies with traditional manufacturing is shifting production paradigms by optimizing resource utilization and enhancing environmental performance (Wang et al., 2022). As a result, digital transformation has

become a strategic imperative for manufacturers seeking SP and operational resilience, deploying technological innovations to improve life quality, environmental safeguards, and economic outcomes (Raihan, 2023; Si et al., 2023). Current scholarship in China emphasizes two core dimensions: digital capability and technology and their effects on SP, defined via the triple bottom line encompassing economic, environmental, and social outcomes (Xu & Xu, 2023). Digital capabilities enable the shift from traditional to data-driven production, supporting eco-innovation and SP goals, while digital technologies drive green innovation, enhancing quality of life and commercial performance (Su & Wu, 2024). However, beyond these, considerations of digital strategy, information sharing, privacy, and cybersecurity are increasingly critical (Oubrahim et al., 2023). Therefore, China's manufacturing sector must balance digital transformation with SP, addressing obstacles such as emissions, resource inefficiency, and digital risks (Zhang & Jin, 2023).

Due to limited integrative reviews on DT-SP in the Chinese manufacturing context so that study employs a comprehensive systematic literature review to explore the symbiotic relationship between DT and SP in Chinese manufacturing, spotlighting both opportunities (e.g., green innovation, energy efficiency, product and infrastructure optimization) and challenges. It anticipates that digital transformation trajectories among Chinese firms will advance product innovation, entrepreneurial activity, regional economic development, infrastructure efficiency, resource utilization, emission reduction, and green development (Allal-Chérif et al., 2023). By synthesizing current knowledge and identifying future research directions, this research equips stakeholders to integrate digital technologies into sustainable strategic frameworks and strengthens understanding of digital transformation dynamics in China's manufacturing industry.

Theoretical Background

Digitalization refers to applying digital technologies across business, societal, and economic contexts (Proksch et al., 2024). In organizational settings, digital transformation (DT) entails adopting emerging technologies: artificial intelligence (AI), blockchain, the Internet of Things (IoT), and cloud computing to enhance customer experiences, optimize operations, and develop innovative business models (Yang et al., 2023). As a disruptive innovation, DT has the potential to augment and transform traditional practices (Alrawadieh et al., 2021). Yet, some scholars question whether organizations truly undergo paradigm-level transformation, or instead merely integrate new technologies into existing routines, casting DT more as an evolutionary adoption than a revolution. This theoretical debate remains unresolved in the literature (Alrawadieh et al., 2021). However, it is a complex, strategic process that decision-makers must navigate carefully due to the rapid pace of technological change and the uncertainty it introduces (Warner & Wäger, 2019). Modern DT involves deploying digital tools strategically to add value in products and services. Platforms such as social media, search analytics, and network infrastructure enhance stakeholder engagement and foster user-centric capabilities (Asif et al., 2024). Behind the scenes, integration across internal and external processes requires decisive leadership and robust strategies, promoting cross-departmental alignment and systematic information flows (Toșa et al., 2024). Because of digitalization's dynamic complexity, organizations must systematically evaluate and adapt their strategies, making DT a strategic imperative in aligning technology with core business processes (Wen et al., 2022). Specifically, AI and big data analytics have become central to corporate growth, enabling actionable insights from expansive datasets and accelerating

innovation in offerings and business models (Rajput et al., 2023). Corporate digitalization yields multidimensional benefits, catalyzing economic growth, innovation acceleration, and holistic development. One key advantage is enhanced knowledge generation and dissemination, enriching organizational learning, adaptive capacity, innovative collaboration, and value creation (Yao & Sun, 2023). Furthermore, DT supports institutional expansion and operational efficiency improvements through technological deployment, process optimization, and elevated decision-making (Hao et al., 2023). Advanced information systems streamline communication, promote leadership collaboration, and expedite decisions. Additionally, DT has diversified career pathways in fields such as technological innovation, digital marketing, and e-commerce. Figure 1 illustrates the core factor drivers of DT, demonstrating its catalytic function in organizational evolution.

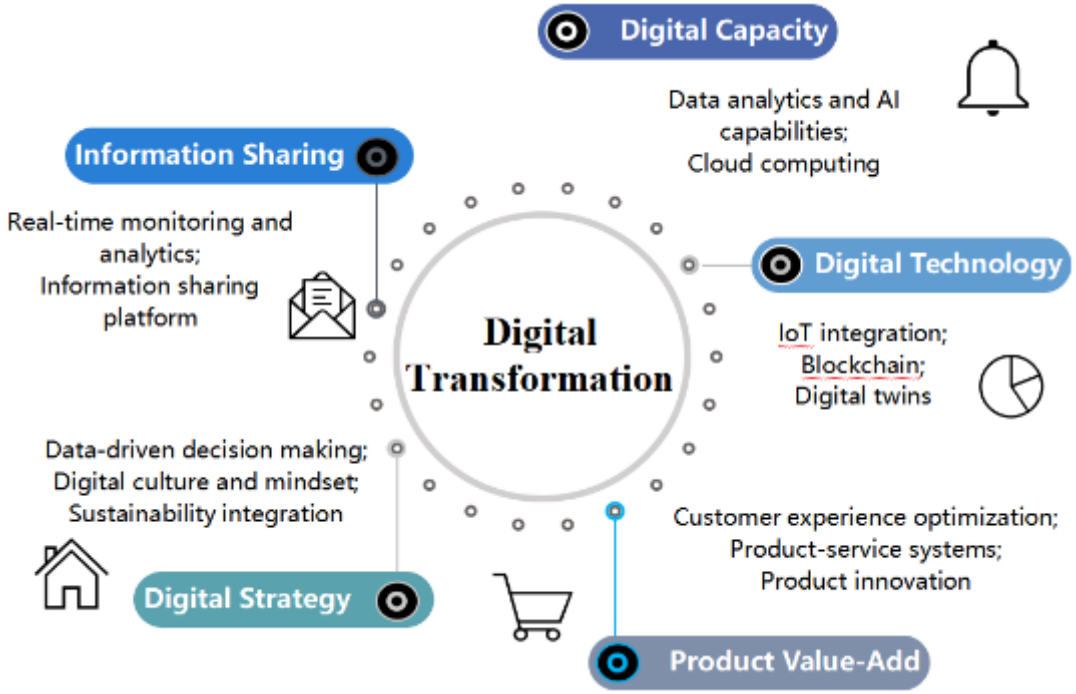

Figure 1. The Key Factor of Digital Transformation

In recent decades, sustainable performance (SP) has emerged as a global imperative, driven by environmental challenges and framed by the United Nations' 2030 Agenda for Sustainable Development (Raihan, 2023). Elkington's "triple bottom line" (TBL) framework, which encompassing economic, social, and environmental dimensions, underpins assessments of SP (Breuer et al., 2023). Environmental SP emphasizes conserving natural capital: water, biodiversity, soil, and air, within Earth's carrying capacity and supporting ecosystem resilience (Xie et al., 2023). Social SP involves equity, justice, human rights, cultural pluralism, resilient infrastructure, inclusive economic growth, and participatory governance (Santos, 2023; Tseng et al., 2023). Economic SP focuses on wealth creation, optimized resource allocation, longitudinal stability, resilience, and improved social welfare (Xu & Xu, 2023). These dimensions synergistically advance sustainable development by addressing societal challenges such as poverty (Raihan & Bari, 2024) and require multi-stakeholder collaboration among governments, businesses, and civil society (Baranauskas & Raišienė, 2022). DT can foster SP by optimizing resource use, reducing emissions, and enhancing transparency. For example, Cheng et al. (2023) demonstrate how IoT-driven energy

monitoring significantly lowers waste. However, other studies note the significant energy consumption of digital infrastructures particularly in data centers can negate some sustainability gains unless green IT practices are adopted. This tension highlights that DT's environmental payoff is contingent, rather than guaranteed. Digital systems generate actionable data that support regulatory compliance and renewables adoption (Al-Emran & Griffy-Brown, 2023). In manufacturing, product, process, and technological innovation drive supply chain efficiency and waste reduction. IoT enables real-time energy monitoring, improving resource management, while digital strategies promote circular economy models encompassing remanufacturing, refurbishment, and recycling to extend product life and minimize waste (Cheng et al., 2023). In China's manufacturing sector, the world's largest DT has been propelled by initiatives such as "Made in China 2025," which emphasizes technological autonomy, environmental stewardship, and innovation (Liang & Chen, 2024). IoT, AI, and big data support real-time monitoring, predictive maintenance, emissions reduction, and supply chain optimization in smart factories (Khan et al., 2024). Government incentives, including tax breaks, subsidies, industrial clusters, and innovation hubs, support this transformation, particularly within innovation hubs like the Greater Bay Area (Li et al., 2021). Although disparities persist across regions, this strategic DT approach holds promise for sustainable development and enhanced global competitiveness.

Research Methodology

This study employs a systematic literature review (SLR) framework based on Tawfik et al. (2019), targeting digital transformation (DT) and sustainable performance (SP) within China's manufacturing sector. We conducted four phases: strategic journal selection, Web of Science search, bidirectional citation refinement, and qualitative evaluation (Paré et al., 2016), narrowing 1,046 initial records to 52 core articles. Subsequently, we applied a reflexive thematic analysis using Braun & Clarke's six-phase model familiarization, coding, theme development, refinement, naming, and reporting which offers a flexible, systematic approach to pattern identification. Independently coded 20% of the corpus in NVivo using both deductive (framework-driven) and inductive (emergent) approaches, generating initial codes like "resource efficiency," "leadership alignment," and "emissions reduction."Codes were iteratively grouped into candidate themes such as "Process Optimization," "Digital Leadership," and "Environmental Metrics" through thematic mapping and tracked via audit logs and reflexive memos to ensure transparency and analytic rigor. Finally, themes were narratively synthesized across economic, environmental, and social SP dimensions, comparing technologies and contexts, and highlighting both convergences and trade-offs (e.g., emissions reduction vs. energy use) yielding a nuanced understanding of DT's role in sustainable manufacturing. Figure 2 shows the entire literature selection process.

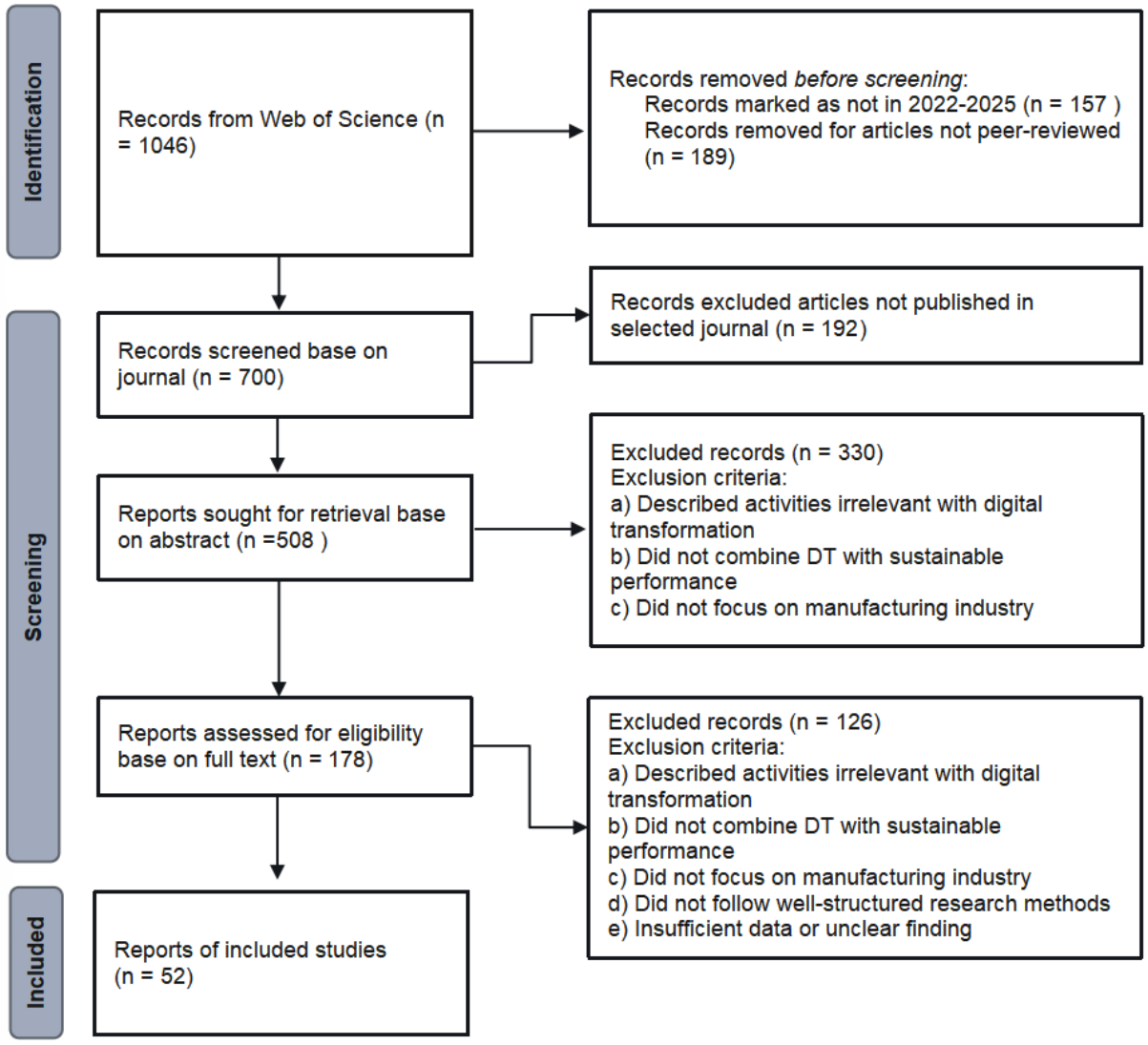

Figure 2. Literature Selection Process

Opportunities

Digital transformation (DT) presents substantial opportunities to foster innovation, enhance collaboration, and empower stakeholders in driving sustainable development (Martínez-Peláez et al., 2023). In light of global challenges such as climate change and inequality, leveraging digital initiatives is imperative to establish sustainable frameworks (Jain et al., 2023). As shown in Figure 3.

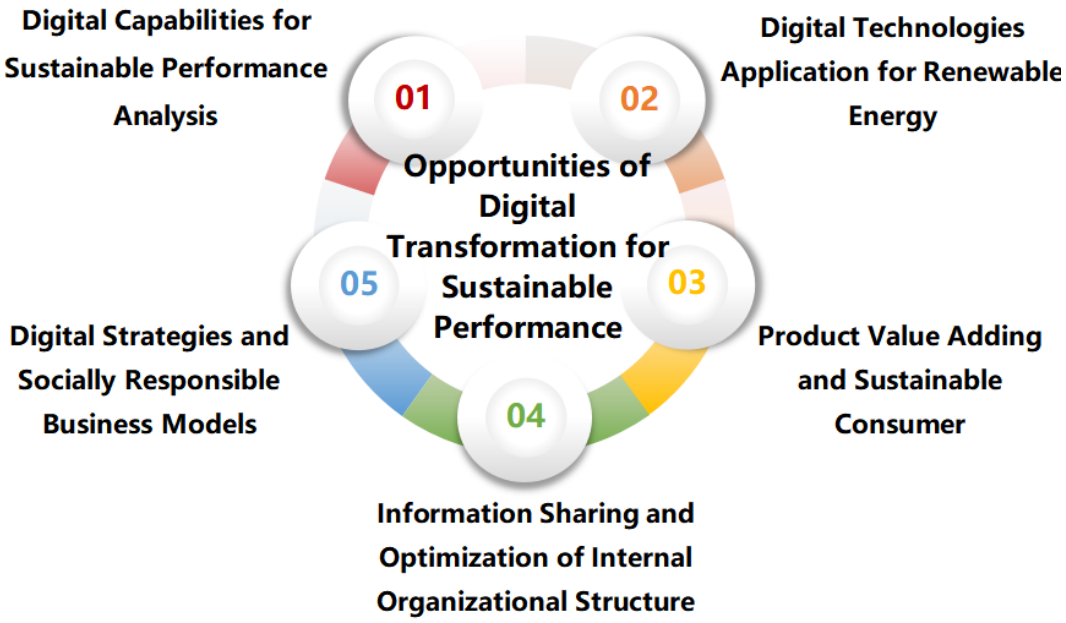

Figure 3. The Potential Opportunities of Digital Transformation for Sustainable Performance

Big Data & Analytics Capabilities

Big data and analytics enable organizations to collect, analyse, and act on large volumes of data, facilitating informed decision-making (Bharadiya, 2023). These digital capabilities drive sustainable development by monitoring environmental metrics such as greenhouse gas emissions, energy use, and water consumption. A meta-analysis confirms that big data significantly supports green innovation, supply chain optimization, and emission reductions. Consequently, firms can target areas for efficiency gains, resource conservation, and renewable energy adoption.

Digital Technologies & Renewable Energy

Digital tools are transforming renewable energy by offering real-time monitoring and precise control of production facilities. Smart grids, enabled by IoT and analytics, optimize energy distribution and promote responsible consumption (Mohsen, 2023). Innovations like 3D printing further reduce waste through on-demand manufacturing, while sharing and leasing platforms, aligned with circular economy principles, encourage sustainable consumption patterns (Wang et al., 2023).

Product Value and Consumer Engagement

Advances in mobile technology have enhanced consumer digital literacy and sophistication (Gonçalves & Patrício, 2022). Greater consumer awareness promotes the selection of sustainable products, intensifies market competition, and drives co-created innovation (Henriques et al., 2023). When consumers actively contribute to product development, brands gain insights that improve SP, foster loyalty, and build trust.

Digitally Enabled Responsibility

In today's knowledge economy, digital strategies are critical for social integration and social responsibility. Businesses embed environmental and social criteria into decision-making processes, responding to consumer demands and regulatory scrutiny (Abbate et al., 2023).

Digital platforms enhance transparency and accountability, enabling comprehensive monitoring and reporting of SP.

Information Sharing & Organizational Optimization

Digital systems like IoT, cloud computing, and analytics facilitate seamless intra-organizational data exchange, improving coordination and resource allocation (Vrchota et al., 2020). For example, Shanghai Electric uses IoT-driven platforms for intelligent energy management, significantly reducing emissions. Similarly, Gree Electric leverages data analytics to streamline production and minimize waste. Nevertheless, challenges such as data silos and cultural resistance require investment in infrastructure and DT strategies (Sun & Guo, 2022).

Challenges

Digital transformation (DT) rapid digital infrastructure expansion especially energy-hungry data centers pose major sustainability challenges. These facilities consume about 3% of global electricity and generate significant greenhouse gas emissions, with AI workloads accelerating demand. As shown in Figure 4.

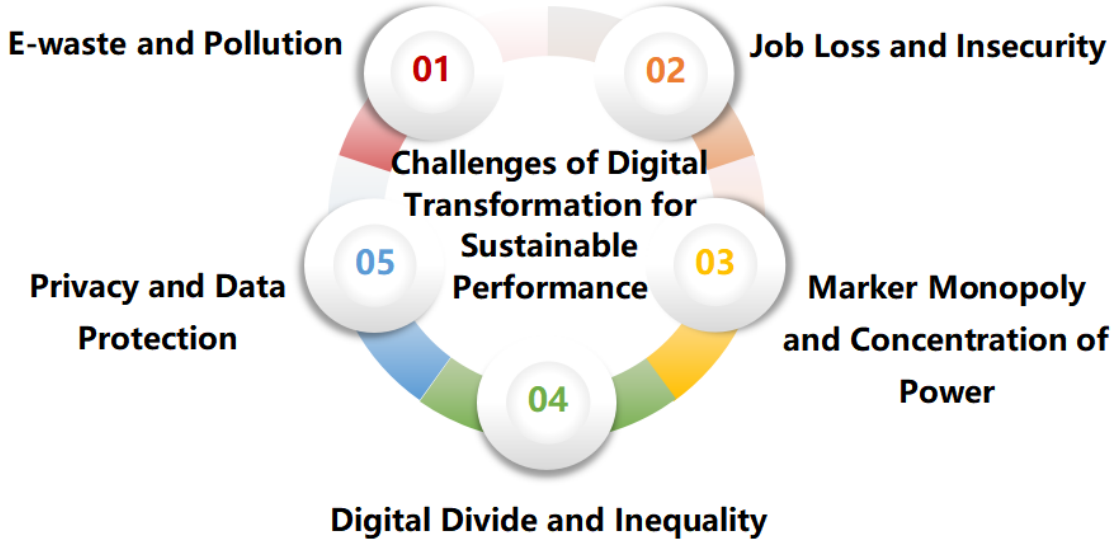

Figure 4. The Potential Challenges of Digital Transformation for Sustainable Performance

E-Waste and Pollution

The rapid pace of digitalization has led to an exponential increase in electronic waste, particularly in developing countries lacking proper e-waste management infrastructure (Ghulam & Abushammala, 2023). Hazardous disposal practices such as open-air burning, acid leaching, and transboundary dumping release toxic substances—including mercury, lead, cadmium, and flame retardants—into ecosystems, posing serious risks to soil, water, air quality, and human health. Studies confirm that residents in e-waste hubs exhibit elevated heavy metal levels, leading to neurotoxic and respiratory issues among vulnerable populations. The urgent need to implement comprehensive recycling systems is evident to mitigate these environmental and health impacts and conserve resources (Andeobu et al., 2023).

Job Loss and Insecurity

Automation driven by DT displaces labor, particularly in manufacturing and agriculture, where routine roles are most affected (Mason et al., 2023). For instance, estimates suggest that productivity gains may lead to 1.6–3.2 million U.S. job losses in two decades due to AI and robotics. Simultaneously, surveys indicate that 12–19% of current jobs are at high risk of automation. Addressing this requires proactive workforce reskilling, upskilling programs, and integration of remote work strategies (Wach et al., 2023).

Market Monopoly and Power Concentration

Digital platforms benefit from network effects, allowing a few dominant firms to capture markets, suppress competition, and reduce innovation. Such concentration undermines product diversity, consumer choice, and corporate accountability in sustainability, while generating ethical risks through algorithm manipulation and data exploitation (Wen et al., 2022b). Regulatory tools—such as interoperability standards, competition law enforcement, and consumer protections—are essential to rebalance market power.

Digital Divide and Inequality

Despite its democratizing potential, DT has widened the digital divide. Global connectivity remains unequal, with only 27–35% internet penetration in low-income and least-developed countries, compared to over 80% in high-income nations. This divide limits access to education, economic opportunities, and healthcare for underserved communities (Vassilakopoulou & Hustad, 2023). Bridging this gap requires investments in affordable broadband, device access, digital literacy, and inclusive policies.

Privacy and Data Protection

The proliferation of digital platforms entails extensive personal data collection, raising privacy and security concerns (Hackfort, 2023). Frequent data breaches and unauthorized data commercialization erode public trust and hinder sustainable practice adoption (Li et al., 2023). Strong privacy frameworks, transparent governance, and stakeholder education are essential to protect data, build trust, and foster responsible DT aligned with sustainability goals.

Conclusions

This research investigates the intricate relationship between digital transformation (DT) initiatives and organizational sustainable performance (SP), particularly within China's manufacturing sector, revealing clear synergies where digital capital enhances renewable energy infrastructure (e.g., solar and wind), fuels product and service innovation, and refines management through data-driven strategies, while enabling transparent consumer-facing sustainability practices. Notably, empirical findings show that digital transformation improves ESG responsibility in Chinese manufacturers, and AI-assisted IoT systems within green supply chains significantly reduce carbon emissions. Integrating DT has been shown to boost manufacturing SP. To capitalize on these benefits and offset persistent challenges, Chinese policymakers and manufacturing managers must act strategically. Policymakers should design digital–green incentive mechanisms aligned with programs like Made in China 2025 and Internet Plus, invest in shared cloud and industrial IoT infrastructure to support SMEs and eco-industrial parks, and mandate standardized digital sustainability KPIs supported by compliance frameworks such as Corporate Digital Responsibility. Meanwhile, manufacturing managers should operationalize DT by embedding AI and IoT into production lines to optimize

energy efficiency and emissions, implement integration DT to reduce waste and enhance quality, monitor real-time digital sustainability KPIs, and fortify IP structures to secure returns on green digital R&D. Addressing data security and workforce transition via reskilling programs will be critical. Methodologically, this study's reliance on Web of Science suggests that future research should broaden bibliographic sources (e.g., Scopus, ScienceDirect), diversify keywords beyond "DT for SP," and explore mediating factors like dynamic capabilities, human–AI collaboration, and green digital innovation. Longitudinal and comparative studies assessing policy effectiveness, regulatory frameworks, and operational excellence models will further elucidate pathways toward high-quality, sustainable manufacturing in China and beyond.

References

Abbate, S., Centobelli, P., & Cerchione, R. (2023). From fast to slow: An exploratory analysis of circular business models in the Italian apparel industry. International Journal of Production Economics, 260, Article 108824. https://doi.org/10.1016/j.ijpe.2022.108824

Al-Emran, M., & Griffy-Brown, C. (2023). The role of technology adoption in sustainable development: Overview, opportunities, challenges, and future research agendas. Technology in Society, 73, Article 102240. https://doi.org/10.1016/j.techsoc.2023.102240

Allal-Chérif, O., Climent, J. C., & Berenguer, K. J. U. (2023). Born to be sustainable: How to combine strategic disruption, open innovation, and process digitization to create a sustainable business. Journal of Business Research, 154, Article 113379. https://doi.org/10.1016/j.jbusres.2022.113379

Alrawadieh, Z., Alrawadieh, Z., & Cetin, G. (2021). Digital transformation and revenue management: Evidence from the hotel industry. Tourism Economics, 27, 328–345. https://doi.org/10.1177/1354816620905969

Andeobu, L., Wibowo, S., & Grandhi, S. (2023). Environmental and health consequences of e-waste dumping and recycling carried out by selected countries in Asia and Latin America. Sustainability, 15(13), 10405. https://doi.org/10.3390/su151310405

Asif, M., Yang, L., & Hashim, M. (2024). The role of digital transformation, corporate culture, and leadership in enhancing corporate sustainable performance in the manufacturing sector of China. Sustainability, 16(7), Article 2651. https://doi.org/10.3390/su16072651

Baranauskas, G., & Raišienė, A. G. (2022). Transition to digital entrepreneurship with a quest of sustainability: Development of a new conceptual framework. Sustainability, 14(3), 1104. https://doi.org/10.3390/su14031104

Bharadiya, J. P. (2023). A comparative study of business intelligence and artificial intelligence with big data analytics. American Journal of Artificial Intelligence, 7(1), 24–30. https://doi.org/10.11648/j.ajai.20230701.14

Breuer, A., Leininger, J., Malerba, D., & Tosun, J. (2023). Integrated policymaking: Institutional designs for implementing the Sustainable Development Goals (SDGs). World Development, 170, Article 106317. https://doi.org/10.1016/j.worlddev.2023.106317

Cheng, S., Fan, Q., & Huang, M. (2023). Strategic orientation, dynamic capabilities, and digital transformation of commercial banks: A fuzzy-set QCA approach. Sustainability, 15(3), 1915. https://doi.org/10.3390/su15031915

Ghulam, S. T., & Abushammala, H. (2023). Challenges and opportunities in the management of electronic waste and its impact on human health and environment. Sustainability, 15, Article 1837. https://doi.org/10.3390/su15041837

Gonçalves, L., & Patrício, L. (2022). From smart technologies to value cocreation and customer engagement with smart energy services. Energy Policy, 170, Article 113249. https://doi.org/10.1016/j.enpol.2022.113249

Hackfort, S. (2023). Unlocking sustainability? The power of corporate lock-ins and how they shape digital agriculture in Germany. Journal of Rural Studies, 101, Article 103065. https://doi.org/10.1016/j.jrurstud.2023.103065

Hao, X., Wang, X., Wu, H., & Hao, Y. (2023). Path to sustainable development: Does digital economy matter in manufacturing green total factor productivity? Sustainable Development, 31, 360–378. https://doi.org/10.1002/sd.2364

Henriques, R., Figueiredo, F., & Nunes, J. (2023). Product-services for a resource-efficient and circular economy: An updated review. Sustainability, 15, Article 12077. https://doi.org/10.3390/su150912077

Jain, H., Dhupper, R., Shrivastava, A., Kumar, D., & Kumari, M. (2023). AI-enabled strategies for climate change adaptation: Protecting communities, infrastructure, and businesses from the impacts of climate change. Computational Urban Science, 3, Article 25. https://doi.org/10.1007/s43762-023-00025-0

Khan, M. B., Ahmed, S., Rehman, M. U., & Saghar, K. (2024). Blockchain technology in supply chain management: Enhancing transparency and efficiency. Journal of Management & Educational Research Innovation, 2, 50–64. 10.4236/oalib.1112874

Li, M., Liu, N., Kou, A., & Chen, W. (2023). Customer concentration and digital transformation. International Review of Financial Analysis, 89, Article 102788. https://doi.org/10.1016/j.irfa.2023.102788

Li, W., Wang, L., Li, Y., & Liu, B. (2021). A blockchain-based emissions trading system for the road transport sector: Policy design and evaluation. Climate Policy, 21, 337–352. https://doi.org/10.1080/14693062.2020.1843656

Liang, P., & Chen, Y. (2024). Effects and mechanisms of higher education development on intelligent productivity advancement: An empirical analysis of provincial panel data in China. Sustainability, 16, Article 11197. https://doi.org/10.3390/su161811197

Martínez-Peláez, R., Ochoa-Brust, A., Rivera, S., Félix, V. G., Ostos, R., Brito, H., Félix, R. A., & Mena, L. J. (2023). Role of digital transformation for achieving sustainability: Mediated role of stakeholders, key capabilities, and technology. Sustainability, 15, Article 11221. https://doi.org/10.3390/su150811221

Mason, A., Haidegger, T., & Alvseike, O. (2023). Time for change: The case of robotic food processing [Industry activities]. IEEE Robotics & Automation Magazine, 30(2), 116–122. https://doi.org/10.1109/MRA.2023.00012

Mohsen, B. M. (2023). Developments of digital technologies related to supply chain management. Procedia Computer Science, 220, 788–795. https://doi.org/10.1016/j.procs.2023.03.105

Oubrahim, I., Sefiani, N., & Happonen, A. (2023). The influence of digital transformation and supply chain integration on overall sustainable supply chain performance: An empirical analysis from manufacturing companies in Morocco. Energies, 16(2), Article 1004. https://doi.org/10.3390/en16021004

Paré, G., Tate, M., Johnstone, D., & Kitsiou, S. (2016). Contextualizing the twin concepts of systematicity and transparency in information systems literature reviews. European Journal of Information Systems, 25, 493–508. https://doi.org/10.1057/ejis.2015.45

Paré, G., Trudel, M.-C., Jaana, M., & Kitsiou, S. (2015). Synthesizing information systems knowledge: A typology of literature reviews. Information & Management, 52, 183–199.

https://doi.org/10.1016/j.im.2014.08.008

Proksch, D., Rosin, A. F., Stubner, S., & Pinkwart, A. (2024). The influence of a digital strategy on the digitalization of new ventures: The mediating effect of digital capabilities and a digital culture. Journal of Small Business Management, 62(1), 1–29. https://doi.org/10.1080/00472778.2021.1883036

Raihan, A. (2023). Nexus between greenhouse gas emissions and its determinants: The role of renewable energy and technological innovations towards green development in South Korea. Innovation and Green Development, 2(3), Article 100066. https://doi.org/10.1016/j.igd.2023.100066

Raihan, A., & Bari, A. M. (2024). Energy-economy-environment nexus in China: The role of renewable energies toward carbon neutrality. Innovation and Green Development, 3, Article 100139. https://doi.org/10.1016/j.igd.2024.100139

Rajput, N., Garg, V., Jyotsna, & Varmani, S. G. (2023). International production and digital economy. In Industry 4.0 and the digital transformation of international business. Springer. 10.1007/978-981-19-7880-7_11

SantQs, E. (2023). From neglect to progress: Assessing social sustainability and decent work in the tourism sector. Sustainability, 15, Article 10329. https://doi.org/10.3390/su151610329

Si, S., Hall, J., Suddaby, R., Ahlstrom, D., & Wei, J. (2023). Technology, entrepreneurship, innovation and social change in digital economics. Technovation, 119, Article 102484. https://doi.org/10.1016/j.technovation.2022.102484

Su, Y., & Wu, J. (2024). Digital transformation and enterprise sustainable development. Finance Research Letters, 60, Article 104902. https://doi.org/10.1016/j.frl.2023.104902

Sun, S., & Guo, L. (2022). Digital transformation, green innovation and the Solow productivity paradox. PLoS ONE, 17(7), e0270928. https://doi.org/10.1371/journal.pone.0270928

Tawfik, G. M., Dila, K. A. S., Mohamed, M. Y. F., Tam, D. N. H., Kien, N. D., Ahmed, A. M., … Huy, N. T. (2019). A step-by-step guide for conducting a systematic review and meta-analysis with simulation data. Tropical Medicine & Health, 47, Article 46. https://doi.org/10.1186/s41182-019-0165-6

Toșa, C., Paneru, C. P., Joudavi, A., & Tarigan, A. K. (2024). Digital transformation, incentives, and pro-environmental behaviour: Assessing the uptake of sustainability in companies' transition towards circular economy. Sustainable Production and Consumption, 47, 632–643. https://doi.org/10.1016/j.spc.2023.12.012

Tseng, M.-L., Li, S.-X., Lin, C.-W. R., & Chiu, A. S. (2023). Validating green building social sustainability indicators in China using the fuzzy Delphi method. Journal of Industrial and Production Engineering, 40(1), 35–53. https://doi.org/10.1080/21681015.2022.2070934

Tseng, M.-L., Li, S.-X., Lin, C.-W. R., & Chiu, A. S. (2023). Validating green building social sustainability indicators in China using the fuzzy Delphi method. Journal of Industrial and Production Engineering, 40, 35–53. https://doi.org/10.1080/21681015.2022.2070934

Vassilakopoulou, P., & Hustad, E. (2023). Bridging digital divides: A literature review and research agenda for information systems research. Information Systems Frontiers, 25(3), 955–969. https://doi.org/10.1007/s10796-020-10096-3

Vial, G. (2021). Understanding digital transformation: A review and a research agenda. In Managing Digital Transformation (pp. 13–66). Emerald Publishing. https://doi.org/10.1016/j.jsis.2019.01.003

Vrchota, J., Pech, M., Rolinek, L., & Bednář, J. (2020). Sustainability outcomes of green

processes in relation to Industry 4.0 in manufacturing: Systematic review. Sustainability, 12(15), Article 5968. https://doi.org/10.3390/su12155968

Wach, K., Duong, C. D., Ejdys, J., Kazlauskaitė, R., Korzynski, P., Mazurek, G., Paliszkiewicz, J., & Ziemba, E. (2023). The dark side of generative artificial intelligence: A critical analysis of controversies and risks of ChatGPT. Entrepreneurial Business and Economics Review, 11(1), 7–30. https://doi.org/10.15678/EBER.2023.1101.01

Wang, Q., & Wang, S. (2020). Why does China's carbon intensity decline and India's carbon intensity rise? A decomposition analysis on the sectors. Journal of Cleaner Production, 265, Article 121569. https://doi.org/10.1016/j.jclepro.2020.121569

Wang, Y., Yang, Y., Qin, Z., Yang, Y., & Li, J. (2023). A literature review on the application of digital technology in achieving green supply chain management. Sustainability, 15, Article 8564. https://doi.org/10.3390/su15098564

Warner, K. S., & Wäeger, M. (2019). Building dynamic capabilities for digital transformation: An ongoing process of strategic renewal. Long Range Planning, 52, 326–349. https://doi.org/10.1016/j.lrp.2018.12.001

Wen, H., Zhong, Q., & Lee, C.-C. (2022a). Digitalization, competition strategy and corporate innovation: Evidence from Chinese manufacturing listed companies. International Review of Financial Analysis, 82, Article 102166. https://doi.org/10.1016/j.irfa.2022.102166

Xie, H., Chang, S., Wang, Y., & Afzal, A. (2023). The impact of e-commerce on environmental sustainability targets in selected European countries. Economic Research–Ekonomska istraživanja, 36(1), 230–242. https://doi.org/10.1080/1331677X.2022.2117718

Xu, X., & Xu, R. (2023). Role of green financing and stability in the development of green resources in China. Resources Policy, 85, Article 103954. https://doi.org/10.1016/j.resourpol.2023.103954

Yang, M., Chen, L., Wang, J., Msigwa, G., Osman, A. I., Fawzy, S., Rooney, D. W., & Yap, P.-S. (2023). Circular economy strategies for combating climate change and other environmental issues. Environmental Chemistry Letters, 21, 55–80. https://doi.org/10.1007/s10311-022-01545-x

Zhang, Y., & Jin, S. (2023). How does digital transformation increase corporate sustainability? The moderating role of top management teams. Systems, 11(7), Article 355. https://doi.org/10.3390/systems11070355