

Model of Digital Transformation in China's Tourism Industry

Chen Keshu^{1*}, Embun Suryani²

University of Mataram

Corresponding Author: Chen Keshu chenkeshu1989@163.com

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ABSTRACT

Digital transformation has been excessively applied in promoting the effectiveness and efficiency of the tourism industry. Despite being valuable tools, suitable models of technology should be considered to support the sector's development. This study aims to investigate the models of digital transformation utilized by China to promote its tourism industry. The researcher ensured the validity of the data sources by collecting thirty-three articles from indexed journal databases such as Scopus, ProQuest, and Springer. The data sources were subsequently analyzed using content analysis, which began with coding to sort the data, categorize data into functional themes or groups, reduce data to distil substantial content into patterns or themes, interpret the identified patterns to derive conclusions that address the research questions, and validate to confirm the research's reliability and validity, ensuring the accuracy and consistency of the coding rules. This study found four primary digital transformation models to achieve the industry's goals: digital technology, digital finance, digital expertise, and big data. These models are considered not only necessary but also crucial models for the industry. This study recommends searching for other appropriate digital tools for different industries

INTRODUCTION

In today's world, the tourism industry is experiencing a significant transition from conventional operational models to digitalization and intelligence, which has brought about significant transformative forces (Barykin et al., 2021). A plethora of new tourism formats and job positions have been created, including big data tourism analysts, innovative tourism solution designers, online tourism platform operation specialists, virtual tourism product developers, and intelligent tourism equipment technical support (Huyen & Nghi, 2019). This is the result of the advent of new technologies and concepts. In addition to possessing comprehensive tourism professional knowledge, these positions necessitate practitioners to possess cross-disciplinary skills, including data analysis, information technology, and product innovation (W. Zhang et al., 2024). Indeed, the need to promote digital transformation is crucial to be considered. Furthermore, the prevailing digital transformation trend has resulted in substantial changes in production, research and development, management, distribution, and other areas (Z. Zhang et al., 2024). As a result of promoting the digital transformation and high-quality development of the tourism industry, the digital transformation and intelligent enhancement of the tourism space have been facilitated by improvements to digital infrastructure (Zhou & Chen, 2024). Therefore, it is advised that future initiatives concentrate on utilizing digital tools to facilitate the integration of ecological industries, thereby promoting industrial growth.

Concerning this aspect, China is urged to continue nurturing intersectoral cooperation and supporting the expansion of industrial value chains to further advance the integrated development of tourism industries. It is imperative to underscore the significance of digitalization, with a particular focus on integrating pertinent digital components into the industrial integration process in the future (Li et al., 2024). In this case, digital transformation is a critical trend for organizations seeking to enhance their development due to the rapid advancement of digital technology. In response to the dual pressures of economic downturn and increasing uncertainty, an increasing number of tourism organizations have adopted digital transformation as their primary strategy to resolve the impasse in the face of adversity. Digital technology in China has thoroughly integrated into all aspects of tourism activities in the past few years. The introduction of emerging technologies, including online booking, virtual tours, and guest monitoring, establishes critical entry points for tourism companies to break down industry barriers, transcend the conventional mode of operation, and facilitate the movement of factors across space and time, thereby defining the future direction of the tourism industry (Yu et al., 2024).

Moreover, a stable monetary policy should be implemented by government managers to facilitate the digital transformation of media corporations, which is most significantly influenced by the external environmental driving force, as evidenced by the predictive capabilities of digital transformation (Wang et al., 2024). Environmental drivers are the primary factor affecting the digital transformation strategies of Chinese media companies, as demonstrated by the ability of the ecological driving force to precisely and

effectively predict the behaviour of the Chinese media industry. The tourism industry has experienced substantial changes due to the proliferation of digital technologies. In this part, travel agencies provided travellers with fundamental information and options through static online brochures. The initial digital travel planning and customer service methods were manual and provided limited personalization (Ilieva et al., 2024).

Equally important, from the tourism perspective, financial development results in a significantly increased availability of funds for investment by tourism business entities or enhanced access to money for purchasers of tourism products and services. In other words, a country's financial sector should be capable of providing access to low-interest financing, which will enable businesses involved in tourism to expand their operations and make tourist destinations affordable to customers (Michalak & Bartkowiak, 2021). Regarding this case, the digital transformation of the industry has been facilitated by the development of the digital economy, and the traditional tourism industry is currently grappling with the pressure and opportunity of digital upgrading. Expanding the tourism services trade can boost foreign exchange earnings, generate employment opportunities, facilitate the transformation and modernization of the tourism industry, and infuse new energy into China's high-quality economic development.

Similarly, the expansion of tourism in numerous nations has been substantially influenced by financial development and information and communication technology (ICT). Its advancements have revolutionized the tourism industry, including marketing, management, production, and consumer relations (Michalak & Bartkowiak, 2021). For example, online marketing and sales allow tourism destinations and enterprises of all sizes to access a broader market. In the same way, potential travellers can view and purchase products online at any time and from any location without the need to interact with service providers in person. Likewise, financial development stimulates tourism expansion by guaranteeing that investors have access to funds to construct or enhance existing tourism infrastructure, thereby generating a greater demand for tourism. Hence, financial development implies that tourists can readily obtain funds to purchase tourism products and services. In this case, accommodation services offer temporary lodging at destinations, while travel agencies are responsible for designing itineraries, coordinating tours, and providing guide services (Luo & Liu, 2024).

However, a significant number of professional education programs in the tourism sector continue to emphasize the traditional teaching of fundamental knowledge, including tourism management, tourism resource development, and tourism marketing. These programs offer relatively few practical applications and aspects of emerging technologies. These may result in a discrepancy between the market demand for graduates and the knowledge structure in the increasingly intelligent and digital tourism workplace, impacting their job adaptability and competitiveness (Yin & Yin, 2024). As a result, there is a need to revolutionize tourism strategies to promote brands and quality in the tourism field. In this field, the application of digital technology has significantly

influenced achieving essential tourism goals. Concerning the background of the study above, this study aims to investigate the digital transformation applied by the Chinese Tourism Industry, focusing on the models of technology used to enhance the quality of the sector.

LITERATURE REVIEW

This study chapter expounds on the related literature about how digital transformation emerges as innovation towards the times of development. Specifically, using digital tools has had significant impacts on the tourism industry. Therefore, the researcher spells out digital transformation and how it influences the tourism industry.

Digital Transformation

Jensen (1981) is recognized as the author of the first peer-reviewed scientific article addressing the subject of Digital Transformation, emphasizing the themes of technology and data management within digitized systems. Over the past decade, interest in Digital Transformation has grown significantly in academic research (Kraus et al., 2021). It represents a transformative process that reshapes traditional business models, introduces innovative methods for monetizing products and services, promotes long-term cost savings in production, and serves as a precursor to digital optimization (Lozic & Cikovic, 2024). This transformation and business model innovations have reshaped consumer expectations and behaviors, exerting substantial pressure on traditional firms while disrupting numerous markets.

Furthermore, Sebastian et al. (2017) identify two key digital strategies within Digital Transformation: customer engagement and digitized solutions. The customer engagement strategy emphasizes fostering customer loyalty and trust through personalized and innovative experiences, often involving interactive opportunities. By utilizing data analytics, companies can identify and tailor offerings to individual customer needs, while social media platforms are used to create and sustain communities of interest. On the other hand, the digitized solutions strategy aims to secure a competitive edge by redefining a company's value proposition by integrating products, services, and data. This approach leverages existing digital technologies to anticipate and address customer needs effectively.

Moreover, there are three primary external factors drive the necessity for Digital Transformation. First, the advent and widespread adoption of the World Wide Web have been accompanied by a surge of new technologies. Second, these emerging digital technologies are drastically altering competitive dynamics. For instance, technology has disrupted traditional competition in the retail sector, shifting sales toward relatively newer digital enterprises. Third, consumer behaviour is evolving in response to the digital revolution, with market trends indicating a significant migration of purchases to online platforms. Digital touchpoints are critical in shaping customer journeys and influencing online and offline sales (Verhoef et al., 2021). Fundamentally, digital transformation is a global phenomenon affecting business operations worldwide. While national borders do not entirely halt the momentum of change, the impacts of Digital Transformation are unevenly distributed across countries and regions. Policymakers and

businesses hold significant power in shaping a country's digital trajectory through regulatory and policy frameworks. Furthermore, a nation's level of economic sophistication plays a crucial role in determining its capacity to advance digital evolution (Grab et al., 2019).

Tourism Industry

The tourism industry is one of the most important sources of revenue in the globe which has been constantly evolving, with the emergence of new segments on occasion. In addition, the development of a tourism strategy as a tool for economic growth, and the identification of those in need of a strategy, can result in the development of product and marketing strategies. Tourism products encompass several aspects which touch urban, seaside, rural, ecotourism, wine, culinary, health, religious, culture, sports, educational, and business, which includes meetings, incentives, conferences, and events, among others (Camilleri, 2018). Besides, appropriate strategies can bring about the improvement of profitability, the attraction of investment, the role of the government and business sector in determining the quality and quantity of the necessary resources, and the support of regional plans for tourism industry (Teshaboyeva, 2023).

The tourism industry is also strongly advised to engage with Artificial Intelligence (AI). By utilizing AI's capabilities, enterprises can provide tailored services, enhance operations, and promote sustainable practices. For instance, AI-driven chatbots and virtual assistants deliver immediate and tailored solutions to consumer requests, improving customer satisfaction and decreasing response times. Machine learning algorithms can process extensive datasets, including client preferences and behaviours, to provide customized travel itineraries, lodgings, and activity recommendations. The appeal of Blockchain technology has also extended beyond the tourism sector to encompass the consumer, energy, and healthcare sectors, among others (Prados-Castillo et al., 2023).

Furthermore, AI algorithms may evaluate data about energy usage, waste management, and environmental effects to pinpoint areas for enhancement and facilitate the adoption of sustainable practices within the tourism sector (Madurga, M.A.G. & Méndez, A.J.G, 2023). Similarly, integrating blockchain technology into the tourism industry represents a significant advancement in sustainability, emerging as a compelling area of research aimed at enhancing the value chain of tourism services and increasing the overall efficiency and profitability of the sector. Implementing this technology in tourism has commenced among significant entities, including tour operators, airlines, and logistics companies. AI may enhance operational efficiency by examining historical data on booking patterns, occupancy rates, and pricing trends, offering revenue management insights, and optimizing back-end operations like inventory management and supply chain logistics.

METHODOLOGY

This study is a systematic literature review in which the researcher aims to investigate the digital transformation models applied by the tourism industry in China. The primary objective of an SLR is to systematically synthesize existing research to address practical inquiries (Okoli & Schabram, 2010). Likewise, Mun et al. (2020) state that an SLR validates existing practices, resolves discrepancies, identifies emerging trends, investigates conflicting findings, and offers actionable recommendations for enhanced decision-making. In this study, the researcher selected thirty-three related articles indexed in Scopus, Proquest, and Springer to guarantee the quality of the research sources.

Furthermore, content analysis is implemented in this investigation to analyze and interpret literature by categorizing it into themes, concepts, and terminology. Krippendorff (1985) outlined the content analysis procedures, which included unitizing to identify pertinent data and selecting appropriate texts or sources, such as articles, interviews, or videos; coding to establish a systematic method for sorting and categorizing data into functional themes or groups; reducing data to distill substantial content into patterns or themes for comprehension of the principal points; interpreting to analyze the identified patterns to derive conclusions that address the research questions; and validating to confirm the research's reliability and validity, ensuring the accuracy and consistency of the coding rules.

RESULTS AND DISCUSSION

This study discussed four primary models of digital transformations applied in China that further impact the tourism industry. The models comprise digital technology, finance, expertise, and big data. These models are essential to leverage due to the paramount benefits toward the effectiveness of achieving the industry's goals. More importantly, the appropriateness of the digital tools was also necessary to avoid misuse, which resulted in ineffective ways during the industrial programs. The following paragraphs explain the four models and the advantages for China's tourism industry.

Digital Technology

The construction of digital technology has become an essential investment in social development and an effective instrument for economic growth. Besides, digital technologies in China are critical to advancing tourism development by enabling technological upgrades and generating economies of scale (Liu et al., 2021). It introduces a diagnostic instrument specifically designed to measure the digital transformation of service industries, with a particular emphasis on cultural tourism. (Lu, 2024). Besides, the level of dual innovation, exploitative and exploratory, in industrial performance can also be effectively enhanced through digital transformation. In fact, the impact of digital transformation on the improvement of exploitative innovation is more significant than exploratory innovation. Yet, the enhancement of enterprise performance through digital transformation is mediated by exploratory innovation and exploitation innovation. In this case, managerial authority can positively moderate the relationship between tourism industrial performance and digital transformation. To this point, the analysis results indicate that digital transformation's impact on

tourism industrial performance is more sounded in the east and central regions, high-tech industries, and firms with a high profitability status of industry in China (Wu & Li, 2023).

Furthermore, digital technology eliminates information barriers by optimizing the construction of tourism platforms and other methods, improving the capacity to accurately market tourism products, effectively enhancing the precise matching of tourism supply and demand, and avoiding resource mismatch and waste (Novakivskiy et al., 2024). Innovative projects in the tourism industry, such as digital, intelligent, and networked smart tourism and digital virtual tourism based on AR and VR technologies, have been facilitated by digital technology, which has given birth to new tourism products and consumption patterns (Pencarelli, 2020). The quality of tourism services has been significantly enhanced by digital technology, which has optimized the digital tourism experience from the visitor's perspective (Vărzaru & Bocean, 2024). Besides, tourism satisfaction has also been improved due to online reservations, virtual queues, personalized tour itineraries, and intelligent guides, which positively impact the propensity to travel and contribute to the sustainable development of tourism. In addition, the digital economy has experienced robust growth because of the widespread implementation of digital technology, which has facilitated the development of well-organized, suitable, and cross-border international trade (Wu & Li, 2023). The digital services trade is emerging as a new source of future trade development, as it is an indispensable component of commerce in tourism industry.

In addition, the role of digital technology is instrumental as it helps to reduce the marginal cost and increase the flow of tourists. Digital technology is a solution to the issues of the diminishing marginal effect of tourism inputs and the imbalance between the inputs and outputs of regional tourism, thereby promoting the improvement of tourism efficiency in terms of expense (F. Zhang & Cheng, 2024). Visitors can effortlessly pay for transportation, accommodations, attractions, and dining by, for instance, scanning a QR code. The contactless ecosystem in China is one of the most traveler-friendly destinations in the world, as it reduces transactional barriers, improves efficiency, and increases customer satisfaction. Hence, digital finance provides convenience and empowers businesses in the tourism sector, including tiny and medium-sized enterprises (SMEs). These businesses can broaden their offerings by utilizing fintech innovations, providing them access to digital loans, crowdfunding platforms, and other financial resources.

Digital Finance

The profound integration of digital technology and the real economy can be most effectively promoted through implementing digital policies, which can support digital technology transformation in multiple dimensions, including macro planning, industry guidance, and micro incentives (Zhang, 2024). This integration of the "digital industry" enhances the regional economy's capacity to withstand external economic uncertainty by further expanding the digital application ecosystem. With its advantages, it also accelerates the digital transformation of industries (Santoso et al., 2024) and promotes high-quality

socio-economic development since the digital economy has been extensively implemented worldwide (Zheng et al., 2024).

Moreover, the positive impact of digital transformation is substantial when confronted with a high degree of marketization (Zhang, 2024). Digital finance effectively promotes the high-quality development of cultural and tourism enterprises by enhancing management efficiency, operational efficiency, workforce quality, and industry spillovers. It has been determined that digital transformation can improve the total factor productivity of cultural and tourism enterprises, and it has become a significant factor in the high-quality development of these enterprises (Sandhya & Varghese, 2023a). This conclusion remains valid following a series of robustness assessments. Besides, digital transformation can enhance cultural and tourism enterprises' quality by improving management efficiency, operational efficiency, the quality of the workforce, and the intensity of industry spillover effects, as demonstrated by mechanism tests (Tang et al., 2024).

The tourism industry in the western provinces of China is achieving economies of scale by increasing returns to scale. The economic growth of the tourism industry can be reflected in the dynamic process from inputs to outputs in developing the digital finance, which is the foundation of tourism efficiency (Siriphanich et al., 2022). The structure of the tourism industry reflects the structural issues of industrial development, which demonstrates the matching and combining relationship of tourism efficiency. Tourism is responsible for the vital mission of revitalizing rural areas and promoting consumption. Nevertheless, the overexploitation of regional tourism resources and the degradation of the ecological environment have resulted from the tourism sector's accelerated expansion (Rosário & Dias, 2024). The equilibrium between supply and demand in the tourism market is the critical factor in attaining efficient development through consistent growth in the total volume of tourism due to the digital finance.

Digital Expertise

The tourism industry in China is undergoing a significant transformation. With digital expertise at the leading edge of this development, the industry has allowed businesses and destinations to modernize their operations and improve the travel experience. Advanced digital tools, including big data, artificial intelligence (AI), and cloud computing, enable businesses to collect and analyze traveller data, offering personalized services and targeted marketing strategies (Sousa et al., 2024). Besides, integrating digital expertise has also revolutionized the tourism infrastructure and destination management. Virtual reality (VR) and augmented reality (AR) technologies generate immersive previews of visitor destinations, enabling travellers to investigate them virtually before their journey (Sandhya & Varghese, 2023b). Furthermore, implementing innovative city initiatives fueled by digital innovation has enhanced urban tourism by providing real-time information on transportation, population management, and local attractions of China (Matos et al., 2019).

During the transition from traditional to digital business models, aligning digitalization with the operational model and attracting digitally competent individuals and essential technologies is crucial. As previously mentioned, these enterprises' human capital and innovation initially experience an increase before experiencing a decline as the profundity of digitalization increases (Zhao & Li, 2024). Hence, fostering a culture of digital engagement and participatory leadership is crucial; encouraging employees to participate in digital policy discussions can align strategies with workforce expectations (Cuibai Yang et al., 2024). Creating a supportive environment for digital innovation, including clear guidelines and resources, can drive competitiveness and growth in the digitalized tourism landscape. The significance of continuous investments in digital skills requires training for individuals working in the tourism industry. It is emphasized that cultivating a culture that promotes active involvement in shaping digital policies and ensuring that educational curriculums align with industry requirements are essential for attaining sustainable growth and innovation in global tourism human resources (Han, 2024).

Indeed, being technologically savvy encompasses the extensive utilization of technology to enhance the efficiency of services, integrate all local institutions, improve information management, and enhance day-to-day activities (Cascio & Montealegre, 2016). Tourism necessitated the implementation of an appropriate technological platform that integrated data from local natural and heritage resources, tourists, actions, and consumption patterns to become intelligent (Matos et al., 2019). To maintain pace with the advancement of the digital economy and capitalize on the benefits that trade in digital services has provided to society, production, and life, China has a comprehensive understanding of the extent of the country's trade in digital services and the factors that influence its competitiveness. It will enable the government to leverage the competitive advantages of our country's trade in digital services further in the international market (Zhao & Li, 2024).

Big Data

The advancements in industrial necessities cause the proliferation of big data technology. Inevitably, the development and operation management modes of numerous industries in society are revolutionized by this technology (Okechukwu Adewusi et al., 2024). Big data has permeated all facets of Chinese social and business lives due to the advancements in information technology. Tourism has emerged as the foundation of the national economy because of economic growth (Adaga et al., 2023). In responding to this matter, many provinces and regions in China are also adopting the big data and utilizing the technology to develop smart tourism and expedite the development of the tourism industry. Indeed, the development of innovative tourism is significantly impacted by the application value and significance of big data technology in the current information age (Chen, 2020).

Moreover, digital infrastructure forms the foundation for the economy's and society's digital development to support both digital government construction and enterprise intelligence transformation (Zhuang et al., 2019). As a result, most provincial and municipal governments in China established government data open platforms to promote the orderly release of data in the transportation, healthcare, taxation, and education sectors (Zhou & Chen, 2024). This openness enriches the data available to enterprises to promote their intelligence capabilities. Besides, China has also strengthened policy guidance and organizational support at the central government level. The application of big data in enterprises can significantly promote their intelligent transformation (L. Zhang & Zhang, 2025). Furthermore, tourism industry appears to become an essential component of the public's existence due to the evolution of the concept of life and the enhancement of the standard of living (Zhuang et al., 2019). Coastal towns are actively constructing international tourism islands to encourage the growth of the tourism industry. The application of big data technology to the analysis of tourism data has the potential to enhance the efficiency of the utilization of tourism data resources, generate more significant economic and social benefits, and further enhance tourism development (Chaowei Yang et al., 2017). Tourism has begun to recognize the significance of big data on a global scale in the era of big data. Using big data technology for data acquisition and analysis can serve as a reference for decision-making in the tourism sector (Chen, 2020).

Hence, the emergence of the cloud era and the advancement of digital information technology has increased awareness of big data for the tourism industry in China (Chaowei Yang et al., 2017). According to most analysts, the creation of a company generates a vast quantity of unstructured and semi-structured data of varying types that conventional data cannot adequately describe. Downloading these data to the relational database for analysis may incur excessive resource consumption. Considering this case, there is an increasing emphasis on applying big data technology to the industry (Siswo et al., 2024). To effectively process large volumes of data, the Chinese tourism industry implements specialized big data technology, which can be tolerated over time. The strategic importance of big data technology is derived from the specialized processing of meaningful data from vast amounts of data. In other words, the enhancement of the "processing capacity" of data and the realization of the "value-added" of data through "processing" are the critical factors that determine the profitability of the big data industry (Chen, 2020).

In addition, the talent flow analysis system, which is also based on big data, is designed to emphasize the user and employs the business use case diagram to model the business analysis of the entire system (Nocker & Sena, 2019). The system's user and rights management is the administrator's responsibility, where users may utilize the system function as usual following the completion of the registration process. Indeed, different visual information can be viewed by users following their requirements, such as talent distribution and talent flow information. The fundamental information on talents, including regional characteristics, economic impact, time, gender, and learning experience,

was obtained after a systematic study of the factors of talent mobility (Wang et al., 2021). Different types of center distances are calculated when new talent information is entered and categorized under specific talent categories. In the present era of big data, this is a novel data processing model that can continuously learn and improve itself to create new knowledge content based on the relevance of existing data. It is achieved through various fields, including networking, deep learning, information analysis, natural language, machine learning, and cognitive computing (Liu, 2021).

CONCLUSIONS AND RECOMMENDATIONS

Conclusion

Digital transformation has evolved significantly in China's tourism industry. Using digital tools was fruitful in enhancing the effectiveness and efficiency of the sector by considering the most appropriate models to use. This study found four primary digital transformation models utilized by China's tourism industry, further escalating its profits. The models include digital technology, digital finance, digital expertise, and big data, representing each field in the industry. Digital technologies in China are essential for advancing tourism development by facilitating technological enhancements and creating economies of scale. Digital finance offers convenience and empowers businesses within the tourism sector, including small and medium-sized enterprises (SMEs). Moreover, China thoroughly comprehends its trade in digital services and the determinants of its competitiveness. Ultimately, applying big data technology to tourism analysis improves the efficiency of tourism data resource utilization, yields substantial economic and social benefits, and promotes tourism development.

Recommendation

Using digital tools in the tourism industry promotes effectiveness and efficiency. The government should pay more attention to this industry as one of the most influential sectors for the country's economic development by providing training for staff to increase their capability to work. Indeed, the roles of workers can inevitably be crucial to boost the development of the industry in various fields. By innovating digital tools, they can support their company and increase productivity. Besides, the owners of the industrial companies should also provide the necessary tools to equip the workers to advance their working activities. In addition, further research is needed to investigate complementary digital transformation models with divergent subjects and study methods.

REFERENCES

- Adaga, E. M., Okorie, G. N., Egieya, Z. E., Ikwue, U., Udeh, C. A., Daraojimba, D. O., Oriekhoe, O. I., Researcher, I., Researcher, I., Researcher, I., & Researcher, I. (2023). The Role Of Big Data In Business Strategy : A Critical Review. *Computer Science & IT Research Journal*, 4(3), 327–350. <https://doi.org/10.51594/csitrj.v4i3.686>
- Barykin, S. E., de la Poza, E., Khalid, B., Kapustina, I. V., Kalinina, O. V., & Iqbal, K. M. J. (2021). Tourism industry: Digital transformation. *Handbook of Research on Future Opportunities for Technology Management Education*, July, 414–434. <https://doi.org/10.4018/978-1-7998-8327-2.ch025>
- Camilleri, M. A. (2018). *The Tourism Industry : An Overview*. In Springer International Publishing.
- Cascio, W. F., & Montealegre, R. (2016). How Technology Is Changing Work and Organizations. *Annual Review of Organizational Psychology and Organizational Behavior*, 3(June), 349–375. <https://doi.org/10.1146/annurev-orgpsych-041015-062352>
- Chen, N. (2020). Application of Big Data Technology in Smart Tourism. *Journal of Physics: Conference Series*, 1648(4), 1–9. <https://doi.org/10.1088/1742-6596/1648/4/042101>
- Grab, B., Olaru, M., & Gavril, R. M. (2019). The Impact of Digital Transformation on Strategic Business Management. *Ecoforum Journal*, 8(1), 1–8.
- Han, X. (2024). Empowering the Global Tourism Workforce: How Digital Transformation Influences HR Development. *Journal of the Knowledge Economy*, 0123456789. <https://doi.org/10.1007/s13132-024-02292-2>
- Huyen, K. N., & Nghi, N. Q. (2019). Impacts The Tourists' Motivation to Search For Novelty to The Satisfaction And Loyalty to A Destination Of Kien Giang Marine and Coastal Adventure Tourism. *International Journal of Social Science and Economic Research*, 04(04), 2807–2818.
- Ilieva, G., Yankova, T., & Klisarova-Belcheva, S. (2024). Effects of Generative AI in Tourism Industry. *Information (Switzerland)*, 15(11). <https://doi.org/10.3390/info15110671>
- Kraus, S., Jones, P., Kailer, N., Weinmann, A., Chaparro-Banegas, N., & Roig-Tierno, N. (2021). Digital Transformation: An Overview of the Current State of the Art of Research. *SAGE Open*, 11(3), 1–15. <https://doi.org/10.1177/21582440211047576>
- Krippendorff, K. (1985). *Content Analysis: An Introduction to Its Methodology*. In Sage Publication (Vol. 31, Issue 6). International Educational and Professional Publisher. <https://doi.org/10.1103/PhysRevB.31.3460>
- Li, X., Liu, C., Zhou, J., Yan, J., & Liu, T. (2024). The Digitalization Imperative: Unveiling the Impacts of Eco-Industry Integration on Sectoral Growth and Transformation. *Sustainability (Switzerland)*, 16(21), 1–34. <https://doi.org/10.3390/su16219522>
- Liu, Y. (2021). The Application of Big Data in the Intelligent Tourism Management Mode is Explored. *Journal of Physics: Conference Series*, 1881(3), 1–8. <https://doi.org/10.1088/1742-6596/1881/3/032080>

- Liu, M., Lu, M., & Li, Z. (2024). Coupling coordination analysis on digital economy-tourism development-ecological environment. *Journal of Cleaner Production*, 470, 143320.
- Liu, Z., Lu, C., Mao, J., Sun, D., Li, H., & Lu, C. (2021). Spatial-temporal heterogeneity and the related influencing factors of tourism efficiency in China. *Sustainability (Switzerland)*, 13(11), 1–19. <https://doi.org/10.3390/su13115825>
- Lozic, J., & Cikovic, K. F. (2024). Digital Transformation : the Fundamental Concept of Digital Transformation : the Fundamental Concept of. *March*.
- Luo, W., & Liu, J. (2024). From Tradition to Innovation: The Role of Culture Tourism in Transforming Chinese Agriculture. *Agriculture (Switzerland)*, 14(11), 1–26. <https://doi.org/10.3390/agriculture14112042>
- Matos, A., Pinto, B., Barros, F., Martins, S., Martins, J., & Au-Yong-Oliveira, M. (2019). Smart cities and smart tourism: What future do they bring? *Advances in Intelligent Systems and Computing*, 932(February), 358–370. https://doi.org/10.1007/978-3-030-16187-3_35
- Michalak, S., & Bartkowiak, P. (2021). Investigating the Effects of Advancements in Information and Communication Technology and Financial Development on Tourism Growth: A Case Study in South Africa. *Folia Oeconomica Stetinensia*, 24(2), 304–327. <https://doi.org/10.2478/fofi-2024-0027>
- Miguel Ángel García Madurga, & Ana Julia Grilló Méndez. (2023). Artificial Intelligence in the Tourism Industry: an Overview of Revoews. *Administrative Sciences*, 13(8), 1–22.
- Mun, R. U., Ezzani, M. D., & Lee, L. E. (2020). Culturally Relevant Leadership in Gifted Education: A Systematic Literature Review. *Journal for the Education of the Gifted*, 43(2), 108–142. <https://doi.org/10.1177/0162353220912009>
- Nikolskaya, E., Lepeshkin, V., Blinova, E., Kulgachev, I., & Ilkevich, S. (2019). Improvement Of Digital Technology In The Tourism Sector. *Journal Of Environmental Management And Tourism*, 10(6), 1197–1201. Doi:10.14505//Jemt.V10.6(38).01
- Nocker, M., & Sena, V. (2019). Big Data and Human Resources Management : The Rise of Talent Analytics. *Social Sciences*, 8(10), 1–19.
- Novakivskyi, I., Kulyniak, I., Dziurakh, Y., Ohinok, S., & Ukrainets, L. (2024). Modeling the Tourism Market Behavior Based on Discrete Equilibrium Models “Supply – Price – Demand.” *Economics: Innovative and Economic Research Journal*, 12(3), 1–22. <https://doi.org/10.2478/eoik-2024-0036>
- Okechukwu Adewusi, A., Okoli, U. I., Adaga, E., Olorunsogo, T., Franca Asuzu, O., & Daraojimba, D. O. (2024). Business intelligence in the era of big data : a review of analytical business intelligence in the era of big data : a review of analytical tools and competitive. *Computer Science & IT Research Journal*, 5(2), 415–431. <https://doi.org/10.51594/csitrj.v5i2.791>
- Pencarelli, T. (2020). The digital revolution in the travel and tourism industry. *Information Technology and Tourism*, 22(3), 455–476. <https://doi.org/10.1007/s40558-019-00160-3>

- Prados-Castillo, J. F., Guaita Martínez, J. M., Zielińska, A., & Gorgues Comas, D. (2023). A Review of Blockchain Technology Adoption in the Tourism Industry from a Sustainability Perspective. *Journal of Theoretical and Applied Electronic Commerce Research*, 18(2), 814–830. <https://doi.org/10.3390/jtaer18020042>
- Rosário, A. T., & Dias, J. C. (2024). Exploring the Landscape of Smart Tourism: A Systematic Bibliometric Review of the Literature of the Internet of Things. *Administrative Sciences*, 14(2), 1–26. <https://doi.org/10.3390/admsci14020022>
- Sandhya, H., & Varghese, B. (2023a). Big data and artificial intelligence: Creative tools for destination competitiveness. *Multidisciplinary Approaches in AI, Creativity, Innovation, and Green Collaboration*, April, 155–166. <https://doi.org/10.4018/978-1-6684-6366-6.ch008>
- Sandhya, H., & Varghese, B. (2023b). Big data and artificial intelligence: Creative tools for destination competitiveness. *Multidisciplinary Approaches in AI, Creativity, Innovation, and Green Collaboration*, October, 155–166. <https://doi.org/10.4018/978-1-6684-6366-6.ch008>
- Santoso, F. Y. E., Samputra, P. L., & Daryanto, E. (2024). Digital Competitiveness and Economic Resilience. *Asian Journal of Engineering, Social and Health*, 3(7), 1536–1548. <https://doi.org/10.46799/ajesh.v3i7.353>
- Sebastian, I. M., Moloney, K. G., Ross, J. W., Fonstad, N. O., Beath, C., & Mocker, M. (2017). How big old companies navigate digital transformation. *MIS Quarterly Executive*, 16(3), 197–213. <https://doi.org/10.4324/9780429286797-6>
- Siriphanich, P., Mitmuang, P., & Thawonthong, S. (2022). Tourist Satisfaction With the Qr Codes on Street Art in Songkhla Old Town, Thailand. *Journal of Event, Tourism and Hospitality Studies*, 2(1), 1–32. <https://doi.org/10.32890/jeth2022.2.1>
- Siswo, E., Sahputra, A., & Nendi, I. (2024). Application of Big Data and Analytics to Increase Competitive Advantage. *Jurnal Indonesia Sosial Teknologi*, 5(5), 2383–2390.
- Sousa, A. E., Cardoso, P., & Dias, F. (2024). The Use of Artificial Intelligence Systems in Tourism and Hospitality: The Tourists' Perspective. *Administrative Sciences*, 14(8), 1–23. <https://doi.org/10.3390/admsci14080165>
- Tang, R., Xiu, P., & Dong, H. (2024). Research on Digital Transformation Driving the High-Quality Development of Cultural and Tourism Enterprises – Evidence Based on Listed Cultural and Tourism Companies. *Journal of the Knowledge Economy*, 0123456789. <https://doi.org/10.1007/s13132-024-01972-3>
- Teshaboyeva, N. (2023). THE IMPORTANCE OF TOURISM IN PRESENT DAY. *Journal of Foreign Languages and Linguistics*, 5(5). Retrieved from <https://fll.jpdu.uz/index.php/fll/article/view/7811>

- Vărzaru, A. A., & Bocean, C. G. (2024). Digital Transformation and Innovation: The Influence of Digital Technologies on Turnover from Innovation Activities and Types of Innovation. *Systems*, 12(9), 359. <https://www.mdpi.com/2079-8954/12/9/359>
- 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(October 2022), 889–901. <https://doi.org/10.1016/j.jbusres.2019.09.022>
- Wang, J., Xu, C., Zhang, J., & Zhong, R. (2021). Big data analytics for intelligent manufacturing systems: A review. *Journal of Manufacturing Systems*, 1(November 2020), 1–15. <https://doi.org/10.1016/j.jmsy.2021.03.005>
- Wang, Z., Li, Y., Zhao, X., Wang, Y., & Xiao, Z. (2024). Research on Predicting the Driving Forces of Digital Transformation in Chinese Media Companies Based on Machine Learning. *Scientific Reports*, 14(1), 1–17. <https://doi.org/10.1038/s41598-024-57873-7>
- Wu, S., & Li, Y. (2023). A Study on the Impact of Digital Transformation on Corporate ESG Performance: The Mediating Role of Green Innovation. *Sustainability (Switzerland)*, 15(8), 1–20. <https://doi.org/10.3390/su15086568>
- Yang, Cuibai, Li, Z., Li, F., & Li, H. (2024). The Impacts of Digital Leadership on Employee Voice Behaviors: The Mediating Roles of Employee Empowerment and Work Engagement. *SAGE Open*, 24, 1–15. <https://doi.org/10.1177/21582440241260474>
- Yang, Chaowei, Huang, Q., Li, Z., Liu, K., & Hu, F. (2017). Big Data and cloud computing: innovation opportunities and challenges. *International Journal of Digital Earth*, 10(1), 13–53. <https://doi.org/10.1080/17538947.2016.1239771>
- Yin, W., & Yin, L. (2024). Innovation and Practice of "Job- Certification" Professional Talents' Cultivation Model in Tourism Major under the Background of Digitalization Era. *Journal of Electrical System*, 20(2), 816–822.
- Yu, M., Ma, B., Liu, D., & Zhang, A. (2024). Is the Digital Economy Empowering High-Quality Tourism Development? A Theoretical and Empirical Research from China. *PLoS ONE*, 19(5 May), 1–26. <https://doi.org/10.1371/journal.pone.0303087>
- Zhang, A. (2024). The Digital Economy, Integration of Productive Services and Manufacturing, and High-Quality Development of the Manufacturing Sector: Evidence from China. *Sustainability (Switzerland)*, 16(23), 1–22.
- Zhang, F., & Cheng, Q. (2024). Spatio-Temporal Effects and Influence Mechanism of Digital Technology on Tourism Efficiency in Chinese Provinces. *Scientific Reports*, 14(1), 22975. <https://doi.org/10.1038/s41598-024-74367-8>
- Zhang, L., & Zhang, X. (2025). Impact of Digital Government Construction on the Intelligent Transformation of Enterprises: Evidence from China. *Technological Forecasting and Social Change*, 210 (April 2023), 123787. <https://doi.org/10.1016/j.techfore.2024.123787>

- Zhang, W., Jia, C., Liu, Z., & He, P. (2024). Strategies for Enhancing the Value of the Sports Tourism Industry Supported by Multi-sensor Network Technology. *Wireless Networks*. <https://doi.org/10.1007/s11276-024-03866-3>
- Zhang, Z., Xu, H., & Qiao, Z. (2024). Has the Digital Economy Enhanced the Income Distribution Effect Among Industries? Evidence from China. *Sustainability (Switzerland)*, 16(20). <https://doi.org/10.3390/su16208969>
- Zhao, R., & Li, L. (2024). Does digitalization always Benefit Cultural, Sports, and Tourism Enterprises Quality? Unveiling the Inverted U-shaped Relationship from A Resource and Capability Perspective. *Humanities and Social Sciences Communications*, 11(1). <https://doi.org/10.1057/s41599-024-03545-w>
- Zheng, Y., Chen, W., & Zou, W. (2024). The Impact of Digital Policies on Urban Economic Resilience Under the Low-Carbon Background: A Deep Identification Based on Environmental Regulation and Industrial Digital Transformation. *Heliyon*, 10(21), e39583. <https://doi.org/10.1016/j.heliyon.2024.e39583>
- Zhou, M., & Chen, X. J. (2024). Research on the Influence Mechanisms of Digital Economy on Tourism Economic Resilience Empirical Evidence from China. *Portuguese Economic Journal*, 0123456789. <https://doi.org/10.1007/s10258-024-00264-7>
- Zhuang, X., Yao, Y., & Li, J. J. (2019). Sociocultural Impacts of Tourism on Residents of World Cultural Heritage Sites in China. *Sustainability*, 11(3), 1–19. <https://doi.org/10.3390/su11030840>