The Influence of Technology on Management and Legal Aspects of the Tourism Business

Yulian Purnama¹*, Andin Rusmini²

¹²Sekolah Tinggi Pariwisata Ambarrukmo Yogyakarta, DIY, Indonesia

Email: yulian.purnama.hni@gmail.com¹, andinrusmini@stipram.ac.id²

Abstract. Tourism is one of the fastest growing economic sectors in various countries around the world. In the last decade, the development of ICT has significantly changed the landscape of tourism business. The influence of technology on management and legal aspects in the tourism business is becoming an increasingly important topic to research. This research aims to examine the influence of technology on management and legal aspects in tourism business. This research adopts a qualitative approach through literature analysis, which means that this research will investigate and explain information and content sourced from various documents and texts as the basis for analysis. The study results show that the influence of technology in the tourism business has significantly changed the landscape of this industry. The management of tourism companies has undergone major changes, with online booking, data analytics, better communication, and more efficient inventory management. Along with that, the legal aspects of tourism business have faced new challenges with increasingly stringent regulations on data protection, e-commerce, international travel regulations, and corporate social responsibility.

Keywords: Law, Management, Technology, Tourism Business

1. Introduction

The rapid development of technology has significantly changed the landscape in the tourism industry [1]. In the past, consumers relied on paper maps, travel brochures, and travel agents to plan their holidays. However, with the advent of technology, consumers now have greater and faster access to information on tourist destinations, accommodation, and transport. They can easily search, book, and manage their trips with just a few touches of the screen on their smart devices. Parties in the tourism industry, such as hotels, airlines, travel agents, and tour companies, have been compelled to adapt to this significant change [2]. They have to devise more sophisticated marketing strategies, update the way their services are distributed, and improve customer relationship management. With consumers becoming increasingly sophisticated in their use of technology, efforts to remain relevant and competitive in the ever-evolving tourism market require the ability to innovate and adjust to changing technological trends [3]. This is not just a change in business tactics, but also an evolution in a more holistic approach to customer experience in tourism.

The role of technology in changing the tourism business landscape cannot be ignored. Technology has provided industry stakeholders with new tools that allow them to manage operations more efficiently [4]. This involves the utilisation of sophisticated reservation management systems to coordinate orders, real-time inventory monitoring to ensure the availability of necessary resources, as well as more effective supply chain management to meet customer demands in a timely manner. In addition, data analysis has become a cornerstone in making smarter business decisions, helping stakeholders to identify market trends and customer preferences [5]. However, like a two-sided coin, the use of these technologies also poses new challenges that need to be addressed in the tourism industry. Data security and customer privacy are of paramount importance. With so much data generated and processed by these technological systems, the risk of data security breaches becomes more significant. Customer data protection is a key responsibility for tourism businesses, and they must take appropriate measures to secure customer data and comply with applicable privacy regulations [6]. Therefore, while utilising technology to improve efficiency and service quality, tourism companies must also keep customer security and privacy as a top priority in this digital age.
The development of technology in the tourism industry brings increasingly complex legal issues that need in-depth attention. One of the emerging issues is data privacy, especially in terms of the collection and use of customer data. With more personal data being collected by tourism companies to improve the customer experience, the protection of personal data has become very important [7]. Governments and regulatory bodies should develop stricter laws and regulations to ensure that customer data is properly protected and not misused. In addition, issues relating to intellectual property rights are also a concern. In a rapidly evolving digital environment, issues such as copyright and trademarks need to be updated to reflect changes in distribution and marketing through online platforms. Consumer protection is also of paramount importance, especially when most tourism transactions are conducted online [8]. Finally, with various international travel regulations in place, the law must continue to adapt to changes in the pandemic situation and global travel. Thus, it is important to keep the law in the tourism sector relevant with technological developments to maintain fairness and protect the rights of all parties involved in the industry.

Technology companies, especially online travel platforms and app-based tourism services, have played an integral role in revolutionising the tourism industry. With continuous innovations in technology, these companies have facilitated a more personalised and more efficient customer experience in their travels [9]. These platforms allow consumers to plan their trips, book accommodation, transport, and tourist activities quickly and easily through their mobile devices or computers. In addition, they often offer features such as customer reviews, price comparisons and recommendations powered by artificial intelligence. However, these changes also present significant challenges for traditional companies in the tourism industry. They now have to compete with technology companies that are more innovative and responsive to market trends. The competitive dynamics are changing along with these technological developments, with traditional companies being forced to adapt their business strategies to stay relevant and competitive [10]. They must find ways to incorporate technological innovations in their operations, understand and respond to changing consumer preferences, and possibly partner with online travel platforms to expand their reach. Thus, the influence of technology companies in the tourism industry is not only changing the way we travel, but also creating challenges and opportunities that stakeholders in the tourism business must address.

Technological developments are playing an increasingly important role in the discussion of sustainability issues in the tourism industry. One of the most striking aspects is the effort to encourage sustainable travel. Technology has enabled online travel platforms to provide travellers with information and options on greener transport and accommodation [11]. This can include travel options using public transport, the use of more energy-efficient accommodation, or even recommendations on how to reduce the carbon impact of their trip. In addition, technology also supports efforts in sustainable tourism development by providing communication platforms and tools that allow local communities and industry players to collaborate in promoting sustainable goals. However, while technology has great potential in promoting sustainable practices, it cannot be ignored that technological advancements can also have a negative impact on the environment [12]. For example, rapid developments in commercial aviation and air transport have increased carbon emissions and other environmental impacts. The use of technology in the tourism industry can also trigger problems related to large power requirements, such as large data centres that consume large amounts of energy. Therefore, while taking advantage of technology to encourage sustainable travel, there also needs to be awareness of the environmental challenges associated with the use of these technologies, and efforts to mitigate their negative impacts through greener and more sustainable technological innovations.

Research on the impact of technology in management and legal aspects in the tourism industry has important consequences for the various stakeholders involved in the sector. The results of this research can be a valuable source of insight for tourism companies, helping them understand how technology can be optimised to improve their operational efficiency while considering legal and sustainability issues. In addition, the government can use the findings of this research as a foundation to develop regulations that are in line with technological changes and to protect consumer rights and sustainability aspects. Organisations aiming to manage the impact of technology in the tourism business in a way that is balanced with the values of sustainability and fairness will also gain valuable guidance to support their initiatives. Thus, this research not only has an impact at the industry level, but also at the broader social and policy level in understanding and exploiting the potential of technology in the tourism industry.

1.1 Technology

Technology is the use of science and practical knowledge to design, create and operate devices, systems or processes that facilitate human activities [13]. It includes the application of scientific principles in practice, such as the use of knowledge of physics, chemistry, mathematics, computer science, and other branches of science to design and create tools, devices, and systems. Technology also requires a practical understanding of how to
make and use a particular tool or system, which involves the technical skills and expertise required to develop and operate the technology [14], [15]. The technological process involves the planning, design, development and implementation of the resulting product or system. In addition, technology is used to solve problems in various contexts, such as in the medical, communications, and energy fields [16], [17]. There are different types of technology, such as computer technology, information technology, medical technology, automotive technology, and energy technology, each of which has different applications and working principles. Technology is constantly evolving and undergoing innovation, which brings progress in various fields such as health, transport, communication, and industry [18], [19]. However, technology also has significant social and economic impacts, with the potential to increase efficiency, improve quality of life, and create new jobs, but it can also pose problems such as privacy issues and inequality. Overall, technology is a tool that enables humans to achieve their goals, solve problems, and improve quality of life. It is closely related to science, but its main focus is on the practical application of that knowledge. Technology is an essential component of modern society and continues to evolve over time with new innovations and discoveries.

1.2 Management

Management is a holistic process that includes a number of essential activities and functions to achieve specific goals [20]. This process begins with planning, where long and short-term goals are defined, strategies are developed, and action plans are designed as the first step to direct resources such as time, money, labour, and materials towards the desired outcome. After planning, management involves organising resources, which includes establishing an efficient organisational structure, placing individuals in specific roles and responsibilities, and allocating resources according to the established plan. Next, directing or "leading" becomes key, involving actions to motivate and guide organisational members in achieving set goals. It involves communication, leadership, skills development, and supervision. Management also includes controlling, which is used to monitor and evaluate progress towards goals [21]. This involves comparing actual performance with plans, and taking corrective action where necessary. Management also involves managing various resources, including human, financial, material, time, and technological resources, with the aim of achieving maximum efficiency and productivity. Management is always concerned with achieving specific goals, which may vary from one organisation to another [22]. The management process is also continuous, requiring constant monitoring and adjustment to respond to changes in the business environment, technology, and customer needs. Managers themselves require a number of expertise and skills such as leadership, communication, decision-making, and problem-solving abilities. They must also have extensive knowledge of the industry and their specific field. Management has widespread applications in various fields, including business, government, education, healthcare, and non-profit organisations, and is a key element in achieving efficiency, effectiveness, and success in an organisational context.

1.3 Law

Law is a system of rules and regulations established by government authorities or legislative bodies in society to govern the behaviour of individuals, groups or institutions [23]. The main purpose of law is to create a social order that is fair, orderly, and based on the principles of justice, and to protect the rights and obligations of individuals and groups in society [24]. Here are some key points in explaining what is meant by law:

1. Rules and Regulations: Law consists of different types of rules and regulations that govern different aspects of everyday life, including criminal law (which governs criminal offences), civil law (which governs relationships between individuals or legal entities), contract law, property law, and more.
2. Authority and Legitimacy: Laws are made and enforced by legitimate authorities, such as governments, legislative bodies, and authorised institutions. This gives legitimacy to the law and makes it binding for citizens.
3. Law as a Regulator: Laws aim to regulate the behaviour of individuals and groups in society. This includes providing guidance on what can and cannot be done, as well as setting sanctions for violations of the law.
4. Principles of Justice: Laws are based on principles of justice, which include equality before the law, the right to a fair trial, and principles such as the presumption of innocence.
5. Protection of Rights and Duties: The law protects individual rights, such as the right to freedom of speech, the right to property, and other human rights. Conversely, the law also establishes obligations that citizens must abide by, such as paying taxes or respecting the rights of others.
6. Legal Systems: There are different types of legal systems around the world, including common law, civil law, and other variants. Each legal system has different characteristics and principles.
7. Law Enforcement: Law enforcement involves the application of the law, investigation of law violations, prosecution, as well as the sanctioning of lawbreakers. It involves various law enforcement agencies such as the police, courts, and prison institutions.

8. Change and Revision: Laws are not fixed and are subject to change over time. The government or the legislature can revise existing laws or introduce new laws according to changes in society. Law is the foundation of a civilised society and serves to maintain order, justice and protection of individual rights. It also facilitates conflict resolution and enables organised social and economic development. As an essential component of social and political systems, law has a central role in shaping behaviour and relationships within society.

1.4 The Tourism Business

The tourism business refers to the sector of the economy related to travel, tourism, and the industries that serve travellers and tourists [25]. It involves a wide range of activities and services designed to meet the needs and wants of travellers visiting a destination. The tourism business encompasses a number of entities, ranging from travel agencies and hotels to restaurants, airlines, tour operators, and various other related services [26]. Here are some key points in explaining what a tourism business is:

1. Tourism Services: Tourism businesses cover a wide range of services provided to travellers, such as accommodation (hotels, resorts, villas), transportation (airlines, car rental companies, trains), food and beverages (restaurants, cafes, bars), recreation (amusement parks, water rides, tourist attractions), and travel (travel agents, tour operators).

2. Promotion and Marketing: To attract travellers, tourism businesses often engage in strong promotional and marketing efforts. This includes promotion of tourist destinations, package trips, hotel promotions, and others. Digital marketing is also increasingly important in the tourism industry.

3. Destination Development: Development and maintenance of attractive tourist destinations is an important part of the tourism business. This can include infrastructure development, environmental preservation, and the creation of attractive tourist experiences.

4. Tourism Management: The tourism business also includes the operational management and sustainability of tourist destinations. This involves organising visits, managing increased tourism visits, and maintaining a balance between economic interests and environmental preservation.

5. Economic Role: The tourism business can make a significant economic contribution to a region or country. It creates jobs, supports local businesses, and generates revenue from tourists.

6. Social and Cultural Impact: Tourism businesses also have a significant social and cultural impact on destinations. It can have a positive impact by increasing cross-cultural understanding and the creation of economic opportunities, but it can also pose challenges such as environmental damage and sustainability issues.

7. Innovation: Tourism businesses are constantly evolving with innovations in services, including online booking, virtual reality technology for destination promotion, the use of travel apps, and more.

8. Regulation and Compliance: Tourism businesses are often subject to government regulations related to safety, taxes, and environmental regulations. Traveller safety is a top priority in this business.

The tourism business is an important global sector in the economy of many countries. It also creates significant employment opportunities and contributes to local economic growth. However, it is important to manage the tourism business wisely to minimise its negative impacts and ensure environmental and social sustainability in tourism destinations.

2. Method

This research entails a thorough qualitative analysis of the existing literature, with the main goal being a comprehensive review and clarification of available information from a wide range of sources. The primary objective of this qualitative literature review is to gather, assess, and synthesize the existing knowledge pertaining to the impact of technology on management and legal aspects within the tourism business. Data will be gathered from various sources, including academic journals, books, research reports, and other scholarly publications, spanning the period between 1998 and 2023. This timeframe allows for the observation of changes and advancements in the subject matter, identification of trends, and noting any modifications that have occurred during this period. The utilization of qualitative methodology in this literature review allows for an in-depth exploration of the complex and multifaceted aspects of the topic [27]. This approach facilitates the incorporation of a variety of information sources and the examination of a broad range of perspectives.
enhancing the analysis and strengthening the credibility of the findings. The data collection process encompasses careful textual analysis, data retrieval, and the systematic organization of pertinent information related to the research subject. As a result, the researcher will classify this data, compare and synthesize insights from various sources, and identify recurring patterns, themes, and trends within the collected data. An important advantage of using a qualitative literature review lies in its flexibility in understanding and explaining intricate phenomena, as it is not constrained by numerical or statistical limitations [28]. This approach also enables researchers to gain profound insights into the subject’s evolution over time, as well as the development of concepts and perspectives associated with the subject over the years. Throughout the course of this study, it is essential to assess the reliability and credibility of the sources used and critically evaluate the compiled information. When adopting a qualitative approach, it is incumbent upon the researcher to present findings objectively and reflectively, provide clear and concise interpretations, and acknowledge the limitations of the methodologies and data sources employed [29]. The ultimate goal of this research is to provide a comprehensive overview of the subject’s evolution from 1998 to 2023 and, potentially, offer suggestions for future investigations aimed at enhancing our understanding of issues relevant to this subject.

3. Result and Discussion

Tourism is one of the fastest growing sectors of the economy, and the global landscape is no exception. Amidst constant change and evolving consumer demands, modern technology is emerging as a highly significant transformational force, fundamentally changing the tourism business landscape. Technological developments have permeated various aspects of the tourism industry, affecting both the management of the company and the legal aspects that govern its operations [30]. The existence of technology has brought about a dramatic change in the tourism business paradigm, inspiring companies to innovate, improve efficiency, and fulfill consumers’ increasingly high expectations. Against this backdrop, we will embark on an in-depth journey to explore the tremendous impact of technology on the management and legal aspects that govern this exciting world.

The influence of technology in tourism business management stretches through various important dimensions that affect the way the industry operates [31]. One aspect that is particularly striking in this digital age is the online booking capability that has changed the paradigm of travel. In the past, travel agents were the frontline in travel planning and booking, but now, travellers have the ability to plan and book their own trips through convenient online platforms. As a result, travel agents are experiencing a transformation in their business models, with a stronger focus on providing better customer service and the use of integrated travel management systems to ensure a seamless customer experience. This creates new challenges and opportunities for innovation in the tourism industry, which now relies on technology to meet the increasing demands of consumers. Besides online booking, data analytics has also become the backbone for efficient tourism business management. Technological advancements have enabled tourism companies to collect, analyse and make better use of data [32]. These data are a treasure trove of information on customer behaviour, travel trends, and consumer preferences. With a deeper understanding of this information, tourism business management can make more informed decisions in their product development and marketing strategies. Thus, the use of technology in tourism business management has created a landscape that focuses on understanding data and being responsive to customer needs, helping the industry to remain competitive in the ever-changing digital era.

Not only that, technology has opened a wide door for tourism companies to strengthen their communication with customers and business partners. Through the crucial role of social media and online platforms, companies can establish a more intimate and direct relationship with their customers [33]. In this case, social media acts as a key vehicle to hear feedback, respond to queries, and address complaints instantly. These interactions not only allow management to better understand customer needs and preferences, but also cement stronger and more sustainable relationships. Customers who feel valued and listened to are more likely to return and even become loyal brand advocates [34]. In the hospitality industry, technology has also taken inventory management to another level. Modern hotel management systems based on advanced technology can manage room availability, pricing, and bookings with great precision. This means that companies can optimise their hospitality revenue in ways that were not possible before. Through data analysis and smart algorithms, companies can dynamically set room prices, adjust them to market demand and special events, and maximise their revenue. Thus, technology has provided a highly effective tool in inventory management, increasing productivity and generating better financial results for tourism businesses, especially in the hospitality sector [35].

Meanwhile, not only in the management aspect, the influence of technology also penetrates into the domain of tourism business law, and these changes have very significant implications. Data protection has emerged as
one of the key issues in the legal framework of tourism business [36]. This is because the collection, processing, and storage of customer data has become a very important element in the operation of the modern tourism industry. One of the key regulations that has made a global impact is the General Data Protection Regulation (GDPR) in the European Union. This regulation has changed the way tourism companies operate in terms of customer data management. As a result of this stricter regulation, companies have to adhere to strict guidelines to ensure that customer data is strictly maintained, and their privacy remains protected. This creates new challenges in terms of compliance and careful data management, which need to be integrated into the business strategies and practices of tourism companies. In addition to data protection issues, e-commerce-related regulations, international travel regulations, and corporate social responsibility have also created significant changes in the legal aspects of tourism business. Technological developments and the expansion of electronic commerce have triggered changes in the way tourism businesses interact with their customers, which require a deeper understanding of the pertinent regulations [37]. Similarly, evolving international travel regulations may affect the way companies plan and execute international travel, including visa, immigration, and security requirements. On the other hand, increasingly demanding corporate social responsibility is driving tourism companies to pay more attention to the environmental and social impacts of their operations, and to comply with increasingly stringent regulations in this regard. Thus, the influence of technology in the legal aspects of the tourism business is an evolution that cannot be ignored and needs to be taken seriously by companies in this industry.

In addition, e-commerce-related regulations have had a significant impact on tourism businesses, introducing a series of rules that must be carefully adhered to. When tourism businesses engage in online transactions, they are faced with the obligation to comply with consumer protection regulations that safeguard the rights and interests of customers [38]. In addition, taxation aspects are becoming increasingly complex in the e-commerce realm, with tourism companies required to comply with the regulations applicable in each online transaction, which can involve different taxation in each country. In addition, copyright protection is an important consideration in online business, where companies need to ensure that the content they use does not infringe copyright. Tourism businesses operating in different countries also have to deal with diverse international travel regulations, including different visa requirements, cross-border tax regulations, as well as increasingly stringent security requirements. Technology has played a key role in ensuring that tourism companies comply with these regulations, with the use of online security and flight check systems helping to fulfil applicable international travel requirements [39]. All of this emphasises the legal complexities that tourism businesses have to deal with in the rapidly evolving era of e-commerce.

Beyond the impact of regulations and changes in management, the role of social media in the tourism business cannot be underestimated. The rise of social media has opened the door to wider exposure for tourism companies, allowing social and environmental issues related to the industry to come into the public spotlight more quickly and powerfully [40]. When an environmental controversy or issue arises, the news can spread quickly through various social media platforms, garnering global public support and attention [41]. As a result, tourism companies must now conduct their operations with a higher level of transparency and follow sustainable and responsible business practices. This includes efforts in reducing environmental impacts, complying with sustainability standards, and contributing to local communities. While the challenges of dealing with social and environmental issues can be complex, the impact of social media has forced tourism companies to prioritise their corporate social responsibility. In an effort to maintain a positive image and meet increasing consumer demands for sustainability, tourism companies must engage in business practices that are mindful of their impact on society and nature. As such, social media has been instrumental in shaping a new paradigm that emphasises sustainability and social responsibility, which is now an important factor in running a sustainable tourism business in an increasingly connected and socially and environmentally conscious era.

In the overall picture, the influence of technology has created profound changes in both key aspects, namely the management and legal aspects of the tourism business. As technology continues to evolve, stakeholders in the tourism industry cannot avoid the need to adapt to the rapid changes taking place. With breakthroughs such as online booking that allows customers to plan their trips more independently, to the use of data analytics to understand customer behaviour and travel trends, tourism businesses must continue to learn and integrate these technological innovations in their strategies. In addition, they must also remain compliant with applicable ethical and legal standards to ensure that their business sustainability does not neglect the increasingly important social and environmental aspects. Ultimately, the future success of tourism businesses will largely depend on their ability to run efficient and responsible operations, meeting the demands of consumers who are more aware of technology and sustainability issues.

4. Conclusion
The influence of technology in the tourism business has been an inexorable transformational force, fundamentally altering the landscape of this established industry. The change is particularly striking in the management of tourism companies, where innovations such as online booking systems have revolutionised the way customers plan and book their trips. Not only that, technology also brings data analytics that allow companies to better understand consumer preferences and behaviour, enabling them to better align offerings with customer needs. What’s more, increasingly sophisticated communications allow companies to interact more closely with their customers, improving service quality and responsiveness to queries and feedback. In addition, more efficient inventory management has emerged thanks to technology, which optimises asset management and reduces wastage. However, in addition to these positive changes, technology has also brought significant legal challenges to tourism businesses. Increasingly stringent data protection regulations require companies to guard customer privacy very carefully, while evolving e-commerce regulations may require adjustments in the way companies operate online. International travel regulations have also become a focus of attention, given the rapid changes in border rules and travel requirements that may significantly affect tourism businesses. In addition, corporate social responsibility is increasingly coming under the spotlight, prompting tourism companies to pay more attention to the environmental and social impacts of their operations. Thus, the influence of technology in the field of tourism business is a two-sided coin that requires careful adaptation and responsiveness on the part of the industry. Suggestions that can be given on the results of the study include:

1. Adoption of Appropriate Technology: Tourism businesses need to continue to adopt technology that suits their needs. This involves investing in efficient travel management systems and strong customer data protection. Adequate technology ownership and integration can help companies become more competitive and efficient.

2. Deep Understanding of Regulations: Tourism companies should have a deep understanding of the regulations and laws that apply in the various regions in which they operate. This allows them to properly comply with tax regulations, consumer rights, and international travel regulations.

3. Data Protection and Privacy: With data protection regulations becoming increasingly stringent, companies need to prioritise the protection of customer data. Implementing strong data protection policies and investing in information security are crucial steps.

4. Corporate Social Responsibility: In the age of social media, corporate social responsibility (CSR) has a huge impact on a company’s image. Tourism companies should pay attention to sustainable business practices and care for the environment to maintain their reputation.

5. Education and Training: Providing continuous education and training to employees in terms of technology and law is important. Improving their understanding of regulations and technological developments will help companies maintain compliance and optimise their performance.

In the rapidly changing world of tourism business, adaptation to change is the key to success. By understanding the influence of technology and following applicable regulations, tourism companies can continue to grow and provide superior customer experiences while ensuring the sustainability of their business in the future.

References


