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BLOCKCHAIN TECHNOLOGY APPLICATIONS IN TOURISM AND HOSPITALITY

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Abstract
Tourism and hospitality being one of the most participatory economic activities, has improved substantially since the Internet enabled consumers (travellers) to search for and plan their journeys without having to visit a travel agency. Globally, digital transformation seems to be the dominant trend in the growth of all sectors of the economy. Blockchain technology is now a breakthrough service that has revolutionised the view of the tourism and hospitality sector. This is mostly because to its enormous potential for revolutionising data storage and usage, boosting security and transparency, and speeding transactions. Understanding the elements that impact the use and acceptance of blockchain technology can aid in the successful resolution of adoption issues. The purpose of this study is to define the properties of blockchain technology in the travel and hospitality industries, as well as how those industries are influenced. Data is collected from secondary sources.

Keywords: Blockchain Technology, Tourism, Hospitality, Blockchain Application

Introduction

Blockchain, as an innovative technology, is impacting developments in numerous areas, including tourism. According to Iansiti and Lakhani (2017) blockchain technology is a digital ledger that enables distinct organisations to do business in a transparent and trustworthy manner without the need for a central node of control. This is a novel method of organising and processing information in blocks that are verifiable, dependable, and long-lasting (kumar et al., 2020).

Tourism has become one of the trends that millions of people follow on a daily basis. One factor for this is undoubtedly speedier communication enabled by information and communication technologies. Tourism, as an economic activity, specifies two fundamental categories of stakeholders: visitors who profit from tourism and tourism employees who utilise tourism as an economic activity to create revenue (Erceg et al., 2020).

According to Zsarnoczky (2018), the tourism sector will undergo significant transformation soon as a result of shifting customer wants and needs for travel and tourist products and services. He also claims that the sharing economy, which is the foundation of blockchain, is apparent in the tourist sector. With the growing effect of the sharing economy, the tourist sector will begin to focus more on the customer experience, and digitization will have a significant impact on the tourism industry. Other digital applications, such as artificial intelligence and virtual reality, will be used in the industry in addition to blockchain.

Since the Internet allowed customers to look for and order travel items online, the tourism sector has transformed drastically. As a result, many businesses, such as Airbnb and Uber, are shifting away from traditional business structures and towards consumer-to-consumer models. To fulfil client demands,

the tourist sector needed to pool resources, technology, and expertise to create new and creative platforms (Ozdemir et al., 2020).

The blockchain is a collection of blocks that include a record of transactions. As a result, transactions are aggregated within blocks that are added to the blockchain. Cryptographic hashes are used to connect blocks (de Leon et al., 2017). Each block (save the first) carries the preceding block's hash. The blockchain guarantees integrity by connecting blocks of transactions in such a manner that changing any one of them destroys the link to the upcoming block (Varma, 2019). The ledger is the collection of all the blocks.

Blockchain systems have also improved transparency and reduced fraud and mistakes, as well as processing times and transaction costs for all parties involved (Kizildag et al., 2019). Blockchain technology can help governments move towards cashless economies (Onder and Gunter, 2020).

Numerous governments, particularly those that rely significantly on tourism (for example, Malta, Caribbean countries, Aruba, and the Marshall Islands), have begun to make significant investments in blockchain technology in order to improve their tourist sector.

Review of literature

Blockchain can significantly drive or assist tourism and hospitality process automation on a worldwide scale, enhancing the sector's efficiency, accuracy, and production. For example, blockchain can automate a variety of commercial deals or transactions between visitors and service providers, including insurance pre-approvals, without requiring legal involvement (Shen and Bai, 2020).

Smart contracts supported by blockchain are self-executing and self-enforcing, with predefined rules, processes, and penalties (Erceg et al., 2020; Irannezhad & Mahadevan 2021). For example, blockchain provides its clients with automated fight delay insurance; as soon as a battle delay is identified, reimbursement is conducted promptly and securely, minimising needless paper effort (Radanović and Likić, 2018). Similarly, using digital keys or biometric identification, blockchain can automate secure check-ins at airports (e.g., digital passports, smart gates) and hotels (Thees et al., 2020). By shortening processing times, this automation benefits both visitors and service providers.

The possibility of blockchain to improve disintermediation (the reduction of the need for middlemen) is obvious. Blockchain applications have the potential to eliminate middlemen from the tourist value chain, such as online travel brokers (Onder and Treiblamer, 2018).

One of the challenges facing the tourism industry is a lack of transparency, which includes information on hotel capacities, different rates at different source markets, and data discrepancies caused by bookings passing through multiple systems, human errors, double booking, manual and paper-based communication (Irannezhad and Mahadevan, 2021).

According to Rejeb and Rejeb (2019) blockchain will affect tourism by fostering trust through the following factors: transparency, control, influence, and recourse. Another consequence of blockchain technology is enhanced identity management and more efficient contact with passengers, which may be applied across the tourism industry. The application of blockchain technology to the tourism industry has the potential to reduce costs associated with currency exchange rates, as well as to simplify frequent traveller reward schemes (Kowalewski et al., 2017).

The introduction of blockchain, and notably the success of its most well-known product, has garnered major media attention and widespread interest across a wide range of businesses. TUI, for example, has accepted blockchain for its booking, reservation, and payment system and has made considerable investments in start-up enterprises in this space. Customers may share their experiences and pleasure on social media. This might generate issues due to the likelihood of bogus reviews or scams. Because of its properties (security, transparency, trust, and privacy), blockchain may be utilised to solve these difficulties (onder & Treiblamer, 2018). In 2017 the tourist industry was one of the leaders in blockchain investment, and this trend is projected to continue in the next years.

Furthermore, blockchain enables peer-to-peer (P2P) transactions (e.g., customer to customer) for online bookings and reservations (e.g., hotel reservations; air tickets; tour packages) and allows travellers to use digital cryptocurrency (e.g., Bitcoin, Ripple) without relying on third parties or other middlemen (Valeri &Baggio, 2021).

Research Methodology

Blockchain technology was reviewed, with a particular focus on how it is used in the travel and tourist industry to improve agency services and the quality of travel for guests. In order to attain these goals, a specific approach that ensures the quality of the study and prevents the loss of scientific knowledge was used in this work. Throughout the writing process, secondary data sources such as books, publications of national and international organisations and statistics institutes, expert and academic papers, newspaper articles, master's theses, and similar were utilized. Among a variety of academic research-supporting sites, Science Direct, Scopus, and Web of Science were chosen as the key databases for the data used in this study.

Conclusion

When it comes to blockchain technology's acceptance in the travel sector, it is still in its early phases. Researchers from all around the world are attempting to develop applications and frameworks integrating the use of blockchain in the travel and tourist business. As a result of the quick research undertaken in recent years, there has been a growth in blockchain acceptability, resulting in new and important use cases from the travel sector. In conclusion, we conclude that there is certainly room for more effective blockchain applications in the tourist sector; nevertheless, more systematic research is required to have a significant impact on the development process. The paper highlights the scope of research that has been undertaken in areas of blockchain technology and its integration with the travel and hospitality industries during the last five years. The study's goal was to investigate blockchain technology from the standpoint of the hotel business. The outcomes of this study also demonstrate how blockchain technology might increase disintermediation. But the following characteristics and benefits must be present for this disintermediation to occur: immutability, security, transparency, privacy, and traceability.

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