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Blockchain The Antecedent of CSR In the Post Pandemic Era: Glimpses from The Tourism Industry

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Abstract

The introduction of newer technologies has changed the functionality of corporate social responsibility (CSR). The CSR and the ethical codes are witnessing considerable transformation. The advent of technologies has enabled the companies to save resources as well as comply with the CSR norms. Blockchain technologies help to eliminate arbitrariness and support ethical evaluation process. Present research provides for an understanding of blockchain technology towards CSR compliances in the tourism sector. Webjet Limited Rezchain in the hotel distribution industry, The Known Traveller Digital Identity System- KTDIS, TravelChain, Maintenance, Repair, and Overhaul (MRO) blockchain, TUI (Tourism Union International) Bed- Swap, and LIF-Token by Winding Tree are the six cases that have been explored in this study. These companies are pioneer in utilizing the Blockchain technology in the tourism domain in the post pandemic times. The documentary analysis reveals the importance of blockchain in the CSR domain indicating its importance in the areas like traceability, decentralization, transparency, preventing corruption, reducing bureaucracy, and avoiding power concentration.

Keywords: Blockchain; CSR; Tourism; Post-pandemic; Digitalization

Introduction

The world witnessed mega- financial crisis and global economic disruption due to COVID-19 pandemic. Various business models collapsed during the pandemic. Digitalization of the economy transformed the systems through unique and secure ways of data usage and data sharing in the post pandemic times. Blockchain technology emerged as a plug in during these critical times for many sectors. The need for blockchain emanates from its potential to make secure and transparent processes for data storage usage. Digital consumers are at great rise due to advanced techniques like artificial intelligence creating a new dimension for trust and security (Hawlitschek, Notheisen, & Teubner, 2020). Digitalization in the economic system has been the most dynamic transformation that has opened newer avenues for innovative business models. Blockchain emerged as a distributed ledger technology as a part of bitcoin protocol launched in the year 2009 by an anonymous inventor with a pseudo name of Satoshi Nakamoto (Rana et al., 2022). Later in the post pandemic scenario, this virtual currency became a big success in financial, economic, health and tourism industry. The travel and tourism industry contributes to 10.4% of the global GDP making it an evident contributor to the

world economy (WTTC 2021). The COVID- 19 pandemic induced a drop in the share of global GDP and loss of jobs. However, in the post pandemic times, the travel and tourism industry has emerged as a key sector that can drive the recovery of the global economy (Streimikiene et. al., 2021). Tourism has significant social, economic, and environmental impacts across the globe. It is also linked to poverty alleviation, sustainable development, supporting natives' wellbeing, promoting cultural diversity, reducing inequalities, and promoting conservation.

Corporate Social Responsibility (CSR) has been linked to sustainable development of business processes. CSR is defined as "a framework of integrating social and environmental concerns with the business processes/ operations of the companies including a voluntary participation of their stakeholders" (European Commission, 2001). It is of immense importance for the long-term growth and competitive advantage of the companies (Chandler, 2019). However, in tourism industry the perceived value of CSR is lesser as compared to other industries (Van & Persoon, 2019). The pandemic led to the adoption of newer strategies due to the market crisis and evolving business environment in the tourism industry. The businesses that had flexible, innovative, and proactive strategies were able to perform better in unpredicted times like the pandemic (Khan, 2020). CSR strategy helps to recover from social and environmental challenges, especially in the tourism sector by making the travellers attitude and behaviour more responsible (Han et.al. 2020). The challenging times like the pandemic, make it even more important to implement the CSR strategy for sustainable development of the firm.

Blockchain became revolutionary through its efficient, transparent, and sustainable business processes (Rana et al. 2021) in the post pandemic times. The role of intermediaries was eliminated and there was greater level of trust among the business partners (Rashideh, 2020). Blockchain provides for business communication, interactions and relationships that are primarily based on the building blocks of trust and security (Inkson & Minnaert, 2018) making it very significant for the CSR initiatives. With the internet enabled processes tourism industry has witnessed rapid change in the consumer behaviour. Customers prefer to pre search for the reviews of the tourism destinations, services provided, prices offered and booking options available to them. This has resulted in a shift of business models especially in the CSR domain. Companies like Airbnb and Uber have moved from their traditional model to C2C models (consumer to consumer). Companies have combined money, information, and technology for new and innovative tourism platforms for enhancing tourists' satisfaction and better business practices (Colombo and Baggio, 2017).

It is critical for companies to maintain an equilibrium of economic, social, and environmental sustainability, especially during crisis like pandemic. It is evident that the CSR practices help to provide numerous benefits to the companies. The advent of technology further strengthens this process even during turbulent times. The earlier studies have indicated the importance of CSR practices in the tourism sector. However, there is scanty evidence on the adaption of CSR practices and intervention of emerging technologies in the post pandemic scenario. This study focuses on the blockchain enabled CSR practices in the tourism industry. It aims to explore the blockchain enabled CSR practices of the "Tourism Union International (TUI)" Group in the post pandemic times. TUI Group has been identified as the case study in lieu of its remarkable CSR strategies during the COVID- 19 pandemic. The company is also globally renowned for its adaptive and focused strategies towards sustainability, benefitting stakeholders over the years. Multiple awards for environment friendly initiatives were bestowed to the TUI group. The FTSE4Good index (The FTSE4Good Index Series is a series of benchmark and tradable indexes for ESG -Environmental, Social and Governance,

investors), remarkable innovative CSR practices and inclusion in Sustainability Yearbook of 2021, make TUI Group a good fit as a case study (Johann, 2022).

Theoretical Background

We are living in a world of rapid transformation in the business mindset and societal values. The advancement in technology has multifaceted effect on CSR. The UN 2030 agenda mentioned 17 sustainable development goals (SDGs) emphasizing upon sustainable practices and responsible policies across the globe (Aburumman, 2020). The European union strongly promoted and supported the implications of CSR. They also promoted that CSR is important for circular economy for ensuring sustainability of processes (Porcuna, 2021). The long-term growth of businesses is dependent on the right implementation of the CSR strategy. The negative or the ill effect of business processes majorly include global warming and environmental damages. Technological advancements help to mitigate this negative impact. Also, these technologies lead to higher business transparencies, indicating a strong relationship between technology and CSR (Nwafor & Nashchekina, 2021). Blockchain ensured the transparency privacy, security, and trust of data. Blockchain has various applications that have significant relevance to the core pillars of sustainability- "responsibility and governance" (Seifi, 2021). However, there is less academic evidence of linkage between blockchain, sustainability and CSR (Raimondi, 2020).

New and integrated theoretical frameworks have been developed in the post pandemic times, indicating a strong role of Blockchain in explaining the CSR performances. Ezzi, Jarboui, & Mouakhar (2022) empirically explored the relationship between blockchain technology and CSR performance. This study on European firms reflected a significant and positive result of blockchain technologies on their CSR performance. In a similar research direction Rainero, & Modarelli, (2021) found the food tracking and blockchain technology as a decision-making tool towards CSR processes. The IDC's Worldwide Blockchain Spending Guide highlighted that the European blockchain spending of $1.4 billion (2020) would grow at 58% CAGR by the year 2035 (Dragov, La Croce & Hefny, 2020). It was reported that amidst the global COVID-19 crisis, the blockchain technologies played a vital role in realigning the global business networks (Kotecha & Muma, 2020), indicating its vital nature. Most importantly the decentralized approach of Blockchain revolutionized the CSR approaches in various industries like finance, supply chain, health care and tourism industry. The key mantra for survival, growth, and sustainability of a firm depends on business models that imbibe internet of things, digitalization, artificial intelligence and Blockchain. The algorithm and encryption blend of technology has made blockchain the innovative disruption in the era of digitalization. Chronological authentic transactions like reservations, booking tickets, supply chain management, payments and financial agreements indicated the ultimate capability of blockchain technology from its application perspective (Anderson, 2020; Dogru, Mody & Leonardi, 2020).

Just like any other industry, the tourism industry processes also create negative impact on the economic, social, and environmental aspects (Humsona et al., 2021). None of the businesses were invulnerable during the pandemic. The COVID- 19 pandemic resulted in bankruptcy of many businesses and very adversely affected the travel and tourism industry. This crisis opened avenues for meaningful CSR. In the post pandemic times, the companies were able to revive their operations through a balance between the profits and prosperity of its stakeholders (Malik & Pasha, 2022). Researchers have discussed various paradoxes and misunderstandings related to blockchain and tourism processes. The extant literature indicates that the decentralized systems of blockchain promises possibility of solutions to various problems in the tourism industry. It can enable trust and

transparency supporting strong CSR practices. However, it is at a nascent stage and need further exploration (Yadav et al., 2021). The linkage of blockchain characteristics, specifications of CSR and the revival of tourism industry in the post pandemic era could develop useful framework, models and new theories that can create a win- win situation for all the stakeholders (Treiblmaier, 2021).

Despite of the strong potential of Blockchain and huge interest from the industry practitioners, there is dearth of academic literature in the domain of Blockchain investigation and its potential implications across CSR practices. Present paper attempts to highlight the novelty of the topic and suggests research areas that can be further examined through empirical and conceptual research work. It is agreed upon in the academic fraternity that there would be substantial economic and societal implications of the blockchain in the years ahead (Upadhyay et. al., 2021).

Methodology

Blockchain intervention in the tourism industry that support the CSR practices, is the subject of the present research. Webjet Limited Rezchain in the hotel distribution industry, The Known Traveller Digital Identity System- KTDIS, TravelChain, Maintenance, Repair, and Overhaul (MRO) blockchain, TUI (Tourism Union International) Bed- Swap, and LIF-Token by Winding Tree are the six cases that have been explored in this study. These companies are pioneer in utilizing the Blockchain technology in the tourism domain. These case studies are based on the documentary analysis. Blockchain enabled CSR strategy, sustainability aspects, supply chain strategy, transparency, and decentralization process adopted during, and post COVID-19 era have been discussed. The documentary analysis is based on reports and documents including the Webjet annual report 2021, research papers, online articles, KTDI world economic forum report 2018, KTDI corporate reports, TravelChain sustainability report 2022, MRO Blockchain alliance report 2020, TUI Group Annual report 2020, TUI group Annual report 2021, and report on LIF-Token by Winding Tree, 2021.The general information about the companies have been utilized from their websites. Various online articles and websites have been explored for better understanding of blockchain and CSR in the tourism industry. Various aspects of blockchain enabled CSR strategy are discussed in the further sections of the paper.

Findings

Blockchain emerged as a saviour for the travel industry in the post pandemic era. It provided for coverage and sharing of information among the travel and tourism stakeholders. It resulted in removal of intermediaries and replacement of the property management system in the hospitality industry and aided to the CSR practices. The Swiss platform “Winding Tree” deployed the blockchain for the hoteliers and the airline companies as a CSR strategy for enlisting the availability of the seats and rooms for the customers for booking purposes (Baralla et al., 2020). The German group TUI utilized blockchain for effective and secure management of the hotel rooms known as “bed-Swap”. The system allowed the travellers to receive accurate information about room occupancy and room rates of the hotels in a secure process. It also enabled the hoteliers and tour operators to be better prepared for the customers.

The usage of organic, local, and sustainable products had been an advantageous tool in the food and wine tourism sector. Blockchain provided for the traceability of the food products from the farm to the plate of the customer ensuring sustainability and governance. The device registered in the blockchain scanned a QR code/ barcode of the products, making the entry process trustworthy and authentic. The Italian system “Foodchain” utilized blockchain to trace the food items from its origin in the farm to

the table of the consumers. The participating companies made the information public through the QR code on the packaging of such products. This increased the trust and confidence of the customers as well as the companies (Thees, Erschbamer & Pechlaner, 2020).

Lost luggage and misplaced luggage have been a constant trouble area in the airlines industry until "baggage tracking" through blockchain. It reduced the loss of time and money for the customers and the airline companies through quick check-in and reducing waiting time. The various essential check points helped to track the baggage via automatic entry of the collected data in a public register. The COVID-19 pandemic led to the preference of contactless systems. "Bagtrax" utilized blockchain through a sensor attached to customers luggage. It guaranteed data security and safe sequence tracking of the luggage to the customers. It benefitted all the stakeholders like passengers, airlines, and insurance companies and eliminated the chances of black-marketing in reservations and issuance of tickets.

Table 1 presents the prospects of blockchain in the CSR domain indicating its importance in the areas like traceability, decentralization, transparency, preventing corruption, reducing bureaucracy, and avoiding power concentration.

Table 1: Prospects of blockchain in CSR domain

CSR Aspect	Blockchain intervention	Author	Year
Traceability in supply chain	Reduce transaction cost, transparent systems, traceability of supply chain and payment	Baralla et al.	2021
Traceability in supply chain	Accounting settlement, crowdfunding, data storage, smart trading, and supply chain management	Dasaklis et al.	2022
Decentralization of data storage	Decentralized digital assets	Javed et al.	2020
Decentralization of data storage	Fair transactions and sharing of data	Liang et al.	2020
Transparency of transaction	Transparency of donations	Sunny, Undralla, & Pillai	2020
Transparency of transaction	Token sales or Initial coin offerings	O'Dair & Owen	2019
Trace provenance of raw material	Effective tracking of raw material	Bacchetta, Krümpel, & Cullen	2021
Trace provenance of raw material	Easy to track the drugs	D'souza,, Nazareth, Vaz & Shetty	2021
Prevents corruption	Avoiding contract anomaly	Ogunlela., Ojugbele, & Tengeh	2021
Prevents corruption	Peer-to-peer network to prevent any single entity discrepancy	Saeed, Kohler, Cuomo & Mackey	2022
Reduce bureaucracy	Check on bureaucracy in e- government services	Lykidis, Drosatos, & Rantos	2021
Reduce bureaucracy	Reduces bureaucracy on digital platforms	Zutshi, Grilo & Nodehi	2021

Avoid power concentration	Stakeholder avoids cultivating power	Jairam et. al.	2021
Avoid power concentration	Avoid concentration of market power	Hoess et. Al.	2022

Source: Author's work

Webjet Limited

Webjet limited is a renowned online travel firm with its headquarters in Australia. This company was founded in 1998 and in a process of advancement and development process it adopted blockchain. Rez chain is a Blockchain technology that was co-created with Microsoft to eliminate the anomalies of the information and booking services offered to the customers. It utilizes blockchain for decentralized hotel room booking systems, ensuring transparent services for buyers and sellers (Webjet Annual report, 2021). Rez chain aligns the tourists, agents, hoteliers, and travel managers. It has smoothened processes like booking, currency conversion, rooms and beds, medical and special services requested by the tourists. The settlement process between the travel partners and the suppliers, IT platforms and different end users are also greatly benefitted. The design of the Rez chain ensured the privacy and security of the booking data of the company as its paramount agenda (Kapil & Kapil, 2022). Further, the smart contracts have strengthened the CSR practices and governance norms by reducing disputed transactions significantly.

Known Traveller Digital Identity

The Known Traveller Digital Identity Systems, or KTDIS, is the joint platform initiated by World Economic Forum and Accenture. This initiative is a consortium of various stakeholders like government, customers/ individuals, authorities, and the travel industry to provide for safe and secure travel across the globe. The travel industry can utilize secure claims of the travellers to verify their credibility, optimize the processing and reduce the risk. Individual customers can self-manage and get the digital attestation of their profile to decide "what" and "when" to share (KTDI WEF report 2018). The greater the attestation accumulated by a traveller, the greater credibility is provided by travel stakeholders like government and tour operator for smooth and safe travel experience to the customer ensuring fair practices. KTDIS provides multiple digital access to the travellers like facilitating e-passport, biometric, secure border entry and exit compliances, car rentals, hotels, airlines, travel agents, immigration, taxi booking etc. for secure and safe travel (Known Traveller Digital Identity, 2022).

Travel Chain

Travel Chain is a blockchain based decentralized platform for the travel industry. It provides easy access and authentic data to the businesses for the better understanding of their clients. Travellers experience the best of services through the smart data. It allows for collection and monetization of travel data by the users and provides tokens to the customers as compensation for sharing with the travel operators. Travel Chain is a grapheme based Blockchain that enables bifurcation of public and private data through specific keys to the users. Travellers receive discounts, travel tokens, and vouchers and the travel service providers are benefitted by enhancing the customers travel experience through customized travellers' data (Travel Chain 2022).

Maintenance, Repair, and Overhaul blockchain

In the year 2019-20 SITA World Tours entered new alliance constituting of Bolloré Logistics, Cathay Pacific, FLYdocs, HAECO Group, Ramco Systems, and Willis Lease Finance Corporation, supported by Clyde & Co. the purpose of this alliance was to utilize the Blockchain technology for digital tracking, tracing, and recording the movement and maintenance of the parts of the aircraft. It enabled smart contracts, maintenance, and logistics with the stakeholders in the value chain like the airlines, manufacturer of equipment's, logistic suppliers, and maintenance suppliers (MRO Blockchain alliance, 2020).

TUI Bed- Swap

TUI (Tourism Union International) is the world's pioneer in integrating Blockchain to travel industry. This German company is the world's largest tourism company with a strong portfolio of hotels, airlines, cruises, tour operator, large travel agencies, online travel portals, and destination planners across the globe. "Bed- swap" an inhouse Blockchain project of TUI that functions to facilitate the allocation of beds as per the demand and availability of Beds (TUI annual report, 2021). The TUI group's CSR strategy includes sustainable business practices and the implementation of these practices in company's operations. Majorly, their CSR strategy aims at ensuring sustainability in supply chain practices, high code of conduct and ethical standards at all levels of the organization (TUI annual report 2020).

LIF-Token

LIF currency based on the blockchain technology has revolutionized the systems in Winding Tree. The aim of this Non-profit organization is to create an open-source demand and supply market for tracking of the inventory and distribution in the tourism processes. LIF currency connected the buyers and suppliers without any intermediaries. It secured the commercial relationships through smart contracts and reduced the transaction costs per booking for the customers (LIF-Token by Winding Tree, 2021).

Table 2: CSR transformation, Blockchain interventions, and the Travel and Tourism Beneficiaries

S.N.	CSR Transformations	Blockchain Interventions	Travel & Tourism Beneficiaries
1	Cost and speed	• Cost reduction • Smart contracts • Paperless records • Eliminates intermediaries	• Customers • Service providers
2	Intra-firm processes	• Reduce human errors • Manual communication • Baggage handling	• Airline companies
3	Integration and transparency	• Tracking, tracing and one stop for travel services	• Customers • Service providers
4	Operations	• Loyalty reward points • Wi-Fi	• Customers • Airline companies

5	Authenticity	• Review data cannot be removed • Rating of destination popularity can't be compromised	• Customers • Destinations
6	Shared Economy	• Peer-to- peer market • Eliminating intermediaries • Combining various tourism services	• Customers • Destinations
7	Risk reduction	• Addresses the source of risk/ fraud • Verification • Validation • Privacy • Reduces hacking threads	• Customers • Service providers • Destinations • Airline companies • All other tourism stakeholders

Source: Compiled from Irannezhad & Mahadevan, 2020.

Table 2 reflects the various blockchain interventions that have revolutionized the travel and tourism industry. These interventions have transformed the existing CSR processes in the six companies discussed in this study. The stakeholders like customers, service providers, airline companies and destination planners have greatly benefitted from the digital interventions in the post pandemic times.

Discussion

The sharing of data and protection of privacy at the same time has been a crucial issue, especially in the post pandemic times. In this connect, immutability is an interesting characteristic of blockchain, that is seen as boon as well as bane. Standardization of blockchain systems is also a major challenge as the regulations with blockchain are different in every country. However, blockchain has great potential in terms of tokens, smart contracts, decentralization, traceability etc. especially in the tourism industry. In the pandemic crisis, it was crucial for travel and tourism companies to adopt to the evolving pandemic environment. The technology enabled CSR practice has resulted in better organizational protocols in the post pandemic era. It is important for travel and tourism companies to revisit their business practices. Sustainability and digitalization are the prime areas to be focused on these challenging times. This study provides an insight on the CSR strategies of the companies that have benefitted through blockchain. However, it is limited to six companies in the travel domain that were selected carefully. Moreover, this area of research is at its nascent stage across industries due to the disruption caused by the pandemic. Future research may aim at exploring more companies adapting CSR practices through blockchain interventions.

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