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Mini Review

A Call for Investigations on the Prospects and Hesitancies about Using Block-Chain in Tourism

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ABSTRACT

Nowadays, we are witnessing the birth of the Fourth Industrial Revolution (4IR). It is not a revolution of machines but rather a revolution in the way people live their lives and business operations. The 4IR or 4th Era of Innovation refers to exceptionally high digitalization, automation, and connectivity blurring the lines between the physical, digital and biological spheres. The 4IR is also a period dominated by data as it leads to unprecedented levels of computing power and storage capacity while catalyzing innovation at increasingly faster speeds than ever before.

Keywords: Tourism industry; Block-chain; Digital marketing; Fourth Industrial Revolution (4IR)

INTRODUCTION

Tourism is an industry in the global market that has always been slow to adopt technology, especially block-chain. This claim is evident when compared with other sectors, like retail and financial services, which have taken advantage of the benefits of technological advancements like block-chain technology. Tourism and its stakeholders have not realized how this technology can improve their livelihoods. In fact, there are many issues in the tourism industry that could readily be addressed by the use of distributed ledger technology or block-chain tech for short. The fear being felt by those involved in this industry is rooted in education about this new development. The hope is that this understanding would trigger a shift towards widespread implementation within their organization. In this review, I will brief diverse reflections on the viability of block-chain in the tourism industry.

Technology and tourism are two major areas that, when practiced in tandem, can significantly benefit all parties involved in this industry. Specifically, the web allows users to research potential trips before booking an airline ticket or hotel room and be directly engaged in social media with other users and tourism organizations [1-3]. In addition, communication via blogs and various internet discussion boards has been recognized as a new way to interact and connect [4].

BLOCK-CHAIN AND ITS FEATURES

The underlying technology behind block-chain was inspired by computer technologies that created decentralized ledgers with end-to-end encryption in the early years [5,6]. The first block-chain was conceptualized by an individual or group termed Satoshi Nakamoto's pseudonym [7]. Further development of the underlying technological concepts within block-chain has been explored both by various foundations and through open-source software explicitly developed for peer-to-peer power systems and digital currencies like Bit-coin, which are a form of crypto-currency (cementing cryptographically generated tokens through a peer to peer network)

Block-chain technology is a truly innovative and remarkable development. It has given companies the ability to develop products and services that were previously quite difficult to do and have more effective ways of carrying different use cases in tourism [8]. Furthermore, the technology is well suited to industries that require digital information to be transferred in a quick but secure manner, as it can complete transactions in real-time without the need for an intermediary or central power.

Treiblmaier [9] listed numerous benefits of block-chain, such as

(1) Immutability-Information that becomes permanent and unchangeable once confirmed on the block-chain (2) Transparency in which information is discernible to all individuals on the same network (3) Programmability: contracts can be programmed onto computer codes called smart contracts

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(4) Decentralization: data is publically published and not stored in a central location (5) Consensus: Network participants can vote on several issues related to any activity (6) Anonymity: A block-chain allows for identifying or anonymizing those using the network.

Prospects

The tourism industry comprises five segments accommodation, transportation, food and beverage, recreation and entertainment, and travel services [10]. Block-chain has its uses across all these categories to repair issues surrounding most or all of them. In addition, recent research emphasized the block-chain's potential to boost, sustain and change the tourism industry [11]. Therefore, there is a need to define block-chain in the context of tourism [12,13]. Consequently, more research is needed to conceptualize and theorize the incorporation of block-chain in tourism. Likewise, since tourism is linked to different fields of study, researchers need to carry out more investigations to develop a conceptual understanding of precisely how block-chain may apply to tourism, requiring the participation of scholars from various domains.

Treiblmaier and Onder explored block-chain technology's potential implication on the tourism industry by providing an integrated perspective of economics and the social sciences in a multi-theoretical framework [14]. The framework helps to detect paramount outcomes regarding the potential impact of block-chain on tourism as one of its core applications. Treiblmaier and Onder's proved how block-chain is transforming business communication, relations, market structure, and other significant aspects of traditional business, such as diffusion within markets and organizations. In addition, they showed that expansion through economic agents within a peer-to-peer network is an effective method for disseminating information since peers support each other without any third party or "central" authority. Treiblmaier and Onder's efforts to establish an academic framework in studying block-chain and tourism provide a sound basis for future research; however, theories need to be tested further to give a more accurate portrayal. Therefore, it is essential to study theoretical models and practical cases of how tourism can use these views. Doing so will allow better-informed research and help tourism stakeholders in this realm make informed decisions.

As the popularity of block-chain soars, the need to explore its potential benefits becomes paramount. In this exciting and captivating work, thees, erschbamer provide readers with a comprehensive analysis of the implications of block-chain when used in the value system of the tourism industry. Here, the author offers insights into how block-chain could transform the industry from planning and booking a vacation to accommodation and food services.

As the field of block-chain evolves, the potential of the technology must be explored and understood. Not only is this significant to understanding the implications of block-chain, but it also allows researchers and scholars to highlight and address the issues associated with the power of block-chain technology for new areas of development in the tourism sector.

Hesitancies

While block-chain technology is superior to other more traditional and slower forms of data storage today, there are still some issues with it, especially as far as mass adoption is concerned. For example, if a system's set is too large, systems using proof-of-work can take up an excessive amount of energy. Another significant drawback would be the inability to scale in many situations where situations need to grow faster than what digital infrastructure would allow for those along with problems involving economic incentives. To solve these issues and make block-chain technology successful overall, it needs time to be tested and explored before reflecting on any adverse side effects of regulation or even environmental impact by digital instruments.

Rashideh suggested a central agency that maintains a consistent network among stakeholders while, at the same time, preventing illegal actions [15]. Therefore, this central agency could develop strategies and plans to use block-chain technology effectively to solve this issue. Another problem highlighted by Rashideh is that adopting this technology requires substantial collaboration among stakeholders such as governments, tourists businesses, destination marketing organizations, etc.

Unfortunately, often these agencies do not cooperate. Without these collaborations, it might be challenging for block-chain to spread all over the tourism industry. The suggestion to create a central agency that controls block-chain networks conflicts with decentralization's core tenet of block-chain technology. There should be an alternative that accounts for an area where current implementations have been deficient: security. While there are mechanisms in place now to ensure data integrity and prevent bad actors from committing fraudulent transactions, no equivalent measures have been resigned as of yet to protect users' personal information and assets from felling and smart contracts from hacking [16]. Rather than rely on third parties such as governments or corporations, communities (block-chain experts) should find ways to proactively develop solutions that enable technological innovation while protecting sensitive information directly through this infrastructure.

DISCUSSION

Furthermore cited how block-chain technology is gaining much traction in the tourism sector (and other industries, too). However, one main drawback is that Swiss SMEs are 5-10 years behind the big players; this amounts to an extreme competitive disadvantage. In addition, marketers don't agree on using block-chain networks exclusively for digital marketing.

As this review addressed, block-chain technology has been and remains nothing less than a disruptive force in all sectors of the economy. While central banks and governments of major economies have not been able to agree on regulations regarding block-chain and crypto-currencies, other sectors that stand to gain from resilient, cheap and fast transactions such as tourism may need to wait for regulation before they can reap the benefits of block-chain technology.

Block-chain technology is rapidly evolving beyond its initial use as a digital currency. As a result, its potential applications in the tourism industry are many and need to be more thoroughly researched. Remarkably, I was very much engaged by Treiblmaier's work that provided a brilliant discussion of various paradoxes concerning block-chain and how tourism researchers may begin to address these in their research from management and social sciences perspectives.

CONCLUSION

This mini-review has shown that many agree on how block-chain technology and tourism are great together now, and it's not only the future. Some dispute, but not much can go against block-chain technology's usefulness in tourism and its subsidiaries. Furthermore, the reviewed literature clarifies how much our industry needs such research now more than ever before. This review provides a valuable contribution to the initial explorations about block-chain and tourism, and it's evident from a perusal of the available material that there is an urgent need for further investigations concerning both pros and cons of this technology in our field.

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