

The Metaverse as an Innovative Marketing Tool to Enhance the Tourism Sector The Chinese Experience as a Model

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Abstract:

This study aims to explore the role of metaverse technologies as an innovative marketing tool to enhance the tourism sector by analyzing China's pioneering experience in this field. It examines the impact of the metaverse on the Chinese tourism sector by offering immersive virtual tourism experiences that enhance the overall travel experience. The study concludes that the metaverse represents a powerful and promising tool for expanding the tourist base and providing interactive virtual travel experiences that closely simulate reality.

The study calls for adopting a comprehensive strategic approach to enhance the use of metaverse technologies in the tourism sector, as this innovative marketing tool has become a strategic necessity rather than merely an option for achieving sustainable sector growth. Additionally, the study recommends strengthening cooperation between the public and private sectors to establish strategic partnerships that support innovation in leveraging the metaverse for tourism development.

Keywords: Metaverse; Tourism sector; Tourism marketing; Chinese experience

JEL Classification: M31; L86; L83; Q33

Introduction

The tourism sector is one of the most prominent economic sectors worldwide, playing a pivotal role in fostering economic and social development. With the ongoing digital revolution in recent years, modern technologies have become essential tools in redefining the tourism industry, opening new horizons for innovation in marketing tourist destinations. The metaverse is one of the most significant innovative tools capable of bringing about a major transformation in this sector.

China is among the first countries to adopt this technology to enhance its tourism sector by promoting its cultural and historical landmarks in an innovative and interactive virtual environment. This allows tourists from around the world to engage with these attractions without the need for physical travel, making the travel experience more flexible and appealing.

Research Problem

How does metaverse technology contribute to the development and enhancement of the tourism sector in China?

Sub-questions

1. What is the metaverse, and how can it be applied in the tourism sector?
2. What marketing potential does the metaverse offer for the tourism?
3. What are the major tourist attractions in China promoted through metaverse platforms?
4. How can the metaverse contribute to enhancing sustainable tourism?
5. What challenges might hinder China from integrating the metaverse into its tourism sector?

Hypotheses

1. The metaverse enhances the tourist experience, leading to an increase in actual visit rates.
2. The metaverse plays a significant role in tourism marketing by providing interactive virtual experiences, offering detailed information about destinations.
3. Major historical and cultural landmarks in China, are among the key attractions promoted through metaverse platforms to offer innovative digital tourism experiences.

4. Utilizing the metaverse in tourism contributes to promoting sustainable tourism by reducing the need for physical travel.
5. China faces technical and regulatory challenges that hinder the implementation of metaverse technology in its tourism sector.

Significance of the Study

The significance of this study lies in exploring the role of the metaverse as an innovative tool that directly influences the transformation of the tourism landscape and the development of the tourism sector, with a particular focus on China's pioneering experience in this field. The study provides a framework for understanding the opportunities the metaverse offers in stimulating tourism activity and opening new horizons for tourism marketing. Additionally, it examines the challenges associated with implementing the metaverse in the tourism sector while offering recommendations for tourism institutions and countries seeking to maximize the benefits of these technologies.

Research Objectives

This study aims to analyze the impact of metaverse technologies on enhancing tourist experiences and improving tourism marketing strategies by examining China's experience in implementing the metaverse in the tourism sector, it explores the initiatives and projects launched to attract tourists and boost the tourism economy, the study also seeks to provide practical recommendations for decision-makers in the tourism sector on effectively integrating metaverse technologies into tourism marketing strategies to promote sustainable sector growth.

Research Methodology

To comprehensively address the topic and answer the research problem, the study adopts a descriptive-analytical approach, which is well-suited for this type of research.

1- Theoretical Foundation of the Metaverse and Its Applications in the Tourism Sector

The Metaverse is one of the modern technologies that has brought about profound transformations across various fields, and tourism is among the most prominent industries leveraging the metaverse.

1-1 -The Concept of the Metaverse

The term Metaverse was first introduced by Neal Stephenson in his 1992 science fiction novel *Snow Crash*, where he envisioned a vast virtual universe in which users could immerse themselves in interconnected digital worlds, engaging in real-time activities and interactions. Over the years, this concept has evolved, and its definitions have expanded to describe a shared virtual space that integrates augmented reality (AR), virtual reality (VR), and the internet, while the metaverse has been an intriguing concept for decades, its expansion was accelerated by the COVID-19 pandemic. The term Metaverse itself is a combination of two components: "Meta", meaning beyond, and "Verse", derived from Universe, making its full meaning "Beyond the Universe" or "Meta-Universe" (Eddine, 2022, p. 3).

The metaverse is built on the integration of Virtual Reality (VR), Augmented Reality (AR), and other virtual environments to create a three-dimensional digital space that provides immersive, sensory-rich, and interactive experiences for users. This technology surpasses both Augmented Reality (AR) and Virtual Reality (VR) by enabling deeper user integration into digital environments, allowing interactions that closely mimic real-world experiences (Mohamed, 2023). By utilizing VR headsets, AR glasses, haptic vests, and sensor-equipped gloves, users can simulate near-real experiences (djebil, 2023, p. 346). These smart wearable technologies act as a bridge between users and the metaverse, conveying physical sensations within the digital realm. For instance, a user can see objects in 3D through VR glasses, feel physical effects through haptic feedback sensors embedded in vests and gloves, thereby creating a hyper-realistic digital experience (Ali, 2022, pp. 16-18).

1-2- Components of the Metaverse

Metaverse researcher Jon Radoff developed a model that outlines his comprehensive vision of the metaverse. In this model, he categorizes the metaverse into seven interconnected layers, with each layer representing an essential part of the metaverse's structure, each layer builds upon the previous one and influences the layers that follow, the model is illustrated as follows:

Figure number (1) : The Structure of the Metaverse



source: (innovations, 2023, p. 12)

From the figure above, we observe that the structure of the Metaverse consists of the following layers (innovations, 2023):

1. **Infrastructure:** This represents the physical foundation of the Metaverse, including essential technologies required for its operation, such as 5G networks, Wi-Fi 6, cloud computing, microchips...

2. **Human Interface:** This includes devices that allow users to interact with the Metaverse, such as smartphones, smart glasses, wearable devices...

3. **Decentralization:** This layer relies on technologies such as edge computing, AI, and blockchain to distribute control of the Metaverse among multiple individuals, ensuring a secure and transparent environment.

4. **Spatial Computing:** This includes 3D engines, augmented and virtual reality, and geographic mapping to create immersive 3D experiences.

5. **The Creator Economy:** This consists of tools and platforms that enable creators to generate content and establish a new digital economy within the Metaverse.

6. **Discovery:** This refers to the methods through which content and services within the Metaverse are discovered, such as advertising networks..

7. **Experience:** This is the topmost layer of the Metaverse structure, encompassing the activities and interactions users can engage in, such as gaming, social networking, virtual performances, and shopping

1-3-Integrating Metaverse Technology into the Tourism Sector

The increasing interest of stakeholders in the tourism and hospitality industries in modern technologies and new ways to engage with tourists has been growing steadily. The COVID-19 pandemic accelerated the adoption of digital solutions, alongside the global shift toward reducing the environmental impact of tourism. This shift has encouraged the adoption of virtual tourism, leading to the emergence of a relatively new type of tourism that relies on virtual reality (VR) and augmented reality (AR) (Soumia, 2021, p. 218). As a result, metaverse technology has become an integral part of tourism marketing strategies. Tourism enterprises have begun integrating the metaverse into their marketing operations, including virtual exhibitions, virtual airline experiences, and virtual hotels. Tourism and travel applications have become increasingly immersive with the advancement of high-quality VR headsets. The expansion of 5G communication networks has further contributed to the widespread adoption of this technology,

especially after its endorsement by Facebook (now Meta)(El-Sayed, 2023, p. 358).The Metaverse continues to drive significant transformations in the tourism industry, extending beyond traditional tourist attractions to space tourism experiences (Rejolut, 2024).

1-4-The Importance of Integrating Metaverse Technology into Tourism Marketing Strategies

Integrating metaverse technology into the tourism sector in general and tourism marketing in particular represents a great opportunity to innovate tourism experiences, and the most important can be highlighted as follows:

1-4-1- Enhancing the Tourist Experience

The Metaverse allows tourists to enjoy an immersive tourism experience by fully engaging in three-dimensional virtual environments, where they can interact with tourist destinations and participate in virtual events and exhibitions from their homes as if they were physically experiencing them without the hassle or high costs of real-world travel, which can be expensive(yujie, Yujing, & Ruohan, 2023, p. 24),By creating 360° virtual tours of famous tourist landmarks, iconic sites, and even hotels and resorts, these tours can provide tourists with a preview of what to expect, encouraging them to book actual visits in the future.

The Metaverse also offers tourists a new opportunity to compare different services between hotels and restaurants, helping them make the best choice. And it is an excellent opportunity for tourists who cannot travel physically, such as: Elderly People ,People with health issues that prevent them from traveling and who cannot afford travel expenses (El-Sayed, 2023, p. 356).

1-4-2- Increasing Sales and Reducing Costs

The Metaverse provides opportunities for tourism institutions to increase sales and reduce costs by creating immersive virtual experience, Tourism institutions can showcase their destinations and hotels in an attractive and interactive manner, which enhances the interest of potential tourists and encourages them to make bookings and used it to offer special promotions and exclusive discounts to users. Moreover, marketing through Metaverse platforms is more cost-effective compared to traditional marketing.

1-4-3-Personalizing Tourism Experiences

The Metaverse enables tourism institutions to offer customized experiences tailored to each tourist's interests and preferences. For instance, tourists interested in history can explore historical sites through an interactive virtual environment, where they can engage with virtual tour guides who provide historical information in an entertaining and educational manner.

1-4-4- Enhancing Brand Identity

Having a presence on Metaverse platforms allows tourism institutions to strengthen their brand identity, making them appear more innovative by offering immersive and innovative digital experiences that reflect the identity of the destination or tourism institution, the Metaverse also provides an opportunity to create innovative digital content, reinforcing their image as tech-savvy (BO & eung, 2021, p. 452).

1-4-5- Developing Hotel Services

The hospitality industry has witnessed significant advancements due to technological innovations that have transformed traditional hotel services. Through Metaverse technology, tourists can now experience interactive 3D virtual tours to explore hotel rooms and suites before making a reservation, providing them with a precise visualization of available services and facilities, the Metaverse also enables the hosting of virtual events and conferences within fully immersive digital environments, as well as offering exclusive promotions and rewards within the virtual space.

An example of this innovation is M Social Decentraland Hotels & Resorts, which became the first tourism institution to launch a hotel in the Metaverse in 2022, This virtual hotel merges real-world and digital experiences in ways designed to spark tourists' curiosity and engagement, Tourists can explore the hotel using a virtual avatar, which replicates the design and features of real-world Millennium Hotels (Rejolut, 2024) ‘ and the fundamental developments in hotel services from the First Industrial Revolution to the Metaverse era can be illustrated in the following figure:

Figure number (2) : The Evolution of Hotel Services



source: (Zeqiri, Mejri, & Ben Youef, 2024)

From the figure above, we observe that the hospitality industry has undergone the following phases (Zeqiri, Mejri, & Ben Youef, 2024):

1. Hospitality Industry 1.0: This period was marked by the introduction of steam-powered vehicles, which contributed to increased mobility and travel. Additionally, hotels began offering indoor plumbing services.
2. Hospitality Industry 2.0: This phase saw the widespread use of electricity in hotels, the introduction of elevators, steam heating systems, and various transportation modes, including cars, trains, and ships.
3. Hospitality Industry 3.0: Significant changes emerged, including the rise of computerized reservation systems (CRS), the development of online travel agencies, and the introduction of global distribution systems (GDS).
4. Hospitality Industry 4.0: The Fourth Industrial Revolution brought digital innovations, including social media, AI-powered hotels, automated chatbots, keyless hotel rooms using IoT technology, AR and VR.
5. Hospitality Industry 5.0: The industry is shifting towards sustainability, while expanding the use of robots, the metaverse.

1-4-6- Contributing to Sustainable Tourism

The Metaverse helps achieve a balance between exploring tourist attractions and reducing the environmental impact of tourism by providing innovative solutions that mitigate the ecological footprint of traditional tourism. Through virtual travel, tourists can explore destinations without the need for physical movement, thereby reducing carbon emissions caused by air travel and other transportation methods, the Metaverse also enables virtual visits to endangered sites as an alternative to physical visits, helping preserve tourist landmarks for future generations. (stof & Elgen, 2022).

2- The Role of the Metaverse in Developing the Tourism in China

Metaverse technologies play a pivotal role in reshaping the future of tourism in China. Thanks to these advancements, it is now possible to explore China virtually through interactive virtual tourism experiences.

2-1-The Development of the Metaverse in China

China has a strong metaverse infrastructure and is a key player in the development and adoption of virtual and augmented reality, Chinese tech giants such as Alibaba and Tencent have been at the forefront of metaverse development, particularly Tencent, which has made significant investments

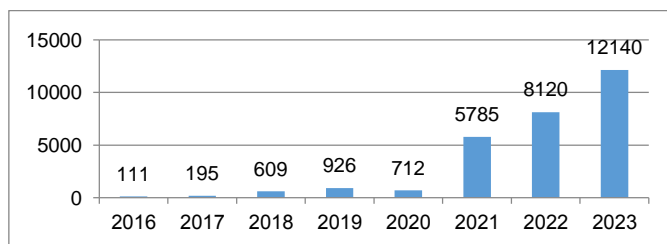
in this field, Tencent's social media and gaming platforms serve as core components of the metaverse ecosystem, Alibaba has also entered the metaverse through its virtual shopping platform Buy+, which allows users to browse and purchase products in a virtual environment, The company has explored integrating VR and AR technologies into various aspects of e-commerce, enhancing customer experience, and China's gaming industry is closely linked to the metaverse. As the world's largest gaming market, Chinese gaming companies have actively explored metaverse applications within the gaming industry. (Tom P. , 2023)

China is one of the first countries to launch a metaverse project, introducing the world's first Metaverse tourism initiative "Datang Kaiyuan" in 2021, This project was developed by Lightyear Xi'an Digital, Its goal is to provide virtual experiences that allow tourists to explore the historical background of ancient China (innovations, 2023, p. 5).

China is also the first country to establish a Metaverse academic major at a Chinese university in September 2022. Moreover, China remains the only country to dedicate a special day to the Metaverse November 11 each year. On this day, the focus is on innovations and economic opportunities that the Metaverse offers in various fields (Oliver, 2023)

Furthermore, the Chinese government has shown strong support for the Metaverse industry as part of its national policy framework, this support has contributed to the registration of more than 500 companies in China with the Metaverse in their names (innovations, 2023, p. 14),and China's Metaverse market is recognized as one of the fastest-growing markets globally, According to a report by the international market research company Grand View Research, it was valued at \$12.14 billion USD in 2024, and it is projected to reach \$117.6 billion USD by 2030,the evolution of the Metaverse market size in China can be illustrated in the following figure:

Figure number (3): Growth of the Metaverse Market in China (2016–2023) (Million USD)



Source: (innovations, 2023, p. 8)

2-2- The Reality of Virtual Tourism in China

The tourism sector plays a major role in the Chinese economy, contributing significantly to its growth. In 2023, China experienced a strong tourism recovery following the COVID-19 pandemic, with tourism revenues reaching approximately 4.9 trillion yuan (GMI, 2024). China remains one of the most sought-after tourist destinations globally, attracting millions of tourists annually due to its cultural, historical, and civilizational diversity. However, when the pandemic outbreak occurred in Wuhan at the end of 2019, the Chinese tourism sector suffered significant losses due to flight cancellations and travel restrictions. In response, China's Ministry of Culture and Tourism launched several digital projects in 2020 aimed at digitizing archaeological sites and museums. In 2022, China further developed the "Culture & Tourism China Metaverse" platform in collaboration with several Chinese technology companies, this platform serves as an innovative tool for promoting and marketing Chinese tourism globally, offering an immersive interaction with China's cultural heritage. Users can experience near-real virtual tourism within a 3D-connected environment available 24/7 online, the platform allows seamless interaction with digital resources and other users, to support the creation and dissemination of cultural and tourism content, the platform utilizes advanced digital technologies, including: AI, Blockchain technology, Cloud computing, Virtual reality, these technologies transform traditional cultural and tourism content into digital content, ensuring efficient dissemination in the Metaverse. Through this platform, China can promote its tourist attractions, traditional festivals, theatrical and more. (Chen, 2023)

China's advanced infrastructure, including Metaverse technologies, virtual reality, and augmented reality, has played a pivotal role in the growth of virtual tourism, the country has invested heavily in cutting-edge technologies such as AI and 5G networks, the adoption of 5G technology is a key factor in the implementation of the Metaverse, According to the GSMA Mobile Economy Report China 2023, the 5G penetration rate in China reached 45% of the population in 2023 and is expected to rise to 70% by 2027, and by the end of 2025, China is projected to have 37 million users with virtual identities on Metaverse platforms, signaling significant growth in the Metaverse sector in the coming years (Tuhu, 2023). By the end of 2023, China's virtual cultural tourism market had surpassed \$140 billion USD (Qiao, 2024, p. 249).

2-3- The Role of the Metaverse in Marketing Chinese Tourist Destinations


The key roles of the Metaverse in marketing Chinese tourist destinations can be summarized as follows:

2-3-1- Exploring Tourist Destinations Virtually

The Metaverse offers the opportunity to explore China’s most famous tourist destinations virtually before physically traveling to them. This enhances the appeal of Chinese tourist sites and encourages real-world visits. Through 3D immersive environments, tourists can virtually navigate Chinese landmarks such as: The Great Wall of China, Shanghai’s temples, The streets and cultural sites of Hong Kong, Tourists can also interact with virtual tour guides or even digital recreations of historical local residents, who provide detailed insights into the history and significance of these sites.

More than 100 Chinese museums and travel agencies are collaborating with technology companies to create Metaverse spaces that enhance visitor experiences by attracting more tourists through educational and entertainment-based tourism content (Xuehan, 2022). Additionally, the Metaverse plays a crucial role in preserving China's cultural heritage. A major drawback of traditional tourism is the deterioration and loss of original artifacts. Thus, digitizing cultural assets is a necessity in the Metaverse era. Through digital restoration, many fragile and perishable artifacts which are prone to color fading and deterioration can be preserved and displayed safely in virtual environments. This helps protect China’s cultural heritage (stof & Elgen, 2022). The following table provides examples of Chinese tourist destinations that have integrated Metaverse technology to promote tourism in China:

Table number (1) : Examples of Chinese Tourist Destinations Promoted via the Metaverse

Tourist Attractions	Metaverse Applications
<p>The Great Bao Temple Archaeological Museum, Nanjing</p> 	<p>It utilizes Metaverse technologies to reimagine the historical grandeur of The Great Bao Temple, allowing visitors to create virtual avatars to explore the temple’s landmarks, including the famous decorated pagodas. Interactive exhibitions, such as installations using augmented reality, enable visitors to engage with the temple’s history.</p>
<p>The Grand Canal Museum of China,</p>	<p>This museum is dedicated to documenting the Grand Canal, one of the oldest and longest artificial waterways in the world,</p>

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<p style="text-align: center;">Yangzhou</p> 	<p>and a UNESCO World Heritage Site. It utilizes Metaverse technologies, such as augmented reality and virtual reality, to enhance the visitor experience. The museum also allows visitors to interact with exhibits using virtual avatars or 3D environments to explore the history of the Grand Canal.</p>
<p style="text-align: center;">Sanxingdui Journey Project</p> 	<p>In 2022, the e-commerce company Alibaba launched a Metaverse-based project to revive the civilization of Sanxingdui, an ancient civilization located in Sichuan. Visitors can explore archaeological exhibits, including the famous bronze statues, tools, and jewelry used by the ancient inhabitants of this civilization.</p>
<p style="text-align: center;">Star Ferry</p> 	<p>Star Ferry is one of the oldest modes of transportation in Hong Kong, dating back to 1888. It is considered a historical and cultural symbol of Hong Kong, operating passenger ferries across Victoria Harbour. Through the virtual platform The Sandbox, which utilizes blockchain technology, tourists can now learn about its history and explore how the site looked in the past and present. They can also interact with virtual characters, representing former employees and residents, to gain insights into the historical evolution of the ferry service and the harbor.</p>
<p style="text-align: center;">Luoyang VR Project</p> 	<p>The IQIYI platform, one of China's largest digital entertainment platforms, launched the Luoyang VR Project, an initiative aimed at reviving the ancient capital of Luoyang. This project combines virtual reality with real-world environments, offering an immersive experience in the Metaverse. Upon entering the Metaverse, users can engage in activities such as boating, chariot riding, and flying on mythical predatory birds within a 300-square-meter space.</p>
<p style="text-align: center;">The Great Wall of China</p> 	<p>Metaverse technologies are being used to promote the Great Wall of China, one of the greatest historical and engineering landmarks in the world. Through the Metaverse, visitors from all over the world can explore the Wall virtually, walk along its pathways, and enjoy the surrounding landscapes.</p>

Source: (stof & Elgen, 2022)

2-3-2-Promoting Chinese Culture

The Metaverse plays a prominent role in reviving and promoting Chinese culture by hosting virtual cultural festivals, including events dedicated to Chinese cuisine, traditional dances, handicrafts, and calligraphy. Tourists

can participate in these events virtually, making cultural experiences more accessible and engaging. An example of this is the virtual festival for promoting Chinese cuisine. In 2022, Trip.com Group and Sands hosted the "Global Best Restaurant Awards", which was the first Metaverse-based food event. This online event aimed to enhance tourism and entertainment elements in Macao, a city known for its culinary creativity, the event took place in the Metaverse platform of The Londoner Macao, offering an innovative and immersive experience. Additionally, Trip.com Group, Shanghai Digital Exchange, and Tencent launched a limited series of non-fungible tokens (NFTs) on Trip.com Group's platform, providing an advanced and immersive travel experience that strengthens the digital economy of cultural tourism in Macao, a total of 7,026 restaurants were honored, and the winners were selected based on evaluations from hotel chefs, representatives of restaurant associations, and influencers in food and travel. This competition helps tourists discover traditional local cuisines and enhances culinary tourism in the region. (Sands China Ltd. and Trip.com Group Jointly stage Metaverse Gourment Event and Promote Macao as Creative City of Gastronomy, 2022). In October 2022, the Chinese newspaper China Daily launched its digital employee, Yuanshi, introduced as an explorer and promoter of Chinese culture. Yuanshi presents engaging and interactive storytelling about Chinese tea production and decorative arts, allowing tourists to discover the history of Chinese tea, which dates back to the Xiong Dynasty, explore its various types, and take virtual tours of China's famous tea plantations, and Yuanshi also provides insights into Chinese decorative arts, such as pottery making, and hand embroidery, explaining the production processes in detail, the platform also enables tourists to virtually participate in activities like designing pottery decorations or embroidering patterns (Qiu, 2024).

2-3-3-Promoting Eco-Tourism

Metaverse technologies enable tourists to explore China's breathtaking natural landscapes virtually. For example, the city of Shigatse has accelerated the digital transformation of its tourism and cultural industries through a Metaverse-powered promotional event aimed at enhancing eco-tourism for Mount Everest, which is located in Shigatse and is the world's highest mountain. According to data from the Chinese digital travel agency Trip.com, the city also boasts over 300 natural tourist sites, and the number of tourists booking trips to Shigatse through the platform increased by 34.1% year-on-year in the first half of 2022 (Global, 2022). Metaverse technologies have also been used to promote tourism in Zhangjiajie, Hunan

Province, one of China's top tourist destinations, known for its stunning natural scenery and rich biodiversity, the region gained global recognition after being featured in the film "Avatar", as the floating mountains of Pandora were inspired by Zhangjiajie's remarkable rock pillars, the Metaverse is now being leveraged to showcase Hunan's iconic landscapes and towering peaks, offering tourists an interactive experience where they can engage with the region's native flora and fauna. Notably, Hunan has been designated as the world's first Metaverse Research and Development Center for a tourism site, where efforts are being made to integrate and advance Metaverse tourism technologies. This immersive virtual tourism experience is further enhancing the region's global appeal(Global, 2022).

Additionally, the Metaverse contributes to sustainable tourism by allowing tourists to explore China's biodiversity and ecosystems without negatively impacting the environment, tourists can also interact with local wildlife, gaining insights into their natural habitats and raising awareness about the protection of endangered species. Furthermore, virtual platforms enable visitors to track sustainable farming practices, such as the cultivation of rice and Chinese tea, reinforcing the importance of environmental conservation.

2-3-4-Specialized Tourism Experiences

Metaverse technologies allow the customization of virtual tours for tourists based on their personal interests. History enthusiasts can interact with archaeological sites and historical landmarks, while those interested in Chinese culture can engage in virtual festivals. Meanwhile, eco-tourists can interact with natural landscapes and biodiversity in China. The Metaverse also enables tourists to choose virtual tourism experiences that match their budgets. For example, visiting famous historical landmarks requires a higher budget than exploring lesser-known sites. Additionally, tourists can customize their visit itinerary based on their available time. If their time is limited, they can opt for a short virtual tour covering only the most iconic landmarks. Conversely, if they have more time, they can engage in a more comprehensive experience, including additional historical and cultural sites.

2-3-5- Targeted Advertising on Metaverse Platforms

Some Chinese tourism institutions use the Metaverse to create customized advertisements that appear within the virtual environments visited by users. Several hotels in China collaborate with Metaverse gaming platforms such as Roblox and Fortnite to promote their hotels. For example, leading Chinese hotels, such as Shangri-La and Marriott, create virtual hotel environments

within gaming platforms. As users interact with these virtual environments, they can: Explore hotel rooms and various facilities, Attend virtual events and parties showcasing hotel services. This immersive experience helps attract potential guests, encouraging them to book real-world hotel stays.

2-3-6-Providing Virtual Tourism Services

Most Chinese hotels now offer innovative virtual tourism services, enhancing the customer experience. Through virtual hotel tours, tourists can interact with hotel rooms and facilities, helping them make informed booking decisions. Additionally, tourists can interact with customer service centers in the Metaverse using virtual avatars, facilitating easy booking, inquiries, and even reservation modifications.

2-4-Challenges of Implementing the Metaverse in Promoting Chinese Tourism

The application of the Metaverse in promoting Chinese tourism faces several challenges, including:

2-4-1- Internet Bandwidth

The Metaverse relies on a strong internet connection, as virtual tourism heavily depends on seamless streaming and real-time interaction, requiring stable and high-speed internet. This is a major challenge, particularly in rural areas with limited digital infrastructure, issues like buffering and low-resolution content prevent tourists from fully engaging in virtual tours.

2-4-2-High Costs

Developing Metaverse platforms requires significant investments in acquiring advanced hardware and software technologies, these technologies require regular maintenance to ensure their efficiency. Transforming tourist attractions into 3D experiences also demands a specialized team of engineers and IT professionals, further increasing costs (GMI, 2024). On the user side, tourists need high-end equipment to access a full Metaverse experience, such as VR headsets, high-quality audio devices, and advanced smartphones, which limits accessibility for a large segment of users.

2-4-3-Lack of Emotional Engagement

Although the Metaverse offers an immersive travel experience, it is difficult to replace real-world travel, The fine details of tourist attractions cannot be fully replicated in a virtual space.

2-4-4-Security and Privacy Concerns

Handling and protecting personal data within the Metaverse remains a significant concern for many users, to address challenges related to privacy and data security, the Chinese government established a regulatory framework for the development of virtual reality and the Metaverse as part of the digital economy. This framework was detailed in China's Virtual Reality Development Plan, issued in 2022, it includes a proposed digital identity system to protect user confidentiality and regulate individual identities within the Metaverse (Tuhu, 2023).

Conclusion

In conclusion, the Metaverse is not merely a marketing tool but rather part of a comprehensive digital transformation in the tourism sector, creating new opportunities for interaction between tourists and destinations. By integrating modern digital technologies with innovations in tourism marketing, China can strengthen its position as a leading global tourism destination, paving the way for a more innovative and distinguished future in tourism. The key findings of this study include:

1. The Metaverse offers tourists an immersive travel experience by allowing them to fully engage in 3D virtual environments, interact with tourist destinations, and participate in virtual events and festivals from home as if they were experiencing them in real life—without the inconvenience or cost of physical travel.
2. It enables virtual exploration of China's famous tourist attractions before physically visiting them, enhancing their appeal and encouraging actual visits.
3. Integrating the Metaverse into tourism marketing presents an innovative opportunity to enhance tourism experiences, improve customer loyalty, and increase revenue through digital solutions aligned with modern technological advancements.
4. Metaverse technologies allow for customized virtual tours based on tourists' personal interests and budgets.
5. The Metaverse can help reduce the environmental impact of traditional travel by providing sustainable virtual alternatives that support eco-friendly tourism.
6. China has the potential to lead the Metaverse revolution in the future. However, as with any innovation, challenges must be addressed. With government support, continuous research and development, and a

clear vision, China is on the right path to fully utilizing the Metaverse's potential across various sectors, contributing to national economic growth.

Recommendations

1. Tourism institutions should invest in research and development to advance innovative technologies in virtual tourism.
2. Public and private sectors should collaborate to establish strategic partnerships that support innovation in Metaverse applications within the tourism industry.
3. Tourism sector employees should receive training on utilizing Metaverse technologies and developing digital content.
4. Governments should strengthen cybersecurity by implementing robust security measures to protect users while engaging with Metaverse platforms.

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