

# Innovative Tourism Marketing: The Impact of Virtual Reality on Travel Intentions

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**Abstract.** This study explores the potential of innovative tourism marketing by investigating how VR, and the Metaverse can provide challenges and opportunities for decision-making and promoting destination development. The research employed a descriptive qualitative approach to explore how VR environments influence the development of digital marketing in tourism destinations. This method aimed to capture perceptions and behaviors within their natural context, informed by a review of existing literature. From the initial collection of 223 research articles, only 13 studies were included in the meta-synthesis after the selection process. The findings that VR, and the Metaverse can indeed be powerful tools for digital marketing, offering transformative potential for marketing tourism destinations. They can create immersive and engaging experiences that attract and retain tourists, thereby enhancing the overall appeal and competitiveness of destinations. However, the implementation of VR, and Metaverse technologies presents challenges, including the need for substantial investment in technology infrastructure. Meanwhile, some of the advantages include the ability to have interactive experiences and improve accessibility through virtual tours.

**Keywords:** Tourism, Destination, Virtual Reality (VR), Digital Marketing, Intention.

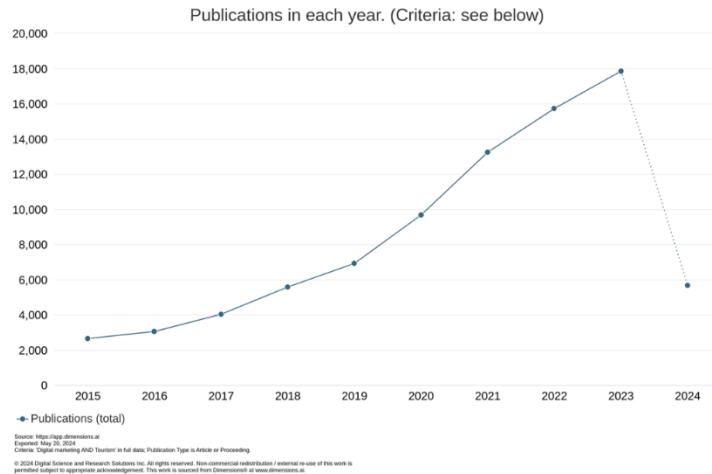
## 1 Introduction

The burgeoning digital landscape has positioned the tourism industry at the forefront of innovative strategies to expand its reach and effectiveness [1]. Digital marketing has emerged as a pivotal tool, revolutionizing how tourism engages with customers. Integrating social media, data analytics, and other digital innovations has fundamentally transformed the marketing paradigm, reshaping consumer experiences and driving industry growth [2]. Indonesia, a dynamic tourism market boasting rich cultural heritage and stunning landscapes, offers a compelling platform for strategic digital marketing implementation [3]. Its diverse offerings, from Bali's beaches to Yogyakarta's temples, are increasingly promoted through digital channels [4]. To attract and retain domestic and international tourists, Indonesian tourism businesses are leveraging social media, SEO, content marketing, and big data analytics [5]. The COVID-19 pandemic accelerated the tourism industry's digital transformation, emphasizing the importance

of online platforms [6]. As the industry recovers, digital marketing remains crucial for growth and competitiveness. Recent studies underscore the significance of social media marketing in shaping destination image and tourist behavior. Moreover, the role of big data analytics in optimizing tourism marketing strategies has gained prominence [7]. Indonesia's tourism industry can benefit greatly from harnessing the power of these digital tools to enhance tourist experiences and drive economic growth.

According to a survey conducted by PwC, Indonesia ranks as the country with the fifth highest percentage of metaverse users worldwide. The survey revealed that 35% of respondents in Indonesia had engaged with the metaverse within the past six months. The metaverse is an internet-based virtual reality environment designed to closely mimic the real world. Globally, 26% of respondents across 25 countries reported using the metaverse within the same period. India leads with the highest number of metaverse users, with 48% of respondents indicating usage. Vietnam follows in second place with 43%, while Hong Kong and the United Arab Emirates hold third and fourth places with 42% and 38% of users, respectively. Indonesia's 35% places it fifth, followed by Qatar and China, each with 34%. The metaverse significantly enhances tourism by providing novel and immersive experiences while also benefiting tourism management and marketing [8]. This aids in travel planning, interaction, and engagement of tourists, which in turn alters consumer behavior and increases motivation for physical travel. However, challenges exist in the implementation of VR technology. The high cost of developing quality VR content can be a barrier, especially for small and medium-sized enterprises (SMEs) in the tourism sector. Additionally, there are still accessibility issues with this technology among the wider public, as not everyone possesses the necessary VR devices [9].

The adoption of VR in tourism digital marketing offers a variety of opportunities. First, this technology allows destinations to reach a global audience in a way that was previously impossible. VR can attract tourists from various parts of the world, especially those looking for unique and immersive experiences. Second, VR can be used for education and cultural preservation, allowing museums and historical sites to present their collections interactively and educate visitors about Indonesia's cultural heritage [10]. One of the most interesting innovations in tourism digital marketing is the use of Virtual Reality (VR) technology. VR technology offers a new and immersive way for travelers to experience a destination before they actually arrive [11]. With VR, users can explore tourist attractions, hotels, and cultural attractions virtually, providing a more realistic and detailed picture of the experience they can expect. This not only increases tourists' interest and enthusiasm but also helps them make more informed decisions. In Indonesia, several tourism destinations and businesses have begun adopting VR technology to enrich their marketing strategies [12]. Moreover, luxury hotels and resorts are utilizing VR to offer virtual tours of their rooms and facilities, providing potential guests with an immersive experience that can influence their booking decisions.



**Fig. 1.** Digital Marketing in Tourism Publication Graphic

Based on the results of sorting data from the Dimension website (2024), it can be observed that the articles and proceedings that have been investigated show a significant increase in digital marketing research in the context of tourism destinations. This shows that this topic is becoming increasingly relevant and of interest to researchers. Therefore, further studies need to be carried out to understand in depth the current trends and issues related to digital marketing integration in the tourism industry.

## 2 Problem Formulation

Existing studies often focus on the general use of the technology without providing an in-depth analysis of VR's effectiveness in different contexts. Additionally, there is a lack of empirical data on how VR affects various segments of the Indonesian tourism market, especially SMEs compared to large companies. This research was conducted to explain the opportunities and challenges that hinder some Indonesian tourism businesses as well as more effective and inclusive strategies, supporting the sustainable growth of the Indonesian tourism sector in the digital era.

## 3 Method

### 3.1 Participant

This research is a literature review research conducted independently by the researcher himself without involving other participants. This is due to the nature of literature review research which does not require the involvement of human participants because the main focus is on the analysis of existing scientific work. With a methodological approach, this research aims to contribute new knowledge in digital marketing in tourism with VR and metaverse through a thorough examination of relevant literature.

### **3.2 Participant**

This research is based on an in-depth literature review regarding digital marketing, the use of VR and the metaverse in the tourism context, and related challenges and opportunities. This research instrument includes scientific articles, academic journals, conference papers, and relevant books. Researchers will consult the literature to build a theoretical framework, identifying key concepts, theories, and empirical findings related to game-based learning and critical thinking. This literature review process aims to provide informed interpretation, thereby ensuring that the research is based on existing theory and research findings. Because the data used is in the form of library documents, the researcher has a central role as a key instrument in collecting, analyzing, and interpreting information found in the literature. Thus, the researcher is responsible for ensuring that this research obtains a comprehensive and in-depth understanding of the topic under study.

### **3.3 Data Analysis**

The data analysis process using a systematic literature review involves collecting data from various documentary sources and literature related to virtual reality (VR) and metaverses in the tourism industry. The collected data is then combined to build a more comprehensive understanding of the phenomenon being researched. By using source triangulation, researchers can identify the consistency of the data obtained, reduce bias, and deepen understanding of the research topic. This approach not only strengthens the validity of research by showing that the same results emerge from multiple sources but also increases the depth and complexity of understanding of the research subject.

## **4 Result and Discussion**

The data obtained from Harzing's Publish or Perish was organized using the PRISMA 2020 flow diagram, as illustrated in Figure 2. The descriptive details of the included articles are presented in Table 1. One thousand three hundred forty-six (1,346) initially collected studies from the website Dimension.ai were scrutinized to remove studies that did not meet the inclusion criteria. The initial studies collected were from Google Scholar using specific keywords ( $n = 500$ ). From the 223 initially collected published research articles, the following studies were excluded: 175 studies due to irrelevance, non-English language, books, proceedings, and theses. This process significantly reduced the initially collected articles, resulting in a final 13 studies for the meta-synthesis. The 13 studies are described as indicated in Table 1.

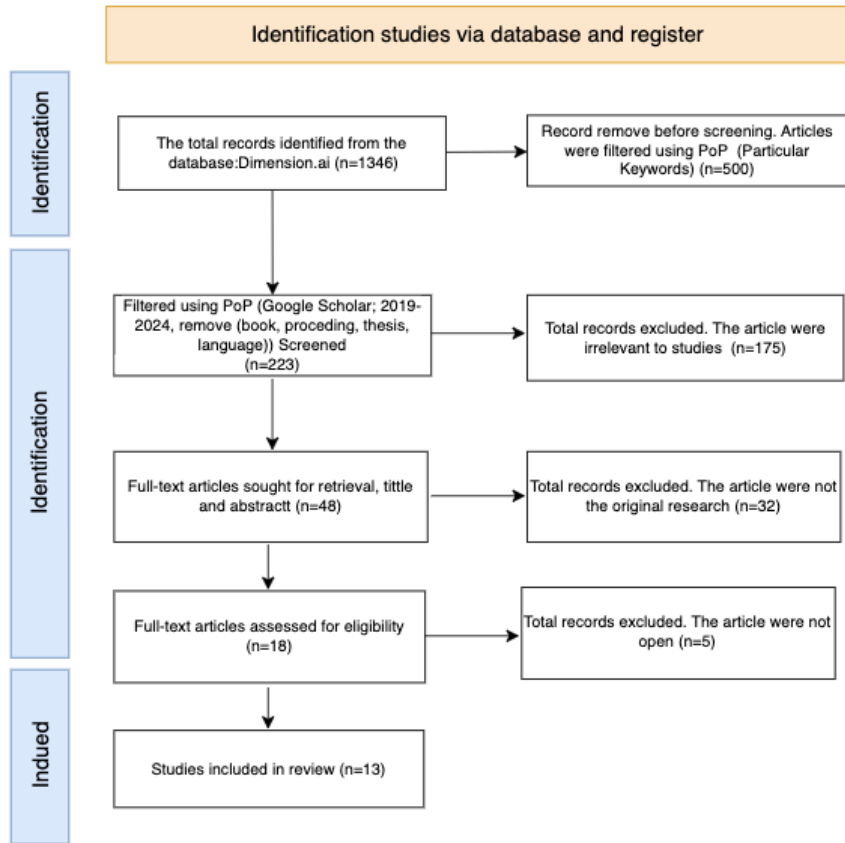


Fig. 2. Prisma flow diagram on data selection

Table 1. The Literatures

| No. | Author(s)             | Year | Title  | Themes/Issues           |
|-----|-----------------------|------|--|-------------------------|
| 1.  | Yogesh et al. [10]    | 2022 | Metaverse beyond the hype: Multidisciplinary perspectives on emerging challenges, opportunities, and agenda for research, practice, and policy | Impact of the Metaverse |
| 2.  | Dimitrios et al. [13] | 2023 | Metaverse as a disruptive technology revolutionizing tourism management and marketing  | Impact of the Metaverse |
| 3.  | Philip et al. [14]    | 2022 | What is augmented reality marketing? Its definition, complexity, and future  | AR Marketing strategy   |

|     |   |      |  |  |
|-----|---|------|--|--|
| 4.  | Salvatore Monaco and Giovanna Sacchi [15] | 2023 | Traveling the Metaverse: Potential Benefits and Main Challenges for Tourism Sectors and Research Applications  | Impact of the Metaverse                |
| 5.  | Anne R Smink et al. [16]                  | 2020 | Shopping in augmented reality: The effects of spatial presence, personalization and intrusiveness on app and brand responses                             | AR Marketing strategy                  |
| 6.  | Muhammad Shoaib et al. [17]               | 2022 | Virtual Tourism and Digital Heritage: An Analysis of VR/AR Technologies and Applications   | VR, AR Strategy                        |
| 7.  | Seongeun Yoon dan Yoonjae Nam [18]        | 2024 | Metaverse engagement and Korea travel intentions: Understanding affordances, presence, and place attachment among Brazilian ZEPETO users                 | Potential of the metaverse for tourism |
| 8.  | Zahra Ghali et al. [19]                   | 2024 | Investigating metaverse marketing-enabled consumers' social presence, attachment, engagement and (re)visit intentions                                    | Potential of the metaverse for tourism |
| 9.  | Nansy Kouroupi and Theodore Metaxas [20]  | 2023 | Can the Metaverse and Its Associated Digital Tools and Technologies Provide an Opportunity for Destinations to Address the Vulnerability of Overtourism? | Potential of the metaverse for tourism |
| 10. | Elisa Rancati and Alessanto d'Agata [21]  | 2022 | Metaverse in Tourism and Hospitality: Empirical Evidence on Generation Z from Italy  | Impact of the Metaverse                |
| 11. | Dyan Triana et al. [22]                   | 2024 | The Existence Of The Metaverse Tourism In Indonesia: Between Opportunities And Threats   | Impact of the Metaverse                |
| 12. | Santanu Mandal et al. [23]                | 2024 | The orientation of Gen Zs towards metaverse tourism  | Impact of the Metaverse                |
| 13. | Timothy Jung et al. [24]                  | 2024 | Metaverse for service industries: Future applications, opportunities, challenges and research directions   | Impact of the Metaverse                |

Virtual Reality (VR) is greatly transforming digital marketing strategies for tourist destinations by providing more immersive and engaging experiences for prospective visitors [14]. With VR, tourist destinations can offer virtual tours that let users experience a location virtually before committing to a physical visit. For instance, a VR tour can deliver a 360-degree view of a hotel,

a natural landscape, or a cultural attraction, which surpasses the capabilities of conventional images or videos [25]. VR significantly enhances user engagement in ways previously unseen in digital marketing [16]. This technology allows for a more personalized and interactive experience, strengthening the emotional connection between potential tourists and destinations [25]. Marketing campaigns incorporating VR can create an immersive experience that makes potential tourists feel as if they are already at the destination, thereby increasing the likelihood of them visiting in the future [26].

VR opens up numerous new opportunities in digital marketing for tourist destinations. For example, marketers can use VR to host virtual events where tourists can interact directly with the destination in a virtual environment [27]. Additionally, destinations can use VR to create content that can be shared on social media, attracting more attention and generating buzz around the destination. VR also allows for the collection of detailed data on user behavior and preferences while they interact with virtual content [28]. This data can be used to optimize digital marketing campaigns, tailor offerings more effectively to target audiences, and develop more effective marketing strategies. For instance, data analysis from virtual tours can provide insights into which attractions are most appealing to potential tourists, which can then be used to highlight specific aspects of marketing campaigns [29].

## **5 Discussion**

### **5.1 Impact of the Metaverse**

The Metaverse holds immense potential to revolutionize the tourism and hospitality sectors, particularly for Indonesia, with its rich cultural heritage and diverse landscapes. Generation Z, adept at digital technologies, is particularly drawn to the immersive experiences offered by virtual and augmented reality (VR and AR) applications (Image) [30], [31]. The Metaverse can create new avenues for marketing, service delivery, and customer satisfaction, attracting both domestic and international tourists through immersive virtual tours of cultural heritage sites, interactive museum exhibits, and AR-enhanced travel guides [32]. However, realizing the full potential of Metaverse tourism requires addressing several challenges. Ensuring equitable access to technology is crucial, as the digital divide between urban and rural areas must be bridged [13]. Investing in high-speed internet, VR/AR equipment, and digital literacy programs is essential to create a seamless integration of the Metaverse into the tourism industry. By overcoming these hurdles, Indonesia can position itself as a leader in Metaverse tourism, offering unparalleled experiences and driving economic growth [33], [26].

### **5.2 AR Marketing Strategy**

AR marketing is defined as the use of augmented reality technology to overlay digital content in the real world, creating a blended environment that enhances consumer interaction with products and brands [14]. The future of AR marketing is promising, with advancements in technology expected to make AR more accessible and effective. VR and AR technologies are being integrated into virtual tourism, allowing users to explore destinations and heritage sites virtually. benefits of virtual tourism and digital heritage, such as increased accessibility,

preservation of cultural heritage, and enhanced educational opportunities. It also addresses challenges, including technological limitations, high costs, and the need for digital literacy among users. While AR can provide valuable and engaging experiences, overly intrusive or distracting elements can negatively impact user experience and brand perception. Finding the right balance is essential for successful AR marketing strategies [16], [28].

### **5.3 Potential of the metaverse for tourism**

The Metaverse allows for enhanced social presence, where users feel connected to others in a virtual space. This social interaction can enhance the overall travel experience and increase engagement. Metaverse marketing can create strong emotional attachments to virtual representations of destinations [34],[35]. Metaverse, such as VR tours, interactive guides, and virtual events. These tools can offer meaningful and immersive experiences that satisfy tourists' desires for exploration and learning. By promoting virtual tourism, destinations can achieve more sustainable tourism practices [36].

## **6 Conclusion**

The Metaverse has the potential to transform tourism and hospitality, particularly in Indonesia, by leveraging VR and AR to create immersive experiences that attract Generation Z and enhance customer satisfaction. Addressing the digital divide and investing in necessary technology and digital literacy are crucial steps to maximize this potential and drive economic growth. AR marketing blends digital content with the real world to enhance consumer interaction. Its future looks promising with technological advancements, but challenges like high costs and the need for digital literacy must be overcome. Effective AR marketing strategies must balance engaging experiences with user comfort. The Metaverse has the potential to revolutionize tourism and hospitality, leveraging its rich cultural heritage and diverse landscapes. Generation Z is particularly attracted to the immersive experiences offered by VR and AR applications.



## References

- [1] Volberda, H. W., Khanagha, S., Baden-Fuller, C., Mihalache, O. R., & Birkinshaw, J. (2021). Strategizing in a digital world: Overcoming cognitive barriers, reconfiguring routines and introducing new organizational forms. *Long Range Planning*, 54(5), 102110.
- [2] Baddam, P. R. (2022). Revolutionizing Customer Experience through Innovative Digital Marketing Approaches. *Global Disclosure of Economics and Business*, 11(2), 71-86.)
- [3] Petriana, B. (2017). The perceived destination image of Indonesia: An assessment on travel blogs written by the industry's top markets (Doctoral dissertation, Open Access Te Herenga Waka-Victoria University of Wellington).
- [4] Respatyanti, Y. R. (2019). Enhancing the Information Availability of Indonesia's Tourism Destinations Through A Travel App (Doctoral dissertation, Open Access Te Herenga Waka-Victoria University of Wellington).
- [5] Putri, G. S., Ananta, I. B., Rafiqi, H. B., Persada, S. F., Elysia, F., & Panduhati, K. L. (2024, April). How to Optimize Promotion Tactics for Sustainable Tourism Product through 360-degree Communication?(Case Study in Poncokusumo, Malang). In *IOP Conference Series: Earth and Environmental Science* (Vol. 1324, No. 1, p. 012065). IOP Publishing.
- [6] UNWTO. (2020). COVID-19 and tourism: A global crisis. World Tourism Organization.
- [7] El Archi, Y., Benbba, B., Kabil, M., & Dávid, L. D. (2023). Digital Technologies for Sustainable Tourism Destinations: State of the Art and Research Agenda. *Administrative Sciences*, 13(8), 184.
- [8] PwC. (2022). Global survey on metaverse usage.
- [9] Rahimizhian, S., Ozturen, A., & Ilkan, M. (2020). Emerging realm of 360-degree technology to promote tourism destination. *Technology in Society*, 63, 101411.
- [10] Dwivedi, Y. K., Hughes, L., Baabdullah, A. M., Ribeiro-Navarrete, S., Giannakis, M., Al-Debei, M. M., ... & Wamba, S. F. (2022). Metaverse beyond the hype: Multidisciplinary perspectives on emerging challenges, opportunities, and agenda for research, practice and policy. *International journal of information management*, 66, 102542.
- [11] Ercan, F. (2020). An examination on the use of immersive reality technologies in the travel and tourism industry. *Business & Management Studies: An International Journal*, 8(2), 2348-2383.
- [12] Soeswoyo, D. M., Jeneetica, M., Dewi, L., Dewantara, M. H., & Asparini, P. S. (2021). Tourism potential and strategy to develop competitive rural tourism in Indonesia. *International Journal of Applied Sciences in Tourism and Events*, 5(2), 131-141.
- [13] Buhalis, D., Leung, D., & Lin, M. (2023). Metaverse as a disruptive technology revolutionising tourism management and marketing. *Tourism Management*, 97, 104724.
- [14] Rauschnabel, P. A., Babin, B. J., tom Dieck, M. C., Krey, N., & Jung, T. (2022). What is augmented reality marketing? Its definition, complexity, and future. *Journal of business research*, 142, 1140-1150.
- [15] Monaco, S., & Sacchi, G. (2023). Travelling the Metaverse: Potential Benefits and Main Challenges for Tourism Sectors and Research Applications. *Sustainability*, 15(4), 3348.
- [16] Smink, A. R., Van Reijmersdal, E. A., Van Noort, G., & Neijens, P. C. (2020). Shopping in augmented reality: The effects of spatial presence, personalization and intrusiveness on app and brand responses. *Journal of Business Research*, 118, 474-485.
- [17] Siddiqui, M. S., Syed, T. A., Nadeem, A., Nawaz, W., & Alkhodre, A. (2022). Virtual tourism and digital heritage: An analysis of VR/AR technologies and applications. *International Journal of Advanced Computer Science and Applications (IJACSA)*, 13(7).

- [18] Yoon, S., & Nam, Y. (2024). Metaverse engagement and Korea travel intentions: Understanding affordances, presence, and place attachment among Brazilian ZEPETO users. *Journal of Destination Marketing & Management*, 31, 100865.
- [19] Ghali, Z., Rather, R. A., & Khan, I. (2023). Investigating metaverse marketing-enabled consumers' social presence, attachment, engagement, and (re)visit intentions. *Journal of Retailing and Consumer Services*.
- [20] Kouroupi, N., & Metaxas, T. (2023). Can the Metaverse and its Associated Digital Tools and Technologies provide an opportunity for destinations to address the vulnerability of Overtourism?. *Tourism and Hospitality*, 4(2), 355-373.
- [21] Rancati, E., & d'Agata, A. (2022). Metaverse in tourism and hospitality: Empirical evidence on generation Z from Italy. *ESI Preprints*, 10, 800-800.
- [22] Putra, D. T., Mahmudin, T., Wiatha, N. G. M., Adnyana, I. M. S., & Septiviari, A. I. M. (2024). The Existence of The Metaverse Tourism in Indonesia: Between Opportunities and Threats. *Reslaj: Religion Education Social Laa Roiba Journal*, 6(3), 2291-2300.
- [23] Dwivedi, Y. K., Hughes, L., Baabdullah, A. M., Ribeiro-Navarrete, S., Giannakis, M., Al-Debei, M. M., ... & Wamba, S. F. (2022). Metaverse beyond the hype: Multidisciplinary perspectives on emerging challenges, opportunities, and agenda for research, practice and policy. *International journal of information management*, 66, 102542.
- [24] Jung, T., Cho, J., Han, D. I. D., Ahn, S. J. G., Gupta, M., Gopal, D., ... & Tom Dieck, M. C. (2023). Metaverse for service industries: Future applications, opportunities, challenges and research directions. *Computers in Human Behavior*, 108039
- [25] Ouerghemmi, C., Ertz, M., Bouslama, N., & Tandon, U. (2023). The impact of virtual reality (VR) tour experience on tourists' intention to visit. *Information*, 14(10), 546.
- [26] Jung, T., Cho, J., Han, D. I. D., Ahn, S. J. G., Gupta, M., Gopal, D., ... & Tom Dieck, M. C. (2023). Metaverse for service industries: Future applications, opportunities, challenges and research directions. *Computers in Human Behavior*, 108039.
- [27] Marasco, A., Buonincontri, P., Van Niekerk, M., Orłowski, M., & Okumus, F. (2018). Exploring the role of next-generation virtual technologies in destination marketing. *Journal of Destination Marketing & Management*, 9, 138-148.
- [28] Siddiqui, M. S., Syed, T. A., Nadeem, A., Nawaz, W., & Alkhodre, A. (2022). Virtual tourism and digital heritage: an analysis of VR/AR technologies and applications. *International Journal of Advanced Computer Science and Applications*, 13(7).
- [29] Miah, S. J., Vu, H. Q., Gammack, J., & McGrath, M. (2017). A big data analytics method for tourist behaviour analysis. *Information & Management*, 54(6), 771-785.
- [30] Rancati, E., & d'Agata, A. (2022). Metaverse in tourism and hospitality: Empirical evidence on generation Z from Italy. *ESI Preprints*, 10, 800-800.
- [31] Mandal, S., Paul, J., Kotni, V. D. P., & Chintaluri, M. G. (2024). The orientation of Gen Zs towards metaverse tourism. *Journal of Destination Marketing & Management*, 32, 100871.
- [32] Dwivedi, Y. K., Hughes, L., Baabdullah, A. M., Ribeiro-Navarrete, S., Giannakis, M., Al-Debei, M. M., ... & Wamba, S. F. (2022). Metaverse beyond the hype: Multidisciplinary perspectives on emerging challenges, opportunities, and agenda for research, practice and policy. *International journal of information management*, 66, 102542
- [33] Putra, D. T., Mahmudin, T., Wiatha, N. G. M., Adnyana, I. M. S., & Septiviari, A. I. M. (2024). The Existence of The Metaverse Tourism in Indonesia: Between Opportunities and Threats. *Reslaj: Religion Education Social Laa Roiba Journal*, 6(3), 2291-2300.

- [34] Yoon, S., & Nam, Y. (2024). Metaverse engagement and Korea travel intentions: Understanding affordances, presence, and place attachment among Brazilian ZEPETO users. *Journal of Destination Marketing & Management*, 31, 100865.
- [35] Ghali, Z., Rather, R. A., & Khan, I. (2024). Investigating metaverse marketing-enabled consumers' social presence, attachment, engagement and (re) visit intentions. *Journal of Retailing and Consumer Services*, 77, 103671.
- [36] Kouroupi, N., & Metaxas, T. (2023). Can the Metaverse and its Associated Digital Tools and Technologies provide an opportunity for destinations to address the vulnerability of Overtourism?. *Tourism and Hospitality*, 4(2), 355-373.