

Accessing metaverse in tourism research: a preliminary bibliometric insight

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Objectives | The specific objectives of this research encompass four key aspects: (1) identification of the primary research themes and topics in metaverse-related tourism literature, (2) an analysis of publication patterns and trends over time, (3) recognition of the most influential authors, journals, and publications in the field, and (4) identification of research gaps and directions for future investigation.

Methodology | Scholarly interest in the concept of the metaverse is growing, especially within the fields of technology and digital innovation, with potential applications in tourism research. This preliminary bibliometric study aims to provide an accurate representation of the evolving landscape of metaverse-related research in the context of tourism. We analyze key bibliometric characteristics, including authorship networks, thematic clusters, and publication trends, utilizing a substantial corpus of scholarly publications from 2017 to 2023, extracted from the Scopus database and analyzed using R programming software. Bibliometric analysis, a quantitative research method employing statistical and computational tools to scrutinize scholarly literature, offers valuable insights into the intellectual structure and evolution of a research field (Donthu et al., 2021; Moral-Muñoz et al., 2020). This study intends to investigate the extent to which metaverse technology has been incorporated and applied within the realm of tourism. Its core purpose is to gain a deeper understanding of the current status of metaverse technology usage, with a specific focus on its contributions to the tourism industry. The study will scrutinize available literature on the subject, including journal articles, conference proceedings, and book chapters, to identify key themes, trends, and patterns in the field. These may include the volume of publications over time, the distribution of publications across different geographic regions, and the most frequently explored topics.

Main results and contributions | Our findings reveal a notable increase in publications over recent years, indicating a growing interest in the interplay between the metaverse and tourism. We identify influential authors and affiliations, offering insights into the global distribution of research endeavors in this emerging field. Furthermore, through thematic clustering analysis, we highlight the predominant themes and areas of investigation within this research domain. This paper contributes valuable insights into the swiftly developing field of metaverse applications in tourism research and establishes a foundation for future research and collaboration in this dynamic, multidisciplinary domain. The findings of this study will enhance our comprehension of the state of metaverse tourism research, offering valuable insights for scholars, industry practitioners, and policymakers concerning current trends, research deficiencies, and potential avenues for further exploration in this field. Additionally, the research will contribute to the ongoing discussion on the role of metaverse technology in tourism development, offering practical guidance to stakeholders in the tourism industry on harnessing immersive technologies effectively. The utilization of metaverse technology has the potential to exert a substantial impact on the industry, with both positive and negative implications (Allam et al., 2022), and this study aims to shed light on these effects. Lastly, the research will present recommendations for future research and practical applications in the field of metaverse, based on the insights derived from the bibliometric analysis. These recommendations will address areas for improvement and potential avenues for further investigation.

Limitations | While the importance of metaverse in tourism research is increasingly acknowledged (Gursoy et al., 2022), there remains a significant gap in comprehending the scope and adoption of metaverse technology in tourism. The utilization of metaverse in tourism is still in its early stages (Koo et al., 2023), necessitating a comprehensive exploration of the current state of research in this domain. Consequently, this paper aims to conduct a bibliometric analysis of the existing literature in the field of metaverse in tourism research. Its primary objective is to bridge this knowledge gap and enrich the academic discourse by presenting a systematic review of the available literature in this area despite the small number of publications.

Conclusions | The hospitality and tourism industry is currently experiencing significant transformations, and it's not just due to the global travel restrictions associated with COVID-19 (Gössling et al., 2020). Disruptive technologies in the digital realm, such as the emergence of the metaverse, are playing a significant role in these changes (Buhalis et al., 2023). Even as traditional travel returns to pre-pandemic levels, virtual hospitality and tourism experiences are gaining popularity (Gursoy et al., 2022). The concept of the metaverse and its associated virtual experiences have drastically shifted people's perspectives on the future of technology and its potential impact on the hospitality and tourism sectors (Go & Kang, 2022). Companies in this

industry are eager to explore ways to harness the metaverse's potential and offer their customers virtual travel and hospitality experiences, products, and services (Dwivedi et al., 2022). The metaverse, a three-dimensional virtual environment that emphasizes social connections, has captured the attention of the hospitality, tourism and travel sectors due to its ability to foster social interactions and create a strong sense of presence (Chen, 2023). Customers are increasingly opting for metaverse-based travel and hospitality experiences, products, and services (Koohang et al., 2023). These metaverse applications are revolutionizing the hotel and tourism sectors by reshaping how people choose accommodations, plan their trips, make reservations, and even attend events (Wong et al., 2023). While the metaverse cannot entirely replace physical travel, it's worth noting that metaverse hospitality and tourism applications are becoming increasingly immersive thanks to technological advancements and the high quality of virtual reality (VR) headsets (Monaco & Sacchi, 2023). As a result, tech-savvy consumers and digital natives are embracing virtual travel (Bhalla et al., 2021). Therefore, the metaverse is poised to play a pivotal role in the industry, enhancing the overall travel and hospitality experience in various ways (Yang & Wang, 2023).

References

- Allam, Z., Sharifi, A., Bibri, S. E., Jones, D. S., & Krogstie, J. (2022). The Metaverse as a virtual form of smart Cities: Opportunities and challenges for environmental, economic, and social sustainability in urban futures. *Smart Cities*, *5*(3), 771–801. https://doi.org/10.3390/smartcities5030040
- Bhalla, R., Tiwari, P., & Chowdhary, N. (2021). Digital Natives Leading the World: Paragons and Values of Generation Z. In *Springer eBooks* (pp. 3–23). https://doi.org/10.1007/978-3-030-70695-1 1
- Buhalis, D., Leung, D., & Lin, M. (2023). Metaverse as a disruptive technology revolutionising tourism management and marketing. *Tourism Management*, *97*, 104724. https://doi.org/10.1016/j.tourman.2023.104724
- Chen, Z. (2023). Beyond Reality: Examining the Opportunities and Challenges of Cross-Border Integration between Metaverse and Hospitality Industries. *Journal of Hospitality Marketing & Management*, *32*(7), 967–980. https://doi.org/10.1080/19368623.2023.2222029
- Donthu, N., Kumar, S., Mukherjee, D., Pandey, N., & Lim, W. M. (2021). How to conduct a bibliometric analysis: An overview and guidelines. *Journal of Business Research*, *133*, 285–296. https://doi.org/10.1016/j.jbusres.2021.04.070
- Dwivedi, Y. K., Hughes, L., Baabdullah, A. M., Ribeiro-Navarrete, S., Giannakis, M., Al-Debei, M. M., Dennehy, D., Metri, B., Buhalis, D., Cheung, C. M., Conboy, K., Doyle, R., Dubey, R., Dutot, V., Felix, R., Goyal, D., Gustafsson, A., Hinsch, C., Jebabli, I., . . . 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. https://doi.org/10.1016/j.ijinfomqt.2022.102542
- Go, H., & Kang, M. (2022). Metaverse tourism for sustainable tourism development: Tourism Agenda 2030. *Tourism Review*, *78*(2), 381–394. https://doi.org/10.1108/tr-02-2022-0102
- Gössling, S., Scott, D., & Hall, C. M. (2020). Pandemics, tourism and global change: a rapid assessment of COVID-19. *Journal of Sustainable Tourism*, *29*(1), 1–20. https://doi.org/10.1080/09669582.2020.1758708
- Gursoy, D., Malodia, S., & Dhir, A. (2022). The metaverse in the hospitality and tourism industry:

 An overview of current trends and future research directions. *Journal of Hospitality Marketing*& Management, 31(5), 527–534. https://doi.org/10.1080/19368623.2022.2072504
- Koo, C., Kwon, J., Chung, N., & Kim, J. (2022). Metaverse tourism: conceptual framework and research propositions. *Current Issues in Tourism*, *26*(20), 3268–3274. https://doi.org/10.1080/13683500.2022.2122781
- Koohang, A., Nord, J. H., Ooi, K., Tan, G. W., Al-Emran, M., Aw, E. C., Baabdullah, A. M., Buhalis, D., Cham, T., Dennis, C., Dutot, V., Dwivedi, Y. K., Hughes, L., Mogaji, E., Pandey, N., Phau, I., Raman, R., Sharma, A., Sigala, M., . . . Wong, L. (2023). Shaping the Metaverse into Reality: A Holistic Multidisciplinary Understanding of Opportunities, Challenges, and Avenues for Future Investigation. *Journal of Computer Information Systems*, 63(3), 735–765. https://doi.org/10.1080/08874417.2023.2165197
- Monaco, S., & Sacchi, G. (2023). Travelling The Metaverse: Potential benefits and main challenges for tourism sectors and research applications. *Sustainability*, *15*(4), 3348. https://doi.org/10.3390/su15043348
- Moral-Muñoz, J. A., Herrera-Viedma, E., Santisteban-Espejo, A., & Cobo, M. J. (2020). Software tools for conducting bibliometric analysis in science: An up-to-date review. *El Profesional De La Informacion*, *29*(1). https://doi.org/10.3145/epi.2020.ene.03
- Wong, L., Tan, G. W., Ooi, K., & Dwivedi, Y. K. (2023). Metaverse in hospitality and tourism: a critical reflection. *International Journal of Contemporary Hospitality Management*, *36*(7), 2273–2289. https://doi.org/10.1108/ijchm-05-2023-0586
- Yang, F. X., & Wang, Y. (2023). Rethinking Metaverse Tourism: A Taxonomy and an Agenda for Future research. *Journal of Hospitality & Tourism Research*. https://doi.org/10.1177/10963480231163509