

Airbnb Insights: User-Generated Content Analysis and Brand Social Media Listening

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Goal and objectives of the dissertation

Goal

The main aim of this thesis focuses on understanding the dynamics of interaction between users and the Airbnb brand.

Objectives

The research aims to conduct a bibliometric review to understand Airbnb's evolution in scientific literature, identifying key topics, influential authors, and new research directions. It also seeks to analyze the representativeness of Airbnb reviews in tourism research by quantifying user participation and comparing it to other rental platforms. Additionally, the study examines Airbnb's brand perception on TikTok, focusing on user-generated content (UGC) and the impact of influencers on engagement. Another objective is to analyze user sentiments towards Airbnb, both in accommodation reviews and through TikTok's official profile and hashtag #airbnb, as well as in face-to-face and online experiences. Finally, the research aims to develop a methodology applicable to any brand for analyzing user-generated text and audio content on social media.

Methodology

This thesis combines various scraping software's and AI tools for data collection and analysis, offering a comprehensive analysis of the Airbnb brand that can be applied to any online platform.

The literature review was conducted using Web of Science, identifying 385 articles on Airbnb published between 2014 and January 2023 and VOSViewer software was used for bibliometric techniques, including co-citation and keyword co-occurrence. Representativeness of Airbnb reviews followed Mellinas & Martin-Fuentes (2022). In this case, data from InsideAirbnb included 24,278 listings and 522,999 recent reviews, analyzed by listing type, reviews, availability, and review dates. Airdna provided average occupancy rates for Barcelona, Madrid, Valencia, and Sevilla, and data on tourist apartment stays from the Spanish National Statistics Institute.

TikTok content was analyzed using Apify, with 4Tokkit downloading videos, hashtags, and also Google Speech to Text for audio transcription. Sentiment analysis employed MeaningCloud, while emotions in TikTok posts were analyzed with Orange Data Mining's SentiArt, quantifying emotions like happiness, sadness, anger, fear, disgust, and surprise (Jacobs, 2019).

Finally, reviews on face-to-face and online Airbnb experiences were gathered with Octoparse. And, DistilRoBERTa was used to identify emotions (Ramos & Chang, 2023), followed by compositional data analysis (CoDA) to explore Ekman's six emotions (Coenders & Ferrer-Rosell, 2020). MANCOVA analyzed how experience characteristics (online vs. offline, category, duration, rating, price) affect emotional composition.

Results

This thesis contributes to the understanding of how user-generated content (UGC) on digital platforms shapes user perception and loyalty towards Airbnb. By analyzing content from both the brand and users on TikTok, it highlights the interaction between brand identity and user experiences, emphasizing authenticity and personalization in the sharing economy. Airbnb's classification has evolved from the 'sharing economy' (Lutz & Newlands, 2018) to a 'short-term rental platform' (Barrero-Rescalvo & Diaz-Parra, 2024). Academic interest in Airbnb surged after 2014, with most studies emerging a decade after its foundation. These academic contributions address remaining questions in the sector, particularly around sustainability and innovation, aligned with the European Union's 2030 Sustainable

Development Goals (SDGs). Brands that engage with users' concerns, using AI to offer personalized services, are increasingly relevant.

Airbnb reviews have a higher representativeness compared to other platforms, with a 70% participation rate, surpassing Booking.com's 38-40% (Mellinas, 2019) and TripAdvisor's 2% (Mellinas & Martin-Fuentes, 2022). This high participation is due to Airbnb's proactive review system, which encourages guests and hosts to review within a 14-day window. The personal bond in Airbnb interactions often results in more positive ratings (Bulchand-Gidumal & Melián-González, 2020), with a 90% positive sentiment rate in this study, aligning with Guclu *et al.* (2020), who found a 94% positivity rate in Barcelona.

Theoretical conclusions

This thesis confirms that TikTok serves as an additional channel for Airbnb, where both the brand and users project positive emotions like happiness and surprise. Customer reviews, emphasize the importance of content (accommodation, hotel, Airbnb) over interactions like comments or likes. Other studies, such as Cenni (2023) have explored aspects like customer satisfaction, security, and brand image through social media. Airbnb's positive brand content remains influential, but user-generated content is increasingly critical in shaping its narrative. Positivity toward the brand can manifest as brand sympathy or love. As Cenni (2023) concludes, positive interactions on digital platforms, including responses to user praise, enhance brand perception. Airbnb now offers more than rentals, providing experiences that generate memories and emotions. Trust and personalization are key in in-person experiences.

Practical Applications of the Dissertation

Considering the findings, the practical contribution of the thesis refers to enhancing strategies for online reputation management. The findings suggest that Airbnb managers can design more effective interventions to foster positive engagement and manage brand perception, especially through interactions with nanoinfluencers and leveraging platforms like TikTok to reach younger audiences. In terms of methodology, this thesis contributes to the current literature through the use of advanced techniques such as artificial intelligence to analyse large volumes of UGC data (text and audio). Additionally, the implementation of models like DistilRoBERTa to assess user emotions and responses in different experience formats (online and face-to-face) provides a valuable tool for future research in platform economies and digital tourism. This doctoral thesis proposes a methodology that can be extended to any brand with an online presence to analyse representativeness, sentiment, and emotions linked to its identity.

Content of the dissertation

Abstract of Chapter 1

Airbnb has undergone an evolution that has increasingly captured the attention of the research community since its inception. This interest is due to the varied and significant impacts that Airbnb has had on the accommodation sector, encompassing everything from enhanced accessibility to concerns about housing affordability. The present study analyses the general trend of Airbnb, the leading short-term rental platform. An exhaustive analysis of 385 articles that include the keywords "Airbnb" and "rental" and are indexed in Web of Science (WoS), was conducted. This analysis identifies the most influential themes, examines the most cited articles, and highlights the predominant authors and the most prolific institutions, in addition to exploring the geographical connections between them. This article provides a comprehensive, 360-degree view of the literature on the platform, offering a unique study that covers the most recent period and analyses the areas related to all publications indexed in

WoS. The study is proposed as a tool and a guide for academics, facilitating the identification of future development paths in this dynamic field (Marti-Ochoa *et al.*, 2024a).

Abstract of Chapter 2

User-generated content on social media has led to a new form of communication known as electronic word of mouth, which generates millions of comments about goods and services on the internet every day. This openly accessible content is crucial for prospective consumers as it helps in decision-making, but it is also valuable for product or service providers, as it allows them to improve their businesses based on user reviews, some of which are highly detailed. Another interest group that benefits from these comments are researchers and academics, as it allows them to obtain and analyse information for their studies at a relatively low cost in terms of time and money. The present study aims to perform a sentiment analysis of comments posted by guests staying at a property offered by Airbnb to determine whether their opinions about their experience are positive or negative. However, before doing so, it is necessary to find out the percentage of people who write a review about the service received on Airbnb to verify the representativeness of the reviews on this platform. To achieve this, thousands of comments posted in one year on Airbnb for the four most touristic cities in Spain are analysed: Madrid, Barcelona, Seville, and Valencia. The results show that opinions on Airbnb are much more representative compared to other platforms, as a very high participation rate is calculated. Furthermore, these opinions are predominantly positive, indicating a high level of satisfaction with the service provided (Marti-Ochoa *et al.*, 2024b).

Abstract of Chapter 3

This study delves into Airbnb's brand presence on TikTok by analysing textual content in posts, and human audio in videos. This approach aims to decipher the brand narrative and gauge user engagement. In the dynamic realm of social media marketing, TikTok has emerged as a key platform in shaping brand perception. This research specifically concentrates on Airbnb's content, distinguishing between official narratives and user-generated content (UGC). Notably, themes of "Travel" dominate official posts, contrasting with "Real Estate" and "Business" in UGC. The methodology employed involves advanced data collection techniques, including web scraping for textual data and artificial intelligence for transcribing human audio to text. The findings reveal that UGC commands greater engagement and volume compared to Airbnb's own brand content, underscoring the increasing significance of user involvement in brand storytelling. An analysis of the study results is conducted using linguistic natural processing (LNP) for the sentiment base, and the vector space model for emotion analysis. Sentiment analysis reveals a predominance of the emotion "happiness" and a significant presence of "surprise" in the posts, both of which are critical for audience engagement. Moreover, the study indicates a high approval rate for Airbnb-related content, reflecting a positive reception of the brand. Additionally, the research observes that influencers, particularly nano influencers, have higher engagement rates, indicating that their authenticity and relatability appeal especially to Generation Z audiences. This study not only sheds light on the intricate relationship between brand narrative, user engagement, and sentiment on TikTok but also offers valuable insights into effective brand image construction and propagation in the digital era, highlighting the importance of diverse emotions in enhancing audience engagement (Marti-Ochoa *et al.*, 2025).

Abstract of Chapter 4

With a focus on personalized travel experiences, platforms like Airbnb have revolutionized tourist interactions by offering authentic local experiences, from cooking classes with locals to city tours. This study addresses the gap in understanding emotions expressed in online versus face-to-face Airbnb experiences, taking advantage of the DistilRoBERTa method and compositional data analysis (CoDa)

on peer-to-peer platforms. By examining Airbnb online reviews, this study utilizes sentiment analysis to quantify emotional expressions depending on the type of experiences and categories. The findings suggest that online interactions tend to produce more positive emotions like joy and surprise compared to offline settings, where a variety of emotional responses is evident. Art and Culture, Cooking, and Entertainment categories receive more reviews expressing emotions of surprise and happiness, while Wellness and Tours feature a more varied range of emotions. Additionally, the study explores the impact of variables such as pricing, duration and user ratings on emotional responses, indicating that positive ratings are associated with increased expressions of positive emotions. This methodology helps to understand the emotional aspects of peer-to-peer platform experiences in the digital era, thereby improving our knowledge of consumer behaviour in a rapidly changing digital environment (Marti-Ochoa *et al.*, 2025b).

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