Science is love, love requeries honesty

Expo2020 Dubai and Tourism Marketing: An Online User-Generated Content Analysis

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Abstract

Dubai is currently one of the world's leading cities in the tourism field. Expo2020 has placed it in a remarkable position in sustainable tourism development amongst other tourist destinations. Information communication technologies (ICTs) have become essential for connecting tourism destinations with their visitors and other market partners. X (Twitter) facilitates online communication; embracing it has proved to be critical for boosting the brand image and reputation of tourism spots and augmenting their competitive advantage in the market. User-generated content (UGC) and electronic word of mouth (eWOM) have become important key players in this field. The purpose of this research grounded in the Theory of Planned Behavior and Social Media Engagement Theory, was to deepen the study of the Expo2020 event concerning tourism within the framework of ICTs. To do so, 3811 tweets posted from April 2021 to March 2022 using the hashtags #expo2020 and #visitdubai were analyzed. Nvivo software, among others, utilized X's open API to collect, filter, and organize tweets for study. Users generated more than 10 tweets daily on this topic. Dubai's institutional accounts were highly involved in creating content, leading personal accounts to follow the eWOM and UGC. Destination marketing organization (DMO) related to the Indian segment account stood out as one of the main players in the analyzed sample.

Keywords: Expo2020, Dubai, Tourism Marketing, ICTs, X (Twitter), UGC, eWOM, DMOs
JEL Kodu/Code: L83, M31

1. INTRODUCTION

Expo2020 was a world exhibition event, a universal exposition, held in Dubai, the United Arab Emirates (UAE), from 1 October 2021 to 31 March 2022, re-scheduled from 2020 due to the COVID-19 outbreak, under the primary theme of "connecting minds and creating the future". It was the first world expo in the Middle East, Africa, and South Asia region (Alshamlan et al., 2021). Expo2020 functioned under the belief that uniting the world can facilitate the interchange of fresh viewpoints and motivate crucial measures to offer practical resolutions to global issues.

Organizations and fairs around the world are pioneers in the promotion and marketing of countries and cities. With the increase in the promotion of destinations, it increases the mobility of potential tourists (Zengin and Şeyhanlıoğlu, 2019; Demirbaş and Bayram, 2022). Expo events impact the broader tourism and hospitality sector. Although specific barriers often exist, these events boost a destination's image, increasing its rank as a tourist attraction avenue (Herezniak et al., 2018). Apart from strong international cooperation, expos have facilitated a breakthrough in the tourism industry, allowing host cities and nations to augment their reputation in the global arena (Seitzhanova, 2018).

Dubai has "developed national strategies to attract Western tourists" (Garrod and Nicholls, 2022) (p. 3), paying attention to aspects such as cultural expectations. Over the years, it has also positioned itself as a city that pushes for sustainable development in all its sectors. Al-Dabbagh (2022) indicated that when organizing Expo2020, Dubai's administration expected that the event

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would consume roughly half of its electricity from 100% renewable sources. Despite the uncertainty created by the COVID-19 pandemic, which influenced some planned infrastructural projects to attain the set projection, Expo2020 has had multiple impacts on Dubai—most notably those that entail Dubai's improved brand image and employment creation in the city's tourism and travel industry.

Although there are other sources of information, a destination's image shared on social media can substantially impact potential customers since it provides information about the place's outlook (Khan et al., 2022). With the help of User-generated content (UGC), a tourism destination can change potential visitors' preferences and purchase intentions (Zhang et al., 2020). UGC influences potential visitors by providing authentic, peer-generated insights that shape their perceptions of the destination. Positive UGC, such as reviews and shared experiences, can increase a visitor's likelihood of choosing a destination by building trust and appealing to emotions, ultimately influencing purchase decisions.

While X, formerly known as Twitter, has been the primary platform of analysis due to its open-access data and popularity during large events, other social media platforms such as Instagram and Facebook have also played a significant role in shaping tourism perceptions through user-generated content. These platforms offer more visual and longer-form content compared to X's concise and text-driven format. This study focuses on X as a case study for real-time interactions and user engagement. The gap in the current literature lies in the limited exploration of UGC on X during mega-events like Expo 2020. This research seeks to fill that gap by analyzing how UGC on X influenced tourism perceptions and engagement during a major global event.

X was also selected due to its open API, allowing easy access to data and its widespread use during large events like Expo2020, which facilitates real-time, public conversations. Additionally, X's concise format and use of hashtags make it ideal for tracking specific topics and trends in tourism marketing. X's linkage with information communication technology (ICT) draws from its consideration as a social media platform, which scholars consider vital metadata that categorizes posts and propagates topics and ideas. Currently, despite the limitation of X's usage by destination marketing organizations (DMOs), the platform has become an essential social media marketing strategy. The utilization of ICTs and social network analysis in tourism research is still in its early stages (Menashy and Verger, 2019). Prior studies in the social sciences have already explored the use of information and communication technologies (ICTs) and social media to examine systems with multiple actors, outside of the tourism domain (Myers et al., 2014). X is the predominant platform in these analyses because of its open nature, which allows users to engage in various conversations and establish tracking linkages between accounts. Additionally, it provides access to historical data associated with the hashtags used in the tweets. Network analysis on X has emerged as a systematic approach to visualizing and understanding the interactions and connections within a community (Darmon et al., 2015). X data analysis methodology can be extrapolated to several areas of the social sciences. X can be utilized to ascertain the progression of a network on a particular subject or to investigate a discourse associated with a specific domain of study by identifying the individuals who possess the most significant influence (Goritz et al., 2019). There are several ways to obtain data from X, using one's own X account together with other APPs or obtaining data from a third party. X has recently eased access to X (Twitter) API for academic research (Developer X API, 2024). Software companies are also making it easier to access X data (Netlytic, 2023; Phillips and Lu, 2018).

This research aims to explore the role of UGC on X in shaping the tourism landscape during Expo 2020. Specifically, the study seeks to identify key trends in UGC, evaluate the impact on visitor perceptions and purchase intentions, and assess how institutional and personal accounts contributed to tourism marketing efforts.

While several studies have explored UGC and social media in tourism, there is limited research specifically focusing on the impact of X content during a large-scale event like Expo2020. This study aims to fill that gap by analyzing how UGC on X influenced tourism perceptions and engagement during Expo 2020. The main aim of this work was to fulfill the research gap in the area of ICTs' impact on tourism destinations and events via content users.

The principal conclusions of this research are that during the Expo 2020 event in Dubai, X users generated a high number of tweets and content related to both the event and tourism. More than 10 tweets a day included the hashtags #expo2020 and #visitdubai, together relating to the area of study. The explicit hashtag #tourism was also highly used. Institutional X accounts such as @expo2020dubai and @visitdubai, were highly involved in the creation of content, but also personal accounts contributed to generating content and achieving the most-liked tweets. This confirms the importance of public/institutional and private gathering together to achieve destination awareness and positive development. @visitdubai_IN, part of Visit Dubai but focused on Indian visitors, stood up as one of the most retweeted accounts, and one of its tweets was the most retweeted tweet. This confirms the importance of focusing efforts on specific segments when generating content on X.

2. LITERATURE REVIEW

2.1. Expo2020 Dubai and Tourism

IISD Hub (2021) highlighted that Expo2020 was rescheduled following the COVID-19 pandemic from 20 October 2020 to 10 April 2021 to run from 1 October 2021 to 31 March 2022. Organizers projected approximately 25 million visits by persons "from around the world by the time it ends in March 2022" (Pfalz, 2021) (p. 1). As a human ingenuity festival, Expo2020 sought to enhance collaboration to achieve three themes—opportunity, mobility, and sustainability—all of which are critical for the generation of sustainable solutions (Haneef et al., 2019). Therefore, its successful organization opened an avenue for Dubai to demonstrate its economic and sociocultural achievements and projections, raising its profile through tourism.

Scholars describe expo events as international occasions organized by the International Exhibitions Bureau under the World Fair that expose host nations to the global arena, focusing on cultural exchange, nation-building, and industrialization. Expos allow countries from all over the world to gather and display their craftsmanship and goods and to share essential information about their various hometowns with great pride. Some renowned landmarks, which later became tourist attraction centers, have occurred through world expos (Vij et al., 2019). By organizing these occasions, the international community gains an opportunity to have a dialogue platform for cooperation and growth, establishing new links and driving the world toward success.

Scholars link this process with enhanced tourism development due to expos' creation of tourism demand, increased visitor numbers, and stimulated travels for many people. Moreover, they allow hosts to improve their existing venues and introduce new brands (Alrawabdeh, 2022). These approaches create tourism opportunities and permit destinations to be among the leading tourism

hubs even after completing expo events. Drawing from such attractiveness, one can concur that expo events are essential for improving a destination's image in the tourism arena.

The brand awareness that expo events create is also critical in employment creation in respective destinations. Sharma et al. (2019) applied the tourism area life cycle (TALC) model, which was proven essential in advancing tourist destinations and expanding the involvement of local and international tourism agencies. Since expos also attract visa facilitation, they stimulate job creation and growth through tourism (Seitzhanova, 2018). With increased brand awareness, hosting nations position themselves as the best tourist attraction centers, pushing them to employ more people to meet the global demand in the tourism sector. Therefore, since this aspect increases global outreach, having expo events is critical for employment creation in destinations' tourism sectors.

Expo 2020 has impacted Dubai's economy, demographics, and infrastructure, making it the Middle East's tourism hub (Sharma et al., 2019). By 2017, the UAE had only 317,500 employees in the tourism and travel industry. However, with Expo2020, stakeholders have projected an improvement in its tourism sector, targeting a 2.4% increase per annum in employment rates, leading to roughly 410,000 workers by 2027 (Khudhair & Mardani, 2021). The growth from Dubai's increased demand for its tourism industry globally will attract more tourists, even past Expo2020 (Alrawabdeh, 2022). Hotels actively seek customer satisfaction with their services and within the destination (Baquero, 2021). The attractiveness of visiting Expo 2020 certainly added a plus to Dubai hotel customers during this event and increased employment. Expo 2020 has boosted Dubai's brand image, thereby facilitating more tourist attractions. Recent research in the UAE underscores that entrepreneurial orientation plays a pivotal role in enhancing sustainable performance, particularly in green technology adoption and innovation (Baquero, 2024). This concept aligns with the strategies employed during Expo 2020, where sustainability was a key focus, and green technologies were prominently showcased to promote eco-friendly tourism.

The Hawaii Tourism Authority pays special attention to its visitors' perception of the place as a sustainable tourism destination (Linnes et al., 2022). Events such as Expo 2020 have also placed Dubai on the sustainability roadmap, a critical concept for ecotourism promotion. The cohabitation between luxury and sustainability has been examined by researchers, highlighting that Expo 2020 has allowed the tourism sector's stakeholders to incorporate sustainability initiatives to facilitate the city's development (Nadkarni, 2019). As one of the most visited cities globally, Expo 2020 has enabled Dubai to pursue growth without compromising the needs of future generations (Marzouki, 2019). Furthermore, Dubai's expo offered world-class attractions, including Crocodile Park, fish markets, and traditional souks, creating sustainable business opportunities for the city "in the run-up to, and beyond 2020" (Marzouki, 2019:235). Pike et al. (2021) linked the changes to Dubai's improved destination image, which they insisted has influenced its travel situation and visitation.

2.2. Information and Communication Technologies (ICTs) and X

Information communication technology (ICT) entails an infrastructural component that enhances modern computing. Its application has proved essential to organizations and people interacting in the current digital world. ICTs have changed how people communicate and find information, work, and conduct business (Roztocki, 2019). Since individuals have embraced technology, ICTs have augmented their ability to improve businesses and gain market relevance. Moreover, there is extreme competition in the global market, with many firms opting to use ICTs "as outstanding strategies to overcome the competitive environment and succeed" (Jameel et al., 2017:15). ICTs

have created an avenue for companies to confront market challenges and create sustainable competitive advantages in their respective industries. The same principles can be applied to DMOs.

Companies face competition due to available product features, sellers, location, and information availability. The same challenge applies to tourism destinations and organizations, which Law et al. (2019) maintained often struggle to identify market gaps and utilize them to gain competitive advantages. Therefore, by acquiring ICTs, firms have succeeded in implementing vital technologies to enhance innovation and help them attain strategic marketing (Faghih et al., 2018). In their view, Labanauskaitė et al. (2020) argued that the tourism business requires the adoption of new technologies to facilitate the availability of specific services. Companies' reliance on ICTs to facilitate innovation has enabled them to boost their customer orientation and adapt to the changing demands. Despite the shifting of tourists' behavior patterns, such innovations have helped tourism destinations to align their services with customers' preferences, placing them in a competitive position in the market.

ICTs have also attracted the use of the Internet, with a notable one being the Internet of Things (IoT), which tourism destinations utilize to connect and exchange crucial data, thereby improving their operations. While digital innovations have become important in the current market, IoT has allowed tourism businesses to embrace an interactive process and share critical information about their services with their customers and tourist communities. The transition of the Internet into Web 3.0 has permitted tourists to experience virtual reality, post their reviews, and accept online bookings (Pencarelli, 2019). Tourism companies have changed their business models (BMs) with the Internet, adopting Internet-based BMs and configuring them to connect with other organizations, suppliers, producers, and ecosystem drivers. Therefore, since these processes have increased standardized data exchange, it is clear that ICTs have become essential (Perelygina et al., 2022).

ICTs mainly improve communications, marketing, advertising, promotion, and contracting of tourism services. The current reliance on integrated market communications (IMCs), which has increased due to social media use, allows tourism companies to advance their marketing communication (Mulyana et al., 2020). With this process, organizations have had the leeway to interconnect and synergize their marketing activities, creating powerful messages that communicate their products with specific purposes. Moreover, the adoption of ICT has revolutionized how consumers discover, access, and comprehend information, as well as how they strategize and make purchases, acquire knowledge and engage in discussions, and communicate and engage in activities (Gössling, 2021). These changes have forced companies to make significant shifts in their marketing strategies, expanding their online activity to grow their tourist' market base and augment profitability. They have also aligned their operations to accommodate online advertisements and promotions. Law et al. (2019) cited that these measures significantly increase product and service visibility. Such mechanisms influence tourists' decisions to visit particular tourism destinations.

ICTs are also crucial for achieving sustainable tourism marketing (STM). Janjua et al. (2021) linked the process with the triple bottom line (TBL) theory, encouraging tourism firms to align their sustainability marketing with people, the environment, and profit. By integrating ICTs into tourism firms, the latter can augment potential tourists' awareness of their effects on sustainability. The world is currently grappling with various challenges, with the COVID-19 pandemic being the prevalent issue (Gössling, 2020). Although such crises negatively impact tourism destinations and organizations, their management has to assure tourists that the focus is on sustainability. Therefore,

by using ICTs, tourism companies can communicate with their customers and inform them about measures to achieve resource use efficiency. This approach is vital for retaining and attracting more tourists.

X is an online social networking service that permits its users to post and interact, primarily through messages called tweets. X can be regarded "as a low-level information news flashes portal" (Hou et al., 2021:5). X allows DMOs "to post information about features that may attract tourists and promote destinations by retweeting posts" (Bigné et al, 2019:491). Furthermore, the adoption of X has also enabled destination companies to apply a crowd-sourcing approach, allowing them to tag data that detect customers' emotions about offered services (Alkhammash et al., 2019). Additionally, there are often some less-known tourist spots that hardly attract new customers; however, with X, affected tourism destinations can supplement their reviews to reach millions of potential visitors (Silaa et al., 2022). In addition, scholars posit that the site's simplicity has established a promising avenue for tourism firms to post tweets daily and to engage people in their opinions about available events, services, or facilities.

2.3. User-Generated Content (UGC) and e-Word-of-Mouth Effect (eWOM)

User-generated content (UGC) includes an original and specific brand, primarily created by customers and posted on online platforms, including social media and other channels. Tourism destinations can increase potential visitors' attention based on this content, specifically in terms of effective reaction and persuasion knowledge. Media outlets, such as Forbes and Adweek, encourage companies to adopt UGC to redefine their marketing goals, especially social media (Mayrhofer et al., 2020). According to Kiran and Vasantha (2016), the new era of social media, which also applies to ICTs, requires information creation and sharing through UGC Kiran and Vasantha (2016). This process influences the purchase intention and revisits of tourists. Moreover, UGC is linked with relationship intensity, as people often "trust information from close friends rather than information from casual friends" (Kim & Lee, 2017:1087). Therefore, depending on how firms or DMOs encourage UGC utilization, it can attract or discourage potential tourists.

UGC also helps improve a tourism destination's image. Gurung and Goswami (2017) defined destination image as potential visitors' perception of an area, drawing from their imagination, emotional thoughts, and prejudices. This approach, with increased customer satisfaction, is associated with positively influencing their loyalty behavior (Xu et al., 2021).

UGC has been used as a proxy for primary data in various tourism studies, offering insights into traveler behavior and destination image. A recent study by Marine-Roig (2022) utilized UGC to analyze visitor sentiment toward cultural heritage sites, demonstrating its value in understanding tourist satisfaction and destination branding.

Electronic word-of-mouth (e-WOM) refers to the transmission of favorable or negative opinions about a service, product, or company by a past, present, or potential consumer, which is then accessible to a wider audience through the Internet. It differs from traditional word-of-mouth due to its potential to reach a much larger audience via the internet. eWOM plays a crucial role in influencing tourist behavior, as consumers tend to trust peer recommendations and review more than official marketing communications. In the context of tourism, positive eWOM can increase a destination's appeal by enhancing credibility and creating an emotional connection with potential visitors. The proliferation of eWOM on platforms like X, where users share their real-time experiences, has made it a pivotal factor in tourism marketing strategies, significantly shaping

destination images and influencing travel decisions. With the booming information technology (IT) era, the Internet has become a leading tool that customers use to transfer information to millions of individuals globally, with e-WOM being critical due to the convincing power of discussions (Le-Hoang, 2020). In their view, Pour et al. (2020) and Nuseir (2019) regarded e-WOM as a motivational tool that impacts tourists' attitudes about various destinations, their purchasing inclinations, and tourism companies' decision-making processes. On the contrary, Taryadi and Miftahuddin (2021) maintained that while e-WOM mainly affects potential customers, tourism destinations can also use it to improve their services and products to positively influence visitors' decisions. Thus, regardless of the party using it, e-WOM can change tourists' perceptions of a specific place and can influence service delivery for tourism destinations.

Similar to UGC, e-WOM also affects a destination's image. The concept often changes revisit intentions and tourist attitudes, depending on the information they receive online (Harahap and Dwita, 2020). Since the tourism business has become interactive, many customers rely on the Internet to communicate with others about a destination, with some searching already posted content. This approach has changed how these customers view particular destinations (Aprilia and Kusumawati, 2021). Some believe that they would experience great pleasure when visiting specific areas due to the obtained information. Since e-WOM changes customer behavior, it alters how they view a tourism organization (Huete-Alcocer, 2017). Therefore, based on the above information, it remains clear that embracing e-WOM can prove vital for improving a destination's image among tourists.

2.4. Research Model and Hypothesis

This study is grounded in the Theory of Planned Behavior and Social Media Engagement Theory, hypothesizing that UGC influences tourists' attitudes, perceived behavioral control, and subjective norms, which in turn affect their intention to visit a destination.

The Theory of Planned Behavior (TPB) was developed by Icek Ajzen in 1985 and is a widely used psychological theory to predict and understand human behavior in specific contexts. TPB suggests that an individual's actions are directly impacted by their intention to carry out those actions. This intention, in turn, is influenced by three primary factors: their attitude toward the behavior, subjective norms, and perceived behavioral control. In the context of tourism, TPB can be applied to understand how potential tourists form their intentions to visit a destination. For example, positive attitudes towards a destination (influenced by marketing or word of mouth), social influences (friends or influencers advocating for the destination), and the perceived ease of visiting (accessibility, cost, etc.) all contribute to the intention to visit.

Social Media Engagement Theory is a framework that examines how individuals interact with content on social media platforms and the effects of these interactions on both the user and the content provider (e.g., brands, companies, or other users). Engagement on social media typically includes actions such as liking, sharing, commenting, and posting content. In the context of tourism, Social Media Engagement Theory helps to understand how users interact with content related to travel destinations, how these interactions influence their perceptions and behaviors, and how destinations can strategically use social media to enhance their visibility and attractiveness. For example, a destination's use of captivating imagery and engaging narratives on platforms like Instagram can drive both emotional and behavioral engagement, ultimately leading to increased tourism.

The following hypotheses have been formulated by synthesizing existing research on the Theory of Planned Behavior (TPB) and Social Media Engagement Theory, which both explain how users' attitudes and behaviors are influenced by their engagement with online content. Studies on UGC and eWOM have demonstrated that positive online interactions increase users' likelihood of visiting a destination (Zhang et al., 2020). Furthermore, research on mega-events (Herezniak et al., 2018; Sharma et al., 2019) suggests that institutional accounts play a crucial role in shaping public perceptions, a hypothesis reflected in the prominence of official Expo2020 and Dubai tourism accounts in this study. Therefore, this research hypotheses are grounded in these theories and empirical studies, anticipating that both institutional and personal accounts would actively generate and disseminate content around Expo2020, influencing user engagement and tourism outcomes, as follows:

> *Hypothesis 1: Expo2020 and Tourism have together been an active issue of debate on X, during Expo2020 and six months prior to starting the event, showing an average of at least one daily tweet with both hashtags #expo2020 and #visitdubai.*

> *Hypothesis 2: The X accounts most mentioned in these tweets were @expo2020dubai, the official Expo2020 Dubai account, and @visitdubai, the official Dubai's tourism account.*

> *Hypothesis 3: The most active X accounts on this issue were not only institutional accounts, but also personal accounts.*

3. MATERIALS AND METHODS

This study follows the methodological approaches used in recent tourism research, such as the work by Mehra (2023), which utilized social media analytics to assess destination marketing effectiveness. Ensuring the robustness of our methodology, we employed similar data collection and analysis techniques to provide valid and transparent results.

The area of research (Expo2020 and Tourism) can be found on the official Expo2020 Dubai website (Expo2020 Dubai, 2023) and on the official Dubai's Tourism website (Visit Dubai, 2023). Both are supported by institutional/official X accounts, @expo2020dubai and @vistidubai, respectively, that offer information and interact with other X accounts. In the description of @visitdubai, the X account includes the hashtag #visitdubai and uses it in every Tweet. @expo2020dubai does not include a specific hashtag in its description, but it uses the hashtag #expo2020 in every tweet. These were the first hashtags to be analyzed in X for this research. By utilizing an advanced search feature, which is accessible to all X account holders, the utilization of certain hashtags, either individually or in combination, was confirmed. It was confirmed that a significant number of accounts were utilizing this combination, which aligns with the central concept of this research.

In order to obtain X data, it was used a personal account. It was requested an X Developer Account, which allows one to set up and manage own projects and apps. To do so, it was required to add a telephone number to an existing X account and to fill in a questionnaire explaining the purpose of the research using X's data. Using raw data from X's API can be difficult, and basic knowledge of R is at least needed. R is a programming language used for statistical computation (Aizaki et al., 2014). Specialized software businesses can also provide access to X data (Netlytic, 2023; Phillips and Lu, 2018; TBinder, 2023). A mix of both options was used for this research. Software applications are developing resources to analyze X data. NVivo software offers researchers the possibility of installing a plug-in and retrieving selected tweets according to hashtags, dates, etc.

Data can easily be exported to Excel or other software for filtering. NVivo software adds significant value for researchers (Phillips and Lu, 2018).

The search query used was #expo2020 AND #vistidubai. Both hashtags were mandatory terms. The time frame investigated spanned from 1 April 2021 to 31 March 2022, considering the Expo2020 event (1 October to 31 March 2022) and the Expo2020 pre-event (1 April 2021 to 31 September 2021). There were no limitations on the wording used. Any tweet that incorporated the two hashtags stated before was included in the study sample.

4. RESULTS

4.1. General Data and Activity about Expo2020 and Tourism

A total of 3811 tweets were identified during the search. The tweets spanned from April 1 2021, until March 31, 2022. Both hashtags #expo2020 and #visitdubai were used together on a tweet, representing an average of 10.4 tweets posted daily.

As shown in Graph 1, X activity began barely one month prior to the inauguration of Expo 2020 on October 1. Despite the event being set for the year 2020, there was little action between April and August of 2021. During the six months of the Expo, X activity was strong, particularly in October 2021, when the event opened, and from January to March 2022.
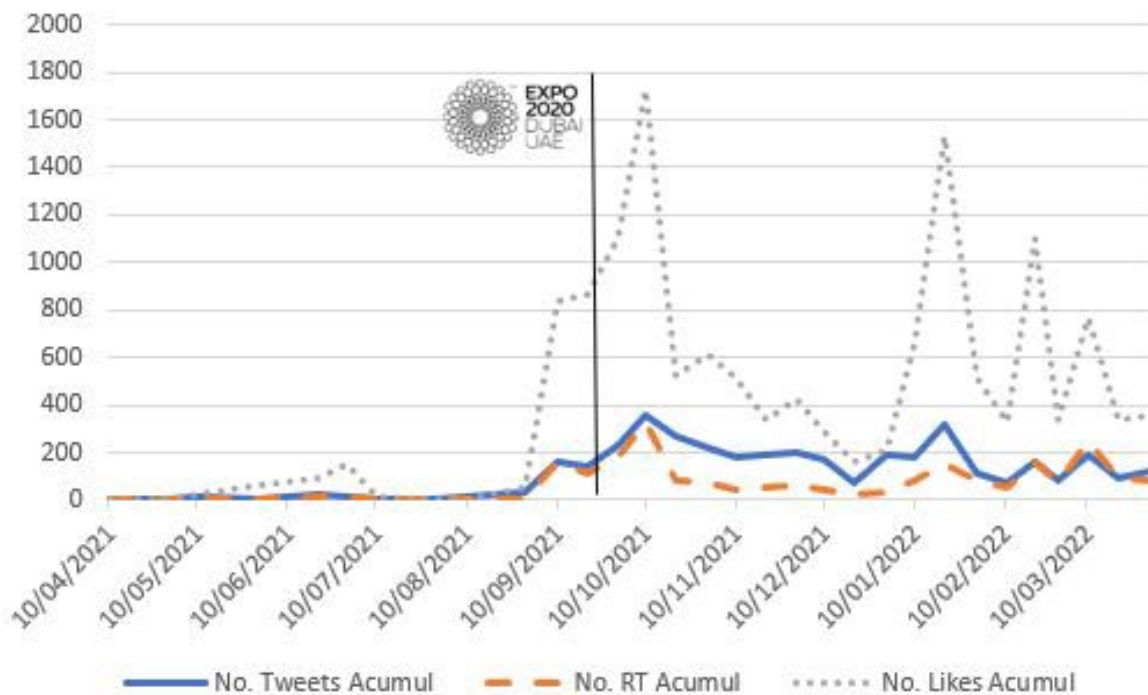
Graph 1. #expo2020 and #visitdubai Tweets, RT and Likes.
Source: Created by author.

Tweets were posted by 1311 contributors, resulting in an average of 2.91 tweets per contributor. A high percentage of these tweets were retweets (51.54%), while 48.05% of the 3811 tweets were original tweets that included links and images. Only 0.31% included text only, and 0.34% were replies.

Regarding the age of the X accounts, 43.86% of them had been in existence for six years or longer, 11.83% had existed for four to six years, 14.49% had existed for two to four years, and 29.82% had

recently been created and were less than two years old. In many circumstances, the age of an X account indicates that it is a genuine account.

The mean length of the tweets was 236.97 characters; 76% of the tweets exceeded 240 characters.

The main sources of use of these tweets were X for iPhone (48%), X for Android (24%), and X's web app (15%). The rest of the sources were in the following order: Sprinklr, Hootsuite, X for iPad, Instagram, Tweet Deck, Sievet Weet, and Sprout Social.

In addition to the two hashtags that were evaluated, six additional hashtags were used, in the specified sequence: #dubai, #UAE, #mydubai, #dubailife, #emirates, and #tourism.

4.2. Most-Liked Tweet and Most Retweeted Tweet

The tweet that received the greatest number of likes was shared by an individual's own account with the handle @borneast55. This user's profile photo depicts a male individual, named Abdalla E. Al Serkal, and describes himself as the "Director of Sheikh Mohammed Centre for Cultural Understanding," a Dubai-based NGO (Sheikh Mohammed CCU, 2023). This account had 847 followers and followed 746 accounts.

The mentioned Tweet was posted on 17 January 2022 using the researched hashtags, text, and an image with a link on it. This Tweet received 1184 likes, 93 retweets, and 22 comments, as can be seen in Figure 1.
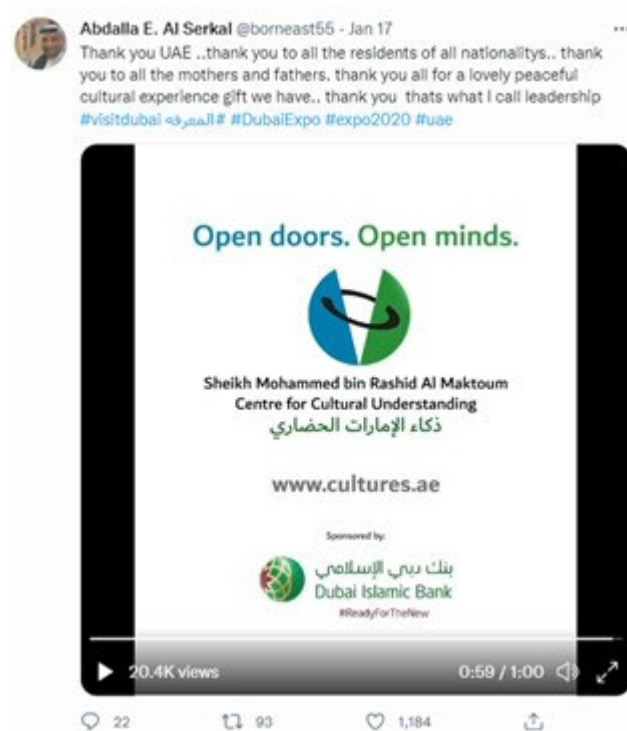

Figure 1. Most-liked tweet.

Source: Al Serkal (2019)

The subsequent three tweets with the highest number of likes were shared from official accounts: @visitdubai_IN, @visitdubai, and @expo2020dubai.

The most retweeted tweet was posted by an institutional X account: @visitdubai_IN. This is a verified X account, run by Visit Dubai, that targets Indian users and thus adapts its content sharing about Dubai to their likes and interests, as can be seen in Figure 2.

Figure 2. Most retweeted tweet.
Source: Visit Dubai IN https://x.com/VisitDubai_IN

The subsequent tweets with the highest number of retweets were shared by the @visitdubai and @expo2020dubai accounts.

4.3. Most Mentioned and More Active Accounts

The Expo 2020 Dubai and Visit Dubai accounts were the most often referenced accounts in the sample: @expo2020dubai and @visitdubai (Figures 3 and 4).

Figure 3. Expo2020 Dubai's official X account.
Source: https://expo2020dubai.com

Figure 4. Dubai's official tourism account.
Source: https://x.com/visitdubai

The most actives accounts, using the two hashtags #expo2020 and #visitdubai, were @DubaiCRC, Dubai Camel Racing Club (see Figure 5), and @visitdubai.

Figure 5. Dubai Camel Racing Club's official X account.
Source: https://x.com/DubaiCRC

4.4. Most Retweeted and Followed Accounts

The most retweeted accounts in the sample were @visitdubai with 1395 retweets and @visitdubai_IN with 339 retweets.

The verified users with a larger number of followers participating in this sample were: @AhlamAlShamsi (see Figure 6), @MapsMaponyane (see Figure 7), and @expo2020dubai.

Figure 6. Emirati singer Ahlam Al Shamsi's official X account.
Source: https://x.com/AhlamAlShamsi

Figure 7. South African actor Maps Maponyane's official X account.
Source: https://x.com/MapsMaponyane

5. DISCUSSION AND CONCLUSIONS

5.1. Discussion

This research contributes to the existing literature by applying the Theory of Planned Behavior and Social Media Engagement Theory in the context of a mega-event, demonstrating how UGC not only reflects but also shapes tourist behavior and destination image in real-time.

It can be confirmed that Expo2020 and tourism were active issues of discussion on X during the Expo2020 event. Users of this ICT platform used hashtags such as #expo2020, #visitdubai, #dubai, #UAE, #mydubai, #dubailife, #emirates, and #tourism, mainly for this topic.

The study sample, comprising 3811 tweets, had a substantial proportion of retweets. This may be seen as a lack of strong commitment from the UCG on this topic. However, upon closer examination, we discovered that there was high-quality content generated by official accounts, which in turn attracted a significant number of users who were interested in Expo2020 and tourism. They effortlessly shared and amplified the reach of this material on X.

The majority of original tweets included links and images. Those that included only text were residual (0.31%). Tourism and events such as Expo2020 were definitively a visual issue. DMOs should focus on visual images that capture the interest of people, thus creating content on ICTs.

The number one source of these tweets was X for iPhone. The use of the iPhone since its arrival in mid-2007 has been related to a segment of people with a higher-than-average income (Goggin, 2012). This research methodology based on the use of X allows us to assume that the majority of visitors/residents visiting Expo2020, or just tweeting about Expo2020 and tourism, were iPhone users and therefore did not have a low income.

The explicit hashtag #tourism was among the most used hashtags, together with #expo2020 and #visitdubai, confirming the interest of X users in tourism while using the aforementioned combination of hashtags.

The most-liked tweet was posted by Addalla E. Al Serkal, from his personal X account, on 17 January 2022, receiving 1184 likes. This person seems to work in a managerial position in a Dubai-based NGO. He generated positive content about the tourism destination event. The use of "pre-set" hashtags created by an institutional/official X account might have helped this tweet to gather with other X users and achieve a high number of likes. Tweets posted by @visitdubai and @expo2020dubai also stood out as most liked.

Surprisingly, an institutional account, part of Visit Dubai but focused on the Indian market, posted the most retweeted tweet, as well as one of the most-liked tweets in the sample. @visitdubai_IN appears to be a 2.0 evolution of servicing visitors to a destination, catering information for a specific segment: the Indian population in this case.

Both @expo2020dubai and @visitdubai were the most mentioned accounts in the sample. It can be said that both entities positively managed their presence in X so that they were at the forefront of the minds of visitors attending the event.

@DubaiCRC, Dubai Camel Racing's official X account, was found to be the most active account. This is an example of the transversality of UGC. Not only can institutional accounts help build positive content within a touristic destination during an event, but so can local institutions.

Verified personal accounts such as Emirati singer Ashlam Al Shansi and South African actor Maps Maponyane, both with millions of X followers, stood out as users of the aforementioned hashtag combination.

5.2 Conclusion and Limitations

The idea of "customer-centric" is very strong in hospitality management. Hotel managers focus on being where the customers are, which is the physical space of the hotel during their stay or any ICT during or pre-/post-stay (Baquero, 2022). This allows hospitality companies to know the preferences of their customers, verify the satisfaction of a new restaurant menu, etc. Public/institutional entities and DMOs should apply the same principles using a "visitor-centric"

approach. They should be where visitors are. If customers use ICTs and generate content about a destination, DMOs should be there too in an active way.

Unfortunately, some tourism destinations do not benefit from this "visitor-centric" approach. Therefore, such destinations, hotels, etc. are not performing in the best shape that they could perform.

Luckily for Dubai, its public/institutional entities lead by example. They actively participate, promote, and support events such as Expo2020. They show their presence in ICTs, they generate positive content that leads visitors and residents to enjoy the destination, and they amplify the available information about a destination. As a form of ICT, UGC is vital for providing factual and emotional information about a tourism destination or company, which augments revisiting intentions. According to Kaosiri et al. (2017), tourists often have expectations about particular destinations, with many purchasing or declining the offered services based on the information they receive. Hence, since UGC communicates to tourists about a place, its embracement by tourism organizations can increase the latter's brand image and improve its competitive advantage in the market. We might argue that the destination image consists of both cognitive and emotive elements. The image of the destination can be defined as the total mental impression that each individual has of a place or destination produced by knowledge as well as the feelings that the location evokes in them. Certainly, through hosting events such as Expo2020 in Dubai, the destination image of Dubai has improved for all visitors and ICT users.

This study contributes to the theoretical understanding of UGC and eWOM within the context of a mega-event by applying the Theory of Planned Behavior and Social Media Engagement Theory. It demonstrates how real-time social media interactions shape tourist behavior and perceptions of destination branding. The findings suggest that UGC on X not only reflects users' attitudes toward a destination but also actively contributes to shaping those attitudes through social media engagement.

For practitioners, this research highlights the importance of leveraging social media platforms like X to engage potential tourists during major events. Institutional accounts should not only generate content but also foster user interaction to maximize the reach and impact of their messaging. The results emphasize the need for targeted content strategies, such as those used by @visitdubai_IN to appeal to specific segments, like Indian visitors, which proved highly effective during Expo2020.

This study had some limitations that future research could address. Future research should explore the longitudinal effects of such engagement on tourism sustainability and destination loyalty. Future studies could focus on sentiment analysis, as the current research has not approached or benefitted from the development of new software applications that ease the access of this analysis for researchers. The research uses only Twitter data, it is important to note the need for cross-platform analysis in future studies. Future studies could focus on developing the relationship between India and Indian communities and Dubai. It was surprising to learn of the high impact of an X account that caters to information about Dubai as a destination for Indian visitors and/or residents, namely, @visitdubai_IN.

The results of this research offer points of reflection for public institutions, DMOs, hospitality firms, and those in similar areas, as well as new approaches for scientific research in the area of tourism.

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ETHIC STATEMENT FORM

Research Support Information: This research has received no funding from any source.
( ) Ethics committee approval was required.
(X) Ethics committee approval is not required. The reason is stated below.
( ) Since the data were collected before 2020, ethical committee approval was not obtained.
(X) The method used in the study does not require ethics committee approval.
Contribution Rate of Author(s)
1. Author: 100%
Informed Consent Form: N/A