

ASERS

# Journal of Environmental Management and Tourism

Quarterly

Volume XV

Issue 3(75)

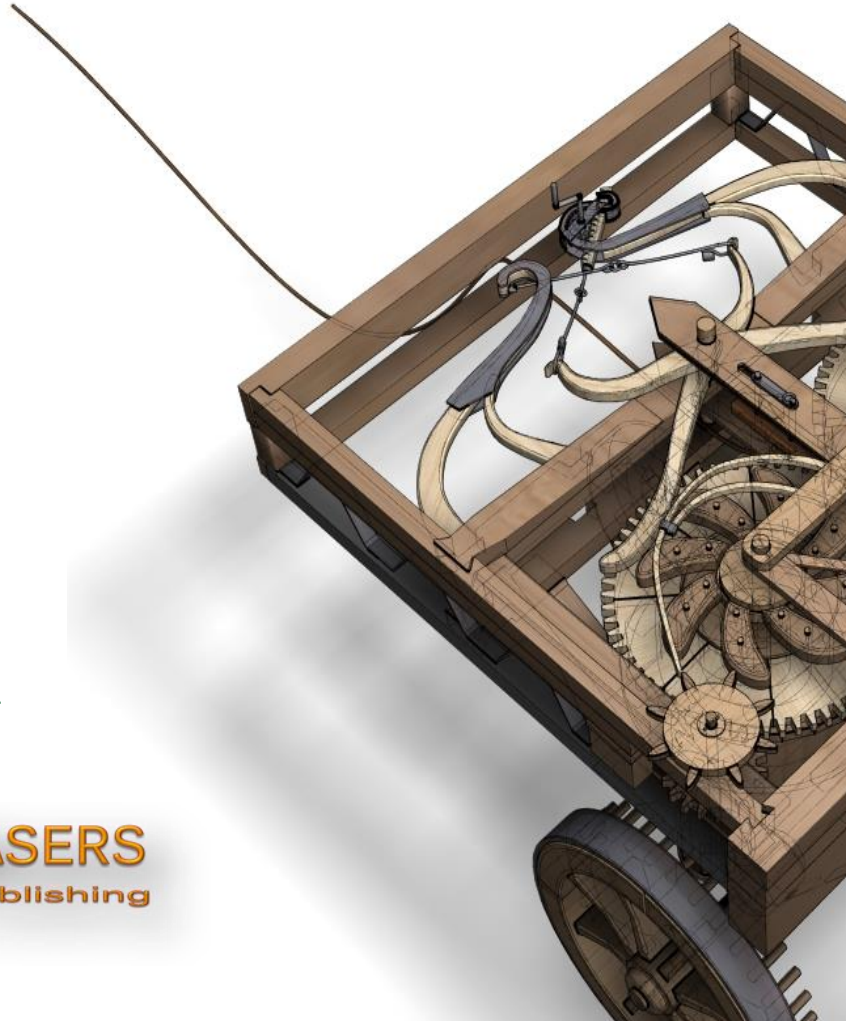
Fall 2024

ISSN 2068 – 7729

Journal DOI

<https://doi.org/10.14505/jemt>

ASERS  
Publishing



Editor in Chief:  
**Ramona Pirvu,**  
University of Craiova, Romania

Co-Editor:  
**Cristina Mihaela Barbu,**  
Spiru Haret University, Romania

**Editorial Advisory Board:**

**Omran Abdelnaser,** University Sains  
Malaysia, Malaysia

**Huong Ha,** Singapore University of Social  
Sciences, Singapore

**Harjeet Kaur,** HELP University College,  
Malaysia

**Janusz Grabara,** Czestochowa University of  
Technology, Poland

**Vicky Katsoni,** Technological Educational  
Institute of Athens, Greece

**Sebastian Kot,** Czestochowa University of  
Technology, The Institute of Logistics and  
International Management, Poland

**Andreea Marin-Pantelescu,** Academy of  
Economic Studies Bucharest, Romania

**Piotr Misztal,** The Jan Kochanowski  
University in Kielce, Faculty of Management  
and Administration, Poland

**Agnieszka Mroziak,** Faculty of Biology and  
Environmental Protection, University of  
Silesia, Katowice, Poland

**Chuen-Chee Pek,** Nottingham University  
Business School, Malaysia

**Roberta De Santis,** LUISS University, Italy

**Fabio Gaetano Santeramo,** University of  
Foggia, Italy

**Dan Selişteanu,** University of Craiova,  
Romania

**Lesia Kucher,** Lviv Polytechnic National  
University, Ukraine

**Lóránt Dénes Dávid,** Eötvös Loránd  
University, Hungary

**Laura Ungureanu,** Spiru Haret University,  
Romania

**Sergey Evgenievich Barykin,** Peter the  
Great St. Petersburg Polytechnic University,  
Russian Federation

**Omar Abedalla Alananzeh,** Faculty of  
Tourism and Hotel Management, Yarmouk  
University, Jordan

**Marco Martins,** Polytechnic Institute of  
Tomar, Portugal

**Konstantinos Antoniadis,** University of  
Macedonia Thessaloniki, Greece

Table of Contents:

1	<b>Food Security and Marine Capture Fisheries of BUGSAY Association of La Libertad, Negros Oriental, Philippines</b> Eden Grace V. TABANAO, Christine B. GALLOSA	429
2	<b>Fuzzy Analytical Hierarchy Process Evaluation of Stakeholder Groups Involvement in Forest Management Situations</b> Dorina GRAZHDANI	435
3	<b>How Advanced Is Green Participatory Budgeting in Poland and Spain? A Case Study of Gdansk and Barcelona</b> Małgorzata SIEMIONEK-RUSKAŃ, Anna SIEMIONEK-LEPCZYŃSKA	449
4	<b>Alternative Forms of Tourism: User Generate Content Promote Birdwatching Tourism in Kefalonia island, Greece</b> Michail XANTHAKIS, Nikos ANTONOPOULOS, Andreas KANAVOS, Anastasia KOMNENOU	459
5	<b>Integration of the Pro-Environmental Concepts in Various Management Accounting Tools</b> Anna SIEMIONEK-LEPCZYŃSKA, Michał CHALASTRA	479
6	<b>How Green Are Hotels in Ghana? Evidence from Star-Rated Hotels in Kumasi Metropolitan Area</b> Amoako Noble SARKODIE, Jane DERY, Charlotte GYIMAH, Comfort GYEDUAH, Hannah Esi Akyere ACQUAH	488
7	<b>Integrating Marine Tourism into the Blue Economy Framework</b> Kiran REDDY, Bhaskar SAILESH	501
8	<b>Tourists' Preferences in the Context of Their Psychological Well-Being: Conjoint Analysis</b> Anna MŁYŃKOWIAK-STAWARZ, Robert BĘBEN	521
9	<b>Improving Tourist Loyalty: Examining the Role of Environmental Tourism Policy on Tourist Behavior</b> Ivo NOVITANINGTYAS, Clarisa Alfa LIONORA, Andhatu ACHSA, Budi HARTONO	537
10	<b>Assess the Barrier of Small and Medium-Sized Hotel Digitalization: A Combination of AHP and DEMATEL Analysis</b> Pham Thanh TUNG	547
11	<b>The Interconnection of Rural Tourism Development with Local SMEs: The Potential of Startup Business Networking in Southern Malang Indonesia</b> Agung WINARNO, Desti Nur AINI, Norlida Hanim Mohd. SALEH, Muhammad Aris ICHWANTO, Agus PURNOMO, Amalia Arifah RAHMAN	564
12	<b>Exploring Tourists' Experience in Cinema-Induced Tourism through Sentiment Analysis Approach: Case of Ouarzazate Film Attractions</b> Moulay Abdellah TAIBI, Raja HANBALI, Fatima-Zohra IFLAHEN	575
13	<b>AI in Competitive Intelligence, Traditional and New Techniques for Gathering and Analysing Data</b> Silvia Denisa TARANU, Adrian Gabriel CIORANU	591

# Call for Papers Winter Issue 2024

## Journal of Environmental Management and Tourism

**Journal of Environmental Management and Tourism** is an open access, peer-reviewed interdisciplinary research journal, aimed to publish articles and original research papers that contribute to the development of both experimental and theoretical nature in the field of Environmental Management and Tourism Sciences. The Journal publishes original research and seeks to cover a wide range of topics regarding environmental management and engineering, environmental management and health, environmental chemistry, environmental protection technologies (water, air, soil), pollution reduction at source and waste minimization, energy and environment, modelling, simulation and optimization for environmental protection; environmental biotechnology, environmental education and sustainable development, environmental strategies and policies.

Authors are encouraged to submit high quality, original works that discuss the latest developments in environmental management research and application with the certain scope to share experiences and research findings and to stimulate more ideas and useful insights regarding current best-practices and future directions in Environmental Management.

Also, this journal is committed to a broad range of topics regarding Tourism and Travel Management, leisure and recreation studies and the emerging field of event management. It contains both theoretical and applied research papers and encourages obtaining results through collaboration between researchers and those working in the tourism industry.

The journal takes an interdisciplinary approach and includes planning and policy aspects of international, national and regional tourism as well as specific management studies. Case studies are welcomed when the authors indicate the wider applications of their insights or techniques, emphasizing the global perspective of the problem they address.

**Journal of Environmental Management and Tourism** is indexed in RePEc, CEEOL, ProQuest, EBSCO, DOAJ and Cabell Directory databases.

Details regarding the publication in this journal are here: <https://journals.aserspublishing.eu/jemt/about>

**Deadline for submission:** 15<sup>st</sup> October 2024

**Expected publication date:** November 2024

**Website:** <https://journals.aserspublishing.eu/jemt>

**E-mail:** [jemt@aserspublishing.eu](mailto:jemt@aserspublishing.eu)



DOI: [https://doi.org/10.14505/jemt.v15.3\(75\).12](https://doi.org/10.14505/jemt.v15.3(75).12)

## Exploring Tourists' Experience in Cinema-Induced Tourism through Sentiment Analysis Approach: Case of Ouarzazate Film Attractions

Moulay Abdellah TAIBI  
The Faculty of Arts and Humanities  
Cadi Ayyad University, Marrakech, Morocco  
ORCID: 0009-0005-3298-4192  
Corresponding Author: [m.taibi.ced@uca.ac.ma](mailto:m.taibi.ced@uca.ac.ma)

Raja HANBALI  
The Faculty of Sciences  
Ibn Tofail University, Kenitra, Morocco  
[raja.hanbali@uit.ac.ma](mailto:raja.hanbali@uit.ac.ma)

Fatima-Zohra IFLAHEN  
The Faculty of Arts and Humanities  
Cadi Ayyad University, Marrakech, Morocco  
[f.iflahen@uca.ac.ma](mailto:f.iflahen@uca.ac.ma)

**Article info:** Received 18 June 2024; Received in revised form 8 July 2024; Accepted for publication 31 July 2024; Published 30 August 2024. Copyright© 2024 The Author(s). Published by ASERS Publishing 2024. This is an open access article distributed under the terms of CC-BY 4.0 license.

**Abstract:** This research aims to explore tourists' experiences in movie-induced tourism in the region of Ouarzazate, the hub of the cinematographic industry in Morocco and Africa to come up with managerial implications that can improve the tourist experience in this region. A sentiment analysis approach was applied to TripAdvisor reviews in English on the three main filming facilities and attractions: Atlas and CLA studios and the film museum in Ouarzazate. The method combined topic modeling and lexicon-based algorithms; an approach based on Natural Language Processing using a Python toolkit to investigate prevailing sentiment among visitors of these touristic sites. The result of our study showed that tourists generally have a positive sentiment towards the region of Ouarzazate. However, the desert still dominates as the primary aspect that attracts tourists to the region, while cinema is a secondary attraction to the majority of tourists. The study is one of the first studies to reflect on the potential of Cinema Induced Tourism in Ouarzazate, Morocco, one of the attractive destinations for tourists and filmmakers, which, despite its potential, does not figure among cinema-induced tourism destinations in the literature.

**Keywords:** tourism; cinema-induced tourism; Ouarzazate; sentiment analysis.

**JEL Classification:** Z32;

### Introduction

Ouarzazate is one of the five provinces of the Draa Tafilaleet region, Morocco. This region is a well-recognized tourist destination worldwide for its desert tours. Owing to its history and geographical location, this province has distinguishing qualities that make tourism and cinema the main pillars of Ouarzazate's economy. This territory is one of the most attractive destinations for tourists and filmmakers as it affords most of the touristic infrastructure in the region in addition to cinema facilities, which is why Ouarzazate annually attracts foreign and Moroccan movie productions. Due to this reputation, the city was nicknamed the Hollywood of Africa. As a meeting point for tourism and cinema, this city has features of a movie-induced tourism destination.

This paper aims to assess the significance of cinema-induced tourism as a potential niche for innovative cultural tourism practices in Ouarzazate. Using the opinion-mining approach, we explored tourist opinions on their experience in movie-induced tourism in this province. TripAdvisor reviews about the main film attractions were

collected and analyzed through combining topic modeling and lexicon-based algorithm techniques based on Natural Language Processing relying on a Python toolkit.

The originality of our study is in exploring the untapped potential and significance of assessing the reputation of a place as a top film tourism destination through visitors' reviews. Ouarzazate has been widely recognized by national professionals in tourism and culture as a significant hub for film tourism. However, obtaining a deeper understanding of the real experiences and viewpoints of visitors through their assessments provides a nuanced perspective on the efficacy of the location as a film tourism destination. The purpose is to evaluate the extent to which Ouarzazate's identity and appeal as a film tourism destination are validated by the testimonies of its visitors. The findings offer valuable insights for the development of appropriate strategies and suitable marketing activities.

## 1. Literature Review

### 1.1 Tourism as an Experience

The shift in modern consumer behavior from focusing on the product and service to focusing on the experience makes this latter an essential driver of the economy (Yang *et al.* 2020). Since its first use by Pine and Gilmore (1998), the "experience economy" has gained ground. Many researchers consider it at the heart of different fields of activities, including the hospitality industry, where experience is the core of the whole operation (Sarmiento-Guede *et al.* 2021), as well as a source of value creation (Sorensen *et al.* 2017). After commodities, goods, and services, experience has emerged as the fourth and last step in the "progression of economic value." For Pine and Gilmore (1998, p. 98), experience is "not an amorphous construct; it is as real an offering as any service, good or commodity". It is the most influential antecedent that can affect tourists' intentions to revisit a destination (Chang *et al.* 2014); the reason why a good experience would be the best way to commercialize a destination among potential visitors.

The main focus of tourists' Experience while traveling is "visiting, seeing, and living in a different mode of life" of the destination (Stamboulis and Skayannis, 2003, p. 38). In addition to reasoning abilities during visits, previous experiences help tourists give meaning to the Experience they are living (Oliveira *et al.* 2019). Accumulated experiences help tourists classify and rate destinations according to their level of satisfaction. Experience is not only limited to the instant feelings while visiting a destination but extended to the ability of the service to construct an everlasting memory, for the ultimate purpose of an experience is to "create lasting memories that a visitor will reminisce about and will share in respective social networks," (Andrades and Dimanche, 2014, p. 108). Extensive documentation exists in the literature on defining and specifying the factors that create an exciting and memorable experience. Larsen *et al.* (2019) argue that for a tourist experience to be interesting depends on a combination of familiarity and novelty, while Sthapit *et al.* (2020, p. 549) add that different factors significantly influence the "importance and memorability of a tourist's experience: satisfaction, novelty, refreshment, involvement, and knowledge." Beatriz Gómez-Morales *et al.* (2024) state that research on film fan tourists highlights the psychological and sociological aspects of their experiences, particularly at filming locations, where they experience the narrative, fantasize, and create new memories.

Based on the literature, Gentil *et al.* (2007, p. 397) defined customer experience as "an evolution of the relationship between the company and the customer. The Customer experience originates from interactions between a customer and a product, a company, or part of its organization, which provoke a reaction. This experience is strictly personal and implies the customer's involvement at different levels (rational, emotional, sensorial, physical and spiritual)". Customer experience includes both participation tourism experience perception and opportunity tourism experience perception (Ge, 2022).

### 1.1 Value Co-Creation in the Era of UGC

By sharing the experience through word-of-mouth with one's social network, family, friends, and colleagues, the visitor creates a circle of potential visitors that would base their traveling decisions on that experience. Disseminating information about an experience guides potential tourists and service providers in the destinations to improve the service and the whole experience. This exchange is the first step to achieving value co-creation, a revolutionary notion that ends the traditional model where the suppliers produce goods and services, and the customer is a passive consumer.

The emergence of Web 2.0 and ICT has considerably boosted these social processes and interactions between different stakeholders. Like most activities, tourism has widely benefited from the proliferation of these tools that add further social dimensions of co-creation and empower the consumer (Neuhofer *et al.* 2014). They have transformed how experiences and value are created (Neuhofer *et al.* 2012) by revolutionizing communication between service providers and their customers and consumers. ICT and Social Media, in particular, have improved

working and communication techniques and brought the concept of peer communication during service processing (Grönroos, 2012). In other words, these tools facilitate vertical communication between the customers and suppliers or service providers and horizontal communication among consumers and users. Potential visitors and media users can access various travel content, opinions, and commentaries produced and shared by other users (Lam *et al.* 2020). According to Assaker (2020), tourists increasingly rely on reviews on social media from previous tourists to make travel decisions (Lam *et al.* 2020). A study by Gretzel and Yoo (2008) confirms that 97% of the participants in a survey admitted consulting previous travelers' reviews while planning their trips (González-Rodríguez *et al.* 2021).

These opinions and reviews are an aspect of what is currently known as User Generated Content (UGC), a creative work produced without a clear commercial interest and published on publicly accessible websites OECD (2007). UGC is related to electronic word-of-mouth, e-WOM marketing (Wang and Rodgers, 2010). It is a horizontal communication built on compassion among peers (tourists) far from the influence of Destination Marketing Organisations (DMOs) and service providers. It is any "positive or negative statement made by potential, actual, or former customers about a product or company, made available to many people and institutions via the Internet" (Hennig-Thurau *et al.* 2004, p. 39). Unlike traditional Business-to-Consumer (B2C) advertising models, e-WOM's main characteristic is the ability of consumers to control and create marketing communication about any given product or service (Wang and Rodgers 2010, 214).

Because UGC and eWOM are increasingly gaining customers' trust, companies work on taking advantage of these tools by getting involved in the process and adopting them as marketing strategies (Wang and Rodgers, 2010), which questions the truthfulness and reliability of UGC information (Lu and Stepchenkova, 2015). Despite some critics, UGC has significantly shifted the power balance between businesses and customers, shifting from Goods-Centered to Service-Centered Dominant Logic Vargo and Lusch (2004). This shift, facilitated by UGC, allows businesses and customers to collaborate and create value.

## 1.2 Movie-Induced Tourism in Ouarzazate

Ouarzazate is one of the five provinces composing the Draa Tafilalet region with an area of 12464 km<sup>2</sup>, which counts for 14 % of the total regional territory (HCP, 2019). Geographically, it is situated between the High Atlas and Anti-Atlas Mountains. The history and geographical location offered Ouarzazate specific characteristics that make tourism and cinema the first and second pillars of Ouarzazate's economy (Zabadi, 2016). Ouarzazate is considered one of the most attractive regions for both tourists and film producers.

The province affords significant and varied potential in tourist activity, allowing it to be the principal pole of tourist attraction in the Draa Tafilalet region. Tourism is considered the fundamental field of activity in the provincial economy. Up to 31/12/2015, the province had 47.2% of the number of classified tourist establishments, with a proportion of 52.1% of the total rooms and 74.8% of nights spent in the region in 2015. (HCP, 2019). Foreign tourist arrivals in Ouarzazate reached 236 857 in 2018, representing 4.5% of foreign national (HCP, 2019).

Concerning the cinematographic industry, Ouarzazate is internationally known as a destination for many international producers and filmmakers. This reputation granted the city the nickname: "Hollywood of Africa". Earning this privilege was due to its natural, cultural, and human assets. Its unique topography and landscape made it an appealing destination for the cinematographic industry Rutherford and Marshall (2017, p. 25) and its brilliant sun and its quietness (which is conveyed by its Amazigh name 'ouar zazat' which literally means 'that which is without noise') motivated the British producer-director David Lean to "became the first top producer to utilize the site's crystal-clear atmosphere when he shot shimmering desert scenes for Lawrence of Arabia" in 1962 (Rutherford and Marshall 2017 p25). The local architectural style known as Ksar and Kasbahs is also an attraction for many famous producers and directors like Ridley Scott, who transformed the Ksar Ait Benhadou into sets for his blockbuster *Gladiator* in 2000. The same site was the setting of many famous films, from *Sodom and Gomorrah* (1963) to *Game of Thrones* (2017).

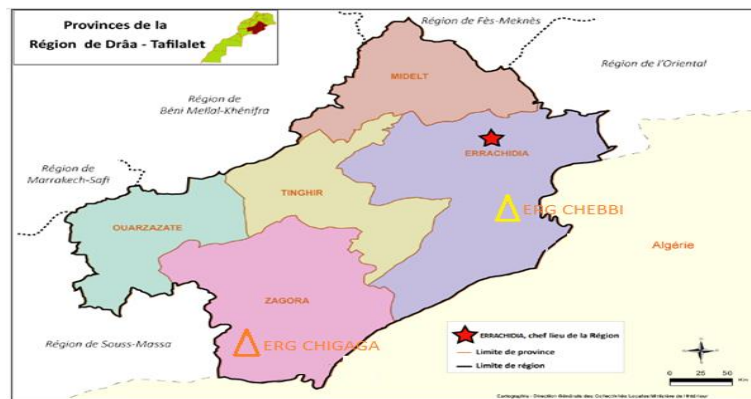
In addition to these traditional and historical buildings transformed into movie sets, Ouarzazate affords three main filming facilities: Atlas1983, CLA 1983, and Kanzaman, 2004 Studios. These facilities offer directors and producers sets used by previous productions with the possibility of modifying them to respond to the requirements of the new films or even building new ones on request. Ouarzazate affords highly experienced extras, and skillful craftsmen who can "fabricate anything anywhere" (Rutherford and Marshall 2017p 27) using materials such as plaster, plastic and polystyrene, wood and metal.

As mentioned earlier, the cinematographic industry constitutes the second pillar of the province's economy. Ouarzazate studios and region increasingly attract movie national and international movie productions (Rutherford and Marshall 2017, p. 28). The general manager of Atlas and CLA studios says that "the increasing number of film

productions in Ouarzazate not only creates new opportunities for Moroccan and Arab-world actors and directors but also boosts income for everyone in the region, from taxi drivers to restaurant owners" and that around 30 percent of the budget is spent locally on everything from hotels and meals to helicopters. (Rutherford and Marshall 2017, p. 26)

Being a meeting point of both tourism and cinema gives Ouarzazate an absolute advantage that has led to the emergence of a specific tourism niche: movie-induced tourism.

Figure 1. Map of Draa Tafilalet Region Provinces, adapted from HCP



Carte 1: Provinces de la Région

### 1.3 Movie-Induced Tourism

People usually interchange the terms movie-induced tourism, film-induced tourism, and film tourism. They are all used to refer to a worldwide emerging typology of tourism that is "fueled by both the growth of the entertainment industry and the increase in international travel" (Hudson and Ritchie, 2006, p. 387). The literature defines this phenomenon as the "visitation of a site or a location that is or has been used for or is associated with filming" (Buchmann *et al.* 2010, p.233). Roesch (2009, p. 6) defines it as a "specific pattern of tourism that drives visitors to see screened places during or after the production of a feature film or a television production". For Hudson and Ritchie (2006, p. 387), it is "tourist visits to a destination or attraction as a result of the destination's being featured on television, video, or the cinema screen".

Like all of its precursors, such as art and literary tourism, movie-induced tourism "falls under the umbrella of cultural tourism" (Gjorgievski and Trpkova, 2012, p. 98). Bolan and Kearne (2017) argue that the beginning of cinema-induced tourism was with the John Ford film 'Quiet Man,' 1952 (Bolan and Kearne, 2017), while in a literature review, Taibi and Iflahen 2023 state that the first known form of cinema-induced tourism is associated with Casablanca (1943) by Michael Curtiz, which makes Morocco a pioneering destination of cinema-induced tourism. However, the connection between films and tourism gained ground in the 20th century when cinema and television became principal media (Beeton, 2016). Only until the late 2000s did movie-induced tourism become a widely researched topic among academics (Connel 2012, 1012).

Beeton (2005) explains that film has a vital role in destination imaging and marketing as it reinforces the image of a destination held by potential visitors, builds a new one, or replaces an old one. The effect of films on tourists who seek to "re-live an experience (or even emotion) encountered in the film, reinforce myth, storytelling or fantasies, or for reasons of status (or celebrity)" (Beeton 2010, 2) pushed the advertising industry to adopt it as an effective strategy to reach potential mass markets (Horrigan 2009, 52). Many countries have witnessed increased tourists after being featured in films or television dramas (Hudson and Ritchie, 2006). Hudson and Ritchie (2006, 256) add that Tourism Organizations can use films as "springboards for marketing" if visitors perceive them as appropriate for the destination. Though destinations featured in movies generally attract fans for a visit, Spears *et al.* (2013) specify that destinations featured in Hollywood movies have the most robust attractiveness.

Within movie-induced tourism, Beeton (2005) distinguishes between 'on-location' tourism and 'off-location' tourism. The first refers to the actual physical site of the film shooting, while the second refers to movie sets and locations created in film studios and the film studio to replace the actual site. In the context of Ouarzazate, we are mainly concerned with off-location tourism as the filming facilities on the site that filmmakers use as an alternative for locations worldwide.

Cinema-induced tourism is an essential niche in Ouarzazate regarding its potential in cinema and tourism. However, destination marketers and academia give little importance to this activity. There needs to be more

institutional promotion valorizing the movies filmed in Morocco, and there is a dearth of research in this area (Taibi and Iflahen, 2023).

#### 1.4 Previous Studies Used Sentiment Analysis

The development and affordability of communication tools such as devices, internet connections, and eventually social media raised internet users who share information on the network to express their opinions or vent their emotions (Xu *et al.* 2019). The exponential growth of data on the Internet in various fields has led to the emergence of big data (Shayaa *et al.* 2018), the datasets whose size is beyond the ability of typical database software tools to capture, store, manage, and analyze" (J. Manyika *et al.* 2011, 1). Nowadays, digital data is a tool for both businessmen and their clients (Manyika *et al.* 2011). To exploit it, researchers have developed methodologies to analyze the massive amount of data. Opinion mining, called sentiment analysis, is an emerging method among these tools. It is the extraction of individual viewpoints and emotional responses towards specific entities, phenomena (Pawar *et al.* 2016). This new methodology has been recently used in tourism studies to analyze tourists' opinions vis-à-vis a given destination. Unstructured data retrieved from social media or other platforms is treated using various methods and tools to develop insight into tourists' experiences.

Wang and Kirilenko (2021) researched to confirm that the opinions and feelings expressed by tourists in their reviews through social media on the Grand Canyon, USA, significantly impact other visitors' decisions to visit the park and how sentiments and experiences change according to the origin of the reviewer. The data studied was 27,177 reviews on TripAdvisor from visitors from ten different countries.

Ge (2022) analyzed tourists' experiences and perceptions of tourism experience and explored the characteristics of tourists' behavior to devise managerial suggestions to deal with negative reviews to strengthen the sustainable development of small island tourism. This study used the content analysis method and Ver1.0.1 word frequency analysis software to count the frequency of 120 travel notes retrieved online.

Arianto and Budi (2020) conducted an aspect-based sentiment analysis based on a dataset of 5592 Google Maps reviews of Indonesia's tourist sites Borobudur and Prambanan Temple. The data was retrieved using BotSol's Google Maps review Crawlers, and then data was manually annotated. The researchers applied five machine learning algorithms: Random Forest (RF), Naïve Bayes (NB), Logistic Regression (LR), Decision Tree (DT), and Extra Tree (ET). In addition to words, the researchers also processed emojis.

Garner *et al.* (2022) used topic modeling to interpret and categorize comments and reviews about travel dimensions from Yelp.com. Then, the authors performed a sentiment analysis using machine learning to capture the weight of positive and negative words in each review. R package was used to generate a selection of topics featured by frequent keywords, used correlated topic models, and conducted topic sentiment analysis, with each comment as a single document, to identify the valence of each review. After obtaining frequent keywords from each topic, the researchers investigated the original sentences to determine the content of each topic.

This new method has been applied nationally by a few researchers in tourism. Ali *et al.* (2021) provide a new technique by combining topic modeling and lexicon-based algorithms to explore the destination's negative e-reputation using an aspect-based sentiment analysis approach. The corpus of the study was 39,216 TripAdvisor reviews from different locations and attractions in Marrakech, Morocco. This approach focuses on Latent Dirichlet Allocation (LDA) instead of an R package to extract hidden aspects and dimensions from the visitors' reviews and then conduct Lexicon-based sentiment analysis to reveal the weaknesses in the tourism experience in this city.

Safaa *et al.* (2017) studied how tourists identify the authenticity of a travel experience in Marrakech and its surroundings. The methodology adopted was the semantic analysis of a corpus of 361 reviews collected from different types of tourism establishments on TripAdvisor. The study used the IRAMUTEQ analysis method to identify the dominant ideas and themes in the reviews according to computing frequency and proximity statistics of words in the data.

Concerning cinema and the application of sentiment analysis to movie-induced tourism, Agrusa *et al.* (2018) studied Walt Disney's animated film Frozen and its impact on tourism in Norway. Unlike other studies using sentiment analysis on data retrieved from online platforms, this study was an electronic survey with over 1,000 worldwide participants who shared their opinions about the effect of movie tourism on a destination. The study used open-ended questions, which the researchers analyzed through text mining. The study resorted to dictionaries to classify the comments by uploading the API and then categorizing opinions into positive, negative, and neutral.

## 2. Research Methodology

This section presents the methods and tools used in this paper to answer the research questions.



## 2.1 TripAdvisor Platform

With the emergence of Web 2.0, interactive platforms changed the dynamics of relations between consumers and service providers. Founded in 2000, TripAdvisor aims to serve as a travel information and advisory e-channel (Law, 2006). The platform owners claim it to be "the world's largest travel guidance platform with more than 1 billion reviews and opinions of nearly 8 million businesses, available in 43 markets and 22 languages" (TripAdvisor).

TripAdvisor is not a booking agent or tour operator; it acts as a comparison-shopping website to introduce the best offers to potential travelers/tourists based on reviews and ratings by other users. Due to its reputation among travelers and academia, we opted for TripAdvisor to investigate the opinions of tourists of Ouarzazate concerning the significance of film tourism.

## 2.2 Methods and Tools

This paper utilizes topic modeling with Latent Dirichlet allocation (LDA) to expose latent trends in a corpus of reviews on filming facilities and cinema museums in Ouarzazate collected from TripAdvisor. The collected dataset will display topics that indicate the opinions and sentiments of tourists through reviews. Using a vocabulary-based algorithm, we developed a sentiment analysis model using reviewers' ratings to show to what extent the vocabulary used in reviews reflects the sentiments of tourists.

### 2.2.1 Latent Dirichlet Allocation

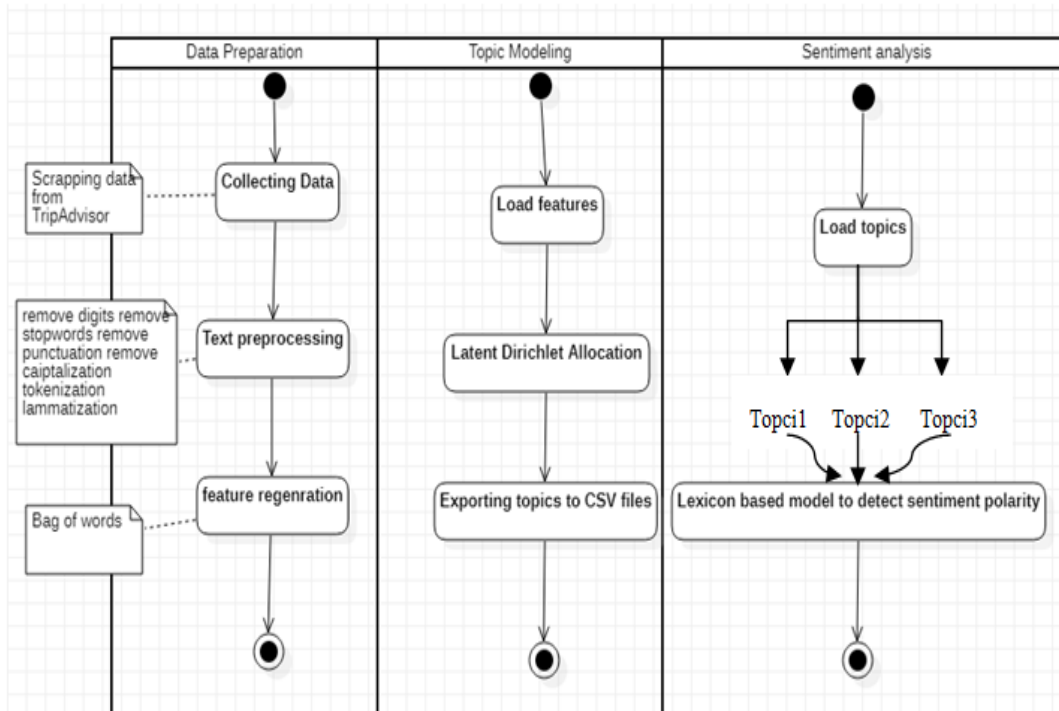
Topic modeling is a type of modeling that assumes that observed variables interact with unobserved or latent parameters in a specific probabilistic relationship, which then generates the data within a dataset (Vayansky and Kumar, 2020). It is one of the most potent techniques in text mining for data mining, latent data discovery, and finding relationships among data and text documents (Jelodar, 2018).

One of the most popular topic modeling methods is Latent Dirichlet Assignment (LDA), an unsupervised generative probabilistic model of a corpus. In brief, it represents documents as random mixtures over latent topics," where all topic's characteristics are via a distribution over words author (Jelodar, 2018, p.3).

### Steps and Processes

The following chart illustrates the steps of the processes of our method.

Figure 2. Diagram of research flow





studios) asked us if we wanted to take a picture with a couple of extras in costumes who were chilling in between scenes.

*We did and then it turned out they wanted money for it!! Expected in places like Marrakech's Square but NEVER in a place where you think everybody is behaving professionally. »*

The review becomes: « tour nice get rather unexpected morocco 's contribution mainstream cinema cool nice guide official guide studio ask want to take picture couple extra costume chill scene turn want money to expect a place like Marrakech square never place think everybody behaves professionally »

Table 1. Techniques of data preprocessing

Technique	Description
<b>Remove upper capitalization</b>	Lower case each letter in the review
<b>Word repetition</b>	Replace word repetition with a single occurrence. 'OOOO' becomes 'OO'.
<b>Punctuation repetition</b>	Remove punctuation.
<b>Word contraction</b>	Replace contractions with their extended forms.
<b>Stop words</b>	Remove stop words from the review
<b>Lemmatization</b>	Return every word to its root.
<b>Tokenization</b>	Take a review as input and return a list of tokens.

After normalizing the text, we assumed that a rating of 1-2 was negative, a rating of 4-5 was positive, and a rating of 3 was neutral. Then convert each rating into sentiment. 1 for positive sentiment, -1 for negative sentiment, 0 for neutral sentiment.

Table 2. Sentiment classification

Review rating	Classification	Polarity
1 or 2	Negative	-1
3	Neutral	0
4 or 5	Positive	1

### 2.3.1.2.2 Features regeneration

We have enforced different exploratory data analyses to produce helpful perceptions in our corpus and understand tourists' feedback concerning their experience in Ouarzazate. This part presents the data analysis applied to our dataset.

**Word cloud:** is a semantic extraction from a text corpus. It is a visual representation of the most common words in a document. It is usually one of the first steps in visualization to develop an overall idea about the subject of the text corpus. Figure1 shows the most commonly used words in negative reviews.

Figure 6. word cloud of negative reviews



**Word frequency:** Figure 5, Figure 6, Figure 7, and Figure 8 show the most common words and their frequency in positive, negative, and neutral reviews. We can see that desert, tour, trip, and guide are the most frequently used words in positive reviews. In the negative reviews, film, movie, set, and studio are the most frequent words. As for neutral reviews, the most frequent words are film, guide, movie, and tour. This indicates that tourists are more interested in the tour in the desert than the cinema in Ouarzazate.

Then we converted our corpus into two lists, one for the review tokens (X) and one for the review sentiment (y); we used these lists to build a dictionary with the word and sentiment as an index and the count of occurrence as value (Table 3), that allows us to calculate the frequency of each word in positive, negative or neutral review (Table 4).

Figure 6. Word frequency of the top 15 most occurent words in Positive reviews

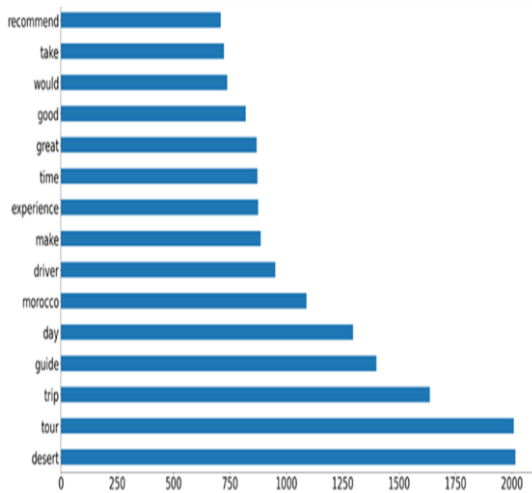


Figure 7. Word frequency of the top 15 most occurent words in Positive reviews

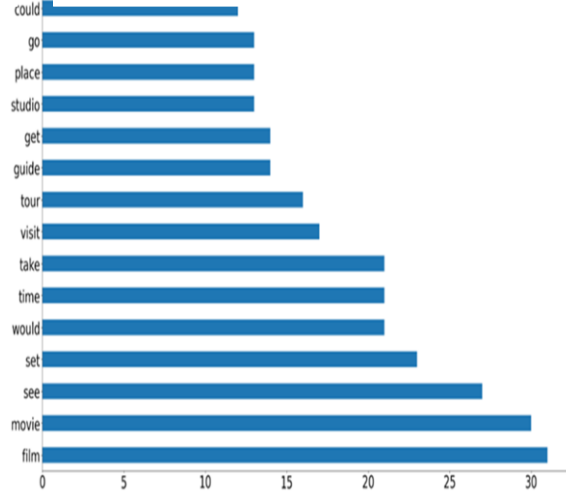


Figure 8. Word frequency of the top 15 most occurent words in Neural reviews

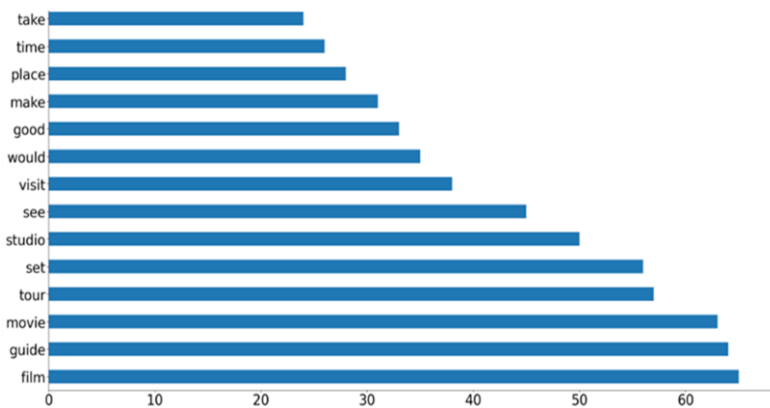


Table 3. Example of a dictionary based on token and sentiment

Word	Positive	Neutral	Negative
Place	Dict.[(place,1)]	Dict.[(place,0)]	Dict.[(place,-1)]
Movie	Dict.[(movie,1)]	Dict.[(movie,0)]	Dict.[(movie,-1)]

Table 4. Some word frequency in different reviews

Word	Positive	Neutral	Negative
Tour	1999	56	16
Desert	2007	10	3
Trip	1627	4	6
Guide	1321	64	14
Movie	131	30	62
Studio	121	50	13

### 3. Results

#### 3.1 LDA Results

The first step was determining the optimal number of topics in our corpus. We used a manual evaluation of topic-document and a manual evaluation of topic-top words. Based on this, the researchers identified three topics.

Through our reading of the results, we identified three dimensions: the movie set, the behavior of the tourism workers, and the travel experience (Table 5). We distinguish movie sets by the terms set, film, movie, and studio. The second dimension is the behavior of the tourism workers, represented by words like guide, driver, and trip. The third dimension is the travel experience, characterized by vocabularies such as tour, desert, Morocco, and experience.

The data set was split into training and testing sets and manually labeled. Each rating in the test set refers to one aspect/sentiment category.

Table 5. Highlighting dimensions and terms of Ouarzazate reviews corpus

Movie set		Behavior of the tourism worker		Travel experience	
Terms	Weight	Terms	Weight	Terms	Weight
Set	0.02439	Desert	0.11081	Tour	0.11328
film	0.02343	trip	0.09638	desert	0.09112
movie	0.02243	tour	0.07822	morocco	0.07745
see	0.01948	day	0.07622	trip	0.0683
guide	0.01933	guide	0.06283	guide	0.06645
Studio	0.01873	driver	0.05332	day	0.05463
Tour	0.01699	great	0.04833	make	0.04864
Visit	0.01535	night	0.0469	experience	0.04796
Place	0.01022	time	0.04201	driver	0.04246
Interesting	0.00883	good	0.03982	time	0.04176

##### 3.1.1 Lexicon-Based Model Results

Lexicon-based approaches use each word's intensity and semantic orientation to represent the phrase's attitude; this suggests using a predetermined dictionary to distinguish between positive and negative expressions. A bag of words often represents a text. Following the distribution of the individual scores for each phrase, a pooling procedure - such as averaging the total sentiments - determines the final sentiment.

Following identifying the fundamental phrases and themes within our corpus, the extracted words are subjected to a sentiment analysis technique to determine the emotions and mood associated with each dimension. Sentiment analysis is the process of looking at data and analyzing it according to the needs of the study, usually through utilizing these feelings to identify different impressions and events caused by the data. In light of this, the authors conducted a comparative analysis of the corpus for each dimension to determine tourists' preferences, needs, and main issues.

##### 3.1.2 Using Topic Modeling for Sentiment Analysis Approach

Topic modeling is a natural language processing (NLP) technique that identifies topics in a collection of texts. LDA is one of the most popular topic modeling techniques. It assumes that documents are mixtures of topics and that each topic is distributed over words. LDA assigns topics to documents and words to topics probabilistically, seeking to find the most likely topics for each document and word based on the observed word frequencies.

###### 3.1.2.1 Sentiment detection using VADER sentiment with LDA

We have also used the Valence Aware Dictionary and Sentiment Reasoner (VADER) to determine reviews' polarity and classify them according to multiclass sentiment analysis. VADER is a lexicon and rule-based sentiment tool for identifying user sentiments shared on social media (Elbagir and Yang, 2019).

TripAdvisor's reviews are mostly positive, indicating that 91.3% are positive, and Vader scores 97.2%.

Table 6. Summary of basic results of Vader sentiments.

Topic	Reviews	Positive		Neutral		Negative	
		Expected	Observed	Expected	Observed	Expected	Observed
1	285	152	245	88	10	45	30
2	670	669	669	1	0	0	1
3	591	590	588	0	2	1	1

### 3.1.2.2 Sentiment detection using TextBlob

TextBlob is a Python library for processing textual data using Natural language Processing. It analyzes sentiments based on polarity and subjectivity.

Results using TextBlob were so close to Vader's results, 97.5% observed positive reviews compared to 91.3% expected positive reviews on TripAdvisor.

Table 7. Summary of basic results of TextBlob

Topic	Reviews	Positive		Neutral		Negative	
		Expected	Observed	Expected	Observed	Expected	Observed
1	285	152	250	88	4	45	31
2	670	669	669	1	0	0	1
3	591	590	588	0	0	1	3

## 4. Discussion


It is worth emphasizing that all reviews are explicitly scraped from the pages of the filming facilities and attractions in Ouarzazate on TripAdvisor and that most of them are positive. However, based on the study of word frequency associated with ratings, we deduce that the top three frequent words associated with positive reviews are, respectively, desert, tour, and trip (fig. 3). In comparison, the three most frequent words in negative reviews are film, movie, and see (fig. 4). Concerning the neutral reviews, the three most frequent words are, respectively, film, guide, and movie (Fig. 5).

The high frequency of positive feedback about the 'desert' in film attractions pages implies that the desert is the primary attraction to Ouarzazate and the region, making cinema-induced tourism a secondary activity on the way. Busby and Klug (2001) discuss this standard practice, confirming the existence of two distinct forms of film-induced tourism: visiting film-related attractions as a primary interest or visiting filming sites as part of a more significant holiday. The genre of movies filmed in Ouarzazate (which are primarily biblical and historical stories that feature the ancient Middle Eastern countries of Jerusalem, Jordan, Egypt, and Yemen) might have contributed to reinforcing the desert image of the region because films significantly reinforce the image held by potential visitors of a destination (Beeton, 2005). This role of film-induced tourism in enhancing the region's image is a testament to the unique potential that Ouarzazate could offer.

The dissatisfaction with the film attractions might be attributed to the fact that the leading nationality of reviewers is the United States, particularly California, the land of Hollywood and New York, this "actual" location contains iconic places for filming many blockbuster movies (Pomerance, 2007, p.11). Californians who live near Hollywood and New Yorkers who frequent the streets and coffee shops featured in many American films would have elevated expectations and, therefore, might be disappointed when comparing Hollywood studios and the actual locations to those of Ouarzazate. On the other hand, interest in the desert rather than other aspects offered by the region can be explained by the fact that the second most prevalent nationality among reviewers is the British. Tourists seek unique experiences that contrast their previous experiences (Bigné *et al.* 2009). The desert, with all its attributes, is in stark contrast to the usual landscape experienced by the British. Sunny, warm weather, calm atmosphere, unique geological formations, such as dunes, rock formations, canyons, unique flora and fauna, and a distinct array of manufactured landmarks and monuments characterize it. Together, these attributes may seem more exotic and excitement-triggering. Excursions through the desert using quad bikes and camels, spending a night in traditional desert camps, and admiring the sunset and sunrise in the region of Draa Tafilalet, to which Ouarzazate belongs, are the principal activities offered by all tourism agencies operating within this territory. All tour operators in the region propose tours that all end in the desert as the peak achievement of the touring adventure, either in Erg Chebbi dunes (in the east) or Erg Chigaga dunes (to the South) (see Fig. 1).

Additionally, it is noteworthy that Ouarzazate is the gate to Draa Tafilalt, given its border with Marrakech, which is the primary tourist destination in Morocco (MTAESS, 2024; Observatoire Du Tourisme, 2024). Furthermore, Ouarzazate International Airport is the main airport serving the Draa-Tafilalet region (ONDA, 2024). Therefore, it is primarily the departure and the end of one of the famous sightseeing tours known as the classical tour of the desert. Ouarzazate is not a standalone destination but rather a part of a sightseeing tour offered by most agencies operating in the region. These tours typically range from 1 to 3 days and cover the Draa Tafilalet region, an area larger than Belgium, and the Netherlands combined, with no railways, highways, and minimal domestic flights. Therefore, time is an essential resource for tourists who travel on a tight schedule and desire to reconsider priorities to maximum satisfaction in a shorter time. Thus, "time" is consistently used in positive, neutral, and negative reviews (Fig. 3, Fig. 4, Fig. 5).

However, the association of neutral and negative comments with film and cinema attractions suggests that the visitors were not fully satisfied with their visits to film attractions compared with their satisfaction with the desert. This dissatisfaction is primarily related to the archaic nature of the sets that harsh weather wears out, the behavior of some of the staff (who, according to some reviews, ask for extra tips), or the price of the tickets (8 Euros for Atlas Studio and 3 Euros for Cinema Museum). We can summarize the reasons for dislike in the following review.


 **Evitaki**  
Athens, Greece • 60 contributions 👍 2 ...

●○○○○○

**Avoid it if you can!**  
Oct 2019 • Friends

Neglected place with very rude persone!! Also they make you pay extras that they don't mention at the beginning! 8€ basic entrance, plus 4€ game of thrones, plus, plus, plus and on top of it you have to pay also the local guide to explain what you see. These people are not professionals at all. There are bigger and new studios close by instead of this awful place.Total waste of time...

It is crucial to acknowledge that film tourists have distinct profiles compared to other categories of tourists, mainly nature tourists. Before visiting and appreciating a film-related attraction, they must possess some prerequisites. Film tourists are typically cinephiles who visit locations featured in a movie they have previously watched. Therefore, a serendipitous or incidental tourist (Macionis and Sparks, 2009) who is not interested in cinema or has yet to watch the movie associated with the visited site (possibly by chance) would have a different gaze and perspective than a specific film tourist. The following review illustrates our hypothesis, presenting a contrasting perspective to the preceding one.

 **ray ciantar**  
10 contributions 👍 1 ...

●●●●●●

**Atlas film studio**  
sept. 2019

as a person who loves movies i was overwhelmed by this studio.to walk and see a set as this is a truly wonderful experience.the sets are beautifully kept and walking thru is a wonderful experience.i highly recommend a visit to this set so you too can experience a walk inside movie making.

The two comments are separated by one month but convey contradictory viewpoints. Therefore, it is necessary to examine further the cause of this discrepancy in perspectives and emotions toward the exact location.

As stated earlier, the topic modeling method demonstrates that one can infer three topics from the global corpus of reviews. The first topic is cinema and movie sets, the second one is the behavior of the tourism workers, and the third is the tourist experience. The first topic seems evident since we are dealing with pages of cinema and film attractions. The second topic emphasizes the crucial role of tourism workers, especially drivers and tour guides, in creating a positive or negative impression in a tourist's mind. Finally, experience seems to be the most important takeaway that tourists focus on in their visit to any destination, and this is a shift in modern consumer behavior from the focus on the product and service to experience, which is considered the core of the whole tourism operation (Sarmiento-Guede *et al.* 2021).

## Conclusion and Implications

The study of the 1540 reviews (from 2011 to 2021) on film tourism in Ouarzazate available on TripAdvisor, using sentiment analysis, shows that cinema is related to negative sentiment while desert tourism looks positive, which leads us to conclude that the aspect of a desert destination is the hallmark that eclipses other attributes of the region, especially cinema. The city is nicknamed the Hollywood of Africa and welcomes its visitors with cinematic emblems that stand as city landmarks. However, the cinematic image attributed to the city is still dominated and resisted by the stereotyped image of a sunny desert region inhabited by the Berber nomads. Although cinema is not a significant pull factor for Ouarzazate, it can still play a pivotal role in promoting the region and the country. It is a powerful tool embedded into the destination promotion strategy.

Online reviews on various platforms should be invested as insightful, ready-to-use feedback to improve the service provided by film-related facilities and guarantee a positive reputation among potential tourists. Online reviews, especially negative ones, should be addressed as complaints that offer an opportunity to improve the cinema destination (Heung and Lam 2003, 283). Research shows that consumers will be more likely to consider negative than positive e-WOM reviews in their decision-making process, given that the former is more truthful, influential, helpful, and valuable than the latter (Von Helversen *et al.* 2018). Negative reviews substantially affect potential visitors' attitudes and behaviors (Von Helversen *et al.* 2018). Thus, the increase in negative reviews related to cinema should alarm decision-makers.

The literature recognizes that cinema management's primary purpose in building film sets in Ouarzazate is purely cinematographic. Once the filming is over, filmmakers leave the site (Beeton, 2005), and then the inherited sceneries are exploited as tourist attractions by any right holder. Thus, in this sense, tourism is a side/extra activity that fills the gap between filming periods, which might explain why cinema managers give limited attention to this niche.

All stakeholders should collaborate by establishing a synchronized policy to promote the region and build an attractive destination to face the growing competition from emerging film destinations with similar properties to Ouarzazate, like Jordan, Tunisia, and Saudi Arabia. Tourism and cinema management should cooperate to sustain this niche by encouraging more film productions through practical measures like tax incentives, procedure facilitation, and consideration of the tourism dimension while preparing the movie sets. We also recommend organizing cinema-related events to attract cinephiles and devise instructional and entertaining experiences to satisfy tourists during their visits to cinema-related facilities.

Ultimately, the results also accentuate the role of tour guides and drivers. Thus, it is necessary to provide formal training for cinema tour guides like other specialized tour guides and raise tour drivers' awareness regarding the responsibility they hold vis-à-vis the image and reputation of the destination.

## Limitations and Future Research

We acknowledge that analyzing tourists' sentiments based solely on English reviews retrieved from TripAdvisor may have limitations. Using data from a single platform may result in platform bias (Twil *et al.* 2021), as tourists often share their reviews on other platforms like Google Maps or other social media platforms. Furthermore, most tourists do not leave reviews about every visited destination. On top of that, people tend to comment on what they dislike more than what they like because adverse experiences have more impact than positive ones (Baumeister *et al.* 2001). Additionally, we do not disregard the possibility of fraudulent reviews within the corpus. As a result, we recommend conducting a similar study on other platforms, such as Google Maps, in the three main languages used by site reviewers: English, French, and Spanish, and ensuring the genuineness of exploited reviews.

## Acknowledgments

We would like to express our gratitude to Dr. Omar Bencharef, Dr. Khalid Elhousni, and Dr. Laarbi Safaa. We highly appreciate their constructive guidance.

## Credit Authorship Contribution Statement

**Moulay Abdellah Taibi:** Conceptualization, Investigation, Methodology, Formal analysis, Writing – original draft, Data curation, Validation, Writing – review and editing, Visualization.

**Raja Hanbali:** Methodology, Software, Formal analysis, Data curation, Validation, Visualization.

**Fatima-Zohra Iflahen:** Supervision, Validation, Writing – review and editing.

## Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.



### Declaration of Use of Generative AI and AI-Assisted Technologies

The authors declare that they have not used generative AI and AI-assisted technologies during the preparation of this work.

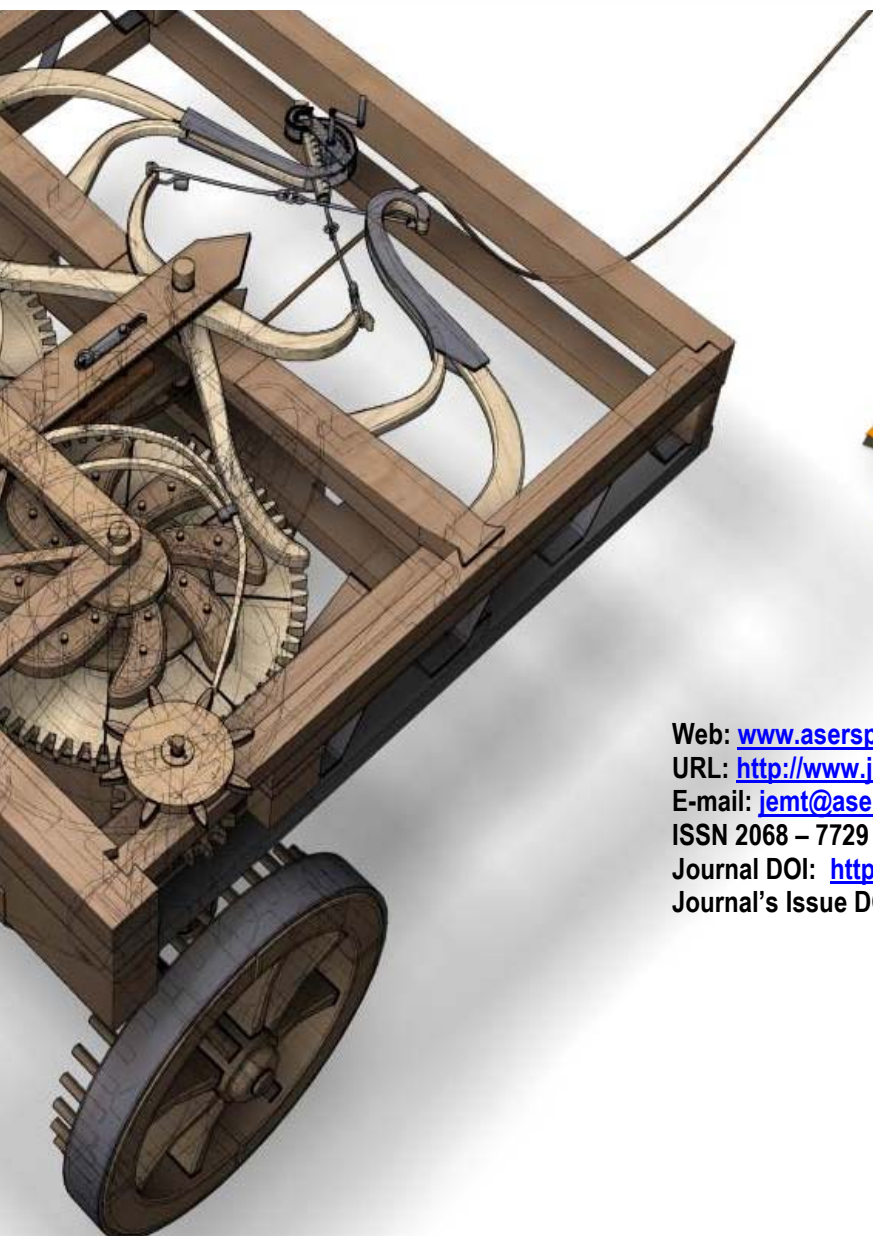
### References

- [1] Agrusa, J., and Linnes, C. and Lema, J. and Metcalf, B. 2018. Data Mining in Film Tourism. 6. 51-69
- [2] Twil, A., Bidan, M., Bencharef, O., Kaloune, S., and Safa, L. 2021. Exploring destination's negative e-reputation using aspect-based sentiment analysis approach: Case of Marrakech destination on TripAdvisor. *Tourism Management Perspectives*, 40. DOI: <https://doi.org/10.1016/j.tmp.2021.100892>
- [3] Sarmiento-Guede, J. and Antonovica, A. and Antolin-Prieto, R. 2021. Instagram as a value co-creation tool for the image of tourist destination. Analysis of the case of Spain during Covid-19: the Balearic and the Canary Islands Instagram. 42. 798-1015. DOI: <https://doi.org/10.48082/espacios-a21v42n12p07>
- [4] Arianto, D., and Budi, I. (2020, October). Aspect-based sentiment analysis on indonesia's tourism destinations based on google maps user code-mixed reviews (study case: Borobudur and prambanan temples). In *Proceedings of the 34th Pacific Asia Conference on Language, Information and Computation* (pp. 359-367).
- [5] Baumeister, R. F., Bratslavsky, E., Finkenauer, C., and Vohs, K. D. 2001. Bad is Stronger than Good. *Review of General Psychology*, 5(4): 323–370. DOI: <https://doi.org/10.1037/1089-2680.5.4.323>
- [6] Busby, G., and Klug, J. 2001. Movie-induced tourism: The challenge of measurement and other issues. *Journal of vacation marketing*, 7(4): 316-332. DOI: <https://doi.org/10.1177/135676670100700403>
- [7] Campo, S., and Garau, J. B. 2008. The Influence of Nationality on the Generation of Tourist Satisfaction with a Destination. *Tourism Analysis*, 13(1): 81–92. DOI: <https://doi.org/10.3727/108354208784548779>
- [8] Chang, L. L., Backman, K. F., and Huang, Y. C. 2014. Creative tourism: a preliminary examination of creative tourists' motivation, experience, perceived value and revisit intention. *International Journal of Culture, Tourism, and Hospitality Research*, 8(4): 401–419. DOI: <https://doi.org/10.1108/IJCTHR-04-2014-0032>
- [9] Elbagir, S., and Yang, J. (2019, March). Twitter sentiment analysis using natural language toolkit and VADER sentiment. In *Proceedings of the international multiconference of engineers and computer scientists* (Vol. 122, p. 16).
- [10] Fan, X., and Luo, Y. 2020. Value Co-Creation: A Literature Review. *Open Journal of Social Sciences*, 8(02): 89–98. DOI: <https://doi.org/10.4236/jss.2020.82008>
- [11] Fong, A. 2010. The influence of online reviews: Case study of TripAdvisor and the effect of fake reviews. *Digital Research and Publishing*, 6: 106-113.
- [12] Garner, B., Thornton, C., Luo Pawluk, A., Mora Cortez, R., Johnston, W., and Ayala, C. 2022. Utilizing text-mining to explore consumer happiness within tourism destinations. *Journal of Business Research*, 139: 1366–1377. DOI: <https://doi.org/10.1016/j.jbusres.2021.08.025>
- [13] Ge, J. 2022. Research on Small Island Tourism Experience Perception Based on Big Data Analysis. *Journal of Coastal Research*, 2020(115): 39–41. DOI: <https://doi.org/10.2307/48640382>
- [14] González-Rodríguez, M. R., Díaz-Fernández, M. C., Bilgihan, A., Shi, F., and Okumus, F. (2021). UGC involvement, motivation and personality: Comparison between China and Spain. *Journal of Destination Marketing and Management*, 19. DOI: <https://doi.org/10.1016/j.jdmm.2020.100543>
- [15] González-Rodríguez, M. R., Martínez-Torres, M. R., and Toral, S. L. (2014, December). Monitoring travel-related information on social media through sentiment analysis. In *2014 IEEE/ACM 7th International Conference on Utility and Cloud Computing* (pp. 636-641). IEEE. DOI: <https://doi.org/10.1109/UCC.2014.102>
- [16] Grönroos, C. 2012. Conceptualizing value co-creation: A journey to the 1970s and back to the future. *Journal of Marketing Management*, 28(13–14): 1520–1534. DOI: <https://doi.org/10.1080/0267257X.2012.737357>
- [17] Hennig-Thurau, T., Gwinner, K. P., Walsh, G., and Gremler, D. D. 2004. Electronic word-of-mouth via consumer-opinion platforms: What motivates consumers to articulate themselves on the Internet? *Journal of Interactive Marketing*, 18(1): 38–52. DOI: <https://doi.org/10.1002/dir.10073>

- [18] Heung, V. C. S., and Lam, T. 2003. Customer complaint behavior towards hotel restaurant services. *International Journal of Contemporary Hospitality Management*, 15(5): 283–289. DOI: <https://doi.org/10.1108/09596110310482209>
- [19] Jelodar, H., Wang, Y., Yuan, C., Feng, X., Jiang, X., Li, Y., and Zhao, L. (2018). Latent Dirichlet allocation (LDA) and topic modeling: models, applications, a survey. *Multimedia Tools and Applications*. DOI: <https://doi.org/10.1007/s11042-018-6894-4>
- [20] Lam, J. M. S., Ismail, H., and Lee, S. 2020. From desktop to the destination: User-generated content platforms, co-created online experiences, destination image, and satisfaction. *Journal of Destination Marketing and Management*, 18. DOI: <https://doi.org/10.1016/j.jdmm.2020.100490>
- [21] Larsen, S., Wolff, K., Doran, R., and Øgaard, T. 2019. What makes tourist experiences interesting? *Frontiers in Psychology*, 10(AUG). DOI: <https://doi.org/10.3389/fpsyg.2019.01603>
- [22] Lu, W., and Stepchenkova, S. 2015. User-Generated Content as a Research Mode in Tourism and Hospitality Applications: Topics, Methods, and Software. *Journal of Hospitality Marketing and Management*, 24(2): 119–154. DOI: <https://doi.org/10.1080/19368623.2014.907758>
- [23] Payne, A. F., Storbacka, K., and Frow, P. 2008. Managing the co-creation of value. *Journal of the Academy of Marketing Science*, 36(1): 83–96. DOI: <https://doi.org/10.1007/s11747-007-0070-0>
- [24] Pizam, A., and Jeong, G.-H. 1996. Cross-cultural tourist behavior. *Tourism Management*, 17(4): 277–286. DOI: [https://doi.org/10.1016/0261-5177\(96\)00019-2](https://doi.org/10.1016/0261-5177(96)00019-2)
- [25] Reichenberger, I. 2017. C2C value co-creation through social interactions in tourism. *International Journal of Tourism Research*, 19(6): 629–638. DOI: <https://doi.org/10.1002/itr.2135>
- [26] Rutherford, T., and Marshall, R. 2017. Morocco's Cinema City. *Aramcoworld*, 68(5), 24-31. Retrieved from <https://www.aramcoworld.com/Articles/September-2017/Morocco-s-Cinema-City>
- [27] Safaaa, L., Housni, K. E., and Bédard, F. 2017. Authenticity and Tourism: What TripAdvisor Reviews Reveal About Authentic Travel to Marrakech. In R. Schegg and B. Stangl (Eds.), *Information and Communication Technologies in Tourism*. Springer, Cham. DOI: [https://doi.org/10.1007/978-3-319-51168-9\\_43](https://doi.org/10.1007/978-3-319-51168-9_43)
- [28] Shayaa, S., et al. 2018. Sentiment analysis of big data: Methods, applications, and open challenges. *IEEE Access*, 6: 37807–37827. DOI: <https://doi.org/10.1109/ACCESS.2018.2851311>
- [29] Sigala, M. 2016. Social Media and the Co-creation of Tourism Experiences. In *The Handbook of Managing and Marketing Tourism Experiences* (pp. 85–111). Emerald Group Publishing Limited. DOI: <https://doi.org/10.1108/978-1-78635-290-320161033>
- [30] Sthapit, E., Del Chiappa, G., Coudounaris, D. N., and Björk, P. 2019. Tourism experiences, memorability and behavioural intentions: a study of tourists in Sardinia, Italy. *Tourism Review*, 75(3): 533–558. DOI: <https://doi.org/10.1108/tr-03-2019-0102>
- [31] Taibi, M.A., and Iflahen, F. Z. 2023. Cinema-induced Tourism in Morocco: A narrative review. *Environment-Behaviour Proceedings Journal*, 8. DOI: <https://doi.org/10.21834/ebpj.v8i23.4507>
- [32] Vargo, S. L., and Lusch, R. F. (2008). Service-dominant logic: Continuing the evolution. *Journal of the Academy of Marketing Science*, 36(1): 1–10. DOI: <https://doi.org/10.1007/s11747-007-0069-6>
- [33] Vargo, S. L., Lusch, R. F., Smith, R. H., Hunt, S., Laczniak, G., Malter, A., Morgan, F., and O'Brien, M. (2004). Evolving to a New Dominant Logic for Marketing. *Journal of Marketing*, 68: 1–17.
- [34] Vayansky, I., and Kumar, S. A. P. 2020. A review of topic modeling methods. *Information Systems*, 101582. DOI: <https://doi.org/10.1016/j.is.2020.101582>
- [35] Vickery, G., and Wunsch-Vincent, S. 2007. *Participative web and user-created content: Web 2.0 wikis and social networking*. Organization for Economic Cooperation and Development (OECD).
- [36] Von Helversen, B., Abramczuk, K., Kopeć, W., and Nielek, R. 2018. Influence of consumer reviews on online purchasing decisions in older and younger adults. *Decision Support Systems*, 113: 1–10. DOI: <https://doi.org/10.1016/j.dss.2018.05.006>

- [37] Wang, Y., and Rodgers, S. 2010. Electronic word of mouth and consumer-generated content: From concept to application. In *Handbook of Research on Digital Media and Advertising: User Generated Content Consumption* (pp. 212–231). IGI Global. DOI: <https://doi.org/10.4018/978-1-60566-792-8.ch011>
- [38] Xu, G., Yu, Z., Chen, Z., Qiu, X., and Yao, H. 2019. Sensitive Information Topics-Based Sentiment Analysis Method for Big Data. *IEEE Access*, 7, 96177–96190. DOI: <https://doi.org/10.1109/ACCESS.2019.2927360>
- [39] Yoo, K.-H., Sigala, M., and Gretzel, U. 2016. Exploring TripAdvisor. In *Tourism on the Verge* (pp. 239–255). DOI: [https://doi.org/10.1007/978-3-642-54089-9\\_17](https://doi.org/10.1007/978-3-642-54089-9_17)
- [40] Law, R. 2006. Internet and Tourism - Part XXI. *Journal of Travel and Tourism Marketing*, 20(1): 75–77. DOI: [https://doi.org/10.1300/j073v20n01\\_06](https://doi.org/10.1300/j073v20n01_06)
- [41] Ministère du Tourisme, de l'Artisanat et de l'Economie Sociale et Solidaire (2024). *Evolution par destination des nuitées réalisées dans les établissements d'hébergement touristique*. Ministère Du Tourisme, De L'Artisanat Et De L'Economie Sociale Et Solidaire. Retrieved May 6, 2024, from <https://mtaess.gov.ma/fr/tourisme/chiffres-cles>
- [42] Observatoire Du Tourisme 2024. Statistiques sur le tourisme au Maroc pour le mois de mai 2024. In <https://www.observatoiredu tourisme.ma/wp-content/uploads/2024/07/TDB-NATIONAL-MAI-2024.pdf>.
- [43] Office National Des Aéroports. (2024, July 22). *Communiqués de presse: Aéroports du Maroc : trafic aérien au premier semestre 2024*. Retrieved July 31, 2024, from <https://www.onda.ma/Je-d%C3%A9couvrez-ONDA/Espace-presse/Communiqu%C3%A9s-de-presse>
- [44] TripAdvisor. 2023. Homepage. Retrieved from <https://www.tripadvisor.com/>

# ASERS



The logo for ASERS Publishing, featuring the word "ASERS" in a bold, orange, sans-serif font with a stylized fan-like graphic to the left, and the word "Publishing" in a smaller, orange, sans-serif font below it.

Web: [www.aserspublishing.eu](http://www.aserspublishing.eu)

URL: <http://www.journals.aserspublishing.eu/jemt>

E-mail: [jemt@aserspublishing.eu](mailto:jemt@aserspublishing.eu)

ISSN 2068 – 7729

Journal DOI: <https://doi.org/10.14505/jemt>

Journal's Issue DOI: [https://doi.org/10.14505/jemt.v15.3\(75\).00](https://doi.org/10.14505/jemt.v15.3(75).00)