

DATA MINING IN FILM TOURISM

*Jerome Agrusa, University of Hawaii
Cathrine Linnes, Østfold University College
Joseph Lema, Stockton University
Brian Metcalf, University of Cincinnati*

Abstract

The economic impact of film induced tourism is of great interest to governments, tourist authorities, local businesses as well as residents. Film tourism reveals a positive economic impact on a featured location. This study investigates Walt Disney's animated film Frozen and the impact the film has on tourism in Norway. Although the movie Frozen takes place in fictional Arendelle, movie producers incorporated Norwegian inspired scenery, imagery, and culture throughout the film. This study was conducted through an electronic survey with over 1,000 participants who shared their attitudes towards tourism and the effect movie tourism has upon a destination. The open-ended questions were analyzed through the application of text mining to better understand participants' perceptions.

Keywords: Film induced tourism; Destination placement; Text mining; Disney; Frozen.

INTRODUCTION

Film induced tourism can have a positive economic impact on a destination not only in the short term, but the effect can easily last a number of years (Riley, Baker, VanDoren, 1998). Destination placement in film tourism is also one of the more effective ways to market a destination to a tourist. A number of studies have found that a featured destination in a film has increased tourism to that location. Looking at specific blockbuster movies, *Harry Potter* for example, had an average increase of 50% in tourism to all its filming locations after the film's release. In some cities and towns, it was as much as 200%. Frozen is reported to have increased tourism in Norway by 37%, while the movie *The Beach* filmed in Thailand, experienced an increase of 22%, *Braveheart* a 300% increase in tourism to Wallace Monument Scotland, *Mission Impossible 2* with increases to Sydney National Park by 200%, and the movie *Troy* had an increase of tourism to Turkey by 73% (Champion Traveler, n.d.). Several Las Vegas casinos frequently allow film crews to use their properties for filming movies or television (TV) series, that results in a spike for room reservations at these featured casino hotels (Verrier, 2014). Recently, there has been a popular TV series about the exciting life on board

the ship Stena Line operating between Oslo, Norway and Frederikshavn, Denmark (Stena Line, 2018). TV viewers have been able to see the life on board while traveling on the ship which has had a positive impact on the ships booked reservations (Stena Line, 2018).

Animated movies are no different as the Walt Disney Corporation reported high profits with the release of animated films that portrayed tourist destinations. Astonishing profits of \$12.47 billion in the third quarter of 2014 alone led Disney to exceed forecasts (Nakashima, 2014). In addition to the wildly successful release of motion pictures from elsewhere in their catalog such as the Marvel series (e.g., Iron Man, The Avengers, Thor, Captain America, and Defenders of the Galaxy) in addition to other animated features, and the inevitable success the upcoming *Star Wars* entries will bring now that this franchise is part of Disney, the 3D computer-animated movie, “*Frozen*,” is the current juggernaut blockbuster from Walt Disney Pictures, released in November, 2013. *Frozen* is making Disney substantial profits as customers demonstrate they are willing to “Let It Go.” Since being released, this movie has become the top grossing animated movie of all time (McClintock, 2014), the top grossing film of 2013, and the fifth top-grossing movie in the world of all time (“Box Office Mojo for *Frozen*,” 2014). In the first year of its release, the film *Frozen* had grossed over \$1.3 billion worldwide at the box office alone. Nominated for two Academy Awards, it won both “Best Animated Feature” and “Best Original Song” (“Let It Go”) in February 2014. The franchise money making potential for *Frozen* also seems to be limitless. Bob Iger, the Chairman and Chief Executive Officer of Disney, noted that *Frozen* “has real franchise potential” and stated that we will be seeing *Frozen* in more places than we’ve seen so far” (“The Walt Disney Company”, 2014, p. 13.).

Movie tourism can be divided into sub-categories, film tourism, travel film tourism and film induced tourism (Tomala & Faber, 2011). Film induced tourism can be further split into sub-categories such as destination placement connected to the film, movie studios and movie parks, and as scenery backdrop in a film to draw tourists to a location.

There can be various reasons for a person being drawn to a film destination. As one of the significant travel motivations among tourists who visit a film destination, film tourism has since emerged in the media and literature (Rittichainuwat & Rattanaphinanchai, 2015). The literature related to film-induced tourism for example has increased, yet still has limited levels of attention on perceived and actual impacts upon the destination itself (Pratt, 2015). Media can be a significant influencer to attend an event or festival (Ashton, 2014). For example, visits to a location associated with a certain movie, the desire to explore a film studio or theme park, or the possibility to descent into the film by using the landscape as a recognition value (Kim, Kim, & King, 2018).

Many times, the scenery being either real or animated, catchy music, or charming characters can encourage visitation. Furthermore, films can also stimulate a sense of nostalgia for tourists of a past memory or event that may relate to a particular

tourism destination (Kim & Kim, 2018). Connecting past memories to the present requires a level of creativity for nostalgia tourism to occur among destinations (Kim, Kim, & King, 2018).

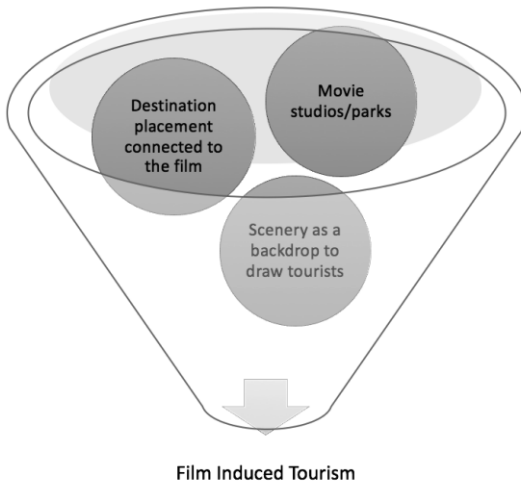


FIGURE 1. A breakdown of film tourism.

In many instances, it can be difficult to define the target market as some characters, story or destinations attract a larger population. The movie *Frozen* became a huge hit among many children around the world. As a result, in 2015, Disney immediately announced that a sequel for the movie *Frozen* was being planned for release (Graser, 2015). *Frozen 2* is currently slated for release on November 27, 2019 (Pearson, 2018). Kristen Anderson-Lopez and Robert Lopez, who won the Academy Award for best original song “*Let It Go*,” are also confirmed to return to write the sequel’s music (Perry, 2017). The voice recording for the sequel began in September of 2017 with Idina Menzel returning as Elsa along with Kristen Bell as Anna, Jonathan Groff as Kristoff and Josh Gladys as Olaf (Perry, 2017).

The animation film *Frozen* was so popular that characters from the movie were inserted into the storyline of the 4th season of ABC’s popular *Once Upon a Time* series. A *Frozen-on Ice* tour was developed and immediately became Disney’s most popular ice show of all time, selling 250,000 tickets on its first day and leading company to project total sales reaching three million show tickets sold (Murray, 2014). Disney Stores everywhere and theme parks were initially unable to adequately meet the demand for related *Frozen* merchandise. Frustrated parents took to social media to complain about not being able to buy *Frozen* merchandise demanded by their children. Nine of the ten best-selling items at the Disney Store in the second quarter of 2014 were *Frozen*-related (Fritz, 2014). By the end of April 2014, Disney Parks had to impose a five-item limit at its stores, while many other Disney Store outlets had imposed a two-item limit on *Frozen* retail items and resorted to requiring customers to enter into a lottery on busiest days just for the chance to purchase the very popular *Frozen* character costumes (Thurston,

2014; Zakarin, 2014). Children around the world can be seen singing the songs, wearing or carrying *Frozen* merchandise even 5 years after the film's release. Just in time for the 2014 year-end holidays, *Frozen* toppled "Barbie" from her more than a decade-long throne as the number one demanded toy for girls (Kell, 2014a). Sales of *Frozen* toys and other merchandise were projected to hit \$1 billion in the United States alone in 2014, nearly matching its worldwide box office draw for that year, giving Disney, as well as toy manufacturers Mattel and Jakks Pacific a boost when overall retail sales for the key 2014 holiday season appeared uncertain. Furthermore, Wal-Mart had more than 700 *Frozen* items, Toys 'R' Us had more than 300, and eBay reports over 40,000 listings for *Frozen* gear on its website (Kell, 2014b). *Frozen* ended 2014 as the year's most popular DVD or Blu-Ray, nearly tripling the sales of runner-up *The Hunger Games: Catching Fire* and the *Frozen* soundtrack, selling nearly 3.5 million copies, beat Beyoncé, Taylor Swift and One Direction to top the Billboard charts for 2014 (Murray, 2014).

One of the featured attractions at the various Disney Parks (e.g., Disneyworld, Disneyland, Epcot Centre, etc.) have been daily meet-and-greet opportunities for children with actors portraying the main characters from *Frozen*. These have been overwhelmingly popular with typical wait times of 3-5 hours and sometimes reaching as long as six hours (Epcot's *Frozen* Meet and Greet, 2014; Lush, 2014). Now there is also a *Frozen* Ever After musical boat ride and *Frozen* Ever After Dessert Party in Epcot and a First Time in Forever: A *Frozen* Sing-Along Celebration. Further, paint décor to match the look of *Frozen* have been applied throughout the Norway Pavilion within the World Showcase of Epcot Centre in Florida. For example, the entryway sign to one of the Pavilion buildings appears in *Frozen* colors and reads "Norsk Kultur: Inspiration for Disney *Frozen*" (as pictured in Munarriz, 2014). Disney has greatly increased the percentage of gift shop space devoted to *Frozen*-themed merchandise and the character Meet-and-Greets (Munarriz, 2014). For months, after the release of the blockbuster movie *Frozen* there were rumors that Disney had plans to replace or refurbish the theme ride "Maelstrom" within the Pavilion, a Viking boat ride through scenes inspired by Norwegian imagery and culture, with a *Frozen*-themed ride of some sort. In September 2014, Disney officially reported that the ride was indeed closing in October 2014 with the following announcement: "The new attraction, which replaces Maelstrom, will take our guests to *Arendelle* and immerse them in many of their favorite moments and music from the film. The pavilion will also include a royal greeting location where Anna and Elsa can meet our guests" (Staggs, 2014, para. 2).

Before the decision was made, it was reported that Disney requested Norway to contribute \$9 million to update the pavilion and especially the Maelstrom ride, or let Disney largely change the Pavilion and convert the ride to even more of a *Frozen* theme (Brooks, 2014). This appeared in mainstream news within Norway and residents were divided as to the stance, if any, that the Norwegian government should take on the issue. As Robert Niles states on the Theme Park Insider website (Niles, 2014, para. 2), "Clearly, guest demand justifies a permanent new home for the entire *Frozen* franchise, not just a character meet-and-greet and a sing-along

show. So, the question isn't whether to build a *Frozen* attraction, the question is... where?" He adds, "The placement makes sense, at first glance. *Frozen's* fictional kingdom of Arendelle sure looks like Norway. And the pavilion's current attraction, the Maelstrom boat ride, hasn't drawn people to the park in decades, and only started regularly drawing a significant queue due to crowd-shifting under Disney's new MyMagic+ system" (para. 3). This would, however, mark a significant departure from Epcot's original purpose as a non-fiction theme park. However, Disney seems intent and content to move away from such non-fiction themed entertainment. They have built a new *Avatar*-themed land at Disney's Animal Kingdom and moved the *Lion King* show into the same park's Africa section. There were also rumored plans for adding other Pixar and Disney animation characters throughout Epcot (Niles, 2014).

Given the movie's enormous popularity, it makes perfect sense that Disney wants to capitalize on it in a major and ambitious way somehow, and somewhere within its parks. Some argue that it makes less than perfect sense and is not universally agreed that within the Norway Pavilion's space is the best or correct location. Others argue that bringing *Frozen* anywhere within Epcot's World Showcase would mark a significant departure from Epcot's original purpose as a non-fiction theme park. The positive impacts of *Frozen* on Norway as a tourism destination and *Frozen* in the Norwegian Pavilion was a largely a success.

BACKGROUND

Film Tourism

Many local and national governments indicate that tourism will increase if their locations are featured in films. For example, New Zealand's profile and levels of tourism increased with the release of the popular "Lord of the Rings" trilogy and the country was willing to award the production company of the series lucrative tax break incentives to facilitate their decision to shoot the sequels there (Clark, 2010). The positive and statistically significant relationship between successful films and tourism has been evidenced as Mitchell & Stewart (2012) investigated changes in overseas tourist numbers to Australia following the "Mad Max" and "Crocodile Dundee" movie franchises, and New Zealand following the "Lord of the Rings" trilogy. They selected these locations because they are both distant from overseas locations and require deliberate decisions to visit either one. Using data on tourist numbers to Australia and New Zealand, they found evidence of an increase in tourism following the release of a movie. However, this increase was not generally sustained for more than two years. This does contradict other research that shows that film-induced tourism can last for years (Hudson & Ritchie, 2006). Riley, Baker, and Van Doren (1998) found that although peak interest occurs immediately after a film is released, a 54% increase in visitation to featured destinations was evident for at least five years in the 12 films they studied.

Furthermore, and highly relevant to the relationship between Norway and *Frozen*—set not in Norway, but in fictional Arendelle—it does not seem to matter if the movie is specifically set in that actual location or a fictional one, such

as the *Lord of the Rings*' "Middle Earth." They add that this effect may be present even if the movie claims to be set in a particular location, but is actually filmed elsewhere, which is common in the movie industry. It is worth noting that the *Mad Max* movies were correlated with significant increases in tourism to Australia despite the fact that the plot was not specifically Australian, and the scenery depicted was not exactly appealing.

Psychologically speaking, why this relationship—often called Movie Tourism—exists is not certain. Jewel and McKinnon (2008) speculate that it could be perceived that Movie Tourism is connected to nostalgia and identity; that one has a yearning for what life was or should be like. And that one creates identities within the settings, imaginary and/or factual. Whatever the reasons, the impact of movie locations on tourism is real, even if for just a few years following a movie's release, and most governments seem eager to pursue that relationship.

Research has also been conducted exploring the best ways to exploit the Movie Tourism phenomena (Bolan & Williams, 2008; Hudson & Ritchie, 2006; Strielkowski, 2017). Hudson and Ritchie (2006) posit that there are four best types of marketing activities in which destination marketing organizations can engage in to promote film tourism. These include proactive efforts to encourage producers and studios to film at the location, generating media publicity around the film and its location, marketing activities that promote the film location after production, and peripheral marketing activities that leverage film tourism potential. Their regression analysis indicated a high correlation between film tourism success and use of at least one of these four factors. While there has already been a great deal of media publicity around the movie *Frozen* and the locations serving as its inspiration, this suggests that additional marketing activities promoting these locations (perhaps by central and/or regional tourism organizations in Norway) and other peripheral marketing activities associating these locations with the movie (such as the Norway Pavilion at Disney's Epcot Center and/or their other park locations or the Disney Adventure cruises to Norwegian locations) will serve to increase Norwegian tourism even further.

Film-Induced Tourism

Although the popularity of the film and extent of the tourist reaction to *Frozen* may have taken some by surprise, the connection between films and tourism to locations depicted in them is well known (Croy, Beeton, Frost, & Laing, 2015; Dore & Crouch, 2003; Kim, Chen, & Su, 2009; Metcalf, Linnes, Agrusa, & Lema, 2015; Metcalf, Linnes, Agrusa, & Lema, 2018; Riley, Baker, & Van Doren, 1998; Riley & Van Doren, 1992). According to Morgan and Pritchard (1998), placing a destination in a film is the ultimate in tourism product placement. Many studies have identified diverse aspects of film tourism, including the motivation of film tourists (e.g., Beeton, 2005, 2010; Macionis, 2004; Macionis & Sparks, 2009; Riley & Van Doren, 1992) or the perception of a destination's image by film tourists (e.g., Butler, 1990; Chalip, Green, & Hill, 2003; Croy, 2010; Frost, 2006; O'Connor, Flanagan, & Gilbert, 2010; Sealy & Wickens, 2008). Past studies have described the impacts of film/television tourism (e.g., Aitchison, Macleod, &

Shaw, 2000; Croy, 2011; Han & Lee, 2008; Heitmann, 2010; Kim, Agrusa, Chon, & Cho, 2008; Kim, Agrusa, Lee, & Chon, 2007; Metcalf, Linnes, Agrusa, & Lema, 2015, 2018; Riley & Van Doren, 1992; Riley, Baker, & Van Doren, 1998; Tooke & Baker, 1996), while film-induced tourism literature has analyzed the cultural perspectives of film tourism (e.g., Bandyopadhyay, 2008; Huang, 2011; Su, Huang, Brodowsky, & Kim, 2011) as well as the managerial aspects of film tourism (e.g., O'Connor et al., 2010; Riley & Van Doren, 1992; Tooke & Baker, 1996). Many studies consistently demonstrate that film/television are mediums that attract tourists to a film destination or film story-related destinations (Kim, Agrusa, & Chon, 2014). Similarly, Lee and Bai (2016) maintain that pop culture can be a significant force in regard to destination image. Early in the travel decision-making stages, the image of a destination through a potential film can perform an influential role upon visitation to a particular tourism destination (Yen & Croy, 2013).

Economic Impact of Film-Induced Tourism

A major research stream of film tourism includes an analysis of the economic impact of film-induced tourism (Kim, Agrusa, & Chon, 2014). Some studies have reported that the adverse economic impact film-induced tourism has on a destination may include increases in real estate prices, higher house rental fees and consumer prices, and increasing congestion (Beeton, 2005; Riley & Van Doren, 1992; Tooke & Baker, 1996). However, a majority of studies report the positive impacts on a movie's backdrop site, such as development of the tourism industry, growth of job opportunities, and an increase in tax revenue (Busby & Klug, 2001; Connell, 2005; Croy, 2010; Han & Lee, 2008; Huang, 2011; Kim, Agrusa, Lee, & Chon, 2007; Riley & Van Doren, 1992; Riley et al., 1998; Tooke & Baker, 1996). Other studies indicate that post-effects after the airing of a film is completed may be minimal (Croy, 2010; Heitmann, 2010; Macionis & Sparks, 2009). The screen effect may also exist as a fractional contribution among a number of elements in the probability of a tourist visit rather than either-or notions of simply being film-tourists or non-film tourists to a destination (Fernandez-Young & Young, 2008).

Film-Induced Tourism from a Social Scientific Perspectives

As conveyed by Kim, Agrusa, and Chon (2014), it is interesting to assess film tourism from social scientific perspectives (e.g., anthropological, sociological, and psychological). Film-inspired tourism deals with postmodern epistemologies of hyper-reality or myth-telling (Beeton, 2005), commercialization (Beeton, 2005; Frost, 2006), authenticity or pseudo effect (Beeton, 2005; Frost, 2006), and the deconstruction or construction of a location's image (Aitchison et al., 2000; Heitmann 2010). Items, themes, and locations in films also perform a deep role as cinematic fictional representations of the screened locations and therefore are constructed as signs or icons of the destination in the tourist's mind (Hirschman & Thompson, 1997; Tooke & Baker, 1996).

Anthropologically, the deconstruction of a place by a film and its reconstruction of the image of a place can occur as a post-tourist experience, while a boundary

between the authentic and inauthentic worlds exist. Thus, hyper-reality or myth-telling are framed through the process of soft filtering so that viewers can accept fictional cinematographic storylines portrayed or represented within a film or TV program. As a result, film tourists construct their own interpretations of images that are framed through a film and consume represented images featured in a film. Consequently, social science researchers have criticized film locations as becoming commercialized and organized leisure sites to gain mercenary pursuits as opposed to offering entertainment to film tourists (Kim et al., 2014).

Film-Induced Tourism from a Cultural Perspective

Studies of film tourism have also been explored from the cultural perspective. On screen tourism and destination place making are also posing new implications for tourism policy development (Lundberg, Ziakas, & Morgan, 2018). Films impacts can depend on the destination image for the tourists and resident's cultural heritage (Giraldi & Cesareo, 2017). New film-induced trends from the Asian cultural tourism perspectives have been reviewed (Huang, 2011; Kim et al., 2007, 2014; Su et al., 2011). A number of studies indicated that the demand for TV drama-induced tourism from Asian countries to Korea stemmed from the cultural similarity or proximity (Kim et al., 2014). Whether possessing genetic ties or merely interest in different cultures, individuals are swayed by the backdrop of the storyline since films represent a multiplicity of race, migration, colonialism, persecution, power, tradition, conflict, culture, and religion (Mordue, 2001; Portegies, 2010). Thus, a film can stimulate overseas residents to visit their homeland and connect with their heritage identity or reminisces (Bandyopadhyay, 2008).

Destination Management and Image

The strategic marketing of a destination is essential in an increasingly competitive tourism environment. Film-induced tourism however, has yet to be fully appreciated in terms of destination management and marketing (Hudson, Wang, & Gil, 2011). Wray and Croy (2015) argue that destinations assess film production history and visitor friendliness as important considerations for the development of film tourism.

Broadcasting news, documentaries, television programs, movies, and films according to Shani, Wang, Hudson and Gil (2009), have increased as popular autonomous sources of information for tourism destinations. With diverse media exposure and increasing access to information through mobile and digital applications, along with other emerging technologies such as cloud-based applications, the need for further inquiry into implications for destination management exists. Furthermore, while destination awareness has been driven by increased general media exposure (Gammack, 2005), film tourism studies are particularly limited in regard to the inclusion of local resident perspectives (Beeton, 2001; Kim, Kim, & Oh, 2017; Mendes, Vareiro, & Ferreira, 2017; Yoon, Kim, & Kim, 2015; Zhang, Ryan, & Cave, 2016). Film tourists' perspectives, characteristics, motivations, and behaviors have similarly remained a limited area

of exploration in the academic literature in regard to destination management (Connell, 2012; Quintal & Phau, 2015).

METHODOLOGY

To investigate the research questions pertaining to the perceived impact that the Disney movie Frozen is having on audience members' desire to travel to/within Norway, 1068 surveys were collected from participants from across the world where the focus was on U.S. and Norwegian residents. This study was distributed via Facebook and a variety of websites in the U.S. and Norway, in both English and Norwegian languages. Each survey version consisted of a consent statement followed by closed-format questions, with multiple opportunities for respondents to share open-ended thoughts and opinions. The majority of participants were from the U.S. (55%), Norway (39%), and other countries (6%) such as Saudi Arabia and Canada. The majority of the U.S. participants in this study resided in Hawaii, Florida, California, Pennsylvania, and New York. A total of 41 states (and the District of Columbia) in the United States were represented. Furthermore, the age of the survey participants ranged from 18-90 years of age with the mean age reported to be 32.2 years of age.

The focus of this paper centers on the open-ended questions. All surveys were completely voluntary with no overt incentives or compensation offered to participants. To analyze the responses from the participants text mining has been used. Text mining is meant to extract meaningful information from large amounts of survey data. Text mining is especially useful when the survey data is in response to open-ended questions. In such surveys, respondents provide their comments or opinions in their own words. The participants can talk about whatever they feel, like, appreciate, disagree with, or complain about. Text mining can aid in the process of extracting meaning from what people say. Dictionaries are used to classify the comments by uploading the API. The responses have been categorized based on positive, negative or neutral responses. A neutral response could be a respondent with mixed opinion about the question being asked.

To prepare the data set using text mining the following steps were performed.

- The first step is to determine what the final product will be by framing the research questions.
- Next the pre-processing and cleansing operations are performed to detect and remove anomalies. The cleansing process makes sure to capture the real essence of the text available and is performed to remove stop words and indexing the data.
- Finally, the data is run to examine patterns and trends to analyze the text files.

This study explores the following two research questions:

- RQ1: What are people's attitudes towards tourism?
- RQ2: Can movie tourism have a positive impact on a destination?

ANALYSIS

Survey question 1 and 2 below pertains to research question 1 and survey question 3,4,5,6,7 pertains to research question 2.

Question 1. There were more participants who favorably agreed with this statement where money was the most frequently used argument for tourism to have a strong presence in a country. Norway is no exception. In 2017, travel and tourism directly supported 172,000 jobs. This is 6.5% of the total employment. The direct contribution of Travel & Tourism to GDP was USD14.9bn and is forecasted to rise by 1.9% in 2018 (World Travel & Tourism Council, 2018).

Overall, tourism brings more benefits to Norway than problems to the country.

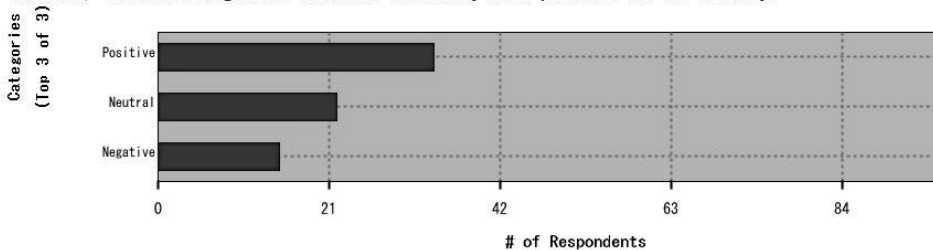


FIGURE 2. Overall, tourism brings more benefits to Norway than problems to the country.

Question 2. This question is particularly interesting because in the closed ended questions 61% were positive towards having more tourists in their community while only 8% disagreed and 28% were neutral. When analyzing the written responses, one can clearly see that when participants had an opportunity to express themselves freely with the majority against more tourists in their local community. The most frequently used word was “too much”. This can be understandable because in certain places there are few residents residing or a place can easily feel invaded if all the visitors come at one time. Overall, there were 38% negative, 36% positive and 26% neutral responses that were extracted and categorized.

Would you like to see more tourists in your community?

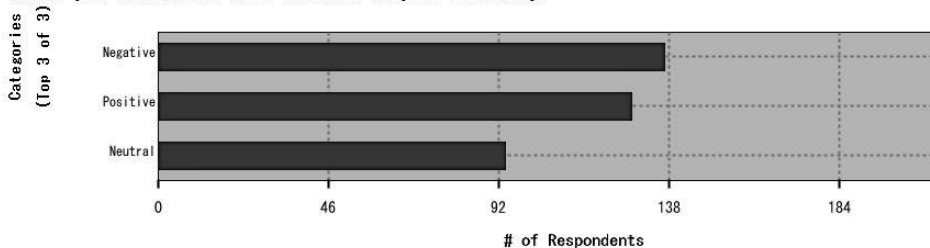


FIGURE 3. Would you like to see more tourists in your community?

Question 3. The closed ended responses reported 40% agreement, 16% disagreement, and 43% neutral. However, in the open-ended questions one can clearly see that the opinion has changed. There were 37% negative, 19% positive and 44% mixed comments. The most frequently extracted positive word was

accurate, culture, and good. Neutral, no experience and don't know, and on the negative side, skeptical and disappointment. Some participants mentioned the movie happened to be a cartoon movie and not a real destination where one can see the scenery, and this might make certain people feel they do not want to be portrayed in such a way. However, Frozen was a number one box office hit and any exposure or marketing will result in a positive impact for a country or related business.

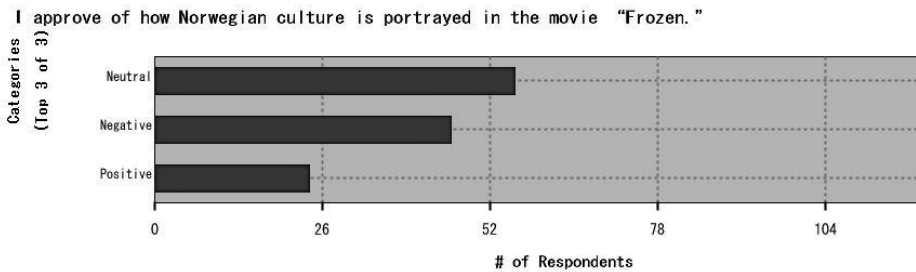


FIGURE 4. I approve how Norwegian culture is portrayed in the movie "Frozen".

Question 4. When expressing themselves in writing the number of negative comments reported to be 38% while positive comments were 36%. The most frequently related positive words were "more tourism and good", while on the negative side "too much and traffic" was reported. Of course, if a person had a positive or negative experience with tourism this will be transpired in their answer. The bottom line is that, tourism in Norway experienced a 37% increase based on the movie *Frozen* (Furuly, 2014). This is in line what most participants felt, and this is also indicative worldwide. Norway did benefit from Disney.

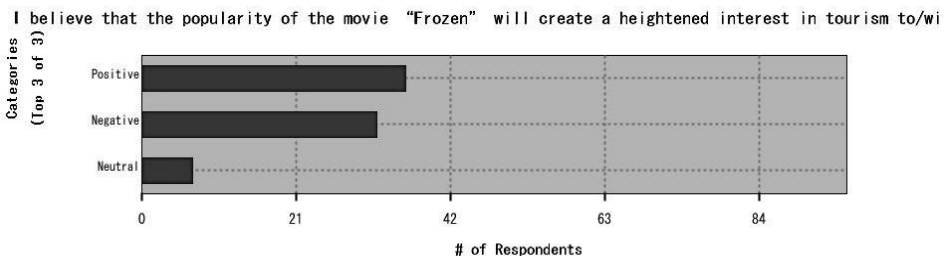


FIGURE 5. I believe that the popularity of the movie "Frozen" will create a heightened interest in tourism to/within Norway.

Question 5. The most frequently positive extracted words were "beautiful", "visit Norway", "like, and culture". On the negative side, "dislike and no" were the most frequently extracted words. From the total responses 20% of the comments were positive, 45% were neutral and 35% negative. The reason for this might have to do with the movie being a children's cartoon movie although some mentioned if their children wanted to visit, they would absolutely be willing to go. Others lived in the country and did not want to go to see the sight.

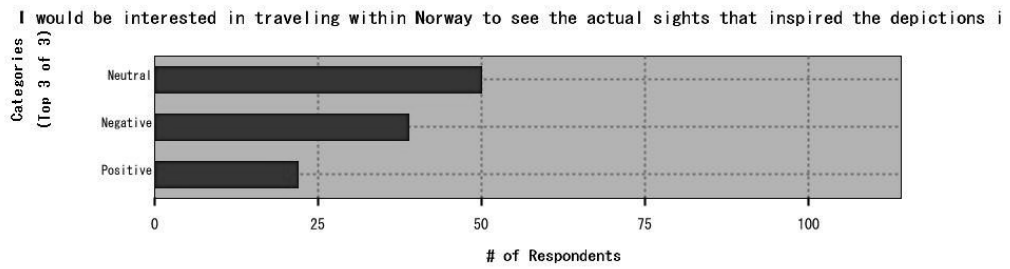


FIGURE 6. I would be interested in traveling within Norway to see the actual sights that inspired the depictions in the movie “Frozen”.

Question 6. The majority of the respondents felt the movie would not be good for Norwegian tourism. A total of 55% of the respondents provided negative comments, 34% positive and 11% neutral. The number one positive extracted word was “would be good”, and the negative extracted words were “nothing to do with and no”. Many might like it exactly as it is today and perhaps are afraid of the unknown. It might seem foreign to connect a Disney movie to a destination. However, the country has benefitted from a lot of free marketing from Disney.

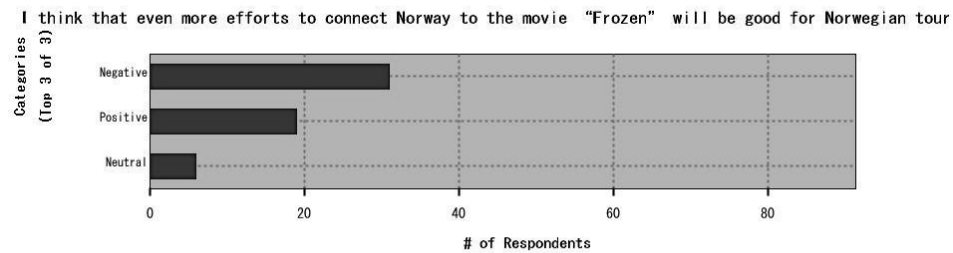


FIGURE 7. I think that even more efforts to connect Norway to the movie “Frozen” will be good for Norwegian tourism.

Question 7. At the end, the participants were given one last chance to provide additional feedback. The comments were divided into sub-categories based on what they mentioned in their statement. The topics ranged from the famous Maelstrom ride and their disappointment of the ride closing at EPCOT, their love for Disney and the theme park, the movie Frozen and its popularity and how much they liked the film, and a concern about how the Norwegian culture being miss portrayed in the movie. Many comments were neutral.

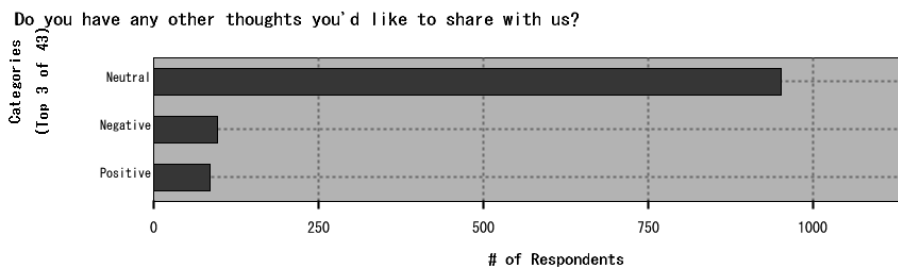


FIGURE 8. Do you have anything else you wish to share.

CONCLUSION

The problem one has with open-ended questions is that people tend to write down whatever they have on their mind. However, one can still manage to gather opinions and come to a valid and reliable conclusion using text mining.

For research questions 1, the respondents feel a country can benefit from tourism and that tourism is important for a country. However, when it comes to having too many tourists too close to home their opinion changed. This has to do with not in my back-yard approaches. As long as the tourists come in moderation and the cruise ships, busses, tourist operators work with the local tourist office to streamline the visits, things can be controlled, and the anxiety level can be reduced. In addition, countries offer production incentives for producing movies in their countries. Norway is no different, they offer 25% cash rebate on all eligible expenses when a minimum of \$3 million is spent on the production (Buder, 2016). Countries are seeing value in film induced tourism as it creates a heightened interest for a particular destination.

For research question 2, the respondents felt that the movie did not portray the Norwegian culture well, however, one can clearly see Norwegian artifacts throughout the movie. There was no question of where the inspiration was taken from. However, the attitude here from those mentioning this is more that, a country should not be portrayed through cartoons. There may be limited harm, Disney has a strong brand name and is well liked throughout many parts of the world among multiple generations. One of the reasons some people did not want to travel to see the sights had to do with many of the respondents were Norwegians and they felt they had no need to see the place. On the other hand, Americans were much more interested seeing the sites and may not have traveled to Norway or have a strong wish to visit while additionally they may have ancestors coming from the country. Furthermore, when children visit EPCOT and see all the magic, they can have a strong influence on their parents wanting to travel to see the country. In terms of having a strong tie between the movie and Norway, there were mixed feelings here as well. However, the people who tend to leave written comments are those who have the strongest opinion. Movie induced tourism has many positive impacts on a country and can benefit a nation's tourism industries.

REFERENCES

- Aitchison, C., Macleod, N. E., & Shaw, S. J. (2000). *Leisure and tourism landscapes: Social and cultural geographies*. London: Routledge.
- Ashton, A. S. (2014). Tourist destination brand image development—an analysis based on stakeholders' perception: A case study from southland, New Zealand. *Journal of Vacation Marketing*, 20(3), 279-292.
- Bandyopadhyay, R. (2008). Nostalgia, identity and tourism: Bollywood in the Indian diaspora. *Journal of Tourism and Cultural Change*, 6(2), 79-100. doi:10.1080/14766820802140463

- Beeton, S. (2001). Smiling for the camera: The influence of film audiences on a budget tourism destination. *Tourism Culture & Communication*, 3, 15–25.
- Beeton, S. (2005). *Film-induced tourism: Aspects of tourism*. Clevedon, England: Channel View Publications.
- Beeton, S. (2010). The advance of film tourism. *Tourism and Hospitality Planning & Development*, 7(1), 1–6. doi:10.1080/14790530903522572
- Bolan, P. & Williams, L. (2008). The role of image in service promotion: focusing on the influence of film on consumer choice within tourism. *International Journal of Consumer Studies*, 32(4), 382–390.
- Brooks, T. (2014). *Who should pay for any changes to Norway pavillion*. Retrieved from <https://dadfordisney.com/2014/07/28/who-should-pay-for-any-changes-to-norway-pavilion/>
- Box Office Mojo for Frozen. (2014). *Frozen*. Retrieved from <http://boxoffice Mojo.com/movies/?id=frozen2013.htm>
- Buder, E. (2016). *The Best Countries in the World to Film Your Movie, Based on Production Incentives*. Retrieved from <https://nofilmschool.com/2016/07/film-production-incentives-tax-incentives-movie-rebates>
- Busby, G. & Klug, J. (2001). Movie-induced tourism: The challenge of measurement and other issues. *Journal of Vacation Marketing*, 7(4), 316–332.
- Butler, R. W. (1990). The Influence of the media in shaping international tourism patterns. *Tourism Recreation Research*, 15(2), 46–55.
- Chalip, L., Green, C., & Hill, B. (2003). Effects of sport event media on destination image and intention to visit. *Journal of Sports Management*, 17, 214–234.
- ChampionTraveler.(n.d.). *Popular Movies Can Increase Tourism to the Film's Location between 25%-300%*. Retrieved from <https://championtraveler.com/news/popular-movies-can-increase-tourism-to-the-films-location-between-25-300/>
- Clark, A. (2010). New Zealand changes labour laws to save filming of the Hobbit movies. *The Observer*. Retrieved from <http://www.theguardian.com/business/2010/oct/31/warner-bros-new-zealand-hobbit-film>
- Connell, J. (2005). Toddlers, tourism and Tobermory: Destination marketing issues and television induced tourism. *Tourism Management*, 26(5), 763–776.
- Connell, J. (2012). Film tourism – evolution, progress and prospects. *Tourism Management*, 33(5), 1007-1029.
- Croy, W. G. (2010). Planning for film tourism: Active destination image management. *Tourism and Hospitality Planning & Development*, 7(1), 21–30. doi:10.1080/14790530903522598
- Croy, W. G. (2011). Film tourism: Sustained economic contributions to destinations. *Worldwide Hospitality and Tourism Themes*, 3(2), 159–164. doi:10.1108/17554211111123014
- Croy, W. G., Beeton, S., Frost, W., & Laing, J. (2015). Introduction: Film tourism. *Tourism Analysis*, 20(3), 265-267.

- Dore, L., & Crouch, G. I. (2003). Promoting destinations: An exploratory study of publicity programmers used by national tourist organizations. *Journal of Vacation Marketing*, 9, 137–51.
- Epcot's Frozen Meet and Greet to offer extended hours. (2014, February 7). Retrieved from <http://www.wdwmagic.com/attractions/norway/news/07feb2014-epcot's-frozen-meet-and-greet-to-offer-extended-hours.htm>.
- Fernandez-Young, A. & Young, R. (2008). Measuring the effects of film and television on tourism to screen locations: a theoretical and empirical perspective. *Journal of Travel & Tourism Marketing*, 24(2/3), 195–212.
- Fritz, B. (2014, May). Disney's film business gets big boost from 'Frozen'. *Wall Street Journal*. Retrieved from <https://www.wsj.com/articles/disney-posts-27-rise-in-profit-1399409114>
- Frost, W. (2006). Braveheart-ed Ned Kelly: Historic films, heritage tourism and destination image. *Tourism Management*, 27, 247–254. doi:10.1016/j.tourman.2004.09.006
- Furuly, J.G. (2014). *Disney-film gir økt turisme til Norge fra USA*. Retrieved from <https://www.aftenposten.no/kultur/i/9m0Pw/Disney-film-gir-okt-turisme-til-Norge-fra-USA>
- Gammack, J. (2005). Tourism and media. *Annals of Tourism Research*, 32(4), 1148–1149.
- Giraldi, A., & Cesareo, L. (2017). Film marketing opportunities for the well-known tourist destination. *Place Branding and Public Diplomacy*, 13(2), 107-118.
- Graser, M. (2015). *Disney announces 'Frozen2*. Retrieved from <http://variety.com/2015/film/news/disney-announces-frozen-2-1201451480/>.
- Han, H., & Lee, J. (2008). A study on the KBS TV drama Winter Sonata and its impact on Korea's Hallyu tourism development. *Journal of Travel & Tourism Marketing*, 24(2-3), 115–126. doi:10.1080/10548400802092593
- Heitmann, S. (2010). Film tourism planning and development—questioning the role of stakeholders and sustainability. *Tourism and Hospitality Planning & Development*, 7(1), 3146. doi:10.1080/14790530903522606
- Huang, S. (2011). Nation-branding and transnational consumption: Japan-mania and the Korean wave in Taiwan. *Media, Culture & Society*, 33(1), 3–18.
- Hudson, S., Wang, Y., & Gil, S. M. (2011). The influence of a film on destination image and the desire to travel: A cross-cultural comparison. *International Journal of Tourism Research*, 13(2), 177-190.
- Hudson, S., & Ritchie, J.R.B. (2006). Promoting destinations via film tourism: An empirical identification of supporting marketing initiatives. *Journal of Travel Research*, 44(4), 387-396. doi: 10.1177/0047287506286720
- Jewell, B., & McKinnon, S. (2008). Movie Tourism: A new form of cultural landscape? *Journal of Travel & Tourism Marketing*, 24(2/3), 153-162.
- Kell, J. (2014a, November). 'Frozen' dethrones Barbie as top toy for girls this holiday. Retrieved from <http://fortune.com/2014/11/25/frozen-dethrones-barbie/>.

- Kell, J. (2014b, December). *Why Disney's 'Frozen' is the hottest toy of the year*. Retrieved from <http://fortune.com/2014/12/23/frozen-is-the-toy-of-the-year/>.
- Kim, H. J., Chen, M. H., & Su, H. J. (2009). The impact of Korean TV dramas on Taiwanese tourism demand for Korea. *Tourism Economics*, 15, 867–73.
- Kim, S. S., Agrusa, J., & Chon, K. (2014). The influence of a TV drama on visitors' perception: A cross-cultural study. *Journal of Travel & Tourism Marketing*, 31(4), 536-562.
doi: 10.1080/10548408.2014.883950
- Kim, S. S., Agrusa, J., Chon, K., & Cho, Y. (2008). The effects of Korean pop culture on Hong Kong residents' perceptions of Korea as a potential tourist destination. *Journal of Travel & Tourism Marketing*, 24, 2–3.
doi:10.1080/10548400802092684
- Kim, S. S., Agrusa, J., Lee, H., & Chon, K. (2007). Effects of Korean television dramas on the flow of Japanese tourists. *Tourism Management*, 28(5), 1340-1353. doi:10.1016/j.tourman.2007.01.005
- Kim, S. & Kim, S. (2018). Segmentation of potential film tourists by film nostalgia and preferred film tourism program. *Journal of Travel & Tourism Marketing*, 35(3), 285-305.
- Kim, S., Kim, S., & King, B. (2018). Nostalgia film tourism and its potential for destination development. *Journal of Travel & Tourism Marketing*, 71-87.
- Kim, S., Kim, S., & Oh, M. (2017). Film tourism town and its local community. *International Journal of Hospitality & Tourism Administration*, 18(3), 334-360.
- Lee, S., & Bai, B. (2016). Influence of popular culture on special interest tourists' destination image. *Tourism Management*, 52, 161-169.
- Lundberg, C., Ziakas, V., & Morgan, N. (2018). Conceptualising on-screen tourism destination development. *Tourist Studies*, 18(1), 83-104.
- Lush, T. (2014, June 5). *Families in a frenzy over Disney's 'Frozen'*. Retrieved from <https://www.seattletimes.com/nation-world/families-are-in-a-frenzy-over-disneys-quos-frozen-s/>
- Macionis, N. (2004). Published in: *W. Frost, G. Croy, & S. Beeton (Eds.), International Tourism Media Conference Proceedings* (pp. 86–97): Understanding the film-induced tourist. In Berwick: Monash University Tourism Research Unit.
- Macionis, N., & Sparks, B. (2009). Film-induced tourism: An incidental experience. *Tourism Review International*, 13, 93–101.
doi:10.3727/154427209789604598
- McClintock, P. (2014, March). *Box office milestone: 'Frozen' becomes No. 1 animated film of all time*. Retrieved from <http://www.hollywoodreporter.com/news/box-office-milestone-frozen-becomes-692156>
- Mendes, R., Vareiro, L., & Ferreira, A. R. (2017). Residents' perceptions of film-induced tourism: A Portuguese case study. *Tourism and Hospitality Research*, 17(4), 424-433.
- Metcalfe, B., Linnes, C., Agrusa, J., & Lema, J. (2015). Do you want to build a snowman in Norway? The impact of Disney's movie on Norwegian

- tourism. *Developments of the new tourism paradigm in the Asia Pacific Region Proceedings of the 21st Asia Pacific Tourism Association Conference*, 395-404. (ISSN: 2092-5549)
- Metcalf, B., Linnes, C., Agrusa J., & Lema, J. (2018). Film tourism in Norway: The effect fictional characters have on tourism. *International Business & Economics Research Journal*, (ISSN: 1535-0754).
- Mitchell, H. & Stewart, M.F. (2012). Movies and holidays: the empirical relationship between movies and tourism. *Applied Economics Letters*, 19, 1437–1440.
- Mordue, T. (2001). Performing and directing resident/tourist cultures in Heartbeat country. *Tourist Studies*, 1(3), 233–252.
doi:10.1177/14687976010010 0302
- Morgan, N., & Pritchard, A. (1998). *Tourism promotion and power: Creating images, creating identities*. Chichester, UK: John Wiley & Sons.
- Murray, N. (2014, December). *Ice Age 2014: Remembering the year 'Frozen' took over*. Retrieved from <http://www.rollingstone.com/music/features/the-year-in-frozen-20141231#ixzz3NZg3miW1>.
- Nakashima, R. (2014). *'Frozen' helps Disney 3Q profit rise 22%*. Retrieved from <http://abcnews.go.com/Business/wireStory/disney-3q-profit-rises-22-percent-24854931>.
- Niles, R. (2014). *Vote of the Week: Should Disney change Epcot's Norway pavilion to Frozen*. Retrieved from <https://www.themeparkinsider.com/flume/201407/4125/>
- O'Connor, N., Flanagan, S., & Gilbert, D. (2010). The use of film in re-imagining a tourism destination: A case study of Yorkshire, UK. *Journal of Vacation Marketing*, 16(1), 61–74. doi:10.1177/1356766709356611
- Pearson, B. (2018). *Frozen 2 will cover an important, unexplored aspect of Elsa and Anna*. Retrieved from <https://www.slashfilm.com/frozen-2-update/>
- Perry, S. (2017). *Frozen 2 details: Everything we know about the sequel*. Retrieved from <https://www.comingsoon.net/movies/features/905423-frozen-2-details>
- Portegies, A. (2010). Places on my mind: Exploring contextuality in film in between the global and the local. *Tourism and Hospitality Planning & Development*, 7(1), 47–58. doi:10.1080/14790530903522622
- Pratt, S. (2015). The Borat effect: Film-induced tourism gone wrong. *Tourism Economics*, 21(5), 977-993.
- Quintal, V. & Phau, I. (2015). The role of movie images and its impact on destination choice. *Tourism Review*, 70(2), 97-115.
- Riley, R. W, & Van Doren, C. S. (1992). Movies as tourism promotion: A 'pull' factor in a 'push' location. *Tourism Management*, 13, 267–75.
doi:10.1016/0261-5177(92)90098-R
- Riley, R., Baker, D., & Van Doren, C. S. (1998). Movie induced tourism. *Annals of Tourism Research*, 25, 919–35.
doi:10.1016/S0160-7383(98)00045-0
- Rittichainuwat, B. & Rattanaphinanchai, S. (2015). Applying a mixed method of quantitative and qualitative design in explaining the travel motivation of

- film tourists in visiting a film-shooting destination. *Tourism Management*, 46, 136-147.
- Sealy, W. & Wickens, E. (2008). The potential impact of mega sport media on the travel decision-making process and destination choice—the case of Portugal and Euro 2004. *Journal of Travel & Tourism Marketing*, 24(2-3), 127–137.
doi:10.1080/10548400802092601
- Shani, A., Wang, Y., Hudson, S., & Gil, S. M. (2009). Impacts of a historical film on the destination image of South America. *Journal of Vacation Marketing*, 15(3), 229-242.
- Staggs, T. (2014, September 12). 'Frozen' attraction coming to Epcot. Disney Parks Blog. Retrieved from <http://disneyparks.disney.go.com/blog/2014/09/frozen-attraction-coming-to-epcot/>.
- Stena Line. (2018). Danskebåten, TV-serien om Stena Saga. Retrieved from <https://www.stenaline.no/danskebaten>
- Strielkowski, W. (2017). Promoting tourism destination through film-induced tourism: The case of Japan. *Trziste Market*, 29(2), 193-203.
- Su, H. J., Huang, Y. A., Brodowsky, G., & Kim, H. J. (2011). The impact of product placement on TV induced tourism: Korean TV dramas and Taiwanese viewers. *Tourism Management*, 32(4), 805–814.
doi:10.1016/j.tourman.2010.06.020
- The Walt Disney Company (2014). Q1 FY14 Earnings Conference Call. Retrieved from <http://cdn.media.ir.thewaltdisneycompany.com/2014/q1/q1-fy14-earnings-transcript.pdf>.
- Thurston, S. (2014, May). 'Frozen' frenzy creates shortage for Elsa, Anna merchandise. Tampa Bay Times. Retrieved from <http://www.tampabay.com/news/business/retail/frozen-frenzy-creates-shortage-for-elsa-anna-merchandise/2180802>.
- Tomala K. & Faber F. (2011). Film tourism. In A. Papathanassis (Ed.), *The long tail of tourism*. (pp. 149-158). Gabler: Springer. Retrieved from https://link.springer.com/chapter/10.1007/978-3-8349-6231-7_16
doi: 10.1007/978-3-8349-6231-7_16
- Tooke, N. & Baker, M. (1996). Seeing is believing: The effect of film on visitor numbers to screened locations. *Tourism Management*, 17(2), 87–94.
doi:10.1016/0261-5177(95)00111-5
- Verrier, R. (2014). *Las Vegas is placing its bets on Hollywood*. Retrieved from <http://www.latimes.com/entertainment/envelope/cotown/la-et-ct-onlocation-las-vegas-think-like-a-man-20140709-story.html>
- World Travel & Tourism Council. (2018). Travel & Tourism Economic Impact 2018 Norway. Retrieved from <https://www.nhoreiseliv.no/contentassets/c5f3c5015f7840e1bb0184f88b5a3be3/turismens-betydning-for-norge.pdf>
- Wray, M., & Croy, W. G. (2015). Film tourism: Integrated strategic tourism and regional economic development planning. *Tourism Analysis*, 20(3), 313-326.
- Yen, C. H., & Croy, G. W. (2013). Film tourism: celebrity involvement, celebrity worship, and destination image. *Current Issues in Tourism*, 19(10), 1027–1044.

- Yoon, Y., Kim, S., & Kim, S. (2015). Successful and unsuccessful film tourism destinations: From the perspective of Korean local residents' perceptions of film tourism impacts. *Tourism Analysis*, 20(3), 297-311.
- Zakarin, J. (2014). *America's 'Frozen' Obsession Continues, Leading to Disney Store Lotteries and Disneyland Crazyness*. The Wrap: Covering Hollywood. Retrieved from <http://www.thewrap.com/americas-frozen-obsession-continues-leading-crazy-wait-times-disney-store-lotteries>.
- Zhang, X., Ryan, C., & Cave, J. (2016). Residents, their use of a tourist facility and contribution to tourist ambience: Narratives from a film tourism site in Beijing. *Tourism Management*, 52, 416-429.