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THE CHALLENGES OF OVERTOURISM IN EUROPE

An Analysis of the Effectiveness of Proposed Solutions through the Deterrent Theory

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Objectives

The main objectives of this study were:

To examine the antecedents and consequences of overtourism.

To assess the effectiveness of deterrent mechanisms employed by tourism destinations.

To identify the role of consumers' prior knowledge on their tourism behavior.

Summary

Overtourism is a growing problem in European cities due to the uncontrolled development and poor management of the tourism industry. These factors have led to a multitude of negative outcomes for key stakeholders in the industry, but especially destinations and their residents. This bachelor's thesis discusses the existing literature on overtourism in Europe through a comprehensive literature review and overviews a study conducted for reducing the phenomenon. The literature review encompasses both previous research on overtourism and related concepts, and the theoretical grounding of the deterrent theory and prior knowledge research. The study was conducted with consideration of the deterrent theory. Three tourism deterrents were selected and developed to be tested for their effectiveness in reducing tourism intention. Studies of the impact of prior knowledge were also consulted and included as a factor in the study to attempt to identify its role in tourism intention. The study aimed to complement previous research on overtourism by providing concrete solutions to the phenomenon.

Conclusions

The study conducted for this thesis concluded that three deterrent mechanisms are effective in reducing tourism intention and therefore may reduce overtourism levels in destinations which implement them. These three deterrent mechanisms included

- The introduction of a lottery system for entrance to popular locations,
- the introduction of a tourist-tax on applicable products and services
- and the branding of destinations for special interest tourists (SIT).

These deterrent mechanisms were found to be significantly effective both against no deterrent and individually significant with varying effectiveness. Also concluded was that prior knowledge of had no significant effect on the effectiveness of the deterrent mechanism. These conclusions provide useful information and tools for destinations facing overtourism.

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1.   INTRODUCTION

1.1.   Background

The growing phenomenon of overtourism is present and developing throughout European destinations. Overtourism is largely defined as the deterioration in the quality of life for residents and the quality of experience for visitors due to excessive amounts of tourists (Koens, Postma and Papp, 2018; Bourliataux-Lajoinie et al., 2019; Perkumiene and Pranskuniene, 2019; Capocchi, Pierotti and Amaduzzi, 2019). Venice, Barcelona, Dubrovnik in addition to other popular European tourist destinations are struggling with incessant overtourism (Phi, 2019). Inevitably, this is the case, as Europe receives half of all 1.3 million international tourists, the aforementioned cities being the most crowded (Koens, Postma and Papp, 2018). A measurable indication of overtourism is the concept of carrying capacity. The concept is generally defined as the maximum number of visitors to a destination without the cause of negative impacts such as damage to the environment, economy or society overall (Koens, Postma and Papp, 2018: 2). Carrying capacity is usually expressed as a ratio of residents to visitors and differs for every destination (ibid). For instance, Venice had a 1:360 resident-visitor ratio and Dubrovnik 1:33 in 2017, both of which were already then critically close to their carrying capacities (World Economic Forum, 2017). Both destinations continue to struggle with managing their tourism levels and have since then surpassed their carrying capacities, only resulting in further overcrowding and other negative consequences (Capocchi, Pierotti and Amaduzzi, 2019). These definitions and examples serve as a base for understanding the antecedents and consequences of overtourism.

Overtourism in Europe has been caused from the managerial perspective by the uncontrolled development and poor management of the tourism sector (Capocchi, Pierotti and Amaduzzi, 2019; Phi, 2019). Additionally, the problem has been exacerbated by an increase in consumer spending power, cheaper travel options, rapid urbanization in Europe, development of travel infrastructure and technology and emergence of social media networks, among other antecedents (Capocchi, Pierotti and Amaduzzi, 2019; Phi, 2019; Bourliataux-Lajoinie et al., 2019; Koens, Postma and Papp, 2020). As a result of these causes, congestion in European destinations is increasing, safety concerns are proliferating, and the overall cost of living is rising,

among other consequences (Capocchi, Pierotti and Amaduzzi, 2019; Martín, Martínez and Fernández, 2018; Kruczek, 2019; Milano, 2018; Bourliataux-Lajoinie et al., 2019). Understanding and advancing research on the antecedents and consequences of overtourism will help destinations and other stakeholders in the tourism industry adapt their practices to create a more sustainable balance for the level of tourism.

1.2.   Research Problem

The phenomenon of overtourism has strained many European destinations and their residents to their limits (Phi, 2019). Not only are the previously mentioned statistics of overtourism in Europe alarming, the repercussions which are proliferating in destinations raise the concern for immediate action. Due to the replacement of long-term local tenants with short-term tourist accommodations, Venice has become the most expensive Italian city to live in (Martín, Martínez and Fernández, 2018). Similarly, Kraków showed a 63% annual increase of tourist rentals in 2017, also resulting in higher costs of living for locals (Kruczek, 2019). As a result, increasingly many locals of these cities are relocating (Martín, Martínez and Fernández, 2018; Kruczek, 2019). Martín, Martínez and Fernández (2018) describe that Barcelona is faced with security concerns due to the common use of drugs and alcohol by tourists. Phi (2019) raises concern that some of Dubrovnik's cultural sites have been significantly damaged by the constant flow of tourists. These consequences of overtourism only skim the surface of the true impacts of the phenomenon.

Overtourism is undoubtedly a present and growing problem in Europe. To begin to find solutions to the issue, the primary cause for the phenomenon must be addressed. Although uncontrolled development and poor management of the tourism industry is the main cause regarding the management of destinations, consumer behavior is the core reason for the overtourism problem (Capocchi, Pierotti and Amaduzzi, 2019). Tourists flock to certain destinations due to a variety of causes in such volume that destinations struggle or are unable to adapt to (ibid). Due to this behavior, the aforementioned repercussions of overtourism are ultimately caused. Institutions governing these destinations, therefore, are in need of methods to reduce tourism levels in order to combat these growing negative impacts of the industry. In other words, these methods need to deter tourists from traveling to these

overtouristed destinations. Therefore, to secure the sustainable future of the tourism industry, deterrents against tourism must be researched and introduced by these institutions.

These potential deterrents must be researched specifically on their effectiveness to reduce tourism intention. However, the effectiveness of these deterrents is affected by multiple factors. One of the factors which may have a significant impact is the prior knowledge a tourism consumer may have about a destination. The knowledge level of a potential tourist may impact how they perceive a deterrent; If a potential tourist is more knowledgeable about a destination, for example, it may be that the introduced deterrents are not as effective for them as purchase barriers may be consequently reduced and they know more about what the destination has to offer. This is a key factor to research and for institutions to consider when creating new tourism policy.

Nevertheless, tourism cannot be completely eradicated. The problem is multi-faceted as many of the economies of these overtouristed destinations are critically dependent on the tourism industry (Martín, Martínez and Fernández, 2018). For example, 18% of Barcelona's GDP came from tourism in 2017 (ibid). Additionally, the tourism industry has ties to various stakeholders, each with unique and often conflicting interests (Phi, 2019). Governments, residents and any businesses related to or supported by the industry must be considered and consulted when making tourism management decisions. For these reasons, solving the issue of overtourism is a challenging task, but far from an impossible one.

1.3.   Research Questions

There were three main research questions for this study:

- What are the antecedents and consequences of overtourism?

- How effective are deterrent mechanisms employed by tourism destinations against overtourism?

- What is the role of consumers' prior knowledge on their tourism behavior?

1.4. Research Objectives

The above section outlined the research questions of this literature review and overall study. Therefore, the main objectives of this study were to examine the antecedents and consequences of overtourism, to assess the effectiveness of deterrent mechanisms employed by tourism destinations and to identify the role of consumers' prior knowledge on their tourism behavior.

2. LITERATURE REVIEW

2.1. Introduction

The concept of overtourism is a growing concern, and consequently, topic of discussion in literature as the phenomena grows throughout cities in Europe. This literature review will discuss the existing research on overtourism background, implications, causes, solutions and related discussions. Additionally, relevant theory of deterrents and implications of prior knowledge will be connected to the concept of overtourism and will act as the basis for the study based on the findings of this literature review.

2.2. Background on Overtourism
2.2.1. Defining Overtourism

To begin to describe the term overtourism, we must first identify the meaning of tourism itself. According to Heslinga (2018), tourism is the "sum of the phenomena and relationships which arise from the interactions between tourists, business suppliers, host governments, and host communities." The tourism industry has grown and diversified its channels of consumption greatly in the last fifty years (Perkumiene and Pranskuniene, 2019). However, this growth and diversification has ultimately led to the concept of overtourism.

Due to the evolving nature of tourism and varying impacts on destinations, there are a multitude of definitions for overtourism. The origin of the term itself can be traced to Skift, a global travel industry intelligence website (Koens, Postma and Papp, 2018). Skift claims to have created the term in 2016 and owns the trademark for

'overtourism' (ibid). The majority of definitions of overtourism cite the deterioration in the quality of life for residents and the quality of experience for visitors due to excessive amounts of tourists (Koens, Postma and Papp, 2018; Bourliataux-Lajoinie et al., 2019; Perkumiene and Pranskuniene, 2019; Capocchi, Pierotti and Amaduzzi, 2019). Additionally, overtourism is defined as the absence of good tourism management and uncontrolled development and growth in the sector (Koens, Postma and Papp, 2018; Capocchi, Pierotti and Amaduzzi, 2019). Koens, Postma and Papp (2020: 3) identify that overtourism reflects the challenge itself of managing the tourist flows or urban destinations. Simply a feeling by tourists, residents, hosts or other party that there is an excess of tourists in an area also is described as overtourism (Koens, Postma and Papp, 2018: 4). Coca-Stefaniak et al. (2016) and Bourliataux-Lajoinie et al., (2019) link overtourism to heightened resistance to tourism, congestion, failing infrastructure. However, this is not the focus for all literature when defining the term.

Some literature defines the concept more towards how overtourism changes the landscape and atmosphere of a destination. Perkumiene and Pranskuniene (2019) state that overtourism can also be characterized with environmental changes in the destination and Goodwin (2017) explain the concept as something that changes the character of a destination and causes it to lose authenticity. Goodwin (2017) also includes the element of tourist pressure in his definition: a feeling of frustration, annoyance and unease resulting from excessive amounts of tourists and a reduction in the quality of life. Tourist pressure is the "usually calculated by the ratio between the number of inhabitants and the number of daily tourists" and overtourism is the "subjective perception of the tourist pressure in a place" (Bourliataux-Lajoinie et al., 2019: 2). Tourist pressure is a key definition of overtourism, as attempts to quantify overtourism in a destination.

Overall, overtourism is a "complex and multilayered phenomenon" (Benner, 2019: 2) unique to every destination and perspective. The variety in these definitions and viewpoints of overtourism exemplify the emerging nature of the concept; the meaning of the phenomena itself has not been completely agreed upon in literature. Nevertheless, the major components of defining overtourism are congestion of

destinations, reduction in resident quality of life and changes in the destination's environment as a result of large amounts of tourists.

2.2.2. History of Overtourism and Related Discussions

Despite the term 'overtourism' having emerged from media discourse in 2016, debates on the harmful effects of tourism appeared in literature as early as the 1960's and destinations have been faced with tourism-related issues long before then (Capocchi, Pierotti and Amaduzzi, 2019; Perkumiene and Pranskuniene, 2019; Phi, 2019). Overtourism is by no means a "new phenomenon" (Perkumiene and Pranskuniene, 2019: 5). In the 1960's, the majority of discussions focused on the harm tourism causes to the local environment and the negative perceptions of residents (Capocchi, Pierotti and Amaduzzi, 2019). By the 1970's, research in the field began to focus on the "impact of overexploitation of tourist sites and the reactions of local residents" (Bourliataux-Lajoinie et al., 2019: 1). In the 1980's, the concept of destination carrying capacity was introduced into the discussion (discussed further in section 2.2.3) in addition to more environmental and sustainability perspectives on tourism (ibid). These concepts built a strong city-focused base for the discussions to come.

Since the 1990's, the overtourism discussion in literature has specified its angle towards "placing greater emphasis on the responsibility of the sector's actors and individual tourists" (Capocchi, Pierotti and Amaduzzi, 2019: 8). Since the introduction of the term 'overtourism' in 2016, new elements in the discussion include a deeper "level of level of awareness of the possibly damaging effects of the permanent quantitative growth of mass tourism" (ibid: 8) and a greater focus on tactical policy proposals to combat the issue. The term 'overtourism' has been criticized for its use as a media buzzword and the lack of grounding to theory the concept pertains in academic literature (Phi, 2019; Capocchi, Pierotti and Amaduzzi, 2019). As seen *in Figure 1* from Capocchi, Pierotti & Amaduzzi's (2019) work, the term 'overtourism' exploded in its use in the media around mid-2017, further exemplifying the use of the term as a marketable and accessible media buzz-term noted to have little "explanatory value" (ibid: 7).
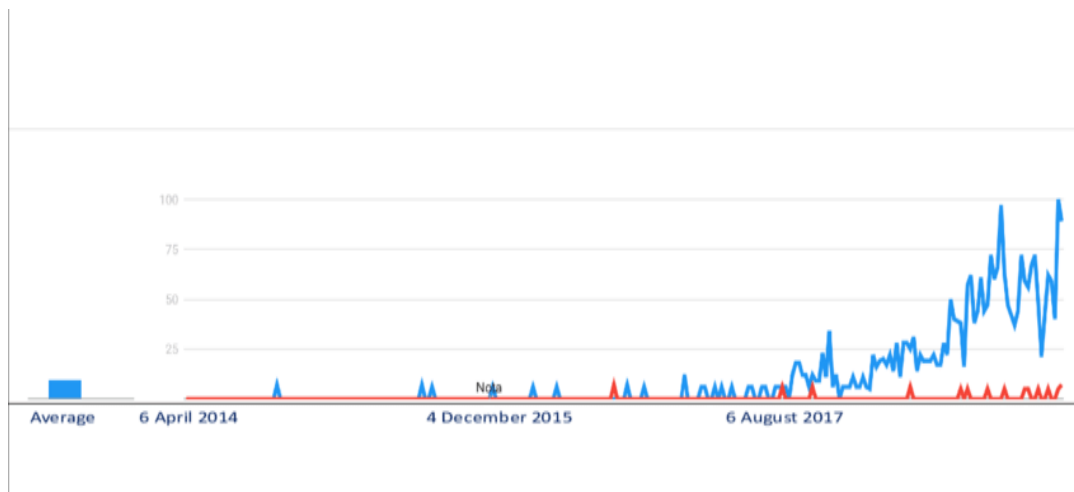
Figure 1: "Google Trends: Use of "Overtourism" and "Over-tourism" (Capocchi, Pierotti and Amaduzzi, 2019: 7).

Nevertheless, the term and overall concept of modern 'overtourism' has transitioned from informal media discourse into academia (ibid). Thematically, Phi (2019: 3) describes that the literature on overtourism from 2016 onwards falls under four "inter-related themes, each with a main 'character' (i.e. tourists, locals, cities and the travel industry)." These themes will be described in later sections in detail.

2.2.3. Carrying Capacity

As mentioned in section 2.2.2, the concept of 'carrying capacity' was introduced into tourism management literature in the 1980's (Bourliataux-Lajoinie et al., 2019). According to the United Nations World Tourism Organization (UNWTO), the tourism-carrying capacity of a destination is "the maximum number of people that may visit a tourist destination at the same time, without causing destruction of the physical, economic, and sociocultural environment and an unacceptable decrease in the quality of visitors' satisfaction" (Koens, Postma and Papp, 2018: 2). Essentially, carrying capacity in regard to tourism is the level to which tourism can coexist with a destination without causing serious negative consequences (Koens, Postma and Papp, 2018; Capocchi, Pierotti and Amaduzzi, 2019). Capocchi, Pierotti and Amaduzzi, (2019: 7) point out that this capacity "may be higher or lower depending on the physical characteristics of the destination and residents' attitude, loyalty and pride." Bourliataux-Lajoinie et al., (2019) adds that the density of tourism interest points within a destination generally decrease the overall capacity.

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When discussing the concept in a city context, Barcelona is a prime example. Barcelona's Tourism Activity Report from the year 2016 displays the percentage of residents that "consider the city to have reached its limit of capacity went from a 25% in 2012 to a 48.9% in 2016, a fact that evidences a latent social conflict" (Martín, Martínez and Fernández, 2018: 2). This perceived decrease in carrying capacity occurred simultaneously as the city's tourism grew exponentially, from 1.73 million tourists in 1990 to 15.4 million tourists in 2017. (Martín, Martínez and Fernández, 2018). Carrying capacity is a key element to describing the state of tourism in a city destination and can ultimately assist destinations find a level of tourism which does not cause negative consequences. Some authors describe carrying capacity as a broader topic of crowding pressure in cities. The World Economic Forum (2017) highlights this topic in their study of local populations compared to overnight visitors in major European cities struggling with overtourism. The study argues that if sustainable tourism management measures are not established in cities such as Venice (1:360 resident-visitor ratio), Dubrovnik (1:33) or Paris (1:8), the carrying capacities of these cities will quickly run out and leave the cities with greater negative impacts (World Economic Forum, 2017). The World Economic Forum (2017) also cites Santorini, Greece) and Cinque Terre, Italy as having already surpassed capacity, but does not provide a resident-visitor ration for them. The main issues associated with carrying capacity or crowding pressure is the challenge of building and maintaining infrastructure to keep up with the demand of tourists (Capocchi, Pierotti and Amaduzzi, 2019). With a lack of management and policy, these cities will suffer under the tourism industry.

2.2.4. Growth of the Tourism Industry

The tourism industry has grown rapidly and concurrently with urbanization in the previous decades (Koens, Postma and Papp, 2018). According to the United Nations, "in 1990, 43% of the world's population lived in urban areas; by 2015, this share had grown to 54% and is expected to reach 60% by 2030" (ibid: 4). Simultaneously, international tourists have increased "from 25 million international arrivals in 1950, to over 1.3 billion in 2017" (Koens, Postma and Papp, 2018: 4) which the UNWTO forecasts will continue to grow "3.3% annually until 2030 a year in which 1.8 billion tourists will cross borders" (ibid: 4). The focus of overtourism on primarily European cities in media is not overstated. The UNWTO emphasizes that half of the 1.3 million

international tourists were taken in by Europe in 2017, with the three most tourist-crowded cities being Barcelona, Venice and Dubrovnik (Phi, 2019). Problematic is the rapid urbanization combined with the growing tourism industry. The factors which have led to this growth will be discussed in section 2.2.6 in detail. Many tourists are urban tourists and therefore both of these factors cause severe strain on cities as their carrying capacities are passed. Capocchi, Pierotti and Amaduzzi (2019) argue that understanding these two kinds of rapid growth affecting cities is key to developing sustainable urban tourism practices and managing the industry effectively so that the urban populations not only benefit from it, but also support it. Perkumiene and Pranskuniene (2019) advocate for degrowth in the industry to create more sustainable practices and benefit the local communities under the pressure of overtourism. On the other hand, the UNWTO is a key advocate of the "need for constant tourism growth" (Phi, 2019: 4) regardless of the challenges of overtourism.

Constant growth is a key trend in the tourism industry. Even despite periods of political instability or concerns of security, Capocchi, Pierotti and Amaduzzi (2019) note that tourism continued growing in London and Paris with little significance. Similarly, Croce (2018) forecasts constant growth over the following decade despite any crises which may temporarily negatively impact the development of tourism. Croce (2018) also elaborates that the allocation of tourists may change as the overall number of tourists increase; he alludes to a constantly evolving and growing industry. The growth of the tourism industry is a crucial element to consider when planning long-term management strategies for overtourism in Europe.

2.2.5. Factors of Destination Choice

Previous sections have defined the concept of overtourism, and key elements related to the phenomenon. However, an important factor in understanding the roots of overtourism is comprehending the process of destination choices by individuals and what factors influence those choices. When making a choice for a destination to travel to, there are two factors which influence the decision: the type of person and their purpose or motivation for travel (Qiu, Masiero and Li, 2018; Lee & Crompton, 1992; Plog, 1974). According to Qiu, Masiero and Li (2018: 2), these are the "personality perspective" and the "motivation perspective" in destination choice. The personality perspective suggests that different personality traits are connected to

certain travel destination choices (Qiu, Masiero and Li, 2018). The factor of the type of traveler also includes elements of age, gender, nationality, ethnicity, religion, socioeconomic status and the size and type of their travel group; these factors also influence their final choice of destination (ibid). On the other hand, the motivation perspective is usually specific to the trip an individual is planning (Qiu, Masiero and Li, 2018). Dann (1981) describes the two forces of travel motivation, the push and the pull factors. The push factor describes the motive for an individual to leave their home and the push factor describes the motive which "drive tourists toward a destination" (Dann, 1981: 191). These factors provide insights to the underlying motivations and reasons for tourists to visit certain destinations and provide grounding for overtourism research.

In addition to the motivations for tourism, another primary initiator to destination choice occurs during the information gathering process (Qiu, Masiero and Li, 2018). Qiu, Masiero and Li (2018: 8) argue that "the basis for the formation of visit intention" is the "primary information possessed by tourists and secondary information collected from other channels." According to Alonso-Almeida, Borrajo-Millán and Yi (2019), there are four channels where information about a destination is transferred from. These four channels include information which the destinations provide, information from "distribution channels such as travel agencies or tour operators," information received from others by word of mouth (WoM) or through the internet by e-word of mouth (eWoM) and information gathered from personal experiences in the destination (ibid: 2). Most of these information channels are not controlled by the destinations themselves, yet they are a key initiator in the destination choice process. These channels are difficult to manage if destinations hope to make changes to their tourism levels.

After the initial stages of personality, motivation and information gathering which begin to determine destination choice, there is a process coined by Karl et al. (2015) which describes the following stages of the process. This process is displayed in *Figure 2.*
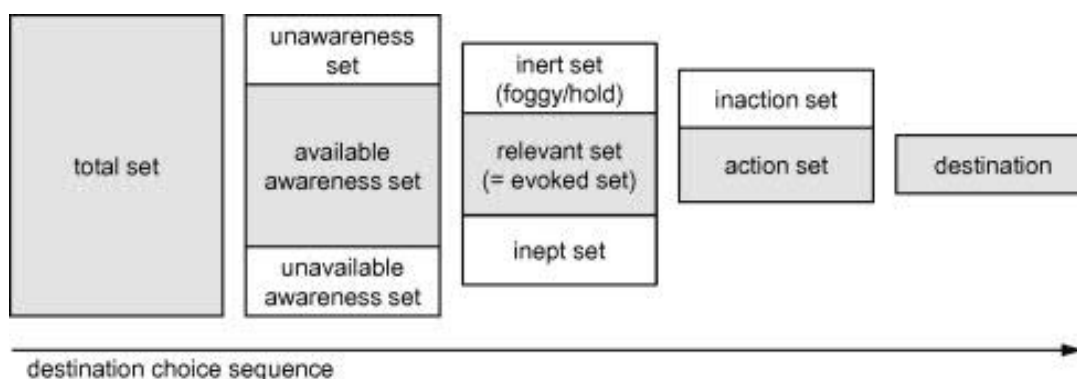
*Figure 2: "*Destination choice set structure (Karl et al., 2015, p. 49)" (Qiu, Masiero and Li, 2018: 6).

Three main stages constitute the destination choice process. Crompton (1992) divides the process to the "formation of an available awareness set, the reduction to the relevant set, and the selection of the final destination" Qiu, Masiero and Li (2018: 11) argue that although these stages are valid, the brand awareness of certain destinations is a required element for individuals to make a choice. The overall process begins with the total set which is the category with all possible destinations (ibid). This category is then divided into three subcategories, the unawareness set (destinations tourists do not know about), the unavailable awareness set (destinations tourists know about but are inaccessible as a result of particular restrictions) and finally the available awareness set (destinations which tourists know of and are accessible to them) (Qiu, Masiero and Li, 2018). The available awareness set is then divided by tourists into the next category which is made up of the inert set ("destinations toward which tourists are indifferent"), the inept set (destinations which tourists have negative perceptions for) and the relevant or evoked set (destinations tourists are "willing to consider" and gather more information on (ibid: 6). The inept set contains the subcategories of "foggy" and "hold," the first consisting of destinations for which tourists cannot judge due to a lack of information, and the latter consisting of destinations for which tourists are knowledgeable about but are still indifferent towards (Qiu, Masiero and Li, 2018: 6). Destinations can shift between these sets due to changing perceptions or new personal experiences. The relevant of evoked set is divided into the inaction set and the action set, depending on if the tourist acts on their choices of travel, and from the action set, the final destination is chosen (ibid). This process is relevant to overtourism as tourists have gone through this process to decide their visit to a destination struggling with overtourism.

Additionally, if regulation is to be enacted, it needs to partially interrupt this process for some tourists, causing a different categorization at a certain stage of this process.

2.2.6. Causes of Overtourism

In addition to the decision-making process for destination choice, it is important to identify the root causes of overtourism and only then begin to discuss possible resolutions. Literature in overtourism often divides the causes into endogenous and exogenous categories. In other words, categorizing the causes into internal causes to visit destinations and external causes to visit destinations (Bourliataux-Lajoinie et al., 2019). However, these categorizations are quite rudimentary as some causes such as social media influence can come internally from the destination and externally from tourists or other groups (Koens, Postma and Papp, 2018). Nevertheless, identifying causes for overtourism is a crucial element to begin to manage the issue in affected cities. The causes for overtourism can alternatively be divided loosely into economic, cultural, infrastructural, technological innovation and marketing categories.

Beginning with the economic causes, primarily, poor management, "uncontrolled development" and the complexity of the different levels of the tourism supply chain are cited as main reasons for overtourism by multiple sources (Capocchi, Pierotti and Amaduzzi, 2019; Phi, 2019; Bourliataux-Lajoinie et al., 2019; Koens, Postma and Papp, 2020). Additionally, overall "increasing affluence in well-populated areas of the world" (Croce, 2018: 8) and a growing middle class with increasing purchasing power across developed and emerging economies are cited to be key reasons for overtourism as well (Koens, Postma and Papp, 2018; Capocchi, Pierotti and Amaduzzi, 2019; Bourliataux-Lajoinie et al., 2019). The increasing overall demand for travel and the resulting growth of the industry are also discussed as a cause of overtourism (Capocchi, Pierotti and Amaduzzi, 2019; Croce, 2018). The economic causes for overtourism are also discussed in terms of rapid urbanization and general economic development by Capocchi, Pierotti and Amaduzzi (2019). According to Krippendorf (1987: 6) in his text 'The Holiday Makers,' he described the prioritization of economic growth as "destructive" quality of the industry. Phi (2019: 4) responds that this type of "pro-growth agenda" is promoted by large tourism organizations such as the UNWTO still today and is "deeply embedded in the policies and operations of

many local/national authorities within the tourism system." This is undoubtedly a concerning trend for the future of the industry.

Bourliataux-Lajoinie et al., (2019) adds to these economic causes a factor based on Europe. The authors find that despite the "unified currency in the euro area, the difference in standards of living between countries makes certain destinations particularly inexpensive for tourists" (ibid: 5). For example, many central and northern Europeans travel to Portugal due to the lower cost of living, which is "around 20-30 per cent lower" than their home nations (Bourliataux-Lajoinie et al., 2019: 5). This travel trend occurs in other parts of Europe as well and contributes to overtourism as tourists target cheaper destinations (ibid). Finally, underlying economic and cultural trends are also causing overtourism. Out of these trends, the most significant is the work-leisure industrial model, which is embedded into economies globally (Phi, 2019). Moreover, this model of "'work-home-free time-travel', has continued to expand" (ibid: 4). Phi (2019: 4) continues that "under this model, travel is predominantly used as a way of recovering from the routine-weary work and home." Resulting from this model, seasonality of travel occurs. Vacations from work are often during similar times of the year, resulting in mass travel during these holidays and therefore, the effects of overtourism (Phi, 2019). Another global trend claimed to be causing overtourism by Capocchi, Pierotti and Amaduzzi (2019: 9) is the "imitation effect" of emerging economies in respect to the tourist behavior of Western economies. This effect is causing similar patterns of tourism around the world, resulting in masses of tourists visiting the same destinations. These economic and overall trends causing overtourism are general global trends adding to the issue which are difficult for individual destinations to reverse.

Transitioning into the cultural category, Bourliataux-Lajoinie et al., (2019: 4-5) asserts that:

> "global cultural syncretism has also contributed to a new type of tourism based on low-cost, all-inclusive packages and unrestricted spring breaks for students. The latter, previously a typically American practice at sites like Cancun (close to the US, with mild weather and attractive in terms of purchasing power) have been transposed by European students staying in Ibiza, Lloret del Mar or Zrce Beach in Croatia."

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Similar to the "imitation effect" discussed above, cultural syncretism describes how cultures around the world are becoming more parallel in nature, causing similar travel trends and therefore overtourism (ibid). This cause affects tourist's behavior in a more discreet manner and is difficult for destinations to take into account when resolving issues surrounding overtourism.

Economic and cultural causes for overtourism serve as the core causes for the issue, however, there are infrastructural causes mainly related to transportation which may be more tangible for destinations to begin to reverse or impact (Capocchi, Pierotti and Amaduzzi, 2019; Phi, 2019; Bourliataux-Lajoinie et al., 2019; Koens, Postma and Papp, 2020). Causes for overtourism in this category include rapidly developing transport infrastructure, decreasing overall costs for travel and transportation, the simplification of travel, improved accessibility to destinations, and the introduction of low-cost airlines such as Ryanair and EasyJet (Koens, Postma and Papp, 2018: Phi, 2019; Capocchi, Pierotti and Amaduzzi, 2019; Bourliataux-Lajoinie et al., 2019). Capocchi, Pierotti and Amaduzzi (2019) also cite the increasing frequency of large cruise ships in Europe as a major cause for overtourism due to the large masses of people entering a city at once. The negative effect of cruise ships docking in cities has been seen especially in Venice, due to the lower overall carrying capacity of the city (ibid). These causes and trends have made travel simpler and cheaper in Europe, and therefore increased tourism levels leading to overtourism. Despite being a large industry, transportation costs and infrastructure can be affected by cities struggling with overtourism with new policies.

Lower costs and simpler travel influence tourist behavior to a great extent, however technological innovation in regard to new travel-based platforms and social media have had a great effect on rising tourism levels according to many authors (Croce, 2018; Capocchi, Pierotti and Amaduzzi, 2019; Bourliataux-Lajoinie et al., 2019; Phi, 2019). The majority of literature cite how technological innovation has been a key contributor to overtourism, especially new travel-based platforms such as peer-to-peer rental accommodation site Airbnb. The growth of these sharing platforms is the key cause for tourism gentrification and the rise in housing costs in cities according to Phi (2019). Additionally, Bourliataux-Lajoinie et al. (2019: 7) discuss applications such as the "Monument Tracker" which "propose the most-used routes in a city,

increasing the tourist density in some areas at the expense of others." These types of platforms and apps are causing cities to become more infiltrated with tourism and are difficult to slow down.

Another technological innovation which has contributed to overtourism is the rise of social media. Social media and other communication platforms such as TripAdvisor are allowing travelers to co-create value by evaluating their experiences, sharing and commenting on content from trips and "streamlining" their opinions which therefore "influence demand," adding to the effect of overtourism (Capocchi, Pierotti and Amaduzzi, 2019: 10). Bourliataux-Lajoinie et al. (2019) also discuss how trends which appear on social media are similar to fashion trends and consequently cause issues for cities due to a quick rise in popularity without necessarily enough time for the destination to adjust. The authors describe how tourist sites and blogs posted about "'secret' destinations such as Croatia or Macedonia" when overtouristed cities began making headlines. However, these destinations then grew quickly in popularity and began showing signs of overtourism as well. (ibid: 4-5). Similarly, Alonso-Almeida, Borrajo-Millán and Yi (2019: 3) discuss how user generated content (UGC) "influences the decision-making of travelers regarding where they would like to travel" and even asserts that according to travelers, social media is the "most credible tool choose destinations to visit." As discussed previously, the concept of Word of Mouth (WoM) or eWoM in regard to social media is an influential tool in destination choice which consumers find reliable (Alonso-Almeida, Borrajo-Millán and Yi, 2019). Social media and other online communication platforms will continue to influence the decision making of users in regard to destinations and remain an accurate tool to define the preferences of consumers in their travels (ibid) Due to this heightened ability for consumers of tourism products and services to communicate, overtourism is perpetuated.

Frequently, traditional media such as television or movies also act as a cause for overtourism. The tourism levels in Dubrovnik, Croatia experienced a drastic increase after the popular series *Game of Thrones* was shot there (Capocchi, Pierotti and Amaduzzi, 2019). Similarly, films "portraying wild stag parties… in Budapest have revived the fad and generated a revival of this type of "limitless" tourism" (Bourliataux-Lajoinie et al., 2019: 4-5). This type of media often distorts the

perceptions of the viewer on the destination and create a desire for masses of tourists to experience a place or a lifestyle first-hand.

Traditional media, social media, other online communication platforms are considered the external 'marketing' of a destination. However, destinations also create marketing for themselves internally. This is another possible cause of overtourism as the goal of destination marketing is to attract more visitors to destinations, which is problematic as this marketing has the potential to either create or contributing to existing overtourism. Hutton (2018) and Phi (2019) assert that the increasing spending destinations allocate for marketing is a main cause for overtourism in Europe. Destinations often promote themselves through Destination Marketing Organizations (DMOs) (Bourliataux-Lajoinie et al., 2019). These organizations have the main goal of attracting tourists, which is concerning for popular destinations struggling with overtourism if their tactics are not changed. For example, in Barcelona, a marketing strategy was employed in 2016 which created "a strong identity for the territory" through embracing culture and life in the city with phrases such as "Barcelona shopping line and fiesta" and "Barcelona Bona Nit" (Bourliataux-Lajoinie et al., 2019: 5-6). In parallel with marketing, the branding of a destination and its connection to overtourism has been a main line of research in literature. Séraphin et al. (2019: 9) has found that "universal stereotype branding strategies often result in mass tourism" because the "strategy's main focus is attracting as many visitors as possible to the destination." Séraphin et al. (2019: 10) researched the branding of European destinations which struggled with overtourism during the summer of 2017 ("Barcelona, Cambridge, Dubrovnik, Florence, Oxford, Rome, Stratford-on-Avon, Venice, and York") and found that each used a "universal stereotype strategy" with "generic slogans and logos." This strategy is noted to be a fairly universal strategy for DMOs in Europe and Séraphin et al.'s (2019) study establishes a connection between this type of branding and tourists clustering in the same destinations.

Each of the causes outlined in this section are important to understand when destinations begin to unravel their problems with overtourism. Each category of causes for the phenomena offers unique challenges for destinations and some are irreversible. It is crucial for destinations to begin creating policy for the complex issue

of overtourism and the causes outlined here may allude to possible paths to solutions. However, the positive impacts of tourism must be accounted for in these solutions which often create barriers for the regulation of tourism (ibid). These positive impacts are outlined in the following section.

2.2.7. Positive Impacts of Tourism

Despite being a challenge facing many European destinations, it is important to highlight positive impacts of tourism in cities as the industry is crucial to the livelihood of multiple destinations. Additionally, in regard to creating policy to combat overtourism, it is highly important to emphasize the positive effects tourism has on locations and for policy makers to comprehend that a balance of tourism must be found. Eradicating tourism to excess would be detrimental to certain destinations which depend on the activity (Kruczek, 2019; Martín, Martínez and Fernández, 2018; Alonso-Almeida, Borrajo-Millán and Yi, 2019). Positive impacts of managed tourism include increased profits for cities, the generation of employment, the improvement of the quality of life for locals, the development of infrastructure, cultural development, and innovations of the business network (Kruczek, 2019; Martín, Martínez and Fernández, 2018; Koens, Postma and Papp, 2020). Martín, Martínez and Fernández, (2018: 4) add that the "interaction with foreign cultures" is a key benefit of tourism for a destination but do not identify that the type of interaction determines whether the impact is positive or negative. Martín, Martínez and Fernández (2018: 4) also cite "the preservation of the local identity" as a positive impact. However, the local identity quickly deteriorates with greater levels of tourism as locals relocate and tourists cause the deterioration of cultural sites (discussed more in section 2.2.8) (Capocchi, Pierotti and Amaduzzi, 2019; Benner, 2019). Only the positive impacts related to economic and infrastructural benefits are maintained with tourism classified as overtourism (ibid).

The positive impacts of tourism are crucial for the economies of multiple cities in Europe. For example, tourism is a key industry in Kraków (Kruczek, 2019). In 2017, "12.9 million people visited Kraków as tourists… [and] 10% of employment in the Kraków economy" is from tourism. Moreover, tourism is "considered to be one of the strategic sectors of the Spanish economy" (Martín, Martínez and Fernández, 2018: 1). In 2017, tourism "accounted for 14.9% of the national GDP and directly supported

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2.8 million jobs, more than any other sector in the economy" (ibid: 2) In Barcelona specifically, the percentage of GDP coming from tourism was up to 18% in 2017 (Martín, Martínez and Fernández, 2018). Clearly, tourism is a vital sector for the economies of many European cities and policy needs to account for the dependence of cities on the activity. Nevertheless, the negative impacts of tourism activities often overshadow this dependence.

2.2.8. Negative Impacts of Tourism

With tourism comes tourism-related problems, which have undoubtedly become larger and more difficult to tackle with an increase in tourism. According to Kruczek (2019: 9), overtourism causes conflict "between three parties;" residents, tourists and entrepreneurs. Each stakeholder in the tourism equation have specific needs and desires. For instance, residents want no disruptions in their lifestyle from tourists, while tourists want to relax and experience a location, and entrepreneurs want to develop their business and increase profits (ibid). These unique desires cause conflict as their goals often overlap. Overtourism causes many kinds of problems for each of these stakeholders; following are descriptions of the problems overtourism causes.

Primarily cited in overtourism literature is the overall congestion and overcrowding of public spaces and attractive locations mass tourism causes (Capocchi, Pierotti and Amaduzzi, 2019; Martín, Martínez and Fernández, 2018; Kruczek, 2019; Milano, 2018; Bourliataux-Lajoinie et al., 2019). The issue of congestion relates to the previously discussed concept of carrying capacity and is claimed to be the number one source of dissatisfaction among residents of destinations dealing with overtourism by Milano (2018). Bourliataux-Lajoinie et al., (2019) and Milano (2018) expand the issue of congestion to encompass an overload of people using transportation, long waiting times and increased challenges of managing the flow of people in parking, access to locations and the city center.

Related to congestion is the issue of increased pressure on infrastructure and other public spaces, cited as another key problem caused by overtourism by Koens, Postma and Papp (2020) and Benner (2019). With more people also comes more demand, resulting in increasing prices of goods, services, rentals, tickets and an

overall increase in the cost of living (Benner, 2019; Martín, Martínez and Fernández, 2018; Milano, 2018; Alonso-Almeida, Borrajo-Millán and Yi, 2019). Milano (2018: 7) describes this impact as a "drop in residents' spending power." Additionally, an increase in tourism in an area has resulted in the "substitution of local businesses with others more tourist-oriented" (Martín, Martínez and Fernández, 2018: 4) and excessive advertising and extreme commercialization within growing tourist areas (Kruczek, 2019: 3). This increase in living costs undeniably increases pressure and causes irritation for local residents.

In addition to increased demand and prices for goods, services and other items, the demand therefore price has increased for accommodation within cities experiencing overtourism (Alonso-Almeida, Borrajo-Millán and Yi, 2019; Milano 2018; Martín, Martínez and Fernández, 2018; Kruczek, 2019; Benner, 2019). The increase in real estate prices includes both the purchase of land and rentals (Milano, 2019; Martín, Martínez and Fernández, 2018). Milano (2019) observes that land in overtouristed cities is often taken up to build more tourism infrastructure, reducing the supply of usable land for housing. Benner (2019) extends this argument to state that overtourism causes the privatization of spaces which would otherwise be public and therefore introduces elements of segregation into cities. Additionally, housing prices are increasing in rental markets such as Venice due to the "substitution of residential rentals with tourist ones" (Martín, Martínez and Fernández, 2018: 2) through online peer-to-peer platforms such as Airbnb. Due to this substitution, Venice has become the most expensive city to in Italy to live (Martín, Martínez and Fernández, 2018). Perkumiene and Pranskuniene (2019) establish the cause of this issue is that in popular locations, hosting an apartment on a night-by-night basis to tourists can yield more income than a long-term rental. Martín, Martínez and Fernández (2018: 11) claim that "the perception of negative impacts [by residents] is associated to a larger extent with vacation rentals platforms instead that with the rise in demand." The greatest concern with tourism growth by residents is based on the model of the growth rather than the rise in demand itself.

This trend causes the remaining long-term rentals for locals to be in short supply and therefore high in price. The increase in the cost of housing is causing local residents in affected cities to relocate (Capocchi, Pierotti and Amaduzzi, 2019; Martín, Martínez

and Fernández, 2018: 2). The depopulation of the cities not only is problematic for the local economy and maintenance of the local culture, but also causes gentrification (a change in the character of a part of a city) in the most affected districts (Milano, 2019; Benner, 2019; Kruczek, 2019: 3). For example, the city center of Berlin is experiencing gentrification due to increasing real estate prices, tourism and tourism development (Kruczek, 2019: 6) Kruczek (2019: 6) argues that despite the tourism industry bringing millions in profits for the Berlin, it has "left a negative mark" on its development (Kruczek, 2019: 6). Similarly, Kraków's city center and Old Town District are faced with depopulation and gentrification due to apartment buildings "transformed into hotels, hostels and apartments for tourists" (Kruczek, 2019: 7). Kruczek (2017: 7) also discussed how the Airbnb rental market has grown in Kraków, as over "11,000 apartments were rented via Airbnb" in 2017, with an overall tourist rental increase "of 63% annually." Resulting from these changes, over one thousand permanent inhabitants of the city are relocating annually despite the previously highlighted dependence on the tourism industry for the city. Finally, Barcelona is a prime example of what Ballester (2018: 3) calls "gentritouristification" due to the recent tourism resistance in the region (discussed further in section 2.2.9). Catalans find the city center of Barcelona to have become too expensive, as "foreigners have acquired secondary homes there, resulting in a significant change in the current population and an increase in average rents" (Bourliataux-Lajoinie et al., 2019; 3). Many Catalans have therefore relocated outside the city to more affordable areas not affected by what Bourliataux-Lajoinie et al., (2019: 3) calls a "veritable invasion." Each of these city examples presents a trend occurring across Europe as the tourism industry is creating pressure and causing people to leave their homes.

The relocation of residents and the gentrification caused by rising living costs and real estate suggest further impact of overtourism on cities related to the loss of culture and the traditional lifestyle of certain areas. Benner (2019: 4) connects overtourism to the "deterioration of local residents' identification with place" and a loss of the "authentic character" of a destination. Additionally, overtourism is claimed to disrupt the inhabitant's traditional lifestyle (Martín, Martínez and Fernández, 2018; Alonso-Almeida, Borrajo-Millán and Yi, 2019). Evidently, overtourism causes problems for the residents within affected destinations.

However, overtourism also has a direct connection to negative environmental impacts. These impacts include the excessive use of natural resources, increased waste production, an increase in litter, damage to habitats of animals, harm to the overall environment, degradation of cultural sites and concerns of environmental sustainability (Koens, Postma and Papp, 2018; Benner, 2019; Capocchi, Pierotti and Amaduzzi, 2019; Martín, Martínez and Fernández, 2018; Kruczek, 2019; Alonso-Almeida, Borrajo-Millán and Yi, 2019). Bourliataux-Lajoinie et al., (2019: 3) adds that overtourism adds issues of management of "drinking water, wastewater and waste management," creating complex management issues for cities nearing their carrying capacity. These issues highlight the long-term effects of mass tourism and are consequences for each of the stakeholders previously outlined: the residents, visitors and entrepreneurs.

The final negative impacts of overtourism include elements of behavior of tourists which cause disruptions and safety issues for residents. Primarily, many articles describing problems of overtourism cite noise, specifically from bars and clubs established primarily for tourists (Martín, Martínez and Fernández, 2018; Bourliataux-Lajoinie et al., 2019; Kruczek, 2019). Additionally, Martín, Martínez and Fernández (2018: 4) describe that the general trend of decreasing travel costs has "initiated a younger tourist demographic to move into Barcelona," causing incessant disruptions for residents. Kruczek (2019: 7) also explains that Kraków has become "a much less comfortable place to live" due to parties, loud music, shouting in the streets and "the incessant rattle of suitcase wheels." Disruptions are not the only issue caused directly by tourists. A general concern of safety due to masses of short-term visitors is relevant in many European cities. Martín, Martínez and Fernández (2018) state that overall insecurity, mainly due to an increased consumption of drugs and alcohol, are key problems caused by overtourism in communities. Each of these problems are difficult in nature to solve and require the cooperation of multiple parties to manage and mitigate.

Overall, these problems are varied and often complex in nature. Most issues created by overtourism leave consequences for the residents, however, also the experience of the tourists is affected with some of the issues such as congestion, environmental and cultural site degradation and general disruptions (Kruczek, 2019), Stakeholders

in the tourism industry nevertheless are minimally affected by these problems the industry itself causes, and therefore creating policy to mitigate these issues is a difficult task for cities facing overtourism (Kruczek, 2019). From research by Martín, Martínez and Fernández (2018: 11), "Economic impacts are assessed more negatively than social ones" which signals that the financial losses of citizens are the key reason "behind [their] rejection" of tourism (discussed further in section 2.2.9). Ultimately, the types and intensities of impacts which result from overtourism in a destination depend on the location, geography, context, type of tourist and the available activities (Martín, Martínez and Fernández, 2018). However, according to Alonso-Almeida, Borrajo-Millán and Yi (2019), the overall support for tourism due to these negative impacts has declined in Europe.

2.2.9. Protests, Tourismphobia, Trexit

The negative impacts of overtourism addressed previously have led to the emergence and "spread of terms such as 'overtourism' and 'tourismphobia' in the media" (Koens, Postma and Papp, 2018: 4). These surfacing of these terms indicate challenges of tourism management in urban destinations and the frustration of residents (ibid). Tourismphobia, also known as 'anti-tourism,' specifically describes the animosity and rejection towards tourists (Séraphin et al., 2019; Phi, 2019). Anti-tourism movements also have become increasingly common, which include:

> "demonstrations blocking passengers from leaving cruise ships stopping off in Venice by Venetian anti-tourists, damaging a tourist bus in Barcelona by a group of anti-tourists, signs of the type "Tourist go home!" and refusals to sell to tourists in certain places such as restaurants or exhibitions, museums and heritage places" Bourliataux-Lajoinie et al., 2019: 2).

These movements unite people against tourism and directly affect tourists in destinations (Séraphin et al., 2019). In addition to these terms denouncing tourism, Séraphin et al. (2018) proposed a new term "Trexit," combining the words tourist and exit. This strategy is considered drastic, as the term describes deliberately "stop[ping] visitors [from] coming in" (Séraphin et al., 2019: 1). However, some interpretations define Trexit as a "deliberate strategy by managers in tourist areas to stem the flow of tourists and offer another form of attractiveness" (Bourliataux-Lajoinie et al., 2019: 2). Each of these terms have emerged due to desperate need for management change in the tourism industry.

The public opinion of tourism in Europe overall has shifted quite drastically in the previous decade. From Alonso-Almeida, Borrajo-Millán and Yi's (2019) study of Barcelona's resident opinions about the level of tourism from 2007 to 2017, the perceptions of tourism have drastically shifted to negative. The results of the study can be found in *Figure 3.*
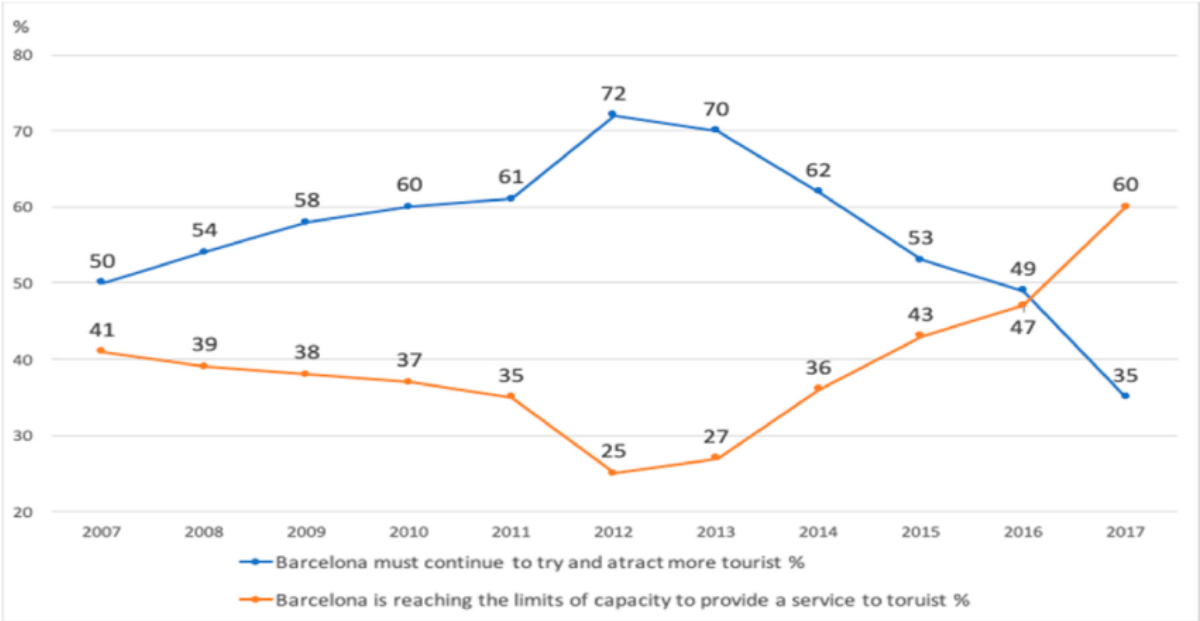
Figure 3: "Barcelona Citizens' opinion about tourism size. Own Elaboration" (Alonso-Almeida, Borrajo-Millán and Yi, 2019: 8).

In another study from the following year by Martín, Martínez and Fernández (2018), the figure of residents in Barcelona who are against tourism and its development rose to 38.6%, despite the previously noted dependence Barcelona has on the tourism industry and that the city has been "traditionally open to tourism" (ibid: 8). As a result of these attitudes and the general rejection of tourism due to the negative impacts outlined above, many opponents have taken action. The animosity towards tourism has ensued "assaults to restaurants, businesses and yachts; attacks on tourist buses, bikes damaged in tourist spots, and other acts of vandalism" (Martín, Martínez and Fernández, 2018: 1) in many European cities. These reactions are drastic in nature and mirror a need for immediate change from the residents of European cities overrun by overtourism.

The behavior of local residents while under pressure from mass tourism has been studied since 1975 (Doxey, 1975). The model created by Doxey (1975) identifies five stages of resident behavior as tourist pressure increases. *Figure 4* presents the development of these stages while compared to the rise in the number of tourists.
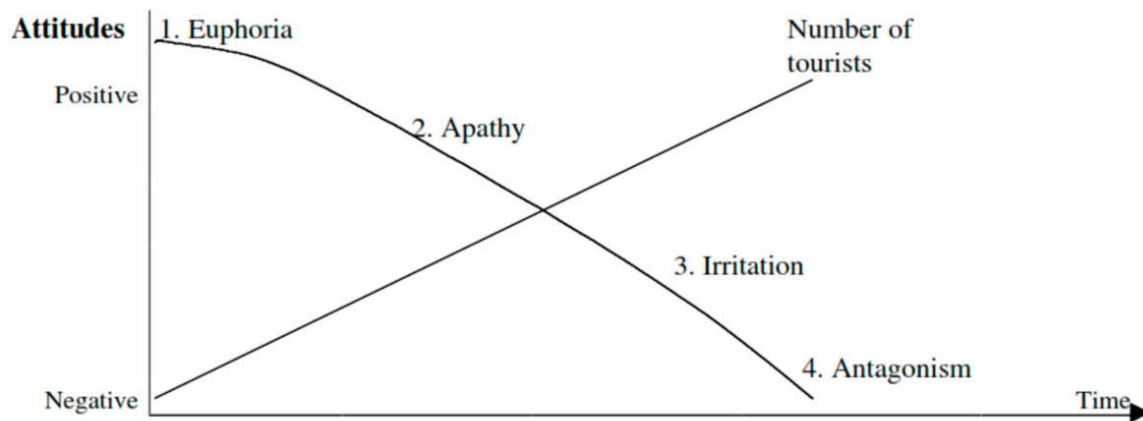
Figure 4: Graphical representation of Doxey's irritation index: Adapted from Doxey (1975), cited in Bourliataux-Lajoinie et al., (2019).

Stage 1 is euphoria; this stage defines the period of low to moderate tourist levels and the resulting economic development within a location (Bourliataux-Lajoinie et al., 2019). During this stage, residents value tourism activities in the area as they benefit from the creation of jobs, developments in infrastructure and the other previously mentioned tourism benefits and minimal consequences. Following is stage 2, apathy (ibid). This stage occurs when tourism continues to increase, begins to irritate residents and levels of tourism have become moderate to high (Doxey, 1975). The tourism industry develops more formally in the local economy and "feelings of relationship and hospitality are lost" (Bourliataux-Lajoinie et al., 2019: 2). During stage 3 of irritation, negative consequences of mass tourism such as disruptions, waste problems and degradation of areas are "perceived as more important than economic gain" (ibid: 2). Tourism begins to cause residents to reach a "breaking point" by this stage (Bourliataux-Lajoinie et al., 2019: 2). Stage 4 of antagonism is when residents perceive tourism as a "disruptor of everyday life" (ibid: 2). The last stage, not defined in *Figure 4,* is a stage in which a destination is forced to reinvent itself and accept that tourism has taken over certain elements which cannot be restored (Bourliataux-Lajoinie et al., 2019). These stages are useful for cities to

identify their stage and make changes before the impacts of tourism cannot be reversed.

2.2.10. Freedom of Movement

Despite the backlash on tourism activities, it is important to identify the concept of the right of people to travel, the freedom of movement. The freedom of movement is defined as the right to travel and the right to the mobility of an individual and "are recognized in international legal human rights instruments" (Perkumiene and Pranskuniene, 2019: 6). In contrast, according to Juss (2004), the right of free movement does not correlate to automatic free access to other nations. Nations must have legitimate reason or interest to put forth restrictions on the freedom of movement of individuals (Perkumiene and Pranskuniene, 2019). Currently, nations in Europe struggling with overtourism are not placing enough restrictions on travel according to Perkumiene and Pranskuniene, (2019), who argue that the current overtourism context does not align with the potential sustainable tourism context (See *Figure 5*).
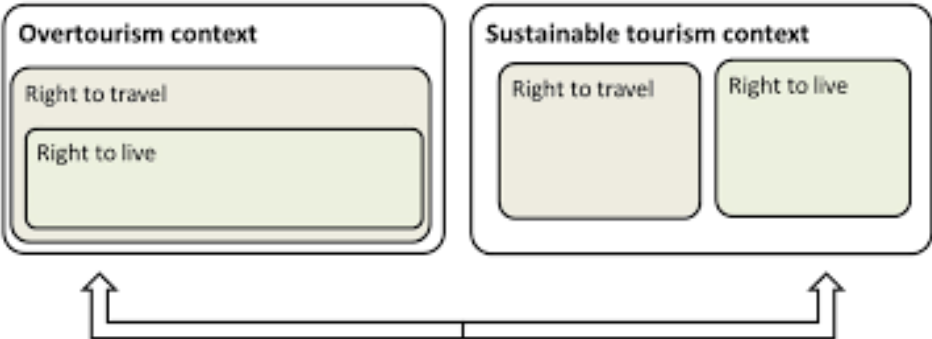
Figure 5: "Overtourism and sustainable tourism contexts. Between the right to travel and the right to live" (Perkumiene and Pranskuniene, 2019: 13).

Still, Perkumiene and Pranskuniene, (2019: 13) put forth that the "The rights of travelers are clearer and better protected…" than those of residents, which are broad and not as "effectively expressed." To create more sustainable tourism industries in cities across Europe, the rights of residents must be identified and put forth when considering further tourism development. Despite disagreements in the rights of different parties in the tourism industry, destinations do have legitimate reason to enact regulation on tourism if struggling with negative impacts of tourism outlined in

section 2.2.8. The proposed overtourism regulation or solutions take many different forms and are dependent on the destination and the specific overtourism problems they are faced with. The following section will delve into the limited existing and proposed solutions for overtourism in Europe.

2.3. Overtourism Solutions and Theoretical Grounding

2.3.1. Proposed Solutions to Reduce Tourism

Overtourism is a challenging issue to solve for a multitude of reasons. Overtourism has widespread negative impacts which were previously mentioned, however, the positive impacts of tourism cannot be ignored. Not only does overtourism provide multiple positive impacts for destinations, but many are also economically dependent on the activity (Capocchi, Pierotti and Amaduzzi, 2019; Bourliataux-Lajoinie et al., 2019). Additionally, challenging is the presence of multiple stakeholders in the tourism industry, and Kruczek (2018) discusses the need for a dynamic compromise between the parties. These factors among others make it difficult for destinations to propose policy on tourism regulation, despite the problem being imminent and pushing cities to their limits. Destinations require a sustainable strategy to combat overtourism which considers the wellbeing of the residents, balances the economic dependence of the city on the tourism industry, yet still offers tourists an attractive destination and experience.

It is worthwhile to mention the perspective of the UNWTO on overtourism 'solutions' prior to discussing more concrete solutions proposed by other authors. As a tourism growth-promoting organization, the UNWTO's recommendations for destinations already affected by overtourism simply alleviate the effects of the phenomena instead of reducing it (Koens, Postma and Papp, 2018). For example, the organization recommends destinations to "educate tourists on local customs," "stimulate events in off-peak months," "produce city guides and books highlighting hidden treasures" and "create safe cycling routes and stimulate bicycle rentals" (ibid: 8). The UNWTO is accused of simplifying the complex problem of overtourism and reducing it "into 'tame' policy problems, to be readily addressed by management solutions and individual agency" (Phi, 2019: 4). These recommendations are undoubtedly beneficial in temporarily alleviating the effects of overtourism, however, do not reduce the number of tourists overall (Phi, 2019).

Similar to some solutions from the UNWTO, the dispersal strategy for tourism management is popular among destinations. This strategy includes dispersing tourists throughout a destination instead of focusing tourism in a single district (Alonso-Almeida, Borrajo-Millán and Yi, 2019). For example, in Kraków, this strategy is being employed (Kruczek, 2019). The city is creating "new attractions" in non-central districts and constructing infrastructure such as bridges to simplify transportation to the new sights (ibid: 11). Kruczek (2019) claims that this tactic has been successful in the dispersal of tourists in the city and initiated growth in the new areas with new restaurants and events. The introduction of new technology which can be used to "communicate with tourists in real time in order to provide information and suggest alternative attractions" is another method suggested by Capocchi, Pierotti and Amaduzzi (2019: 14) to disperse tourists. These strategies reduce the pressure from a single area yet introduces tourists to new areas to overrun (ibid). Much like the recommendations of the UNWTO, the overall dispersal strategy fails as long-term solution (Alonso-Almeida, Borrajo-Millán and Yi, 2019).

Many destinations have identified the renting of apartments to tourists as a key cause for many of the negative impacts of overtourism. Consequently, many destinations have combatted this cause with bans on Airbnb rentals (Kruczek, 2019). For example, in Berlin, an overall ban on Airbnb was enacted by the local government in 2017 and a similar ban was also passed in Majorca (ibid). However, both of these bans have been lifted since 2017 due to increased supervision and cooperation with the platform (Kruczek, 2019). Nevertheless, many European cities are struggling to adapt to platforms such as Airbnb and are in the process of testing different kinds of regulation for the platform to reduce its effects on the city.

A central category of policy destinations is enacting policy which limits the number of tourists into a city either by closing off certain areas or by introducing lottery systems for some tourist locations (Capocchi, Pierotti and Amaduzzi, 2019; Kruczek, 2019). According to Qiu, Masiero and Li (2018) and Wu et al. (2011), the number of available tourist spots at a destination has is positively correlated with visit intention. Therefore, fewer available tourist locations should reduce the number of tourists. This type of regulation has been used for example in Rome, Milan, Florence and Venice. The cities have agreed to install "electronic gates that lock when a defined limit is reached" to reduce the "influx of tourists" (Kruczek, 2019: 10). These strategies are

effective in regulating tourist pressure in certain areas with the possibility of being closed off (ibid). They work both as an immediate reduction in tourist traffic and a long-term strategy for the issue.

Destinations also have addressed overtourism with regulation regarding taxes and fines for tourists. The most discussed regulation in literature according to Phi (2019: 4) is the "collection of 'tourist tax.'" This measure is tactical, as based on research by Qiu, Masiero and Li (2018: 3), "an increase in price will result in a decline in visit intention" with all else constant. Additionally, destinations such as Venice have introduced higher fines for "littering and inappropriate behavior" to 450 Euros (Kruczek, 2019: 10). These moderate regulations have a direct connection to higher price for tourists and prompt tourists to rethink their travel intentions and behavior.

A different tactic is not regulatory, but instead based on branding. Séraphin et al. (2019) proposed a strategy based on branding which recommends destinations to shift their branding efforts towards Special Interest Tourists (SIT) to reduce the overall volume of visitors. This implies that destinations who are impacted by overtourism could "brand each region of the destination as SIT destinations by focusing on a particular type of experience they want to offer to potential visitors" (ibid: 3). The division of tourist types or SIT markets gives much room for matching a destination to the correct SIT target market. Travel personality studies have evolved since their introduction by Cohen (1972) in 1972. Early studies divided tourist types into scales from those seeking familiarity in more mature destinations to those seeking new experiences in less developed destinations. More modern categorizations of tourist types include divisions such as the division by Nickerson and Ellis (1991) into "Venturers", "Pioneers", "Voyagers", "Journeyers", "Sightseers", and "Traditionals" to the division by Gretzel et al. (2004) into ""Culture Creature", "City Slicker", "Sight Seeker", "Family Guy", "Beach Bum", "Avid Athlete", "Shopping Shark", "All Arounder", "Trail Trekker", "History Buff", "Boater", and "Gamer"" (Qiu, Masiero and Li, 2018: 4). These categorizations of travel personalities are useful for destinations when deciding which SIT tourist types to brand their destination towards.

Studying examples of SIT branding are useful for destinations interested in employing the tactic. Scotland is cited as a prime example of a destination utilizing

SIT tourism branding successfully due to its focus on outdoor adventures (Park & Petrick, 2005). Additionally, Kruczek (2019: 11) suggests for "Kraków is to focus on attracting more affluent tourists" as their SIT sector as the city is a common destination for a younger demographic. This overall strategy would tackle the previously mentioned 'universal stereotype' branding strategy as SIT branding specifies the destination's brand with a more identity-based approach which Séraphin et al. (2019) claims will reduce tourism levels. Despite being quite niche and "sensitive to changes," SIT branding offers a long-term solution for destinations looking to specify their target market and in turn reduce the volume of tourists (Séraphin et al., 2019: 3).

The solutions outlined above give insight into the current situation with overtourism resolutions and the criticisms of those resolutions prove which strategies are more temporary and which will be successful in the long-term. As overtourism in Europe is an imminent problem, it is necessary to evaluate and trial these solutions in order to find appropriate measures for affected destinations.

2.3.2. Application of Deterrent Theory

The above examples of solutions focused on the long-term are all attempting to deter people from visiting a destination. The deterrent theory is therefore applicable to analyzing the solutions to the phenomena of overtourism. According to Cole (1989: 2), a major investigator of the theory, research of the deterrence theory "emphasizes the process by which a society coerces individuals into conformity through legal sanctions." Cole (1982: 2) elaborates that individuals will be less inclined to act in a certain way if they perceive a "high risk" of penalty. She adds that the larger the likelihood and "severity of the punishment" for a certain type of behavior, the "more individuals are deterred" from doing it (ibid: 2). The results from Cole's (1989) study utilizing the deterrence theory also indicate that the more visible the measures for deterrence, the more effective they are. Previous research and application of this theory has been utilized to analyze fraudulent acts, specifically of consumers (Cole, 1989; Zabriskie, 1973). However, this perceptual theory can also be employed in overtourism research in terms of the effectiveness of the tourism deterrents of destinations. Based on this theory, it can be proposed that the propensity of the punishment will have a direct effect on the overtourism levels in a destination; the

harsher the punishment, the lower tourism will fall as a result. Additionally, the more visible these punishments are to the public, the more effective they will be in reducing tourism levels in a destination. Based on the review of literature, the three most discussed long-term applicable proposals for the reduction of overtourism are the following:

- The introduction of a lottery system for entrance to popular locations,
- the introduction of a tourist-tax on applicable products and services
- and the branding of destinations for special interest tourists (SIT).

These three resolutions propose three different levels of deterrent. The likelihood of penalty in lottery system is high, depending on the lottery winning percentage. For the second resolution, the increase in taxation, the penalty is competitively moderate, as a consumer can still participate in a tourist activity simply by paying more. For the final resolution of SIT branding of destinations, the penalty is low since through information search, a potential consumer can find activities that suit them in a destination and certainly be able to participate in the tourist activity. The deterrents presented are of low medium and high nature, and the following hypothesis can be proposed based on their nature and the deterrent theory:

H_1: The intensity of the deterrent intervention will have a negative correlation with the likelihood of overtourism in the tested location. In other words, the size of the existing penalty will have a direct effect on the manner which consumers will behave towards their intention of travel to a certain destination.

2.3.3. Implications of Prior Knowledge

When used in analyzing overtourism, the deterrent theory is limited by the effects of consumers' prior knowledge about the destination. This prior knowledge may affect the decision of a consumer despite the presence of a deterrent for travel and therefore its effect must be considered and analyzed. Prior research on impacts of prior knowledge have focused on the connections prior knowledge has to consumer perceptions of quality and the development of knowledge structures for a product (Rao and Monroe, 1988; Howard and Sheth, 1969; Bettman, 1979). Previous research on the implications of prior knowledge by Rao and Monroe (1988: 3) asserts that prior knowledge "facilitates the acquisition of new information…and the use of existing information." Rao and Monroe (1988: 3) assert that the impact of prior

knowledge on "consumer's information processing" is defined as the "amount of accurate information held in memory about product alternatives" in addition to the consumer's own conceptions of the product, which may not be accurate. The results of Roe and Monroe's (1988) study show that the higher consumers' familiarity with a certain product, the higher they view the quality of that product based on its price. Therefore, when connecting the topic to the effect of prior knowledge on applied deterrents for tourism in destinations, the prior knowledge of travelers may reduce the effectiveness of deterrents. This occurs only if the perceived prior knowledge of a potential traveler points to a high quality of destination according to the research by Roe and Monroe's (1988). Based on the research on the effect of prior knowledge on consumer decisions, the following hypothesis is proposed:

H_2: The prior knowledge of a tourism destination reduces the effect of the deterrent.

2.4. Conclusion

The problem of overtourism is undoubtedly multi-faceted and requires analysis from multiple perspectives. The hypotheses previously mentioned are formulated based on the review of literature and the theories discussed. H_1 correlates the intensity of overtourism deterrent to its effectiveness while H_2 discusses the potential impact of a limitation to H_1. The following study tests these hypotheses and attempts to find effective resolutions to solve the complex issue of overtourism.

2.5. Conceptual Framework

The conceptual framework found in *Figure 6* makes up the foundation of this study and is based on the interpretation of the study of literature.
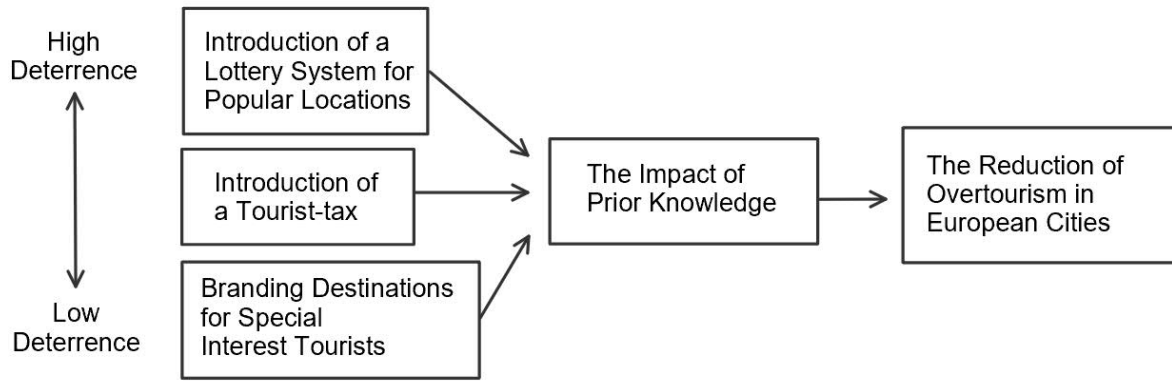
Figure 6: Conceptual framework on Overtourism Reduction (Suomalainen, 2020).

The focus of this study is overtourism in Europe and the impact of certain deterrents with the goal of reducing the phenomena. The literature review confirms the gap in research about the effectiveness of tourism reduction policies and methods. Furthermore, the existing literature on overtourism point to three long-term methods for reducing overtourism. These three methods will serve as the independent variables of the study. The moderator of the study will be the impact of prior knowledge a potential tourist has on a destination. Finally, the reduction of tourism intention (and therefore the reduction of overtourism in European cities) will serve as the dependent variable.

3. METHODOLOGY

3.1. Methodological and Philosophical Approach

This research assumed a positivist approach. Positivism is a philosophy which asserts that facts and knowledge can only be trustworthy if obtained through observation such as measurement (Research, 2019). Additionally, positivism considers the researcher independent from the research, meaning that little to no interaction takes place between the researcher and the participants to the research (ibid). Data collection and the interpretation of data are the only tasks which were conducted by the researcher during the span of this study. Observations were quantitative and statistical analysis was applied to them. Moreover, all research was completed objectively and with deductive logic. Each of these factors align with the positivist approach and provide reason for why the approach was employed in this

study. The advantages of assuming the positivist approach for this study were that the approach allows for the researcher to determine and analyze causal relationships between data points and that it provides clear instructions for the researcher in terms of their role in the research and how the study should be conducted. However, the latter can also be a disadvantage of this approach. The rigidness of the positivist approach may limit the researcher when conducting research and therefore possibly limit the potential of their study. Overall, the positivist, monomethod and cross-sectional approaches were a suitable fit for this research due to the constraints and nature of the study which was conducted.

The approach of this study was monomethod and cross-sectional. The monomethod approach was used for this study primarily because a questionnaire was employed as the data collection tool. Also, quantitative data was most useful when analyzing participant responses. The research objectives the study (described again below) were also more effectively met with quantitative data and analysis. Qualitative data would have proven difficult to analyze due to the type and large amount of data the questionnaire collected. Although utilizing a monomethod approach fit the style and type of research being conducted, a mixed-method approach would have provided a more comprehensive understanding of the data and phenomenon and would have balanced any weaknesses of the quantitative approach. The cross-sectional approach was employed as the research was conducted on a group of people during the time of the research. This approach allowed for the researcher to study the latest information available. This was crucial as the topic of overtourism is constantly changing and the study aimed to focus on the current behaviour of tourists to combat the phenomenon. Both approaches were also largely chosen due to time and resource constraints.

This study was conducted for the purpose of assessing the latter two research objectives: the effectiveness of deterrent mechanisms employed by tourism destinations and the role of consumers' prior knowledge on their tourism behavior. The overall strategy of this study was focused on meeting these research objectives. The literature review focused on examining recent research on overtourism from which the deterrent mechanisms employed in this study were selected. The deterrent mechanisms chosen for this study were those which appeared most frequently in

previous overtourism research and case studies and are outlined in section 2.5. The study by Rao and Monroe (1988) was used as a foundation to assess the role of consumer's prior knowledge on their tourism behavior. Therefore, the strategy of this study consisted of testing tourism deterrent mechanisms and utilizing methodologies to assess prior knowledge from previous studies to ultimately find the most effective concrete solutions to the overtourism problem.

3.2.   Data Collection

A quantitative approach was required to gather the data to study the effectiveness of deterrent mechanisms and the role of prior knowledge. A questionnaire was the most effective method of data collection. The questionnaire was developed in and conducted through a Qualtrics online survey from February 19th, 2020 through March 9th, 2020. Participants had unlimited time to respond between these dates. The questionnaire was shared through Facebook, Instagram and an email to current Aalto University (Mikkeli campus) students. A convenience sample was used for the collection of data. This choice of sample was chosen due to accessibility and time constraints. Additionally, the choice of sample reflected the objectives of the study as it aimed to study the tourism behavior of all kinds of individuals, or in other words, a convenience sample of the general public.

The questionnaire consisted of 30 questions of varying type (described in sections below). Responding to the questionnaire was voluntary and all responses were recorded anonymously. Responses were collected from 176 participants, but only fully completed responses were recorded. Those responses made up 128 out of the total of 176 responses. Additionally, responses from minors and incorrect responses to the final two multiple choice questions (described below) were not included. The final sample size used in the analysis was 104.

The title of the shared survey was "Tourism Thesis Survey," assuring to not to allude to the phenomenon of overtourism as that may influence the attitude of the respondent. The questions of the survey were split into 8 different sections, excluding the forward. Described below are the sections, a general overview of their questions, the question types and their purpose. The full questionnaire can be found in Appendix 1.

The first section following the foreword included socio-demographic questions. Gender, age, marital status and annual income level questions were included. All questions in this section were multiple choice except age, which gave respondents a numerical field to respond in. The purpose of the first section was to gather information about the sample of the study.

The second section asked respondents about their tourism behavior. The 6 questions in this section were all multiple-choice format. The questions asked how often the respondent travels locally and with whom, how often the respondent travels internationally and with whom, how often the respondent travels locally for business and finally how often the respondent travels internationally for business. The purpose of this section was to prompt the respondent to think critically about their own tourism behavior to prepare for future sections. Additionally, the section was used to collect information about the tourism tendencies of the sample.

The third section of the questionnaire aimed to identify a travel desire of the respondents and their likelihood of going through with realizing that desire. The open-ended question prompted respondents to write name of a city in Europe which they would like to visit in the next year. The following question was a rating scale which asked respondents to rate their likeliness to visit this location in the next year from 1 (Extremely unlikely) to 10 (Extremely likely). The destination chosen in this section by the respondent was coded into all later questions of this questionnaire to ask the questions based on their specific destination preference.

The fourth section was comprised of questions based on research by Roe and Monroe (1988). These questions tested the prior knowledge of the respondent on their chosen destination with questions similar to those of the 1988 study. The purpose of this section was to identify and derive the level of knowledge the respondent had on the destination they chose. This section was developed by first identifying key knowledge factors of destinations such as popular locations, previous visits, personal perception of knowledge, etc. This level of knowledge would then later be tested on its significance on the impact of the deterrents introduced in sections five and six. Therefore, the purpose of this section was to find information to

answer the final research objective; to identify the role of consumers' prior knowledge on their tourism behavior.

Section five simply instructed the respondent to read a news article about their destination's struggles with overtourism presented in the following section. The fifth section also gave a definition of overtourism. Section six included three separate news articles where each respondent received one at random. The articles included the name of the destination which the respondent chose in section three to make it appear as the article was about their chosen destination. Each article was nearly identical, describing that the respondent's chosen destination was experiencing negative impacts of overtourism and have decided to take action to reduce its effects with a certain tourism deterrent. The only difference with the news articles was the deterrent strategies for tourism. The strategies included those described in section 2.5., introducing a lottery system for popular locations, introducing a tourist tax and branding destinations for special interest tourists. Each article was presented to the sample nearly equally, with about one third of respondents reading one article. This way, each deterrent strategy was tested, however, the length of the survey remained short. Additionally, the expectation was that each unique deterrent strategy would yield different results. Therefore, only one strategy was posed to each respondent to be able to later compare the results for the effectiveness of the deterrents on travel intention.

The seventh section included two rating scale questions, prompting the respondent to rate their likelihood of visit to their destination after reading the news article on overtourism and the deterrent strategy employed in their chosen destination. This question was repeated in the exact same manner as in section three. This was done so that the change in likelihood of visit could later be assessed for before and after exposure to the news article and tourism deterrents. The question was also asked if the respondent's inclination to visit was changed after reading the article. This question was asked in two different ways to identify any and all shifts which occurred in the respondents perception of the article and intention of travel to their chosen destination. The purpose of this section was to assess the effectiveness of deterrent mechanisms employed by tourism destinations.

The eighth and final section of the questionnaire included two multiple choice questions as a check to see if respondents read the news article provided to them. These questions asked about key points of the generic article (article not including the deterrent) which all respondents read. Any respondents who answered both or either of these questions incorrectly were removed from the sample. A final "anything to add" open-ended response box was included. All questions were mandatory except this final question. The questionnaire overall attempted to uncover information regarding both objectives which the study aimed to achieve.

3.3.   Limitations of Methodology

The methodology of this study had three main limitations due to the limited time and resources devoted to this study. The first limitation is the sample size. This study was able to analyze 104 out of the total 176 responses. If this number would have been larger, the reliability and overall significance of the study would have greatly improved. Secondly, the sample composition proved to be another limitation. The main method of data collection was a convenience sample and the main methods of questionnaire distribution were through social media and an email to university students. This may have caused a disproportionate number of respondents to be students and therefore caused a possible bias in the data. The final major limitation of the methodology was that the chosen deterrent choices had not been researched before. Therefore, their inclusion in the study was rather rudimentary. The only criteria for deterrent selection was their repeated presence in previous literature. These limitations to the methodology of this study provide areas of improvement for future studies but do not undermine the importance or significance of this research.

4.   DATA ANALYSIS

Before analyzing the data gathered from the questionnaire, the data was prepared. As mentioned above, incomplete responses, responses from minors and incorrect responses to the final two multiple choice questions were removed. No outliers were found so therefore none were removed. Finally, the string values of "age" were transformed into numeric values. The prepared data was then analyzed using the statistical software SPSS.

The respondent profile of this study consists of data points collected on gender, age, marital status and annual income level. The mean age for respondents in this study was 30.9 with a median of 22. 42.3% of respondents were male, 57.7% female. 0% of respondents selected other gender options. *Figure 7* demonstrates the age and gender distribution of the respondents in this study. The distribution of marital status is shown in *Figure 8*. Finally, *Figure 9* demonstrates the income distribution of respondents. These four socio-demographic data points describe the respondent profile of this study.
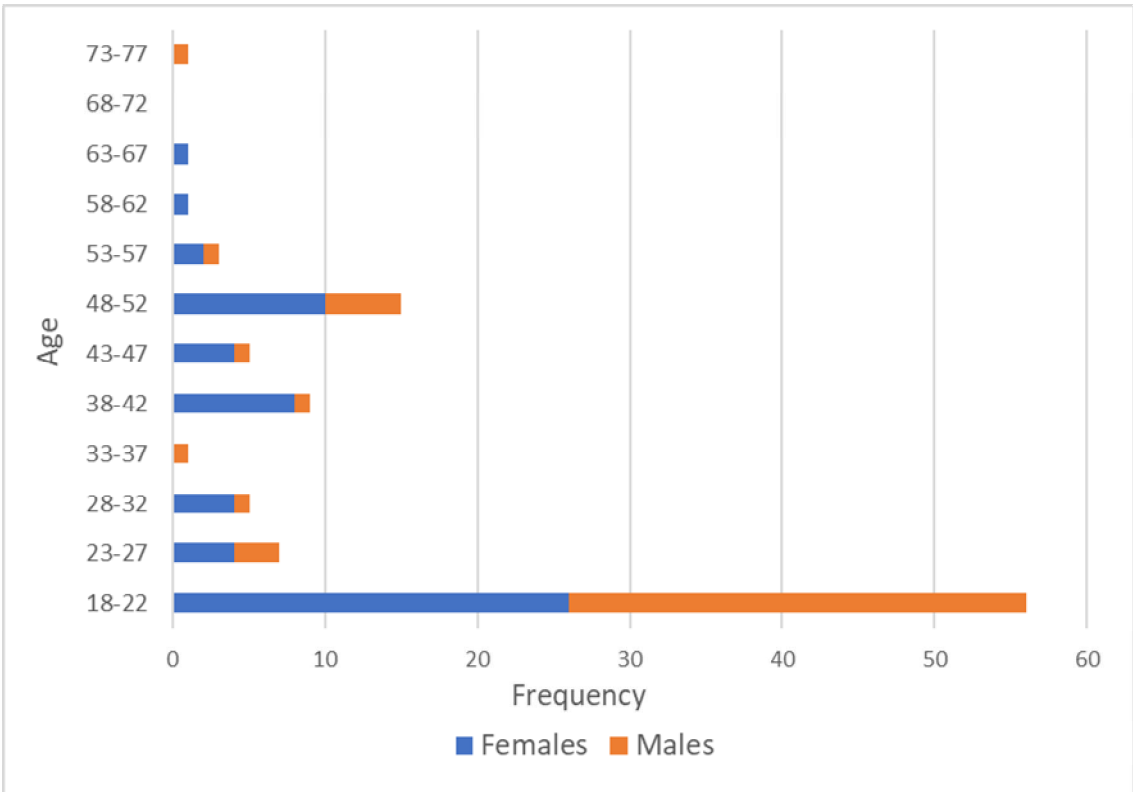
Figure 7: Age and gender distribution of respondents (Suomalainen, 2020).
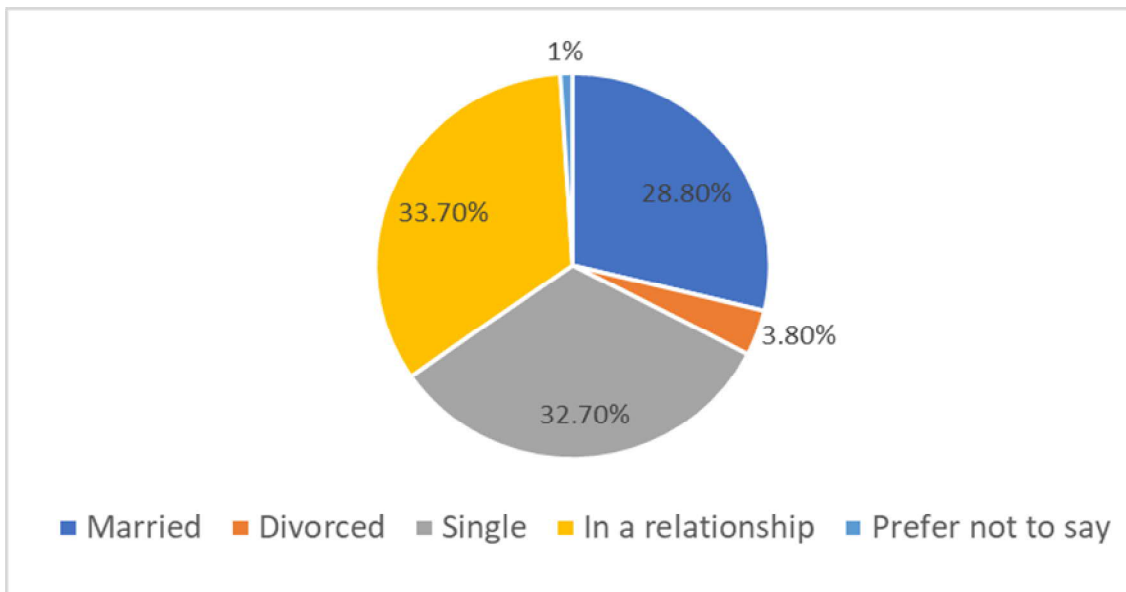
Figure 8: Marital status of respondents (Suomalainen, 2020).
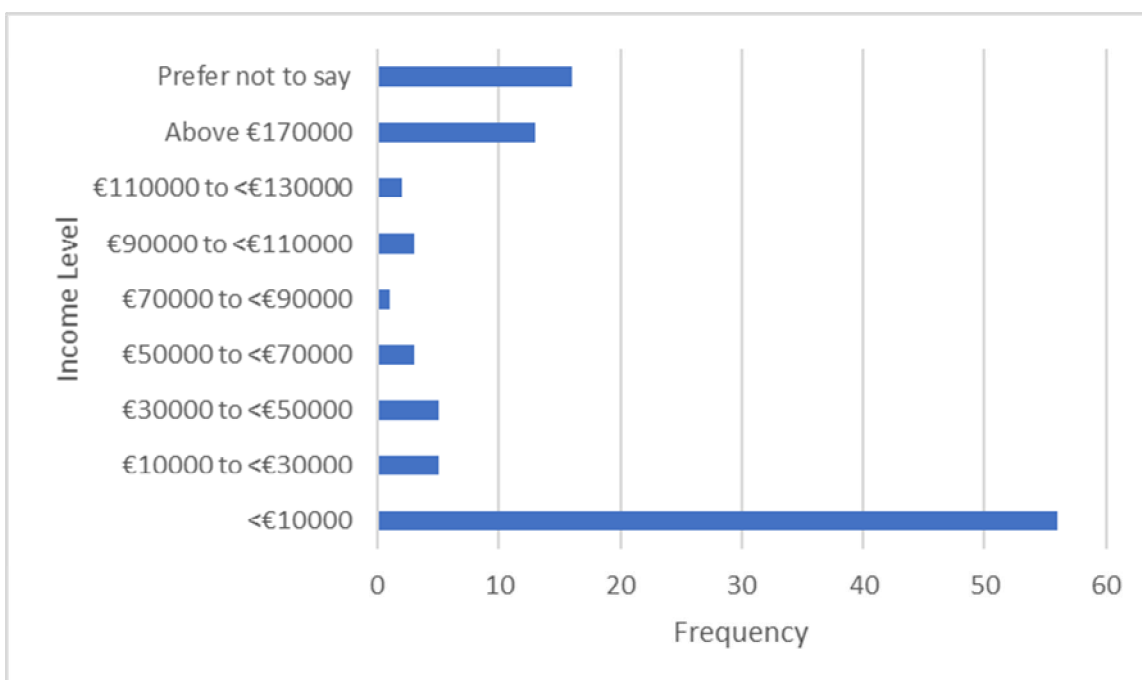
Figure 9: Annual income level of respondents (Suomalainen, 2020).

In addition to the socio-demographic data points, tourism behavior data points were also collected from respondents. *Figure 10* shows the number of times respondents travel for leisure locally and internationally. *Figure 11* illustrates who respondents travel with locally most often, while *Figure 12* illustrates who respondents travel with internationally most often. Finally, *Figure 13* shows the number of times respondents

travel for business locally and internationally. This data makes up the tourism behavior profile of the respondents in this study.
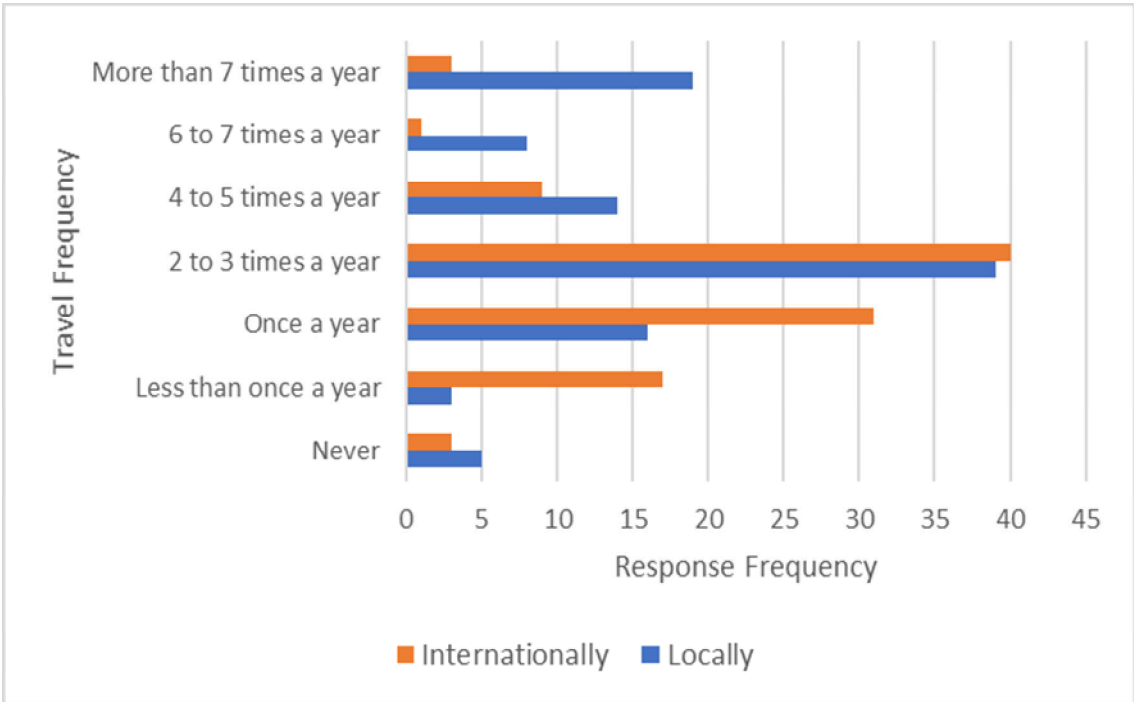
Figure 10: Number of times respondents travel for leisure locally and internationally (Suomalainen, 2020).
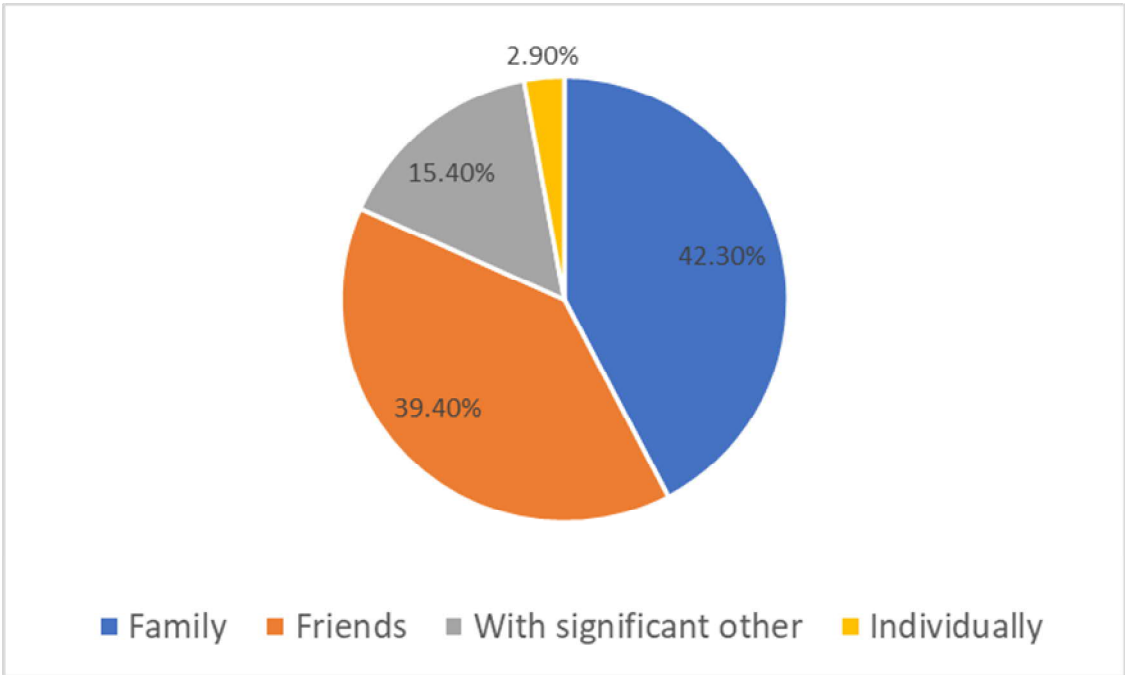
Figure 11: Who respondents travel with most often locally (Suomalainen, 2020).
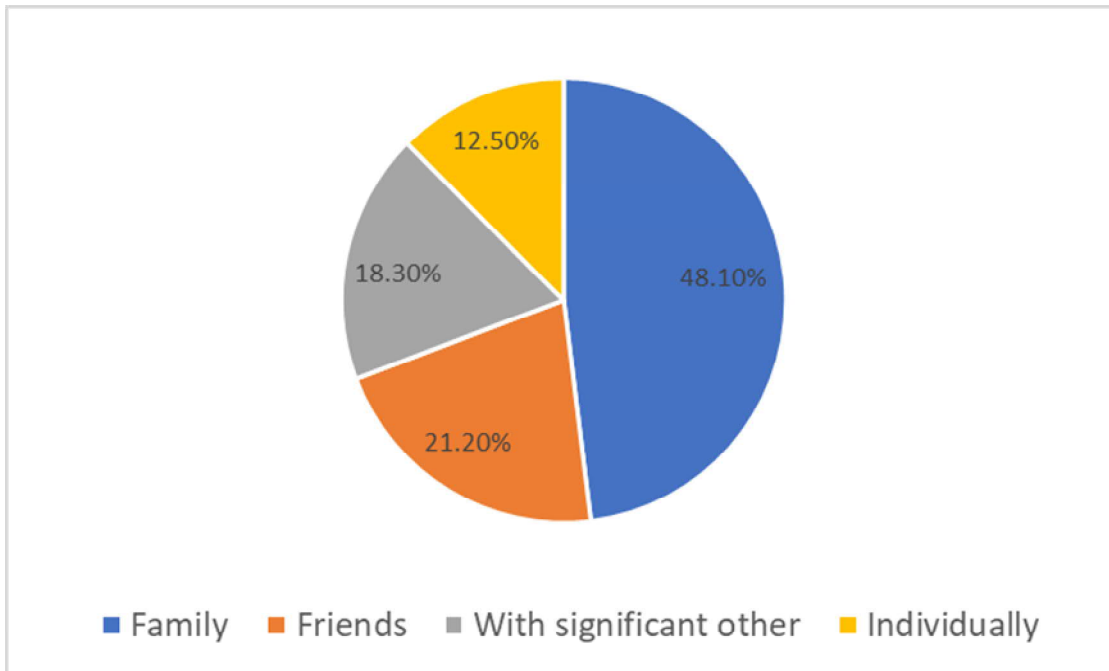
Figure 12: Who respondents travel with most often internationally (Suomalainen, 2020).
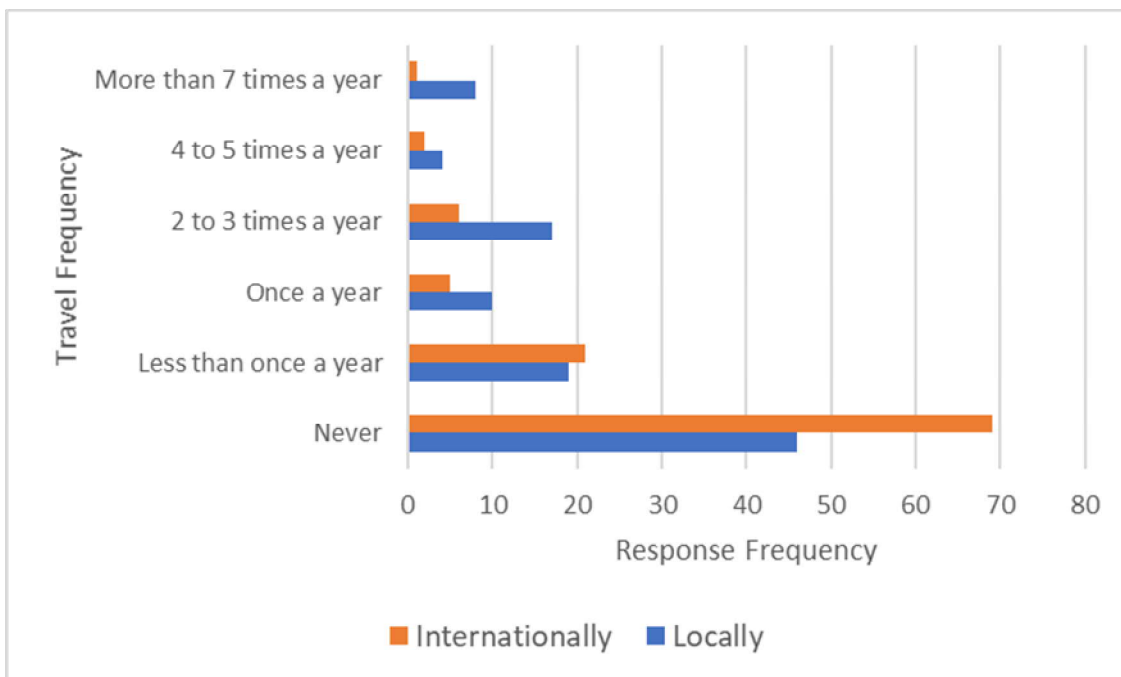
Figure 13: Number of times respondents travel for business locally and internationally (Suomalainen, 2020).

The next step in analyzing the data was to conduct a reliability analysis of the prior knowledge scale. The three rating scale questions in section four of the questionnaire were included in this analysis. The Cronbach's alpha statistic was used to test the

reliability of these prior knowledge scales. For these three scales, the Cronbach's alpha was 0.79. A coefficient closer to 1.0 has a greater internal consistency of the tested variables in the scales. This signifies that the internal consistency of these scales is good. Therefore, the prior knowledge scale can be deemed reliable. SPSS data can be found in Appendix 2.

As previously described, the effectiveness of three separate tourism deterrents were tested:

- The introduction of a lottery system for entrance to popular locations,
- the introduction of a tourist-tax on applicable products and services
- and the branding of destinations for special interest tourists (SIT).

For simplicity, these deterrents will be referred to as "Lottery" (#1) "Tax" (#2) and "Branding" (#3).

The first test which was conducted measured the effectiveness of all deterrents against no deterrent. In other words, the questions which this test aimed to answer was: "Does any deterrent work against no deterrent?" A paired samples t-test was used to discover is there was significance. The test compared questions 14 and 28, which were rating scale questions asking for the likelihood of destination visit pre and post introduction of deterrent in the news article. The test found the statistic significant, as the significance level was >0.05 at 0.000. *Figure 14* below shows the paired samples statistics for this test. *Figure 15* shows the results of the paired samples test, including the significance level of the test described above. Additional SPSS data can be found in Appendix 3.

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	How likely are you to visit your chosen destination in the next year? - |	6.2157	102	2.97723	.29479
	After reading the news article, how likely are you to visit [QID13-ChoiceTextEntryValue] in the next year? - |	5.3824	102	2.87373	.28454

Figure 14: Paired samples statistics table for testing the effectiveness of all deterrents against no deterrent (Suomalainen, 2020).

Paired Samples Test

			Paired Differences							
					95% Confidence Interval of the Difference					Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	
Pair 1	How likely are you to visit your chosen destination in the next year? - | - After reading the news article, how likely are you to visit [QID13-ChoiceTextEntryValue] in the next year? - |	.83333	1.98052	.19610	.44432	1.22234	4.250	101	.000

Figure 15: Paired samples test results table for testing the effectiveness of all deterrents against no deterrent (Suomalainen, 2020).

The second test which was conducted on the data aimed to discover if there were differences among the deterrents, or in other words, if one deterrent was better than others. A paired samples t-test was used for this test. Each individual deterrent was compared to the likelihood of destination visit pre and post introduction of deterrent. For deterrent #1, Lottery, the test was significant with a significance level >0.05 at

0.038. For deterrent #2, Tax, the test was more significant with a significance level >0.05 at 0.008. For deterrent #3, Branding, the test was also significant with a significance level >0.05 at 0.02. SPSS data can be found in Appendix 3.

The third test aimed to find if there were significant differences between deterrents on their effectiveness to deter visit (utilizing only post news article scale for likelihood of visit). A One Way Anova was used to test this. The overall significance and significance between the deterrents were deemed insignificant as each were above the significance level of 0.05. Therefore, no significant differences between deterrents on their effectiveness to deter visit were found. SPSS data can be found in Appendix 3.

Finally, the impact of prior knowledge was tested on the effectiveness of the deterrents. In other words, this test aimed to answer the question: Does the prior knowledge of a destination affect the likelihood of visit before and after reading the news article? A "Knowledge" variable was calculated using the mean of prior knowledge rating scale questions (#18-20). These rating scales were previously tested to be reliable. A regression analysis was used for this test and found the significance level of 0.128. As this value is greater than 0.05, the impact of prior knowledge of the effectiveness of the deterrents is not significant. SPSS data can be found in Appendix 3.

5. FINDINGS

5.1. Results of Study
5.1.1. Deterrent Strategies
The lottery, tax and branding deterrent strategies initially were hypothesized to comprise of three different levels of deterrent. A high penalty was equated with the lottery deterrent, a medium penalty with the tax deterrent and a low penalty with the branding deterrent. The following hypothesis was formulated with these levels in mind:

H_1: The intensity of the deterrent intervention will have a negative correlation with the likelihood of overtourism in the tested location. In other words, the

size of the existing penalty will have a direct effect on the manner which consumers will behave towards their intention of travel to a certain destination. The results of the study do not fully correspond with this hypothesis. The study found that there are no significant differences between deterrents on their effectiveness to reduce tourism. However, the greatest reduction of tourism intention when comparing likelihood of visit before and after introducing the deterrent was with the tax deterrent (significance level of 0.008), followed by branding (0.02) and finally lottery (0.038). In other words, the order of deterrent effectiveness was found to be tax, branding and then lottery according to this study. Additionally, the study discovered that any deterrent strategy, lottery, tax or branding, is significantly effective in reducing overtourism when compared to no deterrent strategy. Thus, each tourism deterrent mechanism is significantly successful in reducing tourism intention.

5.1.2. Effects of Prior Knowledge

The impact of prior knowledge was hypothesized to negatively impact the effectiveness of deterrents. The following hypothesis was formulated with this concern in mind:

H_2: The prior knowledge of a tourism destination reduces the effect of the deterrent.

The results of the study did not support this hypothesis. The study found that the prior knowledge a respondent had on their chosen destination did not significantly impact their likelihood of visit after the introduction of the deterrent (significance level of 0.128). In other words, prior knowledge of a destination did not significantly impact the effectiveness of the introduced deterrent.

6. DISCUSSION AND ANALYSIS

The objectives of this research were to primarily examine previous research on overtourism in terms of its causes and consequences and secondly to identify and examine the effectiveness of tourism deterrents to assist destinations facing overtourism. Additionally, the research aimed to determine if prior knowledge of destinations by consumers influenced these deterrent mechanisms. These aims were specifically formulated to help solve the research problem. The problem consists of

the consequences of overtourism as a result of similar consumer behavior in the tourism industry. These consequences are multi-faceted, ranging from congestion to safety issues to rising costs of living. Complicating factors in this problem include the dependence of economies on the tourism industry as well as the large number of stakeholders both in and affected by the tourism industry.

Previous research on overtourism, specifically when discussing solutions, primarily focuses on the mitigation of the effects of tourism-related consequences instead of reducing tourism overall (Phi, 2019; Koens, Postma and Papp, 2018). This can be primarily seen from previous research promoting or by the UNWTO (ibid). As previously discussed, these surface-level strategies only temporarily reduce the impact of overtourism on destinations and residents. The significant lack of long-term tourism reduction strategies in existing literature is concerning, considering the gravity of the overtourism problem. For the purposes of this study, three long-term overtourism solutions most frequently discussed in previous literature were identified and their effectiveness was subsequently researched. These long-term solutions were the introduction of a tourist-tax, the implementation of a lottery system for entrance to popular destinations and finally the branding of destinations towards SIT. As each of these long-term solutions was found to be significantly effective in reducing overtourism, this study confirms these overtourism reduction solutions established in earlier work on overtourism. These potential solutions contribute to the limited prior research on long-term overtourism management and provide policy makers with concrete ideas to add to existing tourism policy.

This research proposes the aforementioned tourism deterrents for destinations struggling with overtourism. The differing effectiveness of these solutions were not found to completely correspond with the hypotheses initially proposed. Hypothesized was that the highest penalty would correspond with the highest reduction of tourism intention. The greatest penalty was hypothesized to be lottery, followed by tax and then by branding. However, the tax deterrent was found to be the most effective, with the greatest found reduction of tourism intention, followed by branding and finally by lottery. The tax deterrent may be the most effective due to its simplicity compared to the other two deterrents. Higher taxes are not only simple to understand, but also a

universal negative penalty. Branding was less effective than taxes, as hypothesized, due to its categorization as a lower penalty. This may be because branding of a destination does not offer a direct monetary or other type of penalty to the tourism consumer. Finally, the lottery deterrent was the least effective. This was surprising, as this deterrent was suspected to be perceived as being the highest penalty out of the three deterrents. There are multiple potential causes for this result. Firstly, the perception of respondents on the size of the penalty could have been hypothesized incorrectly. Secondly, there may have been issues in respondents understanding the deterrents due to limited explanations available in the questionnaire. This may have led to the hypothesized lower-penalty branding deterrent to be perceived as a higher penalty by the respondents, or the opposite for the lottery deterrent. Finally, another possibility is that people are not significantly interested in those activities in destinations which a lottery system would be created for. In other words, modern consumers may be looking for more unique experiences and would not be deterred from visiting a destination if there is a lottery for the most popular tourist spots. Nevertheless, this result was surprising.

The results from the study suggest that consumers are influenced by these researched deterrents, but certain deterrents may be perceived as a greater penalty and therefore are more significant in reducing tourism intention. This correlates with the deterrent theory, as Cole (1982: 2) claims that the larger the likelihood and "severity of the punishment" for a certain type of behavior, the "more individuals are deterred" from doing it. Therefore, it is valuable to note that the propensity of the punishment will have a clear effect on the tourism level within a destination. The harsher the penalty is perceived as by the public, the lower the tourism levels will fall. Based on what was hypothesized for this study, earlier work by Cole (1982) on the deterrent theory is partially confirmed. Since the hypotheses on the consumer perception of the penalty for each deterrent were made largely subjectively, it is not a reason to refute the original study on the deterrent theory despite the results not matching completely with the hypotheses. Additionally, hypotheses based on the deterrent theory did predict the tourist-tax deterrent to be more effective in reducing tourism intention than the branding deterrent. For these reasons, this study partially confirms previous work on the deterrent theory, specifically by Cole (1892).

Each of these deterrents was also effective against no deterrent. This may be because without any penalty, people have a greater intention to visit a destination than with a penalty. This also corresponds with the deterrent theory, as Cole (1982: 2) asserts that individuals will be less inclined to act in a certain way if they perceive a risk of penalty. Therefore, each of these deterrents can be categorized as a risk to consumers, as their intentions significantly changed as a result of the introduction of any of these deterrents. As each of the deterrents were hypothesized to be perceived as penalties and therefore be effective in reducing tourism intention, this study further confirms earlier work on the deterrent theory.

The primary purpose of these deterrents is to reduce tourism levels and therefore alleviate the negative impacts of excessive numbers of tourists. Despite not agreeing completely with previous hypotheses, each suggestion is significantly effective on reducing tourism intention according to this research. Therefore, implementing one or more of these solutions for a destination would potentially alleviate the negative impacts of overtourism. Additionally, the deterrent theory suggests that destinations make these deterrents visible, as the more visible these deterrents are to the public, the more effective they will be in reducing tourism levels (Cole, 1989). This visibility would potentially allow destinations to further improve the effectiveness of their implemented deterrents.

An important factor which this study addressed was the impact of a consumer's prior knowledge of a destination on the effectiveness of tourism deterrents for that destination. Previous prior knowledge research has primarily focused on its effect on consumer perceptions of quality (Rao and Monroe, 1988; Howard and Sheth, 1969; Bettman, 1979). These studies were adapted to provide methodology and theory for the effect of prior knowledge of a destination on tourism deterrents. Rao and Monroe (1988) claim that prior knowledge "facilitates the acquisition of new information…and the use of existing information" and the more familiar a consumer is with a product, the higher they perceive its quality based on the price. Therefore, when adapted to overtourism, it was hypothesized that the prior knowledge of a tourism destination reduces the effect of the deterrent as familiarity may reduce certain purchase barriers according to the study. However, the study found that prior knowledge has no effect on the effectiveness of tourism deterrent mechanisms. Therefore, based on what was

hypothesized and found in this study, previous research on prior knowledge (specifically when adapted to overtourism deterrents) is refuted.

Based on the hypotheses and the results of this study, previous research on long-term overtourism solutions is confirmed, the deterrent theory is partially confirmed and previous research on prior knowledge is refuted. However, the important factor of this study is that the three long-term solutions researched were found to each be significantly effective for the reduction of tourism intention. The problem of overtourism becomes less challenging for destinations with the availability of these types of well-researched solutions. Therefore, research on overtourism management is significant and necessary for destinations to have tools available to stabilize themselves and refocus on well-being.

7. CONCLUSIONS

7.1. Theoretical Implications

The three tourism deterrents which this study researched were all found to be significantly effective to varying degrees in reducing tourism intention. Taxation was found to be the most effective deterrent, followed by the branding deterrent and finally by the lottery deterrent. These deterrent strategies all were also found to significantly work against no deterrent strategy on reducing tourism intention. Additionally, the prior knowledge of a destination had no significant effect on the impact of the tourism deterrents. Therefore, the implementation of one or many of these deterrents to destinations facing overtourism should theoretically reduce tourism levels. The main findings of this study provide further knowledge on tourism management strategies and add to the limited but growing research into overtourism management. Additionally, based on the hypotheses and results of this study, the research confirms prior research on long-term overtourism solutions, partially confirms the deterrent theory and refutes the previous research on prior knowledge.

7.2. Implications for Destinations, the Tourism Industry and International Business

Overtourism in Europe has a wide array of implications on a multitude of entities, ranging from cities and their residents to international business and culture. However, destinations and the tourism industry are the primary actors in the debate on overtourism. The solutions researched in this study give policy makers or managers in institutions governing destinations potential solutions to implement to assist in curbing the negative consequences of overtourism.

Based on this study, it is primarily recommended for these institutions to introduce a tourist-tax for destinations struggling with overtourism. The tourist-tax deterrent proved to be the most effective method of reducing tourism intention based on this research. If the introduction of multiple deterrents is either possible or necessary to further reduce tourism levels, it is recommended to introduce the remaining deterrents in their order of effectiveness. Following the introduction of the tourist-tax deterrent, branding for SIT should be instituted and only then adding the lottery system deterrent. However, these deterrents and their recommended order of implementation is only a guide. The challenges of each European destination regarding overtourism are unique, and therefore each destination requires a tailored tourism reduction plan. Fortunately, this study found three significantly effective tourism reduction deterrents which can each serve as tools for destinations creating their unique plan for reducing tourism levels. In other words, according to this study, any of the researched deterrents would work in reducing overtourism. The implementation of tourism deterrents is in many cases necessary to sustainably manage the future of the tourism industry in European destinations. Destinations must realize that the consumers of the tourism industry, or tourists, suffer if the product of the tourism industry, or destinations, are suffering themselves.

From a wider perspective, the implementation of these deterrents or similar ones by institutions governing destinations provide the tourism industry with guidelines to follow regarding tourism in already overcrowded destinations. Regarding international business, the availability of researched tourism deterrents and their implementation in destinations are a step forward in creating wider guidelines for business, where the well-being of destinations and their residents is valued above business ventures. The

research into disrupting overtourism communicates that business cannot disrupt the livelihood of these parties. To positively impact destinations, their residents, the tourism industry and international business for the long-term, it is crucial to begin managing growth. This management may occur effectively through implementing tourism deterrents and by identifying methods of sustainable growth and practicing them to the greatest extent possible.

7.3.   Suggestions for Further Research

The phenomenon of overtourism, despite having a presence in literature since the 1960's, has a new and more urgent meaning in the current day as multiple European cities are struggling to keep up with the increasing demand of tourists. Consequently, further research is needed on the phenomenon to understand overtourism and find solutions for those struggling destinations. The majority of literature thus far discusses the problem of overtourism, discusses how destinations can mitigate the effects of masses of tourists, illustrates the reactions of residents to overtourism and analyzes previous literature on the phenomenon. However, literature on overtourism lacks studies on how to reduce tourism overall in such urgent circumstances. Solutions to overtourism in current literature mainly focus on short-term mitigation instead of long-term resolution. This study only focuses on and tests the effectiveness of three potential long-term solutions. The results yielded varying effectiveness for European destinations. Therefore, a key suggestion for future research is to focus on developing and testing these long-term resolutions.

The next question after the time frame of the resolutions is their location. Although this study focuses on European destinations in general, each individual destination facing overtourism has unique problems and therefore may need resolutions made specifically for them to be most effective. Future research should focus on studying specific destinations worldwide struggling with overtourism, developing solutions and studying their effectiveness.

Finally, future research should develop a more economically conservative approach due to the significant impact the tourism industry has on many destinations struggling with overtourism. In addition to developing and testing resolutions to overtourism, future research should consider the negative economic impact these solutions may

cause after their implementation. The adaptability of the destination's economy to the implementation of tourism deterrents or other solutions to overtourism should be considered and studied in future research.

Overall, this study suggests future overtourism research to focus on new, long-term resolutions to overtourism, a more specific destination focus for resolutions and a wider consideration of economic impact. The focus of each suggestion for further research is analogous to that of this study: to ultimately assist destinations faced with the multi-faceted and growing issue of overtourism in reducing tourism levels and therefore its consequences.

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APPENDICES

Appendix 1: Questionnaire

Tourism Thesis Survey

Q1 Dear respondent,

The following is a survey conducted for an undergraduate thesis at Aalto University School of Business, Mikkeli Campus. The research topic of the thesis is tourism choice.

No prior knowledge is required, and participation in this survey is voluntary. Your responses to this survey will be anonymous and confidential; answers will be used for scholarly purposes only. This survey will take approximately 5 minutes.

If you have any questions or concerns with the content of this survey, please contact laura.suomalainen@aalto.fi.

To agree to participate in this study, click the arrow below.

Thank you for your participation!

Q2
What is your gender?

○ Male (1)

○ Female (2)

○ Other (3)

○ Prefer not to say (4)

- -

Q3 What is your age (in years)?

_____

Q4 What is your marital status?

○ Married (1)

○ Widowed (2)

○ Divorced (3)

○ Separated (4)

○ Single (5)

○ In a relationship (6)

○ Prefer not to say (7)

Q6 What is your annual income level?

○ (1)

○ €10000 to (2)

○ €30000 to (3)

○ €50000 to (4)

○ €70000 to (5)

○ €90000 to (6)

○ €110000 to (7)

○ €130000 to (8)

○ €150000 to (9)

○ Above €170000 (10)

○ Prefer not to say (11)

End of Block: Socio-demographics

Start of Block: Tourism Behavior

Q7 About how often do you travel for leisure locally?

○ Never (1)

○ Less than once a year (2)

○ Once a year (3)

○ 2 to 3 times a year (4)

○ 4 to 5 times a year (5)

○ 6 to 7 times a year (6)

○ More than 7 times a year (7)

Q8 Who do you travel with **locally** for leisure most often?

○ Family (1)

○ Friends (2)

○ With significant other (3)

○ Individually (4)

Q9 About how often do you travel for leisure internationally?

○ Never (1)

○ Less than once a year (2)

○ Once a year (3)

○ 2 to 3 times a year (4)

○ 4 to 5 times a year (5)

○ 6 to 7 times a year (6)

○ More than 7 times a year (7)

Q10 Who do you travel with internationally for leisure most often?

○ Family (1)

○ Friends (2)

○ With significant other (3)

○ Individually (4)

Q11 About how often do you travel for business locally?

○ Never (1)

○ Less than once a year (2)

○ Once a year (3)

○ 2 to 3 times a year (4)

○ 4 to 5 times a year (5)

○ 6 to 7 times a year (6)

○ More than 7 times a year (7)

Q12 About how often do you travel for business internationally?

○ Never (1)

○ Less than once a year (2)

○ Once a year (3)

○ 2 to 3 times a year (4)

○ 4 to 5 times a year (5)

○ 6 to 7 times a year (6)

○ More than 7 times a year (7)

End of Block: Tourism Behavior

Start of Block: Destination Choice

Q13 Which European city would you like to travel to in the next year? Please type the name of the city *CORRECTLY* in the space below:

_____

Q14 How likely are you to visit your chosen destination in the next year?

	Extremely unlikely	Moderately unlikely	Neither likely nor unlikely	Moderately likely	Extremely likely

0 1 2 3 4 5 6 7 8 9 10

| () |

Q16 The following questions are based on research by Roe and Monroe (1988).

Q17 Have you visited ${Q13/ChoiceTextEntryValue} before?

○ Yes (1)

○ No (2)

Q18 How knowledgeable are you about ${Q13/ChoiceTextEntryValue}?

	Not knowledgeable at all	Slightly knowledgeable	Moderately knowledgeable	Very knowledgeable	Extremely knowledgeable

0 1 2 3 4 5 6 7 8 9 10

| () |

Q19 How knowledgeable are you about ${Q13/ChoiceTextEntryValue} compared to your friends and family?

	Least knowledgable	Less knowledgable	Equally knowledgable	More knowledgable	Most knowledgable
	0 1 2 3 4 5 6 7 8 9 10				

| () |

Q20 How much research have you done on ${Q13/ChoiceTextEntryValue}?

	None at all	A little	A moderate amount	A lot	A great deal
	0 1 2 3 4 5 6 7 8 9 10				

| () |

Q21 Name three popular tourist spots in ${Q13/ChoiceTextEntryValue}. If unable to, name as many as you can.

_____

_____

_____

_____

_____

Q22 What tourist-type is ${Q13/ChoiceTextEntryValue} most geared towards in your opinion?

○ "Culture Creature" (1)

○ "City Slicker" (2)

○ "Sight Seeker" (3)

○ "Family Guy" (4)

○ "Beach Bum" (5)

○ "Avid Athlete" (6)

○ "Shopping Shark" (7)

○ "All A rounder" (8)

○ "Trail Trekker" (9)

○ "History Buff" (10)

○ "Boater" (11)

○ "Gamer" (12)

Q23 Overall, how familiar would you consider yourself with ${Q13/ChoiceTextEntryValue}?

○ Not familiar at all (1)

○ Slightly familiar (2)

○ Moderately familiar (3)

○ Very familiar (4)

○ Extremely familiar (5)

End of Block: Prior Knowledge

Start of Block: Deterrent Background

Q27 Read the short news article about ${Q13/ChoiceTextEntryValue} on the following page. The destination has been facing overtourism and the following article describes a proposed solution to combat the issue.

For background: Overtourism is defined as uncontrolled development and poor management of the tourism sector leading to the deterioration in the quality of life for residents and the quality of experience for visitors due to excessive amounts of tourists.

Q25 ${Q13/ChoiceTextEntryValue} has been experiencing excessive amounts of tourists recently and is struggling to keep up with the demand. The quality of life is deteriorating for residents, there is lots of congestion and cultural and environmental locations are being destroyed, among other negative effects. Due to these negative effects of overtourism, ${Q13/ChoiceTextEntryValue} authorities have come up with the solution to introduce a lottery system for the entry to all popular tourist locations. This solution has been proposed to and approved by the government due to the imminent crisis and will take effect by the end of this week.

○ I have read the above news article (1)

Q26 ${Q13/ChoiceTextEntryValue} has been experiencing excessive amounts of tourists recently and is struggling to keep up with the demand. The quality of life is deteriorating for residents, there is lots of congestion and cultural and environmental locations are being destroyed, among other negative effects. Due to these negative effects of overtourism, ${Q13/ChoiceTextEntryValue} authorities have come up with the solution to create a tax system where every tourist will have to pay a certain amount of tax to visit the popular destinations. This solution has been proposed to and approved by the government due to the imminent crisis and will take effect by the end of this week.

○ I have read the above news article (1)

Q27 ${Q13/ChoiceTextEntryValue} has been experiencing excessive amounts of tourists recently and is struggling to keep up with the demand. The quality of life is deteriorating for residents, there is lots of congestion and cultural and environmental locations are being destroyed, among other negative effects. Due to these negative effects of overtourism, ${Q13/ChoiceTextEntryValue} authorities have come up with the solution to begin to brand the destination as suitable for only those are really interested in the type of attraction the place has to offer. This solution has been proposed to and approved by the government due to the imminent crisis and will take effect by the end of this week.

○ I have read the above news article (1)

Q28 After reading the news article, how likely are you to visit ${Q13/ChoiceTextEntryValue} in the next year?

	Extremely unlikely	Moderately unlikely	Neither likely nor unlikely	Moderately likely	Extremely likely
	0 1 2	3 4	5	6 7	8 9 10
| ()					

Q29 Has this story made you feel less inclined to travel to ${Q13/ChoiceTextEntryValue}?

	Not at all	Slightly	Moderately	Very	Extremely
	0 1 2	3 4	5	6 7	8 9 10
| ()					

66

Q30 What was the purpose of the news article?

○ To describe a solution to overtourism for ${Q13/ChoiceTextEntryValue} (1)

○ To state that overtourism is not a problem (2)

○ To define the benefits of overtourism (3)

○ To promote the tourism industry (4)

Q31 What is happening to ${Q13/ChoiceTextEntryValue}?

○ ${Q13/ChoiceTextEntryValue} is getting a new tourist attraction (1)

○ ${Q13/ChoiceTextEntryValue} is becoming too crowded (2)

○ ${Q13/ChoiceTextEntryValue} needs more tourists (3)

○ The economy of ${Q13/ChoiceTextEntryValue} is suffering (4)

Q30 Anything to add?

_____

_____

_____

_____

_____

Appendix 2: SPSS Reliability Analysis

Case Processing Summary

		N	%
Cases	Valid	102	98.1
	Excluded[a]	2	1.9
	Total	104	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.790	3

Item Statistics

	Mean	Std. Deviation	N
How knowledgeable are you about [QID13-ChoiceTextEntryValue]? - |	4.8333	2.13914	102
How knowledgeable are you about [QID13-ChoiceTextEntryValue] compared to your friends and family? - |	5.5784	2.17290	102
How much research have you done on [QID13-ChoiceTextEntryValue]? - |	4.1078	2.29466	102

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
How knowledgeable are you about [QID13-ChoiceTextEntryValue]? - |	9.6863	15.148	.664	.681
How knowledgeable are you about [QID13-ChoiceTextEntryValue] compared to your friends and family? - |	8.9412	14.967	.660	.685
How much research have you done on [QID13-ChoiceTextEntryValue]? - |	10.4118	15.235	.574	.779

Appendix 3: SPSS Hypothesis Testing

I. Effectiveness of all deterrents:

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	How likely are you to visit your chosen destination in the next year? - |	6.2157	102	2.97723	.29479
	After reading the news article, how likely are you to visit [QID13-ChoiceTextEntryValue] in the next year? - |	5.3824	102	2.87373	.28454

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	How likely are you to visit your chosen destination in the next year? - | & After reading the news article, how likely are you to visit [QID13-ChoiceTextEntryValue] in the next year? - |	102	.771	.000

Paired Samples Test

| | | Paired Differences | | | | | | | |
| | | | | | 95% Confidence Interval of the Difference | | | | |
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	How likely are you to visit your chosen destination in the next year? - | - After reading the news article, how likely are you to visit [QID13-ChoiceTextEntryValue] in the next year? - |	.83333	1.98052	.19610	.44432	1.22234	4.250	101	.000

II. Effectiveness of individual deterrents:

Paired Samples Statistics[a]

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	How likely are you to visit your chosen destination in the next year? - |	5.6667	33	2.94392	.51247
	After reading the news article, how likely are you to visit [QID13-ChoiceTextEntryValue] in the next year? - |	4.7879	33	2.57096	.44755

a. DETERRANT = 1.00

Paired Samples Correlations[a]

		N	Correlation	Sig.
Pair 1	How likely are you to visit your chosen destination in the next year? - | & After reading the news article, how likely are you to visit [QID13-ChoiceTextEntryValue] in the next year? - |	33	.651	.000

a. DETERRANT = 1.00

Paired Samples Test[a]

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	How likely are you to visit your chosen destination in the next year? - | - After reading the news article, how likely are you to visit [QID13-ChoiceTextEntryValue] in the next year? - |	.87879	2.32859	.40536	.05310	1.70447	2.168	32	.038

a. DETERRANT = 1.00

Paired Samples Statistics[a]

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	How likely are you to visit your chosen destination in the next year? - |	5.8788	33	3.14004	.54661
	After reading the news article, how likely are you to visit [QID13-ChoiceTextEntryValue] in the next year? - |	5.0000	33	2.68095	.46669

a. DETERRANT = 2.00

Paired Samples Correlations[a]

		N	Correlation	Sig.
Pair 1	How likely are you to visit your chosen destination in the next year? - | & After reading the news article, how likely are you to visit [QID13-ChoiceTextEntryValue] in the next year? - |	33	.820	.000

a. DETERRANT = 2.00

Paired Samples Test[a]

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	How likely are you to visit your chosen destination in the next year? - | - After reading the news article, how likely are you to visit [QID13-ChoiceTextEntryValue] in the next year? - |	.87879	1.79857	.31309	.24104	1.51653	2.807	32	.008

a. DETERRANT = 2.00

Paired Samples Statistics[a]

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	How likely are you to visit your chosen destination in the next year? - |	7.0278	36	2.75148	.45858
	After reading the news article, how likely are you to visit [QID13-ChoiceTextEntryValue] in the next year? - |	6.2778	36	3.14970	.52495

a. DETERRANT = 3.00

Paired Samples Correlations[a]

		N	Correlation	Sig.
Pair 1	How likely are you to visit your chosen destination in the next year? - | & After reading the news article, how likely are you to visit [QID13-ChoiceTextEntryValue] in the next year? - |	36	.813	.000

a. DETERRANT = 3.00

Paired Samples Test[a]

			Paired Differences							Sig. (2-tailed)
						95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df		
Pair 1	How likely are you to visit your chosen destination in the next year? - | - After reading the news article, how likely are you to visit [QID13-ChoiceTextEntryValue] in the next year? - |	.75000	1.84197	.30700	.12677	1.37323	2.443	35		.020

a. DETERRANT = 3.00

III. One-Way Anova

Descriptives

After reading the news article, how likely are you to visit [QID13-ChoiceTextEntryValue] in the next year? - |

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
1.00	33	4.7879	2.57096	.44755	3.8763	5.6995	1.00	10.00
2.00	34	4.8529	2.77579	.47604	3.8844	5.8215	.00	10.00
3.00	36	6.2778	3.14970	.52495	5.2121	7.3435	2.00	10.00
Total	103	5.3301	2.90837	.28657	4.7617	5.8985	.00	10.00

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
After reading the news article, how likely are you to visit [QID13-ChoiceTextEntryValue] in the next year? -		Based on Mean	2.474	2	100	.089
	Based on Median	1.966	2	100	.145
	Based on Median and with adjusted df	1.966	2	99.923	.145
	Based on trimmed mean	2.389	2	100	.097

ANOVA

After reading the news article, how likely are you to visit [QID13-ChoiceTextEntryValue] in the next year? - |

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	49.775	2	24.887	3.061	.051
Within Groups	813.002	100	8.130		
Total	862.777	102			

Multiple Comparisons

Dependent Variable: After reading the news article, how likely are you to visit [QID13-ChoiceTextEntryValue] in the next year? - |

Tukey HSD

(I) DETERRANT	(J) DETERRANT	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1.00	2.00	-.06506	.69677	.995	-1.7227	1.5926
	3.00	-1.48990	.68717	.082	-3.1247	.1449
2.00	1.00	.06506	.69677	.995	-1.5926	1.7227
	3.00	-1.42484	.68187	.097	-3.0471	.1974
3.00	1.00	1.48990	.68717	.082	-.1449	3.1247
	2.00	1.42484	.68187	.097	-.1974	3.0471

After reading the news article, how likely are you to visit [QID13-ChoiceTextEntryValue] in the next year? - |

Tukey HSD[a,b]

DETERRANT	N	Subset for alpha = 0.05
		1
1.00	33	4.7879
2.00	34	4.8529
3.00	36	6.2778
Sig.		.083

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 34.289.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

IV. Impact of prior knowledge

Descriptive Statistics

	Mean	Std. Deviation	N
Post - Pre	-.8333	1.98052	102
KNOWLEDGE	4.8766	1.90497	104

Correlations

		Post - Pre	KNOWLEDGE
Pearson Correlation	Post - Pre	1.000	.152
	KNOWLEDGE	.152	1.000
Sig. (1-tailed)	Post - Pre	.	.064
	KNOWLEDGE	.064	.
N	Post - Pre	102	102
	KNOWLEDGE	102	104

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	KNOWLEDGE[b]	.	Enter

a. Dependent Variable: Post - Pre

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.152[a]	.023	.013	1.96740

a. Predictors: (Constant), KNOWLEDGE

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.101	1	9.101	2.351	.128[b]
	Residual	387.065	100	3.871		
	Total	396.167	101			

a. Dependent Variable: Post - Pre

b. Predictors: (Constant), KNOWLEDGE

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.602	.538		-2.979	.004
	KNOWLEDGE	.158	.103	.152	1.533	.128

a. Dependent Variable: Post - Pre