

Data mining to reposition a religious tourist destination in COVID-19

[Natalia_Vila-Lopez](#) (*Department of Marketing, Faculty of Economics, University of València, València, Spain*)

[Ines_Kuster-Boluda](#) (*Department of Marketing, Faculty of Economics, University of València, València, Spain*)

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Data mining to reposition a religious tourist destination in COVID-19

Data mining to
reposition

Natalia Vila-Lopez and Ines Kuster-Boluda

*Department of Marketing, Faculty of Economics, University of València,
València, Spain*

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Abstract

Purpose – The positioning of a tourism destination can easily change due to external uncontrolled factors, such as a pandemic. In this scene, the purpose of this study can be summarized in two main points: to investigate the main topics associated with a religious tourism destination (Vatican City) before and from the pandemic crisis, and to identify potential topics that could be highlighted to reposition this tourism destination more favorably.

Design/methodology/approach – The information was extracted from Trip Advisor, specifically from the web Vatican City (7,152 reviews). This information was analyzed using text mining software applied to English text data.

Findings – The results show that the image of Vatican City has evolved, from a larger cultural, artistic and historical destination to a destination with a strong religious orientation, probably due to the growing influence of tourists and pilgrims in search of spiritual consolation in a global health crisis. New comments have emerged in the pandemic on topics such as Pope, Catholicism and love.

Practical implications – The authors recommend repositioning this tourism destination under what they have dubbed the umbrella of the three “Rs”: religion, renaissance and relaxation. Also, two outstanding attractions are frequently mentioned by tourists in this more spiritual scenario: Saint Peter’s Basilica and Sistine Chapel.

Originality/value – Studies about religious tourism are scarce, and those considering an urban city as a key religious tourism destination even more.

Keywords Data mining, User-generated content, Tourism destination, Repositioning, Religious, Destination image, Trip Advisor, Online travel reviews, OTRs, DMO, Crisis, Vatican City, Religious tourism, Urban city

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Introduction

Covid-19 has caused a global health crisis like few before and the tourism industry's numbers have plummeted (Bulchand-Gidumal, 2022; Sun *et al.* 2022). Some strategies need to be developed for increasing the number of foreign tourists, which begins by recognizing the destination image that tourists have of a specific destination (Murakami, 2018). In this scene, Pike and Ryan (2004) underline that any destination positioning strategy must correct negative images. So, when an image does not work, it must be changed correcting negative perceptions. For this reason, destination managers are increasingly interested in understanding what the image of a destination is because "that image plays a crucial role in decision-making regarding selecting a holiday destination" (Mariné-Roig, 2019, p. 3392).

The main problem is that markets are dynamic and heterogeneous, and the positioning of a tourism destination can easily change, and this represents a significant challenge for Destination Marketing Organizations (DMOs) (Pike and Ryan, 2004). In this vein, Chacko and Marcell (2008) explain how crises and disasters have damaged the positioning of a lot of tourism destinations in the recent past. They also reviewed Biermann's (2003) work, which identified five types of situations capable to damage the positioning of a tourism destination: war and conflict, crime, terrorism, natural disasters, and health-related crises. Focusing on the last one, the Covid scenario is a hot example of how the loss of security can be a critical image deterioration in the promotion of a destination. To manage an image crisis, something should be changed to survive (Sun *et al.* 2022). Murakami (2018) recommends the use of a marketing strategy for improving the image of a destination. To re-establish the damaged positioning of a tourism destination after a crisis some new topics should be reinforced in the communication message, while others should be attenuated according to tourists' perceptions.

In this scene, the present paper has been developed with the aim to present the steps that could be followed by DMOs to restore the destination image of a particular tourist destination: Vatican City. Two main specific objectives guide our work: (i) first, to investigate the main topics associated with a religious tourism destination (Vatican City) globally and since the pandemic crisis, and, (ii) second, to identify potential topics that could be highlighted to reposition this tourism destination more favorably.

The image of a tourist destination depends deeply on the user-generated content encouraged by tourists using new technologies (Mariné-Roig and Clavé, 2015; Ganzaroli, *et al.*, 2021). As Mariné-Roig and Clavé (2015) have underlined, social media provides a huge quantity of information that allows you to form a first impression of a destination. In the tourism industry, these authors underline the role of two sources of information: travel blogs and online travel reviews (OTRs). The first source (blogs) has lost relevance in recent years, while the former (online travel reviews) is becoming more and more relevant in tourism decision-making. That's because "tourism is one of the sectors with a very close relationship with the new information and communication technologies" (Miguéns *et al.*, 2008, p.2). To this end, the online travel reviews (OTRs) of this destination written in English in Trip Advisor were analyzed. The usefulness of OTRs to analyze a destination image can be shown in Mariné-Roig (2019) or Gour *et al.* (2022).

Compared to previous works, the present paper adds value in three main lines. First, preceding studies have investigated the role of different crises in the positioning strategy of a tourism destination (wars, climatic disasters, etc.) (Chacko and Hawkins Marcell, 2008); however, the effect of a global health crisis such as the one caused by Covid-19 is something totally new. Second, most destination image studies have lacked any

conceptual framework (Pike and Ryan, 2004), and, also, most of them have not considered big data to define the communication strategy of the destination. Most religious studies use an interview method (Kim and Kim, 2018), while studies based on qualitative data extracted from social networks are practically inexistent. This study seeks to address these shortcomings by proposing future lines of action based on consumers' spontaneous opinions manifested in social networks after visiting a particular city (Vatican City) considered a tourist destination in its own right. Third, studies about religious tourism are scarce (Kala, 2021), and those considering an urban city as a key religious tourism destination even more (Kim and Kim, 2018, p. 529). As these authors remark, "few empirical studies investigate religious tourists at urban religious tourism destinations". In addition, City-tourism is a new type of tourism with high potential for future urban development that has received little attention, despite the proliferation of information and communication technologies (Bock, 2015).

Positioning strategies for religious destinations: theory and hypotheses

Different forms of tourism exist according to tourists' motivations (Rinschede, 1992,): (i) holiday tourism, (ii) cultural tourism, (iii) religious tourism; (iv) social or group tourism, (v) sport tourism, (vi) economic-business tourism and (vii) political tourism. Many times cultural tourism, holiday tourism and religious tourism go hand to hand. This occurs especially in Rome (Rinschede, 1992, p. 52). So, focusing on "religious tourism", Rashid (2018) reviewed the published works on this topic (initial sample of 1,604 documents on this topic) concluding that people may visit the same site with very different motivations. The dominant approach states that the same destination can be considered a religious pilgrimage for some tourists (religious motivations) or a tourist city for others (adventure or cultural motivations). From this perspective, a religious destination is studied including a mix of experiences. For example, Rinschede (1992) states that religious tourists can visit a place to attend a meeting or live an experience, to view constructions and other artistic manifestations.

In any case, before choosing a religious tourism destination, the most important driver is the previous image that the place has on the mind of the potential visitor. That is, the tourist destination image is a key element to determine an individual's subjective perceptions, behaviors, and destination choices (Koçyiğit, 2016; Gallarza *et al.*, 2002). As Al Jauzi *et al.*, (2021, p. 269) conclude for an Islamic destination "brand positioning is a way that is used to demonstrate the superiority of a brand and its difference from other competitors". Three main dimensions defined every destination image: a cognitive-rational dimension (based on previous knowledge), an affective dimension (based on feelings), and a conative dimension (Pike and Ryan (2004). When talking about purely religious tourists (pilgrims) these three dimensions are reinforced, because pilgrims have a wealth of prior knowledge based on their devotion and consequently they enhance their emotions on the visit due to their religious passion. In spite of this, the tools used to promote a religious destination are the same as those used in urban tourism. For example, religious destinations are many times linked to attractions and events that contribute to city branding (Chan *et al.*, 2016), however, these attractions and events have a spiritual essence that makes them different. The likelihood of perceiving that something is going wrong or not working is much lower than for other types of events and attractions, so their positive impact on the destination's image is much stronger.

So, based on the Urban Planning Theory (Park *et al.*, 2020), when the profile of the tourist is so diverse, it is necessary to define the image of the destination correctly, in order to try to accommodate the different groups. To this end, a positioning analysis is required to understand how a destination is perceived to perform on attributes deemed

important to the target (Pike and Ryan, 2004). The problem is that many times, tourism destinations experienced a seasonal pattern, and their positioning is not stable because at one time of the year they are visited for one reason and at another time of the year they are visited for other reasons, or not visited at all. That is, the image of a particular tourism destination can be quite different depending on when it's measured. This situation can lead to the communication strategy being perceived as inconsistent. Nowadays, the pandemic crisis has damaged many tourism destinations and so their images are very different from what it was a few months ago. For example, Ahmad *et al.*, (2021), with a sample of 426 respondents, concluded that destination image significantly affects visit intention, and for this reason, a decrease in visitors has been related to the consequences' of Covid-19 on tourism destination image. In the same vein, Romagosa (2020) describes the negative effects that this pandemic has unleashed on most of the world's tourism destinations.

So, as previous lines have summarized, travel patterns and the popular areas of a city can change (Park *et al.*, 2020). Destination planners need to be aware of this to avoid inconsistent communication messages and disappointed tourists. It seems that the positioning of touristic destinations, especially those massively visited in the past (such as religious destinations), has not remained stable due to the global health crisis. So, the following research question could be enounced:

RQ1: Has the positioning of a religious tourism destination (Vatican City) remained stable since the pandemic period?

In this scenario, and in order to alleviate the lack of regularity in the influx of tourists, or to reverse the negative trend that the Covid situation may have generated in a particular destination, there is a marketing strategy capable of producing interesting results: the repositioning of the brand. Previous literature has documented the usefulness of the repositioning strategy to wash or refresh the image of a damaged destination. For example, Chacko and Marcell (2008) explained the repositioning of New Orleans as a tourism destination after the devastating effects of Hurricane Katrina in August 2005. In the same vein, Volcic *et al.*, (2014) analyze effective ways to reposition Sarajevo after the war. Other times, destination managers need to recover the image of a destination that has a relatively intact infrastructure but a completely devastated destination image. Also, from another approach, the repositioning strategy has been used on the opposite side, to stop the affluence of tourists (S raphin *et al.*, 2019), which is known as Trexit (Tourist exit). From this approach, the problem to solve is different: the massive affluence of tourists that wants to be reduced. In any case, the repositioning strategy provides a useful solution to reach the objectives of destination managers.

Diverse destinations have reacted by repositioning themselves to bridge the gaps in the pandemic. For example, Malaysia started a crisis management plan to enforce a movement control order since the Covid-19 pandemic to identify potential threats and prepare important responses (Ahmad *et al.*, 2021). As Romagosa (2020) explains, the current crisis implies that something must be changed in terms of management and planning. A tourism destination needs to react because this crisis represents an unexpected opportunity. Also, Bulchand-Gidumal (2022) provides some guides for recovering tourism after the COVID-19 crisis in island tourism based on an integrated smart tourism destination framework.

Focusing on religious destinations, we can observe that they are among the most damaged because the virus has provoked crisis management involving in a very special

way sacred places (Mosier *et al.*, 2020). As these authors state, the future of religious destinations is promising as the pandemic subsides due to the psychological impact of closing religious places and the power of faith in recovering visits. But, to solve the situation, a repositioning plan should be developed. To revive a religious destination, the first step should be to segment the market to identify problems that need to be covered. That is, the positioning strategy requires a previous segmentation process to identify destination targets (Mykletun *et al.*, 2001). The second step is to find those positioning cues that better fit with each target group. In this vein, diverse lines of repositioning could be applied to a religious damaged destination in a health crisis to cover the needs of different targets: (i) a purely religious focus, to highlight the possibility of meeting famous religious leaders, attending religious festivals, seminars, events or special days (Hag and Yin-Wong, 2010); (ii) a relaxation-based focus, to remark the usefulness of visiting holy places in search of solutions for daily life problems (Hag and Yin-Wong, 2010) to rest and find interior peace after a crisis; (iii) a cultural focus, to show the possibility of reviving a religion (Hag and Yin-Wong, 2010) by visiting architecturally interesting sacred sites of long-standing tradition. This last option highlights the relevance of paying attention to history, art, and culture because as Formica and Uysal (1996, 324) early stated Italy “has a tremendous allure in terms of its historical and cultural variety and richness has proven to be its leading force since the 18th century”. In this vein, Al Jauzi, *et al.*, (2021) conclude that the religious tourism center in West Nusa Tenggara has a mosque with a unique building architecture, which contributes to its attractiveness to religious tourists. In the same line, Deb (2021) simplifies the positioning alternatives into two, hedonic and functional, depending on the kind of destination cues remarked for a destination.

In sum, the image of a destination changes over time (Mariné-Roig, 2019), and, as previous lines have shown, it's important to develop an appropriate branding strategy to reposition a tourism destination. Given that segmentation precedes positioning, consumers' opinions need to be considered, particularly in religious tourism destinations, massively visited and hardly damaged in the pandemic era. The problem to be solved is:

RQ2: Which topics-cues could be used to reposition a religious tourism destination (Vatican City) in the pandemic period?

Methodology

Tourism destination and sample

Vatican City was chosen because this destination is visited by international pleasure travelers as well as authentic pilgrims from all over the world (Kim and Kimm 2018). In addition, this destination has been one of the most damaged by the pandemic (Mosier *et al.*, 2020). In addition, the justification for studying a specific city is because following Bock (2015), city tourism is one of the fastest-rising travel segments worldwide, and the changing nature of city tourism becomes increasingly apparent in many cities that need to be investigated. In addition, Vatican City was chosen because massively visited tourist destinations have suffered a superior image deterioration due to the severe restrictions that Covid has brought in terms of capacity. That's because holy monuments and other religious spaces have a special place in the hearts and minds of many people (Mosier *et al.*, 2020). Vatican City has been gaining interest in recent years, because is one of the three major pilgrimage destinations for Christians, along with Jerusalem and Santiago de Compostela (Kim and Kim, 2018). In terms of Timothy (2020), Vatican City is the smallest country on earth but probably the most visited. All these points lead us to focus our proposal on this tourism destination. According to cumulative attraction and gravity

theory, “travelers tend to visit a number of attractions in and around a destination in order to maximize value (money, time, and effort) and reduce risk (Park *et al.*, 2020), and Vatican City is an excellent example of this.

To study this destination, big data was used, due to the growing importance of user-generated content in tourism. Trip Advisor was used because it is a website where most information posted is autonomously generated by its users (Miguéns *et al.*, 2008). Among review sites, Trip Advisor is the world’s largest travel site (Murakami, 2018). This source of information is also used in the study of the city of Venice done by (Ganzaroli *et al.*, 2021) or in the study of India done by Gour *et al.* (2022). More specifically, 7152 online travel reviews (OTRs) written in English on Trip Advisor about “things to do” in Vatican City were retrieved in July 2021. That is, given that the English site of the Vatican City was analyzed, English reviews were analyzed. The data was separated into two main blocks: globally and since the beginning of Covid-19. 10% of these comments were after the declaration of pandemic status in March 2020. The results for this sub-sample were compared with the whole period to identify new trends in travelers’ comments. Recent research by Guerrero-Rodriguez, *et al.*, (2021) compared differences in OTRs by examining different information attributes in the dataset. More specifically, these authors developed three analyses: (1) dividing OTRs based on their geographical origin (national vs. international); (2) identifying temporal changes in OTRs (holiday vs. non-holiday seasons), and; (3) measuring the evolution in the number of OTRs over time (periods between 2002 and 2020). In their study, “Mexico was the country that contributed to a larger number of OTRs, 52.5% of the total. The USA and Canada were second and third, reporting 22.7% and 4.66% respectively. However, other countries also have a considerable number of reviews on the TripAdvisor platform, such as Japan (3.32%), Colombia (2.16%), France (2.05%), Brazil (1.96%), Costa Rica (1.71%), Spain (1.69%), Australia (1.61%), England (1.58%) and Germany (1.47%)” (Guerrero-Rodriguez *et al.*, 2021, p. 9). In the same vein Marine-Roig and Huertas (2020) analyzed 152,704 Airbnb OTRs in Barcelona in several languages, each sub-sample of a different size (English: 108,064; Spanish: 22,132; French: 13,805; German: 4611; and Italian: 4092), from different periods (being 2017 an inflection point due to a terrorist attack and the Catalan independence process).

Statistical tools

To carry on our research, the same steps of Marine-Roig and Clavé (2015) were followed. As these authors recommend, the a-processing paradigm was developed (data are first stored and then analyzed). To this end, three free software were used: Cyotek Web Copy, Note Pad ++, and KH Koder 3 Folder. First, Cyotek is a software that permits web data extraction. It was used to download the comments in the English web of the Vatican City in Trip Advisor. This information unstructured or only semi-structured information was organized with this software to be easily analyzed more systematically. Second, Note Pad ++ was used to open the extracted data in an easily understandable format. Only texts were analyzed in our study. Mariné-Roig (2022) recommends using this kind of software to give a standard format (ISO: International Organization for Standardization) to date. Third, KH Koder 3 Folder was used to analyze the data, because this software is recommended to relate and interpret people’s comments concerning a specific theme. This free software for analyzing textual data was used, for example, to analyze the user-generated content about Japanese gardens (Yingming and Katsunori, 2019). It permits unveiling how

frequently occurring words are interrelated. Also, Murakami (2018) uses this statistical tool to study the image of Japan in order to identify which tourist attractions should be recommended. In the same vein, Tussyadiah (2017) used to KH-Koder to identify content and themes from online reviews to explain major service attributes of peer-to-peer (P2P) accommodation sought by guests. That is, text mining has been used to study destinations' image by identifying frequent words and the network of the words (Murakami, 2018; Mariné-Roig, 2022). We have focused on our analysis in the textual body. Following Tussyadiah's (2017) procedure: (i) some words were specified as stop words, such as articles or connectors (i.e. "a", "an", "and", "already", "the", "because", "during", "each" etc.); (ii) a long list of words were included in the "force pick up" box (for example, cannot miss, can't beat, can't miss, can't recommend, cannot be missed, do not, etc.) and (iii) part-of-speech (POS) tagging were selected (such as noun, proper-noun, verb, adjective etc.). The box other was not marked.

Results

RQ1. Has the positioning of Vatican City evolved?

The following lines will show how the adjectives, nouns, and verbs used by the visitors of the Vatican City in their comments to describe their experiences have evolved. That is, the topics that remain in visitors' minds since the pandemic are not strictly the same as those used before. To carry on this analysis, we have used the unique statistic that the KH coder provides: "Term Frequency" (TF). This indicator measures the number of occurrences of each target word in the entire data. For the first period, the TF was equal to or higher than 4, being the highest TF for the words cent (TF=59) and tour (TF=57). For the second period, the TF was equal to or higher than 19, which means a higher convergence between the opinions of the visitors in this second period (since Covid-19 was declared). The most popular words in period two were Vatican (TF=420) and tour (TF=328). We would like to highlight that the maps that our software generates, include words with low TF, as they could represent potential trends, and even if they are lower in volume, they should not be neglected as destination managers should also listen to the voice of minorities, that is, of publics with less representation (Marine-Roig Huertas, 2020, Guerrero-Rodriguez *et al.*, 2021).

First, regarding the **adjectives** associated with Vatican City (Image 1, left side), we can identify many positive references, such as **beautiful-amazing-great**. As image 1 shows, these three terms appear together in the same group, and the spheres representing them have the longest diameter (TF=130; TF=85, TF=65). The second group of positive adjectives is **religious-impressive**. A third group connects the adjectives **long-free-good**. Two other groups include two outliers respectively: **sure** and **impressive** (TF=47 and TF=27 respectively). Just one negative adjective has been identified also in an isolated group: **busy** (TF=33). To ensure that the term "busy" was used in a negative sense and not in a positive one (i.e. the destination was not busy), comments in which the term was used were manually reviewed. That is, visitors, tend to use sentences with positive adjectives focused on places, persons, and global experiences such as "amazing structures outside the basilica on St peter square", "lots of beautiful things to see", "police & Swiss Guards are very professional, polite & helpful", "everything in the Vatican is amazing and pristine", "amazing part of Rome, very religious". Despite this, the city is perceived: as "very very busy", "busy but manageable and enjoyable".

If we look specifically at the comments made since Covid-19 was declared in March 2020 (Image 1, right side), some new positive adjectives have strongly

emerged in a new group: **excellent-wonderful** (both with a TF=6). Another group includes four positive adjectives (two of them are new): **amazing-great-good-fantastic**. “Amazing” and “great” have the biggest spheres in image 1 (TF=16 and TF=14 respectively), so they are outstanding terms in this period. The third group of adjectives mentioned together with also big spheres representing outstanding values in this period is **beautiful-sure** (TF=22 and TF=13 respectively). Image 1 shows a new negative adjective that has appeared, **hard**, which is mentioned together with **busy** (both with TF=5). Therefore, although their frequency is not the highest, the combination of these terms only appears in period two. In sum, in the Covid period, some new positive adjectives are used frequently linked to persons (i.e. “excellent time”, “tour guide Agnes was excellent”, “Val is a wonderful person”), combined with traditional positive adjectives (i.e. “fantastic views”, “fantastic gift shop “great guided Vatican tours”, “beautiful Pietá by Michelangelo”). A negative sense of busy and hardness is appreciated in some comments (i.e. “hard to know where to look”).

(Image 1)

Second, focusing on the **verbs** associated with the Vatican City (Image 2, left side), a group of frequent terms mentioned together is **visit-feel-leave-need-enter**. The verb visit has the biggest sphere (TF=149). The second group of verbs mentioned together is **recommend-guide-think-enjoy-skip-wait**. Recommend has the biggest sphere (TF=83). A third group includes **try-pay-allow-want**. A fourth group includes: **walk and buy**. Walk with a big sphere (TF=87). Also, a negative verb appears in an outlier: **avoid** (TF=25). That is, based on the biggest spheres, this destination seems a place to recommend and to walk.

Again, if we look specifically at the comments made since Covid-19 was declared in March 2020 (Image 2, right side), some new verbs appear. The new group includes two positive verbs mentioned together: **expect and experience**. A second group talks about **buy-include-love** (love is a new verb of this period with TF=5). A third group includes: **enjoy-need-spend-book-make**, being the verb spend the one with the biggest sphere (TF=18). A fourth group includes the **visit-walk-recommend-skype**. The verb “visit” has the biggest sphere (TF=35), together with recommend (TF=17). Additionally, a new negative verb has emerged in this period: **miss** (TF=5), mentioned with **look-know-say**. So, it seems that since the pandemic, the visitors have become more emotional and passionate, assigning higher importance to love, hope, and experiences (i.e. “love it”, “I do love the Vatican City” and “an experience you must partake in”). The frequent verbs during the whole period are “walk” and “spend”.

(Image 2)

Third, concerning the **nouns** mentioned for the Vatican City (Image 3, left side), there is a group of places to visit mentioned together: **Basilica St Peter-Chapel Sistine-Museum-Vatican-time**. The terms Vatican (TF=420) and time (TF=169) have the biggest sphere in this group, which means that visitors need a lot of time to visit all the attractions in the Vatican. A second group includes seven nouns, some of them with negative connotations: **line-people-crowd-lot-guide-tour-hour**. The noun tour has the biggest sphere, with the second-highest TF in the total sample of words (TF=328). A third group includes some nouns with small spheres: **square- museum-country-pope** (Pope TF=48). A fourth group includes nouns with small spheres and slight negative connotations: **cent-entrance-group-experience-ticket-queue** (queue TF=83). That is, based on the size of the spheres, it seems that many sentences illustrate the relevance of

making a tour: “a guided tour could be a better option”, and “highly recommend a tour group”. The negative terms in this period are related to crowds, queues, a lot of people, and hours. Some sentences including these weaknesses are: “lots of tourists and a lot of walking”, “twenty-six thousand people a day visit Vatican City every day” and “It's a bit like Disney World you wait in crowded lines”.

If we look specifically at the comments made since Covid-19 was declared in March 2020 (Image 3, right side) a new group of nouns emerges: **painting-garden-Pope-post-photo**. Also, some new nouns are included in visitors' comments, such as **catholic** (TF=4), mentioned with **country-Square-basilica-country-St Peter-world-dome**, or **experience** (TF=12), mentioned with **list-thing-bit-morning-area-entrance**. Also, a lot of new negative terms emerged in this period. For example the group: **book-minute-people-group-queue-ticket-painting**. So, visitors seem to be more disappointed due to waiting (TF=8) and queuing (TF=22) problems, probably related to capacity restrictions. In addition, references to Catholicism have augmented, probably because more people are visiting Vatican City seeking spiritual support. In any case, our results corroborate previous studies, insofar as it has been demonstrated that nouns are important content words that usually include proper nouns such as names of tourist attractions, person's names, and organization names (Murakami, 2018). The most frequent nouns are **cent** (TF=59), **tour** (TF=57), **time** (TF=38), **Vatican** (TF=36) and **visit** (TF=35), the last one mentioned with **history-art-crowed-lot-place-statue-cent**

(Image 3)

In sum, the comments made above lead us to solve **RQ1**, as far as our results show that the positioning of the Vatican City in the mind of its visitors has evolved. More specifically, from the pandemic, the number of nouns, adjectives, and verbs has grown as the maps show. The terms used in the pandemic reflect that visitors' comments are more varied and included some new topics that can be summarized in: a greater inclination towards enthusiastic emotions, proximity to Catholicism, and rejection of the queue-waiting that the pandemic seems to have intensified.

RQ2. Topics recommended for repositioning the Vatican City due to the pandemic scenario

In order to identify the outstanding topics that visitors have used in their comments about Vatican City in Trip Advisor a frequency analysis was done. Table I shows the top 27 keywords more frequently used by users in the analyzed social network. Additionally, table II incorporates those keywords frequently mentioned together in the entire data set.

Based on these frequently used terms, we can extrapolate which is the positioning strategy of Vatican City. Following Pike and Ryan (2004), the frequently used terms can be grouped into three main positioning dimensions: cognitive, affective, and conative. (i) The cognitive image is based on tangible physical attributes; (ii) the affective image is based on tourists' feelings towards a destination; and (iii) the conative image can be considered as the likelihood of visiting a destination within a certain period. The outstanding words for each dimension in our work are:

1. First, some interesting words reflecting the **cognitive image** of the Vatican City (visual/tangible perceptions) are: Vatican, tour, cent, place, Rome, museum, beautiful, or chapel among others. Table II shows recurrent sentences such as “volume of people”, “inside of St Peter” or “Famous Sistine Chapel Ceiling” among others. So, it seems that a tour is recommended to visit different famous attractions of this beautiful place where objectively there are a lot of people.

2. Second, some interesting words from Table I reflecting the **affective image** of the Vatican City (internal feelings linked to experiences) are: time, hour, crowd, amazing, and queue. Table II shows affective sentences such as: Volume of people, religious people, much time, excellent guide. That is, visiting Vatican City is amazing, particularly for religious people; it seems important to have a guide; also problems with time, queues, and volume of people are frequently commented.
3. Third, some interesting words reflecting the **conative image** (behaviors/actions) of the Vatican City are: walk, free visit day, line audio ticket, and member tour group. So, from a behavioral approach, it seems that visitors like to walk and join a tour.

(Table I and Table II)

In addition, co-occurrence maps were obtained to visually represent the co-occurrence network between words in a text (Image 4). These maps are generated using nouns, verbs, and adjectives from the reviews. A co-occurrence network with highly co-occurring words leads us “to understand a more complete image of the destination” (Murakami, 2018, p. 112). These co-occurrence maps were calculated for the whole period and the specific period since the pandemic, in order to identify new positioning directions of this destination.

On one side, for the whole period (Image 4, left side) the groups of words mentioned together lead us to identify four main positioning exes:

1. **Cluster 1:** The Vatican City must be visited using a day when going to Rome. These terms have the biggest spheres on the map. So, following the Gravity Theory (Park, Xu et. al, 2020), Vatican City is the primary attraction (or destination) in our study, which a stronger gravitational pull than the secondary attraction (Rome), but both of them can be combined to enhance the global attraction of Italy. Vatican City is linked to other words: spend-day-time. This is illustrated in some opinions of the visitors, such as “fantastic short break”, “whole day” or “busy day”.
2. **Cluster 2:** related to the former, people recommended in their comments to use a tour with a guide. The term “tour” has the biggest sphere on the map. Frequent comments in the database are, for example: “brilliant tour guide”, “line tour”, “interesting tour” “tour guide”, “funded tour of St. Peters”, and “guide Vatican tours” among others. So, as previous literature has demonstrated (Huang et. al, 2010), satisfaction with guiding services positively affected satisfaction with tour services. Guide tourists seem to spend more than independent ones (Casado-Díaz et. al, 2021), probably because they felt lost and bewildered.
3. **Cluster 3:** focuses on places. St Peter’s Basilica, Chapel Sistine, and the museum are three outstanding attractions to visit. So, our findings suggest in line with Park, et al. (2020) that travelers do not tend to visit all parts of a city, but only specific places.
4. **Cluster 4:** illustrates that to buy tickets you will have to wait in a queue, but you can skip using online tools.

(Image 4)

These results lead us to conclude that visiting Vatican City is a complement to visiting Rome, which can be done in a day with a guide. The main motivation in global terms is the acquisition of culture by visiting three outstanding places: St Peter’s Basilica, Chapel Sistine, and the museum. The use of new technologies can help to avoid queues.

On another side, if we look specifically at the comments made since Covid-19 was declared in March 2020 (Image 4, right side), eleven new blocks of related words have emerged which give us potential ideas to inspire the re-positioning strategy for this religious destination. The blocks in this period talk about:

1. **Cluster 1:** booking a tour with a guide is recommended (for an hour). Tour has a big sphere.
2. **Cluster 2:** the City of Vatican needs time.
3. **Cluster 3:** the outstanding places to visit are. St Peter's Basilica, Chapel Sistine, and the museum. You can take photos, feel, view, etc. You will wait and you should book.
4. **Cluster 4:** with tickets, you can skip lines.
5. **Cluster 5:** You can also see gardens and Pope is in this smallest country of the world to live a religious experience. Some comments illustrate this: "spiritual experience", "papal audiences", "papal residences", and "Christian church". You can find also a post office. In sum, the frequent terms in cluster 5 are: smallest, country, world, free, site, Pope, garden, and post office.
6. **Cluster 6:** Visiting architecture although crowded.
7. **Cluster 7:** Church-highly-excellent.
8. **Cluster 8:** it's something beautiful to breathtaking.
9. **Cluster 9:** Full of art is history.
10. **Cluster 10:** ask, tell, wonderful.
11. **Cluster 11.** Sure, make, certain.

So, a mixture of different motivations seems to explain the election of this tourism destination since March 2020: **relaxation** (cluster 8: "breathtaking"), **culture** (cluster 6: "architecture" and cluster 9: "full of history"), and **religion** (slightly cluster 7: "church" and slightly cluster 5: "Pope"). This means that apart from culture acquisition, visitors are more worried recently about receiving a religious reinforcement because new terms related to religion are starting to appear. The main threat to be addressed is **overcrowding** and time (clusters 2 and 4), which has been damaging the image of the destination for some time and has been exacerbated in recent months. Essential to book a **tour** (cluster 1) to solve all these points.

In sum, our results corroborate that a positioning strategy can be unfolded mainly into its cognitive and affective components (Koçyiğit, 2016). For this author, cognitive components seem to be more relevant for constructing a destination image than affective ones. In the same vein, Pike and Ryan (2004) remarked on the need of distinguishing between an individual's beliefs and attitudes, because beliefs represent information held about an object, while attitudes are a favorable or unfavorable evaluation of the object. Following this stream of research, in the re-positioning strategy of the Vatican City, we defend that the cognitive image should be reinforced, more than the affective one.

More specifically our maps lead us to conclude that the Vatican City should be repositioned to highlight the following cognitive attributes: beauty, architecture, art history, Pope, and tour. That is a mixture of "relaxing, culture, and religion" as previous results have highlighted. Our results based on big data support the work done by Kim and Kim (2018) with 102 valid responses. These authors identified three main attributes in the Vatican City: traditions and history, religious architecture and artwork conservation, and a holy atmosphere. These authors also call attention to one of the most representative and significant cathedrals in the world: St. Peter's Basilica. Our results corroborate this point, as long as the most frequently mentioned attractions in this study were (based on the number of comments), first, St Peter basilica and, second, Sistine Chapel.

That is, before the pandemic, the positioning of the Vatican City might have rested on its artistic and cultural interest since the words grouped refer to aspects such as St Peter Basilica, Chapel Sistine, museum, guide, and tour. On the contrary, religious terms were not frequently used before the pandemic. The clusters with these terms emerged in the second period. That is, the thematic network did not mention this point since the pandemic burst out. Thereafter, new religious topics of conversation have been frequently introduced (i.e. Pope, catholic, love), perhaps because visitors seek spiritual consolation in periods of crisis. Also, new verbs reflect the need to relax, love, and enjoy apart from learning. In addition, it should be noted that our results show some attributes that need to be omitted and solved because they are recurrent before and since the pandemic: “wait in a queue”, “crowded”, and “volume of people”.

Then, and responding to our RQ2, we can conclude that our results lead us to recommend a repositioning strategy for the Vatican City looking for a balance between architecture and religion to learn, enjoy and relax, being the main threat to solving queues and waiting times.

Discussion

The present paper has analyzed the reviews posted on Trip Advisor via a text mining approach to investigate the evolution of the destination image of a religious tourist destination (Vatican City) to recommend future directions to reposition this place. Comments from the pandemic were extracted to identify potential lines of action. Our results show that a wide range of related attributes should be highlighted to carry on the repositioning strategy of Vatican City. This result supports Kim and Kim (2018) proposal, who argued that the motivations and experiences of visitors vary, depending on their religiousness level, religion, and denomination. That is, to reposition the Vatican City some new positive topics need to be reinforced and other negative ones need to be softened considering a range from devout pilgrims to secular tourists (Nolan and Nolan, 1992). That's because the image of a town is a global multidimensional concept (gestalt) obtained from the perception of tourists of different attributes (Mariné-Roig, 2019).

This paper has demonstrated that from the pandemic, the religious attractiveness of Vatican City appears reinforced, probably because many visitors are looking for spiritual comfort. That is, until March 2020, comments have emphasized the cultural and artistic dimension of Vatican City, with no references to the Pope or spiritual issues. However, in the comments analyzed from March 2020 onwards, these themes emerge strongly. These results are in line with Kala (2021) findings in India. In this vein, our study has shown that the main exes-cues to reposition Vatican City should be “religion, relaxing, and culture”. This means that the proposed repositioning strategy could be a mix of the three of them: (i) a **religious focus**, to highlight the possibility of meeting famous religious leaders (i.e. Pope), attending religious festivals, seminars, events, or special days (i.e. Easter) (Hag and Yin-Wong, 2010); (ii) a **relaxing focus**, to remark the usefulness of visiting holy places in search of solutions for daily life problems and find spiritual calm and (iii) a **cultural focus**, to show the possibility of reviving the religion (Hag and Yin-Wong, 2010) paying attention to history, art and culture. Principal attractions have been mentioned in the analyzed comments, being the most frequently mentioned ones (based on the number of comments): first, St Peter Basilica and, second, Sistine Chapel. But contrary to Nolan and Nolan (1992), religious festivals or other special dates have not been mentioned. Also, unlike the study of Kim and Kim (2018), our results do not include references to food, or the friendliness of the local people.

Theoretical implications

As the literature argues, the positioning strategy is based on a communication axis that represents the value proposition of the stimulus being positioned. This communication axis takes the form of a slogan that includes a set of key adjectives. In the case under study, the potential adjectives to dress the slogan of the proposed mixed positioning strategy could be “amazing”, “fantastic” or “wonderful” because they are the most recurrent adjectives in visitors’ comments. So, these adjectives seem to be the most relevant ones.

Similarly, the positioning of a stimulus can be damaged and tainted by negative adjectives that cloud the initial value proposition. Our results show that in the positioning strategy of this destination a main weakness exists: it is perceived as crowded with frequent queues, a lot of people, and waiting times. So, like in Venice, an over-tourism problem seems to make the destination less attractive due to the excessive number of visitors. This over-tourism has led to a touristification of the city (Ganzaroli *et al.*, 2021), as some comments of the visitors have revealed (for example, many allusions to souvenirs and postcards or daily guided excursions).

Practical implications

Previous conclusions lead us to the following managerial implications. First, due to the mixture of motivations to visit the Vatican City since March 2020, destination managers should consider remarketing topics in the repositioning strategy, which we could name the “3 Rs”: religion, relaxation, and renaissance (culture). The idea is to enjoy a mix of spiritual, cultural, and relaxation experiences. The lines of repositioning proposed are not the opposite of those that emerge from the work of Hag and Yin-Wong (2010) focused on Islamic religious destinations or the work of Kala (2021) focused on India. In our study, religion, relaxation, and renaissance (culture) represent the essence of Vatican City and need to be mixed into its positioning strategy. The offer of mixed benefits to position a tourism destination has also been proposed by Deb (2021), by differentiating between utilitarian and hedonic images.

Even more, given that nowadays it’s important to position a destination considering elements related to social identity, community, and sustainability (S  raphin *et al.*, 2019), these topics should not be obviated, as recent comments in Trip Advisor have slightly shown. As these authors recommend, traditional elements based on the “identity and history (past)” of the destination and new elements that are more “marketing and aesthetically based (future)” need to be transmitted. These recommendations could be used by DMOs to prepare attractive travel packages focused on: (i) purely religious motivations, (ii) motivations focused on relaxation, and (iii) cultural motivations. Second, and given the helpfulness of user-generated content, based on Ko  y  git (2016, p. 29) we recommend tourism promoters in the Vatican City to “create data banks that could be instantly accessible in multiple languages both for domestic and foreign Tourists”.

Third, although a repositioning strategy can be followed to improve the perception of the Vatican City among its visitors, we cannot forget that places need to be pleasant also for their residents because if they are happy, they will contribute to making the repositioning of the destination work. Since Trip Advisor does not collect residents' opinions, this point should not be forgotten in future studies. In terms of Deb (2021). The overall image of a destination cannot be changed only through positioning, it requires the implication of both visitors and non-visitors.

Fourth, to avoid the weak points that visitors have commented on (i.e. queues, crowded, a lot of people, waiting times), some ideas from smart tourism destinations could be borrowed. For example, the use of technologies to improve connectivity, information systems, and sensorization to solve overcrowding; and to “better understand the movements of the tourists while at the destination, the relations they have with other tourists and residents, and the places they visit” (Bulchand-Gidumal, 2022). The improvement of smart technologies will also contribute to solving the over-tourism problem (Ganzaroli et al., 2021), and increase visitors’ satisfaction and positive eWOM.

Fifth, given that topics such as photos and post office are also mentioned in visitors’ comments, this kind of information could be included on flyers and social networks to promote the destination.

Limitations and future research lines

We cannot conclude without highlighting some limitations of this study. First, just a specific religious tourism destination was investigated. Future studies could have identified the main competitors of Vatican City in order to develop a positioning map to identify untapped market niches. As Pike and Ryan (2004) indicate, positioning research requires a frame of reference to include the competition since a position is defined relative to competitors on specific attributes. Second, tourists’ differences have not been compared in the present paper. Future research could include some classification variables to investigate if different targets think, feel and behave differently when commenting on Vatican City. For example, differences in tourist behavior by global region, age, or income should be looked at in bigger detail (Bock, 2015). Third, our results have shown that Vatican City is visited in one day, in a short trip. So, following Pike and Ryan (2004), future investigations focused on short-break motivations could be done.

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Table I. Twenty-seven most frequent keywords in the entire dataset.

Word	Frequency	Word	Frequency
Vatican	420	Just	128
Tour	328	Chapel	121
Cent	318	Peter	118
Time	169	Line	116
Place	168	Guide	115
Rome	161	Basilica	114
St	159	Sistine	111
Museum	149	City	99
Visit	149	Hour	97
City	144	Crowd	87
People	135	History	87
Day	133	Walk	87
Beautiful	130	Amazing	85
		Queue	83

Table 2. Keywords in the entire dataset which are used together frequently

Cluster	Score	Cluster	Score
			10.338
Volume of people	10.918	one point	
Free visit day	10.784	much time	10.300
Inside of st. Peter	10.774	other parts of Rome	10.244
		Michelangelo Buonarroti work of art	10.239
Line audio ticket	10.760	excellent guide	10.236
Apostle Peter	10.758		
Famous Sistine Chapel Ceiling	10.680	awesome experience	10.228
Whole outer perimeter of st peter's cent	10.677	only thing	10.226
religious people	10.652	informative way	10.137
other ways	10.549	member tour group	10.136
2-3 hour	10.529	pieces of art	10.099
	10.529		
small country		many museums	10.061
sights it's cent	10.438	saint peter's tomb	9.919
	10.414		
number of tours		paved square	9.898
roma termini	10.392		

Image 1: Adjectives associated with the Vatican City

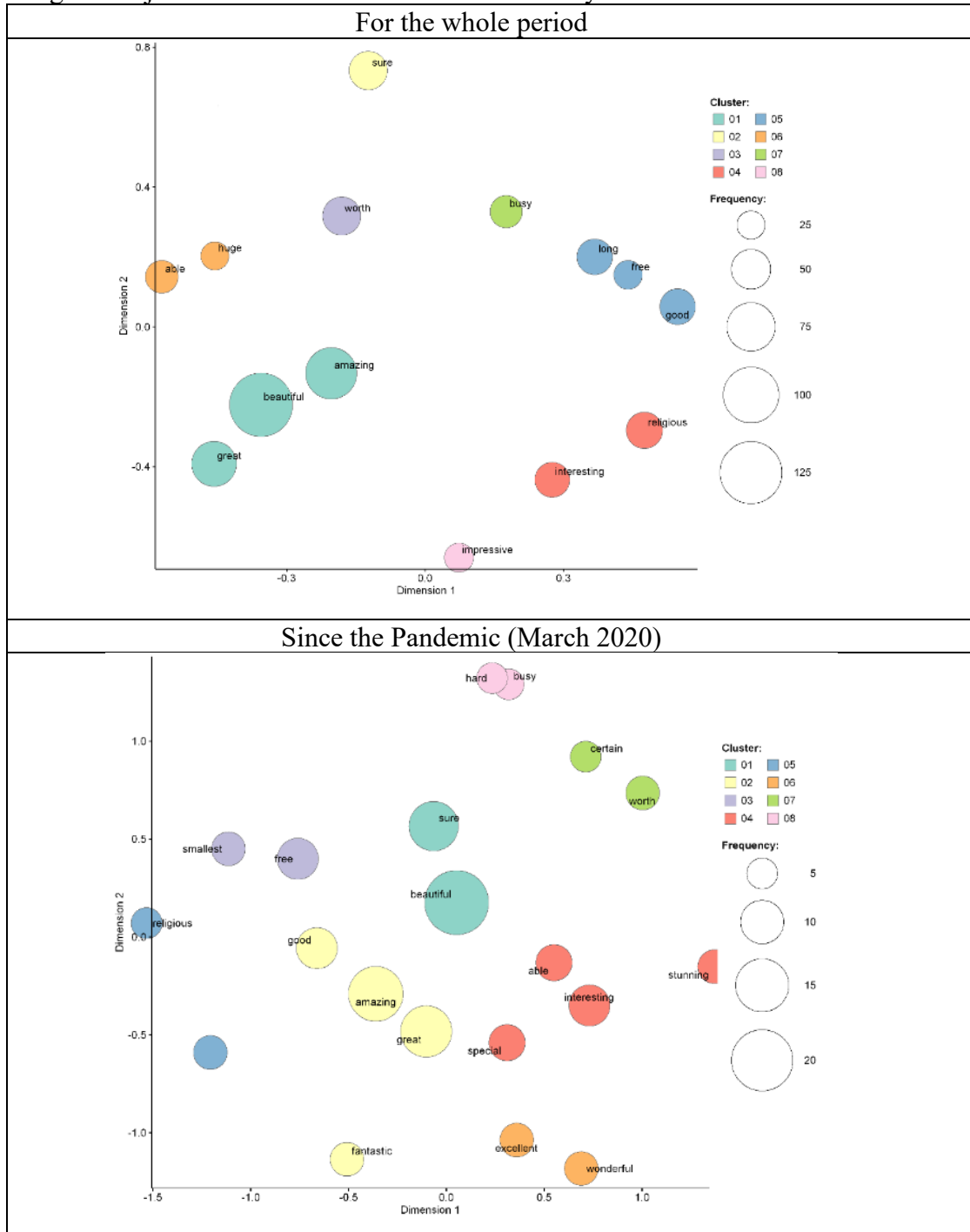


Image 2: Verbs associated with the Vatican City

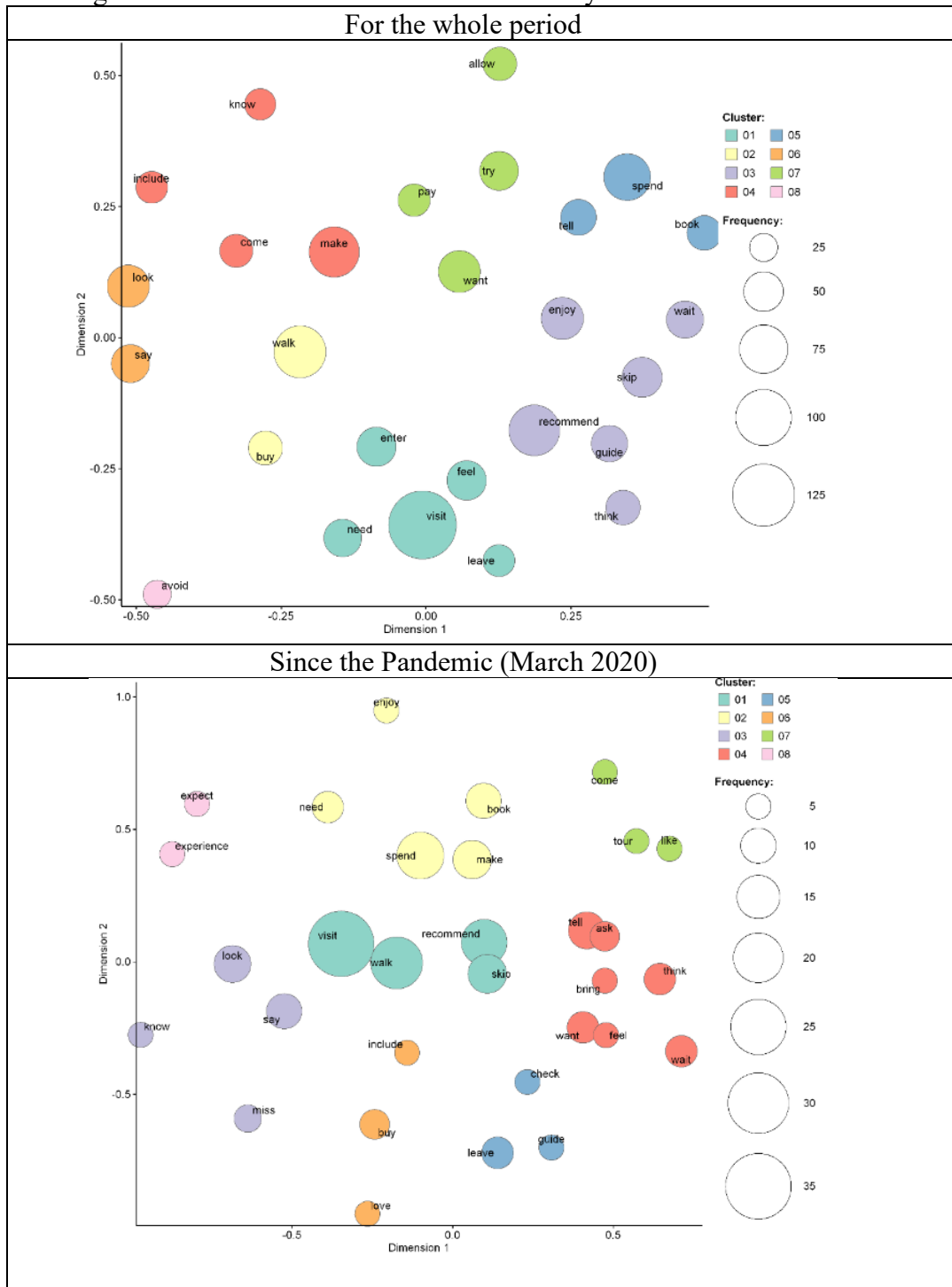


Image 3: Nouns associated with the Vatican City



Image 4. Co-occurrence map of words mentioned together

