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COVID-19 and social media communication strategies: A comparative study of the effectiveness of Facebook posts during the lockdown and the “new normal” in the airline industry

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A R T I C L E   I N F O
Keywords:
Social media marketing
COVID-19
Consumer brand engagement
Airlines. Iberia
Air Europa

A B S T R A C T
This comparative study analyses the effectiveness of the communications delivered via Facebook by two Spanish airlines, Iberia and Air Europa. Using various indicators, the publications posted by the two Spanish airline companies (Iberia and AirEuropa) on this social media site during the COVID-19 pandemic are examined using two time-frames, namely the “strict lockdown” (between March 14th and June 21st, 2020) and the “new normal” (between June 22nd and September 30th). In this study we examined a total of 39 Iberia’s and 49 AirEuropa’s posts for the former period and 49 Iberia’s and 89 AirEuropa’s posts for the latter one. By analysing the followers’ reactions to these posts, the work seeks to identify the relationship between use of different contents and three variables: brand popularity, customer brand engagement, and virality. Two time periods are selected, one spanning national lockdown as a result of the state of emergency declared in Spain and the other relating to the subsequent ‘new-normal’ as emergency restrictions began to be lifted. The results show that the Facebook posts created by Iberia that included informative messages, references to COVID-19, with hashtags, and allusions to corporate social responsibility—were more popular than Air Europa posts. Iberia posts generated greater customer brand engagement and virality, and received more positive reactions in terms of likes and loves.

1. Introduction

As a consequence of health crisis caused by the coronavirus (COVID-19) pandemic, the tourism and hospitality sector, and commercial airlines in particular, are now struggling to survive (Albers and Rundshagen, 2020). According to the International Air Transport Association (IATA), the airline industry faced losses in 2020 estimated at 118 billion dollars, with a fall in demand of 61% compared to 2019 (IATA, 2020). According to data published by the European Organisation for the Safety of Air Navigation (EUROCONTROL, 2020), from the beginning of the pandemic in 2020, air traffic in the European Union fell by 88% compared to 2019. In Spain, the COVID-19 crisis was responsible for a 67% drop in passenger numbers in the commercial airline market in the period January–June 2020, compared to the previous year. This represents a loss of 71.8 million passengers (MITMA, 2020).

Cancellations and dwindling demand have given rise to a major challenge for airlines, which need to find effective strategies to establish and nurture their relationships with their different publics in this climate of fear and uncertainty. To pursue this purpose, commercial airlines have begun to communicate through social networks to respond to user enquiries (as an additional customer service tool) and to continue relating to their publics and maintain high levels of consumer brand engagement during the pandemic. The rationale here is to encourage users to fly with them when the travel restrictions are lifted. In this regard, communication plays a key role because without communication there can be no relationship, and the challenge is twofold: they not only need to select the right media but also the right content. As Ebrahim (2020) and Appel et al. (2020) note, the rapid expansion of social networks has changed how companies communicate, interact, and engage with customers. In this new way of communicating, social networks are now among the preferred means for companies wanting to listen to, address, and interact with their publics. The academic literature has therefore analyzed consumer interaction with social networks to obtain information about their ability to generate brand knowledge and brand engagement (Bonilla et al., 2019; Coursaris et al., 2016; Shahbaznezhad et al., 2021).

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https://doi.org/10.1016/j.jairtraman.2022.102255
Received 24 March 2021; Received in revised form 17 April 2022; Accepted 20 June 2022
Available online 27 June 2022
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Nevertheless, despite recognizing the importance of using social media communication to maintain the relationship with the customer (Lee et al., 2018), only few studies have indicated what type of content strategy should be carried out as a way to maximize interactions (Li and Xie, 2020; Vishnu et al., 2019) and, as a consequence, the popularity, engagement and virality of what is reported by the brand (Bonsón and Ratkai, 2013; Kim and SpillerHettche, 2015; Oviedo-García et al., 2014; Rauschnabel et al., 2012) decreasing the feelings of uncertainty.

With these premises, the following research questions emerged:

1. How often should companies communicate with their stakeholders during a pandemic?
2. What type of content should they craft for their communications?
3. Are contents with explicit reference to COVID-19 the most effective?
4. Are promotional or informative contents the most effective?

Consumers are mainly concerned with the safety measures implemented, the requirements relating to the use of masks, maintaining a safe distance between passengers (by means of excluding from the sale the middle seats on the airplane), and the disinfection of aircraft between flights (Brandwatch, 2020). However, further studies are needed to look into the consumers’ preference for messages regarding their security and the effect exerted by the company-generated contents on brand relationships.

Therefore, the present study aims to explore the relationship between two fundamental aspects of the communication strategy during two time periods, one spanning national lockdown, as a result of the state of emergency declared in Spain, and the other relating to the subsequent ‘new-normal’, as emergency restrictions began to be lifted:

1) The relationships between publication frequency and brand popularity, customer brand engagement, and virality;
2) The relationships between use of different contents on social media (informative vs promotional; with explicit COVID-19 information or not) and brand popularity, customer brand engagement, virality and sentiments generated.

In sum, the present study explores how the way in which airlines communicated on social networks during the pandemic affected their brand popularity, consumer brand engagement, [measured using Key Performance Indicator (KPI)] sentiments generated and virality.

In pursuing this research goal, a qualitative and comparative study of content published on Facebook by two of the leading Spanish airlines (in terms of number of passengers), namely Iberia and Air Europa, over the months spanning from the declaration of the state of emergency in Spain, on March 14, 2020, to September 30 of the same year.

The research study presented in this paper focuses on Facebook, which has been selected for being one of the most popular social networks (IAB Spain, 2020a; Wearsocial, 2020), and the preferred social network for airlines (making up to the 85% of the total number of their followers on social networks) (DataSocial, 2019).

Therefore, this research paper contributes to the literature on communications on social networks providing evidence about how the frequency of publication and the content type are associated to brand popularity, engagement, virality and sentiments towards the post. The results will support communications managers in their decision-making regarding the suitability of informative versus promotional posts on social networks and the most adequate frequency.

2. Literature review

2.1. Social networks: Their theoretical delimitation and their effectiveness as a communications medium

Appel et al. (2020) define social media taking different perspectives. On the one hand, they can be considered “a collection of software-based digital technologies—usually presented as apps and websites—that provide users with digital environments in which they can send and receive digital content or information over some type of online social network” (p. 80). On the other hand, Appel et al. (2020), Dijkmans et al. (2015) positioned social media as constituting a digital marketing channel that can be used to communicate with consumers via advertising. Furthermore, and from a broader viewpoint beyond a digital medium or technological services perspective, Appel et al. (2020) point to what users do in these environments. For example, they refer the role of social networks as spaces for information-sharing and electronic word-of-mouth (eWOM).

However, whatever conceptualization is applied, it is clear that social media play a major role in firms’ marketing activities as they provide access to customers and a means of maintaining individualized relationships with them (Appel et al., 2020; Kelly et al., 2010; Kim and Ko, 2012; Richter and Koch, 2008; Seo and Park, 2010), giving brands the opportunity to know better their current and potential customers (Kabadayi and Price, 2014). According to these authors, social networks allow brands to receive feedback and suggestions from their consumers more easily, allowing them to respond, improve their offerings, manage potential problems and provide better service. In addition, many consumers who follow the brands they like on social networks can easily respond when brands post content on their official platforms by “liking”, commenting and/or sharing the content (Vishnu et al., 2019). Given the importance of this role, unsurprisingly, social networking sites have witnessed rapid growth both in user numbers and in the extent to which they are used by firms to implement their marketing activities. For example, according to the General Study of Social Networks published by IAB Spain (2020a), advertisers report that their primary interest in social networks derives from sales (75%) followed by communication with their various publics. Regarding communications specifically, responding to enquiries and generating branding accounted for 51% of social network activity, customer service 49%, generating leads 48%, and generating brand awareness 40% (IAB Spain, 2020b). This report also shows the positive evolution of social networks, reaching 87% penetration in Spain, with Facebook being among the five companies reporting the greatest growth alongside WhatsApp, Instagram, YouTube, and Twitter.

2.2. Airlines and the use of social networks

Studies have found that social networks play an important role in companies’ marketing communications, and airlines are no exception as they increasingly use social networks to communicate promotions and deliver marketing activities. Airlines also use these networks for customer management and as an internal channel for communications with and between employees (Seo and Park, 2018). These authors have shown that in the case of an airline, the marketing activities carried out by this company in social networks exert a direct effect on brand awareness and image, and on how passengers perceive the airline and to what extent they will post positive comments and recommendations about the airline in social networks. Vishnu et al. (2019) indicate that it is very important for airlines to be active in social networks, as greater exposure to consumers to the airline’s social networks will allow them to feel more involved, strengthen their relationship with the brand and, thus, brand equity.

A demonstration of their application in this sector is the Facebook service Dynamic Ads for Travel, launched in April 2017. This tool is aimed specifically at airlines and is designed to help them promote their campaigns and announce their flights and routes via Facebook, in a personalized and effective way. The tool gives airlines the scope to produce personalized, dynamic advertisements, based on the searches and interests shown by Facebook users (Hostelur, 2017).

The study conducted by Datasocial (2019) analyzed several airlines (Ryanair, Iberia, Vueling, Bintercanarias, Air Europa, Eurolines Air, Plus Ultra Líneas Aéreas, Volotea, and EasyJet Spain) and suggested that Facebook is
the top social network in terms of frequency of use. This study was conducted between 1 January and August 30, 2019 and analyzed more than 12 million users who had generated approximately 57,000 posts, accounting for over 4.8 million interactions. In total, these airlines posted over 3000 publications throughout the period analyzed by Datasocial, attracting in excess of one million interactions (in the form of likes, comments, etc.).

Iberia, with 164,000 interactions and almost two million followers (or fans) in the period analyzed, was second behind Ryanair with 921,000 interactions and around 5 million followers. According to the aforementioned study (by Datasocial), Instagram is the social network with the least presence in Spain among airlines; however, it enjoys the highest level of customer brand engagement (0.75% higher than Facebook or Twitter) and monthly growth of 100%. These data show that airlines are beginning to turn to Instagram as the perfect platform to draw in those users who are wanting to discover new destinations (Datasocial, 2019). The highest-performing posts on Instagram are those from Iberia and Air Europa, both brands focusing on sharing stunning photos and landscapes.

Due to the major impact of COVID-19 on the aviation sector, commercial airlines have begun to communicate via social networks to respond to user enquiries (as one more customer service tool among many) and to continue relating to their publics and maintain consumer brand engagement during the pandemic. The rationale here is to encourage users to fly with them when the travel restrictions are lifted.

In its recent report "Endurance, Inequality, Innovation: How Covid-19 Has Transformed Consumer Attitudes and Behaviors", Brandwatch (2020) monitored six months’-worth of data on how consumers had adapted to lockdown and how they viewed the next few months regarding different aspects of their life. With respect to airlines, the most notable aspect concerned the safety measures implemented, the requirements relating to the use of masks, maintaining a safe distance between passengers (by not selling the middle seats on the airplane), and the disinfection of aircraft between flights. Another notable aspect was the marked absence of standardized regulations across the entire commercial airline industry.

2.3. Measurement of the effectiveness of communication in social networks

Even before the pandemic, social networks already constituted a relevant channel for establishing relationships (Kumar et al., 2019; Lee et al., 2018; Leung et al., 2013; Vishnu et al., 2019; among others), but after the state of emergency was declared in Spain and during lockdown, their use frequency increased: 48% of individuals reported having used them more often during this period (IAB Spain, 2020b). The social networks that experienced the greatest increase in terms of new users during lockdown in Spain were Instagram, with 49% growth, followed by Facebook and TikTok, with 39% (Statista, 2020).

Given this significant growth in the use of social networks, companies also significantly upped their use as communication tools. Unlike individual users, organizations actively use social networks for advertising and marketing activities (Kim and Ko, 2012; Sea and Park, 2018). In this context, companies must take advantage of all the opportunities offered by social networks if they are to survive in markets as competitive as the present ones. Hence, marketers must evaluate the relative effectiveness of the different social media channels (Buhalis and Mamalakis, 2015; Li and Xie, 2020; Leung et al., 2013), and there are several studies (Bonsón and Ratkai, 2013; Buhalis and Mamalakis, 2015; Luarn et al., 2015; Peters et al., 2013; SMITHA, 2013; Torres-Romay and Garcia-Miron, 2019) that propose indicators to measure the performance of online (social network) marketing activities.

In this regard, a number of authors have measured the effectiveness of communication strategies on social networks focusing on the impact of the type of content generated in social networks and have performed comparative analyses of textual content and complementary elements, such as image and video, and their impact on consumer response to this type of content in terms of likes, shares and comments (França-Coelho, Santos de Oliveira and Severo de Almeida, 2016; Kim and SpillerHetchte, 2015; Rauschnabel et al., 2019). Others have focused on how more emotional, informative or promotional discourse affects such metrics in social networks (Coelho et al., 2016; Cviijkj and Michahelles, 2013; De Vries et al., 2012; Swani, et al., 2013).

Li and Xie (2020) empirically examine the influence of image content on social media engagement using data sets of social media posts about major airlines on Twitter and Instagram. These authors found that the mere presence of image content has a positive and significant effect on customer engagement. In their work on Twitter and Instagram, these authors measure Twitter engagement based on user interaction with tweets, obtained by counting the number of “likes” of tweets; and the number of shares calculated from the number of retweets. In the case of Instagram, these authors measure the number of likes.

Moreover, Leung, Schuckert and Yeung (2013) analyzed the contents posted on Facebook by the three most popular airlines in Asia, Europe and North America (Air Asia, Easy Jet and Jet Blue) and measured engagement in terms of the number of likes to the posts. These authors showed that the frequency of the posts affected consumer engagement, specifically what they name “new” or “fresh” posts. However, Leung et al. (2013) called for the need to further study consumer responses to the frequency of publications and the analysis of their content, as they can affect user perceptions. Likewise, Swani et al. (2013) found that the inclusion of the brand name in publications and the use of an emotional tone increases the number of likes, while Cviijkj and Michahelles (2013) found that depending on whether the content is informative and more entertaining, the number of likes, comments and shares are affected differently, while the study by De Vries et al. (2012) found that it exerts no influence.

Furthermore, Torres-Romay and García-Mirón (2019) define a range of metrics constructed from a model in which they link communication objectives to digital communication formulas, seeking to determine the effectiveness of digital campaigns. The authors establish different indicators and metrics according to the communication objectives, as shown in Table 1.

Elsewhere, Bonsón and Ratkai (2013) propose a set of metrics (see Table 2) to evaluate stakeholder engagement and social legitimacy on a corporate Facebook page, to better understand online corporate communication via Facebook.

According to Buhalis and Mamalakis (2015), the tracking tools of these social networks measure levels of customer brand engagement.

| Communication objective | Communication indicator | KPIs |
|-------------------------|------------------------|-----|
| Informative             | Paid advertising       | Traffic to the web | Number of followers |
|                         |                        | Impressions         | Impression Scope |
| Persuasive              | Community              | User reach           | Number of followers |
|                         | Publications           | Publication effectiveness | Likes |
| Behavioral              | Virality/Engagement    | Interaction (positive/negative) | Comments |
|                         | Sale                   | Conversion on the web | Share of voice |
|                         | Efficiency             | Capture cost per user | Downloads |

Table 1: Indicators and metrics based on communication objectives.
based on the different types of interactions shown by followers, such as likes, shares, and comments. The present study aims to determine how the respective communication strategies undertaken by two companies during the COVID-19 pandemic on the Facebook social network may affect the effectiveness of their posts. Based on the literature review, the following research questions are posed:

RQ1: Do more references to the pandemic generate more popularity?
RQ2: Do more references to the pandemic generate more customer brand engagement?
RQ3: Do more references to the pandemic generate more virality?
RQ4: Are there differences in these indicators over time?

3. Methodology

To better respond to the above-reported research questions, content analysis was chosen as the most appropriate methodology for the present study, examining a dataset drawn from the official Facebook accounts of Iberia and Air Europa. For our study we have chosen Iberia and Air Europa for several reasons. Firstly, as already pointed out, according to data provided by the Spanish government (MITMA, 2020) in the period January–June 2020, the airlines sector fell by 67% compared to the previous year. In that period, 50% of the traffic in Spain was operated by 5 companies including Iberia, Air Europa, Ryanair, Vueling and EasyJet. Of these companies, Iberia and Air Europa showed similar drops (around 60%; 60.5% for Iberia and 50.5% for Air Europa). Secondly, they have carried a similar number of passengers. Thirdly, regarding the use of social networks by airlines, theDatasocial report referred to 2019, indicates that Facebook is the social network most used by airlines in Spain. Moreover, Iberia and AirEurope execute two different communication strategies, thus making them two appropriate companies to be compared. For example: with respect to publications, Iberia decreased 10.28% with respect to the previous year; on the other hand, Air Europa grew 30.34%; and with respect to interactions, Iberia practically maintained the figures of the previous year, with a slight growth of 0.15%, while Air Europa fell 18.12%. Finally, it is important to note that in the present study we have analyzed and, accordingly, measured the interaction of consumers with the publications posted by brands via social network in terms of observable variables, which can be assessed directly, applying the metrics already suggested and implemented in the literature by other authors, such as: Li and Xie (2020); Leung et al. (2013), Torres-Romay and García-Mirón (2019), Bonsón and Ratkai (2013) and Buhalis and Mamakakis (2015).

The data-collection was conducted in the last week of November 2020, through to 1 December. The posts published by Iberia and Air Europa on Facebook from 11 March to 30 September were collected and analyzed. This timespan was divided into two periods: March 11–June 21 (corresponding to the lockdown) and June 22–September 30 (corresponding to the “new normal”, when restrictions were beginning to be eased, especially the ones regarding travelling). Therefore, to achieve the research goal, a total of 61 (31 during the lockdown and 30 during the new normal) posts generated by Iberia and 138 (49 during the lockdown and 89 during the new normal) generated by Air Europa were collected (see Table 3).

The number of followers taken as a reference for the study was as of December 1, with 1,835,490 followers of Iberia and 663,685 followers of Air Europa.

For each of the posts published by the airlines on their respective Facebook pages, the number of interactions—reactions (sentiments), comments, and shares—generated by each publication was counted. An analysis of the sentiment expressed was also performed for each of the publications, based on the range of options that Facebook offers its users, these being: “I like …” (like), “I love …” (love), “… matters to me” (care), “… makes me laugh…” (haha), “… is amazing” (wow), “… saddens me” (sad), and “… makes me angry” (angry). In addition to accounting for followers’ reactions to publications on the two Facebook accounts, the content of the posts was analyzed separately by each researcher participating to this research, following the methodology previously used by other authors (Pan, MacLaurin, & Crotts, 2007). They were classified according to message type (informative vs. promotional), referring to informative posts as those that were given in the form of traditional advertising, thus containing information about specific products, the brand, or the company, for example (Cvijikj and Michalhelles, 2013), and as promotional message those that included any type of sales promotion related to the airline (Cvijikj and Michalhelles, 2013). In turn, these posts were also classified according to whether COVID-19 was explicitly mentioned (including the terms “pandemic”, “coronavirus” and “virus”).

Once all the data had been categorized and revised by each researcher independently and classified in an Excel document, the calculations were carried out and the popularity, consumer brand engagement, and virality indicators were constructed according to the metrics defined by Bonsón and Ratkai (2013).
Comparison between “State of emergency” (Lockdown)” and “New normal” (Iberia and Air Europa).

| Metrics                        | Formula                                      | Period analyzed         | “State of emergency (Lockdown)” | “New normal” |
|--------------------------------|----------------------------------------------|-------------------------|---------------------------------|--------------|
|                                |                                              | Iberia | Air Europa | Iberia | Air Europa | Iberia | Air Europa |
| Popularity                     | (Number of posts with “Like”/Total posts) x 100 | 100%   | 100%       | 100%   | 100%       | 100%   | 100%       |
| Total ‘Likes’/Total number of posts | 670.64/152.90                               | 1056.60/215.30          | 271.82/118.40                   |              |
| Customer Brand Engagement      | (Number of posts with comments/Total posts) x 100 | 2.2%    | 3.2%       | 1.8%   | 1.6%       | 0.4%   | 1.6%       |
|                                | Total comments/Total number of posts         | 1162.90/103.13          | 1736.30/166.1                   | 573.22/68.5  |
|                                | Average comments per post/Number of fans     | 0.04    | 0.02       | 0.03   | 0.01       | 0.01   | 0.01       |
| Virality                       | (Number of posts with shares/Total posts) x 100 | 0.56    | 0.59       | 0.45   | 0.44       | 0.11   | 0.15       |
|                                | (Average number of times a post has been shared/Number of fans) x 1000 | 0.09    | 0.04       | 0.14   | 0.09       | 0.04   | 0.02       |

4.3. Communication strategy and brand popularity

Table 5 shows the comparative analysis of the indicators for popularity, customer brand engagement, and virality of the communications posted by airlines Iberia and Air Europa on Facebook, differentiating between the period earmarked as “state of emergency” and subsequently the “new normal”. Again, the indicators used mirror those developed by Bonson and Raktai (2013).

During the state of emergency, the popularity of Iberia was greater than that of Air Europa (see Table 4), which may be due to the content strategy. As mentioned earlier in sections 4.1 and 4.2, 90.3% of the posts generated by Iberia made some reference to COVID-19, compared to 28.6% of the messages posted by Air Europa. Moreover, 77.4% of Iberia’s and 55.1% of Air Europa’s messages were informative. In this period, Iberia used hashtags in 20 publications, specifically: #JuntosLoConseguiremos (“Together, we’ll get there”) in 17, and #TodoSaldráBien (“Everything’s going to be OK”) in 3. In contrast, Air Europa only used one hashtag, #TodoVaASalirBien (“Everything’s going to be OK”) in 7 publications.

With regard to the “new normal” period analyzed, the popularity of Iberia was also higher than that of Air Europa in terms of the total number of likes in relation to the total number of publications, but lower in terms of the average value of publications in relation to the number of Facebook followers. This difference may be due to the type of content. In the case of Iberia, 36.7% of posts made some reference to COVID-19, and just 12.4% in the case of Air Europa.

Analysing both companies separately and based on the two different periods, we can observe that the popularity of the Iberia brand was higher during the state of emergency than in the “new normal” period across all the indicators for this variable—of the order of 4 times higher. However, in the case of Air Europa, although its posts drew a greater number of likes during the state of emergency than during the “new normal” period, the average number of likes vis-à-vis the number of posts remained similar across both periods. Again, this may be related to the content of these publications and the message type.
4.4. Communication strategy and brand engagement

Turning to consumer brand engagement, as shown in Table 5, Iberia’s followers presented a higher value for this variable than Air Europa, its publications having attracted a much greater number of comments than those of Air Europa during the two periods analyzed. During the state of emergency, each of Iberia’s publications attracted an average of 1733.6 comments, compared to 166.1 for Air Europa. This pattern was repeated in the “new normal” period, when the comments made in response to Iberia’s posts totalled 573.2 compared to 68.5 for Air Europa. The data also show that consumer brand engagement was much greater for both companies during the state of emergency than during the “new normal”.

In the first period, in the case of Iberia, the most talked-about publication, with 15,000 comments, was posted on 24 March. It provided detailed information on the company’s flexible ticketing policy, how to contact the company to request a ticket modification, and how to apply for a compensatory voucher (see Fig. 1). The post that received the least comments was posted on 5 April and attracted just 344 comments (see Fig. 2). This publication comprised a video of the Iberia office building featuring a projected image of the Spanish national flag and the message “Thank you, heroes”, in honour of healthcare personnel.

In the case of Air Europa, the most-commented post was published on 8 April, attracting 1722 comments. In it, the company informed users of the different booking options and its flexibility policy regarding the date of travel (see Fig. 3). The publication that elicited the weakest response was posted on 10 June and attracted just 14 comments. The content of this post was promotional information about trips to Majorca (see Fig. 4).

During the “new normal” period, in the case of Iberia, the publication that attracted the most comments (729) was posted on 14 August. The content was promotional in nature, featuring Lisbon as a destination and including the hashtag #JuntosLevantamosElVuelo (“Together, we’ll take flight”) (see Fig. 5). The least-commented publication appeared on 13 August and advertised Las Palmas as a summer destination in different languages (see Fig. 6).

In the case of Air Europa, the post that drew the most comments (296) was published on 4 August. Its content was informative, dealing with the company’s COVID-19 safety measures and the availability of free facemasks on board (see Fig. 7). The publication with the fewest comments, just 12, was posted on 20 July. It provided promotional price information for flights to various destinations (see Fig. 8).

4.5. Communication strategy and virality

Table 5 shows that Iberia’s virality was higher than that of Air Europa. During the state of emergency, all Iberia publications were shared, which was not the case for Air Europa. With regard to the average number of shares relative to the number of followers, we can observe that this indicator was also higher in the case of Iberia. Finally, in the case of the total number of shares relative to the number of followers, this indicator was slightly higher for Air Europa. In this period, Air Europa focused mainly on promoting destinations and special offers, with references to COVID-19 being much less prominent.

Based on the two periods analyzed, virality was greater during the state of emergency than in the “new normal”, for both companies. During the first period, the most-shared publication among Iberia’s followers was that of 15 April, which was shared 800 times (see Fig. 9). The post reported on the transportation of medical supplies from China.
and included a video, including the hashtag #JuntosLoConseguiremos (“Together, we’ll get there”). In the case of Air Europa, the most-shared post (769 times) was published on 29 March. This post also featured the transportation of supplies from China and included the hashtag #TodoVaASalirBien (“Everything’s going to be OK”) (see Fig. 10).

During the “new normal” period, Iberia’s most viral publication was shared 283 times. It was posted on 12 August, announcing that the company was ceasing to fly the A-340 model, in favour of the new A-350, and included the hashtag #JuntosLevantamosElVuelo (“Together, we’ll take flight”) (see Fig. 11). In the case of Air Europa, the publication with the most shares in this period was posted on 22 June and was
shared 128 times (see Fig. 12). The message referred to the resumption of normal activity, without specific reference to COVID-19.

4.5.1. Communication strategy and sentiments

Regarding the sentiments expressed by followers in response to the posts published during the period under study (see Tables 3 and 6), Iberia received 53,397 reactions (875 per post and 3% of the number of followers) distributed thus: 42,310 during the state of emergency (1365 per post and 2% of followers) and 11,047 (370 per post and 1% of followers) in the period pertaining to the “new normal”. In the case of Air Europa, of the 27,509 sentiments expressed (199 per post and 4% of followers) distributed thus: 13,879 (283 per post and 1% of followers) corresponded to the state of emergency, and 13,630 (153 per post and 1% of followers) corresponded to the “new normal”. Facebook enables users to express their reactions to posts by clicking on a series of predefined-emotion buttons (ranging from love to angry). Examining the reactions to the publications posted by Iberia and Air Europa in relation to the number of publications, Table 6 shows a detailed analysis of the sentiments expressed by the followers of these Facebook accounts.
5. Theoretical contributions and managerial implications

Against the backdrop of a global economy that has witnessed the devastating impact of the COVID-19 pandemic, the aviation sector has suffered one of the greatest crises in its history, with billion-dollar losses worldwide (IATA, 2020). Social media have played (and continue to play) an important role in airlines’ marketing activities as they facilitate direct interaction with customers and enable companies to establish a relationship with them (Appel et al., 2020; Kelly et al., 2010). Likewise, the results obtained from the comparative analysis conducted in the present study provide further evidence of this phenomenon. As mentioned earlier, during the state of emergency, the most talked-about publication of Iberia was a post providing detailed information on the company’s flexible ticketing policy, how to contact the company to request a ticket modification, and how to apply for a compensatory voucher. In the case of Air Europa, the most-commented post informed users of the different booking options and its flexibility policy regarding the date of travel. On the contrary, during the “new normal” period, the most talked-about publication of Iberia was promotional in nature, featuring Lisbon as a destination and including the hashtag #JuntosLevantamosElVuelo (“Together, we’ll take flight”). In the case of Air Europa, the most-commented post was informative, dealing with the company’s COVID-19 safety measures and the availability of free face-masks on board.

To respond to the research questions posed, in the present study, we analyzed the content strategies conducted by two Spanish airlines on the social network Facebook in two different periods during the COVID-19 pandemic: (i) the state of emergency, capturing messages posted very close to the Spanish government’s declaration of emergency measures (March 11, 2020), including a national lockdown and (ii) the “new normal” period, which we classified as pertaining to the de-escalation of emergency restrictions up to and including September 30, 2020.

We analyzed these strategies in terms of publication frequency and content type (informative vs promotional). We also examined their impacts in terms of sentiments generated, popularity, customer brand engagement, and virality, leading to conclude that referring to the pandemic is associated to a greater popularity, customer brand engagement, virality and more positive sentiments.

The main theoretical contribution derived from the present study lies in the fact that both the posting frequency and the content type affect brand popularity, engagement, virality and the generated sentiments, Iberia’s content strategy being more efficient than Air Europa’s strategy. In other words, the posting frequency and its regularity seem to impact positively on the above-mentioned variables analyzed. A greater pressure in terms of number of posts is associated to a less favorable impact on the indicators analyzed (popularity, Brand engagement and virality). We also examined their content strategy being more efficient than Air Europa’s strategy. In other words, the posting frequency and its regularity seem to impact positively on the above-mentioned variables analyzed. A greater pressure in terms of number of posts is associated to a less favorable impact on the indicators analyzed (popularity, Brand engagement and virality) in both the lockdown and “new normal” periods. These results are in line with Leung et al. (2013), demonstrating that the frequency of publication is related to the under-research variables.

Table 6
Comparison between “State of emergency (Lockdown)” and “New normal” (Iberia and Air Europa).

| Formula                                                                 | Period analyzed | “State of emergency (Lockdown)” | “New normal” |
|------------------------------------------------------------------------|-----------------|---------------------------------|--------------|
|                                                                        | Iberia          | Air Europa                      | Iberia       | Air Europa | Iberia       | Air Europa |
| Popularity                                                             | 100%            | 100%                            | 100%         | 100%       | 100%         | 100%       |
| Total ‘Likes’/Total number of posts                                    | 670.64          | 152.90                          | 1056.6       | 215.5      | 271.8        | 118.4      |
| Average ‘Likes’ per post/Number of fans x 100                          | 2.2%            | 3.2%                            | 1.8%         | 1.6%       | 0.4%         | 1.6%       |
| Customer Brand Engagement                                              | 100.00          | 100.00                          | 100.00       | 100.00     | 100.00       | 100.00     |
| (Number of posts with comments/Total posts) x 100                      | 1.6%            | 1.6%                            | 0.4%         | 1.6%       | 0.4%         | 1.6%       |
| Virality                                                               | 1162.90         | 103.13                          | 1733.6       | 166.1      | 573.2        | 68.5       |
| (Average number of times a post has been shared/Number of fans) x 1.000| 0.04            | 0.02                            | 0.03         | 0.01       | 0.01         | 0.01       |
|Average comments per post/Number of fans                               | 0.56            | 0.59                            | 0.45         | 0.44       | 0.11         | 0.15       |
| (Total times the posts have been shared/Total number of posts) x 1.000  | 0.09            | 0.04                            | 0.14         | 0.09       | 0.04         | 0.02       |

Fig. 12. Air Europa post 22/06/2020.

Iberia’s Facebook posts from the period under analysis received a total of 40,909 likes, while Air Europa’s received 21,100—on average, approximately 670.6 and 153 per post, respectively. The Iberia publication that received the most likes (3,980) appeared on 15 April and, as noted earlier, was also the most-shared (see Fig. 9).

During the state of emergency, the differences between Iberia and Air Europa were more pronounced, the former generally achieving superior results compared to the latter. Thus, in terms of the average number of likes, Iberia’s followers generated 1056.6 vs. Air Europa’s 215.5. The average number of love reactions was also much higher in the case of Iberia. The publication that elicited the most loves from Iberia’s followers was posted on 15 April, with 833; the Air Europa post that attracted the most loves was from 29 March, with 485. Both posts made reference to the aforementioned transportation of medical supplies from China (see Figs. 9 and 10, respectively). The third-most-popular Facebook sentiment for the two airlines was angry, with an average of 89.6 and 13.4, respectively. The Iberia publication that provoked the most angry reactions among its followers was posted on 24 March, attracting 566 such responses (see Fig. 1). In the case of Air Europa, a post from 28 June attracted 97 angry reactions. The fourth most-common reaction overall was care, with 24 and 3.3, on average, for each Iberia and Air Europa post, respectively.

In the “new normal” period, the number of reactions, overall, was generally lower than during the state of emergency, with the exception of haba reactions in response to certain Air Europa posts, which was slightly higher.
The results of this study shown that references to COVID-19 and the company’s concern about related issues in its publications have a strong impact on the effectiveness of communication. Especially during the state of emergency, the use of this type of informative content referring to pandemic-related topics had a strong impact on popularity, brand engagement and virality. However, during the “new normal” the users showed a greater preference for promotional posts than informative ones. This can be due to the fact that after the state of emergency the population is eager to recover its normal activity and to travel.

In the period of the state of emergency, we observed that posts in which the airline reported on its active participation in Corporate Social Responsibility (CSR) initiatives (such as transporting important supplies, repatriation or donation of materials) were the most popular, generated the most consumer brand engagement and enjoyed the highest virality. These results are consistent with the findings published by He and Harris (2020) on the impact of the COVID-19 pandemic on CSR. However, promotional content seems to generate little effective impact in terms of sentiment, popularity, brand engagement and virality. Therefore, we consider that contents characterized by an emotional appeal are more positively related to popularity, brand engagement and virality, in line with the findings obtained by Swani et al. (2013).

Accordingly, the posts that received the highest number of positive reactions, for both airlines, were those whose content was related to CSR (specifically, reporting on the transportation of medical equipment from China to Spain). In contrast, the posts that received the highest number of negative reactions were those referring to flight flexibility and procedures to request cancellation vouchers.

As a final observation, posts including hashtags obtained more favorable results in all the indicators analyzed. These results suggest that the significance of hashtags goes beyond the ability to structure or disseminate content, as a consequence of additional motivations, in line with the findings of Rauschnabel et al. (2019). These authors identified ten different motivations for the use of hashtags by social media users: amuse, organize, design, shape, “trendgage” link, inspire, reach, summarize, and endorse. Therefore, and based on the conclusions obtained, social media communication managers are encouraged to apply the following recommendations:

1) Not to saturate the consumer with too many messages. In other words, the frequency of publication should be chosen carefully as it affects the main variables analyzed. It is advisable to use a homogeneous publication strategy with a rather low frequency of publication, as it has been shown to yield better results.

2) Use social networks as an informative channel, mainly emphasizing content related to the CSR carried out by the brand. Social networks can become an effective channel to communicate with customers and inform about the CSR actions being carried out by the company, since customers receive this type of information in a very positive way and contributes to improve the levels of popularity, virality and costumer brand engagement.

3) Use promotional messages only on sporadic occasions as a way to enhance virality. Messages with emotional content have proven to yield better results in terms of popularity, virality and costumer brand engagement and are therefore highly recommended over promotional messages. However, when it comes to increase virality quickly and you are in a period of travel recruitment, promotional messages seem to be more effective.

4) Include hashtags in the messages used to make it easier for the user to classify and find this type of message.

6. Limitations and future research

As with any study, some limitations of this research need to be acknowledged. First of all, this study is based on the analysis of one social network platform (Facebook), thus future research is encouraged to explore how airlines companies develop and execute their communication strategies via other social networks that are currently attracting an increasing number of users and a greater audience, such as Instagram or TikTok.

Second, the geographic context and the selection of two airlines companies limit the generalizability of the results. In this regard, future studies could broaden the research scope and the sphere of study by examining the communication strategies and results on social networks by a broader range of airlines. In this regard, an analysis of top companies in other geographic context could provide more evidence of the more effective strategies during and after pandemic-related restrictions.

Third, in this study a qualitative approach has been taken to pursue the research purposes. While a qualitative analysis was necessary to address the research aims, a quantitative study is encouraged to corroborate the results obtained and enhance the value of the contribution to extant literature.

Finally, while KPIs are a widely accepted measurement, alternative indicators and measures should be included in future studies to enhance the body of knowledge in the field, especially within the airlines industry.

Author statement

Mª Belen Prados-Peña: Conceptualization; Data curation; Investigation; Methodology; Formal analysis, Esmeralda Crespo-Almendros: Funding acquisition; Supervision; Validation; Visualization, Lucia Porcu: Roles/Writing - original draft; Writing - review & editing.

Funding

This work was supported by the Andalusian Program for R&D (grant number P20-01021).

Declaration of competing interest

The authors declare that they have no conflict of interest.

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