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Research Paper

Web Information in Face of COVID-19 Crisis: Evidence from Tourism Sector

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ABSTRACT

Due to COVID-19, the global health crisis has had an unprecedented effect on the tourism industry. Academics and politicians are asked to point out solutions that will help people and the economy mitigate such a bad impact. This paper aims to answer the following research questions: (i) How the pandemic caused by COVID-19 was treated by tourism e/m-commerce companies, (ii) What kind of information is available on social media about COVID-19, (iii) What economic and financial information can be access on the web regarding these companies. This is an exploratory study based on multiple case-study approaches that combine different methodologies and techniques. The content analysis focuses on two main pillars: COVID-19 related information available in websites and social networks; the economic and financial information available and freely accessible on the web. The results indicate that, in general, companies have strengthened their presence in the digital world. Services that were previously provided face-to-face or in a mixed format, are now exclusively remote. Communication with customers about pandemic awareness, public health care and, especially, procedures to be carried out, were also distributed through digital channels. Financial data of companies with a diversified business portfolio evidence systematic risk, while companies that deal exclusively with tourism business already show expected losses due to their exposure to specific risk, expected for the tourism sector.

Keywords: Tourism sector; financial information; social media; COVID-19; content analysis.

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1. INTRODUCTION

The year 2020 will be remembered as a historical mark all over the world. By January 30, the World Health Organization had announced an international public health emergency due to the COVID-19 pandemic. In Portugal, the government required compulsory confinement of the entire population, starting on March 18, 2020. This situation had a profound impact on tourism, leading to the biggest crisis of this economic sector.

According to the latest data from the World Tourism Organization (UNWTO, 2020), different international tourism destinations lost 900 million tourists between January and October 2020, compared to the same period in 2019. In practice, this corresponds to a decrease of US \$935 billion in international export earnings. For the 2020/21 biennium, the UNWTO estimates that international arrivals will decrease by 70% to 75%. The Travel and Tourism cluster - aviation, hotels and accommodations, restaurants, travel agencies, among others - suffered drastically in 2020, mainly since March, with the lockdown decreed by national entities, to stop the expansion of the COVID-19 pandemic.

This context will have differentiated implications for the companies considered, according to their business model and the greater or lesser dependence on tourism, one of the sectors most affected by the pandemic. With the local tourism market, geography and barriers to international circulation, the capital structure of companies, among other factors, gains relevance.

Reports and surveys explore the impact and implications of COVID-19 on Travel & Tourism, providing recommendations that will support the sector now and build its resilience in the future, mainly through 4 inter-related trends, according to the World Travel & Tourism Council (2020):

- **Demand Evolution:** Traveller preferences and behaviours have shifted toward the familiar, predictable and reliable. Domestic vacations, extensive planning, and outdoors will reign in the short-term, with tourism businesses and destinations already adapting.
- **Health & Hygiene:** Health, safety and trust are paramount in this new era. Personal experiences and concerns for social distancing will guide consumer behaviour in the short to mid-term. Businesses will have to collaborate even more closely with their extended value chains to ensure readiness.

- **Innovation & Digitalization:** COVID-19 is proving to be an unexpected catalyst in the Travel & Tourism sector's quest for innovation and integration of new technologies. Digital adoption and consumption are on the rise, with consumers now expecting contactless technologies, among others, as a basic prerequisite for a safe and seamless travel experience.
- **Sustainability:** From widespread unemployment and anti-racism movements to the restoration of natural habitats, the world has been reinvigorated to tackle social, environmental, and institutional sustainability. In particular, heightened public awareness of wildlife markets and poaching has boosted the advocacy for wildlife protection.

As we can conclude from the above, COVID-19 is not only a global health crisis but also a major labour market and economic crisis that has had a significant impact on society. As Hall et al. (2020, p.1), points out, although travel and tourism were confronted with a significant list of pandemics, "there is a surprisingly limited literature on the interrelationships between pandemics and tourism, and its long-term implications." So, despite the difficult future that hospitality businesses face, the government, companies, workers, agencies and other players in the sector are thinking about the best way to deal with such uncertain times.

This article intends to analyse the content about the COVID-19 pandemic transmitted in social media, about the implications of the pandemic in tourism, namely concerning social and economic issues, thus increasing the knowledge of managers of tourism companies.

This paper presents an exploratory study based on multiple case-study approaches that combine different methodologies and techniques. The cases under study were selected through the analytic tool SimilarWeb.

After this introduction, we present the theoretical background of the paper. Next, we describe the case study methodology, particularly the criteria for selecting the organisations and the collection and data analysis procedures. Following, we present and discuss the results. After examining these findings, we expose the main conclusions and future research perspectives.

2. THEORETICAL BACKGROUND

On December 31st, 2019, in Wuhan, China, an unknown pneumonia like sickness was detected and reported to the World Health Organization (WHO, 2020), the COVID-19. This pandemic has been one of the most impactful and tragic pandemics of contemporary times. Since that time,

The COVID-19 pandemic has overwhelmed the world, with confirmed infections threatening the health and lives of millions of people. Consequently, the world has and continues to face huge losses and setbacks due to COVID-19 and at the heart is the Travel & Leisure sector. Personnel and professional life have massive travel restrictions and others stayed home in fear of the virus itself or according to government lockdowns, the cluster came to a near-total standstill.

Reports and surveys explore the impact and implications of COVID-19 on the Travel & Tourism, which advance recommendations that will support the sector now and build its resilience into the future, mainly through 4 interrelated trends, according to World Travel & Tourism Council (WTTC, s/d):

Demand Evolution: Traveler preferences and behaviors have shifted toward the familiar, predictable, and trusted. Domestic vacations, extensive planning, and the outdoors will reign in the short-term, with tourism businesses and destinations already adapting.

Health & Hygiene: Health, safety and trust are paramount in this new era. Personal experiences, the fear of being stuck in another country, and concerns for distancing will guide consumer behavior in the short- to mid-term. Businesses will have to collaborate even more closely with their extended value chains to ensure readiness.

Innovation & Digitalization: COVID-19 is proving to be an unexpected catalyst in the Travel & Tourism sector's quest for innovation and the integration of new technologies. Amid stay-at-home orders, digital adoption and consumption are on the rise, with consumers now expecting contactless technologies, among others, as a basic prerequisite for a safe and seamless travel experience. According to Gretzel et al (2020) COVID-19 is proving to be an unexpected catalyst in the Travel & Tourism sector's quest for innovation and the integration of new technologies.

Sustainability: From widespread unemployment and anti-racism movements to the restoration of natural habitats, the world has been reinvigorated to tackle social, environmental, and institutional sustainability. In particular, heightened public awareness of wildlife markets and poaching has boosted advocacy for wildlife protection.

Following an economic perspective, Tsionas (2020) analyses the cost structure of hotel industry and discusses three different scenarios for the reopening of hotel industry, concluding that “(i) reopening gradually requiring only nonnegative profits is quite feasible but (ii) reopening requiring the same level of profit as in the pre-COVID-19 period is considerably more difficult, and seems feasible by reopening at capacity near 33%” (Tsionas, 2020, p1). The level of 33% is

the break-even point below which government subsidies would be necessary. However, the truth is that companies are taking tentative steps towards re-opening their facilities in an absolute sight navigation approach, with or without government subsidies.

In 2020, Gandasaria & Dwidienawat analysed the content of online news when conveying COVID-19 pandemic information based on the frequency of appearance and news content based on social and economic issues in online news. They concluded that the social issues involved 20 themes. According the authors, some of the most quoted topics included regulations, social funds and charities, the humanities, the availability of infrastructure facilities, education, instruction and appeal, and culture and religion. Whereas, the economic issues involved 52 themes. some of the most quoted topics included exchange rates; transportation; the oil, natural gas and electricity industries; social funds and charities; regulation and policy; agriculture; and the tourism industry. The topics are related to social distancing, social restrictions, social actions, culture, other problems associated with the social sector and the real and massive impact on economic growth. As we can conclude from the above COVID-19 is not only a global health crisis, but also a major labour market and economic crisis that has had a significant impact on society. As Hall et al. (p. 6) points out, although travel and tourism were confronted with a significant list of pandemics and global diseases in the past “there is a surprisingly limited literature on the interrelationships between pandemics and tourism, and its long-term implications”. So, despite the bleak future facing hospitality businesses, government, companies, workers, agencies, and other actors tangled in the sector are thinking about the best way to deal with such uncertain times. By trying to contribute to the research agenda, this paper identifies the content of social media when conveying COVID-19 pandemic information based on social and economic issues.

3. METHODOLOGY

The methodologic options are one of the most relevant decisions, since they outline the expected results and restrict their clarity and accuracy. Given our research questions, which are necessarily generic and comprehensive – (i) How the pandemic caused by COVID-19 was treated by tourism e/m-commerce companies, (ii) What kind of information is available on social media about COVID-19, and (iii) What economic and financial information can be access on the web regarding these companies – we understood the multiple case studies as the strongest approach. We carried out a qualitative analysis of the main communication channels, namely websites and

social networks with text content. Our focus was on web communication strategy followed by key organization of the tourism sector during COVID-19, however, other data sources were consulted.

For data collection and content analysis, we carefully followed all the procedures recommended for exploratory qualitative research, especially those indicated for multiple case-study research (INE, 2020). To enhance the validity and reliability of the case study (Kozinets, 2018), we used different data sources, namely documents in portable document format (PDF) and Hyper Text Markup Language (HTML), disclosed on the website and available on social media networks.

This research was an opportunity to experience qualitative research as a learning process, where the researcher is “continually and consciously making decisions that affect the questions pursued and the direction of the study” (Kozinets, 2018, p.3). To increase data consistency, before proceeding with content analyses, a pilot test was carried out to understand the potential bias due to different interpretations of individual researchers involved in the content analyses. According to Yin, the:

“key to understanding the needed training is to understand that every case study researcher must be able to operate as a “senior” researcher. Once you have started collecting data, you should think of yourself as an independent researcher who cannot rely on a rigid formula to guide your inquiry. You must be able to make intelligent decisions throughout the data collection process”. (2018, p.127)

Thus, the pilot test was done by three researchers who simultaneously analyze 10% of the data. This test did not reveal any important differences between individual research interpretations and so, the subsequent content analyses continued with the three researchers working autonomously, in spite of following the same techniques. All the details about the data collection procedures will be given in the next section.

The selected case studies consisted of e/m-commerce companies with the most access in Portugal. These companies were selected using the SimilarWeb automated tool. SimilarWeb is a tool that provides web analytics services for businesses such as measurement, collection, analysis and reporting of web data (Yin, 2018). With the SimilarWeb tool, the most visited companies in the field of tourism, in e/m-commerce mode, were identified in Portugal. The answer was based on data available until July 3, 2019.

The following table shows, by category, the companies, the URL of the website's home page and the links to the companies' social networks, if they are accessed through existing links on the website.

Table 1. Websites analyzed

SimilarWeb Category	Company	Web address
Accommodations and Hotels	Booking	https://www.booking.com
	AirBnb	http://airbnb.pt
Car Rentals	Rentalcars	https://www.rentalcars.com/
	Europcar	https://www.europcar.pt/
Air Travel	FlyTap	https://www.flytap.com/en-pt/
	Ryanair	https://www.ryanair.com/ie/en/
Travel and Tourism	CP	https://www.cp.pt
	Viagens Sapo	https://viagens.sapo.pt/
Travel and Tourism > Tourism Attractions	Viator	https://www.viator.com/
Travel and Tourism > Transportation and Excursions	<u>Zoomarine</u>	https://www.zoomarine.pt/pt/
	Megabus	https://www.megabus.com/
	Sleeping in Airports	https://www.sleepinginairports.net/

After that, we looked into each company's social media. As already stated, the qualitative methodology was used, which can be generically defined as a method of social research that uses analysis of qualitative data. The technique used was content analyses of social media, websites and social networks. In order to guide the three researchers during data collection and data analyses of each case, there were five well-defined guiding questions:

- (1) Regarding the reservations made before the knowledge of the pandemic, what are the procedures carried out with regard to the possibility of: rescheduling; cancellation; and refund (Yes / No)?
- (2) As for the services provided, what type of information is available?
- (3) What kind of information is provided by companies on the website about healthcare within the scope of the COVID-19?
- (4) In terms of social responsibility, what were the measures implemented by the companies?
- (5) With regard to insurance, what are the risks covered by the companies?

To select the pages to be analyzed, all those belonging to the same domain and where the URL website contained the word COVID were searched. For this, the following Google command was used: `allinurl: covid site:https://[website domain]`

To define the search criteria, Search Engine Optimization (SEO) strategies were considered, organic search was used and the keyword “COVID” would have to be a part of the page’s URL [URL Structure [2020 SEO Best Practices]. (n.d.). Moz. Retrieved August 3, 2020, from <https://moz.com/learn/seo/url>]. The search carried out resulted in 63 html pages and one pdf file. In December 2020, a new analysis of social networks was carried out in the same study period (from March 1 through July 31, 2019). The methodology used to capture users' actions and interactions at the tourist community in the social network was netnography. The objectives were to analyze the textual, graphic, photographic and & audio-visual contents of netnography in social networks. Netnography is acknowledged as a useful research tool for collecting and analyzing online information (Costello, 2017).

Table 2. Social network contents

Company	Social Network	Posts	Videos YouTube	Visualizations YouTube	Comments	Likes/unlikes	Shares	Format
Booking	No links available							
AirBnb	Facebook	3	n/a	n/a	20100	4.600	948	Text/ Photos/ Videos/
	Instagram	0	n/a	n/a	0	0	n/a	Text/ Photos/ Videos/
	Twitter	17	n/a	n/a	1616	3790	1915	Text/ Photos/ Videos/ Illustration
Rentalcars	No links available							
Europcar	No links available							
FlyTap	No links available							
Ryanair	Facebook	11	n/a	n/a	2103	3147	1086	Text/ Photos/ Videos/
	Instagram	22	n/a	n/a	0	418968	n/a	Text/ Photos/ Videos/

	YouTube	5	5	19010	n/a	637/ 85	n/a	n/a
CP	Facebook	44	n/a	n/a	1550	5369	1357	Text/ Photos/ Videos/
	Instagram	7	n/a	n/a	0	2.768	n/a	Photos/ Videos/
	YouTube	13	13	17412		365/6	n/a	n/a
Viagens Sapó	No links available							
Viator	Facebook	0	n/a	n/a				
	Twitter	7	n/a	n/a	6	43	9	Text/ Photos/ Videos/ Illustrations
	Instagram	1	n/a	n/a	11	130	n/a	Text/ Photos/
	Pinterest	n/a	n/a	5	n/a	n/a	n/a	Videos
	YouTube	0	0	0	0	0	0	n/a
Zoomarine	Facebook	31	n/a	n/a	562	6682	1.664	Text/ Photos/ Videos
	Instagram	29	n/a	n/a	0	34251	n/a	Text/ Photos/ Videos
	YouTube	21	21	772	0	453/ 17	n/a	n/a
Megabus	Facebook	17	n/a	n/a	1095	1908	548	Text/ Videos
	Instagram	8	n/a	n/a	15	495	n/a	Text/ Photos/
The Guide to Sleeping in Airports	Twitter	1	n/a	n/a	0	3	0	Text/ Video
	Instagram	1	n/a	n/a	0	3	0	Text/ Videos

By looking at the previous table, we realise that most companies do not have direct access to social networks and those who do, also have little expressiveness both in terms of the number of publications and the number of likes.

After this previous appreciation of social network channels, the content analysis of the selected documents was carried out. According to (Krippendorff, 1980), content analysis is a research technique used to make valid and replicable inferences of data, within their contexts. The organization of content analysis starts from three chronological segments:

(1) Pre-analysis – In this segment, the constitution of the documentary corpus is carried out. In our case, it comprises the social media of the most used e-commerce companies in Portugal (see Table 2).

(2) Exploration of the material or coding – It consists of the process by which the raw data is systematically aggregated into units, which allows for an accurate description of the characteristics, relevant to the content expressed in the text: we chose the registration Units of Analysis (UA) and the categories (classification and aggregation)

(3) Treatment of results, inference and interpretation. (Bardin, 2007).

In the study, the type of adopted UA was thematic or semantic. The classification of constituent elements of a set, by differentiation and then regrouping according to gender, with the criteria previously defined. Categories are rubrics or classes that bring together a group of elements (UA) that have common characteristics (Bardin, 2007). Homogeneity, completeness, exclusivity, objectivity and adequacy of pertinence are some of the characteristics that can help in the construction of empirical categories in content analysis.

The categories in the textual analysis can be produced by different methodologies, in this case, the inductive method was used. Through a process of constant comparison and contrast between the units of analysis, the researcher organizes sets of similar elements, usually based on tacit knowledge, as described by Lincoln and Guba (1985). Following this approach, we constructed the codification tree shown in figure 1.



Figure 1. Tree codes

As already mentioned, the material was then explored by code. Afterward, the results, inference and interpretation were treated, as described in the following section.

Concerning the economic and financial information, our first step was to discover the business company behind the brands and website. This allowed us to redefine our list of cases. Consequently, the initial list has been reduced in terms of economic and financial analysis to the following companies: Booking Holding Inc. (1 and 3), AirBnb Inc (2), Europcar Mobility Group SA (4), TAP Air Portugal (5), Ryanair Holding Inc (6), CP-Comboios de Portugal (7), Altice PT Group (Altice N.V., 8), TripAdvisor Inc (9), Mundo Aquático SA (Zoomarine, 10) and Stagecoach Group PLC (11). The Individual Site “Sleeping in Airports” (12) was excluded due to absence of information.

Then, we used Google Search and applied the following search strategy: “Company Name” and “Financial Reports”. For all the results we investigated the first ten. The richest source was the company’s website and the Stock Exchange data and Financial Times website. Due to the high diversity of information we found, there was a need for some adjustment and simplifications, as explained below:

- As there is no need for a comparison inter-companies, the figures are on the original currency used on the information.
- Differences between variables used – Revenues or Net Income – only happen with the Net Income and are explained.
- As benchmark, it was selected US Benchmark Travel and Leisure by importance in terms of liquidity of NASDAQ stock exchange.

- When the brand was from a website, information from the head-company that explores the brand was used. For instance, Sapo Viagens is a brand of Altice PT Group and the data was collected at Altice N.V. (Netherlands).
- Useful information about Travel and Leisure for the text was obtained through the Financial Times website.

Companies with shares listed on different world exchanges - Booking Holding Inc. (1 and 3), Airbnb Inc (2), Europcar Mobility Group SA (4), Ryanair Holding Inc (8), TripAdvisor Inc (9) and Stagecoach Group PLC (11) - a specialized website – FT: Financial Times - was used to analyze the evolution of securities prices in the last 12 months, as additional information.

Stepping back to April 2019, the opportunities in the leisure travel market were in the sights of international investors. A group of start-ups was expanding internationally in an investment of \$120bn in travel activities industry, elected “the fastest growing segment in the tourism sector”. All the new business models expect the “explosion of Asian markets to a higher level than in Europe and the United States”.

3. RESULTS AND DISCUSSION

The free use of the SimilarWeb tool gives us an orderly list of the two most used websites by the Portuguese, grouped by categories (we selected the subcategories: Accommodation and hotels; Air travel; Car rentals; Ground transportation; Tourism attractions; Transportation and excursions from the travel and tourism category).

We tested the 12 most used tourism websites in Portugal, according to the SimilarWeb tool (see Table 1).

3.1. How was the pandemic caused by COVID-19 treated by tourism e/m-commerce companies?

The results obtained are exposed in the next points. The identification of the most relevant keywords is determined by the number of times one word is present in a given database. A summary or a list of keywords is important because it helps to map the dominant thematic (Silva, 2020). By analyzing the most relevant words, it is possible to map search themes in the area. In figure 2 we can see the most relevant keywords used, in a form of word clouds.

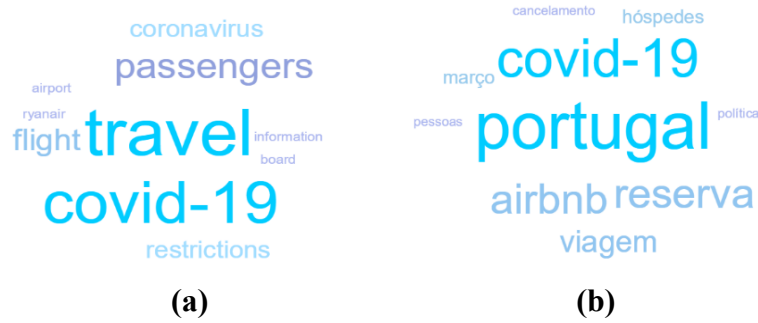


Figure 2. (a) English websites keywords; (b) Portuguese websites keywords

In both cases, it was found that there is a great emphasis on the terms COVID-19, country under analysis and category of studied companies. Then, there is policy, cancellation, restrictions and customers (guests/passengers). Finally, the month in which the confinement period began in Portugal.

Figures 3 and 4 show charts that represent the UA percentage by category and digital channel (website and social network).

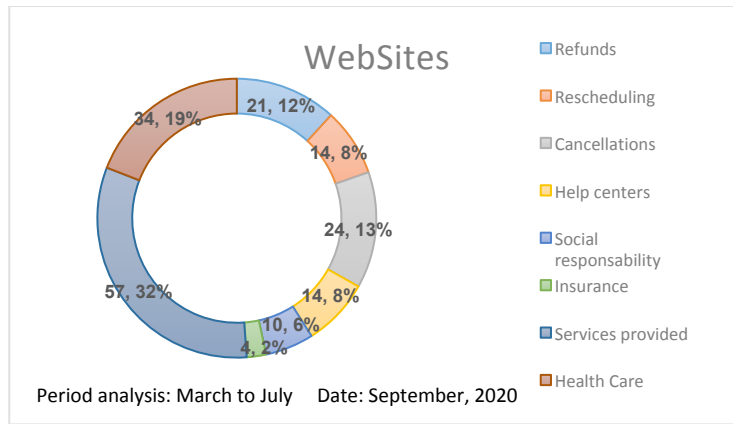


Figure 3. UR percentage by category

Concerning the Websites, the occurrences were distributed by services offered (32.02%), health (19%), which comprises the subcategories of reservations: cancellations (13.48%), refunds (11.80%), and rescheduling (7.87%). Social responsibility represents few occurrences (5.62%), which contrasts with the occurrences representing 31.89% on Social Networks. The security category, as in Social Networks, is not very representative (2.25%). It was found that more than half of the websites have a direct link to the companies' social networks.

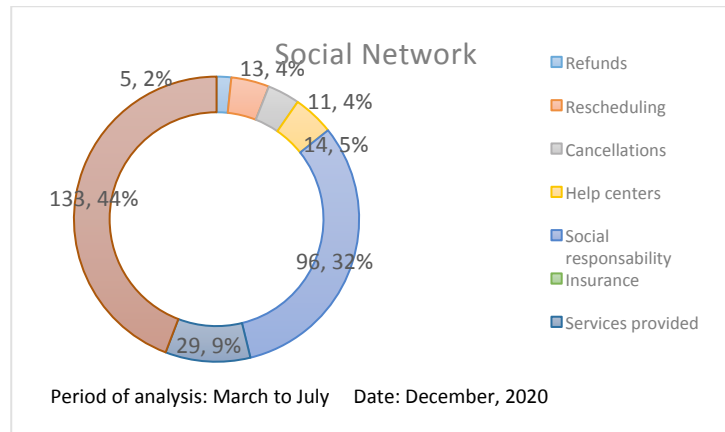


Figure 4. UR percentage by category

In the previous image, it appears that in Social Networks (RS), the occurrences were distributed by health (44.19%), social responsibility (31.89%), which comprises the subcategories of reservations: rescheduling (4.32%), cancellations (3.65%) and refunds (1.66%). As for the services offered (9.63%), help centre (4.65%).

The categories with the greatest impact are health and social responsibility. The reservations and help centres are categories with the least impact. The insurance category did not have impact in social networks.

3.2. What kind of information is available on social media about COVID-19?

As mentioned before, the researchers followed five guiding questions to tailor the information:

3.2.1. Regarding the reservations made before knowledge of the pandemic, what are the procedures carried out with regard to the possibility of: rescheduling; cancellation; and refund (Yes / No)?

From the analysis of the information contained in the analysed websites, the policies will depend a lot on the type of category. Thus, in Accommodation and Hotel companies, cancellations are carried out in a usual way, for example if the cancellation is due to illness, there are no associated costs. As for rescheduling, it always depends on the booking conditions. Refunds depend on the type of reservation: from March 14th, it only happens in the case of illness, but if the reason is COVID-19, it may be refunded in full.

In the Car Rentals category, cancellation is always possible but only if done up to 48 hours before. In the Air Travel category, since there was a suspension of flights, rescheduling is always possible, sometimes with the offer of additional discounts on new bookings. Refunds are full and

may still be in excess. It may happen that the issue of travel vouchers with reimbursement is only possible from one year after their issue.

In the Travel and Tourism category, attention is drawn to the fact that cheaper airlines have not given rise to refunds. Companies linked to animation announce they will resume activities only after the month of September.

In the Tourism Attractions category, companies report 100% refunds by June 30 and cancellations are made according to national policies for COVID-19. As for rescheduling, the validity of the tickets purchased is extended.

Concerning the analysis of the information contained on social networks, there is nothing to highlight. As can be seen, the number of UA in this category is not very significant (4.32%).

3.3.2. As for the services provided, what type of information is available?

The kind of information about alternative services depends on the category of the website and the activity of the company. Some companies gave information about the new online services provided, some distinguished the services that became online from those that remain personal contact services, others simply give information about the services that were suspended or restricted access, for example, the closing of several physical stations and indication of the only physical station available, restrictions on the transport of materials, conditions about cleaning services, and so on. It seems clear that there is a shift from personal interactions to technologies in order to limit contact.

The information presented in social networks is similar to most websites.

3.3.3. What kind of information is provided by companies on websites about healthcare within the scope of COVID-19?

Regarding this issue, all websites, with no exception, provide specific information about the careful procedures that customers should follow, highlighting the etiquette and safety standards they should apply in order to preserve their health.

In general, the rules mentioned were in accordance with those described in Clean & Safe. Portugal Establishment Complying with health measures, published by Turismo de Portugal (Silva, 2020), i.e., it lags behind the legal recommendations. Anyway, it seems clear that new health safety norms forced companies to rethink their premises in terms of cleaning and sanitizing protocols and air handling, for example.

As for social networks, companies in the Air Travel category explain the need to wear a mask when travelling and the air transportation of products needed for health care. Similar to websites, social networks provide information on hygiene, safety measures and etiquette in various text, video and illustration formats.

3.3.4. In terms of social responsibility, what were the measures implemented by the companies?

From the analysis of the information on the observed websites in the scope of social responsibility, it appears that the used policies differ greatly according to the type of category. Thus, in the Accommodations and Hotels category, in case of COVID-19, the information available on the different websites highlights safe facilities, cleaning and dis-infection checklist, information about cleaning professionals, social distance practices, line accommodation when in queue, 72 hours between reservations for cleaning and sanitizing, and lastly the information on interrupting face-to-face experiences from March 18 until at least June 28, 2020.

In the Air Travel category, some companies highlight the existence of re-patrolling flights, even to countries where it would not be possible to fly, due to air space restrictions. Some airlines have remodeled their planes to allow more space, ensuring greater humanitarian cargo.

In the Travel and Tourism category, some companies emphasize the payment of medical expenses of any visitor who is infected with COVID-19 during their stay.

In the Tourism Attractions Category, the information available on websites during the visit highlights the use of face masks, hand sanitizer, disinfection between the use of transport vehicles and regular hygiene, increased cleaning regimen and constant changes of filters air conditioning units.

With regard to social networks, the actions that companies have carried out, namely the provision of free vehicles for health professionals, the distribution of protective equipment by volunteers, and the provision of accommodation for health professionals, are publicized. It is also verified that the messages use diversified formats.

3.3.5. With regard to insurance, what are the risks covered by the companies?

From the analysis of the information on websites observed in the scope of insurance, it appears that the used policies differ greatly according to the type of category. Thus, in the Car Rentals category, the information made available on some websites is aimed at providing full protection insurance to its customers.

In the Travel and Tourism Category, there are companies whose insurance does not protect, unless reservations have been made before the notice of country constraints or restrictions.

With regard to social networks, nothing to highlight.

Responses from companies concerning COVID-19 vary according to the type of business and range, from inhibiting activity (flights) to postponing dates (shows and cultural activities), including the possibility of rescheduling with or without reimbursement of amounts already paid for stays. There is a concern with the hygiene of spaces and procedures and recommendations to prevent the spread of the disease. Companies have taken hygiene measures, especially in Accommodations and Hotels and Travel and Tourism. Hygiene measures such as wearing a mask, disinfectants and social distance are also frequently recommended. Facilities and vehicles were also made available free of charge to some health professionals.

The case of the COVID-19 epidemic shows the critical impact of this new information environment. The information spreading can strongly influence people’s behavior and alter the effectiveness of the countermeasures deployed by governments. To this respect, models to forecast virus spreading are starting to account for the behavioral response of the population with respect to public health interventions and the communication dynamics behind content consumption (Shaman, 2013; Viboud & Vespignani, 2019).

3.3 What economic and financial information can be accessed on the web?

Based on online information obtained from Stock Market, FT-Financial Times and companies’ website information, we prepared the figure n° 5.

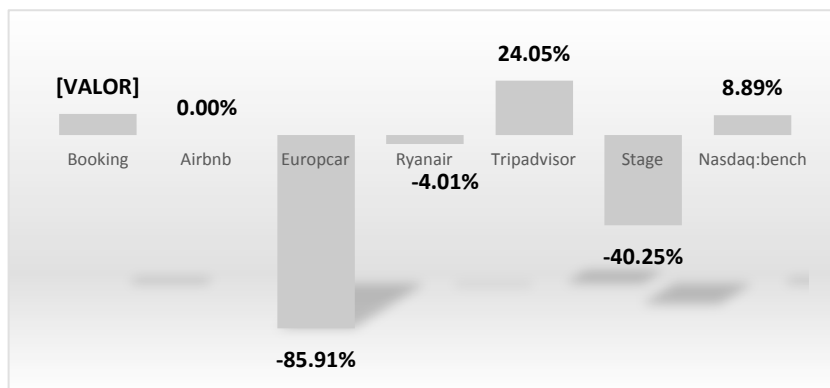


Figure 5. Share Price 1 Year Change

Surprisingly, 1 year after, Booking.com and Airbnb have already overcome the pre-pandemic levels. According to the September report, Booking Holdings will face a decrease of near 50 per cent in 2020 revenue. Nevertheless, Booking Holdings recently (Feb. 11, 2021) shared they have achieved \$2,159.26, more than 13 per cent its value last year (at the same day), with a Beta of 1,246, so more volatile than the market, better than two days ago (at Feb. 9) with a price of \$2,088.06, but always above pre-pandemic value, +9.35 per cent.

Another interesting development is Airbnb, which launched 50m shares at \$68 each at the initial public offering on December 9, 2020, and from the first day of transaction has been skyrocketing its value to \$160, and now to \$216.84. That would value the company at \$100bn. Their revenue increased from \$2.5bn in 2017 to \$4.8 bn in 2020, a growth that did not prevent net income from keeping in the red \$674m. In 2020, Airbnb is expected to see a 30 per cent reduction in revenue, which could double the previous year's loss.

TripAdvisor Inc is one of the stars of the momentum, with share value of 36.98, a 1-year increase of 24 per cent, well above US Benchmark Travel and Leisure, with an average increase of 8.89 per cent. Trip is an online travel company that owns and operates a portfolio of online travel brands, associated to websites, in two-dimension activity Hotel and Non-Hotel.

On the other hand, there are listed companies with highly negative performances due to the adverse context caused by the pandemic widespread through several waves in America, Europe and Oceania and the fears associated with Travel and Leisure all over the world. This is the reality for companies like Europcar, Stagecoach and Ryanair, with the price of their securities falling by -86%, -40% and -4%, respectively in the last year (Table 3 and Table 4).

Europcar is a France-based company whose activity is related to the car rental business, targeting business customers, as well as leisure customers. Through Bluemove, it offers carsharing services through a mobile application. It operates through Brunel, a London-based ride-hailing business and GuidaMi by UbeeQ and Buchbinder Group.

Despite the strong revenue growth for the last 3 years (2017-19) of 25 per cent and a positive net income, although fluctuating, that allowed accumulating €238bn in profits over this period, it has defaulted around \$9tn on its debt, as part of a financial re-structuring carried out at the end of 2020. Highly indebted companies face even more uncertainty after governments strong packages for companies related to country lockdowns. The share quoted on Paris Stock Exchange have

lost 83 per cent of their value since last year and the beta of 2.345 expresses this uncertainty regarding the future.

Megabus Europe operates with intercity coach services within mainland Europe and between the United Kingdom and continental Europe. SGC's profits fell to £5.4m in the six months prior to October 31 compared with £65.9m for the same period last year, while revenue fell 43 per cent to £454.6m. Shares in the bus company have fallen by 42 per cent in the past 12 months and a beta of 2.203 demonstrates the volatility of the security.

Lastly, Ryanair Holdings plc is a holding company for Ryanair Limited (alongside its subsidiaries Buzz, Lauda, Malta Air). Ryanair provides various ancillary services and engages in other activities connected with its core air passenger service, including non-flight scheduled services, Internet-related services, and the in-flight sale of beverages, food and merchandise. Revenues have increased €1bn, in the last three years (2017-19) up to €7.7bn and are expected to achieve €8.5bn in 2020. Net income accompanied the trend and the positive exploration accumulated €3.6bn in profits, with the possibility to generate in 2020, €1bn plus. Share price even so decreased by 4.63 per cent on a year base to €15.03. CP management has divided its operations into three Business Units: Urban trains - Lisboa, Porto and Coimbra; Alfa Pendular, InterCities and International trains; and Regional and InterRegional trains. From 2017-19, it has increased its revenue by 22 per cent, 82% in the last year, to €341million and improved historically recorded losses to €50 million, half the value of the last two years. Mundo Aquático - Parques Oceanográfico de Entretenimento Educativo S.A. was founded in 1989. Zoomarine launched, in 2002, the "TogetherWeProtect" project.

Our sample includes international and domestic companies, some of them are market share and others are not, and surprisingly we found one personal business. After working with available data and experience many comparisons of accounting measures, we realize that Revenue and Net Income were the most common indicator. However, as we can observe in figure nº6, there are many cases missing.

The company manages Zoomarine-Algarve since 1991, a theme park located in Albufeira, in the heart of Portugal's main tourist region. In the last 3 years, it is making relevant investments (around €5million) in new services, goods and energy efficiency. In the period between 2017-19, the company stabilized its turnover around €20million with a result of €4million.

As expected, we found several difficulties to get comparable information.

Table 3. Most common indicators of national and international companies - Revenue

Company	Revenue (Millions)							
	date	2020	2019	2020	2019	2018	2017	
1-3 Booking Holdings Inc	\$	sept,2020	5	11 727	7 141 (1)	15 066	14 527	12 681
			558					
2 Airbnb Inc	\$	sept,2020	2	3 698	3 273 (1)	4 805	3 652	2 562
			519					
4 Europcar Mobility Group SA	€	june,2020	815	1 306		3 022	2 929	2 412
5 Tap Air Portugal	€	--	--	--		3 345	3 251	2 979
6 Ryanair Holdings Inc	€	--	--	--	8 495 (2)	7 697	7 151	6 648
7 CP – Caminhos de Portugal	€	--	--	--		341	289	279
8 Altice PT Group	€	--	--	--		2 110	2 110	2 249
9 TripAdvisor Inc (desde 2014)	\$	sept,2020	151	428	550 (1)	1 560	1 615	1 556
10 Mundo Aquático, SA	€	--	--	--		20	19	19
11 Stagecoach Group PLC	£	oct,2020**	454	796	1 420 (2)	1 879	2 818	3 941
			*					
12 Individual site	-	--	--	--	--	--	--	--

(1) Authors Forecast based on structure from 2019; (2) Company forecasts
 * Profit before taxation; ** EBITDAR_EBIT+Depreciation, amortization and impairments+Aircraft rents; *** six months period
 1-3 <https://www.bookingholdings.com/>
 2 https://www.sec.gov/Archives/edgar/data/1559720/000119312520294801/d81668ds1.htm#toc81668_13
 4 <https://investors.europcar-group.com/static-files/021d4809-b691-4de4-8de3-cf220963d24e>
 5 www.tapairportugal.com > Investidores > Comunicados
 6 <https://investorryanair.com>
 7 <https://www.cp.pt/institucional/en/the-company/report-and-accounts>
 8 <http://altice.net/sites/default/files/pdf/Altice%20-%20Annual%20report%202019%20-%20vf2.odf>
 9 <https://irtripadvisor.com/financial-information/annual-reports>
 10 <https://sabibyinfo.com/version-202115/Login.serv?product=sabineo>
 11 <https://www.stagecoachgroup.com/media/resources-library/publications/financialreports.aspx>

Table 4. Most common indicators of national and international companies – NET Income

Company	Net Income (Millions)							
	Date	2020	2019	2020	2019	2018	2017	
1-3 Booking Holdings Inc	\$	sept,2020	224	3	295 (1)	4 865	3 998	2 341
			694					
2 Airbnb Inc	\$	sept,2020	-697	-323	-1 454 (1)	-674	-17	-70
4 Europcar Mobility Group SA	€	june,2020	-286	-69	--	38 *	139 *	61 *
5 Tap Air Portugal	€	--	--	--	-443 (2)	-106 **	-118 **	21 **
6 Ryanair Holdings Inc	€	--	--	--	1 000 (2)	885	1 450	1 316
7 CP – Caminhos de Portugal	€	--	--	--	--	-52	-106	-112
8 Altice PT Group	€	--	--	--	--	-166	722	66
9 TripAdvisor Inc (desde 2014)	\$	sept,2020	-48	50	-121 (1)	126	113	-119
10 Mundo Aquático, SA	€	--	--	--	--	4	4	4
11 Stagecoach Group PLC	£	oct,2020***	5	66	36 (2)	22	71	32
12 Individual site	-	--	--	--	--	--	--	--

(1) Authors Forecast based on structure from 2019; (2) Company forecasts
 * Profit before taxation; ** EBITDAR_EBIT+Depreciation, amortization and impairments+Aircraft rents; *** six months period
 1-3 <https://www.bookingholdings.com/>
 2 https://www.sec.gov/Archives/edgar/data/1559720/000119312520294801/d81668ds1.htm#toc81668_13
 4 <https://investors.europcar-group.com/static-files/021d4809-b691-4de4-8de3-cf220963d24e>
 5 www.tapairportugal.com > Investidores > Comunicados
 6 <https://investorryanair.com>
 7 <https://www.cp.pt/institucional/en/the-company/report-and-accounts>
 8 <http://altice.net/sites/default/files/pdf/Altice%20-%20Annual%20report%202019%20-%20vf2.odf>
 9 <https://irtripadvisor.com/financial-information/annual-reports>
 10 <https://sabibyinfo.com/version-202115/Login.serv?product=sabineo>
 11 <https://www.stagecoachgroup.com/media/resources-library/publications/financialreports.aspx>

A successful financial risk management practice for large corporations enhances a value increase for the different partners and does not jeopardize the company's social responsibility. According to Alexander (Alexander, 2008), companies face two types of risks: Idiosyncratic or Reducible Risk and Systematic or Irreducible Risk. The cases studied are evidence of this duality of risks in the context of the pandemic.

5. CONCLUSIONS

This research provides practical insights for tourism industry managers about companies' sustainable competitiveness. The COVID-19 pandemic has heightened the need for companies to adopt digital business models. Management communication in crisis situations is crucial to guarantee the emission of clear and compelling messages to the customers. Digital channels were used to provide clarifications to customers. The financial data of companies with a diversified business portfolio evidence systematic risk. In contrast, companies exclusively dealing with the tourism business show expected losses due to their exposure to specific risks expected for the tourism sector.

Beyond the intrinsic limitations of qualitative research, our study does not explore the relationship between strategic planning, crisis management and web communication. Thus, future research should include this perspective and benefit from a larger sample and international comparison.

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