Effect of COVID-19 crisis on Revenue per Available Room in Portugal and Spain

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Abstract

Revenue per Available Room (RevPAR) is a crucial metric for measuring and comparing hotel performance and there are several factors that determine its increase or decrease. The purpose of this study is to identify the determinants of RevPAR and to understand how the COVID-19 (COronaVIrus Disease of 2019) health crisis affected hotel Key Performance Indicators (KPIs) such as the Average Daily Rate (ADR), the Occupancy rate and the RevPAR in the Iberian Peninsula through a literature review and a comparative analysis. With data collected from STR (Smith Travel Research) and from Our World in Data, this study analyses the RevPAR, the ADR, the Occupancy rate, and the cumulative COVID-19 confirmed cases from Portugal, Spain and the European average. The results show that, despite having similar hotel performances, Portugal is more volatile to seasonality, while Spain has a slightly higher RevPAR average. COVID-19 negatively affected RevPAR and occupancy rates in both countries, reflecting on a brutal impact like no other crisis. Additionally, the study highlights a greater influence of occupancy rate on RevPAR results compared to ADR. The analysis reveals a close relationship among the indicators in the Iberian Peninsula, indicating a growing trend.

Keywords: RevPAR, determinants, COVID-19, Spain, Portugal

1. Introduction

Tourism is a major industry in most countries and an important factor in the development of the global economy. However, Europe is preparing for a new economic recession due to the emergence of new variants of the COVID-19 (COronaVIrus Disease of 2019), wars and inflation, global distribution issues, and social unrest, which are expected to hinder the growth of European countries (Gunter et al., 2022). Therefore, it is important for revenue managers and hotels to understand the factors that drive Revenue per Available Room (RevPAR) and demand for hotel rooms.

The tourism policies of the Iberian Peninsula have been conditioned by geographic, social, political, and technological factors. Spain opted for rapid growth based on low-cost mass tourism, while the Portuguese government favored a more gradual approach based on higher-quality tourism and the protection of national enterprises. In the 1990s, Spain's beach and sand tourism continued to grow, leading to economies of scale, and maintaining a low-cost production. This also resulted in the internalization of national hotel chains. Spain became more flexible, diversified, and segmented in terms of production structure, offering new cultural and environmental touristic products. On the other hand, Portugal initially overlooked luxury tourism, but later explored it, while also making great efforts were also made to develop cultural and nature tourism. Spain's tourism industry underwent sector restructuring and achieved economic and political convergence with Europe, while Portugal concentrated tourism power within the State and experienced stagnant revenues (Almeida Garcia, 2014). Today both nations are among the most visited, attracting millions for their beaches, nice weather, artistic tradition, history, and gastronomy. Tourism plays a crucial role in the economies of both countries, generating wealth and employment, making its importance undeniable to the Iberian economy (Leitão et al., 2022).

This makes revenue management critical in this competitive, multifaceted, ever-changing market with complex decision-making processes. In this way, it is important to measure performance in order to improve it. The most common revenue management metrics are Average Daily Rate (ADR), RevPAR and Occupancy rate (Hung et al., 2010). RevPAR has been widely used by the lodging industry as a key indicator of hotel performance. The goal of any revenue manager is to maximize profitability with the resources at their disposal, which can be achieved by maximizing RevPAR. Among the various determinants of RevPAR, ADR is a more accessible tool for managers (Chattopadhyay & Mitra, 2019) but there are other determinants that can affect it.

The aim of this study is to understand the factors that affect RevPAR and how Key Performance Indicators (KPIs) were impacted by COVID-19 in the Iberian Peninsula. To achieve this, this article is composed by a literature review on RevPAR and on the effects of

this health crisis, following a comparative analysis methodology of ADR, occupancy rate and RevPAR in Portugal and Spain and European average, retrieved from Smith Travel Research (STR), from January 2019 until December 2022 and the COVID-19 cumulative cases in 2020 and 2021 from Our World in Data. Hence, the results demonstrate the impact of the health crisis with hotel KPIs in the Iberian Peninsula. The study ends with conclusions and directions for future research.

2. Literature Review

2.1 Revenue per Available Room and its determinants

RevPAR, which stands for Revenue per Available Room, is a metric that measures the average revenue generated by each available room during a specific period. It can be calculated by dividing the total rooms revenue by the number of rooms available or by multiplying the ADR by the occupancy rate. Hotel operators use RevPAR to forecast future room revenue, estimate market share, evaluate staff productivity, and provide an indicator of customer satisfaction. It also allows the comparison of lodging markets based on revenue volatility and relative growth (Ismail et al., 2002). RevPAR serves as a standard measure of hotel supply and demand performance and is often considered a gauge of growth (Cross et al., 2009).

Despite being a standard measure of hotel performance (Kim et al., 2019), the validity of RevPAR has been a topic of debate. Brown and Dev (1999) argue that its fragility stems from the exclusion of income from other sectors, and the neglect of costs considerations. RevPAR only takes into account room revenue and disregards other revenue sources such as spas, golf, and restaurants. Additionaly, the influence of local conditions is not considered too (Kimes, 1999). To adress these limitations, alternative performance measures have been suggested. Brown and Dev (1999) used measures as GOPPAR (Gross Operating Profit per Available Room), TRevPAR (Total profit per Available Room) and ProfitPAR (Profit per available room), comprising the total sales, profit and the Gross Operating Profit (GOP). Also, Cross et al. (2009) suggested that profit directors should assay not only their revenue but compare their results with competitors' RevPARs.

Since RevPAR is calculated by multiplying the Occupancy rate with the ADR, and is influenced by these metrics, understanding these is important. ADR is the average selling price of guest rooms during a certain period, it can be calculated by dividing the total room revenue by the total rooms sold. The Occupancy rate is the number of rooms sold during a specific period, expressed as a percentage of the rooms available during that period, calculated by dividing the total rooms sold by the total rooms available for sale (Ivanov, 2014). Both these metrics depend on the days of the week, period of the year, special events, market segments, location and accessibility, competitors, marketing, product and service quality, contract conditions, price levels, booking terms, types of rooms being booked, between other factors that impact demand for hotel rooms (Ivanov, 2014).

The occupancy rate is the larger contributor to a hotel's net operating income, while the ADR is influenced by political and socio-economic factors (O'Neill & Mattila, 2006). In addition, the effect of uncertainty of infectious diseases on the hotel room demand must now be considered (García-Gómez et al., 2021; Ozdemir et al., 2022).

Although there's a limited number of studies that examined fluctuations and determinants of RevPAR, it is possible to analyse which have been the determinants influencing hotel revenues. Chattopadhyay & Mitra (2019) studied the influence of ADR, occupancy rate, demand, seasonality, and monthly trends in Sweden and concluded that an increase in demand leads to an increase in RevPAR, but if demand is lacking, an increase in ADR would result in a decrease in occupancy rate and, consequently, RevPAR. Both ADR and demand need to be considered, and the ADR is the only instrument that can be controlled by managers, since the other factors are beyond their control. However, a higher ADR can lead to a relatively higher RevPAR, even with lower occupancy, although this is more corroborated in hotel chains (Enz et al., 2016). In periods of crisis and recession, as RevPAR is determined by sales and the number of rooms available, the increase in hotel room capacity might play an important role in the decline of RevPAR (Zheng, 2014).

Hotel characteristics such as location, size (number of rooms), class, age, hotel operation and seasonality have been found to influence RevPAR (Jiang & Taylor, 2020; W. G. Kim et al., 2013; Sainaghi, 2011; Xiao et al., 2012). Other hotel internal factors such as market orientation, employees and years, since the last renovation, were found to drive RevPAR (Sainaghi, 2011). Xiao et al. (2012) examined the RevPAR in US hotels in 2012 and found that the hotel owner and brand affiliation explained a great share of RevPAR fluctuations. Further factors such as brand positioning, quality of service and sales effectiveness can also drive RevPAR (Cross et al., 2009) along with customer satisfaction, product quality and customer mix also have significant effects on hotel performance (Kim et al., 2013; Kimes, 1999).

With the digital revolution, the impact of social media and user-generated content on hotel performance has increased. Positive user reviews have been found to increase prices and, consequently, occupancy, indicating a positive relationship between user reviews and hotel performance (Anderson, 2012). Digital marketing, social media and online reviews have a positive effect on hotel performance (de Pelsmacker et al., 2018; Phillips et al., 2017).

Studies by Liu et al., (2013) and Pacheco (2016) examined the RevPAR local and global drivers during the 2008 economic recession, in Asia and Portugal, respectively. Liu et al., (2013) found that international tourist arrivals, inflation, trade balance, stock index, consumer confidence, exchange rate, real-estate development and big impact events affect RevPAR (such as the 2008 Beijing Olympics, the 2011 Japanese tsunami, the Bangkok floods from July 2011 through January 2012, and the Shanghai Expo from May until October 2010). The authors also observed that, until the year of the global economic crisis, RevPAR generally moved together in the eight Asian cities examined between 2005 and 2011, which they referred to as "co-movement," but then started to diverge.

In Portugal, lower price segments have been found to be more sensitive to changes in the economy than higher price segments. Local factors such as the number of residents and non-residents overnight stays, economic growth and consumer index from Portuguese, US and EU consumers have a greater influence on RevPAR (Pacheco, 2016). These results highlight the high sensibility of the hotel industry to cyclical factors.

A recent study conducted on 251 certified hotels in Florida concluded that hotels with sustainability certificates can improve their KPIs compared to competitors by having a first-mover advantage (Bianco et al., 2023).

2.2 COVID-19 health crisis impact on the Iberian Peninsula

Tourism crises can take various forms, including economic, political, socio-cultural, environmental, technological, and commercial disruptions. Due to its reliance on multiple sectors and its experiential nature, the tourism industry is highly sensitive to such crises (Henderson, 2007).

The COVID-19 pandemic had an unprecedent impact on the tourism industry, surpassing previous events as the 11th September 2001, the SARS (severe acute respiratory syndrome) outbreak in 2003, or even the 2008 financial crisis, since the pandemic caused a brutal impact on hotel revenues as the whole industry had to stop due to the lockdowns and restrictions and consequently people were not allowed to travel (Guillet & Chu, 2021).

Southern Europe, including Portugal and Spain, was particularly hard-hit by the COVID-19 pandemic, being among the most harmed economies (Moreira et al., 2021). Portugal declared the “State of Emergency” on 18th March while Spain declared it on the 14th of March, with confinement and mobility restrictions, closing of schools and universities, restrictions on flights, closing borders and closure of shops, restaurants, bars, sports facilities, museums and face-to-face services. Both countries declared the end of the mandatory quarantine involved four “reopening” phases, beginning on May 4th (Moreira et al., 2021). This shows that there is some consensus on policies to be applied to face COVID-19 in the Iberian Peninsula.

Customers' consumer behaviour in the tourism industry has also undergone significant changes due to this pandemic. People started prioritizing their top travel experiences as beach or lakeside gateways or road trips in the countryside. Health and safety considerations have also become more important when choosing a hotel and destination (Gursoy et al., 2020). A study verified that hotel customers' willingness to pay is influenced by hotel attributes, scale, travel-related variables, customer demographics, technology readiness and health concerns (Hao et al., 2022). After the lifting of restrictions, it was anticipated that people would be more willing to pay on travel, according to the revenge travel phenomena, defined as a visitor's trip following the COVID-19 after being obligated to remain at home for months (Shadel, 2020; Zaman et al., 2021). This phycological phenomenon also called 'catch-up travel', originated from boredom during the pandemic (Vogler, 2022). Kim et al. (2022) define compensation travel as traveling for extended periods of time, spending more on

travel, or traveling more frequently to satisfy repressed leisure necessities that were not fulfilled due to the pandemic-related restrictions.

3. Methodology

In this study, Portugal and Spain were selected for analysis due to their geographical proximity and similar socio-economic processes. Although these countries share the tourism industry as a significant contributor to their economies, they are not often compared (Almeida Garcia, 2014; Leitão et al., 2022). The research employed a comparative analysis using qualitative and quantitative data in addition to a literature review.

To assess the impact of the health crisis, data from January 2019 to December 2022 was selected, allowing for comparison of pre-pandemic and post-pandemic ratios. The data was collected from Smith Travel Research Global (STR), which calculates averages of individual hotels in European countries. From the available dataset, the ADR, the occupancy rate and RevPAR were selected in euros. To examine the Portuguese and Spanish ratios, the authors also compared them with the European countries averages available (Austria, Belgium, Bulgaria, Croatia, Czech Republic, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Israel, Italy, Latvia, Lithuania, Malta, Netherlands, Poland, Portugal, Romania, Russia, Slovakia, Spain, Switzerland, Turkey, and the United Kingdom).

To account for COVID-19 confirmed cases in 2020 and 2021, data available on Our World in Data was selected and the cumulative Coronavirus confirmed cases per million people in the selected countries were analysed. The analysis and visualization of data were performed using MS Excel.

The authors defined the period before COVID-19 as 2019, characterized by stability and absence of COVID-19 cases in Europe. The period during COVID-19 encompassed 2020 until the end of 2021, as the first wave of the Alpha variant went from 22nd January 2020 to 28th January 2021 and the second wave from 29th January 2021 to 31st December 2021, which covers the periods from Delta and Omicron variants (Marobhe & Kansheba, 2022). The period after COVID-19 refers to the lifting of major restrictions, starting in the beginning of 2022, considering that most countries eased their COVID-19 restrictions by March 2022 (World Health Organization, 2023).

4. Results and discussion

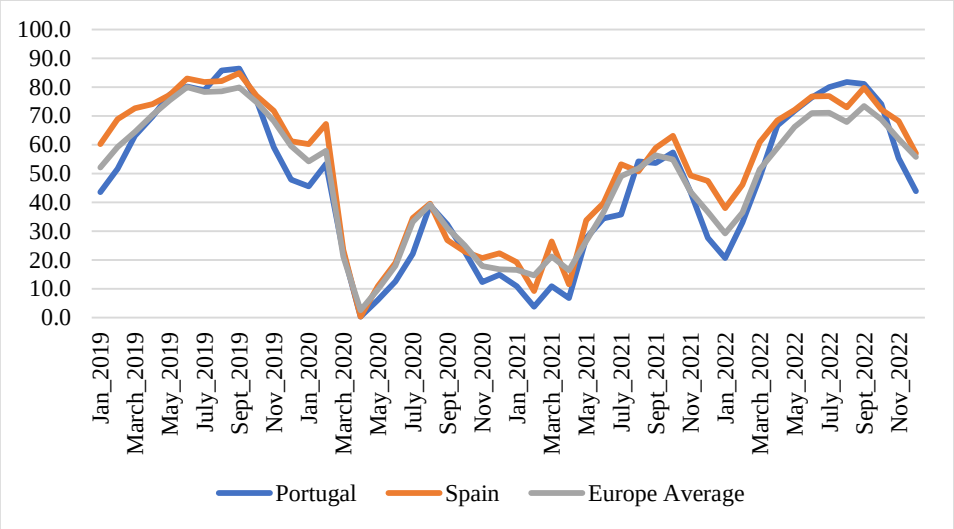
The Occupancy Rate has been slightly lower in Portugal than in Spain, but both countries are in line with the European averages (Figure 1). At the beginning of the second trimester of 2020, there was a significant drop in occupancy rate across all countries, reaching near-zero percentages. Occupancy rate remained at low levels throughout 2020 and 2021, but started to rise again in 2022, approaching 2019 levels, showing a positive trend. This suggests that people began traveling soon after the lifting of the COVID-19 restrictions around March

2022, supporting the revenge travel phenomena (Kim et al., 2022; Vogler, 2022; Zaman et al., 2021; Shadel, 2020).

There is a similar pattern of fluctuation in both countries, with periods of increase and decrease occurring at the same time. Generally, Portugal tends to have higher occupancy rates during the summer months, particularly in July and August. However, during the low season, such as January, occupancy levels are much lower than in Spain. Portugal is thus more susceptible to seasonality-related issues.

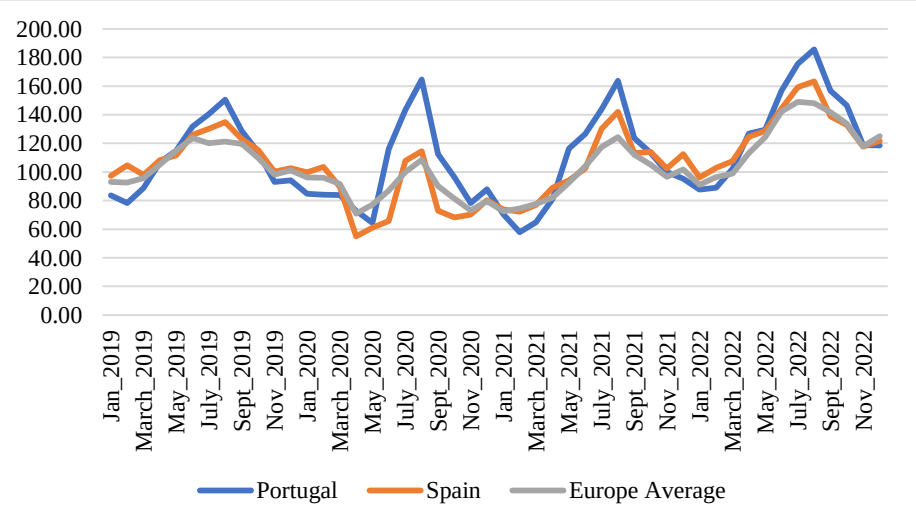
Figure 2 illustrates the ADR from January 2019 until December 2022. Unlike occupancy rate, this KPI showed less variation over the years, exhibiting a consistent upward trend despite the pandemic. Room rates experienced declines during the peaks of the pandemic, but never dropped below EUR 50. Typically, the rates move together in both countries and often surpass the European averages. Portugal tends to have higher ADR in summer months, while Spain surpasses Portugal during the winter months, resulting in significant variation in room rates between periods of high and low seasonality in Portugal.

Figure 1: Occupancy rate percentage from 2019 until 2022



Source: STR Share Center

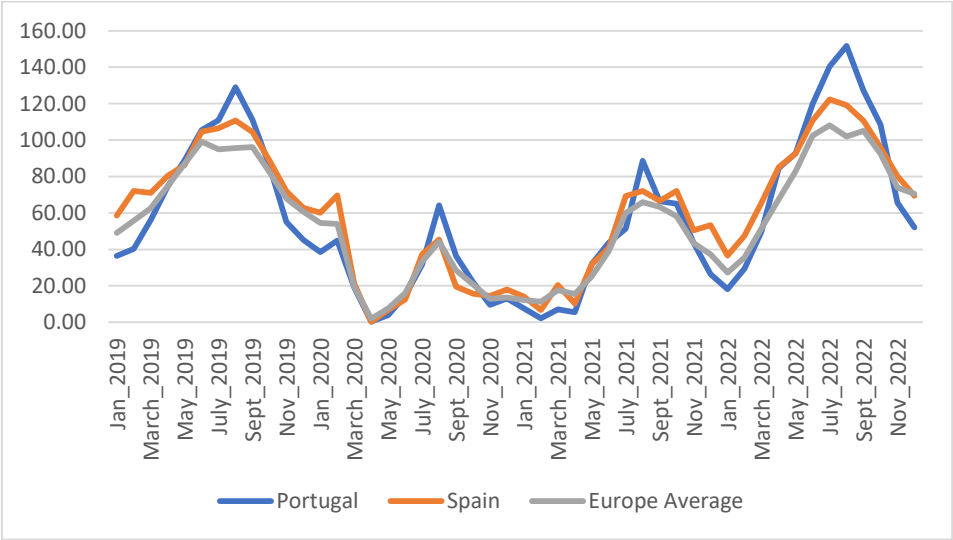
Figure 2: ADR in EUR from 2019 until 2022



Source: STR Share Center

RevPAR experienced a significant decline in 2020 and 2021 (Figure 3). However, in 2022 the RevPAR surpassed the levels of 2019, displaying a rising tendency. Similar to ADR and occupancy rate, Portugal demonstrates higher RevPAR levels during the summer months, while Spain manages to overcome in the remaining seasons. Both countries often exceed the European average, but Spain tends to maintain levels above the average more consistently.

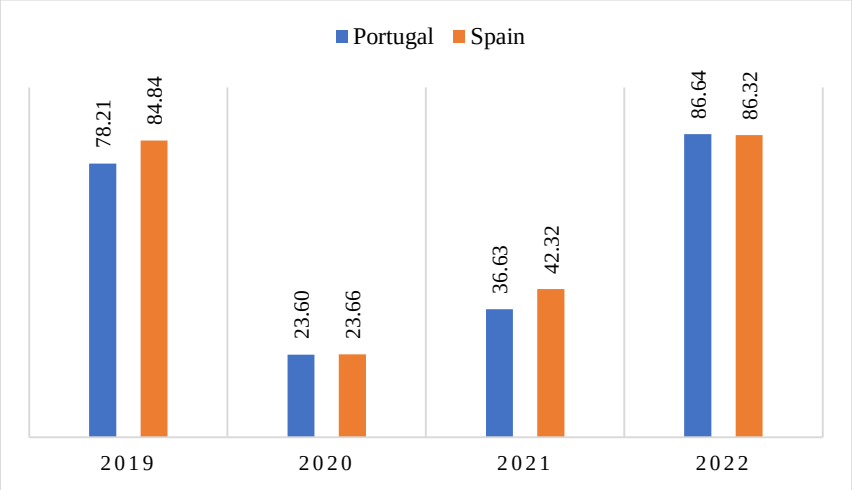
Figure 3: RevPAR in EUR from 2019 until 2022



Source: STR Share Center

Portugal's vulnerability to seasonality is highlighted by its lower occupancy rate, decreased room rates and lower RevPAR during the low season months. On the other hand, Spain exhibits the ability to overcome this determinant of RevPAR, consistently achieving higher KPI values than Portugal and the European average during the winter, fall and spring months. This indicates that seasonality has an impact on RevPAR (Jiang & Taylor, 2020; Chattopadhyay & Mitra, 2019). Nevertheless, it is evident that Portugal and Spain exhibit similar KPI values and display a certain co-movement, given that the ADR, occupancy rate and RevPAR fluctuate in the same way, hence the Iberian Peninsula has a similar behaviour in terms of hotel performance.

Figure 4: RevPAR average in EUR from 2019 until 2022



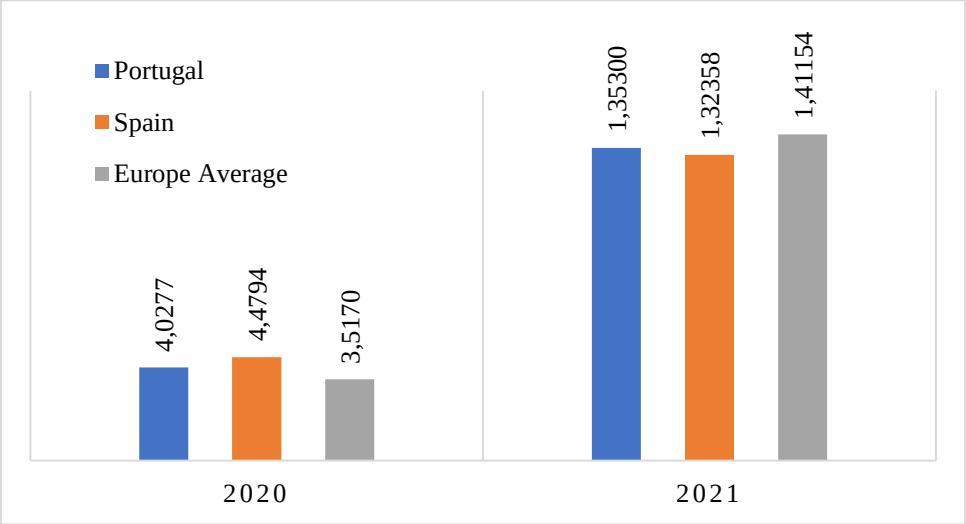
Source: STR Share Center

According to the data, the average RevPAR in Portugal in 2019 was EUR 78.21 and EUR 23.60 in 2020. In comparison, Spain had an average RevPAR of EUR 84.84 and EUR 23.66 in 2020. In 2021, Portugal experienced a higher number of COVID-19 confirmed cases (Figure 5) and a lower RevPAR of EUR 36.63, while Spain had a higher RevPAR of EUR 42.32. It is not possible to assume a direct relationship between the number of confirmed cases and RevPAR, bit it is evident that COVID-19 and its associated restrictions had a significant impact on hotel KPIs. In 2022, the RevPAR average in Portugal increased to EUR 86.64, while in Spain, it reached EUR 86.32, indicating a recovery of RevPAR in Portugal following the pandemic.
This recovery may be attributed to factors such as Portugal receiving the Best European Destination award for the fourth consecutive year in 2020 and being considered the best country to visit in Europe in 2021. Despite the decline in tourist activity, Portugal has been perceived as a sustainable and safe holiday destination, becoming more attractive to hotel chains and travellers (Bacon, 2021).

Figure 5 presents the COVID-19 cumulative cases in 2020 and 2021 from Portugal, Spain, and Europe average. Both countries had a similar number of confirmed cases in both years.

Spain had more cases in 2020, while Portugal had more cases in 2021. They were above the confirmed cases averages in Europe in 2020 and underneath the average in 2021.

Figure 5: Cumulative COVID-19 cases in 2020 and 2021



Source: STR Share Center

Like the rest of the world, Portugal and Spain were severely affected by the COVID-19 pandemic health crisis, resulting in drastic declines in the occupancy rate and RevPAR, as well as a decrease in ADR. This health crisis led to RevPAR and occupancy levels close to zero on March 2020, which was unprecedented in history, as previous crises such as the 11th September 2001 or the 2008 financial crisis did not have such a devastating impact on the industry (Guillet & Chu, 2021). Despite having more confirmed cases in 2021, other factors, such as vaccination and the easing of government restrictions, mitigated the negative impact on RevPAR in 2021.

5. Conclusion

Tourism, as a highly vulnerable industry, experienced a severe impact from COVID-19 pandemic in 2020 and 2021 (Guillet & Chu, 2021; Henderson, 2007). Given this fragility, it is crucial for hoteliers to understand the factors influencing their performance in order to improve it. This study aimed to identify the drivers of RevPAR, a key metric for measuring and comparing hotel performance, and to assess the impact of COVID-19 on RevPAR in the Iberian Peninsula, by analyzing the ADR, occupancy rate, and RevPAR.

The literature review revealed that RevPAR is influenced by various factors, including has a hotel internal factors such as ADR, Occupancy Rate, location, size, class, age, hotel operation and hotel affiliation, hotel owner, employees, quality of service and product, sales effectiveness and sustainability (Bianco et al., 2023; Chattopadhyay & Mitra, 2019; Cross et al., 2009; Enz et al., 2016; Jiang & Taylor, 2020; Kimes, 1999; Kim et al., 2013; Sainaghi, 2011; Xiao et al., 2012). Additionally, RevPAR can be influenced by marketing policies

(Anderson, 2012; de Pelsmacker et al., 2018; Kim et al., 2013; Sainaghi, 2011), hotel uncontrollable factors such as seasonality or trend, the real-estate development, economic growth, stock index, trade balance, grand impact events and exchange rate (Chattopadhyay & Mitra, 2019; Jiang & Taylor, 2020; Liu et al., 2013; Pacheco, 2016), as well as consumer-related factors like consumer confidence, customer satisfaction, international tourist arrival, online reviews and demand for hotel rooms (Anderson, 2012; Chattopadhyay & Mitra, 2019; de Pelsmacker et al., 2018; Kimes, 1999; Kim et al., 2013; Liu et al., 2013; Pacheco, 2016; Phillips et al., 2017).

The negative impact of a pandemic or health crisis on the hospitality industry is evident, as the closure of establishments and travel restrictions led to a sharp decline in occupancy and RevPAR. During the onset of COVID-19 in the Iberian Peninsula in early 2020, ADR was the only lever available to hoteliers. However, in times of crisis like COVID-19, where travel came to a halt, even increasing the ADR could not compensate the extremely low occupancy, resulting in a drastic decline in RevPAR.

While the ADR in these countries never fell below EUR 50, the occupancy rate plummeted close to zero. RevPAR experienced a similar sharp decline as occupancy rate, indicating that occupancy rate has a greater impact on RevPAR results than ADR. This aligns with the findings from the literature review, which highlighted that the occupancy rate significantly contributes to a hotel's net operating income (O'Neill & Mattila, 2006), and RevPAR increases with increased demand (Chattopadhyay & Mitra, 2019), while an increase in room supply can lead to a decline in RevPAR (Zheng, 2014).

Despite having similar performances, Portugal is more susceptible to seasonality, since its ratios are higher in summer, while Spain outperforms Portugal for the rest of the year. However, there has been growth in Portuguese tourism, as evidenced by a slightly higher RevPAR average than Spain in 2022, potentially influenced by the government's efforts to enhance the country's international image as a tourist destination and recent awards as the best European destination. In 2022, both countries experienced significant growth in occupancy rates, but they did not surpass the values seen in 2019. In contrast, RevPAR and ADR exceeded the levels of previous years in both countries.

Furthermore, it was observed that Portugal and Spain have similar policies regarding COVID-19 and exhibit a certain co-movement in their hotel KPIs, since occupancy, ADR and RevPAR increase and decrease concurrently. Given these findings and the growing trend in performance indicators in both countries, it is crucial for the Iberian Peninsula to continue investing in high-quality tourism, address vulnerabilities, and encourage hoteliers to practice revenue management to achieve optimal results.

For future research, a comprehensive investigation of RevPAR determinants in both countries, as well as in other countries in Europe, involving questionnaires to hotels, is recommended. Additionally, further exploration of revenue management practices in both countries would be valuable.

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