

# A multi-criteria, composite index methodology to measure the suitability of target markets for the hotel industry

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## ABSTRACT

This article presents a multi-criteria methodology to identify target markets for the hotel industry, based on objective and quantitative criteria from official statistical sources, using five dimensions: volume, evolution, seasonality, length of stay and expenditure. The methodology allows tourism organisations to: i) identify market indicators that respond to their organisational goals; ii) build a composite indicator that reveals the suitability of these markets; and iii) evaluate market segments based on their attractiveness and their market share. We test and illustrate the methodology using pre- and post-pandemic data for international tourism demand to Spain, illustrating the value of different target markets both for the country's hotel industry and for individual hoteliers.

## 1. Introduction

The COVID-19 health crisis had an unprecedented impact on tourism, in general, and on the hotel industry, in particular. The restrictions to travel and closed borders, the cancellation of national and international flights, and the non-celebration of many events, all led to a sharp drop in hotel occupancy and hotel revenues around the world (Gursoy & Chi, 2020). The pandemic affected the hotel industry in an unprecedented way and required hotels to make a significant effort to meet their customers' needs, such as the introduction of more rigorous and frequent hygiene practices, and health and safety protocols (Gursoy & Chi, 2020; Li, Nguyen, & Coca-Stefaniak, 2020). In an uncertain and unstable environment, such as the pandemic, generating marketing knowledge constitutes a priority for the tourism sector (Veiga, Fernandes, & Ambrósio, 2022). Particularly, the success of the hotel industry is dependent on how it is managed and how marketing strategies are implemented to keep hotels aligned with their strategic goals and their customers' needs and desires (Kazemian, Djajadikerta, Trireksani, Mohd-Sanusi, & Alam, 2022).

'Target marketing' is an approach in which marketing actions are carefully designed to meet the needs of specific segments of an organisation's target audience. The approach starts with identification of market segments, or subgroups of hotel visitors, that have homogenous

behaviours with meaningful differences among them. While there is no single, 'one-size-fits-all' segmentation that fits all situations, the hospitality industry's marketing plans generally have different strategies at least for national and international markets, with 'country' used as the widely accepted segmentation criterion for international markets. During the segmentation process, marketers gain a deep understanding of the different sub-groups within their total market. Marketing managers often have a limited budget and, therefore, will choose to focus their marketing spend on those markets that will lead them to achieve their organisation's long-term goals; thus, maximising the effectiveness of their marketing plan and budget (Jang, Morrison, & O'Leary, 2004; Tkaczynski, Rundle-Thiele, & Prebensen, 2018). The segmentation stage is followed by the target market selection stage. A target market is a market segment composed of travellers who share common characteristics that an organisation decides to serve (Kotler & Armstrong, 2010).

The critical question is how to detect markets that have more potential value (target markets), namely the most attractive segments that an organisation can serve through optimising the use of the resources and capabilities to achieve a higher long-term performance (Tsiotsou, 2006). The answer differs depending on the criteria used to assess the relative merit of each market segment. Much research has paid attention to how marketing-oriented investment decisions influence hotel performance (Hilman & Kaliappen, 2014; Kazemian, Djajadikerta, Roni,

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Trireksani, & Mohd-Sanusi, 2020; Zhou, Brown, & Dev, 2009), and, in particular, to the development of data-driven techniques for segmentation (Alegre, Mateo, & Pou, 2011; Hajibaba, Green, & Dolnicar, 2019; Pesonen & Tuohino, 2017). However, limited attention has been directed at how to select target markets (Jang et al., 2004; Weaver, 2015).

To fill this research gap, this paper proposes a market selection methodology, to allow hospitality organisations to know which of the main markets *within their current client portfolio* are the most valuable to achieve their goals. Thus, the research objectives are: 1) to identify market indicators responding to their organisational goals; 2) to build a composite indicator that reveals the suitability of these markets for their industry; 3) to evaluate market segments based on their suitability and their market share. To achieve this goal, a multi-criteria methodology was developed, based on objective and quantitative criteria from official statistical sources. The methodology is illustrated using inbound tourism statistics for Spanish hotels. Market demand data from 2019 and 2021 were compared to understand the effects of the COVID-19 pandemic on consumer behaviour, and, whether the suitability of the target markets was affected.

The present research contributes to the literature in that it offers a practical understanding of target marketing based on organisational goals. Moreover, the proposed methodology, which is based on quantitative measures, can be used as a complement to subjective approaches.

## 2. Literature review

### 2.1. Market orientation

Today's highly global, market-competitive, dynamic and unstable environments are characterised by swift changes in customers' needs and desires (Gössling, Scott, & Hall, 2021; Li et al., 2020; OECD, 2020). To survive in these environments, organisations must be committed to achieving sustainable competitive advantage and delivering superior performance (UNWTO, 2021). Market orientation has been identified as one of the crucial capabilities of an organisation to enhance their long-term performance to remain competitive (Goldman & Grinstein, 2010; Hilman & Kaliappen, 2014; Kazemian, Sanusi, & Adewale, 2016). Market orientation is defined as a critical capability to respond to market demand with the aim of creating value for customers (Julian, Mohamad, & Sefnedi, 2014); it is comprised of three dimensions: customer orientation, competitive orientation and inter-functional coordination (Kohli & Jaworski, 1990).

In the first dimension, *customer orientation*, organisations strive to understand their target markets. Accordingly, they identify customer target markets, meet current demand expectations, and predict future demand. These actions enable them to achieve high customer value, which is one of the company's objectives (Buhalis & Mamalakis, 2015; Said, Alam, Nik Abdullah, & Zulkarnain, 2016). In a highly competitive and dynamic environment, numerous scholars have advocated for a balance of capabilities development in terms of service improvement (for current demand) and service innovation (for future demand). This balance of capabilities helps hotels to create customer value through service capabilities, and, then, to achieve superior market performance (Chang, Gong, & Shum, 2011; Grisseemann, Plank, & Brunner-Sperdin, 2013; Nicolau & Santa-María, 2013). In the second dimension, *competitive orientation*, organisations strive to understand what their competitors are doing. Thus, they focus on collecting competitor information to acknowledge the latter's strengths and weakness, their capabilities and their strategies. The organisations then use this information to design marketing campaigns with the specific aims of retaining their existing customers and/or attracting potential customers away from their competitors (Dev, Zhou, Brown, & Agarwal, 2009). Finally, the third dimension strives to gain improved understanding, throughout the organisation, of both customers and competitors (Hilman & Kaliappen,

2014). It does this through *inter-functional coordination*, which enhances interdepartmental efforts through coordinated allocation of resources and coordinated customer-related activities.

Although a broad consensus exists on the positive impact of market orientation on performance (Kazemian et al., 2020; Sin, Alan, Heung, & Yim, 2005; Tajeddini & Trueman, 2012; Tang, 2014; Zhou et al., 2009), there have been disagreements about the role of customer and competitor orientation (Zhou, Brown, Dev, & Agarwal, 2007). Research on market orientation, grounded on contingency theory, has aimed to explain the role of environmental factors on the choice between customer- and competitor-oriented strategies (Voss & Voss, 2000). Zhou et al. (2007) argue that each hotel's choice of whether to adopt a customer-oriented or a competitor-oriented approach is likely to be contingent on various environmental factors at the country, local market and customer levels. Factors include the country's stage of economic development, environmental uncertainty, resources available, market dynamics and customer demand.

To date, tourism research has focused more on the aforementioned discussion than on the design of useful tools for the hotel industry to identify target markets (Çinar, Yetimoğlu, & Uğurlu, 2020). Moreover, most research has centred on segmentation, as the initial stage of target marketing; little attention has been paid to the use of statistical tools to assess the tourist segments, to determine selection of the final target markets.

### 2.2. Target marketing

In the hospitality industry, target marketing is recognised as a managerial tool that supports an organisation to enhance their sustainable performance. Following Çinar et al. (2020), an effective target market strategy, combined with good market segmentation, can significantly enhance sales and occupancy rates. Target marketing is particularly promising in terms of its potential to support organisations to achieve their goals and become long-term businesses in which all stakeholders are relevant. Stakeholder theory holds that whatever the ultimate goals of a corporation are, managers must account for all their stakeholders' legitimate interests (Freeman, Wicks, & Parmar, 2004). The theory encourages the identification of groups or individuals that either can influence, or can be affected by, the accomplishments of an organisation's goals. The strategic approach of the stakeholder theory posits that a company should integrate both a resource-based and a market-based perspective to be sustainable (Freeman et al., 2004). Thus, market orientation strategies in the hospitality industry should be aligned with both their organisational goals, and their customers' needs (Kazemian et al., 2020). Furthermore, the selection of target markets should be based on the strength of their competitors and contingency factors, determined by their external environment (Naslund & Norrman, 2019), such as the unstable circumstances derived from the COVID-19 pandemic. The assessment of target markets is then grounded on the stakeholder and contingency theories (Fig. 1).

The selection of target markets involves four steps: choosing the main criteria for segmentation; conducting the market segmentation based on the chosen criteria; assessing segment suitability; and, finally, selecting target markets (Jang et al., 2004). After segmenting markets, each market segment is assessed before certain markets are selected; this is a critical step for the success of a marketing strategy. The criteria for judging the attractiveness of different market segments are: 1) market potential (size and growth), as markets must be large enough to be economically viable; 2) competition and the structural attractiveness of the segments; 3) the mission, vision and goals of the organisation and their own resources and capabilities; 4) serviceability; and 5) costs (Kotler & Armstrong, 2010).

The tourism literature has primarily focused on explaining the early stages of target marketing, striving to understand how destinations or organisations segment their markets (Dolnicar, 2002; Tkaczynski, Rundle-Thiele, & Beaumont, 2009). Following a market segmentation

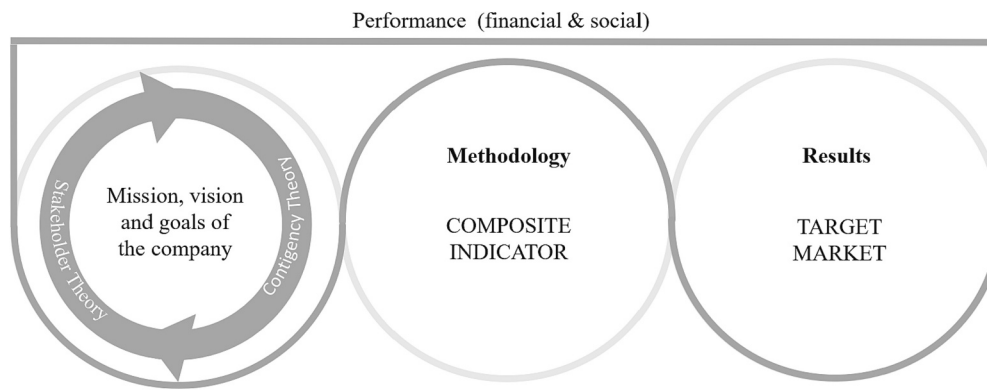


Fig. 1. Research framework.  
(Source: Authors)

strategy requires recognising that tourists differ in their needs, expectations and wishes. As it is not possible to adapt products or services to every individual consumer, tourism and hospitality businesses and destinations choose to customise their products and services to serve a group of consumers with similar characteristics (Çınar et al., 2020; Pike, 2008). Various variables are used to segment tourists, acknowledging that there is no single segmentation procedure that fits all situations (Dietrich, Rundle-Thiele, Schuster, & Connor, 2016).

Much of the statistical data that is provided, for example by tourist boards, is based on geographical factors such as the place of origin, i.e., where consumers live permanently (Chang, 2006). This geographical data is often a good place to start for segmentation methods. Companies often choose, initially, to segment markets within one geographical area, before going on to segment markets based on more specific variables of interest, such as socio-demographic variables (Jang et al., 2004), travel activity (Jang, Morrison, & O'Leary, 2002; Spotts & Mahoney, 1993), expenditure (Castañeda, Vena-Oya, Rodríguez-Molina, & Martínez-Suárez, 2019; Shani, Wang, Hutchinson, & Lai, 2010; Svensson, Moreno, & Martín, 2011), psychographic variables on personality, lifestyle and social classes (Kim & Kim, 2020; Tkaczynski et al., 2009); and behavioural variables related to the use of the products and the consumers' responses to them (Sheng, Ketron, & Wan, 2022; Walker & Hinch, 2006). In the hospitality industry, guests have been segmented according to their use frequency, brand loyalty, service quality perception or location (Yadegaridehkordi et al., 2021). What these methods have in common tends to be an initial geographical starting point to such segmentation, possibly for no other reason than the availability of data and a necessity to choose one language in which to communicate to a specific market.

Despite the relevance of assessing the attractiveness of different segments, few tourism and hospitality studies have focused on this stage of the process. Early on, McQueen and Miller (1985) employed profitability (in terms of expenditure), variability (in terms of loyalty) and accessibility of the segments for the overall evaluation of the target market selection. Loker and Perdue (1992) used profitability (expenditure and overnight stays), accessibility and reachability. Kastenholz, Davis, and Paul (1999) defined a composite index of segment attractiveness from a revenue-generating perspective. However, the main drawback in these studies stemmed from the lack of objectivity and quantifiable measures for profitability as the main criteria for targeting. To overcome this limitation, Jang et al. (2002) used expenditure (market potential) and risk as indicators to evaluate market segment attractiveness. The risk concept employed, that did not cover seasonality as the most serious risk in tourism, was the main limitation of their study. Jang et al. (2004) extended their previous research by constructing several indices from the means of three components: a) tourism expenditure, b) segment size and c) risk. They found that both expenditure risk and size risk, measured through the standard deviations of

the variables, provided useful information to identify valuable market segments. Jang et al. (2004) extended that methodology by including seasonality as a risk variable.

Other scholars have focused on the portfolio optimisation process, employing the efficient frontier methodology (Andriamasy & Rakoton-dramaro, 2016; Botti, Goncalves, & Ratsimbanierana, 2012; Zhang, Botti, & Petit, 2016). In the mean-variance analyses employed in these studies, the maximisation of the expected return of international overnight stays was subject to minimising the instability of the overall portfolio. Rakotondramaro and Botti (2018) extended this line of previous research by including the risk aversion of decision makers in their frontier analysis. Later, based on a quantitative and qualitative approach, Eugenio-Martin and Cazorla-Artiles (2020) found that, in addition to quantitative indicators (such as per capita expenditure, size of origin population, current market share and length of stay), subjective variables (such as customer willingness to travel and customer preferences) need to be considered when targeting markets.

There have been fewer methodological advances in the development of composite indicators than in relation to optimisation indicators. In the last 20 years, research based on composite indices has used a market ranking system to visualise the attractiveness of the potential segments to be targeted. However, limitations with respect to the criteria employed and the lack of precision in the ranking processes can be found when constructing the composite index. To our knowledge, no methodologies in prior research have provided a step-by-step tool, based on composite indices, that can be used by organisations to select valuable markets according to their goals, rather than according to the size and growth of the potential markets. Our contribution to the literature overcomes the shortcomings identified on composite indices, by designing a methodology to select target markets that is more practical and more sophisticated than those currently available.

### 3. Methodology

Our methodology to select target markets allows hotels to evaluate which markets are aligned with their goals, to select the most suitable markets to target. The methodology also allows hotels to adapt to their external environment, their customers and competitors, and to any unexpected crises.

Segmentation constitutes the first step in target market selection. To inform the segmentation process, we use country of origin as the first variable, for consistency with the approaches that most tourist boards use, and because these tourist boards already have data available for this purpose (Gallego, González-Rodríguez, & Font, 2022; Yadegaridehkordi et al., 2021). After the initial segmentation, we propose that the selection of target markets can be determined following the procedure outlined in Fig. 2, which shows how we design a composite index from objective indicators.

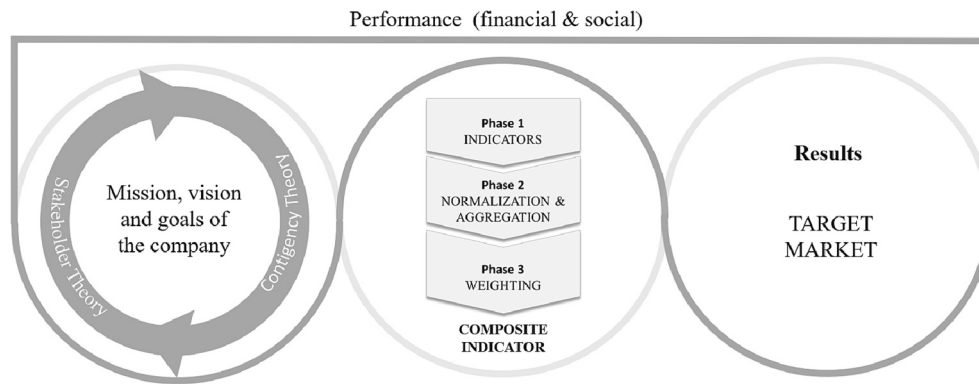


Fig. 2. Methodological phases. (Source: Authors)

3.1. Data

To illustrate the application of our methodology, we chose the tourist destination of Spain for three reasons: (1) tourism is a strategic sector for Spain, representing 12.4% of GDP in 2019 (INE, 2022d); (2) Spain has nearly 15,000 hotel establishments, offering >1.5 million beds in 2019, however demand dropped by nearly 30% in 2021 due to COVID-19 (INE, 2022); and (3) Spain has a highly diverse group of origin markets, with international markets representing 65.1% of the overnight stays in Spanish hotels in 2019, but only 47.4% in 2021, due to the impact of the pandemic.

For this study, we selected the 15 international markets that constituted 81.5% of the volume of overnight stays in 2019 and in 2021, namely: Germany, Belgium, France, Ireland, Italy, Netherlands, Norway, Denmark, Finland, Sweden, Portugal, UK, Russia, Switzerland and USA. Well intended indicators often cannot be calculated due to a lack of data; hence, we prioritised the use of data from official statistical sources. The official sources provide data that are gathered using rigorous methodologies; moreover, that have statistical representativeness, longitudinal availability (Gallego & Font, 2019) and homogeneous comparability for different markets. Besides, using readily available, official data is a cost-effective decision. Specifically, we used three statistical data sources from the Spanish National Institute of Statistics (INE): 1) *Tourist Movement on Borders Survey - FRONTUR* (INE, 2022a) for data on the use of hotel accommodation for foreign tourists in Spain; 2) *Tourist Expenditure Survey - EGATUR* (INE, 2022b), to obtain information about tourists' average daily expenditure in Spain; and 3) *Hotel occupancy survey - EOH* (INE, 2022) for the rest of the information.

For the selection of countries to be included in this research, the availability of data from the three statistical data sources was prioritised. The only exception was data for the Nordic countries where EOH and FRONTUR disaggregated data while EGATUR offered information for those countries as a single entity. Only in for the Nordic countries was the grouped data allocated to Norway, Denmark, Finland and Sweden.

3.1.1. Phase 1: selection of indicators

The feasibility of a market is a function of five dimensions: (a) its impact on the hotel business, helping to increase performance; (b) its measurement of the differences in market behaviour in a given destination; (c) its ability to determine the suitability of a market; (d) the retrievability of data in a homogeneous manner for all markets object of analysis; (e) the potential ease of communication of the results. These criteria helped us to identify the following dimensions: 1) **Volume** of demand in hotel establishments, compared to other forms of accommodation: the greater the use of hotels made by a market, the less effort is required to increase demand or encourage loyalty; 2) **Evolution** of market demand in hotels: markets with the largest growth are the most

attractive target markets; 3) **Seasonality** in demand: markets with more consistent volume of demand are the most cost-effective to service; 4) **Length of stay**: The longer the stay, the more cost-efficient it is to serve that market; and 5) **Expenditure**: The greater the expenditure, the more attractive the market. The higher the indicator's score in these dimensions, the better suited that market is for the hotel industry based on higher volume (dimensions 1 and 2), less seasonality (dimension 3) and greater profitability (dimensions 4 and 5).

Following the literature on designing composite indices to target markets (; Jang et al., 2004; Kastenholz et al., 1999; Loker & Perdue, 1992), and exploiting the public databases available, we identified those indicators that best allowed us to represent the five dimensions outlined above. In our case, all the indicators are of the incremental type (Krajnc & Glavič, 2005), which means that an increase in their value means that the market is more attractive/suitable to be selected. We argue that a single indicator can efficiently measure each dimension. Table 1 identifies the indicators chosen for each dimension, which were, subsequently, aggregated to construct a synthetic indicator.

All the indicators were available for the selected countries with the only exception being that of the average daily expenditure ( $q_{5j}$ ) for Norway, Denmark, Finland, and Sweden, which was imputed to their aggregate data (Nordic Countries).

3.1.2. Phase 2: normalisation and aggregation

We transformed a set of quantitative variables through different units of measurement into a new set of variables with a common unit, establishing the correct aggregation and comparison of the indicators considered by the indicator (OECD, 2008). In multicriteria, double-point reference methods, we normalise the relative position of an indicator with respect to reference values: reserve value (marks the acceptable level) and aspiration value (marks the desirable level) (Cabello, Navarro, Prieto, Rodríguez, & Ruiz, 2014). These levels can be determined in a qualitative manner (expert opinions, policy decisions, etc.) or statistically (Cabello et al., 2014). In our case, we opted for the latter. For

Table 1 Simple indicators associated with the dimensions of analysis.

Dimension	Indicator	Definition
Volume	$q_{1j}$	Percentage of tourists from market $j$ that choose hotels as their accommodation in Spain
Evolution	$q_{2j}$	Year-on-year variation of hotel overnight stays carried out by market $j$ in Spanish hotels
Seasonality	$q_{3j}$	Percentage of stays made by market $j$ in Spanish hotels outside the summer months (July–September)
Length of stay	$q_{4j}$	Number of days that market $j$ stays in Spanish hotels
Expenditure	$q_{5j}$	Average daily expenditure (€) per person and price by market $j$ in Spain.

Source: Authors.



an indicator  $i$  of the market  $j$  ( $i = 1, \dots, p_k, j = 1, \dots, R$ ) and belonging to the dimension  $k$ , we eliminated the atypical values and outliers, denoted  $q_{ki}^{max}$  and  $q_{ki}^{min}$  as the maximum value and minimum value, respectively, of all the markets considered, and denoted their median value,  $q_{ki}^{av}$ , as:

$$q_{ki}^{max} = \max_{j=1, \dots, R} \{q_{kj}^i\}, q_{ki}^{min} = \min_{j=1, \dots, R} \{q_{kj}^i\}, q_{ki}^{av} = \frac{1}{R} \sum_{j=1}^R q_{kj}^i.$$

Making use of these values, the levels of aspiration ( $q_{ki}^a$ ) and reserve ( $q_{ki}^r$ ) were established as follows:

$$q_{ki}^a = \frac{q_{ki}^{av} + q_{ki}^{max}}{2}; q_{ki}^r = \frac{q_{ki}^{av} + q_{ki}^{min}}{2}$$

Thus, the value of aspiration ( $q_{ki}^a$ ) was constructed as the mean value between the average ( $q_{ki}^{av}$ ) and the maximum values of the analysed markets ( $q_{ki}^{max}$ ), and the reserve value ( $q_{ki}^r$ ) was the mean value between the average ( $q_{ki}^{av}$ ) and the minimum values of the analysed markets ( $q_{ki}^{min}$ ).

Next, we calculated the synthetic indicators for each market, within each of the dimensions considered in Phase 1. For this, we considered the dimension  $k$  and market  $j$ . For each indicator  $i$  ( $i = 1, \dots, p_k$ ), and considering the reference points (reserve and aspiration) defined previously, we calculated the individual achievement functions ( $S_{ki}$ ) as follows (Cabello et al., 2014; Ruiz, Cabello, & Luque, 2011; Wierzbicki, 1980; Wierzbicki, Makowski, & Wessels, 2000):

$$S_{ki}(q_{ki}^j, q_{ki}^a, q_{ki}^r) = \begin{cases} 1 + \frac{q_{ki}^j - q_{ki}^a}{q_{ki}^{max} - q_{ki}^a} & \text{if } q_{ki}^a \leq q_{ki}^j \leq q_{ki}^{max}, \\ \frac{q_{ki}^j - q_{ki}^r}{q_{ki}^{max} - q_{ki}^r} & \text{if } q_{ki}^r \leq q_{ki}^j \leq q_{ki}^a, \\ \frac{q_{ki}^j - q_{ki}^r}{q_{ki}^{min} - q_{ki}^r} & \text{if } q_{ki}^{min} \leq q_{ki}^j \leq q_{ki}^r. \end{cases}$$

A value of ( $S_{ki}$ ) < 0 indicates that, for this indicator, the market has a value below the reserve level. In this case, the dimension obtained by the indicator identifies itself as a weakness that makes the market less attractive for the hotel industry. The more negative is the value of the function, the less attractive is that market with respect to the dimension that is analysed. Conversely, a value ( $S_{ki}$ ) > 0 indicates that, for this indicator, the market has a value between the reserve and aspiration levels [ $(S_{ki})$  between 0 and 1] or above the established aspiration level [ $(S_{ki}) > 1$ ] (see Fig. 3). A value of  $S_{ki} > 0$  identifies the dimensions that make that market attractive. The more positive is the value of the function, the more attractive is that market with respect to the analysed dimension. The achievement functions not only measure proximity to the reference levels, but also speak to the standardisation of the indicators (Cabello et al., 2014).

After calculating the performance for each indicator, we grouped them into a synthetic index calculated as the weighted sum. For example, for market  $j$ , we had:

$$P^j = \sum_{i=1}^{p_k} \omega_{ki} S_{ki}(q_{ki}^j, q_{ki}^a, q_{ki}^r)$$

3.1.3. Phase 3: weighting

The synthetic indicator ( $P^j$ ) was based on the compensation between the dimensions according to the weighting given to each dimension ( $\omega_{ki}$ ). Rather than giving all five dimensions the same weighting, we polled 252 hotel managers in June of 2022. Sample size was calculated for a maximum variability, conservative approach  $p = q = 0.5$ , assuming a +/- 6.1% error for global results and a 95% confidence interval, to

establish the relative importance they gave to each of these dimensions in their own prioritisation of markets. The findings (see Table 2) show that the hoteliers valued most of the dimensions relatively similarly, with a slight preference for markets that are growing and for which there is a longer length of stay.

3.1.4. Phase 4: analysis of results

After defining the dimensions that allowed us to measure the suitability of a market, and after calculating the corresponding indices, the last step consisted of analysing the data and classifying the markets to identify the strengths and weaknesses of each of our five dimensions.

Next, we illustrate the benefits of this methodology to inform market segmentation and targeting decisions in two ways: first, we compare the markets for the Spanish hotel industry before (2019) and after (2021) the year that the tourism industry was most affected by COVID-19, to show the decisions that tourist boards can take; second, we simulate a dataset for an individual hotel in 2021 to demonstrate the methodology applied at a single business unit level.

4. Results

4.1. Spanish hotel industry - 2019 versus 2021

In 2019, Spanish hotels received 108.7 million travellers who made 343 million overnight stays, 65.1% of them by international travellers (223.4 million) - a historic record (Fig. 4). COVID-19 put an end to this growth period, with a drop of >80% in international overnight stays in 2020, followed by a gradual recovery in 2021. However, 2021 only reached 36.6% of the numbers achieved in 2019 (Fig. 4).

Undoubtedly, not all foreign markets were affected in the same manner, nor did they have the same importance to the Spanish hotel industry. Applying the methodology developed in this study, we establish a single indicator that synthesises all the dimensions of the analysis ( $P^j$ ), which allows us to identify the strengths and weaknesses of each market. Table 3 shows that in 2019 all the markets analysed had at least one weakness ( $S_{ki} < 0$ ), except Russia. Nine of the 15 markets had negative achievement function scores, which means that their values were below the reservation value that had been set. This demonstrates that Spain was a mature destination in need of innovation. The four Scandinavian markets had less seasonality than other markets, the result of seeking winter sun. The French market had the worst results in all dimensions ( $I^{France} = -0.09$ ), with the lowest index of market suitability of all markets except for a positive year-on-year evolution. Conversely, the United States was the most attractive market for the Spanish hotel industry in 2019 ( $I^{USA} = 0.89$ ) with positive scores throughout, except for length of stay.

There are noticeable differences in how the 15 markets responded post-COVID, as seen in Table 4, which shows 2021 data. France

Table 2 Weighting of dimensions.

Dimension	Indicator	Weight
Volume	$q_{1j}$	0.2098
Evolution	$q_{2j}$	0.2103
Seasonality	$q_{3j}$	0.1839
Length of stay	$q_{4j}$	0.2153
Expenditure	$q_{5j}$	0.1807

Source: Authors.

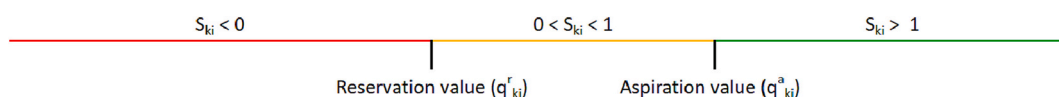


Fig. 3. Values of the individual achievement function ( $S_{ki}$ ). Source: Authors, based on Ruiz et al. (2011); Gallego and Font (2019)

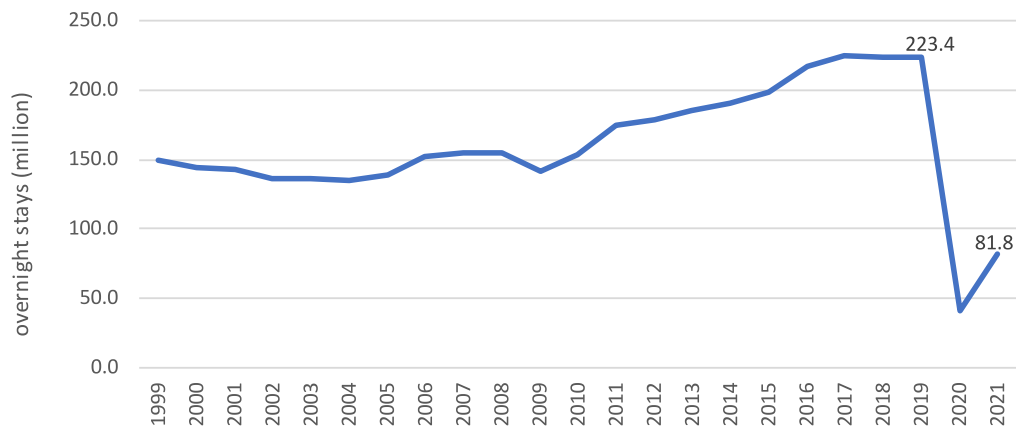


Fig. 4. Evolution of international overnight stays in Spain's hotel establishments. Years 1999–2021. Source: INE (2022)

Table 3 Synthetic indicator and achievement functions by market segment. Spanish hotel industry. Year 2019.

●  $S_{ki} < 0$  ●  $0 < S_{ki} < 1$  ●  $S_{ki} > 1$

P	Index 2019	MARKET	ABR	Individual Achievement Functions ( $S_{ki}$ )									
				VOLUME	EVOLUTION	SEASONALITY	LENGTH OF STAY	EXPENDITURE					
1	0.47	GERMANY	GER	●	0.70	●	-0.03	●	0.43	●	1.03	●	0.19
2	0.18	BELGIUM	BEL	●	0.07	●	-0.01	●	0.16	●	0.67	●	-0.05
3	-0.09	FRANCE	FRA	●	-0.12	●	0.07	●	-0.05	●	-0.09	●	-0.26
4	0.63	IRELAND	IRE	●	0.49	●	1.03	●	-0.01	●	0.85	●	0.74
5	0.33	ITALY	ITA	●	0.85	●	0.84	●	-0.05	●	-0.05	●	-0.02
6	0.28	NETHERLANDS	NET	●	0.29	●	-0.02	●	0.02	●	0.56	●	0.55
7	0.51	NORWAY	NOR	●	-0.03	●	-0.02	●	1.06	●	1.01	●	0.59
8	0.71	DENMARK	DEN	●	1.00	●	-0.01	●	1.00	●	0.99	●	0.59
9	0.75	FINLAND	FIN	●	0.85	●	-0.02	●	1.50	●	0.89	●	0.59
10	0.59	SWEDEN	SWE	●	0.40	●	-0.04	●	1.08	●	0.98	●	0.59
11	0.39	PORTUGAL	POR	●	0.98	●	0.98	●	0.21	●	-0.22	●	-0.07
12	0.47	UK	UK	●	0.76	●	0.00	●	0.41	●	1.01	●	0.11
13	0.79	RUSSIA	RUS	●	1.19	●	0.72	●	0.00	●	0.89	●	1.09
14	0.09	SWITZERLAND	SWI	●	-0.05	●	-0.02	●	0.16	●	0.40	●	-0.05
15	0.89	USA	USA	●	1.17	●	1.03	●	1.15	●	-0.30	●	1.55

Source: Authors.

continued to be the least suitable market ( $I^{France} = 0.12$ ) while Denmark positioned itself as the most suitable ( $I^{Denmark} = 0.78$ ). Most indicators are in yellow ( $< S_{ki} < 1$ ), especially in the evolution of the markets, which indicates that the results of the achievement functions are located between the reserve and aspiration values of 2021. This happened because all the markets responded similarly, with an abrupt drop in the volume of trips because of the COVID-19 crisis, hence most markets found themselves in the bracket between the reservation and aspiration values. In 2019, these markets were less influenced by the global travel crisis and displayed more variation in their behaviours (with a prevalence for low scores). By 2021, expenditure values had improved substantially, with seven of the 15 markets in the green zone ( $S_{ki} > 1$ ), up from only two markets in 2019.

The most attractive markets to target by the Spanish hotel industry changed considerably between 2019 and 2021 (Table 5). Long-haul markets (USA and Russia), that had occupied the top positions in 2019, descended and, instead, Switzerland, Germany and Portugal substantially increased in attractiveness, while the remaining ten markets had less pronounced changes.

Next, we consider how the suitability of the markets analysed above aligns with the baseline data. Fig. 5 visualises the composite indexes of

market suitability for 2019 and 2021, as summarised in Table 5, (on the vertical axis) and market share (on the horizontal axis). It is striking how the hotel industry in 2019 depended mainly on two markets (UK and Germany) both of which are shown to have average suitability positions in 2019, while by 2021 Germany had a similar market share as in 2019 but had improved significantly in its suitability indicator. The third international market, by market share in both 2019 and 2021, was France, which demonstrates the vulnerability of the hotel industry since this was the market with the lowest suitability scores. All the remaining markets had market shares below 3%. In the remaining 12 markets, we can detect opportunities for the Spanish hotel sector such as long-haul markets (under stable market conditions) and markets such as Denmark and Finland (under the recent, unstable market conditions).

#### 4.2. Hotel business simulation. Year 2021

While above we illustrated the potential value of this methodology for a destination management company or hotel association to take industry-wide decisions, it is also possible to apply the methodology at the individual business unit level. An individual hotelier can use the reference levels set for the destination or adjust the weightings for each

**Table 4**  
Synthetic indicator and achievement functions by market segment. Spanish hotel industry. Year 2021.

●  $S_{ki} < 0$    
 ●  $0 < S_{ki} < 1$    
 ●  $S_{ki} > 1$

Index 2021	PAÍS	ABR	Individual Achievement Functions ( $S_{ki}$ )					EXPENDITURE				
			VOLUME	EVOLUTION	SEASONALITY	LENGHT OF STAY						
0.74	GERMANY	GER	●	0.33	●	0.78	●	0.53	●	1.04	●	1.01
0.33	BELGIUM	BEL	●	0.20	●	0.65	●	0.08	●	0.66	●	-0.03
0.12	FRANCE	FRA	●	0.12	●	0.73	●	-0.07	●	-0.04	●	-0.19
0.62	IRELAND	IRE	●	0.49	●	0.68	●	0.43	●	0.63	●	0.87
0.33	ITALY	ITA	●	0.78	●	0.40	●	0.36	●	-0.03	●	0.12
0.53	NETHERLANDS	NET	●	0.38	●	0.63	●	-0.02	●	0.58	●	1.07
0.56	NORWAY	NOR	●	-0.15	●	-0.15	●	1.57	●	0.71	●	1.01
0.78	DENMARK	DEN	●	0.65	●	0.77	●	0.46	●	1.01	●	1.01
0.73	FINLAND	FIN	●	0.61	●	-0.16	●	1.62	●	0.72	●	1.01
0.53	SWEDEN	SWE	●	-0.03	●	0.00	●	1.16	●	0.63	●	1.01
0.37	PORTUGAL	POR	●	0.89	●	0.75	●	-0.09	●	-0.22	●	0.49
0.46	UK	UK	●	0.39	●	0.16	●	0.32	●	1.01	●	0.37
0.38	RUSSIA	RUS	●	1.37	●	-0.16	●	0.88	●	-0.11	●	-0.04
0.58	SWITZERLAND	SWI	●	-0.01	●	1.57	●	0.21	●	0.56	●	0.49
0.70	USA	USA	●	1.19	●	0.67	●	0.64	●	-0.25	●	1.38

Source: Authors.

**Table 5**  
Ranking by markets (from highest to lowest suitability). Spanish hotel sector. Years 2019 and 2021.

Index 2019	Market	Index 2021	Market	Dif Rank 2019/2021		
1	0.89	USA	1	0.78	DENMARK	-3
2	0.79	RUSSIA	2	0.74	GERMANY	-9
3	0.75	FINLAND	3	0.73	FINLAND	0
4	0.71	DENMARK	4	0.70	USA	3
5	0.63	IRELAND	5	0.62	IRELAND	0
6	0.59	SWEDEN	6	0.58	SWITZERLAND	-3
7	0.51	NORWAY	7	0.56	NORWAY	0
8	0.47	GERMANY	8	0.53	NETHERLANDS	6
9	0.47	UK	9	0.53	SWEDEN	-1
10	0.39	PORTUGAL	10	0.46	UK	-2
11	0.33	ITALY	11	0.38	RUSSIA	-3
12	0.28	NETHERLANDS	12	0.37	PORTUGAL	4
13	0.18	BELGIUM	13	0.33	BELGIUM	0
14	0.09	SWITZERLAND	14	0.33	ITALY	8
15	-0.09	FRANCE	15	0.12	FRANCE	0

Source: Authors.

of the five dimensions according to their own organisational strategy, for example by giving more importance to expenditure per night than to length of stay than we had seen in Table 2. A hotel can benefit from having the destination benchmark as a reference, to identify its competitive positioning, which facilitates their ability to identify un-exploited opportunities and to become more aware of their own strengths.

Here, we simulate a market portfolio for a fictional hotel, and for simplicity, we maintain the weightings for the five dimensions we set out in Table 2. Fig. 6 shows the simulation of our fictional hotel in comparison with the average results for the Spanish hotel industry, for 2021. An individual hotel will typically show less diversification in markets than an entire destination, in our case we simulated a high dependency on four markets. While the data in Fig. 5 suggests that the Portuguese market has an overall suitability score for Spain of 0.37, this figure will be different for each individual hotel in Spain; we simulate

that our hotel could be capturing a segment of Portuguese customers that score substantially above the average of Portuguese customers typically travelling to Spain, in any one of the five dimensions (volume, evolution, seasonality, length of stay and expenditure) which would make this a much more attractive market for economic recovery after the pandemic. Similarly, our fictional hotel attracted French tourists that were more attractive than their average for the Spanish hotel industry. Our hotel could use the data to see that while they attract large numbers of German and British customers, these were considerably below their value to the Spanish market. The hotel could use these insights to develop marketing strategies to increase the value captured from these specific markets.

A closer look at the data set for the two markets that offered the greatest opportunity to capture market value for our fictional hotel (UK and Germany) would allow us to pinpoint the gaps that our hotel can close (Table 6). We observe that, compared to the Spanish industry average, our fictional hotel was underperforming in all five dimensions, particularly in relation to growth, seasonality, and expenditure. Insights of this type can inform cost-effective market segmentation and targeting decisions.

### 5. Discussion and conclusion

Market orientation is an approach that aims to create value; it perceives marketing as an effort to generate market intelligence and disseminate it across the organisation (Haapio, Mero, & Karjaluoto, 2021; Kohli & Jaworski, 1990). Companies need to be dynamic and need to adapt continuously to match their customers' evolving needs if they are to continue to generate optimal customer value (Çınar et al., 2020). An external crisis, like the COVID-19 pandemic, causes significant changes in customers' needs and changes their behaviour, which confirms that, in dynamic and non-stable environments, firms should orient their strategies towards their customer base (Dev et al., 2009).

In the literature, much attention has been given to the development of data-driven techniques for market segmentation (e.g., Alegre et al., 2011; Hajibaba et al., 2019; Pesonen & Tuohino, 2017). Market research is often conducted to understand potential demand, closely tied to strategies for capturing new markets. In our research, we analyse the demand across two very different years, and the selection of markets is closely linked to our ability to create strategies to create market loyalty.

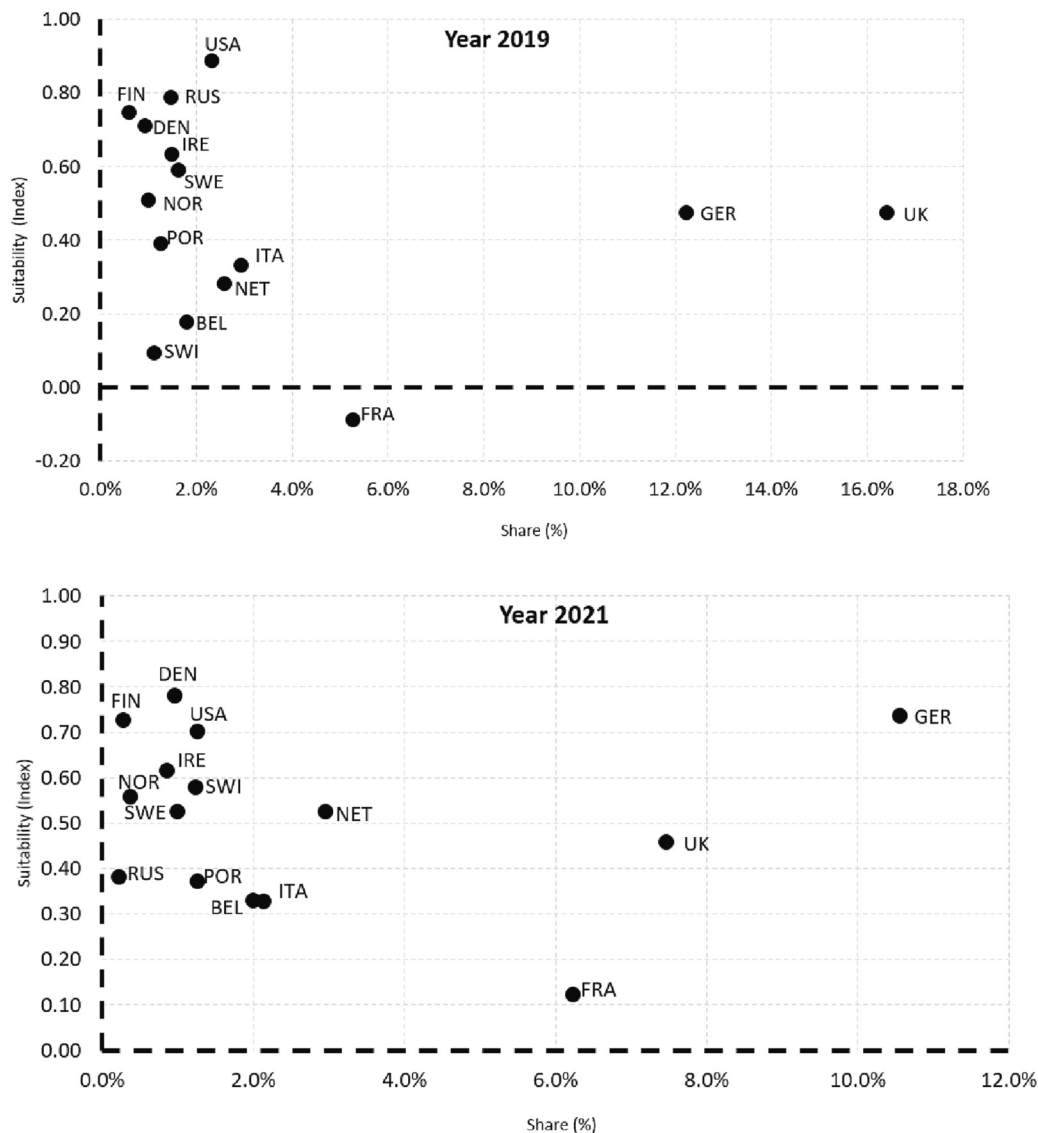


Fig. 5. Market position matrix of suitability and market share. Spanish hotel industry. Years 2019 and 2021. (Source: Authors.)

This implies, not considering the criterion of physical accessibility/transport routes used by other authors (Loker & Perdue, 1992; McQueen & Miller, 1985) for the construction of the composite index, but, instead, using variables such as market volume or profitability (Kastenholz et al., 1999; Loker & Perdue, 1992; McQueen & Miller, 1985). Our target marketing formula is made up of five dimensions: volume, evolution, expenditure, length of stay and seasonality; inclusion of the latter being similar to the approach adopted by Jang et al. (2004).

The composite index developed in this study is applicable to any type of accommodation business, irrespective of its structure or size, and allows decisionmakers to incorporate different dimensions that are relevant to their organisational objectives. The flexibility of the methodology allows decision-makers to use different weightings and to incorporate aspiration and reserve levels into their analysis; hence, they can adapt the model to their needs. In our case, we selected weightings during an online inquiry into hotels and the reference levels were defined statistically. The methodology allowed us to identify the overreliance of the Spanish hotel industry on the UK, Germany and, particularly, France, while identifying other markets with a lower market share that have greater attractiveness. Moreover, we were able to identify how these smaller markets varied depending on the perceived

risks and difficulties of travel resulting from the pandemic. Since we do not expect hoteliers to be versed in statistics, we applied visual methods to interpret the data, such as a traffic light display, rankings and matrices.

### 5.1. Theoretical contribution

Competitiveness, of both destinations and organisations, relies on making cost-effective, data-driven market segmentation and target marketing decisions. This paper responds to a double call of advancing knowledge on target marketing (Tkaczynski et al., 2018) and designing more sophisticated and practical tools to assess the attractiveness of certain market segments (Jang et al., 2004). To date, few studies have provided viable tools on how to select tourism markets (Lee, Morrison, & O’Leary, 2006). This research makes a methodological contribution by offering an agile market segmentation tool that we argue is particularly useful during uncertain times such as those caused by the COVID-19 health crisis, where experience or intuition are less useful to predict demand.

The present study responds to a call in the literature for more research in the assessment of target markets (Çınar et al., 2020), which



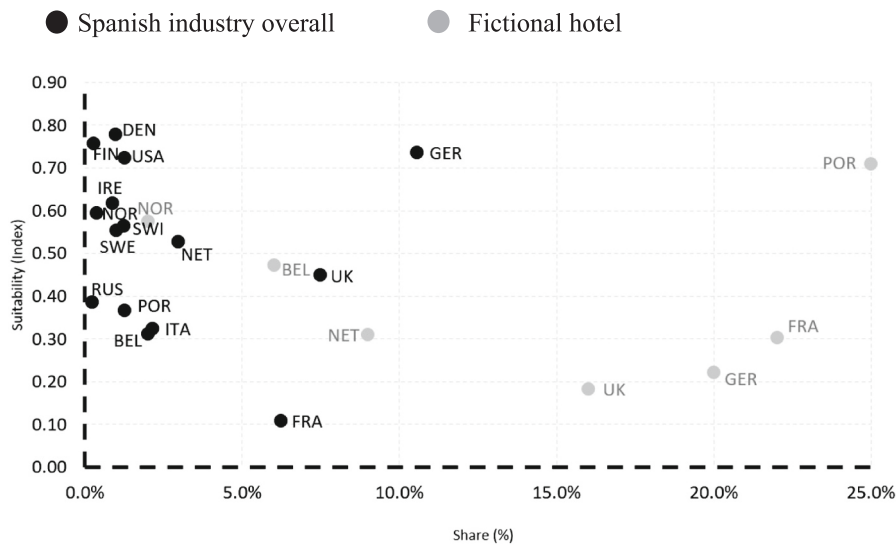


Fig. 6. Market position matrix of suitability and market share. Spanish hotel industry and fictional hotel. Year 2021. (Source: Authors.)

Table 6 Achievement functions for Germany and UK. Spanish hotel and hotel industry. Year 2021.

●  $S_{ki} < 0$    ●  $0 < S_{ki} < 1$    ●  $S_{ki} > 1$

MARKET		VOLUME	EVOLUTION	SEASONALITY	LENGHT OF STAY	EXPENDITURE
GERMANY	Hotel	●	●	●	●	●
	Industry	●	●	●	●	●
UK	Hotel	●	●	●	●	●
	Industry	●	●	●	●	●

Source: Authors.

we operationalise by studying recent and sudden changes in the markets of the Spanish hotel industry. Our methodology helps us to identify the most valuable markets for hotels to achieve good financial performance and meet their shareholders' desires, while also delivering on social performance; thereby, satisfying the hotels' customers' needs and expectations. From a theoretical perspective, the proposed methodological design is in keeping with the stakeholder and contingency theories by revealing how target marketing can generate added value not only for shareholders (particularly, by reducing organisational risk such as seasonality) but also for customers. We demonstrate how a methodology based on our selected five dimensions (demand, evolution, seasonality, length of stay and expenditure) is highly flexible to account for changes over time in customers' needs and desires due to contingent factors, such as the COVID-19 pandemic.

5.2. Managerial implications

The design of a methodology for target market selection, and the visualisation tool for the results, have important managerial implications. The proposed multi-criteria, criteria-ranking methodology is a comprehensive and objective tool to rank markets. The method is easily applied and offers insightful information on the identification of suitable markets for hotels. It does so by considering several criteria individually and, then, providing a composite index that helps hoteliers to rank the markets.

This methodology allows hotels to gain knowledge about which potential markets are the most suitable to target. Hoteliers require deep and timely knowledge of their environment, customers and competitors

if they are to perform well and efficiently (Kazemian et al., 2020; Wang, Chen, & Chen, 2012). This requirement becomes especially relevant in uncertain environments, such as the one caused by the COVID-19 pandemic; in such circumstances, managers require methodologies that help them make informed decisions (Gallego & Font, 2019). Assessing the attractiveness of each segment implies being realistic and responding to questions related to the segment size, its growth potential, and the strength of their competitors. We illustrate how a competitor oriented marketing strategy might help to identify the most profitable segments. It is possible that customer orientation strategies, which are based on customer needs, are not enough to identify the most profitable target markets. For example, a small segment, occupying an exclusive or dominant position for the company, might be more profitable than a large segment for which competition is extremely high. Companies must establish the right balance between customer and competitor orientation strategies. While customer orientation creates value for customers by developing differentiation marketing strategies, a competitor orientation approach might also protect a hotel from having its customer move to a competitor, by efficiently matching the competitor's marketing initiatives. Competitor orientation, as the second dimension of market orientation, might complement customer orientation and lead organisations to develop actions to protect their current client portfolio from their competitors by delivering value and ensuring an excellent customer experience (Dev et al., 2009).

5.3. Limitations and future research avenues

This research might be adapted to any tourism sector (hospitality,

leisure, etc.) that wishes to develop a measurement system to select target markets. The multi-criteria, composite index, in conjunction with the future advances proposed, provides a wide range of future research avenues to make progress on the target marketing literature. The current methodology has been tested on large, existing tourist markets; it can be fine-tuned to consider the feasibility of new markets, notwithstanding the challenges of securing cost-effective and statistically reliable data. Moreover, we understand that policy decisions will be informed by several issues beyond data (Head, 2016), with many factors influencing how destination marketing organisations select markets (Gallego & Font, 2019). Hence, testing the usefulness of the methodology with policy makers can help refine it by, for example, including additional dimensions, making the tool more dynamic and using other sources of data. Other information that might be included, is that of the available resources and capabilities necessary to compete successfully in an attractive segment. This measure might provide hotel managers with the accurate information they need to target the most valuable markets based on their expected economic benefits at a relatively low cost. Another interesting proposal for the use of the multi-criteria index, is that the index would allow hotels to simulate different scenarios according to the decision maker's criteria.

Future research can contribute to knowledge by investigating the goodness of the multi-criteria procedure by analysing the influence of the target markets on hotel performance using a longitudinal research design. The use of big data to provide real-time changes in consumer patterns could be particularly useful in times of uncertainty, such as after the COVID-19 pandemic (Gallego & Font, 2021).

The current methodology is a first proof of concept, but it is static, uses only cross-sectional data and is constructed only with quantitative indicators and internal factors. Building on this, a dynamic perspective could offer hoteliers a more complete picture on the attractiveness of target markets, which would allow hotels to redesign their marketing strategies based on their goals. In addition, a more sophisticated index could take into consideration customers' subjective preferences to account for differences in experiences affecting satisfaction and other behavioural responses such as customer-based brand equity (Eugenio-Martin & Cazorla-Artiles, 2020). Furthermore, the index could take into consideration the structural factors that influence the attractiveness of market segments. Markets that appear to be more suitable (valuable) to a hotel, might be less attractive if they have strong competitors in quality and price. With this regard, competitor orientation, as the second dimension of marketing orientation, provides hoteliers with relevant insights on the short-term strengths and weakness, and the long-term capabilities, of their competitors, which increases their knowledge of the competitive environment. In this vein, competitor orientation, helps hotels to adapt their marketing strategies to remain competitive in unstable and uncertain business environments (Hilman & Kaliappen, 2014).

Another possible improvement for the construction of the index relates to the calculation of weights for the different dimensions. In addition, it could be beneficial to involve other stakeholders (e.g., Destination Marketing Organisations) in the calculation of the index. However, while a lower margin of error leads to more precise results, it is necessary to do a cost-benefit analysis of the sources of data and resource used against any marginal improvements (López-Roldán & Fachelli, 2015), and in times of uncertainty and high risk, agile decision-making methods may be more useful than delaying decisions until a perfect data set is available.

#### Credit author statement

Dr. Inma Gallego designed the study, prepared and wrote the methodology, conducted the data analysis and wrote the results section, as well as contributed to write the manuscript overall.

Dr. M. Rosario González-Rodríguez wrote most of the introduction, literature review, discussion and conclusions.

Prof Xavier Font translated and edited the methodology and results, contributed to writing the introduction, literature review, discussion and conclusions, and proofread the manuscript.

#### Declaration of interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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