

Strategic positioning analysis of Spanish cruise ports

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Abstract

Purpose – Cruise traffic has dynamically advanced worldwide over the past two decades. This maritime business and tourism typology is strongly concentrated in several links that comprise the cruise product. With regard to destination regions, the concentration occurs both in the few worldwide destination regions and in the specific ports within a given destination region. Moreover, in a cruise itinerary's configuration, there is a strong spatial dependence between the ports that comprise it. Taking these into account, the aims of this paper are to identify the current competitive positions of Spanish cruise ports and to explain the different features of the competitive positions obtained.

Design/methodology/approach – A sample of 21 Spanish ports is selected to conduct a competitive positioning analysis. The analysis is developed by applying portfolio analysis based on the “growth-share matrix” adapted to the port industry. Moreover, the sample of ports is divided into three groups based on geographical positions of ports on the Spanish coast, and each group is analysed separately.

Findings – The three Spanish coastal areas have a behavioural pattern in which few ports concentrate the greater share of the cruising activity. The highest number of competitive positions are mature leader and high potential. In the three Spanish coastal areas, there are ports with these positions. Additionally, there are homeports available in the three coastal areas.

Originality/value – The paper contributes to the research of the cruise industry sector especially from the point of view of cruise ports. The results obtained may be useful to cruise port managers for developing strategies aimed at increasing cruise traffic in a port.

Keywords Cruise ports, Port competitive position, Port portfolio analysis, Spanish port system

Paper type Research paper

1. Introduction

The loss in competitiveness of maritime passenger transport over long distances compared with air transport in the 1960s and 1970s facilitated the emergence of a new maritime business, cruise ships, initially created to fill the ship passenger gap created by air transport. The last liners became the first cruise ships, as it took more than a decade to see the complete demise of liner services with the final realisation that long distance travel was now to be assumed by air transport and also considering the 30 years lifespan of a liner. The availability of a fleet of liners which utility was no longer commercially justifiable incited their reconversion to form the first fleet of cruise ships (Rodrigue and Notteboom, 2013). Then, a new type of maritime transport emerged; this was a new means to enjoy the sea and a new type of tourism. Cruise tourism has several particularities that differentiate it from other tourist activities; the main peculiarity is transport means and the type of



accommodation used: the cruise ship. In addition, this tourist typology combines two action areas, sea and land, into one product. The combination of both leads to the cruise industry's key element, the itinerary.

The emergence of cruise traffic and cruise tourism generated changes in various industries. The first change occurred in shipbuilding, with the need to build vessels specifically designed for this purpose. In addition, changes occurred in ports, to adapt port facilities to this type of vessel and their passengers. Furthermore, changes occurred in the tourism industry because of the completely new product, different from any other product; this offered a different opportunity to enjoy leisure time and holidays.

Cruise traffic has been dynamically advancing over the past two decades; from 1990 to 2016, the number of cruise passengers worldwide has grown at an average annual rate of 7.29 per cent. Moreover, forecasts indicate that in 2019, the cruise industry will exceed 25.3 million passengers worldwide, compared with 22.93 million registered in 2016 (Cruise Market Watch, 2017).

The objective of this paper is:

- to identify the current competitive positions of Spanish cruise ports; and
- to explain the different features of the competitive positions obtained.

The paper takes the point of view of competitive positions for analysis to determine the type of position(s) that predominate in a coastal area. Moreover, this point of view is also taken in the analysis to know if the fact that the cruise industry sells itineraries and not just a destination implies a limitation to the number of competitive positions that can be found in a coastal area. In the paper, a portfolio analysis based on the growth-share matrix has been applied as the analysis technique. This is one of the first times in which this type of analysis has been applied in the cruise industry. Therefore, this pioneering research in the study of cruise port competitive positions allows us to answer the following questions:

- Q1. Is the competitive position of a port affected by the configuration approach in itineraries of the cruise industry?
- Q2. Which are the main competitive positions of Spanish cruise ports?
- Q3. Taking into account the changes of cruise traffic in ports, what are the main factors associated with each competitive position?

To achieve the noted objectives, first, there is a literature review related to cruise traffic's regional distribution. This is followed by an analysis of the changes in cruise traffic in the Spanish Port System (SPS) between 2000 and 2016. Next, a port portfolio analysis is conducted using the growth-share matrix to identify the competitive positions of Spanish cruise ports and the discussion of results is also included. Finally, the work's conclusions are presented.

2. Literature review: cruise traffic regional distribution

Cruise traffic has a high level of regional concentration worldwide. In 2016, 86.2 per cent of deployed capacity worldwide was concentrated in seven destination regions. The Caribbean and the Mediterranean are the most popular destinations. In 2016, the former represented 33.7 per cent of deployed capacity, and the latter represented 18.7 per cent. Both destination regions remain active throughout the year although differences occur in the deployed capacity from one season to another; these are called *annual* regions. Moreover, both regions are complementary to one another because the Caribbean has its peak season in the winter, and the Mediterranean peaks in the Northern hemisphere's summer.

However, the remaining five destination regions remain active during a specific season; therefore, those five regions are called *seasonal* regions. Northern Europe is the seasonal region with the highest deployed capacity, 11.7 per cent in 2016, followed by Asia (9.2 per cent) and Australia/New Zealand/Pacific (6.1 per cent) [CLIA (Cruise Lines International Association), 2016]. Repositioning itineraries are associated with the seasonality of the itineraries in certain destination regions, as well as to changes in demand in annual regions. On these repositioning trips, the ship changes its destination region to move to another that allows it to achieve higher occupancy rates. Cruise companies also offer these repositioning sailings as a cruise itinerary.

The ports play a key role in the maritime transport associated with a cruise itinerary, constituting the tourism component link that develops on land. In cruise traffic, three types of ports can be distinguished according to the operations performed in them. In *homeports*, the start and the end of the itinerary occurs; this must satisfy a range of imposed requirements. These requirements arise, on the one hand, from the cruise passengers' needs and, on the other hand, from the ship. In *ports of call*, a cruise ship remains for a limited number of hours; during this time, cruise passengers will visit the port's *tourist hinterland*.

A port of call's tourist hinterland is defined as the geographic area available for cruise passengers to visit (cruise excursions) during a port call (Esteve-Perez and Garcia-Sanchez, 2015). Occasionally, in certain ports of call that satisfy the requirements, partial passenger embarking and disembarking operations can be performed; however, this is associated with a small percentage of passengers. This type of operation is called *interporting*. The global cruise port system is characterised by a high level of regional concentration as well as a clustering of port visits (Rodrigue and Notteboom, 2013). For a destination to be integrated into a cruise network, it has to fulfil a range of prerequisites both at the port's and at the hinterland's side. These prerequisites are varying depending on the type of cruise traffic that the destination facilitates (Niavis and Vaggelas, 2016).

With regard to the configuration of ports that comprise an itinerary, mainly, it is possible to identify two types of itineraries. *Close itineraries* only have one homeport in which the itinerary starts and ends; in this case, the itinerary is a closed loop. *Open itineraries* are those that have two homeports because the itinerary starts and ends at different ports.

In designing an itinerary, first, the cruise line selects the destination region. The next step consists of selecting the homeport(s), depending on whether the itinerary is open or closed, from which the itinerary will be developed. The decision of a cruise line to call at a specific port or, more importantly, to establish the homeport for their vessels depends on whether the area where the port is located is attractive for cruise itineraries.

Homeports play a key role in vessel deployment and in itinerary design in a specific destination region. Thus, homeports should be strategically located in a geographic area in which attractive inland destinations and port cities are abundant and in close proximity to ensure that cruise lines can design competitive and flexible itineraries (Bagis and Doods, 2014). A cruise port needs to be located close to or within an area where cruise ships operate (McCalla, 1998).

Given a homeport and a set of ports of call, the next step is to design itinerary schedule which aims to determine a sequence of the ports of call to visit and the arrival and departure times at the port of call (Wang *et al.*, 2016). On a cruise itinerary, *must-see ports* have significant importance; this type of port provides access to a well-known tourist hinterland. Related to a port's geographical position, although applied to container ports, Hayuth and Fleming (1994) explain the success of a port in the intermediacy but not in the centrality. Intermediacy refers to an *en route* location, that is, the port is located relative to where containers originate and where they are destined. Cruise ports can apply a similar reasoning.

The optimal sequence of the ports of call to visit is mainly determined by geographical distances (Wang *et al.*, 2016). In the cruise industry, *intermediacy ports* will be defined as those located between the homeport, and the successive must-see ports of call that comprise the itinerary. This geographical dependence results in a negative spatial relation for a range of short distances between ports, which becomes positive at intermediate distances and becomes negative again for large distances.

Based on the above requirements in designing an itinerary, Spain is chosen as the geographical study area because it has an important maritime character and is a very well-known tourist destination. Spain has a strategic geographical position at the entrance of the Mediterranean Sea and the Atlantic Ocean. Moreover, the extensive Spanish coast must be considered, including the two archipelagos – one on the Mediterranean Sea, the Balearic Islands, and the second on the Atlantic Ocean, the Canary Islands. In addition, Spain is a very strong worldwide tourist country with 75.3 million foreign tourists in 2016 (Hosteltur, 2017).

3. Cruise traffic in the Spanish Port System

The state-owned SPS is composed of 46 General Interest ports managed by 28 Port Authorities (BOE, 2011); this considers the Landlord port management model present in Spain (IME and FEIN, 2009). The growing cruise industry trend has not gone unnoticed in the SPS. The vast majority of the Spanish ports accommodate cruise ships at their docks. Between 2000 and 2016, cruise passenger movements in the SPS grew by an average annual rate of 9.54 per cent. This means that, in 17 years, the number of cruise passengers arriving in Spanish ports has evolved from approximately 1.95 million in 2000 to 8.69 million in 2016.

Considering the configuration of the Spanish coast, it is possible to divide the 46 state-owned ports into three groups according to their geographical position on the Spanish coast. One group consists of the 24 Spanish Mediterranean and Andalusian Atlantic ports; this includes the ports of the Balearic Islands, the autonomous cities of Ceuta and Melilla and the river port of Sevilla. Another is composed of the 11 ports bordering the Cantabrian Sea and the Galician Atlantic coast, and the third group includes the 11 Canary Island ports.

With regard to cruise traffic, there are high differences in the quantities this traffic represented in each of these three coastal areas. Between 2000 and 2016, Spanish Mediterranean and Andalusian Atlantic ports represented approximately 73.5 per cent of the total cruise passenger movements in the SPS (Table I). This is followed by the Canary Islands with 21.3 per cent and the Cantabrian and Atlantic Galician coast ports with 5.2 per cent.

During the past 17 years, the three coastal areas registered an average annual growth rate in cruise traffic higher than the growth rate registered worldwide of 7.97 per cent. The highest growth was registered in the Canarian ports, with a rate of 12.54 per cent. This was followed by the Cantabrian and Atlantic Galician coast ports with 10.80 per cent and the Spanish Mediterranean and Andalusian Atlantic ports with 8.91 per cent.

Spain has homeports in its three coastal areas. Between 2000 and 2015, the home in/out passenger category grew at an average annual rate of 11.21 per cent; see Figure 1. In this period, home in/out passenger movements have represented annually, an average, 32.4 per cent of total cruise passenger movements.

4. Strategic positioning analysis of Spanish cruise ports

In this section, a strategic positioning analysis (SPA) of the Spanish cruise ports is developed to identify the competitive position of each port of the three Spanish coastal areas defined in the above section. According to Winkelmann and Coeck (1993), the main purposes of this type of analysis are to process and present statistical information on the recent evolution or

Table I.
Cruise traffic in Spain, divided by coastal areas, between 2000 and 2016, cruise passenger movements and the share of total SPS

Year	Mediterranean and Andalusian Atlantic coast (Passengers)		Canary Islands (Passengers)		Cantabrian and Atlantic Galician coast (Passengers)	
		% SPS		% SPS		% SPS
2000	1,517,479	77.97	321,031	16.50	107,713	5.53
2001	1,583,650	76.08	406,697	19.54	91,243	4.38
2002	2,006,709	73.44	608,767	22.28	117,127	4.29
2003	2,465,334	73.77	740,341	22.15	136,444	4.08
2004	2,511,913	71.31	849,252	24.11	161,454	4.58
2005	2,874,558	72.05	926,625	23.23	188,261	4.72
2006	3,076,772	75.22	808,658	19.77	204,746	5.01
2007	3,835,351	76.17	960,786	19.08	239,343	4.75
2008	4,401,763	74.82	1,133,783	19.27	347,403	5.91
2009	4,537,648	74.87	1,192,824	19.68	330,632	5.45
2010	5,409,883	75.27	1,404,883	19.55	372,797	5.19
2011	5,934,502	73.93	1,599,492	19.92	493,676	6.15
2012	5,402,058	71.06	1,718,386	22.60	482,128	6.34
2013	5,623,421	73.26	1,624,473	21.16	427,948	5.58
2014	5,342,409	69.26	1,913,181	24.80	457,835	5.94
2015	6,009,793	69.37	2,183,840	25.21	469,221	5.42
2016	6,259,463	72.01	1,989,272	22.89	443,663	5.10

Source: Author's elaboration based on statistical data from Puertos del Estado (2017)

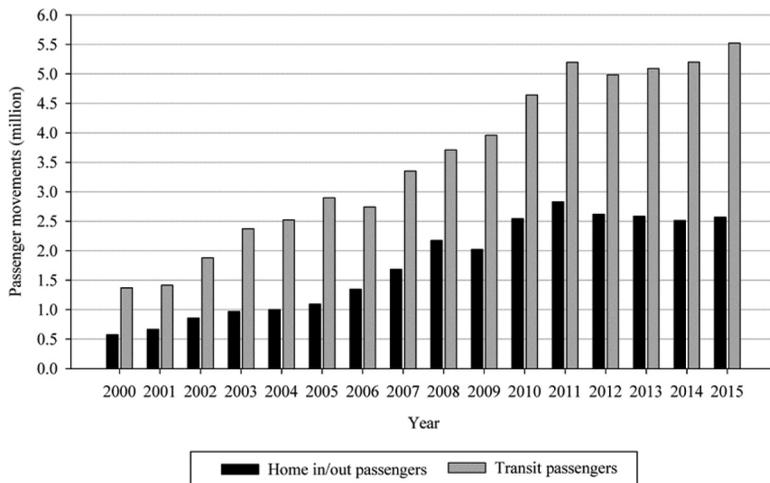


Figure 1.
Cruise passenger movements registered in the SPS between 2000 and 2015

Notes: Figures are segregated by home in/out passengers and transit passengers

Source: Author's elaboration based on statistical data from Puertos del Estado (2017)

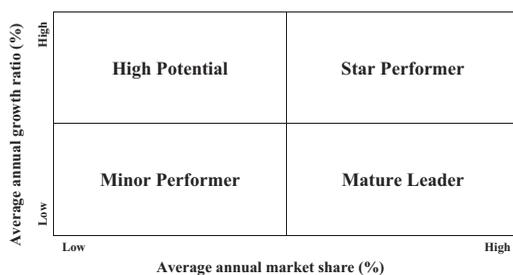
change in the competitive position of different seaports and to help assess the future economic potential of a seaport, given anticipated future developments. The SPA developed to determine the competitive position of the ports in the three port ranges considered consists of a portfolio analysis. The portfolio analysis is conducted using the growth-share matrix

initially introduced by Boston Consulting Group (Henderson, 1979); in this case, the analysis used the version adapted to the port industry. This version of the matrix represents the average market share in the X-axis and the average growth ratio for a given time period in the Y-axis. In addition, this version introduces an additional dimension, a circular shape with a surface proportional to the absolute traffic volume of the port considered in the total range (Haezendock *et al.*, 2006). The matrix is divided into four quadrants, each of which corresponds to a competitive position (Figure 2).

The majority of applications of this matrix in the port industry research field focus on cargo traffic and, more particularly, on containerised cargo. This technique has been applied in the port industry's research developed, for example, by Haezendock *et al.* (2006), Park (2006) and Winkelmanns and Coeck (1993). The first application to passenger cruise traffic dates to 2013; that paper, the work of Bagis and Doods (2014), analysed the competitive position of six cruise ports in the Eastern Mediterranean region.

The application of this matrix to the analysis of cruise traffic has certain limitations because the cruise industry sells itineraries, not ports (Rodrigue and Notteboom, 2013); this generates an interdependency between the two. This implies that the growth in cruise passenger movements of a given port lead to a similar growth in the remaining ports that comprise the itinerary. This aspect is not very present in container traffic. The geographical interdependence of ports on an itinerary ensure that the *Star Performer* (refer again to Figure 2) position is very difficult to achieve. In the development of a cruise itinerary, one has to take into account the geographical limitations from the point of view of balancing sailing time and shore time. This approach seeks to avoid discomfort in cruise passengers motivated by long sailings without calling at port. Thus, there is a maximum sailing distance without calling at port. Therefore, cruise traffic works with the set of ports that make up the itinerary and not with ports in isolation. This means that the number of passengers registered in a port is partially influenced by the number of itineraries in which that port is included, and, therefore, there is an interdependence between ports of the same itinerary. The identification of this feature represents a breakthrough in the application of this analysis technique to determine the competitive positions of cruise ports.

In this particular case, the portfolio analysis is conducted for the time period between 2000 and 2016. The total cruise passenger movements registered in each port is the variable selected to perform the analysis; this is composed of the sum of home in/out passenger and transit passenger movements. This variable is selected because it has the highest precision in measuring the cruise traffic registered in each port. The three coastal areas are analysed independently because they have different weather conditions, different seasonal patterns



Source: Author's elaboration adapted from Haezendock *et al.* (2006)

Figure 2.
Growth-share matrix
applied to the port
industry

and different deployed capacities. In the three Spanish coastal areas, certain ports registered minimal quantities of cruise passenger movements and with irregular patterns during 2000-2016. Therefore, these ports are also excluded from the analysis on the basis that they served less than 150,000 cumulative cruise passenger movements from 2000-2016. Furthermore, cruise traffic from excluded ports are not included in the numbers. In addition, they have no port facilities exclusive to this maritime traffic because cruise traffic is not one of the main sources of business in these basins.

Modifying [Figure 2](#) to the analysis developed in this work, the border of each competitive position is defined by the following concepts. The *X*-axis shows the average market share registered during the 2000-2016 period. The *Y*-axis shows the weighted average growth registered during the 2000-2016 period. In addition, in accordance with the works of [Bagis and Dooms \(2014\)](#) and [Haezendock et al. \(2006\)](#), the analysis has an additional dimension, a circular shape with a surface proportional to the port's cruise traffic volume considered in the total range. In this case, the surface of the circular shape represents the annual average cruise passenger movements in the 2000-2016 period. The centre of each circle represents the growth rate and market share coordinates. Then, for each graphical representation of a port range, the market share, the growth rate and the size of each port are represented simultaneously.

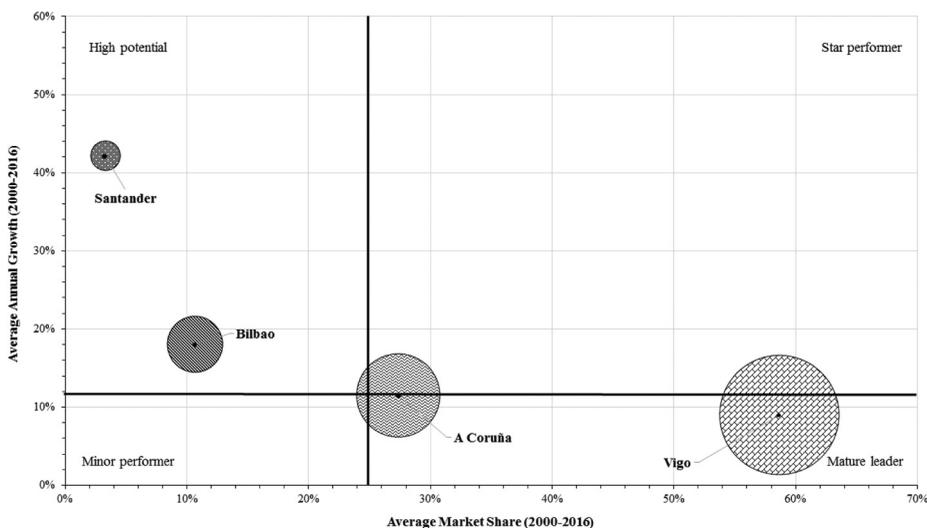
4.1 Cantabrian Sea and Galician Atlantic coast ports

The Cantabrian Sea and the Galician Atlantic coast comprise four cruise ports that registered established and regular cruise traffic. For this range of ports, the borders of each competitive position are as follows. The border in the *X*-axis is defined by an average market share of 25 per cent for the 2000-2016 period. The border in the *Y*-axis is defined by a weighted growth of 11.73 per cent for the 2000-2016 period. The four cruise ports are divided into two competitive positions ([Figure 3](#)). Vigo and A Coruña should be characterised as *mature leader*. The former represented a market share of 58.66 per cent during 2000-2016. In addition, Vigo has served home in/out passengers since 2009, whereas A Coruña registered a market share of 27.35 per cent and an average annual growth rate of 11.49 per cent during 2000-2016. This port also serves home in/out passengers; operations with this type of cruise passengers began later than in Vigo, in 2010.

The remaining two ports, Bilbao and Santander, are *high potential* ports. In both cases, the position obtained is mainly associated with its high average annual growth rate; however, there are significant differences in the market share of both ports, 10.68 per cent (Bilbao) and 3.32 per cent (Santander). The growth registered by both ports far exceeds the average growth rate of the cruise traffic in the SPS of 9.54 per cent during 2000-2016. Bilbao was the first port in this coastal area to serve home in/out passengers, as it began to register this type of cruise passengers in 2005. Moreover, home in/out passenger movements registered in Vigo, A Coruña and Bilbao were mainly associated with interporting operations. This set of ports are included primarily in itineraries that travel through Northern Europe and the British Isles.

4.2 Canary Islands ports

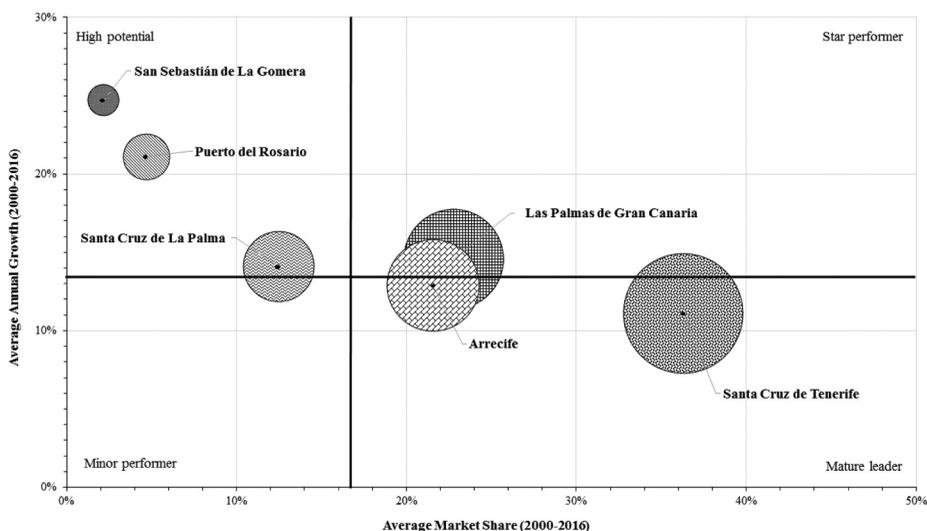
In the Canary Islands, eight ports accommodate cruise ships encompassing the seven islands that make up the archipelago, but only six had an established and regular cruise traffic in their docks during 2000-2016. For this range of ports, the borders of each competitive position are as follows. The border in the *X*-axis is defined by an average market share of 16.67 per cent for the 2000-2016 period. The border in the *Y*-axis is defined by a weighted growth of 13.42 per cent for the 2000-2016 period. This set of ports are divided into three competitive positions, *mature leader*, *star performer* and *high potential* ([Figure 4](#)). Two ports



Notes: The surface of the circular shape represents the annual average cruise passenger movements in the 2000-2016 period. The centre of each circle represents the growth rate and market share coordinates

Source: Author's elaboration

Figure 3. Port portfolio analysis of the Cantabrian Sea and Galician Atlantic coast cruise ports (2000-2016)



Notes: The surface of the circular shape represents the annual average cruise passenger movements in the 2000-2016 period. The centre of each circle represents the growth rate and market share coordinates

Source: Author's elaboration

Figure 4. Port portfolio analysis of the Canary Islands cruise ports (2000-2016)

should be considered as *mature leader*; these accounted a market share of 57.87 per cent during 2000-2016. Santa Cruz de Tenerife is the main Canarian cruise port with a market share of 36.29 per cent in 2000-2016, whereas the remaining *mature leader*, Arrecife, had a market share of 21.58 per cent. Moreover, the average annual growth rate of these ports ranged between 11.12 per cent of Santa Cruz de Tenerife and 12.89 per cent of Arrecife. So that their competitive position is explained partially because the rate registered by each of them slightly exceeds the growth rate in the SPS during the same period and exceeds also the worldwide growth rate of the number of cruise passengers. Las Palmas de Gran Canaria has the *star performer* position. The competitive position obtained is related to their average growth rate in 2000-2016 of 14.57 per cent. Las Palmas de Gran Canaria had also a similar market share to Arrecife of 22.77 per cent. In addition, Santa Cruz de Tenerife and Las Palmas de Gran Canaria are homeports at the Canary Islands.

San Sebastián de La Gomera, Puerto del Rosario and Santa Cruz de La Palma are located at the *high potential* position; this set of ports accounted a market share of 19.36 per cent during this period. There are significant differences in market share and growth rate between San Sebastián de La Gomera and Puerto del Rosario and Santa Cruz de La Palma. The two former accounted for a market share lower than 5 per cent each, whereas Santa Cruz de La Palma had a market share of 12.49 per cent. Furthermore, San Sebastián de La Gomera and Puerto del Rosario registered an annual growth rate that exceeded 20 per cent, whereas Santa Cruz de La Palma grew with an annual rate of 14.09 per cent. The high growth registered, that far exceeds the growth rate of the SPS and doubles the worldwide growth, explains the competitive position obtained.

The ports of the Canary Islands play an important role in itineraries that include calls to Morocco and other Atlantic Islands (i.e. Madeira and the Azores) and in repositioning cruises between Europe and America.

4.3 Mediterranean and Andalusian Atlantic coast ports

Among the 24 ports located in the Mediterranean and Andalusian Atlantic coast, 11 served an established and regular cruise traffic during 2000-2016. For this range of ports, the borders of each competitive position are as follows. The border in the X-axis is defined by an average market share of 9.09 per cent for the 2000-2016 period. The border in the Y-axis is defined by a weighted growth of 11.93 per cent for the 2000-2016 period. This set of ports are divided into three competitive positions (Figure 5). Barcelona, Palma de Mallorca and Málaga are *mature leader* ports; they accounted for a market share of 80.15 per cent in the period 2000-2016. Barcelona and Palma de Mallorca stand out among these with a market share of 43.91 per cent and 27.59 per cent, respectively. Focusing attention on growth ratios of these ports, during this period, the growth ratios ranged between 8.72 per cent of Palma de Mallorca and 10.66 per cent of Barcelona. These ratios are similar to the average growth ratio of cruise traffic in the SPS for the same period of 9.54 per cent and exceed the worldwide growth of approximately 7.97 per cent.

Six ports have a *high potential* position. The port of Valencia has the largest market share in this quadrant with 4.62 per cent and the most dynamic behaviour with the largest growth during the period 2000-2016. Their trend may consolidate it as a *must-see port* in the near future. This port is followed by Ibiza (Balearic Islands), Alicante and Cartagena in terms of market share. The above three ports have similar growth rates of approximately 20 per cent, Ibiza 19.96 per cent, Alicante 18.17 per cent and Cartagena 20.30 per cent. The remaining two ports located at the *high potential* quadrant owe their position, basically, to its high growth rate; however, the market share that they have registered is very low (Figure 5).

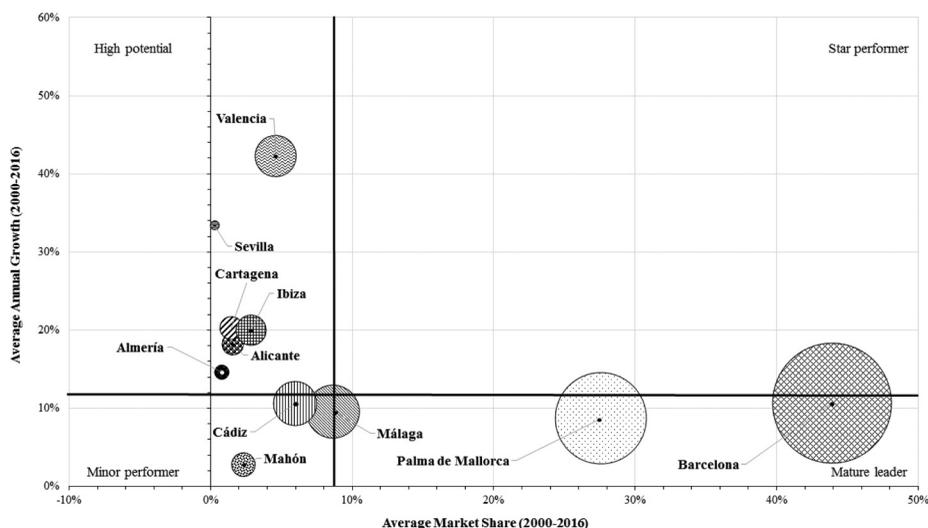


Figure 5.
Port portfolio analysis
of the Spanish
Mediterranean and
Andalusian Atlantic
coast cruise ports
(2000-2016)

Notes: The surface of the circular shape represents the annual average cruise passenger movements in the 2000–2016 period. The centre of each circle represents the growth rate and market share coordinates

Source: Author’s elaboration

The remaining two ports are included in the position of *minor performer*, with an average market share of 8.28 per cent all together. Mahón registered the lowest growth rate whereas Cadiz registered a growth rate close to the average of SPS in 2000–2016. The results of the port portfolio analysis yield a high concentration of cruise traffic by a few ports, with 4 of 11 ports concentrating 86.12 per cent of cruise passenger movements. This result is a consequence of the need to combine the greater heterogeneity of ports in an itinerary, combining ports of different countries.

This set of ports is included primarily in Western Mediterranean itineraries. Barcelona, Palma de Mallorca, Málaga and Valencia have an established role of homeports. Barcelona, in 2015, was the largest cruise port in Europe and the Mediterranean Sea [CLIA (Cruise Lines International Association) Europe, 2016]. Moreover, Cádiz port plays an important role, due to its geographical position at the gates of the Mediterranean Sea and the Atlantic Ocean, in repositioning cruises between the Mediterranean and the Caribbean or South America and vice versa.

4.4 Discussion of results

Each strategic position obtained is associated with particular characteristics of the cruise traffic registered in the port. *Mature leader* ports have regular and established cruise traffic that work as both homeport and port of call. Additionally, *mature leaders* are characterised by being *must-see port*, these act as “locomotive ports” to achieve higher sales ratios of some itineraries. According to Esteve-Perez and Garcia-Sanchez (2017), from a descriptive point of view, a *must-see port* is a port that every cruise passenger wants to visit because it gives access to prestigious and high-quality tourist hinterland. From an econometric point of view, a *must-see port* is a port whose inclusion or substitution in an itinerary implies an increase or decrease on the demand of that itinerary. The vast majority of the cruise traffic registered at

these ports is associated with mass market or contemporary segment. From the point of view of managerial and practical implications, *mature leader* ports should seek and offer new products that generate a distinction from other ports in order to retain the loyalty of repeaters cruise passengers and its position as *mature leader* for various cruise traffic segments. One of the strategies that can be applied is to encourage cruise lines to overnight calls, thus cruise passengers being able to enjoy the nightlife offered by the tourist hinterland.

Moreover, for some ports, the *mature leader* position may be associated with future congestion problems due to the cruise traffic volume that they host. This may mean that they have to limit the number of cruise passengers to avoid port congestion. The quality of port services offered to ships and passengers may be negatively affected by port congestion. In addition, the tourist hinterland may also have congestion problems if there are high concentrations of cruise passengers among few shore excursions. Therefore, *mature leader* ports should design development strategies to increase the number of shore excursions available in the tourist hinterland. This development strategy would have two positive effects; on the one hand, to reduce the congestion in the tourist hinterland because there is a wide range of shore excursions and, on the other hand, the loyalty of cruise passengers to the same port is maintained, and they can also choose among different experiences in the tourist hinterland.

High potential ports have high growth rates, and, in general, this indicates a trend towards reach a regular and established cruise traffic in that port. The cruise activity that they register is associated, mainly, with port of call operations. From managerial point of view, *high potential* ports can establish a development strategy based on the creation of cruise port cluster with *mature leader* ports. This strategy aims to offer itineraries with ports that complement one another. Thus, each port that compose the itinerary offers different tourist attractions and different experiences to cruise passengers. Furthermore, a development strategy to be applied in the *high potential* ports is to increase the number of homeport cruise passengers. The strategy to develop homeport traffic can begin to attend interporting operations and evolving towards a homeport with established traffic. Homeporting is associated with higher economic benefits both not only for the port itself but also for the port-city (i.e. the destination), in comparison with the respective benefits derived from transit calls [CLIA Europe (Cruise Lines International Association), 2015]. Other positive effects related to the creation of port cluster are as follows. If some *mature leader* ports begin to register congestion, the *high potential* ports that are part of the cluster can be alternative ports. In addition, the combination of both types of ports can be associated with ports of “high activity” and ports of “low activity” for cruise passengers. Therefore, different experiences are offered in each port, and this results in itineraries with heterogeneous attractions.

5. Conclusions

Cruise traffic is a very dynamically maritime business and tourism typology, with a growth rate of 7.29 per cent during the past 27 years. This maritime traffic presents a significant regional concentration worldwide. In addition, there is a high level of port concentration in each destination region. The highest concentration is in the number of homeports available. Spain is the second European country in cruise traffic throughput. In the SPS, 33 ports register this maritime traffic.

Since 2000, cruise traffic in Spain has grown above the worldwide growth rate of 7.97 per cent, and, in some Spanish coastal areas, the growth has doubled approximately the worldwide rate. Spain is a key component in the cruise traffic in Europe both in the number of ports of call and homeports available, having homeports on the three Spanish coastal

areas. The home in/out passenger category represents approximately a third of total cruise passenger movements in Spain.

Combining cruise traffic features and competitive positions analysis technique through a portfolio analysis identifies a characteristic of this technique applied to cruise ports. The *star performer* position is very difficult to achieve due to the strong spatial dependence between ports on an itinerary because the cruise industry sells itineraries not destinations.

Spanish cruise ports are characterised by two positive competitive positions, *mature leader* (7 ports) and *high potential* (11 ports). Furthermore, the analysis highlights three port patterns. First, *mature leader* ports with high market share concentration in each port range. This type of port also has a very well-known tourist hinterland (*must-see* port), most are homeports and has a key geographical position to comprise an itinerary. Second, the *high potential* port could be divided into two groups: ports with a well-known tourist hinterland and significant market share that tend to achieve the *must-see* port character (for example, Bilbao, Santa Cruz de La Palma and Valencia); and *intermediacy* ports, which are demanded as intermediate calls between *must-see* ports (for example, Santander, Puerto del Rosario and Cartagena) during the period analysed.

From managerial point of view, *mature leader* and *high potential* ports should apply different strategies to further develop the cruise traffic on their docks. *Mature leader* ports should look for and offer new shore excursions in their hinterlands to create differentiated experiences. This strategy aims to maintain the loyalty of cruise passengers and to reduce the negative effects of congestion in the tourist hinterland. For example, one development strategy must be encouraged overnight calls given the high attractiveness of the tourist hinterland of *mature leader* ports.

Moreover, it is recommended the creation of a port cluster between *high potential* and *mature leader* ports. Through this strategy, ports with *high potential* may be alternative ports to *mature leaders* in case of congestion in these. Additionally, through a port cluster should also develop itineraries with heterogeneous attractions that complement the experiences in *mature leader* ports.

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