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Strategic Positioning Analysis of Spanish Cruise Ports

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ABSTRACT

Cruise traffic has dynamically advanced worldwide over the last 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. During 2000-2014, growth in cruise traffic in the Spanish Port System exceeded the worldwide growth rate. This paper analyses the changes in cruise traffic in the Spanish Port System during the 2000-2014 period and conducts a strategic positioning analysis of Spanish cruise ports. The strategic positioning analysis is developed by applying portfolio analysis based on the "growth-share matrix" adapted to the port industry. Moreover, the analysis is developed based on geographical positions of ports on the Spanish coast. The results of this analysis yield the competitive cruise port locations.

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. 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 last two decades; from 1990 to 2014, the number of cruise passengers worldwide has grown at an average annual rate of 7.63%. Moreover, forecasts indicate that, in 2019, the cruise industry will exceed 25.3 million passengers worldwide, compared with 21.55 million registered in 2014 (Cruise Market Watch, 2015).

The objective of this paper is (1) to identify the current competitive positions of Spanish cruise ports and (2) to explain and characterise the different features of the competitive positions obtained. 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 between 2000 and 2014. Next, a port portfolio analysis is conducted using the growth-share matrix to identify the competitive positions of Spanish cruise ports. Finally, the work's conclusions are presented.

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2. Cruise Traffic Regional Distribution

Cruise traffic has a high level of regional concentration worldwide. In 2014, 84.8% of deployed capacity worldwide was concentrated in seven destination regions. The Caribbean and the Mediterranean are the most popular destinations. In 2014, the former represented 37.6% of deployed capacity, and the latter represented 18.6%. 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*. North Europe is the seasonal region with the highest deployed capacity, 11.0% in 2014, followed by Australia/New Zealand/Pacific (5.2%) and Asia (4.6%) (CLIA, 2015). 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-Pérez and García-Sánchez, 2014). 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).

With regard to the configuration of ports that comprise an itinerary, mainly, it is possible to identify two types of itineraries. *Close itineraries* only has 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 Dooms, 2013). A cruise port needs to be located close to or within an area where cruise ships operate (McCalla, 1998).

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. 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 64.9 million foreign tourists in 2014 (Tourspain, 2015).

3. Cruise Traffic in the Spanish Port System

The state-owned Spanish Port System (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 Spanish Port System. The vast majority of the Spanish ports accommodate cruise ships at their docks. Between 2000 and 2014, cruise passenger movements in the SPS grew by an average annual rate of 10.79%. This means that, in 15 years, the number of cruise passengers arriving in Spanish ports has evolved from approximately 1.95 million in 2000 to 7.71 million in 2014.

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; see Figure 1. 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.

Figure 1: Map of General Interest ports of the Spanish Port System divided by coastal areas.

Source: Author's elaboration adapted from Puertos del Estado (2012).

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 2014, Spanish Mediterranean and Andalusian Atlantic ports represented approximately 75% of the total cruise passenger movements in the SPS; see Table 1. This is followed by the Canary Islands with 20% and the Cantabrian and Atlantic Galician coast ports with 5%.

During the last 15 years, the three coastal areas registered an average annual growth rate in cruise traffic higher than the growth rate registered worldwide of 8.61%. The highest growth was registered in the Canarian ports, with a rate of 14.46%. This was followed by the Cantabrian and Atlantic Galician coast ports with 12.08% and the Spanish Mediterranean and Andalusian Atlantic ports with 9.92%.

Spain has homeports in its three coastal areas. Between 2000 and 2014, the home in/out passenger category grew at an average annual rate of 11.85%; see Figure 2. In this period, home in/out passenger movements has represented annually, an average, 32.4 % 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 Winkelmans and Coeck (1993), the main purposes of this type of analysis are to process and present statistical information on the recent evolution or 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 (Haezendonck et al., 2006). The matrix is divided into four quadrants, each of which corresponds to a competitive position; see Figure 3.

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 Haezendonck et al. (2006), Park (2006) and Winkelmans and Coeck (1993). The first application to passenger cruise traffic dates to 2013; that paper the work of Bagis and Dooms (2013), analysed the competitive position of six cruise ports in the Eastern Mediterranean region.

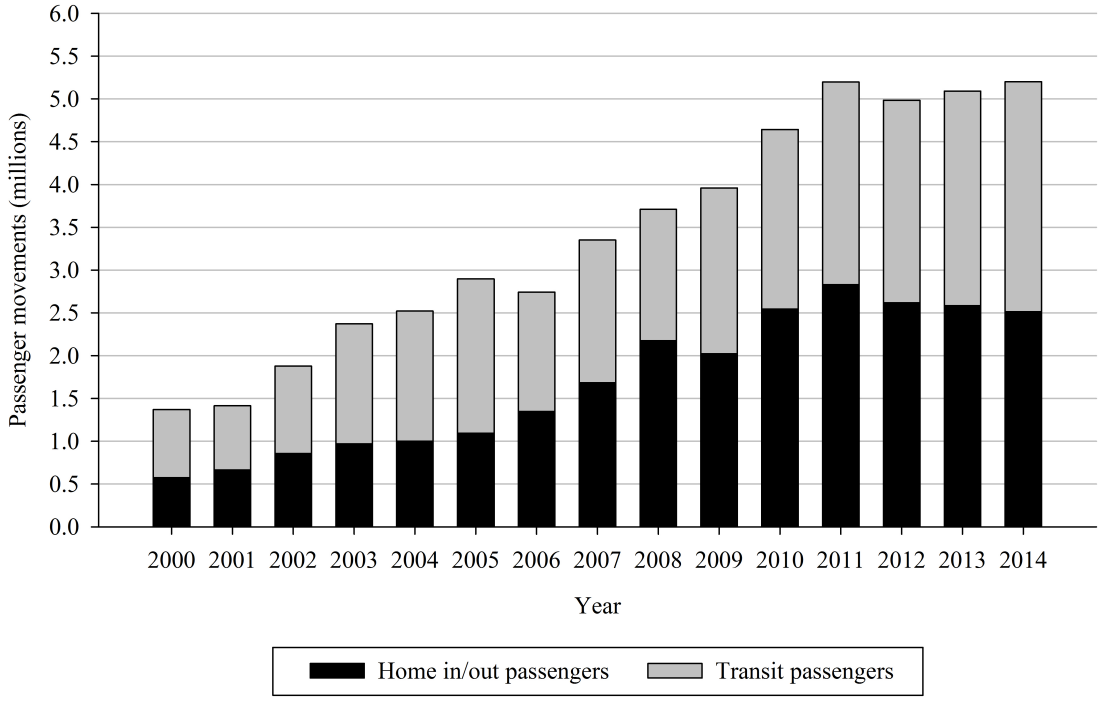
The application of this matrix to the analysis of cruise traffic has certain limitations because the cruise industry sells itineraries, not ports (Rodrigue and Notteboom, 2013); this generates an interdependency between the two. This implies that the growth in cruise passenger movements of a given port lead to a similar growth in the remaining ports that comprise the itinerary. This aspect is not very present in container traffic. The geo-

Table 1: Cruise traffic in Spain, divided by coastal areas, between 2000 and 2014, cruise passenger movements and the share of total SPS.

Year	Mediterranean and Andalusian Atlantic coast (Passengers)	% SPS	Canary Islands (Passengers)	% SPS	Cantabrian and Atlantic Galician coast (Passengers)	% 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

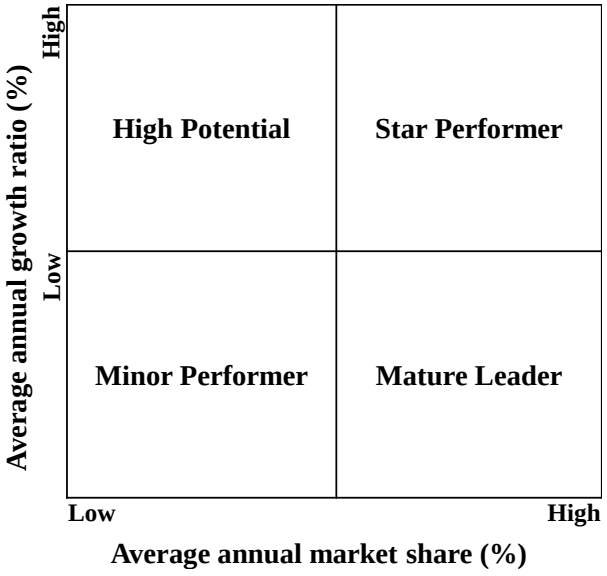
Source: Author's elaboration based on statistical data from Puertos del Estado (2015).

Figure 2: Cruise passenger movements registered in the Spanish Port System between 2000 and 2014; figures are segregated by home in/out passengers and transit passengers.



Source: Author's elaboration based on statistical data from Puertos del Estado (2015).

Figure 3: Growth-share matrix applied to the port industry.



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

graphical interdependence of ports on an itinerary ensure that the Star Performer (refer again to Figure 3) position is very difficult to achieve. 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 2014. 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 and different deployed capacities. In the three Spanish coastal areas, certain ports registered minimal quantities of cruise passenger movements and with irregular patterns during 2000-2014. Therefore, these ports are also excluded from the analysis on the basis that they served less than 115,000 cumulative cruise passenger movements from 2000-2014. 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 3 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 2000-2014 period. The *Y*-axis shows the weighted average growth registered during the 2000-2014 period. In addition, in accordance with the works of Bagis and Dooms (2013) and Haezendonck 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 2000-2014 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

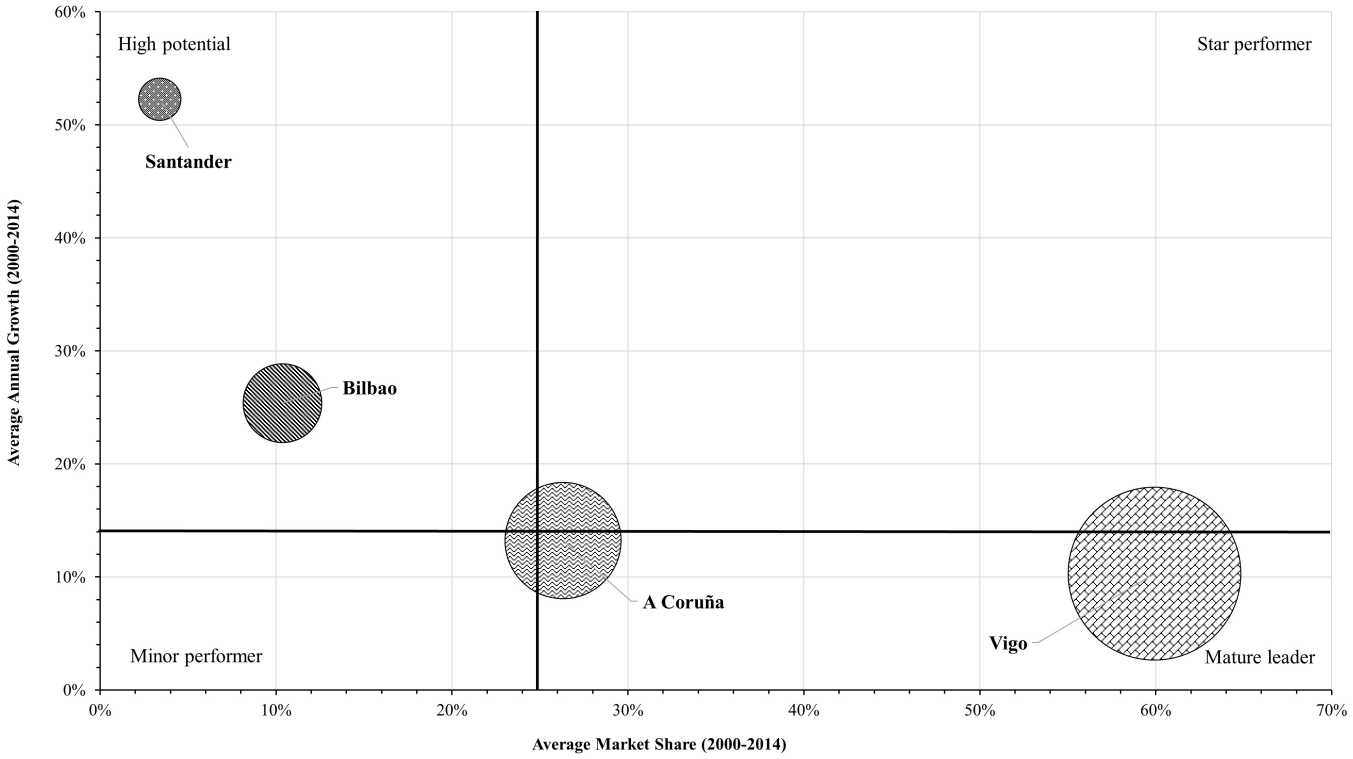
The Cantabrian Sea and the Galician Atlantic coast comprise four cruise ports that registered established and regular cruise traffic. The weighted growth rate of this range of ports for the 2000-2014 period was 14.05%. The four cruise ports are divided into two competitive positions; see Figure 4. Vigo and A Coruña should be characterised as *mature leader*. The former represented a market share of 59.93% during 2000-2014. In addition, Vigo has served home in/out passengers since 2009, whereas A Coruña registered a market share of 26.31% and an average annual growth rate of 13.2% during 2000-2014. 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, 10.37% (Bilbao) and 3.39% (Santander). The growth registered by both ports far exceeds the average growth rate of the cruise traffic in the Spanish Port System of 10.79% during 2000-2014. 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 2000-2014. In this period, the weighted growth rate was of 14.89%. This set of ports are divided into three competitive positions, *mature leader*, *star performer* and *high potential*; see Figure 5. Two ports should be considered as *mature leader*, these accounted a market share of 59.12% during 2000-2014. Santa Cruz de Tenerife is the main Canarian cruise port with a market share of 37.27% in 2000-2014. Whereas the remaining *mature leader*, Arrecife, had a market share of 21.85%. Moreover, the average annual growth rate of these ports ranged between 12.34% of Santa Cruz de Tenerife and 14.15% 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 2000-2014 of 16.26%. Las

Figure 4: Port portfolio analysis of the Cantabrian Sea and Galician Atlantic coast cruise ports (2000-2014).



Source: Authors

Palmas de Gran Canaria had also a similar market share to Arrecife of 21.65%. In addition, 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 19.22% 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% each, whereas Santa Cruz de La Palma had a market share of 12.76%. Furthermore, San Sebastián de La Gomera and Puerto del Rosario registered an annual growth rate that exceeded 20%, whereas Santa Cruz de La Palma grew with an annual rate of 16.22%. The high growth registered that far exceed the growth rate of the SPS and twice 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.

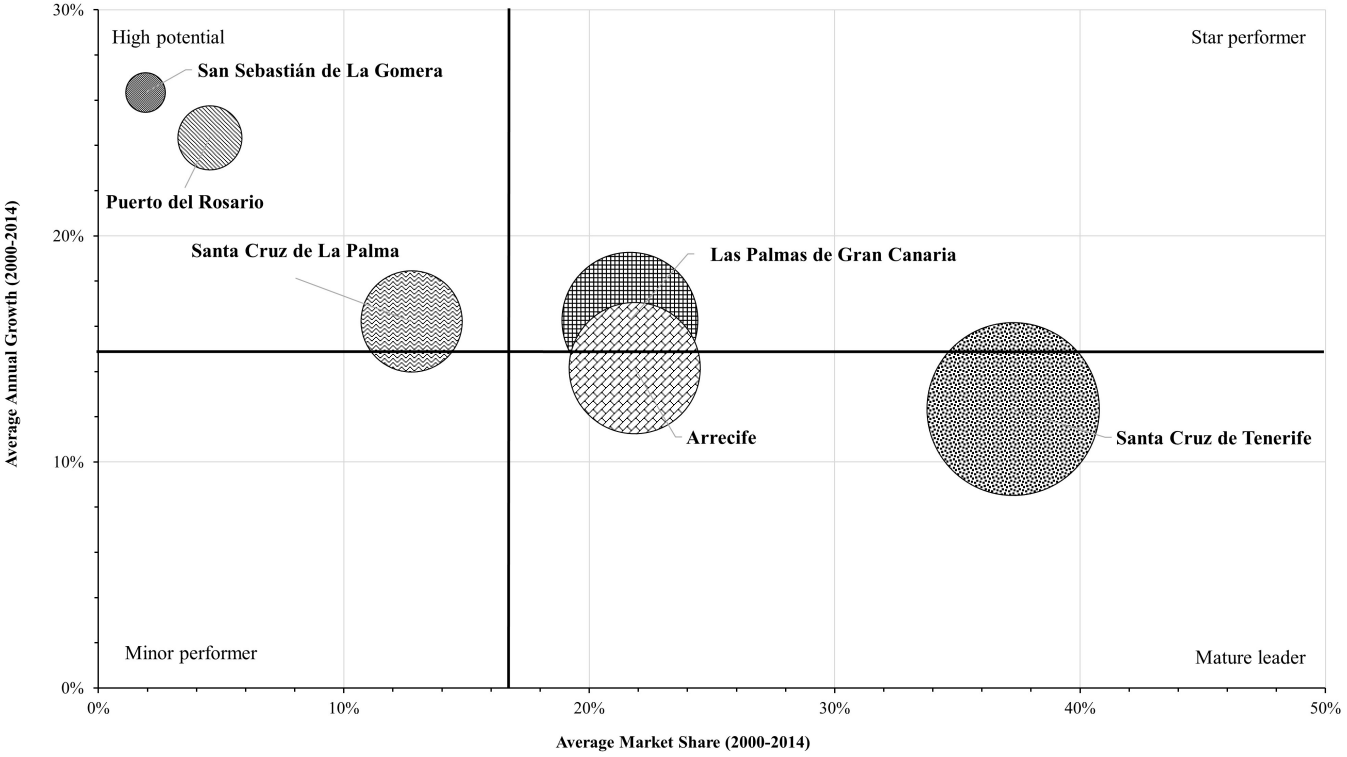
4.3. Mediterranean and Andalusian Atlantic Coast Ports

Among the 24 ports located in the Mediterranean and Andalusian Atlantic coast, 12 served an established and regular cruise traffic during 2000-2014. The weighted growth rate during this period was 12.30%. This set of ports are divided into three competitive positions; see Figure 6. Barcelona, Palma de Mallorca and Málaga are *mature leader* ports; they accounted for a market share of 80.3% in the period 2000-2014. Barcelona and Palma de Mallorca stand out among these with a market share of 43.94% and 27.53%, respectively. Focusing attention on growth ratios of these ports, during this period the growth ratios ranged between 8.28% of Palma de Mallorca and 11.24% of Barcelona. These ratios are similar to the average growth ratio of cruise traffic in the SPS for the same period of 10.79% and exceed the worldwide growth of approximately 8.6%.

Six ports have a *high potential* position. The port of Cadiz has the largest market share in this quadrant with 5.87%. Whereas Valencia shows the most dynamic behaviour with the largest growth during the period 2000-2014. Their trend may consolidate it as a *must-see por*t in the near future. This port is followed by Ibiza (Balearic Islands) and Cartagena in terms of market share. Both ports have similar growth rates of approximately 20%, Ibiza 19.77% and Cartagena 20.82%. The above four ports accounted for a market share of 14.27%. 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; see Figure 6.

The remaining three ports are included in the position of *minor performer*, with an average market share of 4.88% all together. Mahón registered the lowest growth rate whereas Alicante and Almería registered a growth rate close to the average of SPS in 2000-2014. The results of the port portfolio analysis yield a high concentration of cruise traffic by a few ports, with four of 12 ports concentrating 86.17% of cruise passen-

Figure 5: Port portfolio analysis of the Canary Islands cruise ports (2000-2014).



Source: Authors

ger 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 2013, was the fourth largest cruise port in the world and the largest in Europe and the Mediterranean Sea (Barcelona Port Authority, 2014). 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.

5. Conclusions

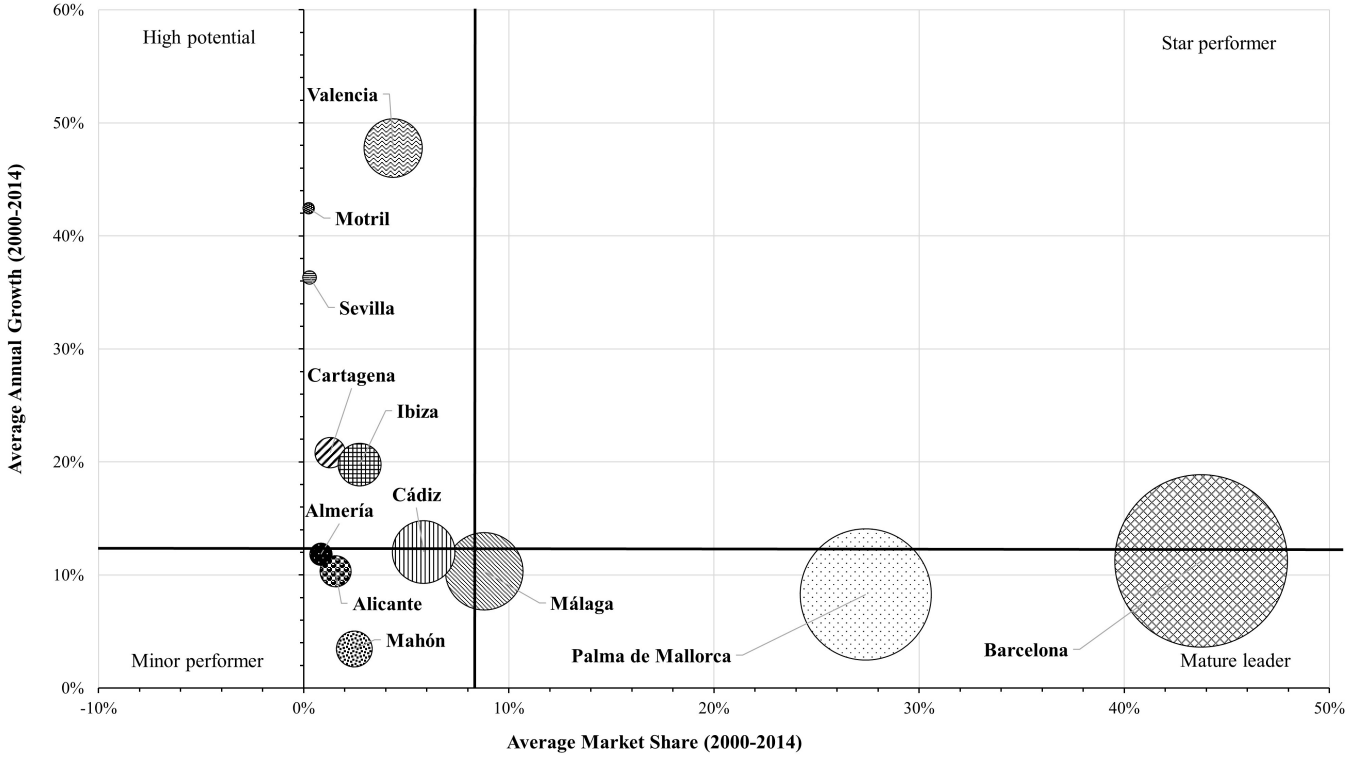
Cruise traffic is a very dynamically maritime business and tourism typology, with a growth rate of 7.63% during the last 25 years. This maritime traffic presents a significant regional concentration worldwide. In addition, there is a high level of port concentration in each destination region. The highest concentration is in the number of homeports available. Spain is the second European country in cruise traffic throughput followed by Italy. In the Spanish Port System 33 ports register this maritime traffic.

Since 2000, cruise traffic in Spain has grown above the worldwide growth rate of 8.63%, and in some Spanish coastal areas, the growth has doubled 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.

Figure 6: Port portfolio analysis of the Spanish Mediterranean and Andalusian Atlantic coast cruise ports (2000-2014).



Source: Authors

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