Tourist facilities in ports

The economic factor

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I. INTRODUCTION

Europe's coastlines, stretching over 89 000 kilometres[1], have been of great value to the European continent throughout its history. Europe's colonial power originated from its connectivity with multiple seas, oceans and intercontinental rivers. Several great empires were built upon its maritime expertise and the resulting economic trade. Today, that greatness is represented in Europe's beautiful cities, which are a major attraction for travellers from all over the world.

The diversity of the continent makes the European Union (EU) an ideal holiday destination. The EU offers a wide range of cultural activities, natural heritage and leisure activity. In the past decade, the EU has welcomed a relatively new phenomenon into the EU tourism industry: namely cruise tourism. Due to its large expanse of coastlines, historical sights and variety of cultures, the EU makes an ideal cruise destination. As the cruise industry is adding significant economic value to EU Member States, cruise tourism is an important sector for coastal regions and islands to attract.

I.1. TOURIST FACILITIES IN PORTS

As well as adding significant economic value, cruise tourism can also give rise to unwanted externalities as cruise ships create air emissions, waste and noise in EU ports and seas. The Communication "An integrated Maritime Policy for the European Union" (COM (2007) 575 final) stresses the importance of reconciling economic development, environmental sustainability and quality of life within coastal regions and islands. The Action Plan accompanying the Communication (SEC (2007) 1278) acknowledges the importance of promoting the development of quality coastal tourism and states that, as a first step, the Commission intends to assess the benefits for ports to invest in infrastructure and facilities for receiving tourists, in particular through cruise tourism.

Taking the positive and negative effects of cruise shipping into consideration, the following research question arises: '*How to increase economic benefits and job creation in coastal regions and islands*

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[1]   http://ec.europa.eu/research/infocentre/article_en.cfm?id=/research/research-
       eu/sea/article_mer27_en.html&item=Environment&artid=7348

particularly through cruise tourism, whilst reducing its negative environmental effects'? The study addresses this research objective by looking at the following aspects:

- Growth and development opportunities for coastal regions and islands through cruise tourism;
- Cruise tourism and the environment;
- Cruise tourism and the economy.

The outcome of the study will be a quantitative indicator to clarify the return on investment in tourist facilities.

Figure I.1 shows a graphical overview of the relevance of this study and its main objective.

Figure I.1 :   Overview of the study
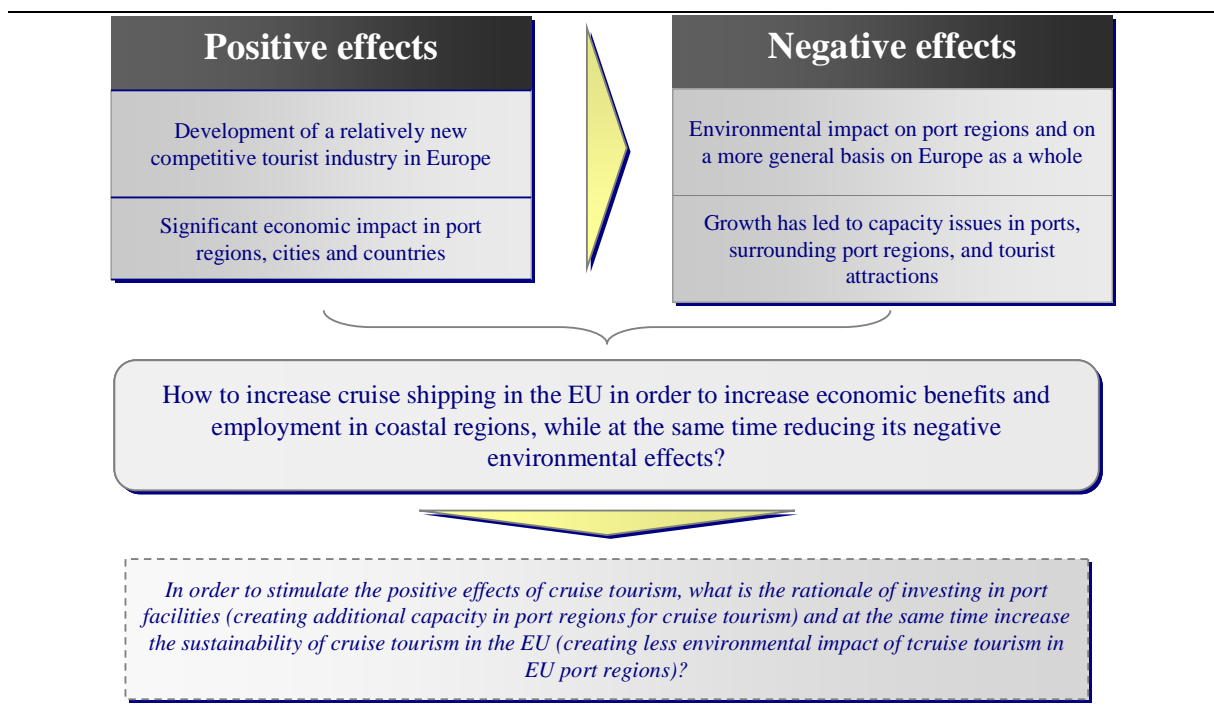
Source: Policy Research Corporation

In the research assignment, the study is subdivided into four tasks.

Task 1: Tourist facilities in and around ports: the environment factor

Increasingly ports are having to adapt their operations to ensure that their activities are sustainable. The process is to a large extent driven by EU legislation that imposes norms in order to protect the environment. More visits by tourists, particularly those arriving on cruise ships, will increase the pressure on the quality of the environment in ports. This trend will translate into additional environment-related costs, which will have to be considered when investment decisions are taken.

Port facilities may eventually also be adapted to promote the use of more sustainable infrastructure and equipment in place of the current systems (e.g. shore-side electricity[2]).

The objectives of Task 1 are to:
- Provide an assessment of the economic rationale of investing in sustainable infrastructure and equipment and, in particular, the use of shore-side electricity;
- Establish cost indicators for compliance with environmental legislation associated with tourist facilities in and around ports.

Task 2: Economic drivers for tourist facilities in ports

This task will clarify the economic rationale for investing in tourism facilities in ports, taking into account the opportunities and risks, and the direct and indirect effects, in terms of growth and job creation, including related activities in and around the ports.

The key goal of Task 2 is to collect relevant information from both the demand and the supply side to strengthen the factual base for a SWOT analysis of tourist facilities in ports, including both direct and indirect economic effects. The facilities to be analysed include tourist facilities that receive cruise ships and ensure their transit to the main tourist centres, including berths, terminals, guides, excursion organisers, tug boats and land transport.

In addition, developing access to the port for tourists may have an effect on other activities, which may need to be reallocated as a result. Therefore, the issue of competition between land and maritime uses in the coastal environment will be addressed.

Task 3: Testing of results

This task is designed to validate the results from the first two tasks. The key goal of Task 3 is to gain acceptance (buy-in) of stakeholders for cruise tourism in EU Member States for the results presented in this study.

Task 4: An indicator to clarify return on investment in tourism facilities

A quantitative indicator of the return on investment in tourism facilities in ports can raise awareness of the economic opportunities and risks that may exist in these markets and can make it easier to compare the tourism market with alternative land use options in and around the ports.
The aim in this task of the project is to devise and calculate an indicator for the average return on investment when financing tourist facilities in ports.

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[2] Shore side electricity is generated by power plants; the use of hydro, wind, solar or nuclear power is preferred, since the generation of electricity using coal, for example, still leads to air emissions

This progress report deals with all research items that are part of *Task 2*.

I.2. RESEARCH OBJECTIVE TASK 2

Task 2 will clarify the economic rationale for investing in tourism facilities in ports, taking into account opportunities and risks, and direct and indirect effects in terms of growth and job creation, including related activities in and around the ports.

The key goal of *Task 2* is to collect relevant information from both the demand and the supply side to strengthen the factual basis for a SWOT analysis with regard to tourist facilities in ports, covering both direct and indirect economic effects. This will include an overview of the relevant types of facilities that could be developed.

To achieve the research objectives of *Task 2*, this report is divided into two main parts:
- The economic impact generated by cruise tourism in coastal regions;
- The drivers behind the economic impact generated by cruise tourism in coastal regions.

I.3. OUTLINE OF THE CHAPTERS

This report consists of five chapters. Following on from this introductory chapter, the *second chapter* deals with the methodology used to assess economic impact. It explains the fundamentals on which the economic impact analyses are based (research questionnaires, scope, timeframe, definitions and obtaining of the data used for analysis). In the *third chapter* results on the economic impact analyses are provided at regional, Member State and EU level. The *fourth chapter* deals with how this economic impact can be broadened. Therefore a SWOT analysis is conducted and ultimately a synthesis will result, from which a strategic focus is extracted for the next chapter. In this *fifth chapter* the results from the fourth chapter are transformed into strategic recommendations with the ultimate aim of enhancing the economic impact of cruise tourism in EU coastal regions.

II. RESEARCH METHODOLOGY TASK 2

In order to assess the economic impact and the drivers of cruise tourism in the EU, a specific research methodology is constructed. This chapter provides an insight into the methodological choices made in order to provide an in-depth reply to the research questions.

II.1. RESEARCH QUESTIONS AND SCOPE

The main research question for this task is:
How can the economic impact of cruise tourism in Europe be optimised through investments in tourist facilities in ports?

Sub questions

- What is the economic impact of cruise tourism in EU ports?
    - What is the direct economic impact?
    - What is the indirect economic impact?
    - What are the employment effects?
    - Where is the economic impact of cruise tourism ultimately allocated (in EU ports, tourist destinations, elsewhere)?
- What is the economic impact of cruise tourism at EU level?
- What are the strengths, weaknesses, opportunities and threats of different categories of port regions in terms of the attraction of (cruise) tourism?
    - What logical categorisation can be made based on types of EU ports?
    - What are the main strengths and weaknesses in each category?
    - What externalities exist for EU ports when it comes to attracting (cruise) tourism?
    - In which category of ports do these externalities present opportunities and/or threats?
- In which facilities should each category of EU ports invest in order to strengthen its position and reduce its weaknesses, given the opportunities and threats that apply to that particular category?
- Which strategies can EU ports follow in order to safeguard a positive return on investment?

Scope

This study is focussed on the assessment of economic impact in coastal regions of the European Union and its territorial areas, created by sea-based cruise tourism. As well as assessing the economic impact in coastal regions, it will also encompass the economic impact by EU Member State and at the wider EU level. This report will also present SWOT analyses for EU-ports on a generic basis, applicable to all EU seaports.

Timeframe

All calculations in this report are based on a timeframe of one year. The cruise ship activities (number of calls and passengers in EU-destinations) are based upon a database that was created by *Policy Research* containing the itineraries of all 177 cruise ships travelling to destinations in the EU from October 2008 to September 2009 inclusive[3].

Key concepts

- *Cruise tourism*: This is defined as a sea voyage of at least 60 hours on a vessel that transports only passengers and visits at least two ports (excluding the port of embarkation); it does not include transportation by luxury ferries;

- *Coastal region*: A region directly situated on the coast of the European Union or its territorial areas;`

- *Cruise destination*: The port destination of visit by cruise ships (e.g. the port of Civitavecchia);

- *Tourist destination*: The destination of visit by cruise tourists (e.g. the city of Rome);

- *Tourist attractiveness:* The extent to which a destination/region is attractive for tourists;

- *Tourist attraction*: A specific object (or cluster of objects) that attracts tourists to a tourist destination;

- *Economic impact:* Impact generated by an entity due to its direct spending in its area of presence;

  o *Direct spending*: Gross total spending generated by an entity (tourist, cruise company, etc) in its area of presence;

  o *Direct economic impact:* The value added and employment created directly by the direct spending of an entity (tourist, cruise company, etc) in its area of presence;

  o *Value added:* The value attributed to products, and services as the result of a particular process by a company;

  o *Intermediate purchases*: Goods/services purchased at suppliers for processing or reselling;

  o *Indirect economic impact*: The value added and employment created at suppliers (and those supplying the suppliers) by means of intermediate purchases;

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[3] For cruise ship itineraries unknown in the period from October 2008 to December 2008, a timeframe from January 2009 to December 2009 was incorporated.

o *Employment effects*: The economic impact created by the spending of employees' wages in the wider economy;

- *Itinerary*: The proposed route or journey of a cruise ship;

- *Transit call*: Refers to a cruise call into a port, where passengers and crew are effectively day visitors. A transit port is referred to as a cruise destination on the itinerary of a cruise ship;

- *Turnaround call*: Refers to a cruise call at a port where the cruise begins or ends and where the cruise passengers embark or disembark. A turnaround port is referred to as the port where an itinerary starts or ends.

- *(Unique) Passenger*: Refers to an individual cruise tourist.

- *Passenger visit*: Refers to a visit by a cruise tourist to a particular port. A turnaround port can receive two passenger visits by the same passenger during a cruise.

II.2.   CALCULATING ECONOMIC IMPACT

The economic impact of sea cruise tourism in EU coastal regions is investigated. Cruise tourism creates an economic impact because tourists, crew and cruise ships spend money in coastal regions. This spending has both a direct and an indirect economic impact.

For the purposes of this study a special database was constructed by *Policy Research* containing the itineraries of all 177 cruise ships travelling on EU destinations from October 2008 to September 2009 inclusive. Some 1 400 itineraries were listed within this timeframe. Since all the ships were known by their name and technical details[4], relevant details such as passenger capacity and crew members per ship were included in the database. By matching the itinerary destinations with these data, it was possible to construct an accurate overview of passenger visits by destination, region and country.

a/ Direct economic impact

The direct expenditures of passengers, crew and ships end up in several industries (hotels, retailers, restaurants, suppliers of fresh food, etc.). Each of these industries needs to purchase goods and/or services at their suppliers before a product or service can be delivered/provided. A shop, for instance, buys its products from a wholesaler, the wholesaler buys the products from a factory, and so on. Therefore, the amount spent by a tourist in a shop does not reflect the amount of direct economic impact in that shop, because a significant part of the amount spent flows indirectly to the shop's suppliers. It is not the amount sold, but the amount of value added generated by the shop that must therefore be assessed as the direct economic impact of the shop. Value added is calculated by taking the sales of the shop and subtracting the costs of (imported) purchases from its suppliers (referred to as 'intermediary purchases'). *Figure II.1* reflects the flows of economic impact, starting with tourist, crew and cruise ship spending.

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[4]   Source: *Policy Research Corporation* based on own calculations and data acquisition; data was validated by cruise lines

Figure II.1 :   Direct and indirect economic impact
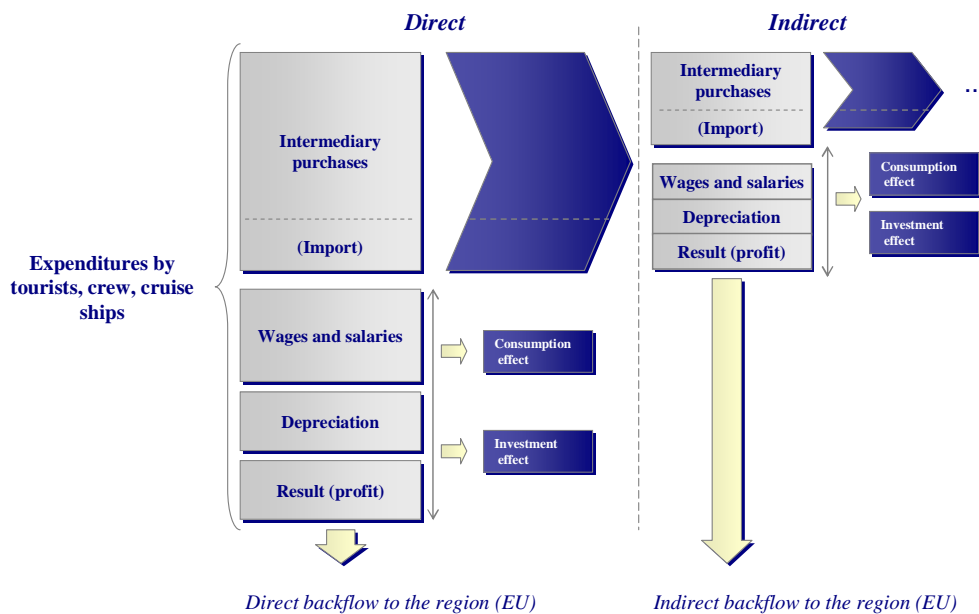
Source: Policy Research Corporation

The sum of the components wages and salaries, depreciation and result/profit in the left column of the figure reflects the value added that is generated (i.e. direct economic impact). The right column shows the indirect economic impact, which will be explained in the next paragraph.

b/ Indirect economic impact

The shop example in the previous paragraph illustrates the importance of not confusing direct spending with direct economic impact. The shop purchases goods/services from its suppliers (intermediary purchases), which will result in another form of economic impact: namely indirect economic impact. The suppliers will purchase goods in other industries, but they will also create value added. This process continues throughout the value chain of a product/service. The indirect economic impact is therefore expressed by the sum of value added created by all intermediate purchases.

c/ Employment effects

Jobs are created because the presence of cruise ships in a port requires a number of services such as pilotage, security and bunkering. However, as tourists and crew also spend money in a region, people will also be employed in that region to cater for their needs. Employment is therefore an important indicator of economic impact and will be referred to in this report as the 'employment effect'.

II.3. ECONOMIC IMPACT IN COASTAL REGIONS

This study mainly focuses on the assessment of economic impact at a regional level, i.e. the economic impact that can be directly attributed to port regions. In order to calculate the economic impact of cruise tourism in coastal regions, the expenditures of passengers, crew members and cruise ships will be calculated. Since the number of calls and the ship characteristics per port are known, the database enables a detailed calculation of the direct economic impact to be made.

a/ Coastal regions

Coastal regions will be defined at a NUTS (Nomenclature of Territorial Units for Statistics) regional level. The NUTS distribution was developed by the European Union in order to group regions into three levels based upon the population density of a region. *Figure II.2* shows the coastal regions that will be taken into account for this study, at the NUTS3 level, which is the most detailed level available. All EU seaports and their direct surroundings are located within these regions.

Figure II.2 : EU coastal regions
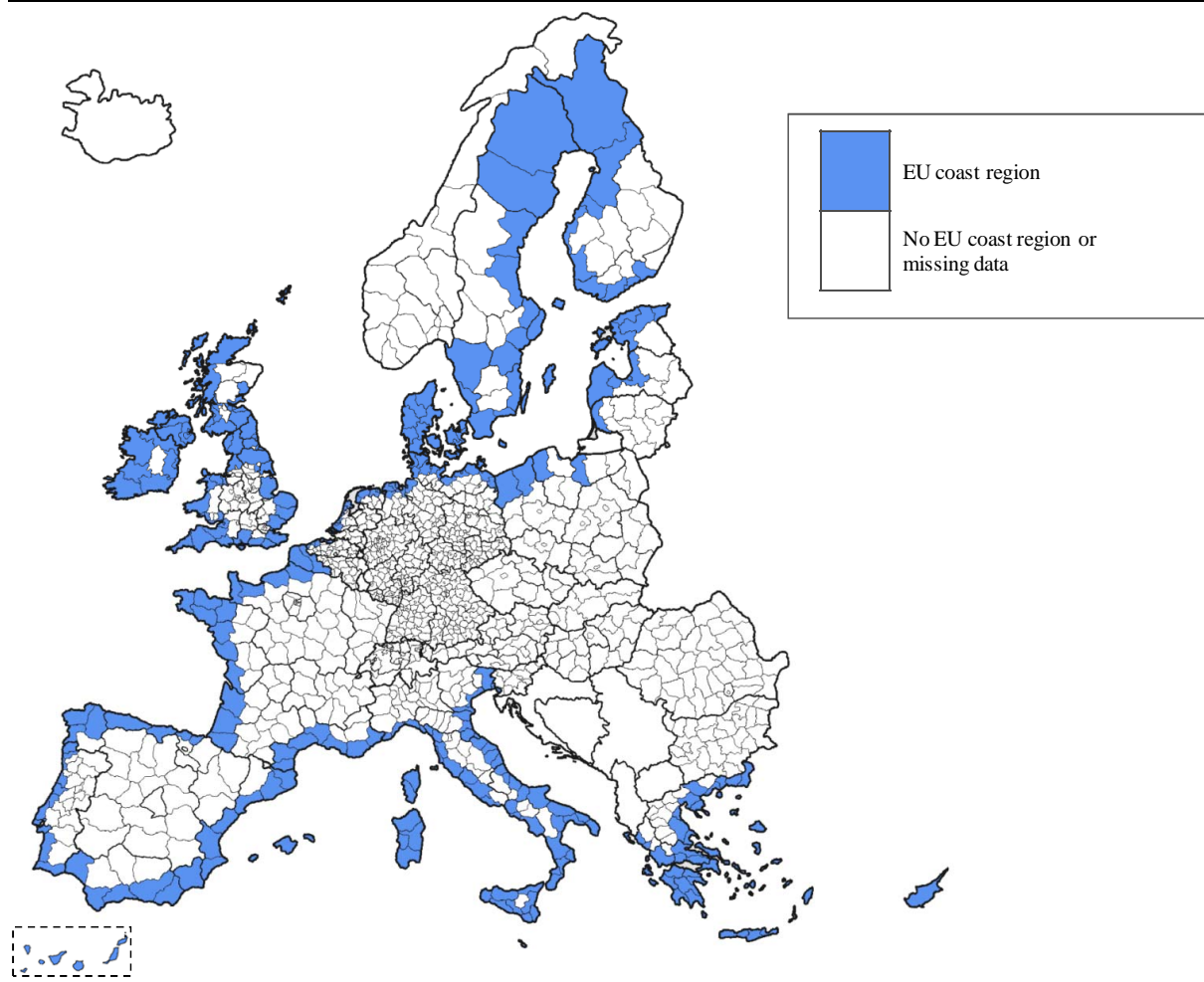
Source: Policy Research Corporation

In order to gain a realistic view of direct spending in these coastal regions, extensive research has been conducted on passenger, crew and cruise ship spending in ports and port regions. The main results will be discussed by category.

II.3.1.2. *Passenger expenditures: the typical cruise tourist*

The spending pattern of a cruise tourist is different from that of an ordinary tourist. The reasons for this phenomenon are twofold. First, a cruise passenger makes multiple visits to shore destinations on a cruise ship's itinerary. As a cruise ship provides the accommodation and related services (food and beverages) during the journey, the expenditures in a destination of visit are mainly driven by what the destination has to offer (sites, shops, etc). Second, at a certain point a cruise tourist needs to embark and disembark in a turnaround port. In destinations of (dis)embarkation a cruise tourist tends to spend a longer time in the area around the port, compared to transit calls. In fact, a significant percentage of these passengers tend to spend a night in a hotel in the port area[5], which significantly increases (and changes) the expenditures of a cruise tourist.

For the purposes of this study, the counting of passengers, and subsequently the calculations of economic impact, are based on the difference between visits that are part of a ship's itinerary (transit passenger visits) and visits for (dis)embarkation (turnaround passenger visits). In the following paragraphs a distinction is made between these two types of visits in order to identify detailed spending patterns per visit category.

a/ *Transit passenger visits*

Transit passenger visits onshore tend to last eight hours[6]. In order to make this relatively short visit beneficial for sightseeing, many cruise tourists take part in organised shore tours. Based on a study by G.P. Wild and BREA[7], the percentage of passengers participating in an organised tour is assumed to be 65%. Moreover, it is assumed that around 80% will pay for the tour on the ship, while 20% pay for the tour onshore. This has consequences for expenditures, since tours that are prebooked on a cruise ship tend to be more expensive (by around 50%). Taking these distinctions into account, it is possible to calculate a weighted average of the expenditures on tours for all transit passengers (that go onshore) (see *Table II.1)*.

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[5]   According to a study by CLIA (2006), 40% of cruise passengers in the U.S. spend one or more nights in the port city/area before or after the cruise

[6]   Source: *Policy Research Corporation* (based on own calculation in Task I)

[7]   Contribution of Cruise Tourism to the Economies of Europe (G.P. Wild and BREA, 2009), prepared for the European Cruise Council and Euroyards

Table II.1 : Expenditures per disembarking transit passenger (in €)

Expenditure category	Participate in organised tour	Do not participate in organised tour	Weighted average
Tours and entrance fees	30	10	23
Food and beverages	10	10	10
Shopping	15	15	15
Transportation	0	5	2
Port fees	5	5	5
Other	5	5	5
Total	*65*	*50*	*60*

Source: Policy Research Corporation

Total expenditures and expenditures per category are based on several studies[8] conducted by individual port authorities and the organisations representing them. Various studies show an average spending of around 50 to 70 euro, but they also show significant variation in levels of spending. In order to assess the most likely spending behaviour, the expenditure categories were therefore approximated within the limits of 50 to 70 euro. Research shows an average expenditure of 30 euro for a tour. The main spending categories are tours, shopping, and food and beverages. The amount of port fees (tourist tax) is based on the average of a sample of ports[9].

With regard to the differences between the passengers who go on a tour and those who do not, the following points should be clarified. When a cruise tourist participates in an organised tour, an average price of 30 euro is assumed (this figure takes account of the difference between prices on the ship and prices onshore). When passengers choose not to go on an organised tour, an expenditure of 10 euro is assumed, which will consist primarily of entrance fees to attractions such as museums or historical buildings. Transportation costs also differ because transportation is included in an organised tour, whereas this is not the case when cruise tourists are visiting the area on their own. For those who visit an area/city on their own, an expenditure of 5 euro is assumed for public transport and/or taxis.

By taking the weighted average of these two groups, the result is an average expenditure of 60 euro by passengers that disembark.

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[8] Amongst others: BREA, The Contribution of the North American Cruise Industry to the U.S. Economy in 2007, 2009; BREA, The Economic Contribution of the International Cruise Industry in Canada 2007, 2009; Horwath Consulting, The Impact of Cruise Tourism to Oslo 2006, 2007; MarketQuest, Economic Impact of the Cruise Industry in Atlantic Canada ,2003; BREA, Economic Contribution of Cruise Tourism to the Caribbean Economy, 2006; Mc Kenzie Wilson, Economic Impact North East England, 2004; Lisbon Port, Questionnaire to International Cruise Passengers, 2007; TCC International and Roger Tyme & Partners, Southampton Cruise Tourism,2005; Incentive Partners, Cruise Baltic Market Review 2008, 2008

[9] Amsterdam, Barcelona, Civitiaveccia, Lisbon, Mykonos, Piraeus, Southampton, Rotterdam, Venice

II.3.1.3. Turnaround passenger visits

The studies that were used to determine transit expenditures show that the average expenditure per turnaround passenger visit is around 100 euro, but here too the results vary significantly. In order to obtain a reliable overview of the expenditures, the same methodology was used as for the calculation of transit passengers, which means that an assessment is made of the different expenditure categories (based on studies conducted by individual port authorities), while bearing in mind that the average expenditures per turnaround passenger are around 100 euro.

As explained in the introduction to this section, the main difference in expenditures between turnaround passengers is the duration of stay in the port area/city. For this study, it is assumed that 40% of turnaround passengers book a hotel[10] and stay one night in the port city/area. Regarding hotel expenditures, a total price of 70 euro per person is assumed. This price is based on the average price of a three-star hotel room in EU countries with cruise tourism[11]. Spending a night in a hotel also affects the other expenditure categories, since these cruise tourists have more time to visit the city/area. Food and beverages and shopping, in particular, are expected to have higher economic impacts when visiting the area for a longer period. Because differences in transportation costs are difficult to assess, no distinction is made for this category. Port fees per embarkation or disembarkation are set at 5 euro. The total weighted average leads to an amount of 95 euro per turnaround passenger, which is similar to the outcomes of the studies that were reviewed.

Table II.2: Expenditures per embarking or disembarking turnaround passenger (in €)

Expenditure category	Overnight stay	No overnight stay	Weighted average
Tours and entrance fees	15	5	9
Food and beverages	35	5	17
Shopping	20	5	11
Transportation and parking fees	20	20	20
Hotels	70	0	28
Port fees	5	5	5
Other	5	5	5
Total	*170*	*45*	*95*

Source: Policy Research Corporation

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[10] According to a study by CLIA (2006), 40% of cruise passengers in the U.S. spend one or more nights in the port city/area before or after the cruise

[11] Due to the higher variation in four and five star hotel prices, three star hotels are used for calculation; the website www.hotelpricebot.com was used to find hotel prices.

II.3.1.4. Crew expenditures – transit and turnaround visits

On average, a cruise ship has one crew member for every two to three passengers[12]. Every time a cruise ship berths in a port, a significant proportion of the crew will disembark the ship to visit a destination[13]. Crew members that visit a destination also spend money, which makes it interesting to include these types of expenditures in this study.

Available studies on crew expenditures show considerable differences, but on average such expenditures amount to 25 euro per disembarking crew member on a transit call[14]. It is assumed that, on average, 50% of the crew disembarks during a transit call. The same amount (25 euro) is chosen as the amount of expenditures on turnaround calls. There is no intuitive reason why crew should spend more during turnaround calls than during transit calls, except for the fact that an average turnaround visit is a couple of hours longer.

Regarding the division of the expenditures, the same studies suggest the following breakdown: shopping (50%), food and beverages (40%) and transportation (10%).

II.3.1.5. Ship expenditures– transit and turnaround visits

When a ship calls in a port, it has to pay fees and handling costs. These include pilotage, (un)mooring, towage, harbour dues, luggage handling, water supply, waste removal and light dues; (terminal costs are included in the port fees under passenger expenditures). In order to calculate the costs for a ship when entering a port, a sample is taken of several European ports: Civitavecchia, Venice, Amsterdam, Piraeus, Mykonos, Barcelona, Lisbon, Southampton and Rotterdam[15].

Costs per port vary according to the ship's size (in terms of GT or passengers) and whether it is a transit or a turnaround call. These variables are also taken into account in order to calculate the ship expenditures. Since waste removal and water supply services are not used in every port, these costs are not taken into account in the calculation of average port costs. Furthermore, because port fees for passengers are included in the calculation of passenger spending, these costs were also excluded. Average values were extrapolated by comparing the port costs, although the port costs varied significantly between ports as they are affected by variables such as the proximity to the sea.

In the next step a formula was devised to calculate the port costs for each individual ship. This was done by dividing the costs per port (per passenger category) by the number of passengers per category, for both transit and turnaround calls. The outcomes per port are fairly similar. For transit

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[12] Source: *Policy Research Corporation*, based on data acquisition by *Policy Research Corporation* and validation by the industry

[13] Source: field visits *Policy Research Corporation*: interviews with ports, cruise lines and visit to Costa Serena

[14] Amongst others: BREA, The Contribution of the North American Cruise Industry to the U.S. Economy in 2007, 2009; BREA, The Economic Contribution of the International Cruise Industry in Canada 2007, BREA, 2009; Horwath Consulting , The Impact of Cruise Tourism to Oslo 2006 , 2007

[15] Data provided by a shipping agent., December 2008

calls the average costs per ship are 6 euro per passenger, while for turnaround calls the costs are around 24 euro per passenger. For turnaround passengers, the embarking and disembarking costs (i.e. luggage handling) are included, which gives the amount of 24 euro per passenger. For example, a ship with 2000 passengers has expenditures of 2000 * 24 euro (2000 disembarking passengers and 2000 embarking passengers). Based on these two outcomes, it is possible to calculate the individual ship expenditures per port.

II.3.2. *FROM EXPENDITURES TO ECONOMIC IMPACT*

In *Paragraph II.2* it was explained that economic impact is the sum of value added generated by industries that are affected directly or indirectly by cruise tourism. The value added per euro spent differs significantly per industry and per EU Member State, as there are different price, wage and industrial production levels within the European Union. Therefore, Input-Output tables[16] have been constructed which reflect the flows (intermediary purchases) between industries, as well as the value added that is created per industry, for each EU Member State.

For every industry (in which money is spent by tourists, crew or cruise ships) the value added per euro spent was calculated by EU Member State[17]. These percentages were used to assess the direct economic impact per industry. In order to assess the indirect economic impact the same steps were repeated for every industry in which money is spent by the suppliers of these industries.

Employment effects

To calculate the number of jobs generated by cruise tourism, the following approach was used: for every industry (per EU Member State), the average value added per employee in an industry (value added per industry divided by the number of people employed full time in that industry) was calculated. By dividing the value added per industry by the value added per employee in that industry, the number of full time jobs created was calculated.

II.3.3. *LEVELS OF DIFFERENTIATION FOR ASSESSING ECONOMIC IMPACT*

The previous paragraphs explained how direct spending in cruise tourism regions could be computed by taking the average expenditures of passengers, crew and ships. Although this is the only valid and reliable method for a study on this scale, the question that remains is whether it is justifiable to allocate the same level of expenditures per passenger to all destinations. There are two important aspects that need to be considered here, namely that:

- The level of tourist expenditures varies across regions;
- Not all expenditures end up in the immediate area of the port.

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[16] Input-Output tables for the members of OECD 2006, provided by the OECD

First of all, the level of tourist expenditures differs at a regional level. A typical tourist visiting Venice or Rome is likely to spend more than in Savona or Genoa, even though these are all cities in Italian coastal regions. There are several explanations for this difference. On the one hand, hotels, restaurants and shops tend to be more expensive in highly popular destinations, as demand will drive up prices. On the other hand, the duration of the visit and the number of spending opportunities tend to be positively correlated to the popularity of the destination, reflecting a higher spending pattern for more popular destinations. Several studies (Walker, Greiner, McDonald & Lyne, 1998)[18] have observed significant differences in spending patterns across destinations and indeed have pointed to a positive relationship between the attractiveness of the destination to tourists and what they spend. Therefore, for the purposes of this study, a regional pricing factor was included as a factor that influences the level of tourist expenditure in a region.

In addition, in order to compute the economic impact on a regional level more accurately, a second factor needed to be incorporated in the model: the impact allocation factor. Cruise ships that berth in a certain port may do so because of a tourist attraction that is situated outside the port's immediate surrounding area. This means that, from the port area's perspective, direct spending - and thus economic impact - will be limited. A typical example is Civitavecchia, which primarily serves as the port of Rome. The vast majority of passenger expenditures end up in Rome instead of in Civitavecchia or its immediate surroundings[19]. Omitting an impact allocation factor in the model would therefore result in a misallocation of economic impact in coastal regions. Hence, in order for this study to be accurate, the impact allocation factor was included in the model.

II.3.4. REGIONAL PRICING FACTOR

In order to assess the impact of regional pricing on tourist expenditures, the following approach was used. As explained above, tourist attractiveness is the main driver of differences in tourist spending across regions. The attractiveness of a destination to tourists undoubtedly leads to the development of a tourist industry, which includes the emergence of hotels, restaurants, bars, shops, etc. By definition, tourist beds serve as the prime residences for tourists, and thus the number of tourist beds within a given region provides a reliable approximation of the region's tourist attractiveness. Therefore, the total number of tourist beds for every NUTS 3 coastal region was collected by using Eurostat (2006). To make the data suitable for further analysis, these numbers were then divided by the surface (in square kilometres) of the corresponding areas, to give the density of tourist beds per square kilometre for each area.

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[18] Walker, P.A., Greiner, R., McDonald, D. and Lyne, V. (1998); *The Tourism Futures Simulator. A systems thinking approach. Environmental Modelling & Software*, 14: 59-67
[19] Although Civitavecchia and Rome are situated in the same NUTS 3 region, this example clearly illustrates the need for a factor that addresses the degree to which the amount of expenditures ends up in the port and/or its direct surroundings.

Subsequently, these values were categorised into five classes, where the highest class represents those regions with the highest tourist bed density. Equally, regions ranked as 5th class have the highest regional pricing factor. This classification is mapped in *Figure II.3*.

Figure II.3 : Tourist bed density per NUTS 3 coastal region
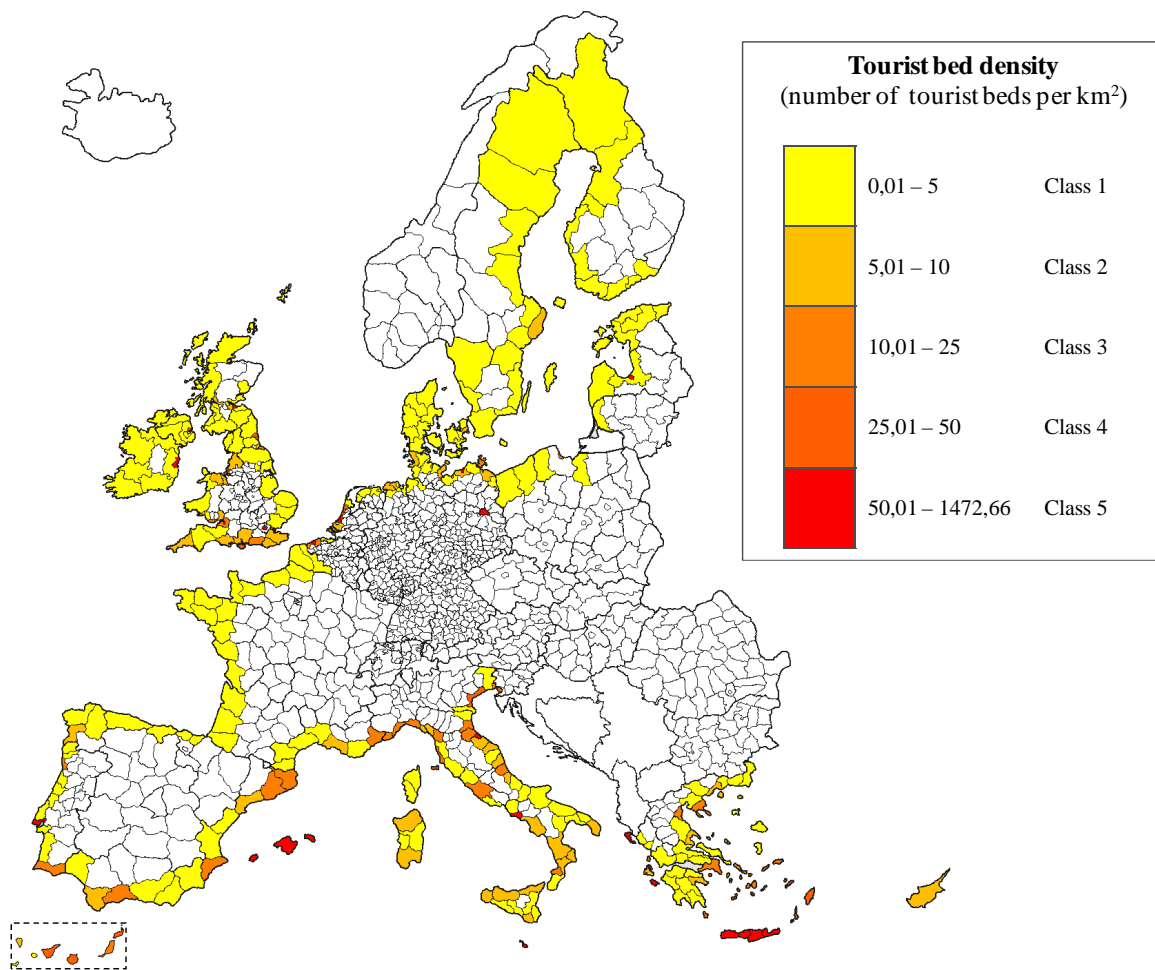
Source: Policy Research Corporation

Using this classification, additional research was conducted to assess the differences in the prices of hotel rooms between these classes. For each class a demographically representative sample of hotels[20] was taken and used to calculate the average hotel room price in that class. As expected, the calculation revealed a positive relationship between tourist attractiveness and hotel prices. Consequently, the overall average hotel price for an EU coastal region was calculated and an index was computed for each class. *Table II.3* shows the indices for the five classes based upon their respective attractiveness to tourists. These indices will subsequently be used to make more accurate approximations of the

tourist expenditures in these ports. Since it can be argued that disembarking crew members can also be regarded as tourists to some degree, crew expenditures will also be corrected by applying the regional pricing factor.

Table II.3 :   Hotel Price Index (HPI) for five classes of tourist attractiveness

Category	Hotel Price Index (HPI) (€70 = 100)
Class 1	73
Class 2	94
Class 3	109
Class 4	111
Class 5	121

Source: Policy Research Corporation

It can be seen from *Table II.3* that the average price of a hotel room in a region that is highly attractive to tourists (class 5) is 21% higher than the average price of a hotel room in a coastal region of the EU. Venice is an example of such a region. The average hotel room price in the least tourist-attractive region (class 1) is 27% lower than the EU average. These indices are suitable factors to add or subtract economic value to/from regions with higher/lower tourist attractiveness (but they do need to be validated on the basis of the region in which the individual port is situated). In the remainder of this study, five port regions are used as case studies to investigate the effects of the two differentiation factors that were elaborated in this paragraph. Based upon these findings and the assumptions made, Barcelona and Warnemünde have been classified in the fourth category, and Civitavecchia and Zeebrugge in the third, while Dover is placed in the second category.

II.3.5. *IMPACT ALLOCATION FACTOR*

a/ Tourist expenditures

The impact allocation factor is another important element in calculating the economic impact on a region because it assesses the degree to which tourist expenditures end up in the immediate surroundings of the port. In the introduction to this paragraph the case of Civitavecchia was already highlighted as a typical example of a popular port with a relatively low economic impact for the port itself.

To quantify the impact allocation factor, two aspects need to be considered. First of all, there are multiple destinations that cruise tourists can visit if a ship berths in a certain port. For five case

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[20] Large sample of three star hotels across cities in different EU Member States; the reason for three star hotels is the relatively high variation in the prices for four and five star hotels

studies[21], the main tourist destinations were divided into one primary and (multiple) secondary destinations. This division, together with the corresponding distances from the five cruise ports, is shown in *Table II.4*. The absolute distance to the tourist destinations is considered to be relevant as it determines to what extent the economic impact from cruise tourists stays in the port area or ends up in other regions.

In the remainder of this paragraph, a tourist attraction will be assumed to be situated inside the port area if the absolute distance from the port is less than 15 km.

Table II.4 : Absolute distances to the main tourist destinations for five case studies

Port	Primary destination	Secondary destination	Distance to primary destination	Distance to secondary destination
Barcelona	Barcelona	-	<1 km	-
Civitavecchia	Rome	-	80 km*	-
Dover	London	Canterbury, Dover surroundings	80 km*	< 15 km
Warnemünde	Berlin	Warnemünde region	250 km*	< 15 km
Zeebrugge	Brugge	Antwerp, Brussels	< 10 km	100 km

* Situated outside the range of 15 km from the port and therefore not further considered as it does result in direct economic impact for the port's region

Source: Policy Research Corporation

Secondly, information is needed about the share of cruise passengers that actually undertake visits to tourist attractions which are considered to be situated inside the port area. This information was collected during the field visits that were conducted by *Policy Research* and can be found in *Table II.5*.

The city of Civitavecchia has no economic impact from passenger expenditures, since all disembarking transit passengers go to Rome, and turnaround passengers do not stay in Civitavecchia either. In Dover, two-thirds of the transit passengers stay in the region; in the case of turnaround passengers it is assumed that none of them stay in the region. In Barcelona all cruise tourists stay in the region; in Warnemünde one-third of the passengers visit Berlin and the other two thirds stay in the region. Because Brugge is close to Zeebrugge, the majority of the cruise tourists (80%) stay in the region.

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[21]   This report uses five case studies: the ports of Barcelona, Civitavecchia, Dover, Warnemünde, Zeebrugge

Table II.5 : Impact allocation factor of tourist expenditures for five case studies

Port	Destination in direct area (<15 km from port)	% of cruise tourists
Barcelona	Barcelona	100%
Civitavecchia	-	0%
Dover	Canterbury, Dover surroundings	67%*
Warnemünde	Warnemünde region	67%
Zeebrugge	Brugge	80%

* Considered transit passengers only

Source: Policy Research Corporation

b/ Crew expenditures

In addition to passenger expenditures, crew expenditures can also be corrected using an impact allocation factor. When a ship berths in a certain area, around 50% of the cruise personnel disembark and spend their spare time onshore. Since the time available for the crew members is typically less than for passengers, another index was used. In the remainder of this paragraph, it has been assumed that an average ship crew member only undertakes a visit outside the port region if it is to a primary tourist destination that is accessible in less than one hour from the port. Destinations that are situated outside this range take up too much of the crew's spare time and therefore will not be considered. Based on this assumption, together with the findings of *Table II.4*, it could be deduced that it is only in the case of Civitavecchia that crew expenditures take place outside the port region (see *Table II.6*).

Table II.6 : Impact allocation factor of crew expenditures for five case studies

Port	Primary touristic destination	Relative distance from port	% of crew that stays in port 's area
Barcelona	Barcelona	Less than 10 minutes	100%
Civitavecchia	Rome	Around 1 hour	0%
Dover	London	Around 1,5 hour	100%
Warnemünde	Berlin	Around 2,5 hour	100%
Zeebrugge	Brugge	Around 0,5 hour	100%

Source: Policy Research Corporation

II.3.6. CONCLUSION

In this paragraph, two important extensions were added in order to enhance the accuracy of the model. First, a tourist attractiveness factor was included, as the attractiveness of a tourist destination positively influences the average level of tourist and crew expenditures. Also, a factor that assesses

the degree to which cruise tourists and crew members spend their money inside the port area was incorporated in the model, as this turned out to be a major determinant of the amount of regional economic impact generated by cruise tourism. The differentiation factors for these ports are summarised in *Table II.7*. On the basis of the aforementioned information, it was possible to make an approximation of regional economic impact for the regions of Barcelona, Civitavecchia, Dover, Warnemünde and Zeebrugge.

Table II.7 : Overview of the differentiation factors of five case studies

Port	Touristic attractivity factor (as index numbers)			Impact allocation factor		
	For tourist expenditures	For crew expenditures	For ship expenditures	For tourist expenditures	For crew expenditures	For ship expenditures
Barcelona	111	111	100	100%	100%	100%
Civitavecchia	109	109	100	0%	0%	100%
Dover	94	94	100	67%	100%	100%
Warnemünde	111	111	100	66%	100%	100%
Zeebrugge	109	109	100	80%	100%	100%

Source: Policy Research Corporation

III. ECONOMIC IMPACT OF CRUISE TOURISM

As was illustrated in *Paragraph II.2* the direct economic impact is the value added of cruise tourism generated on purchases by tourists, crew members and cruise ships in port regions and/or tourist destinations. For the assessment of direct economic impact, the following approach was used. *Paragraphs III.1.1* to *III.1.3* inclusive are dedicated to the assessment of tourist spending, crew spending and cruise ship spending respectively. In *Paragraph III.2* an analysis has been made to convert the direct spending figures into value added in order to quantify the direct economic impact in coastal regions, by Member State and by sea basin. *Paragraph III.3* assesses the indirect economic impact generated by cruise tourism. The (indirect) creation of employment - an important effect of economic impact - has been incorporated in *Paragraph III.4*. An EU approach is followed in *Paragraph III.5* where the additional economic impact created by cruise tourism in Europe (shipbuilding, head offices) was included in the model. The final paragraph deals with regional differentiation factors. These regional differentiation factors have been constructed in such a way as to ensure that economic impact was correctly allocated within the coastal regions.

III.1.1. DIRECT TOURIST SPENDING

The expenditures of passengers in port areas were calculated per turnaround and transit visit. For transit calls the total number of transit passengers that go onshore was used. On average 75% of people disembark on a transit call[22]. When this percentage is taken into consideration, the number of passenger visits can be multiplied by the average expenditures per passenger in a transit port. *Figure III.1* shows the results for the 15 port regions with the highest transit expenditures. The regions of Naples and Civitavecchia are clearly the most important in terms of transit expenditures. However, these ports are primarily a gateway to the tourist hotspots of Pompeii and Rome respectively. The port cities themselves receive only a (minor) share of the passenger expenditures; the related economic impact must therefore be allocated to the tourist destinations. This is also the case for ports such as Livorno (Florence and Pisa) and Le Havre (Paris).

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[22] Based on memorandum from G.P. Wild & BREA (2009), including preliminary survey results of European ports

Figure III.1 :   Top 15 port regions based on transit passenger expenditures (in €)
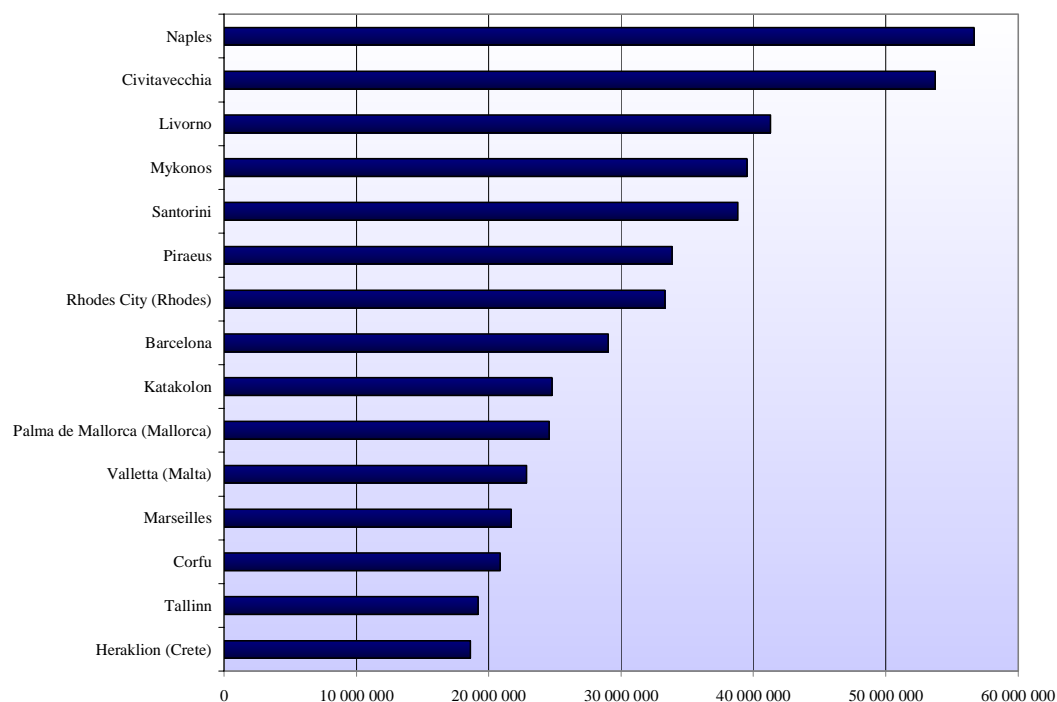
Source: Policy Research Corporation

An additional step was included in the calculation for turnaround passengers, because in the case of a turnaround call all tourists will disembark the ship. It is expected that people who embark and disembark in the same port will not spend their money twice in the same port city. In other words, passengers spend 95 euro (in total) during two visits to this port. On the other hand, when passengers disembark in a different port from their port of embarkation, they are likely to spend the same amount in both ports. So it is expected that they will spend 95 euro in the port of embarkation and 95 euro in the port of disembarkation. *Table III.2* shows the top 15 ports with the highest income from turnaround expenditures.

Figure III.2 :   Top 15 port regions based on turnaround passenger expenditures (in €)
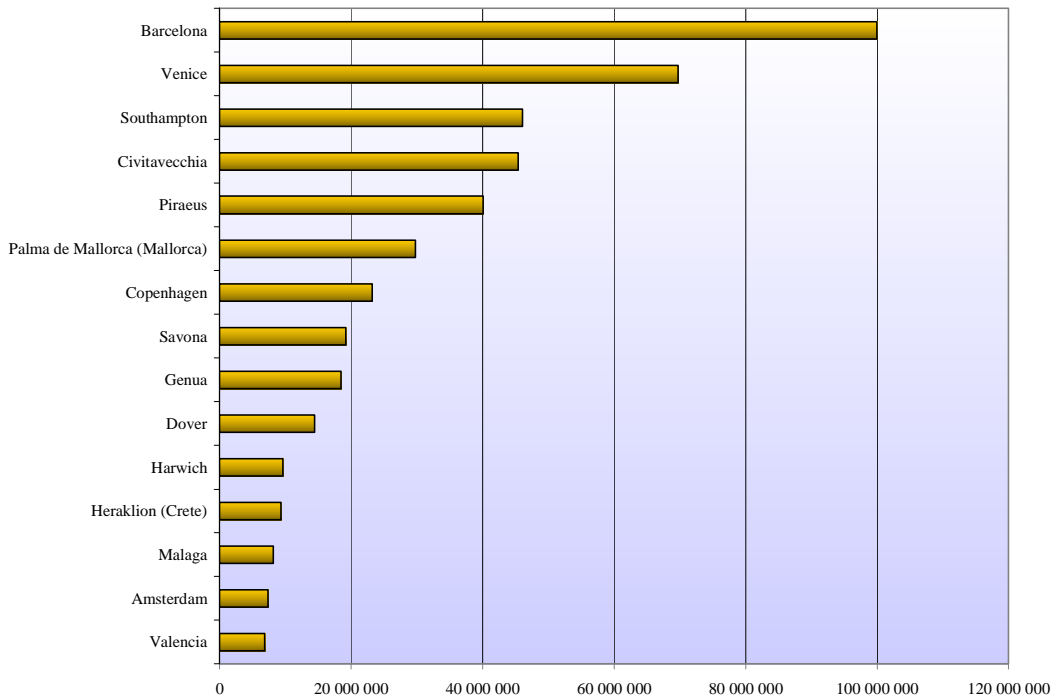
Source: Policy Research Corporation

By adding together the passenger expenditures for turnaround and transit, the total passenger expenditures per port were calculated. The results for the top 15 ports are shown in *Figure III.3*

Figure III.3 :   Top 15 port regions based on total passenger expenditures (in €)
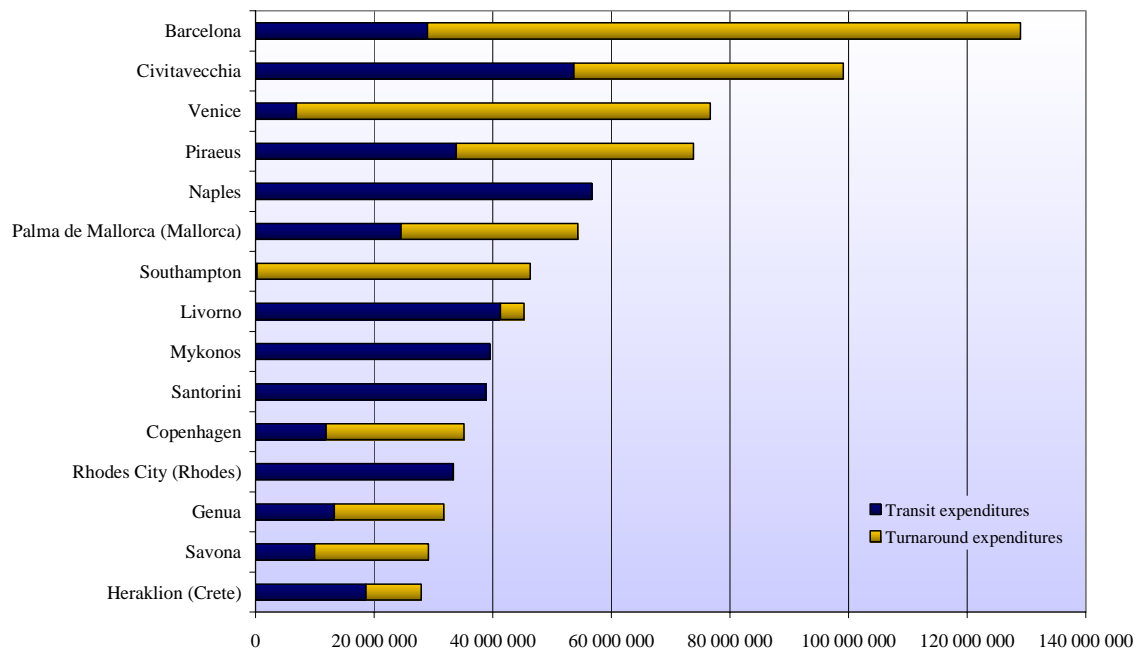
Source: Policy Research Corporation

III.1.2. CREW EXPENDITURES

The total expenditures of crew members in a port were calculated by multiplying the number of crew members that disembark in a transit port (50% of total crew) by 25 euro. The same calculation was made for the spending of crew members in turnaround ports. *Figure III.4* shows the total crew expenditures for the 15 ports with the highest crew expenditures.

Figure III.4 : Top 15 port regions based on total crew expenditures (in €)
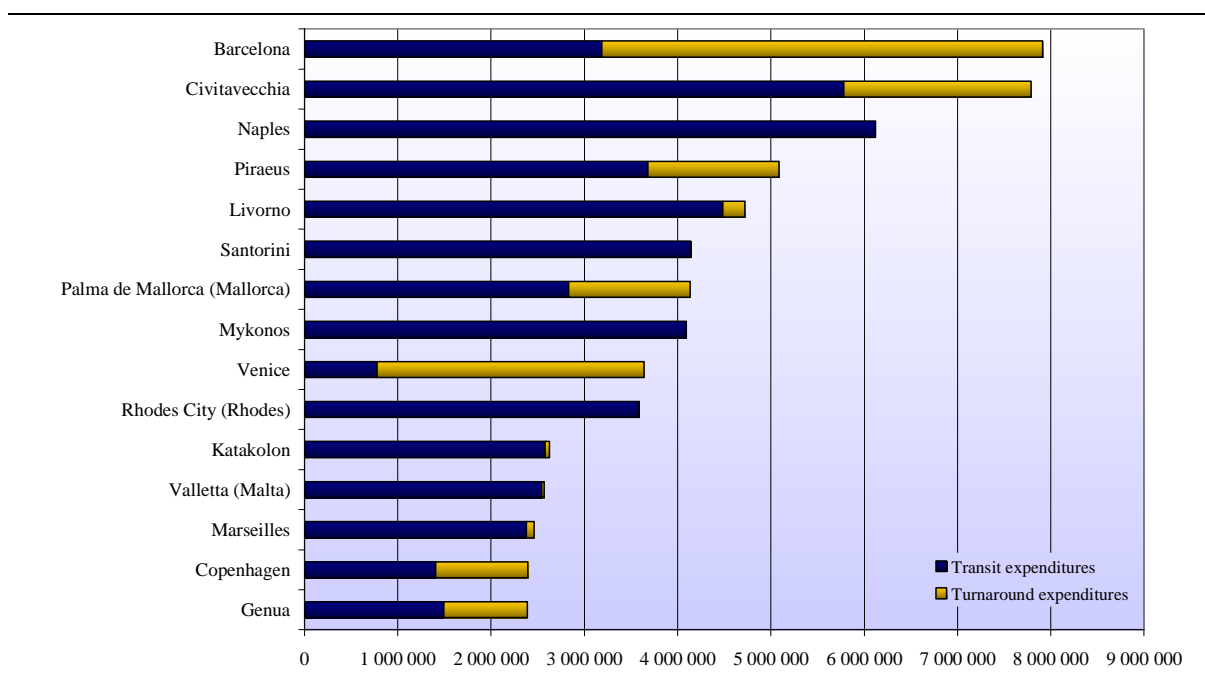
Source: Policy Research Corporation

III.1.3. SHIP EXPENDITURES

The amounts of 6 euro per passenger for transit calls and 24 euro per passenger for turnaround calls were used to calculate ship expenditures in the ports. The price difference between transit and turnaround is mainly due to luggage handling. For transit calls, no luggage handling is required, whereas for turnaround calls the luggage has to be handled twice (for disembarking and embarking passengers). Additional services such as water supply were not included in the calculation and therefore do not affect these figures. The results of this calculation are shown in *Figure III.5*.

Figure III.5 : Top 15 port regions based on cruise ship expenditures (in €)
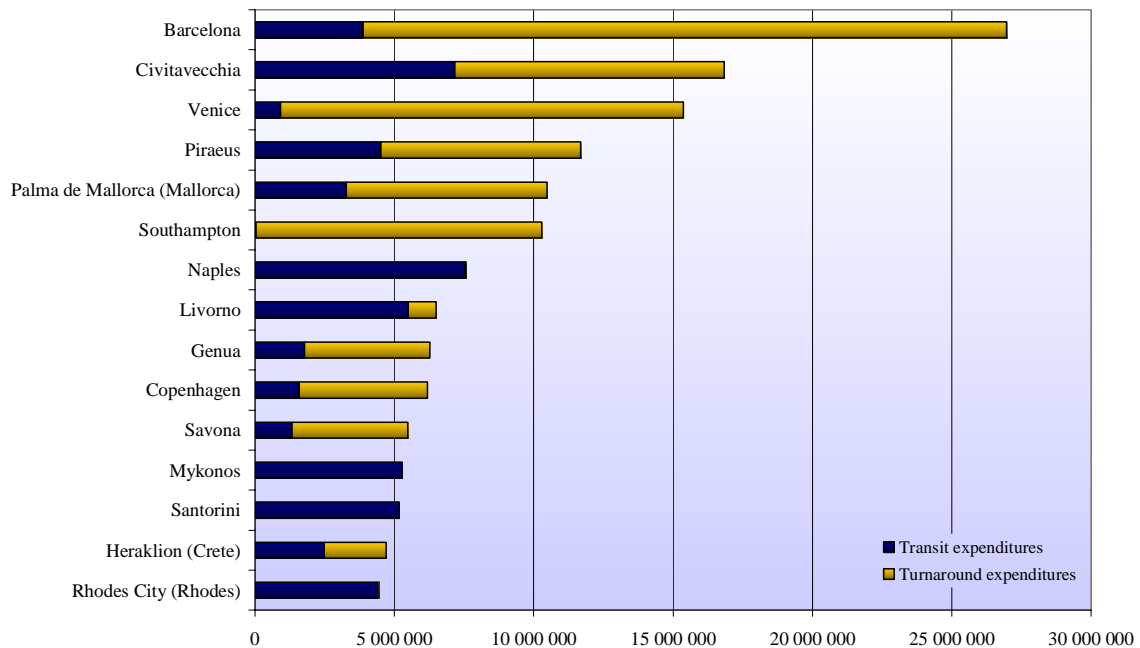
Source: Policy Research Corporation

III.2. DIRECT ECONOMIC IMPACT IN PORT REGIONS

The total expenditures were obtained by adding together the various sources of income for port regions. The result of this calculation for the top 15 ports is shown in *Figure III.6*. The largest cruise ports clearly have a significantly higher income from cruise tourism than the other ports in the top 15.

Figure III.7 illustrates the top 15 ports in terms of the direct value added from direct expenditures. This figure shows the different ranking and relative variations between ports. Barcelona is the port region with the highest value added by far, whereas Italian port regions seem to have lower value added on their sales, since several Italian port regions have a lower ranking than in *Figure III.6*. Greek port regions, on the other hand, have improved their position in this ranking. This change is the result of the differences between these countries in terms of the percentage of direct value added in the industries that are affected by cruise tourism.

Figure III.6 :   Top 15 port regions based on total expenditures from cruise tourism (in €)
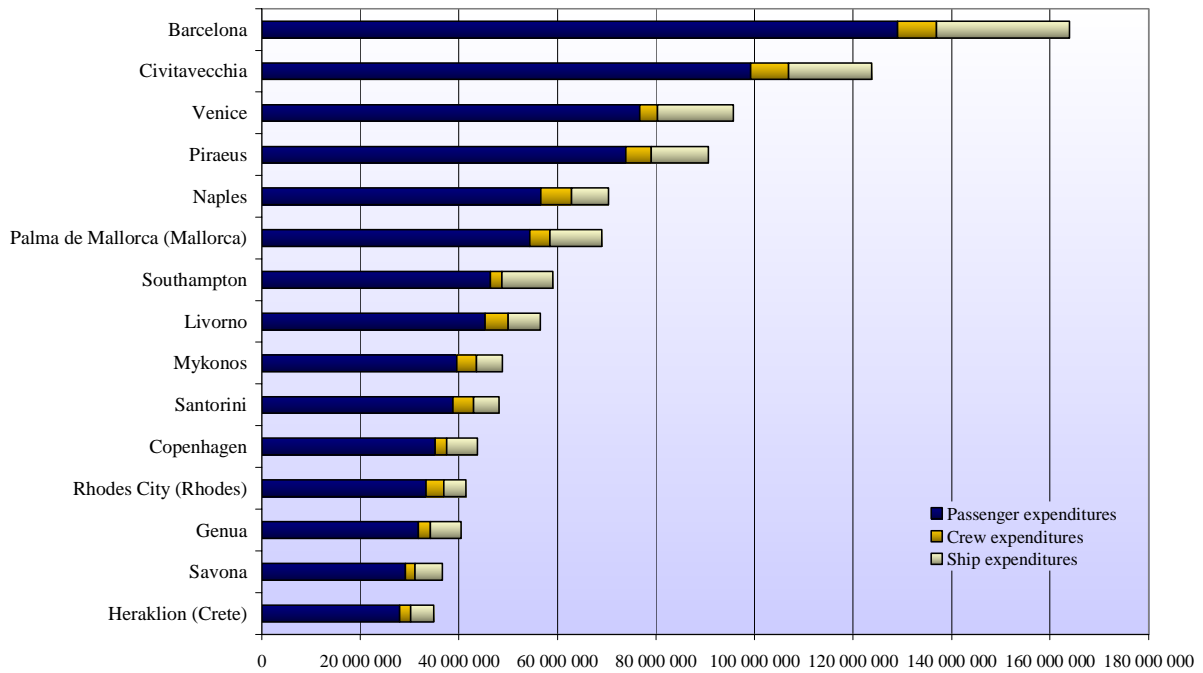
Source: Policy Research Corporation

Figure III.7 :   Top 15 port regions based on direct value added
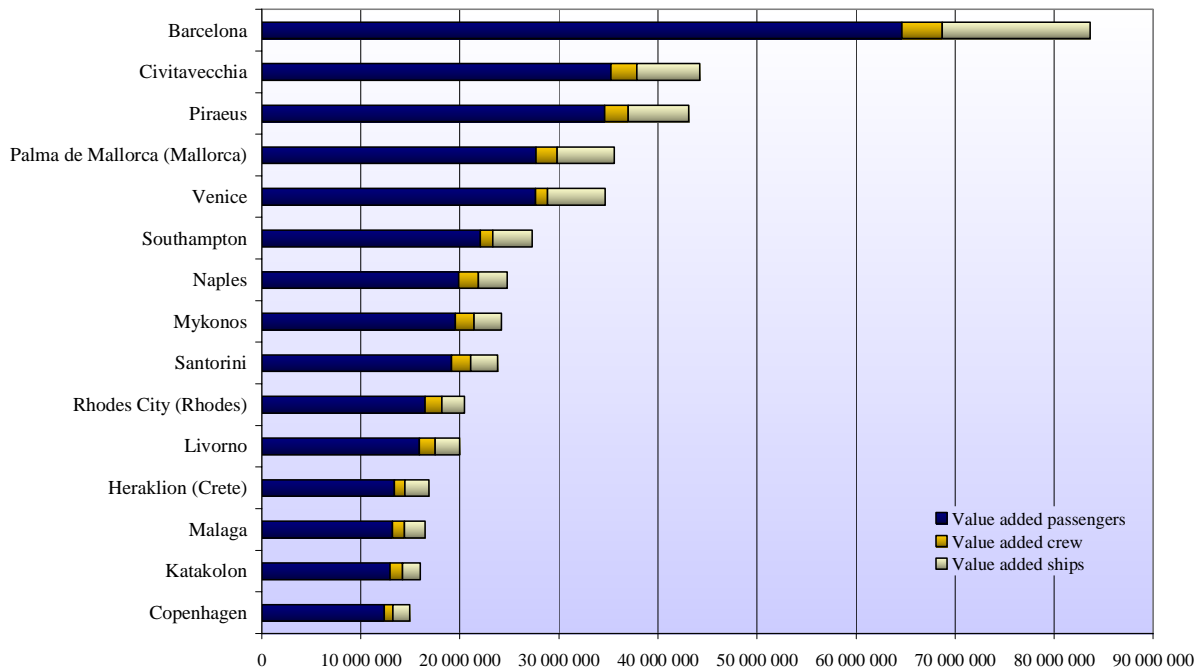
Source: Policy Research Corporation

Figure III.8 represents the effects of direct spending in the EU from the three sources (passengers, crew and ships). The left column shows the total *direct* expenditures, consisting of the three expenditure sources. The right column shows the direct value added from these expenditures.

Figure III.8 :   Total expenditures and value added in port regions (in million €)
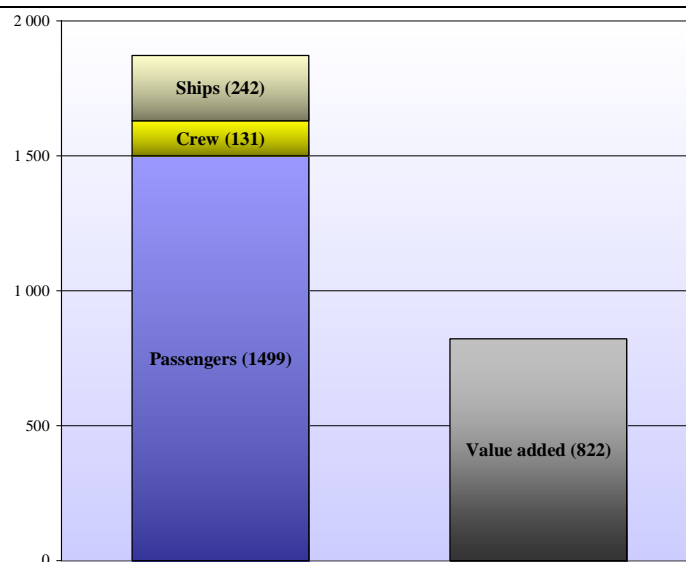
Source: Policy Research Corporation

In addition, the division of expenditures across sea basins, including the direct value added that results from these expenditures, provides an interesting analysis (see *Table III.1)*. The Mediterranean Sea is clearly the most important sea basin in terms of total expenditures and value added. This is reflected by the large percentage of passengers that visit EU ports in the Mediterranean region.

Table III.1 :   Expenditures of passengers, crew and ships per sea basin and value added of direct expenditures (in €)

Sea basin	Passengers	Crew	Ships	Total expenditures	Total direct value added
Baltic Sea	146 700 305	13 243 519	23 087 508	183 031 332	73 280 692
North Sea	103 520 315	6 759 881	20 851 956	131 132 152	58 909 502
Atlantic Ocean	139 445 485	13 931 319	19 548 714	172 925 518	81 674 312
Mediterranean Sea	1 107 940 455	97 109 569	178 298 112	1 383 348 136	607 395 479
Black Sea	1 372 935	188 838	182 778	1 744 551	696 875
Total	*1 498 979 495*	*131 233 125*	*241 969 068*	*1 872 181 688*	*821 956 861*

Source: Policy Research Corporation

It is also interesting to analyse the spending per expenditure category for each country. The resulting table is shown in *Table III.2*[23]. Italy is the country with the highest income from cruise tourism for all income categories, followed by Spain and Greece.

When looking at the figures for value added, the countries appear in a different order. Spain has the highest value added, followed by Italy and Greece. The lower position for Italy in terms of value added corresponds with what was said about the results for Italian ports shown in *Figure III.7*.

Table III.2 : **Income from cruise tourism per expenditure category per country and direct value added per country (in €)**

Country	Tours & entrance fees	Food & beverages	Shopping	Transportation	Hotels	Port fees	Other	Shipping expenditures	Total expenditures	Direct value added
Belgium	1 583 784	900 862	1 298 228	173 570	0	344 301	344 301	548 586	5 193 631	1 789 264
Bulgaria	325 955	195 506	275 097	44 986	11 760	72 138	72 138	116 634	1 114 214	452 659
Cyprus	2 185 118	1 590 010	1 907 546	779 878	791 700	561 080	561 080	1 263 462	9 639 875	4 652 951
Denmark	8 231 936	7 931 741	8 049 175	5 658 519	6 883 324	2 537 739	2 537 739	6 702 738	48 532 909	16 472 774
Estonia	7 388 220	4 112 294	5 943 435	787 153	0	1 606 135	1 606 135	2 559 108	24 002 481	8 228 995
Finland	6 217 869	4 092 533	5 273 416	1 560 671	1 292 004	1 492 146	1 492 146	2 616 840	24 037 625	9 773 000
France	36 367 547	20 694 895	29 276 604	4 766 560	1 359 092	8 053 716	8 053 716	13 273 932	121 846 062	51 992 922
Germany	6 770 587	6 577 011	6 629 848	4 748 901	5 803 728	2 102 707	2 102 707	5 924 598	40 660 086	21 523 704
Greece	96 233 747	59 894 855	79 126 975	20 697 063	15 465 436	22 601 406	22 601 406	41 534 316	358 155 204	174 917 786
Ireland	3 014 757	1 820 199	2 506 332	494 781	240 912	681 568	681 568	1 120 668	10 560 786	5 801 055
Italy	120 406 708	88 993 679	105 582 103	45 109 701	46 751 236	31 257 027	31 257 027	70 638 060	539 995 543	192 300 445
Latvia	927 273	518 607	749 050	99 415	0	201 581	201 581	321 186	3 018 694	1 401 947
Lithuania	598 776	342 097	492 706	65 999	0	130 169	130 169	207 402	1 967 317	747 838
Malta	8 852 224	4 964 158	7 091 257	1 061 171	189 868	1 945 034	1 945 034	3 127 386	29 176 132	14 405 804
Poland	2 387 261	1 345 269	1 923 105	284 141	44 800	523 839	523 839	841 104	7 873 359	2 831 206
Portugal	13 596 214	8 373 651	11 195 292	2 721 153	1 869 336	3 158 887	3 158 887	5 305 830	49 379 251	19 539 032
Romania	190 960	110 271	158 595	21 341	0	41 513	41 513	66 144	630 337	244 216
Slovenia	256 160	150 989	216 580	29 394	0	55 687	55 687	88 728	853 226	337 925
Spain	82 132 777	68 374 829	75 574 696	41 308 265	46 934 860	22 956 567	22 956 567	59 523 474	419 762 034	217 373 594
Sweden	8 508 225	5 585 716	7 210 923	2 113 506	1 735 692	2 038 276	2 038 276	3 945 828	33 176 443	12 426 796
The Netherlands	2 540 890	2 726 768	2 618 813	2 121 748	2 657 872	841 266	841 266	2 429 742	16 778 366	6 795 135
United Kingdom	15 631 582	20 166 142	17 675 808	17 721 442	23 019 304	5 900 268	5 900 268	19 813 302	125 828 117	57 947 813

Source: Policy Research Corporation

III.3.   INDIRECT ECONOMIC IMPACT OF CRUISE TOURISM

Cruise tourism does not only have a direct economic impact; it also has a significant indirect economic impact. Indirect economic impact is generated through the supplies that the seller of the final good/service needs. These supplies come both from the same industry and from other industries in the economy. As was explained in *Paragraph II.2,* the indirect impacts of an industry on other industries can be calculated using input-output tables. By performing several calculations on an original input-output table[24], tables were generated that show the level of additional spending in other

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[23]   The category 'ship expenses' consists of all the expenditures of ships when they call in a port. These costs are not divided over expenditure categories, since this information is not available. The other expenditure categories in the table are based on the total direct spending of passengers and crew members.

[24]   OECD input-output tables 2006

industries when one euro is spent in a particular industry. This table contains multipliers for each industry showing the economic effects generated by one euro of investment in a given industry.

By applying this methodology to the direct economic spending of cruise tourism, it was possible to calculate the indirect economic spending of cruise tourism. Subsequently, the expenditure categories were spread out across the economic industries in order to obtain the right multiplier. This multiplier was then used to calculate indirect economic spending. For example, shopping comes under the heading of 'retail' industry. The 'retail' multiplier was then used to calculate the indirect economic spending generated by shopping expenditures. Furthermore, in order to assess the true economic impact, indirect spending was converted into value added.

The indirect economic impact is only attributable to Member States and not to regions, because no information was available on the extent to which the additional expenditures will end up in the region. The indirect economic impact is illustrated in *Table III.3*.

Table III.3 :   Indirect value added per country (in €)

Country	Indirect value added
Belgium	1 250 238
Bulgaria	181 813
Cyprus	2 039 504
Denmark	11 702 643
Estonia	7 354 532
Finland	4 849 715
France	31 644 874
Germany	14 195 697
Greece	73 995 796
Ireland	2 501 884
Italy	146 861 932
Latvia	1 192 459
Lithuania	649 858
Malta	5 899 966
Poland	2 134 660
Portugal	11 636 066
Romania	163 440
Slovenia	147 250
Spain	153 229 850
Sweden	10 634 069
The Netherlands	2 771 814
United Kingdom	41 836 913

Source: Policy Research Corporation

Because indirect effects can only be attributed to countries, it was not possible to calculate the indirect effects per sea basin. This is due to the fact that several countries have ports in different sea basins.

III.4.   EMPLOYMENT EFFECTS

In addition to direct and indirect expenditures, cruise tourism also leads to the creation of employment effects. The generation of employment as a result of cruise tourism is driven by the employment effects from both direct and indirect expenditures. Direct employment effects are calculated for each port region by dividing the total value added in an industry in the port region by the value added per employee in that particular industry (per country). The employment effects from indirect expenditures were calculated for the whole country, since they could not be measured on a local scale (port region). For the purposes of this calculation the indirect value added of the total expenditures per industry/per country was calculated and divided by the value added per employee in that specific industry in a country. *Figure III.9* illustrates the employment generation resulting from direct expenditures and indirect expenditures. The figure shows the importance of the cruise industry for Greece, Spain and Italy in terms of the jobs created.

Figure III.9 :   Employment effects of cruise tourism (in full time equivalents)
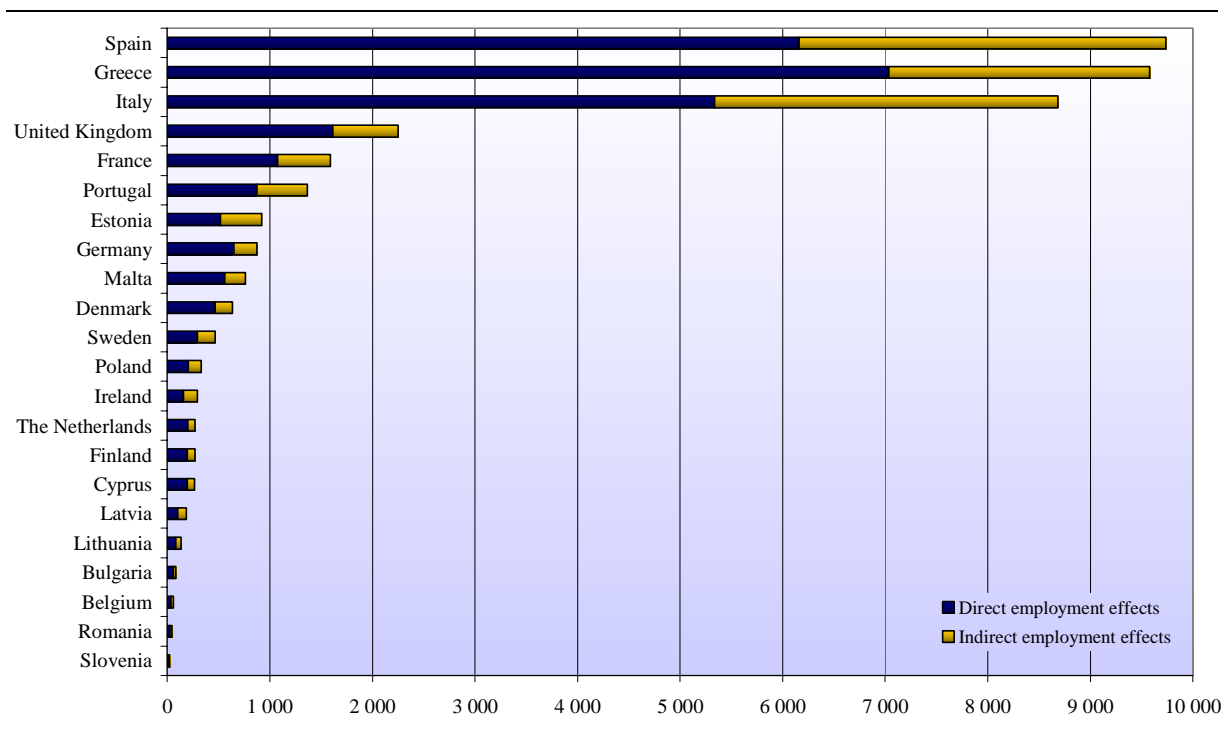
Source: Policy Research Corporation

III.5. ECONOMIC IMPACT AT EU-LEVEL

The aggregated data for cruise tourism expenditures and value added in ports are illustrated in *Table III.4*. As well as the expenditures in ports, expenditures in the shipbuilding sector and the payments to cruise lines for their offices (wages) were also included in the calculation of the total expenditures.

Table III.4 : Expenditures and economic impact of cruise tourism on EU level per year

Determinants of cruise expenditures	Direct expenditures	Economic impact					
		Direct value added	Indirect value added	Total value added	Direct employment	Indirect employment	Total employment
Cruise expenditures	**1 872 181 688**	821 956 861	526 874 974	1 348 831 835	25 867	12 957	38 824
Shipbuilding	5 191 000 000***	1 371 000 000*	1 495 000 000**	1 146 068 466	37 000***		37 000
Cruise line offices and crew	1 150 000 000**	****	****	****	55 000***		55 000
Total	*8 213 181 688*	*-*	*-*	*-*	*117 867*	*-*	*130 824*

*   *Based on the value added percentage of the manufacturing industry in the individual shipbuilding countries (Italy, Germany, France, Finland and other)*
**   *Based on the multiplier of the sector 'transport equipment production' for each individual shipbuilding country the indirect expenditures were calculated*
**   *For the indirect effects the assumption was made that the value added percentage is 30% in all indirect sectors*
***   *Information originates from G.P. Wild (2009) Contribution of cruise tourism to the economies of Europe*
**** *Location (country) of offices is unknown; value added is left outside the analysis*

Source: Policy Research Corporation

In *Table III.4,* the calculations of expenditures, value added and employment effect were all based on the average expenditure per passenger visit. This would indicate that passengers spend the same amount in every port region. However, countries do have different price levels[25] that influence the spending behaviour of tourists: cruise tourists spend more (in absolute terms) in countries with a high price level. An overview of the inclusion of price levels is given in *Table III.5*.

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[25]   See Annex II for an overview of the price levels

Table III.5 : **Direct expenditures and total value added including and excluding price level corrections**

Country	Direct expenditures	*Price level correction*	Total value added	*Price level correction*
Belgium	5 193 631	*5 520 830*	3 039 501	*3 230 990*
Bulgaria	1 114 214	*518 110*	634 472	*295 030*
Cyprus	9 639 875	*8 560 209*	6 692 455	*5 942 900*
Denmark	48 532 909	*66 829 816*	28 175 417	*38 797 549*
Estonia	24 002 481	*17 161 774*	15 583 527	*11 142 222*
Finland	24 037 625	*29 446 091*	14 622 716	*17 912 827*
France	121 846 062	*131 959 285*	83 637 795	*90 579 732*
Germany	40 660 086	*41 920 548*	35 719 402	*36 826 703*
Greece	358 155 204	*320 190 752*	248 913 582	*222 528 742*
Ireland	10 560 786	*13 148 178*	8 302 939	*10 337 159*
Italy	539 995 543	*561 055 369*	339 162 377	*352 389 710*
Latvia	3 018 694	*1 986 300*	2 594 406	*1 707 119*
Lithuania	1 967 317	*1 172 521*	1 397 695	*833 026*
Malta	29 176 132	*21 386 105*	20 305 771	*14 884 130*
Poland	7 873 359	*5 015 330*	4 965 866	*3 163 257*
Portugal	49 379 251	*41 774 847*	31 175 098	*26 374 133*
Romania	630 337	*387 657*	407 656	*250 709*
Slovenia	853 226	*663 809*	485 175	*377 466*
Spain	419 762 034	*387 860 119*	370 603 444	*342 437 582*
Sweden	33 176 443	*38 915 968*	23 060 865	*27 050 395*
The Netherlands	16 778 366	*17 348 830*	9 566 948	*9 892 225*
United Kingdom	125 828 117	*138 788 413*	99 784 727	*110 062 554*
EU Total	1 872 181 688	*1 851 610 859*	1 348 831 835	*1 327 016 159*

Source: Policy Research Corporation

By dividing the categories of interest by the number of cruise passengers visiting a country, a measure was created which provides a rough estimate of the economic potential of cruise tourism. Since the number of cruise passengers is known, the economic impacts could be calculated by multiplying the number of passengers by the outcomes. The economic benefits from cruise tourism growth could also be calculated in this way. As this measure incorporates many underlying variables, it can only give an indication of the economic effects. The results are illustrated in *Table III.6*. In order to correct for different price levels across countries, the expenditures and the other resulting variables were multiplied by the price levels in the different countries.

Table III.6 : **Total direct expenditures, total value added and total employment effects per cruise passenger, plus the passengers needed to create one job (FTE)**

Country	Direct expenditures	Price level correction	Total value added	Price level correction	Jobs per passenger	Price level correction	# passengers per job	Price level correction
Belgium	57	60	33	35	0.0006	0.0007	1 566	1665
Bulgaria	59	27	33	16	0.0044	0.0020	227	106
Cyprus	69	61	48	43	0.0019	0.0017	530	470
Denmark	82	113	47	65	0.0011	0.0015	930	1281
Estonia	56	40	37	26	0.0022	0.0015	464	332
Finland	63	77	38	47	0.0007	0.0009	1 416	1735
France	57	62	39	43	0.0007	0.0008	1 335	1446
Germany	83	85	73	75	0.0018	0.0018	561	579
Greece	62	55	43	38	0.0016	0.0015	608	543
Ireland	59	74	47	58	0.0017	0.0021	605	753
Italy	70	72	44	45	0.0011	0.0012	893	928
Latvia	56	37	48	32	0.0035	0.0023	288	189
Lithuania	57	34	40	24	0.0039	0.0023	256	152
Malta	57	42	39	29	0.0015	0.0011	673	494
Poland	57	36	36	23	0.0024	0.0015	422	269
Portugal	60	51	38	32	0.0017	0.0014	598	506
Romania	57	35	37	23	0.0043	0.0026	235	145
Slovenia	58	45	33	26	0.0017	0.0013	594	462
Spain	76	70	67	62	0.0018	0.0016	570	526
Sweden	64	75	44	52	0.0009	0.0011	1 117	1310
The Netherlands	87	90	50	51	0.0014	0.0015	708	732
United Kingdom	97	107	77	85	0.0017	0.0019	577	636
EU average	66	61	45	42	0.0019	0.0016	690	694

Source: Policy Research Corporation

III.6. ALLOCATION OF ECONOMIC IMPACT WITHIN PORT REGIONS

So far, the economic impact in port regions has been based on the multiplication of equal amounts per passenger and crew member. In reality the spending behaviour of tourists will differ according to the destination and will be dependent on a tourist's mood, the availability of shops, tourist destinations, etc. Therefore, in *Paragraph II.3.3* two factors have been introduced for the allocation of economic impact, because there are two important aspects that need to be considered, namely:

- The level of tourist expenditures varies across regions;
- The fact that not all expenditures end up in the immediate surrounding area of the port.

The variation in spending patterns across regions was investigated and a regional pricing factor was constructed to express the relationship between the spending behaviour of tourists and the attractiveness of a destination/region. This factor is expressed as a mark-up percentage (100%+x%)

for very attractive destinations and a mark-down factor (100%-x%) for unattractive destinations/regions.

The second factor introduced in *Paragraph II.3.3* was the impact allocation factor. The impact allocation factor deals with the extent to which economic impact ends up within the port region (<15 km of the port). As some port regions only benefit from cruise tourism because of the port fees (and other operations in ports like towage, mooring, etc) and do not benefit from the tourist or crew expenditures, a port allocation factor was constructed. This factor is expressed as a percentage.

Both factors have been applied in the five case studies. The results are shown in *Table III.7* and *Table III.8*.

Table III.7 : Direct regional economic expenditures and value added for five typical port regions

Port region	Total passenger expenditures	Total crew expenditures	Total ship expenditures	Tourist attractiveness	Total expenditures	Direct value added
Barcelona	130 783 899	8 018 266	25 077 524	109	163 879 689	83 509 425
Civitavecchia	111 338 153	8 745 994	17 344 009	109	137 428 157	49 051 644
Dover	17 908 954	1 047 240	3 938 955	94	22 895 149	10 534 115
Warnemünde	11 423 648	1 170 403	1 729 757	111	14 323 808	7 600 278
Zeebrugge	4 173 454	536 570	510 514	109	5 220 538	1 800 196

* Expenditures and value added are corrected for price levels

Source: Policy Research Corporation

Table III.8 : Allocation of direct economic impact within port regions

Port	Direct economic impact	Primary destination	Allocation to port region	Allocation to destination outside port region
Barcelona	83 509 425	Barcelona	83 509 425	0
Civitavecchia	49 051 644	Rome	6 571 901	42 479 744
Dover	10 534 115	London	7 711 131	2 822 984
Warnemünde	7 600 278	Berlin	5 581 830	2 018 447
Zeebrugge	1 800 196	Brugge	1 512 891	287 305

* Economic impact is adjusted for price levels and for tourist attractiveness

Source: Policy Research Corporation

IV. DRIVERS OF ECONOMIC IMPACT GENERATED BY CRUISE TOURISM

The first part of this report (Chapters II and III) dealt with the assessment of economic impact generated by cruise tourism in EU coastal regions and Member States. The present chapter takes those results as a starting point, but adds a new perspective, namely: "How to broaden the economic impact of cruise tourism generated in EU coastal regions"?

In order to answer this question, extensive research was conducted. *Policy Research* carried out several field visits to Belgium, Germany, Italy, the Netherlands, Spain and the United Kingdom. During these field visits face-to-face interviews were held with key port authority representatives and other relevant stakeholders. In addition to field visits, *Policy Research* sent out (three separate) surveys to a representative sample of cruise operators, ports and other stakeholders.

The input generated from the field visits, reinforced by the results from the surveys, established a valid and reliable factual basis for the analysis that will be conducted in the following paragraphs.

Chapter objective

The objective of this chapter is to assess the drivers behind the development of cruise tourism. In order to do so, ports were first analysed and categorised according to their characteristics. Hence, an assessment was made of the strengths and/or weaknesses per category. Subsequently, an analysis of current developments and trends was conducted per port category in order to assess opportunities and trends. In the next step, the strengths, weaknesses, opportunities and threats were combined in a SWOT analysis.

The input generated by the SWOT analysis was used to formulate strategies for ports (based on port categories), the ultimate aim of which was to widen the economic impact that is currently generated by cruise tourism.

IV.1.   PORTS AND PORT CHARACTERISTICS

Policy Research has conducted field visits to nine ports in six EU Member States. *Table IV.1* presents these ports, together with their general characteristics.

Table IV.1 :   Ports visited and general port characteristics

Port	Amsterdam	Antwerp	Barcelona	Civitavecchia	Dover	Rotterdam	Tilbury	Warnemunde	Zeebrugge	Helsinki
Turnaround vs transit (in % of calls)	50/50	0/100	50/50	50/50	15/85	0/100	0/100	25/75	0/100	6/94
Primary destination	Amsterdam	Antwerp	Barcelona	Rome	London	Rotterdam	London	Berlin	Brugge	Helsinki
Port in city centre of primary destination	Yes	Yes	Yes	No	No	Yes	No	No	No	Yes
Inland sailing required	2 hours	4 hours	-	-	-	0,5 hour	1 hour	-	-	-

Source: Policy Research Corporation

Generally speaking, it is hard to identify the differences between ports which make one port successful and the other port unsuccessful. Therefore, based on the field visits and surveys, the following 'key success factors' for port regions have been identified:

-    Tourist attractiveness of a destination/region;
-    Accessibility of a destination/region;
-    The level of port facilities.

In order to be able to identify the main differences between ports, it is useful to group ports by taking into account strengths and weaknesses per port category. As mentioned above, tourist attractiveness, the accessibility of a destination/region and the level of port facilities are considered to be the key drivers behind cruise tourism. Therefore, these factors will be used to assess a port's strengths and weaknesses (by considering it as either high or low).

The degree to which a region appeals to tourists is perceived to be the most important determinant of a region's attractiveness as a cruise destination. It is the one factor that is the most difficult and costly to change and is predominantly determined by the intrinsic character of a destination. With the right planning it is possible to influence a tourist's perception of a destination/region, but this requires a long-term view and significant financial resources. The second determinant is the accessibility of a region. This factor is also costly to change, but it is not intrinsically determined. Therefore it is less costly to change and requires a medium–to-long term view. The third determinant - the level of port facilities - is the easiest and least costly to change within a relatively short time frame.

Based on the level of adaptability and importance for each determinant, a model was created on which ports can be scored according to their strengths and weaknesses. Using these perspectives, ports can be categorized into eight categories, which are summarised in *Figure IV.1*.

Figure IV.1 : Model for assessing port strengths and port categories
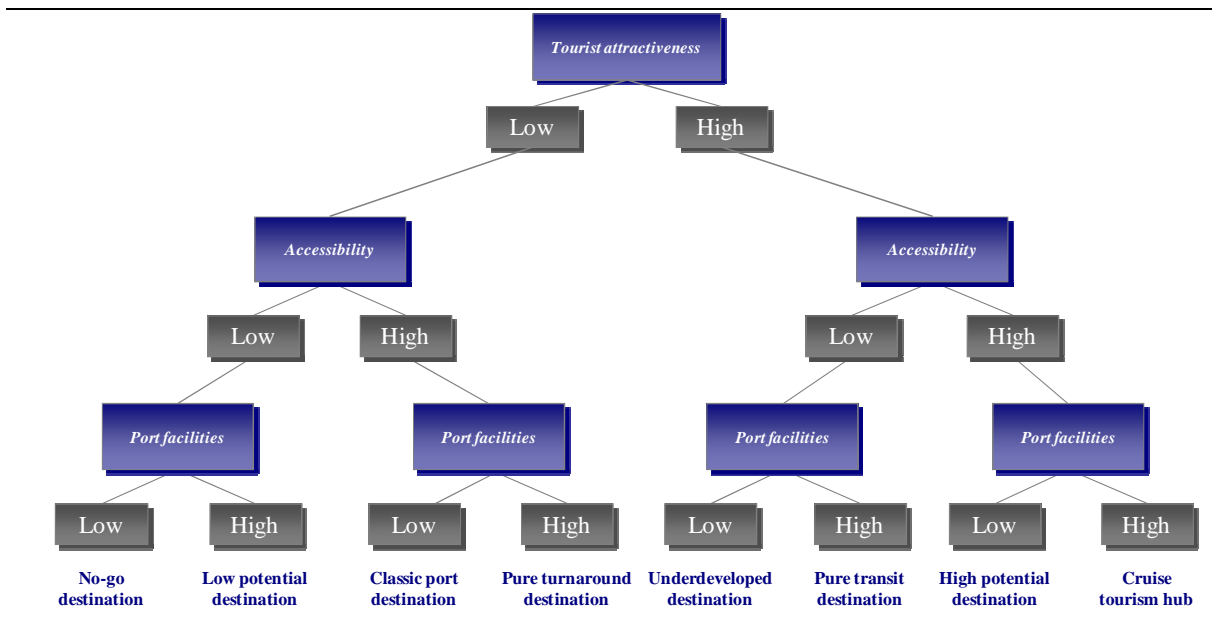
Source: Policy Research Corporation

a/ No-go destination

A 'no-go' destination is a cruise destination that has little or nothing to offer. Such a region has a low level of tourist attractiveness, is difficult to access and offers few port facilities. Consequently, this type of destination does not offer sufficient value to attract cruise tourism.

b/ Low potential destination

A low potential cruise destination has the same drawbacks as a no-go destination, except for the fact that it has adequate port facilities. In order to be able to improve its position, it should primarily focus on improving its accessibility. A typical example of a low potential destination is the port of Swansea, in Wales (United Kingdom).

c/ Classic port destination

The classic port destination can be described as a destination that has low tourist attractiveness, is readily accessible and possesses sufficient port facilities for cruise tourism. A typical example of a classic port destination is the port of Calais in France.

d/ Pure turnaround destination

A pure turnaround destination is a destination that mainly serves as a boarding port for cruise tourists. As the destination is relatively unattractive to tourists, it is typically readily accessible since it is able to attract cruise tourists from different regions (or even countries) to board in its port. It also offers a high level of tourist facilities. A good example of a pure turnaround port is Southampton, situated close to multiple transportation hubs and serving as a turnaround port for the United Kingdom.

e/ Underdeveloped destination

Underdeveloped destinations have a considerable attraction for tourists, but lack the ability to exploit this potential to the full extent. Investments in the accessibility of the region and port facilities are necessary in order to take optimal advantage of its attractiveness. An example of such a port is Santorini, which is a small island in the Greek archipelago and therefore has limited accessibility. Moreover, when cruise tourists go onshore, a cableway takes tourists to the main attraction of the island. As this mode of transportation suffers from a structural shortage of capacity - especially during the summer season - Santorini is often referred to as a logistical nightmare.

f/ Pure transit destination

As the name suggests, a pure transit destination refers to a cruise port that is used for transit cruise tourism only. The destination itself may be attractive and readily accessible for tourists, but the lack of connections with its direct surroundings makes the port unsuitable for turnaround activities. A typical example of a pure transit destination is Mykonos, which is highly popular with tourists and very accessible, because tourists can walk into the city directly from the ship's berth. However, because of its lack of connections with its direct surroundings (mostly due to the fact that it is an island), the port is unsuitable for turnaround activities.

g/ High potential destination

A high potential cruise destination has the potential ability to become a cruise tourism hub. It is situated in a region that is attractive to tourists and it already has a well-developed infrastructure which makes it highly accessible. The only low-ranked aspect is the level of port facilities. To facilitate further growth, it must invest in improving its tourist facilities in the port and its hinterland. Civitavecchia is an example of a high potential destination; it is situated within close range from Rome and receives substantial numbers of tourists every year. Improving its port facilities (especially facilities for tourists like tourist information, signs, etc) will stimulate tourists to also visit the region around Civitavecchia in stead of just going to Rome.

h/ Cruise tourism hub

The cruise tourism hub is highly attractive to tourists, readily accessible and has high quality port facilities. However, in order to sustain its competitive position, the focus must be on improving its ranking on all three determinants, so as to continue maximising its potential. A prime example of this

port category is Barcelona, which is the largest cruise port in Europe in passenger terms. This is because Barcelona is an exceptionally popular tourist destination and has a port directly situated near the city centre. Tourists can literally walk into the city. A trip into the city (by bus or taxi) will take only a few minutes. However, ports in this category often come up against sustainability and congestion issues. To avoid these problems, special attention must be paid to long-term investments in, for example, shore-side electricity or modern waste disposal facilities.

IV.1.2. A PRACTICAL APPROACH TO CATEGORISING PORTS

In reality, the level to which a port scores on tourist attractiveness, accessibility and port facilities will be difficult to express in terms of either 'high' or 'low' values. In order to be able to formulate appropriate strategic recommendations for each type of port, the three determinants have to be assessed by giving them a rating rather than on a "yes/no" basis. Therefore, the attractiveness of a port as a cruise destination was examined using relative variables derived for each of the three factors. These determinants, subdivided into their underlying variables, are summarised in *Table IV.2*. For each underlying variable, a relevant indicator was developed. Ultimately, by using these variables, ports should be able to work out scores of the level of tourist attractiveness, accessibility and port facilities within the port regions. To ensure that the model is used properly, the following assumptions have to be made:

- The purpose of the model is to categorise ports according to their potential ability rather than their actual performance;
- The three determinants must be assessed independently of each other.

Table IV.2 :   Determinants for port attractiveness and underlying variables

Touristic attractiveness	Infrastructure	Port facilities
Intrinsic touristic value	Accessibility of main touristic destination(s)	Required port facilities
Tourist friendliness	Accessibility of transport hub(s)	Additional port facilities

Source: Policy Research Corporation

IV.1.2.1. Tourist attractiveness of a region

The main determinant that drives the development of cruise tourism (and consequently its economic impact) is the intrinsic tourist value of a destination. A cruise port that is situated in a region that is highly appealing to tourists by definition attracts more tourists than ports in less attractive regions.

Determinants of intrinsic tourist value are complex and subjective. Several studies[26] have endeavoured to identify the prime drivers of tourist attractiveness and have come up with three main categories: climate factors, social/cultural factors, and natural factors. Within these categories, especially the availability of historic sights, natural heritage, seasonal sporting possibilities/facilities (e.g. ski slopes, water sport facilities, etc), a pleasant climate, proximity to the coast, and the cultural/social development of a destination were found to be important[24]. However, because of the subjectivity bias, these factors are difficult to quantify. Moreover, these factors differ from one port to another and would require a port-specific analysis, which is not within the scope of this research. In order to resolve this issue, as has been argued in *Paragraph II.4.1*, the number of tourist beds per square kilometre of the port city and its surrounding area can act as an indicator for the intrinsic tourist value of a destination. On the basis of *Figure II.3,* ports can ascertain the tourist bed density in their regions. By using this density, a port can then determine its relative intrinsic tourist value.

Another important determinant of a port's attractiveness to tourists is its 'tourist friendliness' or the degree to which it is 'tourist-ready'. In Civitavecchia, for example, the fact that only very few people speak English and that there are no tourist facilities available (such as a well managed tourist office, maps and signposting in English) in and around the port dissuades tourists from exploring the immediate surroundings of this seaport town. As for intrinsic tourist value, 'tourist friendliness' is difficult to quantify. Furthermore, no useful indicator has been developed to estimate 'tourist friendliness'. Therefore it is suggested that ports use their own perception and/or results from tourist surveys to judge their level of tourist friendliness. Indicators that can be taken into account include the ready availability of tourist information and whether this information is provided in various languages.

Table IV.3 summarises the variables that determine the tourist attractiveness of a region, together with their suggested respective quantitative indicators.

Table IV.3 : **Tourist attractiveness variables and indicators**

Variable	Indicator
Intrinsic touristic value	Tourist bed density
Tourist friendliness	Own perception / tourist survey

Source: Policy Research Corporation

Using its relative scores on both variables, ports can position themselves in one of the quadrants of the matrix in *Figure IV.2*.

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[26] Nielsen, T.S. & Kaee, B.C., *Tourism Flows and Attractiveness in Europe*, University of Copenhagen, 2008

Figure IV.2 :   Scoring the tourist attractiveness of a region/destination
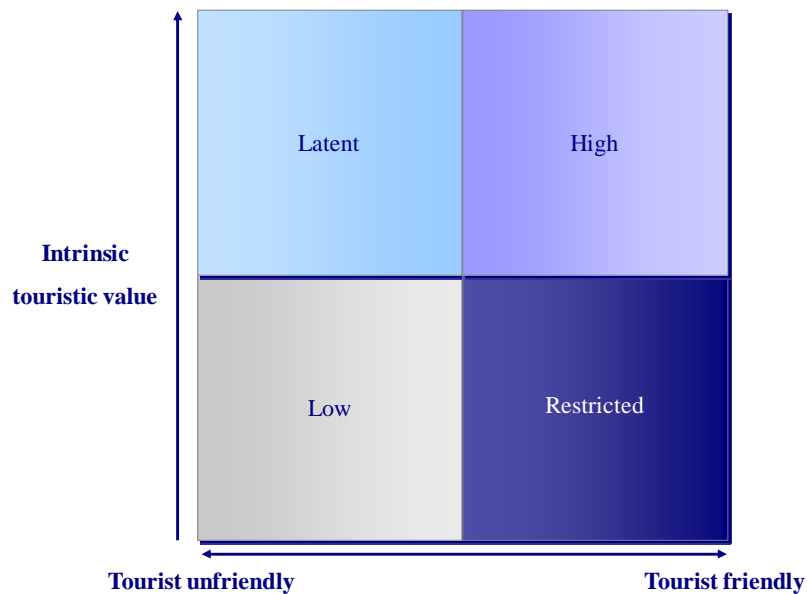
Source: Policy Research Corporation

The categories *High* and *Low* (attractiveness) need no further explanation. However, the *Latent* and *Restricted* categories do need some further explanation in order to be properly understood. A port that is considered as latent has high intrinsic tourist value, but low tourist friendliness. Since high intrinsic value is extremely important, and tourist friendliness is relatively easy to change, such a region has the potential to become a highly attractive region. However, so far, its lack of tourist friendliness prevents it from exploiting this potential. In contrast, a restricted port is very tourist friendly but does not have major intrinsic tourist value. As the latter state of affairs is very difficult and costly to change, such a region is referred to as "restricted".

IV.1.2.2. *Accessibility*

The second determinant of the attractiveness of a region as a cruise destination is its accessibility. This feature can be broken down into variables, such as ease of access of the port itself (i.e. from the perspective of a turnaround passenger) and the ease of access of the main tourist attraction(s), which may be situated in the port and/or its surroundings (i.e. from the perspective of a transit passenger). Clearly, a port that is readily accessible from both perspectives will have greater economic potential than a port that only provides access to a tourist attraction, all other factors being equal. The accessibility of a port can be measured by means of relative distances. Hence, the accessibility of a region from a turnaround perspective can be assessed by taking the relative distances to the nearest highway, the nearest international airport (with connections to the 'source markets'), and the nearest railway station as indicators. In its turn, accessibility from a transit perspective can be measured by using the relative distance to the main tourist attraction(s). The variables of the degree of accessibility of a cruise destination together with their respective indicators are summarised in *Table IV.4.*

Table IV.4 :   Accessibility variables and their respective indicators

Variable	Indicator(s)
Turnaround accessibility	Relative distance to nearest highway
	Relative distance to nearest international airport
	Relative distance to nearest railway station
Transit accessibility	Relative distance to main touristic attraction(s)

Source: Policy Research Corporation

The indicators of accessibility are combined in *Figure IV.3*. The relative distances to transport hubs are grouped under one indicator. Apart from the distances to transport hubs, it is a requirement that these hubs should be connected to the source markets of cruise tourists. As with tourist attractiveness, ports can position themselves in a quadrant corresponding to their scores as indicated in *Table IV.4*.

Figure IV.3 :   Scoring the accessibility of a cruise region/destination
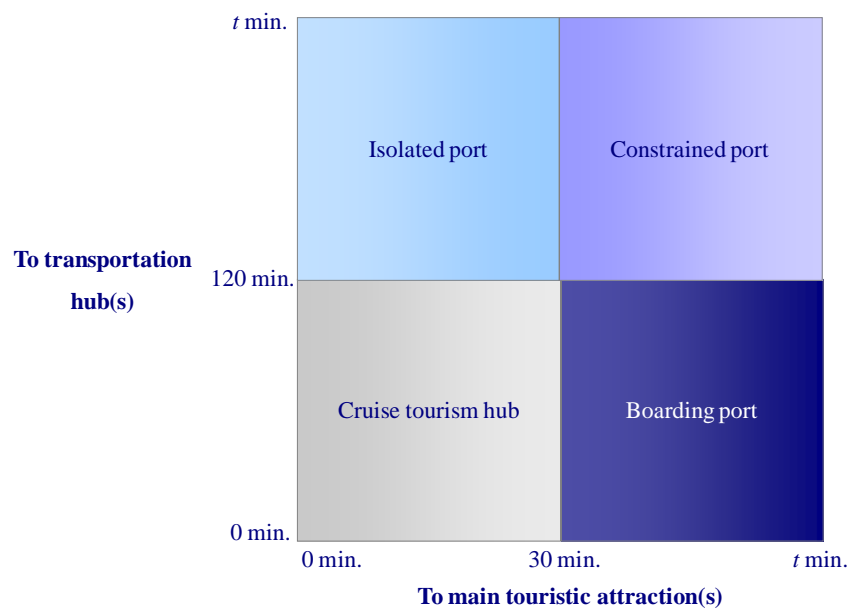
Source: Policy Research Corporation

IV.1.2.3. *Port facilities*

The last determinant of the attractiveness of a region as a cruise destination is what facilities the port has to offer. Port facilities can be subdivided into two main groups. The first group includes those facilities that are already important for the reception of transit cruise ships (e.g. sufficient depth, sufficient quay capacity, etc), while the other group contains facilities which are only relevant for those ports that deal with turnaround cruise ships (e.g. the presence of a terminal, luggage handling,

etc). In order to be able to construct a soundly-based indicator for port facilities, a priority list was drawn up. In that list, the different port facilities are ranked in order according to the level of need, which means that the most necessary facility is listed at the top. This also means that ports should start by examining the first facility and only proceed to the next level down if it is equipped with such a facility. The more facilities a port possesses, the higher its cumulative score. *Table IV.5* shows the preference list incorporating both *general / transit facilities* and *turnaround only facilities*.

Table IV.5 :   Port facilities preference list and respective cumulative scores

General / transit facilities		Turnaround only facilities	
Sufficient draught	1	Luggage handling facilities	5
Sufficient quay capacity	2	Security and custom facilities	6
Parking facilities in direct neighborhood / coach service to parking facilities	3	Terminal	7
Waste disposal facilities	4		

Source: Policy Research Corporation

The port facilities can be represented on a continuous scale, ranging from an undeveloped port on the one hand to a developed turnaround port on the other. A well-developed transit port is found somewhere in the middle of this scale, which clearly highlights the difference between necessary and additional port facilities. Using the scores obtained in the *Table IV.5*, ports can position themselves on the continuous port facilities arrow in *Figure IV.4*.

Figure IV.4 :   Examination of the port facilities
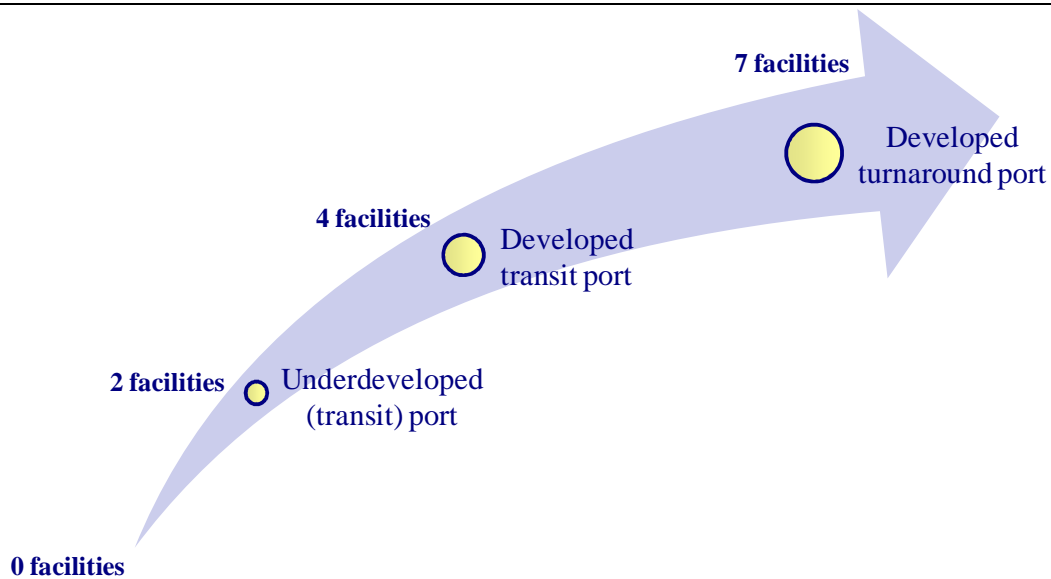
Source: Policy Research Corporation

IV.1.2.4. Concluding remarks

In this paragraph, a practical model towards the identification of a port's strengths and weaknesses was constructed. By means of this model, ports can position themselves in different predefined categories for each determinant. The results of this exercise form the basis for determining the specific strengths (and weaknesses) of the port (or port category).

IV.1.3. GENERIC WEAKNESSES FOR PORTS

Policy Research has analysed the results obtained from the port, cruise operator and stakeholder surveys and has identified the following weaknesses, which apply to a significant number of EU ports. Moreover, the field visits conducted by *Policy Research* also proved to be useful for the assessment of port weaknesses.

a/ Visa for passengers

The Schengen agreement enables free movement of people within the borders of the Schengen area. Citizens of countries outside the Schengen area may need to apply for a visa to enter the Schengen area for a period of 90 days. A number of countries have an agreement with the Schengen area which enables their citizens to enter the area without a visa. However, citizens of a country that does not have such an agreement do need a visa.

When a cruise ship visits a Schengen country or, alternatively, non-Schengen countries during its itinerary, a double or multiple entry Schengen visa is required, since a single visa expires when

someone leaves the Schengen area. Passengers belonging to the group of nationalities that need a visa therefore have to obtain a single, double or multiple entry visa depending on the number of times they intend to leave and enter the area. The problem with visas is that the process of obtaining them can be time-consuming. It may take several months to obtain a visa (depending on the capacity at embassies), which limits the growth potential of cruises in the EU for passengers from these countries, since they have to make their own arrangements for the cruise well in advance. This problem applies primarily to the Asian market, since this is a large potential market where a majority of countries do not have agreements relating to a Schengen visa. The expectation is that shortening the time it takes to obtain a visa will lead to an increase in the demand for cruises in the EU.

b/ Cruise port activities as such are non-profitable and there is a lack of awareness about regional benefits

In most cases, ports are seen as independent entities within a region. Municipalities often do not see the societal and economic benefits of investments in cruise ports and therefore do not invest in facilities that increase economic benefits or reduce environmental impacts.

c/ Lack of coordination and cooperation between ports in coastal regions

Ports try to attract as many cruise calls as possible. This includes attracting cruise ships that would otherwise call at other ports in the region. In certain cases this leads to capacity problems. It sometimes results in overcrowded destinations and negative experiences for tourists. Furthermore, if cruise ships tend to be attracted to other ports because of less stringent environmental restrictions, the negative externalities are moved rather than resolved. If ports within a region would cooperate with each other to spread cruise ships and comply with the same environmental restrictions, there could be a significant increase in regional benefits.

d/ Lack of commitment between ports and the cruise lines

Ports and cruise operators cooperate with each other in some cases (e.g. Costa with the port of Savona, Carnival with the port of Barcelona), but for the most part there is a lack of commitment between ports and cruise operators. Enhanced cooperation could be beneficial for both parties. An example of cooperation which could benefit both sides is cooperation between ports and cruise lines on itinerary planning. When the port is able to check whether the ships' planned itineraries are likely to cause any capacity problems, the port can cooperate with the cruise line to change those itineraries. This can only be achieved through cooperation between ports and cruise operators, as the latter are not allowed to cooperate with each other due to competition regulations.

IV.2. SWOT ANALYSIS

A SWOT analysis incorporates strengths, weaknesses, opportunities and threats. In the previous paragraphs the strengths and weaknesses were identified on a generic level and set out by port category. In this paragraph the strengths and weaknesses will be combined with the opportunities and

threats. For the assessment of opportunities and threats, a trend analysis was conducted which resulted in the following trends:

a/ Shorter cruises

As the working population has less and less time available, tourists want to see more in a shorter time. Consequently, the average length of cruise holidays is becoming shorter.[27]

b/ More experienced cruisers

An increasing share of cruise tourists are experienced travellers, who have already explored most tourist hotspots. This, combined with the rising trend in the number of repeat tourist visits, leads to cruise tourists looking for other aspects, such as the level of facilities offered on board, and the exploration of relatively unknown tourist destinations, rather than being *hotspot runners.*[28]

c/ The emergence of the budget tourist

The *classic cruise tourist* can be described as a luxury oriented, relatively inactive tourist, with few budget constraints. Due to the growth of the cruise industry, new target groups have been attracted to cruise holidays, resulting in a segmentation of the market. An important segment that has emerged is the *budget tourist*, who is typically the counterpart of the classic cruise tourist, since he/she is budget conscious, well-informed about the tourist attractions in a region, and relatively self-sufficient[29].

d/ Increasing ship capacity

As the industry continues to grow, the size of ships grows accordingly. The most recently ordered cruise ships have a capacity of over 4 000 passengers. Larger ships gain from economies of scale as the operating cost per passenger decreases. On the other hand, this makes it more difficult to achieve a 100 percent occupancy rate. Partly for this reason, the competition between cruise lines is likely to intensify, both in the short run (stimulated by the current economic situation) and in the long run.[30]

e/ The emergence of the exploring tourist

A relatively small (though increasing) share of cruise tourists is specifically looking for a personal and unique experience rather than a mass-oriented one. This has resulted in the emergence of niche markets to serve tourists who want to spend their holiday on relatively small ships, and are seeking a unique holiday experience. Individualised luxury destinations are also likely to develop further[31].

[27] Downling, R.K. *Looking Ahead: The Future of Cruising*, Cabi International, 2005
[28] Robbins, D. *Cruise Ships in the UK and North European Market: Development Opportunity or illusion for UK ports?* Cabi International, 2005
[29] Based upon interviews conducted by *Policy Research* with several stakeholders
[30] Source: Cruise Industry News, *Annual Report 2008*
[31] Source: Report European Travel Commission report, *Tourism Trends for Europe*, 2006

f/ Declining average age

The average age of cruise passengers is declining. As the average age falls, different tourist behaviour is likely to be seen. Generally, younger people are looking for more active holiday products.[30]

g/ Emerging markets

As the economies of China and India continue to grow, new markets for attracting cruise tourists to Europe are emerging. The preferences of tourists from these countries generally differ from those who take conventional Western or Japanese cruises[32].

h/ Extending the cruise season

Cruises in the EU are continuing to increase in popularity, which provides opportunities for extending the cruise season. This is primarily true of the Mediterranean area owing to the favourable climate conditions there for most of the year. Cruise lines are already adapting their ships to prepare for changing weather conditions during these extended periods of cruising.

i/ Stricter ISPS code

Ports are obliged to follow the ISPS safety code which was developed after the September 2001 attacks on the United States. Compliance with the ISPS code has created and is still generating significant costs for ports. The code was adapted in 2004, making it stricter and more difficult for ports to comply.

Figure IV.5 summarises these trends and their underlying implications for the cruise industry as a whole and for cruise ports.

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[32] Source: Indian Ministry of Tourism report on Cruise Tourism: Potential & Strategy, 2005

Figure IV.5 :   Current trends in the cruise tourism industry

Increasing ship capacity	Discounted fares, lower margins for operators, intensified competition among ports	Larger ships, lower margins on port fees, pressure to lower costs
Shorter cruises	Lower revenues per passenger per cruise; more turnaround activity; time optimization	Less time spent in ports; more turnaround potential
Falling average age	Child friendliness more important	Child friendly destinations more attractive, child friendly facilities more important
More experienced cruisers	Ship facilities more important; geographic spread of tourism (avoidance of overcrowded hotspots)	Unexplored port regions more attractive
Emergence of the budget cruise tourist	Less luxury ships, discounted fares, less crew per passenger, lower margins for operators	More tours booked onshore, more self-exploring tourists
Emergence of the exploring cruise tourist	Smaller ships; personal touristic experience more important; geographic spread of tourism	Unexplored (quality) port regions more attractive, more self-exploring tourists
Emerging cruise markets (China and India)	More mass market oriented tourists	Crowding; language issues; more organized tours
Expanding cruise season	Opportunity for tourists to cruise during low season	More cruise activity during low season
Stricter ISPS code	Stronger security measures	Significant investments are required to comply with the code

Source: Policy Research Corporation

The next step from a port perspective was to have an indication of whether these implications represent threats or opportunities. *Table IV.6* gives such an indication for each of these trends.

Table IV.6 :   Translation of trends into opportunities and threats for cruise ports

Trends	Opportunities	Threats
Increasing ship capacity	More tourist activity	Lower income per passenger due to pressure to lower port fees/rates
Shorter cruises	More turnaround activity	Shorter duration of visit per port
Declining average age	More demand for child friendly attractions and facilities	
More experienced cruisers	Exploitation of regional benefits (exploring regional sites)	
Emergence of the budget cruise tourist	More added value ending up in region (more tours booked onshore)	• Lower overall level of tourist expenditures • Potentially conflicting interests between cruise lines and ports
Emergence of the exploring cruise tourist	• Exploitation of regional benefits (exploring regional sites) • More value added ending up in regions (more tours booked onshore)	
Emerging cruise markets (China and India)	Exploitation of mass tourism	Destination capacity problems (crowding)
Expanding cruise season	More cruise activity outside peak season	
Stricter ISPS code		Difficulties to comply with code because significant investments are required

Source: Policy Research Corporation

IV.2.1. OPPORTUNITIES FOR PORTS

a/ More tourist activity

As the average capacity of cruise ships increases, more cruise tourists (in absolute numbers) will disembark per ship, resulting in a higher economic impact coming from cruise tourism.

b/ More turnaround activity

Shorter cruises will lead to more cruises (in absolute numbers). Consequently, the number of turnaround calls increases as tourists (dis)embark more frequently. Since the economic impact from turnaround tourism is significantly higher than that from regular transit tourism, this presents an interesting opportunity for ports.

c/ The emergence of the family destination

A relatively new phenomenon in the cruise industry is family travel. More child-friendly attractions and facilities in ports and their surroundings area will positively influence the port's image as an ideal family destination. It also facilitates opportunities for commercial activities.

d/ Exploitation of regional benefits

As cruise tourists become increasingly experienced travellers, they continue to look for unexplored destinations rather than re-visiting the same tourist hotspot. This brings attractive opportunities for regions that have not yet been subjected to tourist flows.

e/ More value added ending up in regions

An increasing share of cruise tourists go on organised tours that are booked onshore instead of on the ship. The margins on tours that are booked on the ship are significant, and mostly work to the benefit of the operator. From the region's perspective, tours that are booked onshore have a considerably greater economic impact.

f/ Exploitation of mass tourism

In the main, this opportunity is more attractive for ports situated in or near tourist hotspots. As mass tourism is attractive in terms of both numbers of visitors and tourist spending, this may be an important opportunity for ports to further extend their commercial activities.

g/ More cruise activity outside peak season

An expansion of the offer of cruises outside the peak season provides opportunities for more economic impact in port regions (assuming that there is no change in peak season activity). Moreover, it reduces the seasonality of cruise activity, which is a beneficial effect.

IV.2.2. THREATS FOR PORTS

a/ Lower income per passenger

Larger cruise ships mean that it is more difficult to achieve high occupancy rates, so at some point operators will start discounting their prices. Lower margins for the operators will in turn put pressure on the level of port fees, eventually intensifying competition between ports.

b/ Lower overall level of expenditures

The emergence of budget cruise tourism has an impact on a tourist's spending pattern. For instance, budget tourists typically undertake activities themselves instead of going on an organized tour and will generally spend less in restaurants, hotels and shops. Furthermore, the current financial crisis might influence the budgets of cruise tourists.

c/ Conflicts of interest between cruise operators and ports

More budget-conscious tourists also means that more organised tours are booked at the destination and fewer on the ship. Since the sale of organised tours is part of the cruise line business model, this may lead to a mismatch of interests between ports and operators. This may eventually result in cruise

operators diverting their ships to ports where they can generate higher revenues. Cooperation and mutual dedication are necessary in order to prevent such conflicts.

d/ Difficulties in complying with the ISPS code

Compliance with the ISPS code involves significant investment. However, ports may face a shortage of capital to invest in the facilities that need to be adapted to the latest ISPS measures. Ports that cope with these problems may need to (partly) transfer ownership of the facilities in exchange for capital.

e/ Capacity problems at destinations

A significant issue that arises from the exploitation of emerging markets is the threat of overcrowding. As these markets are mass oriented (mostly due to the fact that passengers may not speak the language) the berthing of a cruise ship in a port will mean large crowds visiting the destination. Sustainability issues can also arise when it comes to waste handling, emissions, etc.

IV.3. SYNTHESIS

This section attempts to summarise the strengths, weaknesses, opportunities and threats that have been identified in this chapter. The purpose of this synthesis is threefold:

- *Matching opportunities with strengths*: the concept of matching opportunities with strengths involves identifying which opportunities can be exploited using the strengths that a port already possesses;
- *Matching strengths with threats*: the concept of matching strengths with threats involves identifying the strengths that allow a port to overcome an impending threat. If there are not sufficient strengths to overcome impending threats, the outcome of this analysis should be about what (social and economic) investments need to be made in order to obtain the necessary strengths;
- *Identifying and prioritising weaknesses to be remedied:* certain weaknesses do not immediately involve a substantial danger to a port's future, but they may prevent the port from exploiting potential opportunities. Therefore, these weaknesses should be identified and prioritised.

Table IV.7 sets out the strengths needed to exploit the opportunities that were identified for EU ports. As can be seen from the table, most of the strengths needed for the exploitation of opportunities are linked to sufficient port, destination and tourist facilities.

Table IV.7 : Strengths needed for the exploitation of opportunities

Opportunities	Strengths needed to exploit opportunities
More tourist activity	• Sufficient port capacity and tourist facilities in destination
More turnaround activity	• Sufficient hotel and restaurant capacity • Sufficient accessibility for hinterland
Child friendly attractions and facilities	• Sufficient port and destination facilities specifically for children
Exploitation of regional benefits (exploring regional sites)	• Sufficient tourist friendliness • Sufficient tourist facilities in ports
More added value ending up in region (more tours booked onshore)	
Exploitation of mass tourism	• Sufficient tourist facilities in ports
Expanding cruise season	• Favourable climate conditions • Availability of tourist facilities in destination outside peak season

Source: Policy Research Corporation

For each individual port, the strengths needed to exploit opportunities will vary according to that port's position, tourist attractiveness and surroundings. For the purposes of this study it is impossible to include the characteristics of the several hundred ports in the EU. Therefore, the following paragraph will look into the combination of strengths and opportunities for the eight categories that were identified in this chapter.

In *Table IV.8* the identified threats are matched with the strengths needed to overcome these threats. Two main strengths are required in order to deal with these threats: tourist friendliness for the self organising tourist and adequate port facilities (transit capacity to tourist attractions, berth capacity for the bigger ships, etc) for the mass orientated upcoming markets.

Table IV.8 : Strengths needed to overcome threats

Threats	Strengths
Lower income per passenger due to pressure to lower port fees/rates	Sufficient tourist friendliness to enhance self organising tourists to go out on their own (as relatively more value added ends up in the region)
Shorter duration of visit per port	
Lower overall level of tourist expenditures	
Destination capacity problems (crowding)	• Sufficient port capacity • Sufficient port facilities
Compliance costs ISPS code	Sufficient availability of capital

Source: Policy Research Corporation

In *Table IV.9* the generic weaknesses identified are addressed and matched with the extent to which ports are able to internally influence these weaknesses. As can be inferred from the table, the weaknesses confronting ports are mostly externally driven.

Table IV.9 :   Weaknesses and extent to which ports can influence weaknesses

Weaknesses	Level to which ports can influence weaknesses
Visa difficulties for tourists	External issue
Lack of consciousness about regional benefits	Regional issues, coordination and cooperation necessary. Information asymmetries must be resolved
Lack of coordination and cooperation between ports in coastal regions	
Lack of commitment between cruise lines and ports	Hold-up problem, coordination and cooperation necessary

Source: Policy Research Corporation

IV.4.   CONCLUDING REMARKS

In this chapter a SWOT analysis was conducted for all the seaports of the European Union. Three key success factors were identified and used to assess the strengths and weaknesses of ports. This resulted in the creation of eight port categories. For each port category, the strengths, and - in the absence of strengths - weaknesses were identified. Next to category-specific weaknesses, generic weaknesses (identified by *Policy Research* by analysing survey results and input from field visits) were mapped. In the next step, opportunities and threats for cruise tourism were extracted from an analysis of trends and combined with strengths and weaknesses. This resulted in an overview of the most important strengths needed for ports to enhance the further growth of cruise tourism in the European Union.

V. STRATEGIES FOR PORTS

In this chapter, the synthesis from the previous chapter (respectively matching opportunities and threats with strengths) will be followed by drawing up strategies for the eight port categories that were identified.

V.1. GENERIC PORT STRATEGIES

Michael Porter[33] identified three generic strategies for business entities to create a position within the competitive arena:

- Cost leadership;
- Differentiation;
- Focus.

Although these strategies do not immediately appear to match with ports, reformulation within the cruise tourism parameters creates a different perspective:

- The operationally excellent destination;
- The individual tourist oriented destination;
- The exclusive/unique destination.

In *Table V.1* these strategies are listed, together with their underlying objectives. As can be seen, the three strategies together incorporate all the opportunities identified for cruise tourism in Europe.

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[33] Porter, M.E., *Competitive advantages: creating and sustaining superior performance*. Free Press, 1985

Table V.1 : Generic port strategies and objectives

Strategy	Aimed at exploiting the opportunity of:	Aimed at conquering the threat of:
The operational excellent destination	More turnaround activity	• Lower income from tourists • Lower income from cruise ships
The individual tourist orientated destination	• Exploiting regional benefits of self organising tourists (more added value) • Exploiting new markets: younger travellers, upcoming markets	• Lower income from tourists • Lower income from cruise ships • Crowding
The exclusive/unique destination	Exploiting new (luxurious) segments that value uniqueness	

Source: Policy Research Corporation

a/ The operationally excellent destination

The operationally excellent destination is driven by minimising costs and handling tourism flows in the most efficient manner. This type of destination is mass-driven, and has excellent accessibility and facilities for the reception of (mass) tourist flows. This type of destination is best compared with a pure turnaround destination.

b/ The individual tourist oriented destination

The individual tourist oriented destination is focused on delivering the highest value for individual tourists who want to schedule their own time and activities during a visit. The destination offers high accessibility (to its tourist attractions), is tourist friendly and offers excellent tourist facilities in its port and immediate surroundings. This type of destination can be described either as a pure transit destination or a cruise tourism hub.

c/ The exclusive/unique destination

The exclusive/unique destination focuses on small segments of the tourism market that seek uniqueness. This destination is mostly located in the proximity of large ports so that tourist hotspots can still be visited within acceptable time frames. It offers excellent port facilities, but is relatively inaccessible from its hinterland. This type of destination can therefore be described as a pure transit destination.

Figure V.1 displays the eight port categories identified in the previous chapter. The arrows at the bottom of the figure indicate the port strategies that can be targeted by ports.

Figure V.1 :   Port categories and strategic objectives
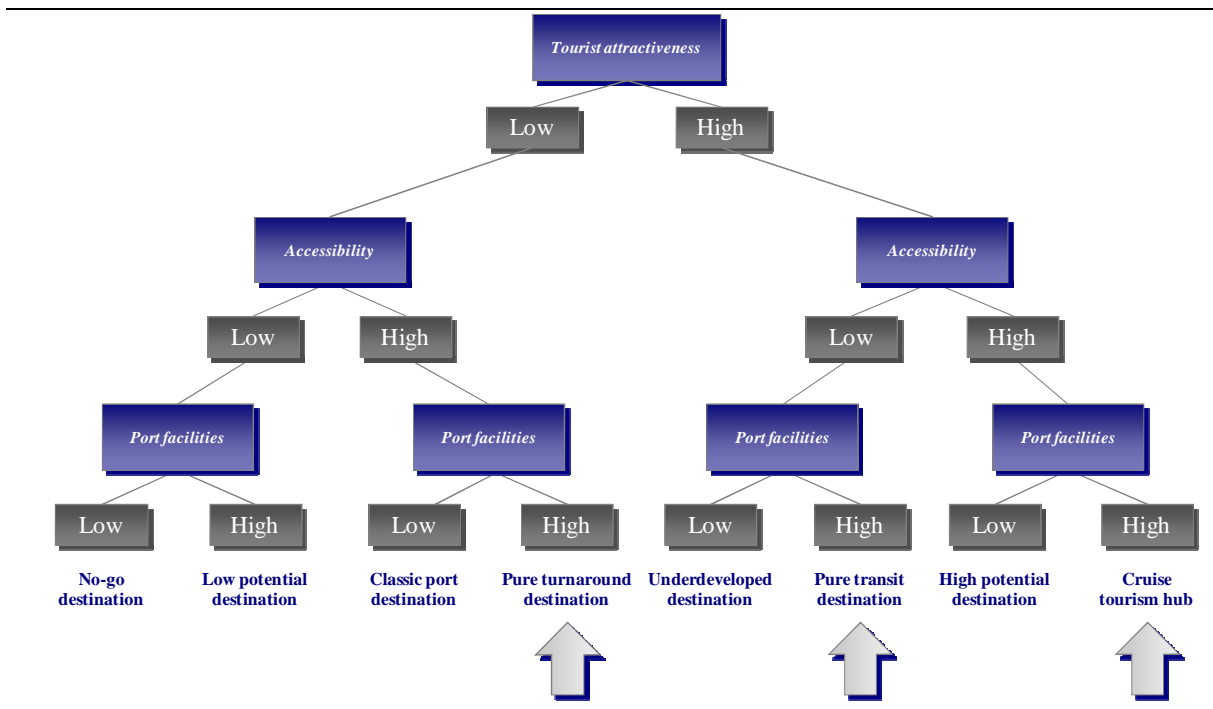
Source: Policy Research Corporation

V.2.   RECOMMENDATIONS AND IMPLICATIONS

a/ Becoming a pure turnaround destination

For ports having a port region with low tourist attractiveness (the no-go, low potential and classic port destination), the maximum achievable in the short-to-medium term is to become a pure turnaround port. As the level of tourist attractiveness is extremely difficult to influence, ports in these categories should not try to position their destinations as an attractive transit destination or cruise tourism hub, because the benefits to be achieved will not outweigh the costs that will need to be incurred in order to attract cruise tourism. A port within a region that is not particularly attractive to tourists should (from an economic point of view) only attract cruise tourism to its region if there is sufficient domestic or international demand for a turnaround point in the port region. Moreover, accessibility is the main factor in the success of a turnaround destination.

In order to exploit the opportunities to the full and to overcome the threats, ports that pursue this strategic objective should adopt a strategy of operational excellence. This strategy enables these ports to exploit the opportunity of greater turnaround activity, whilst overcoming the threats of lower port fees and lower expenditures per tourist.

b/ Becoming a pure transit destination

For ports operating within a region with high tourist attractiveness, two strategies are available. A port can focus on becoming either a pure transit destination or a cruise tourism hub. Becoming a cruise tourism hub may be the ideal objective to pursue, but in reality there will be only a few hubs on the European continent. A pure transit destination may be just as effective in deriving economic benefits from cruise tourism, since the investments required in order to become a turnaround hub may be significant. Moreover, the net economic benefits of attracting smaller and more luxurious segments to a port region could outweigh the net benefits of attracting mass cruise tourism. Ports that want to pursue this objective can follow the strategy of either becoming an *individual tourist oriented destination* or becoming an *exclusive/unique destination*. The choice of strategy depends on the positioning of the port in relation to other ports and the availability of tourist attractions. If a port wants to pursue the strategy of becoming an *individual tourist oriented destination,* it should focus on an optimal accessibility of its tourist attractions, so that tourists can organise their own trips. Regional efforts and/or investments in enhanced tourist friendliness are important for this strategy. In this way, the port can exploit the opportunities of exploring and/or budget-driven cruise tourists. In the meantime it can overcome threats such as lower income due to lower tourist expenditure and port fees, as this type of tourist will generally add more value, which will end up in the port region.

Ports that want to become an exclusive/unique transit destination should focus primarily on excellent tourist facilities in ports and their hinterland, whilst at the same time maintaining the focus on receiving a limited group of cruise tourists.

c/ Becoming a cruise tourism hub

A port that wants to become (or to remain) a cruise tourism hub should pursue the strategy of an *individual tourist oriented destination* if it wishes to exploit its opportunities to the full and overcome its threats. In order to exploit these opportunities (more turnaround activity, more tourist activity, younger travellers and mass tourism) ports should focus on developing port facilities, tourist friendliness and accessibility.

V.3. LIMITATIONS AND ASPECTS FOR FURTHER RESEARCH

The first part of this study assessed the economic impact of cruise tourism in EU port regions, Member States and the EU as a whole. The analyses proved that cruise tourism can generate a significant economic impact. It also showed that the allocation of economic impact should be handled with care.

The second part of this study dealt with the question of how the economic impact of cruise tourism can be enlarged by investing in port facilities. Due to the fact that the outcomes need to be applicable to all EU seaports, the analyses were conducted at an abstract level. Hence, the outcomes provide a

helpful tool for ports, but do not take into consideration the strengths, weaknesses, opportunities and threats of the individual ports. Therefore, an analysis should be conducted at individual port level to incorporate all relevant parameters influencing that port's position within the cruise tourism market.

For *Task 4* an indicator was constructed that allows individual ports to assess the economic impact of cruise tourism and investment opportunities. This tool also includes port facilities which were analysed under *Task 1*, e.g. shore-side electricity. This calculation tool can be accessed at the website http://ec.europa.eu/maritimeaffairs .