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# Effects of Tourism Upon the Economy of Small and Medium-Sized European Cities. Cultural Tourists and “The Others”

## Summary

The paper presents the results of the application of an Input-Output-based approach for the estimation of direct, indirect and induced effects of tourist spending on local economies, in a static partial equilibrium setting. The methodology has been successfully applied in three case studies – Bergen (Norway), Elche (Spain), Syracuse (Italy) –, in the framework of the 6th FP project PICTURE (Pro-active management of the Impact of Cultural Tourism upon Urban Resources and Economies), in order to quantify the monetary impact of cultural tourism upon urban economies. The analysis was carried out in two major steps: firstly, interviews to tourists in each case study city, in order to estimate the scale and variability of the spending patterns of different profiles of visitors (e.g., culture-driven vs. leisure tourists); secondly, application of the Input-Output model of the economy of concern (eventually re-scaling the matrix at the Region or County level) to quantify the effects of tourist expenditure on sales, income and employment for the several impacted economic sectors. Tourists driven by cultural interest are often assumed, in literature, to have a higher than average income and to spend more on holiday. The paper reports the main findings of the analysis, discussing them against the “cultural tourist” stereotype. The analysis aims at assisting local decision makers in identifying the value of different tourist typologies to their region, in understanding how different sectors of local economy and society can benefit from tourism and in determining how to maximise, or more equally redistribute, the positive impact.

**Keywords:** Tourism, Cultural Tourism, Economic Impacts, Input-Output Analysis

**JEL Classification:** C67, R15, L83, D12

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*For further details on the analysis of the impacts of tourism, see PICTURE “D13-Impact of Cultural Tourism upon urban economies” and related Case Studies Annexes, available at <http://www.picture-project.com> (Deliverables section).*

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## 1 Introduction

Tourism is a key industry of the 21st century. The clear tendency emerging in many Countries of Europe toward a greater fragmentation of holidays which multiplies short visits focused mainly on urban tourism (Cabrini, 2003, p. 1), together with the availability of low-cost carriers, increasing holiday time and demographic factors like the ageing of the population, make it one of Europe's largest economic sectors. The estimates indicate a constant growth of the tourism sector in Europe, at a higher rate than the average of the European economy as a whole (European Commission, 2001; WTTC, 2006).

Of all the different forms of tourism, cultural tourism enjoys the highest growth expectations: 15% per year (Tudini, 2006). Quantitative estimation of the contribution of cultural tourism can however diverge, mainly as a result of how "cultural tourists" are defined and accounted for<sup>1</sup>. Following a survey of the European Commission, roughly 30% of tourist destinations are chosen by virtue of the presence of heritage sites which can be visited; this number increases up to 45/50% if the wider cultural sector, such as festivals or important cultural events, is included (Klein, 2001).

Tourism, and cultural tourism, create a lot of positive consequences: for instance, an increased protection of heritage (built, natural, visual), cultural exchanges, the birth of a pride of origins and of course economic benefits in terms of diversification of the local economy (Law, 2000), economic growth, balance of payments, employment and regional balances in individual Countries and across regions. The enhancement of the cultural and landscape resources of a destination is also used by local governments in order to overcome the presently prevalent form of leisure mass tourism, based on sun and beach attractors and characterised by high seasonality which causes overcrowding, thus potentially penalising the local quality of life and impacting the quality of the local environment.

Although it enjoys the reputation of being 'sustainable', cultural tourism can lead to erosion or destruction of heritage, changes in the social fabric and loss of diversity. Tourism can also endanger a local economy by fostering overdependence (Dumont, 2007). The knowledge about cultural tourism impacts is however rather limited (UNESCO, 1994).

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<sup>1</sup> Cultural tourism is defined as «all movements of persons to specific cultural attractions, such as heritage sites, artistic and cultural manifestations, arts and drama outside their normal place of residence» (Richards, 1996, p. 24). Similarly, ICOMOS (International Council on Monuments and Sites) defines cultural tourism as «essentially that form of tourism that focuses on the culture, and the cultural environments including landscapes of the destination, the values and lifestyles, heritage, visual and performing arts, industries, traditions, and leisure pursuits of the local destination or host community. It can include attendance at cultural events, visits to museums and heritage places and mixing with local people» (ICOMOS, 2002).

The present paper aims at providing a better understanding of the economic impact of cultural tourism on urban economies through the estimation of the direct, indirect and induced impacts of tourist spending.

A fundamental question guiding the research is in fact whether and under which dimensions cultural tourism may differ from other forms of tourism. In literature a ‘stereotype’ of tourists driven by cultural interest has emerged and is usually acknowledged, where cultural tourists are associated with higher local benefits and lower local costs than ‘leisure tourists’, mainly due to their higher daily expenditure (as a consequence of the assumption of older age, higher education and higher socio-economic status), lower seasonality and higher interest in local ‘heritage features’ (from food and wine to souvenirs and cultural performances, acting as a stimulus for local entrepreneurs). These assumptions tend, however, to be rather detached from empirical studies and their validity has been rarely questioned and/or validated by experimental investigations. The main aim of this paper is to focus on this gap between theoretical conjectures and empirical observation by focusing on the quantitative analysis of the economic impact of cultural tourists in three European cities: Bergen (Norway), Elche (Spain), Syracuse (Italy). These three case studies have been selected as they present a strong overlapping of both ‘culturally’ as well as ‘leisure-motivated’ tourists.

Section 2 reviews and summarizes the existing literature on the economic assessment of tourism with the objectives of, firstly, identifying the main categories of impacts and, secondly, presenting a methodology available to assess them.

Section 3 presents the procedure implemented for tracing the flow of tourist spending and to identify its impact on sales, income and employment, in a static partial equilibrium setting. Firstly, a survey on tourists visiting the case study cities was conducted. As spending can widely differ across the different kinds of tourists, a segmentation approach has been used, aiming to capture systematic differences in the spending pattern and in the impact on local economy. Key tourist profiles were introduced (cultural, leisure, business, day-tripper, etc.) and, based on the sample of the available questionnaires, average levels and compositions of expenditure evaluated. Then the spending patterns derived were applied to an Input-Output model of the economy of concern. Furthermore, an empirical procedure was applied, in order to ‘re-scale’ the original Input-Output matrix, thus passing from the analysis of the impact of tourists on national economy to the analysis of the impact at Region or County level.

Section 4 reports the results of the case studies exercise, discussing them against the ‘cultural tourist stereotype’.

## **2 Assessing the economic impact of tourism: a theoretical excursus**

In the present paper, only the most simplistic approaches to the economic assessment of tourism impacts based on the “partial equilibrium” setting are deeply described. In such a static setting, characterized by spare capacity (i.e., unemployed resources),



goods and services (housing, food, transportation and other products and services) providing a further impetus to local demand in terms of sales, income and jobs.

Indirect and induced effects are often called *secondary effects*. The size of the secondary effects is influenced by the ability of local economy to satisfy the demand of tourism industries, as well as the size and the shares of tourism industries that are locally owned. The extent of the indirect effects depends on the size of the area under study (e.g., municipal, regional, national) and on the extent to which business firms in the area supply each other with goods and services (the more likely the more diversified and interlinked is the local economy). In general, the smaller the scale of the economy and the higher the share of initial expenditure that leaks out of the local area; the fewer are these linkages and the smaller are the indirect effects. Moreover, the magnitude of indirect and induced effects depends on the share of capital, land and labour that is locally owned. For instance, small family-owned hotels and restaurants are more likely to buy local intermediate inputs than chain hotels and tourist villages. If factors are locally owned, their remunerations – profits, rents and wages – will stay locally and local community will strongly benefit from them.

The basic concept of partial equilibrium analysis is that of *multiplier*.

Two main approaches are used to estimate multipliers: simple analytical economic base models and Input-Output modelling of local economy (I-O henceforth). They are discussed in turn below.

## 2.2 The Keynesian multiplier

The simplest representation of local economy is given by a completely closed economy (i.e., no import and export activities), without taxation, where all activity is collapsed into a single representative sector (households). Let  $\Delta Y$  be an additional spending of tourists visiting the area under study. In this simple representation of local economy, the initial (direct) shock to income is given by  $\Delta X = \Delta Y$ . This tourism-related additional income partly translates into saving and partly into additional consumption. Let  $c$  be the share of income that is consumed by households (exogenous). The original tourist spending,  $\Delta Y$ , will therefore generate a second-round increase of income, given by  $c\Delta Y$ , related to the additional consumption induced by tourism. As before, this additional income translates partly into saving and partly into a further additional (consumption) demand:  $c^2\Delta Y$ . The process continues through a series of successive  $c^n\Delta Y$  increases of income:

$$\Delta Y \dots c\Delta Y \dots c^2\Delta Y \dots c^3\Delta Y \dots \dots \dots c^n\Delta Y$$

The sum of these partial effects is given by:

$$(1) \quad \Delta X = \frac{\Delta Y}{1 - c}, \text{ where } k = \frac{1}{(1 - c)} \text{ is the income multiplier.}$$

In this simple relationship, the Keynesian multiplier includes induced impacts. Furthermore, under the simplifying (and often unrealistic) assumptions imposed in the derivation of (1) – in particular, the absence of imports, i.e. the possibility for the tourism direct revenues to leak out of the local economy –,  $k > 1$ .

Since part of the tourism-related additional income that is not saved is also used to buy intermediate goods and services of production factors (wages, interests and profits, rents) located outside the area of concern (which is even more true in relation

to the impact of cultural tourism in urban economies, where the study area tends to be limited in size – usually at municipal/regional level – and therefore relatively open to ‘leakages’) or to pay taxes to central and local governments, a more general and realistic expression includes the possibility to estimate the impact of imports, taxation and first-round leakages:

$$(1') \quad \Delta X = \frac{(1-l)\Delta Y}{1-c(1-t)+m}, \text{ where } k = \frac{(1-l)}{(1-c(1-t)+m)} \text{ is the income multiplier;}$$

as before,  $c$  is the marginal propensity to consume,  $t$  is the share of income going to the government (tax rate),  $m$  is the share of income spent on foreign goods (propensity to import) and  $l$  is the ‘first-round’ or ‘direct leakage’, i.e., the share of tourist expenditure never entering the destination economy (e.g., in the case of package tours, especially for holidays overseas<sup>3</sup>).

From (1') it is clear that  $l$ ,  $c$ ,  $t$  and  $m$  are key parameters to determine the final effect of the initial additional tourist expenditure. The smaller the leakage into saving, imports and taxation, the bigger the final impacts (in fact any money leaking out of the economy ceases to generate further increases in income and employment). The value assumed by the multiplier represents a balance among these multifaceted effects and the condition  $k > 1$ , met under the generally oversimplifying assumptions of (1), is not necessarily fulfilled anymore.

It is of extreme importance to underline the role played by  $l$ , the share of tourist expenditure never entering the destination economy, as some ‘confusion’ is often found in literature<sup>4</sup>.

Keynesian multipliers are numbers (coefficients) which, when multiplied by an additional tourist expenditure, allow to estimate quantities of interest. The term  $(1-l)$  at the numerator in (1'), related to the ‘capture rate’ (i.e., the percentage of visitor spending ‘captured’ by the region’s economy), can be alternatively included in the definition of the multiplier, as in (1'), or in the definition of additional tourist expenditure; in this case, the multiplicand is not the total tourist spending, but the fraction of total tourist spending captured by the area of concern in the first-round, i.e.  $\Delta Y(1-l)$ . The multiplier and the additional tourist expenditure used in the application should therefore be consistently estimated.

In the case of tourism, the identification and estimation of direct leakages is not a simple and straightforward task. A common example is related to spending on not locally produced goods: in this case only the trade margins for the purchased products enter the local economy (see Section 2.2.1). For other kinds of expenditure, the identification of direct leakages can be rather subtle. An example is reported in Archer (1982), in relation to rental of caravans in coastal areas of the UK. Although as a matter of facts the money is spent locally, it could happen that most of these caravans are owned by people who themselves live outside the area of concern. Thus, many rental charges paid by visitors (to use caravans) don't go to the holiday area, but to the owners of the caravans who live outside the study area. The flow of money into the area of concern, therefore, is only limited to the parking (or site) fees paid by the caravan owners to the site owner (supposed to be a local resident). This sum is

<sup>3</sup> In this case, a large part of the money paid by visitors accrues to the airlines, coach operators, travel agents outside the holiday regions and never even enters the area of concern.

<sup>4</sup> Archer identifies the neglect or incorrect estimation of ‘direct leakages’ as one of the main sources of misuse and abuse in the application of multipliers (Archer, 1982).

considerably lower than the rental fees paid by the tourists using the caravans. In the case of tourism, an ‘aggregated capture rate’ generally ranges between 70% and 90% depending on the size of the region and the proportion of goods relative to services purchased by visitors. Forgetting to correct for the ‘first-round direct leakages’ results therefore in inflated (i.e., erroneously overestimated) impacts.

Multipliers are widely used in policy-making. They are used to study the impact of tourism on business turnover, income and employment and can be used to compare the impact of increased demand on other sectors of the economy or different policy options. Several types of multiplier are commonly used:

- *Income multiplier*, commonly regarded as the most important indicator of the economic performance of tourism industry. This is a coefficient that expresses the amount of income (sales net of intermediate consumption, including wages, salaries and profit) generated in an area by an additional unit of tourist spending. For instance, if tourists spend an extra EUR 1 million in the area and this generates EUR 800,000 of income, the Keynesian multiplier is 0.8<sup>5</sup>. Income multipliers vary depending on whether they include or not incomes accruing to non-nationals residing in the region under investigation, and whether they include or not income accruing to governments. The multiplier can be measured as disposable income – the income available to individuals to spend or save, which is net of tax – or value added income – the income which includes tax and other expenditures which are defined according to national income accounting rules;
- *Sales (or transactions) multiplier*, referring to the effect on business turnover (value of business turnover created by a unitary increase in tourist expenditure);
- *Output multiplier*, referring to the effect on the level of output of the economy. With respect to the sales multiplier it does not only take into account the impact on turnover of local businesses, but also any changes in the level of stocks they hold. This can be useful in identifying potential supply shortfalls, or bottlenecks;
- *Government revenue multiplier*, referring to the effects on governmental revenues from all sources (e.g., direct and indirect taxation, duties, licenses and fees);
- *Employment multiplier*, referring to the effect on employment. It is usually derived from the output or income multipliers. The Keynesian multiplier can be expressed as the ratio of the number of ‘total’ additional jobs (e.g., direct and indirect or direct and secondary) to the initial tourist expenditure. Employment can be measured in terms of full time equivalent jobs, or the actual number of jobs including part-time jobs.

### 2.2.1 The Input-Output (I-O) methodology

The economic impact of tourism is complex because it does not involve a single commonly acknowledged industrial sector, but – as discussed in Section 2.1 – its ‘shock to final demand’ tends to ripple through the economy: in order to be able to satisfy the shock, the involved firms are forced to increase their input purchases from other sectors, and so on. The application of the I-O matrix, through the possibility of

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<sup>5</sup> Although the correct methodology requires the calculation of the multiplier at the margin, it is common practice (mainly because of data limitation) to calculate income effects in terms of *average*, rather than *marginal*, tourism expenditure and to assume that there is no significant difference between them. This implies that the economy has available capacity to meet future demand (see Section 2.2.1).

tracing the flows of spending (sales and purchases) associated with tourism activity, allows the estimation of the impacts of tourism by economic sector.

Let  $\Delta Y$  be the  $(n \times 1)$  vector of the shock to final demand (with  $n$  equal to the number of sectors);  $A$  be the  $(n \times n)$  matrix of *technical coefficients* of the economy; and  $X$  be the  $(n \times 1)$  vector of gross output. Then  $\Delta X = A \cdot \Delta Y$  will be the first-round vector of increases of gross output, leading to additional intermediate demand and therefore to a second-round increases of gross output  $\Delta X = A \cdot (A \cdot \Delta Y)$ . The process continues through a series of successive increases of gross output  $\Delta X = A \cdot (..(A \cdot \Delta Y)..)$  whose sum is given by:

$$(2) \quad \Delta X = (I-A)^{-1} \cdot \Delta Y,$$

where  $(I-A)^{-1}$  is known as the Leontief inverse matrix. In order to simulate the impacts of tourist spending on the economy of a tourist region  $\Delta Y$ , the vector of shocks to final demand, has to reflect the distribution of tourist spending to the industrial sectors that participate directly in the tourism-related activities (i.e., the initial recipients of tourists' money).

While the analytical approach, introduced in Section 2.2, tends to aggregate the effects of tourism in a single coefficient (e.g., economic base models to estimate an overall aggregated "Tourist Regional Multiplier" – Archer and Owen, 1971), I-O model represents the most common tool to generate sector-specific multipliers. The economic base model can be further refined: different rates for direct and indirect taxes can be calculated, first-round leakages can be tailored to the specific nature of the initial shock (Sinclair, 1998), propensity values can assume different values for the short- and long-term (leading to short- and long-run multipliers – Archer and Owen, 1971) or be sector-specific (leading to sector-specific multipliers – Milne, 1987). However, one major advantage of I-O model is that it provides, for each sector of the local economy, detailed information on direct, indirect and induced effects of tourist spending on all economic measures (i.e., sales, income, employment). It also allows a deeper understanding of the impacts of tourism. In fact, e.g., 1 EUR worth of retail trade output would have a rather different ultimate value than 1 EUR worth of a museum's output in a distributional sense: the first accrues to an individual in the private sector and the second to the public sector. On the other side, the development of I-O models requires considerably more data and efforts than simple economic base models. First of all it relies on the existence and availability of a reliable case study-specific I-O matrix.

Therefore, I-O model can be used to calculate different categories of multipliers. Two basic distinctions are made:

- The first is based on the range of effects included, i.e. whether induced effects are considered as well;
- The second is made in reference to the variable affected (e.g., output, as in equation (2), or income). Using sectoral productivities, the effects on employment can also be derived (by dividing sectors' income changes by sector productivity) and consequently an employment multiplier calculated.

Moreover, it also has some limitations deriving from the rather strong hypotheses imposed on the model:

- The model is linear. Production functions are considered to be linear, that is if additional output is required all inputs increase proportionally;

- The model is static and assumes that there are (unlimited) idle resources (including labour, natural resources and capital goods), which means that any increase in final demand can simply be met by proportional increase in sectoral outputs. As a consequence, prices do not respond to increasing demand (perfect elastic supply) and the growth of tourism does not lead to a reallocation of resources across sectors;
- Technologies are fixed. All firms in each sector employ the same technology, and there are neither economies nor diseconomies of scale and no substitution among inputs;
- The outputs of each sector are homogeneous. An industrial sector cannot increase the output of one specific product unless it proportionally increases the output of all its other products;
- In calculating the employment effect, the model assumes a fixed employment/output ratio. Productivity increases are not taken into consideration, that is any additional demand for labour translates into a proportional increase in the number of employees.

The first problem is that I-O matrix approximates the actual economy with respect to the year on which it is estimated. The farther away we are from the I-O table year, the less the evaluation corresponds to actual economy. Tourism, as any economic activity, passes through several stages during its development. The early stages of tourist development of an area are characterized by dynamic, short-term changes implying that technical coefficients do not remain stable at least for some period. As a tourist region matures, the assumption of constant coefficients may be more acceptable (but the coefficients cannot be assumed to remain constant for time periods longer than, typically, five years). At the level of multipliers, one has to notice that the income multiplier, expressed as ratios of money to money, may not significantly change over time; Keynesian employment multiplier however, being expressed as a ratio of number of employees to tourist expenditures, will be affected by inflation.

As already noticed, for the employment multiplier values to hold true, it must be assumed that an increase in final demand will result in each sector increasing their demand for labour in a linear way. This will only be reasonable if every sector is operating at full utilization. In the short run it is likely that most sectors will meet additional demand by either better utilization of existing personnel or by increasing over-time. In such cases, the employment multiplier will over-estimate the effects on employment. This can be particularly critical in the case of tourism, where the restaurant & hotel industry is typically characterized by capacity under-utilization (reflected, e.g., in hotel occupancy rates lower than 100%).

Finally, considering that in most economies there is some unemployment of labour, it is also quite conceivable that some industries will not be able to respond immediately to changes in final demand (because of absence of capacity and supply constraints – Briassoulis, 1991) and any increase in demand will need to be met by an increase in imports.

### 3 Tackling the issues: the methodological approach

#### 3.1 The scope of the analysis

One of the main aims of the economic impact assessment was an empirical and straightforward verification of the legitimacy of the ‘stereotypes’ usually associated to the phenomenon of cultural tourism.

The almost universal caricature of the stereotypical “Heritage tourist” (the so-called *Baedeker/Michelin tourist*) is aged 45-65, with higher than average disposable income, education and travel experience, holidaymaking independently in a group of two and staying in hotel accommodation (Ashworth, 2004).

As a consequence, cultural tourism is often assumed to have higher local benefits and lower local costs than ‘sun&beach’ resort tourism, mainly due to the following elements:

- Cultural tourists show higher daily expenditure. In particular, they are expected to show a preference for relatively expensive hotel accommodations (not so dependent upon the cost-conscious organised package product);
- Cultural tourists are more interested in the consumption of ‘heritage features’ such as food, wine, speciality shopping, cultural performances and evening entertainment;
- Cultural tourists are more dependent on ‘fragmented’ small and medium-sized enterprises (therefore also acting as a stimulus for local entrepreneurs) and less dependent on all-inclusive vacation packages from big tour operators (with a limited number of local staff). On the contrary, if tourists remain for their entire stay at the same cruise ship or resort, which provides everything they need and where they will make all their expenditures, not much opportunity is left for local people to profit;
- Cultural tourism produces a shift in product from the mass production of a low-cost homogeneous product to a more heterogeneous, higher-cost product for a differentiated market. A more differentiated range of products is likely to spread both benefits and costs more evenly, among economic sectors and socially;
- Increased revenues and benefits/costs are more spread also spatially and temporally. This is not only expected to reduce high-risk seasonal jobs or off-season unemployment, but is also supposed to moderate some of the main negative impacts of tourism. On the contrary leisure mass tourism, based on sun and beach attractors and characterised by high seasonality, causes overcrowding, thus penalising the local quality of life and impacting the quality of the local environment.

But a different typology of cultural tourists is also emerging: the so-called *Lonely Planet* or *Rough Guide tourists*. These are young people, aged 20-30, with a different and lower pattern of expenditure of course, staying in inexpensive bed and breakfast or other accommodation facilities, which may have useful advantages for spreading the benefits of tourism both economically and spatially, as this kind of facilities are often owned by local people (Ashworth, 2004, p. 6). This duality is confirmed by the

European Travel Commission and the World Tourism Organization (ETC & WTO, 2005, p. 34):

[City cultural tourists] tend to be predominantly female, highly educated with professional or managerial occupations and relatively high incomes [...]. Although older cultural tourists do tend to undertake more cultural activities and spend more during their city trips, cultural tourism in cities is an activity followed by all age groups, with the peak age group in terms of participation lying between 20 and 30.

The observation of the expenditure behaviour by key tourist profiles (e.g., day-tripper, sun&beach, cultural, recreational) and the evaluation for each tourism segment of its economic impact allows not only to understand whether and under which dimensions the impacts of cultural tourism are different from those of other forms of tourism but also to validate this duality of the cultural tourists' profile.

<b>Tourism in Bergen</b>	<b>Tourism in Elche</b>	<b>Tourism in Syracuse</b>
<b>CULTURAL TOURISM</b>	<b>CULTURAL TOURISM</b>	<b>CULTURAL TOURISM</b>
<ul style="list-style-type: none"> <li>• Art and history – the harbour bearing testimony of the history of the city and the wooden houses dating from the early 19th</li> <li>• Nature and landscape – Bergen, “the Gateway to the Fjord”</li> <li>• Events – above all, the Bergen International Festival</li> </ul>	<ul style="list-style-type: none"> <li>• Archaeology and history – la Alcúdia Park bearing testimony of the different civilizations that inhabited the territory; the Vila Murada containing several buildings telling the history of Moorish and Christian Elche</li> <li>• Natural heritage – Elche Palmeral, recognized by UNESCO as World Heritage in 2000</li> <li>• Intangible cultural heritage and religious events – above all, the Elche Mystery Play, declared a Masterpiece of World Oral and Intangible Heritage by UNESCO</li> </ul>	<ul style="list-style-type: none"> <li>• Massive historical heritage – temples, buildings, castles, bearing testimony of the domination by Greeks, Romans, Byzantines, Arabs, Normans, Swabians, Aragonese, Catalans, Savoys (especially in the Isle of Ortigia, in UNESCO's World Heritage List since 2005)</li> <li>• Religious heritage – the Duomo, St. Lucy celebrations, churches and Capuchins' monastery, the catacombs, Our Lady of Tears' Sanctuary, the Jewish Baths</li> <li>• Food-and-wine and handicraft heritage aiming at the valorisation of the typical products of the territory – the Pupi, wicker, raffia, cork and papyrus objects</li> </ul>
<b>CRUISE INDUSTRY</b>	<b>TRADITIONAL TOURISM</b>	<b>TRADITIONAL TOURISM</b>
<ul style="list-style-type: none"> <li>• Visitors coming on cruise could be driven by cultural interest as well as by pure leisure. They form a significant portion of the total number of yearly visitors in Bergen (245 cruise ships and 190,000 passengers in 2005)</li> </ul>	<ul style="list-style-type: none"> <li>• based on 'sun&amp;beach' assets, consequently on 'leisure-environmental tourism'</li> </ul>	<ul style="list-style-type: none"> <li>• based on 'sun&amp;beach' assets, consequently on 'leisure-environmental tourism', through the exploitation of the sea and the various activities it can host (e.g., yachting)</li> </ul>

Table 1: Main features of tourism in the case studies

Three small and medium-sized cities across Europe have been selected for the present study:

- Bergen (in Hordaland, Norway)
- Elche (in Valencia Autonomous Community, Spain)

- Syracuse (in Sicily, Italy).

Case studies allow an in-depth analysis of processes at local level and a clear understanding of specific impacts.

Furthermore, the dissimilarities among the three case studies (mature/developing destinations, Northern/Southern Europe cities, characterized by natural/sun&beach/built heritage attractors) allowed to study the behaviour of different typologies of visitors, with a specific focus on leisure “sun&beach” tourists and “cultural tourists” (like in Elche and Syracuse), as well as on “cruise tourists” (in Bergen). All these have been declared World Heritage City by UNESCO. In Table 1 the main features of tourism in each case study are briefly reviewed.

### 3.2 Developing the tool

A variety of methods, ranging from ‘pure guesswork’ to ‘complex mathematical models’, can be used to estimate the economic impacts of tourist activity in case studies. Table 2 presents few of them, in order of increasing degree of sophistication.

Level	Spending patterns	Local economy
Judgment	Expert judgment	Expert judgment to estimate multipliers
↓	Use or adjust spending averages from studies of a similar area/market	Use or adjust aggregate tourism spending multipliers from a similar region/study
↓	Adjust spending that is disaggregated within particular spending categories & segments	Use sector-specific multipliers from published sources
↓ Primary data	Survey random sample of visitors to estimate average spending by segment & spending category	Use an Input-Output model of the region's economy

Table 2: Methodological approaches for the estimation of economic impacts, ordered by level of complexity

Source: adapted from Stynes, 1999

For the case studies reported in this paper the ‘most advanced procedure’ based on primary data (last level in Table 2) has been implemented.

The analysis has been carried out in successive steps:

- Firstly, a survey of tourists visiting the case study was conducted (face-to-face interviews) in order to estimate the magnitude and variety of spending by different profiles of tourists (a day visitor who spends most of his/her budget on souvenirs would have a very different spending pattern than an overnight tourist who spends the bulk of money on lodging and restaurants);
- Then, due to the linearity of the I-O relationship, the final demand vector was disaggregated into ‘sub-vectors’. In other words, tourist surveys allowed to assess how much visitors spend on, e.g., accommodation, food, local transportation and other goods and services in the local economy; each of these categories were matched to one (or disaggregated on more than one) of the economic sectors used in the construction of the I-O matrix. By expressing the overall economic impact (direct + indirect + induced) in terms of a multiple of the direct impact alone (as

emerged from the site-specific surveys), Input-Output multipliers have been introduced. The estimation concerned the effects of exogenous changes on: sales in the sectors of the economy, income earned by households and employment expected to be generated because of these new sales and this additional income;

- Finally, an empirical procedure was applied in order to ‘re-scale’ the original Input-Output matrix, allowing a deeper analysis of the specific characteristics of local economy (e.g., passing from the analysis of the impact of tourists on national economy to the estimation of the impact on the economy at Region, or County, level).

From a methodological point of view, the inclusion of induced effects means to pass from a ‘simpler’ Input-Output model that is *open with respect to households* (i.e., that allows the evaluation of only direct and indirect effects) to a ‘more complex’ model that is *closed with respect to households*. The latter takes into account that households earn incomes in payment for their labour to production processes (driven by the demand of an additional number of visiting tourists) and, as consumers, they spend their income in rather well-patterned ways. Thus, in the formulation of the Input-Output analysis the household sector has been moved inside the technically interrelated table, that is to make it one of the endogenous sectors.

In terms of multipliers, the economic impact can be generally expressed as:

*Economic Impact = No. of Tourists · Average Spending per Tourist · I-O Multiplier,*

where *Number of Tourists* corresponds to the number of additional tourists that are expected to be attracted in the region of concern, the *Average Total Spending* reflects the per capita tourist expenditure (daily or, alternatively, over the whole length of stay in the destination) and the *Multiplier* reflects the features of local economy.

If, for example, one were interested in the estimation of the potential economic impact originating from the implementation of a specific tourism policy focused on attracting more tourists in the region, one could opportunely ‘re-scale’ the *Number of Tourists*. On the other hand, if one were interested in the monetary impact of policies aimed at the selection of particular profiles of tourists or at incrementing their length of stay, the *Average Total Spending* would be the most natural parameter to be re-scaled in this kind of ‘what-if’ exercise. In contrast, policies dedicated to the improvement of the inter-linkages among the local enterprises would have mainly an impact on the value of the *I-O Multipliers*.

In the framework of the case studies, a preliminary estimation of the “average spending” per different profiles of tourists has been carried out. Due to the relatively high uncertainty intrinsic to the results, no attempt is done to quantitatively extrapolate these findings in terms of overall economic impacts.

In fact, available resources allowed a limited number of questionnaires to be collected through face-to-face interviews (about 160 complete questionnaires in Bergen, 360 in Elche, and 370 in Syracuse). From a purely statistical point of view, the survey is rather undersized. It has to be remembered that, for example, the European Cities Tourism Research and Statistics Working Group (2004) recommends that 1,500-2,000 interviews be carried out in a single city for the quantitative conclusions of the survey to be considered statistically accurate.

In order to intersect the main profiles of tourists visiting the case studies and to increase the general representativeness of the study, the survey was split into two

tranches: the first performed in the on-peak summer season, the second in the off-peak winter season (except for Bergen where, due to climatic reasons, the impact of off-peak tourism is particularly negligible). Moreover, the interviews were carried out both at the entrance to the most important attractions of the destination and in hotels; in the case of Syracuse, part of the questionnaires were submitted in a beach resort too.

Moreover, in the case studies some of the tourists' profiles are characterized by a relatively low number of available questionnaires. It has to be noticed again that, from a statistical point of view, samples of at least 50-100 visitors are typically recommended, within each tourism segment, for the analysis to be 'robust'. Due to the moderately low number of questionnaires, average spending patterns could only be determined together with relatively large 'confidence intervals'.

Still, the obtained results can be used by local decision makers, e.g., to identify tourist expenditure in their area, understand the value of different tourist types, isolate the likely monetary benefits of a potential tourism development, determine how different sectors of local economy will directly or secondarily benefit from tourism activities (and which inter-industrial linkages should be reinforced in order to increase the monetary benefits), or model the impact of tourism on local additional income and employment.

### 3.2.1 Regional effects: re-scaling of the I-O matrix

Typically, the Input-Output table is available at scales (usually at national level) that are bigger than the one of interest for the local application.

With respect to the Bergen case study, an Input-Output table at national scale was available for 2002 from the Statistical Office (Statistics Norway, 2006). For the Elche case study, the OECD Input-Output table at national scale (Spain) for 1995 has been used (OECD, 1998). Finally, with respect to the Syracuse case study, an Input-Output table at regional scale (Sicily) for the year 2002 could be purchased from the Istituto G. Tagliacarne (2005), a Foundation set up by the Italian Chambers of Commerce. The straightforward implementation of the matrices would have allowed the estimation of the impacts of tourism in Bergen on the Norwegian economy, in Elche on the Spanish economy, and in Syracuse on the Sicilian economy. In order to complement the analysis with a 'more local' estimation of the economic impact, the Input-Output matrix was re-scaled at the level of the Hordaland County, the Comunidad Valenciana and the Syracuse Province, respectively.

From a practical point of view, a series of alternative procedures, at different levels of complexity, have been proposed in literature for re-scaling an I-O matrix. These can be divided into three main categories: "survey", "non-survey" and "hybrid" approaches. The first procedure uses surveys of industries and final consumers to collect primary data on both sales and purchases in order to identify the elements of the transactions table<sup>6</sup>, while the second derives those elements from other (usually

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<sup>6</sup> For survey methods, see e.g.: Richardson H. W. (1985), *Input-Output and Economic Base Multipliers: Looking Backward and Forward*, «Journal of Regional Science», 25, pp. 607-771; Hewings G. J. D. (1985), *Regional Input-Output Analysis*, Sage Publications, Beverly Hills, California; Hansen W. L. and Tiebout C. M. (1963), *An Intersectoral Flows Analysis of the California Economy*, «Review of Economics and Statistics», 45, pp. 409-418; Harmston F. and Lund L. (1967), *Application of An Input-Output Framework to a Community Economic System*, University of Missouri, Columbia.

national) tables by various modification techniques<sup>7</sup>. To gain the advantages of the previous procedures avoiding their main disadvantages, hybrid methods combine non-survey techniques for estimating regional direct requirements tables with superior data obtained from experts, surveys and other reliable sources<sup>8</sup>.

Among the non-survey methods, one of the procedures for estimating regional input coefficients (that is, the amount of locally produced goods and services used to produce one unit of output) is the location quotient approach.

Its main assumption is that regional and national technologies are identical. Considering that the regional technical coefficient is the sum of the regional input coefficient and the regional import coefficient expressing the amount of goods and services imported from other regions and from abroad and used to produce one unit of output, supposing that regional technical coefficient equals the national one means that regional input coefficient is estimated subtracting regional import coefficient from national (regional) technical coefficient. Moreover, assuming that on the one hand regional purchasers prefer to buy from regional producers and decide to import only when regional production is not sufficient to satisfy local requirements, and on the other hand regional producers export only the quantity exceeding the regional demand, the consequence is that the volume of local transactions and thus the value of regional input coefficients tends to be overestimated whereas imports and exports tend to be underestimated.

In the location quotient approach, the regional input coefficient is estimated as follows:

$$a_{ij}^R = q_{ij} a_{ij}^N$$

where  $q_{ij}$  represents the location quotient and it results that  $0 < q_{ij} \leq 1$ .

Regional input coefficients and regional import coefficients ( $t_{ij}^R$ ) are estimated as follows:

$$a_{ij}^R = \begin{cases} a_{ij}^N q_{ij} & \text{if } q_{ij} < 1 \\ a_{ij}^N & \text{if } q_{ij} \geq 1 \end{cases}$$

$$t_{ij}^R = \begin{cases} a_{ij}^N \cdot (1 - q_{ij}) & \text{if } q_{ij} < 1 \\ 0 & \text{if } q_{ij} \geq 1 \end{cases}$$

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<sup>7</sup> For non-survey methods, see e.g. Morrison W. I. and Smith P. (1974), *Nonsurvey Input-Output Techniques at the Small Area Level: An Evaluation*, «Journal of Regional Science», 14, pp. 1-14.

<sup>8</sup> See e.g.: West G. R. (1990), *Regional Trade Estimation: A Hybrid Approach*, «International Regional Science Review», 13, pp. 103-118; Jensen R. C., Mandeville T. D. and Karunarante N. D. (1979), *Regional Economic Planning: Generation of Regional Input-Output Analysis*, Croom Helm, London; Piispala J. (2000), *On Regionalising Input/Output Tables – Experiences from Compiling Regional Supply and Use Tables in Finland*, paper presented at the “XIII International Conference on Input-Output Techniques”, University of Macerata (Italy), 21-25 August; Imansyah M. H. (2000), *An Efficient Method for Constructing Regional Input-Output Table: A Horizontal Approach in Indonesia*, paper presented at the “XIII International Conference on Input-Output Techniques”, University of Macerata (Italy), 21-25 August.

Among the techniques to estimate the value of  $q_{ij}$ , in the analysis of the case studies the “Flegg Location Quotient” (see e.g. Bonfiglio, 2006) has been implemented<sup>9</sup>. This methodology makes use of the number of employees engaged in each economic sector (e.g., in Sicily and Syracuse economy), as well as of empirically derived factors.

The quotient takes the following form:

$$FLQ_{ij} = \frac{E_i^R / E_j^R}{E_i^N / E_j^N} \cdot \lambda^*,$$

where E is employment, R and N indicate the nation and the region, respectively;  $\lambda^* = [\log_2(1 + E^R / E^N)]^\delta$ ,  $0 \leq \delta < 1$ ;  $0 \leq \lambda^* \leq 1$ .

As the “Cross Industry Location Quotient”<sup>10</sup>, Flegg Location Quotient compares the proportion of national output of selling industry  $i$  in the region to that of purchasing industry  $j$ . Unlike the “Simple Location Quotient”, both take account of the importance of both purchasing and (not only) selling sectors at regional level. They enable import proportions to vary within the rows since they allow for differing cell-by-cell adjustments rather than uniform adjustments along each row. In fact, if sector  $i$  is relatively smaller than sector  $j$ , some inputs for sector  $j$  will be imported. Furthermore, with respect to the previous techniques and especially the “Semilogarithmic Quotient”<sup>11</sup>, of which the Flegg’s is a modification, this quotient doesn’t fail in taking into account the size of the region attributing larger input coefficients (smaller import coefficients) to larger regions. The larger the region, the greater the regional input coefficients and the smaller the import coefficients. FLQ requires estimating the  $\delta$  parameter. The bigger the value of  $\delta$ , the greater the adjustment for regional imports: so,  $\delta$  is inversely related to the size of the region.

In their studies on England and Scotland, Flegg and Webber (1997)<sup>12</sup> find that an approximate value for  $\delta$  of 0.3 allows deriving closer multipliers to those obtained by surveys than multipliers obtained by the conventional cross industry location quotients. It should be admitted that further work is necessary on the value of the parameter, since it may not be adequate for regions other than those studied by Flegg. Nevertheless, location quotient technique is effective for the purpose and, above all, it presents the advantage of not requiring much data: moreover, employment data are often the only data available at the highest level of sector disaggregation and at both regional and national levels.

Data about employment in Hordaland were taken, for an aggregated set of economic macro-sectors, from Hordaland County Council (2004). Data about employment in Spain and in the Comunidad Valenciana were obtained from the databases on labour statistics operated by ILO – International Labour Office (2005) and INE – Instituto Nacional de Estadística (2004), and from specific publications on employment statistics (Fundación BBVA, 2000; OECD, 2006). Data about employment in Sicily and Syracuse were obtained from ISTAT (2005), the Italian National Statistical

<sup>9</sup> For further reading, please see e.g.: Flegg T. A., Webber C. D. and Elliot M. V. (1995), *On the appropriate use of location quotients in generating regional input-output tables*, «Regional Studies», 29, pp. 547-561; Flegg T. A. and Webber C. D. (2000), *Regional Size, Regional Specialization and the FLQ Formula*, «Regional Studies», 34, pp. 563-569.

<sup>10</sup> Please see, e.g., the already cited Morrison W. I. and Smith P. (1974).

<sup>11</sup> Please see, e.g., Morrison W. I. and Smith P. (1974).

<sup>12</sup> Flegg T. A. and Webber C. D. (1997), *On the Appropriate Use of Location Quotients in Generating Regional Input-Output Tables: Reply*, «Regional Studies», 31, pp. 795-805 (cited in Bonfiglio, 2006).

Office, for the same economic classification as the one used in the formulation of the Input-Output matrix.

## 4 The I-O Analysis

### 4.1 Profiling tourists: qualitative analysis of the sample

A qualitative analysis of the interviewed population in each case study represents an important basis for the interpretation of the differences in tourists' expenditures and offers useful elements for a wider description of tourists' behaviour.

In the developed questionnaire the most relevant factors of discrimination among different typologies of tourists, for the analysis of the respective patterns of expenditure and expenditure levels, have been identified as follows:

- Reason
- Motivation
- Tour/unique destination
- Organisation of the travel
- Length of stay
- Accommodation
- Expenditure level
- Activities
- Age
- Education
- Employment
- Income.

*Reason* refers to the reason for travelling to the case study city: holiday, visits to friends and relatives, business travel, or other reasons. This is a key factor affecting the direct impact of visitors on the economy as, for example, tourists travelling for cultural reasons spend more/less and put more/less pressure on natural and cultural resources than sun&beach tourists. Among all the interviewed people, those answering "Holiday" were asked to explain the specific reason for choosing the destination (*Motivation*): its cultural heritage or other attractors (that is, culture or leisure).

An important element for the evaluation of the impact on the economy is represented by the *organisation of the travel*, i.e. whether the visitor is self-organised or on the contrary bought a package tour. Linked to this element is the decision of the tourist to visit only the case study city or, on the contrary, to stop in the city only for a fraction of its travel including also other – distant or neighbouring – destinations (*Tour/unique destination*).

The *length of stay* is essential to distinguish between tourists and non-tourists (who will be referred to as “day-trippers”)<sup>13</sup>. This is a key factor in the analysis of the economic impact of different typologies of visitors. For instance, tourists staying for the day are likely to spend a smaller share of total expenditure in locally produced goods.

*Accommodation* is again another important factor of economic impact: hotels are more expensive than, for instance, campsites. Moreover the ownership – whether local or not – of the accommodation chosen is a fundamental factor affecting the indirect, as well as the induced, impact on the economy<sup>14</sup>.

The *activities* done during the period of stay (cultural recreation, entertainment, shopping, etc.) allow the distinction between cultural and ‘non-cultural’ tourists.

Finally, a series of statistical data about *age*, *education*, *employment* and *income* are usually expected to explain both the interest in culture and the level of expenditure of the visitor.

#### 4.1.1 Cultural tourists

In the present paragraph the survey sample of each case study will be analyzed according to the visitors’ *motivation*, distinguishing between two groups: ‘culture-driven tourists’ and other visitors.

In all the three case studies, the large majority of respondents declared they were driven by culture in their choice of the destination. In Bergen, among the 140 respondents, culture-driven visitors are 126, i.e. 90%; the remaining 10% is represented by visitors driven by other reasons, e.g. leisure. In Elche, among the 269 respondents, culture-driven visitors are 229, about 85%; the remaining share is represented by visitors driven by other reasons: for example, in 29 questionnaires, sun&beach/leisure motivations. Finally in Syracuse, among the 291 respondents, culture-driven visitors are 266, more than 90%; the remaining share is represented by visitors driven by other reasons, e.g. sun and beach assets. This latter group is made up of only 15 individuals. The low frequency of sun&beach tourists in Elche is mainly due to the fact that the interviews took place only in Elche city centre and not on the beaches (distant about 12 km). Moreover, there are many other neighbouring locations in the province of Alicante more specifically based on beach assets than Elche. In Syracuse, people visiting the city perceived themselves as cultural tourists, although interviewed in the nearby beach resort of Fontane Bianche (part of Syracuse municipality)<sup>15</sup>.

Table 3 resumes the features of the cultural visitors in each case study.

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<sup>13</sup> According to the definitions (see, e.g., the Tourism Society in the UK, cited in Richards, 1996, p. 21; or the WTO, 1993) *excursionists* are those who stay less than 24 hours at their destination, and only travellers who stay overnight can be defined as *tourists*. However, in the following pages the term “tourist” will be often used interchangeably to refer to both day-trippers and overnight-staying visitors, when there is no distinction between the two groups regarding specific behaviours.

<sup>14</sup> For instance, small family-owned hotels and restaurants are more likely to buy local intermediate inputs than chain hotels and tourist villages. If factors are locally owned, their remunerations will stay locally and accrue to the effects on local economy.

<sup>15</sup> The urban territory of Syracuse, in fact, has no beaches: there are only two narrow and uncomfortable points of access to the sea.

The Cultural Tourist in					
BERGEN:		ELCHE:		SYRACUSE:	
• is mobile	- short visits, in several different cities in the course of the same journey - length of stay is on average 2 days and 2 nights	• is mobile	- short visits, in several different cities in the course of the same journey - length of stay is on average less than 2 days and 1 night	• is mobile	- short visits, in several different cities in the course of the same journey - length of stay is on average 2 days and 1 night
• is self-organized		• is self-organized		• is self-organized	
• stays in hotel or in campsite		• stays in hotel		• stays in hotel or in B&B	
• is young	26-35 years old	• all age groups are almost equally represented	over 25 years old	• all age groups are almost equally represented	26-65 years old
• holds a degree		• has a medium-high level of education	secondary school degree or, to a lesser extent, degree	• holds a degree	
• is employed		• is employed		• is employed	
• has got an average income	<15 or 25-45,000 €/year	• has got a low income	<25,000 €/year	• has got an average income	25-35,000 €/year

Table 3: The cultural tourist's profile

The findings about cultural visitors in Bergen confirm the feature of the stereotypical cultural tourist (they are in fact self-organised, with high level of education, staying in hotel), except for the income level (Figure 2). In fact, although around 30% of both culture-driven and other visitors declare a family income higher than 55,000 € per year, the percentage is higher for 'non-culturally motivated' tourists. In general, non-cultural tourists have got an above the average income (45-55,000 € and over)<sup>16</sup>.

At the same time the evolution in the cultural tourism market is confirmed: an important part is represented by young people. The majority of cultural visitors are indeed younger than non-cultural ones (Figure 3). Almost 33% of cultural visitors are 26 to 35 years old, showing percentages for the other classes of age never higher than 20%; still, there are also over 65-year-old respondents. Non-cultural tourists are instead middle-aged. Looking at the data about accommodation (Figure 4) it can be noticed that, whereas non-cultural tourists prefer hotels, cultural tourists are divided into two main subgroups: tourists staying in hotels and tourists preferring campsites,

<sup>16</sup> It should be however underlined that this question was felt particularly personal. As a consequence, 30 cultural visitors out of 126 refused to answer, as well as 3 non-cultural visitors out of 14. On the contrary, in Elche only 8 cultural visitors out of 229 refused to answer (as well as 1 sun&beach visitor out of 29). In Syracuse the proportion is of 41/266 cultural visitors and of 2/15 sun&beach visitors.

with a consequent lower expenditure. Probably, the latter group is made up of the younger cultural tourists.

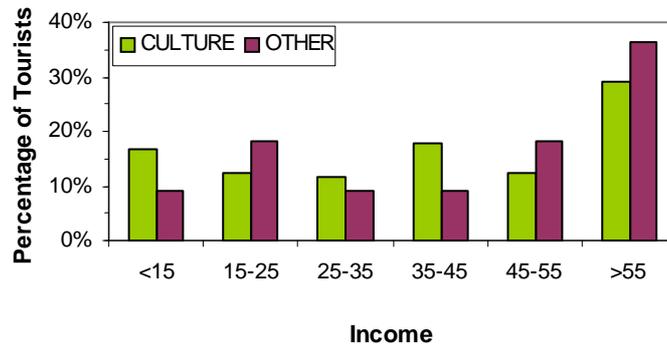


Figure 2: Results of the Bergen questionnaires (motivation, income). Income expressed in thousand €

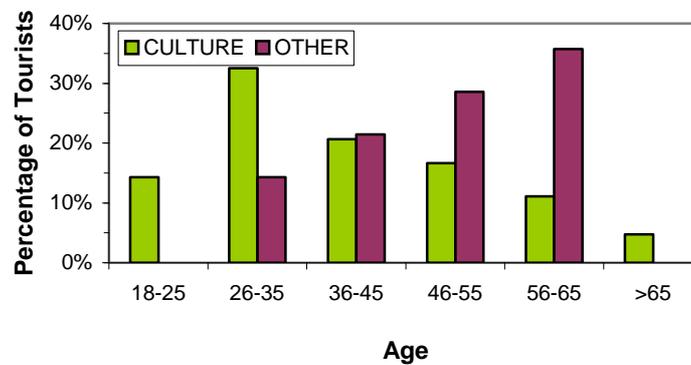


Figure 3: Results of the Bergen questionnaires (motivation, age). Respondents had to be of age

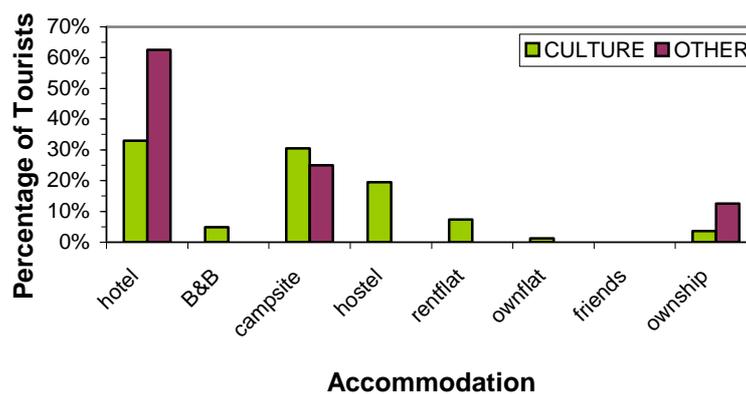


Figure 4: Results of the Bergen questionnaires (motivation, accommodation)

On the contrary, the findings about the cultural visitors in Elche do not fit completely within the paradigm of the stereotypical cultural tourist. The cultural tourist in Elche is self-organized and stays in hotel but, in the majority of cases, he/she has a relatively low income and possesses an average level of education. As can be noticed in Figure

5, in fact, the majority of cultural tourists (30%) declare a family income below 25,000 € per year. Sun&beach tourists, on the other side, show an higher average income: the income classes in the range 25,000-45,000 € are the most represented.

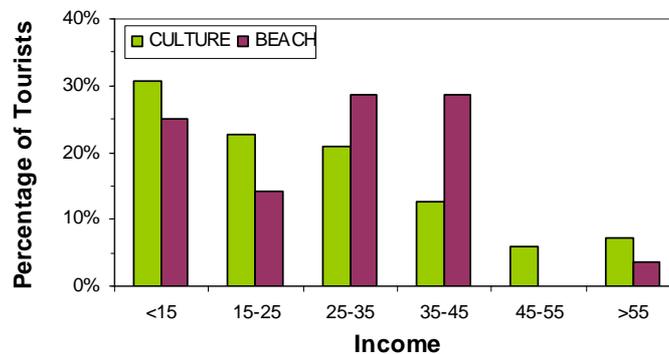


Figure 5: Results of the Elche questionnaires (motivation, income). Income expressed in thousand €

Looking at education, the majority of both cultural and sun&beach tourists are found to hold a secondary school degree or, to a lesser extent, a degree (35%). Surprisingly, apart from PhD holders, sun&beach tourists seem to be slightly shifted towards higher education.

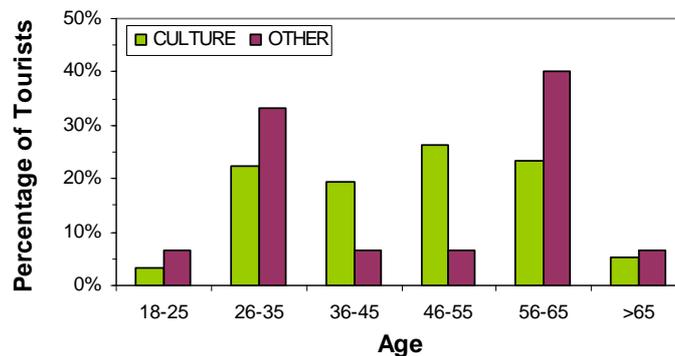


Figure 6: Results of the Syracuse questionnaires (motivation, age). Respondents had to be of age

Similarly, cultural heritage in Syracuse was found to appeal to a relatively broad range of tourists of all ages and interests. On the basis of the results of the survey it can be stated that the Syracuse case does not tend to support the cultural tourist stereotype either, for the following reasons:

- Cultural tourists are not generally older than their ‘sun&beach’ counterparts, confirming the importance of the ‘young backpackers’ cultural tourists. Even looking at the percentage of pensioners, cultural and sun&beach tourists show rather similar values (around 15%), the percentage of retired tourists being slightly higher for the ‘sun&beach’ case. What appears more interesting is the more homogeneous age distribution of culturally motivated tourists (Figure 6). While the distribution for sun&beach tourists tends to show two peaks (for the age

intervals 26-35 and 56-65, respectively), all ages are more evenly represented for cultural tourists (see the age interval 36-55);

- No substantial difference is found with respect to the level of education.

On the contrary, the salary distribution of cultural tourists, when compared to their sun&beach counterparts, seems indeed to be shifted towards higher incomes (Figure 7).

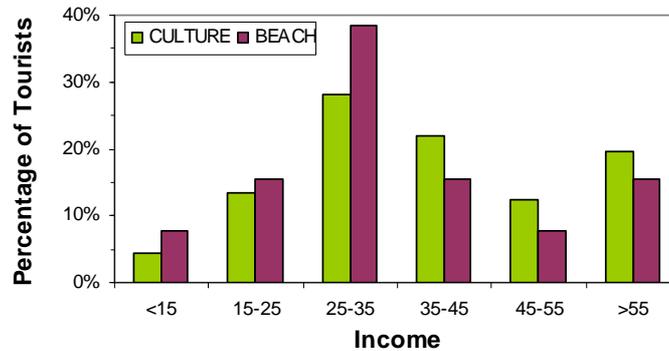


Figure 7: Results of the Syracuse questionnaires (motivation, income). Income expressed in thousand €

In all the three case studies it can be observed that cultural tourists are very mobile. This is evident in the preference for tours (not necessarily part of a structured package, in fact the majority of the visitors in the case studies are self-organised), which combine multiple destinations. Whereas sun&beach tourists declare that Syracuse represents the main destination of their travel, cultural tourists visit more than one location during one holiday. In Elche this is even more true as both sun&beach and cultural tourists declare that Elche is part of a tour. The same happens in Bergen to cultural and other visitors. Moreover, as a consequence of this and due to the diffusion of culture and of leisure time, cultural tourists are found to prefer a greater fragmentation of holidays which multiplies short visits. Even though in Bergen cultural tourists present the same period of stay as other tourists (about 2 days and 2 nights), in Elche and in Syracuse cultural tourists present a shorter period of stay compared with their sun&beach counterparts: in Elche more than 75% of the sun&beach tourists stay overnight, whereas day-trippers are the majority in the cultural tourists cluster (62% of the total); in Syracuse, although both groups are mostly represented by non day-trippers, cultural tourists tend to stay in the destination for a time interval of 2 days and 1 night on average, compared with the 8 days and 7 nights of the sun&beach tourists (Figure 8).

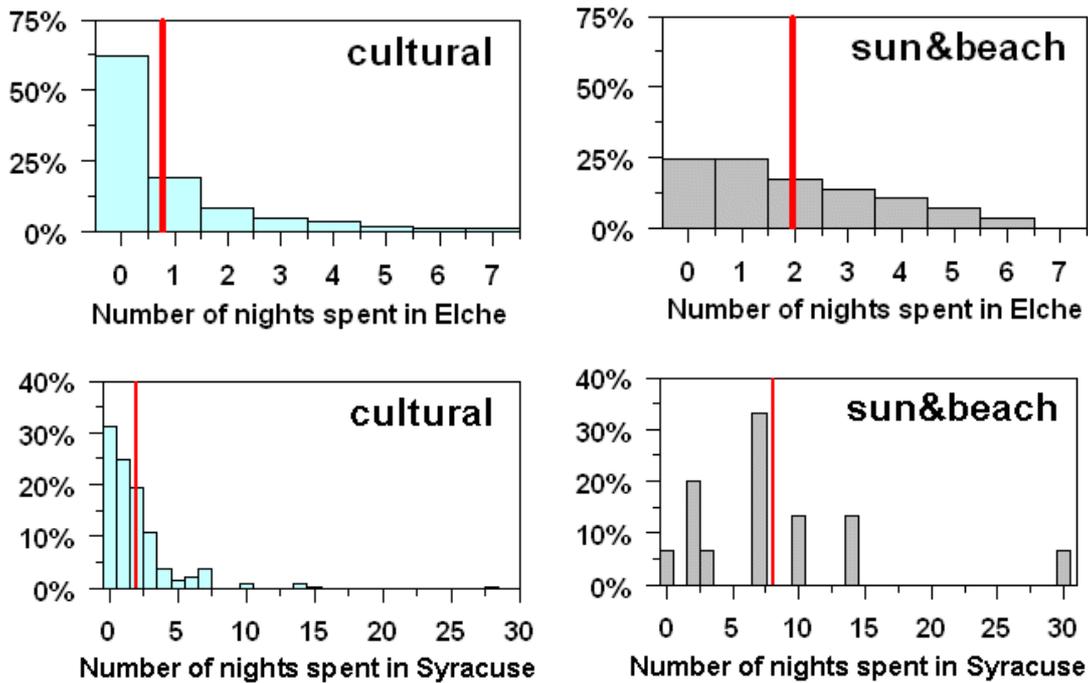


Figure 8: Number of nights spent in Elche and in Syracuse for cultural and ‘sun&beach-motivated’ tourists. The bold lines correspond to the median values

#### 4.1.2 Cruise tourism in Bergen

Considering the importance of cruises to Bergen’s economy, the profile of visitors on cruise has been more deeply analyzed.

Sorting by means of transportation used to reach Bergen and looking at the percentage of visitors on cruise, it can be found that cultural tourists are not cruisers: they choose other means of transport to get to Bergen. Nevertheless, cruisers in Bergen are mainly driven by cultural interest. Still, they are not particularly interested in Bergen and visit also other destinations in the course of a tour<sup>17</sup>, about 60% of ‘cruising tourists’ bought a package tour; on the contrary, 88% of ‘non-cruising tourists’ organised the trip on their own.

A very fundamental difference between the two groups is represented by the length of stay: cruise tourists are essentially day-trippers (in fact, cruise ships stop in Bergen only 10 hours on average), whereas the other visitors stay overnight. More precisely, cruising visitors present an average length of stay of 1.1 nights, compared with the mean permanence of non-cruising tourists which is equivalent to 2.6 nights (Figure 9).

<sup>17</sup> In the sample, cruise tourists are underrepresented: they are only about 27% of the respondents. This is mostly due to the fact that, since the majority of cruise tourists are on guided tours, it is relatively difficult to interview them, as they are often on a hurry and are not free to stop in a place without the whole group.

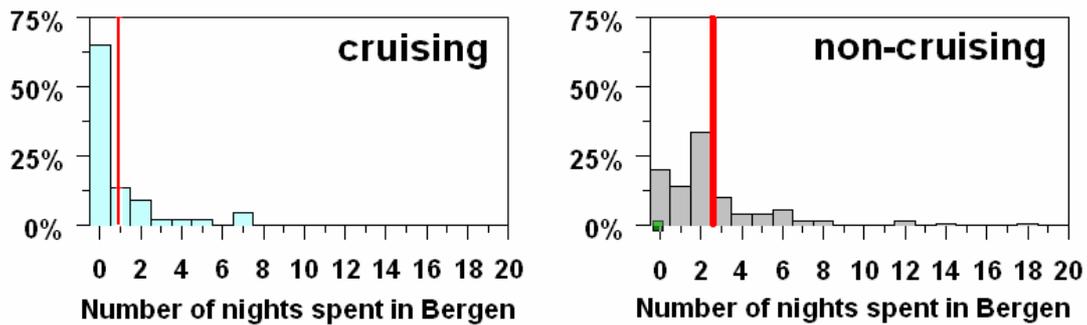


Figure 9: Number of nights spent in Bergen for cruising vs. non-cruising tourists. The bold lines correspond to the median values

Although there is still a general misconception that cruising is mainly for wealthy and/or older people, cruising has been found to appeal to a relatively broad range of tourists of all ages and interests.

As regards age, it can be observed only a slight prevalence of the age class 56-65; on the contrary, non-cruising tourists are over-represented by young people, aged 26-35. As cruising tourists tend generally to be older than non-cruising ones, although both groups of respondents are mostly employed people, over 20% of cruising tourists have already retired from work, while for non-cruising visitors this percentage is below 10% (Figure 10).

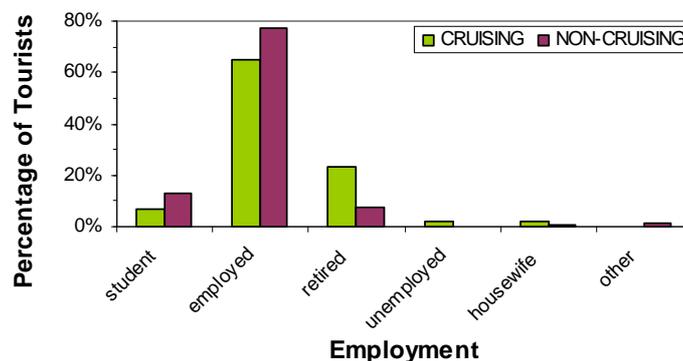


Figure 10: Results of the Bergen questionnaires (means of transport, employment)

As regards income, it can be noticed that in the cruisers' salary distribution top incomes (i.e., more than 55,000 €/year) appear to be somewhat over-represented; but a relatively high percentage of cruisers is also characterized by medium-low incomes, in particular in the interval 15,000 ÷ 25,000 €/year (Figure 11)<sup>18</sup>. The fact that most of the interviewed tourists have a high income confirms that Norway is an expensive Country to travel in.

<sup>18</sup> It should be again underlined that this question was perceived as particularly personal and sensitive: 15 cruising visitors out of 43 refused to answer, as well as 26 non-cultural visitors out of 118.

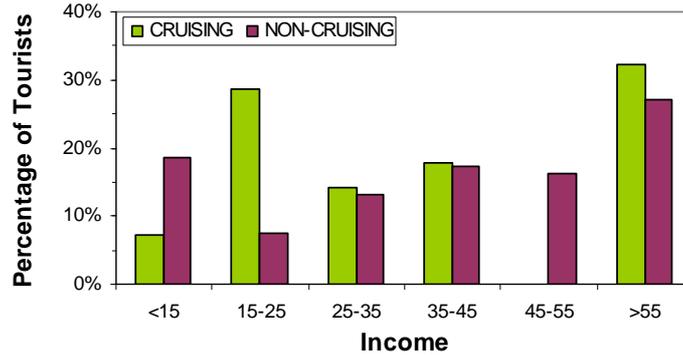


Figure 11: Results of the Bergen questionnaires (means of transport, income). Data expressed in thousand €

## 4.2 Direct impact of tourists' expenditures

As noted by West (1999), in an economic impact study the important thing to consider is not the size of the multiplier but the magnitude of the total impact on sales, income and employment: a small multiplier can correspond to a large total impact and a large multiplier to a small impact on the economy depending on the size of the initial tourist expenditures.

In extracting spending patterns from the survey, some technical and conceptual difficulties arised particularly in relation to the presence of **all-inclusive packages** since – as already anticipated – a large percentage of the money paid by the visitor could actually accrue to airlines, coach operators, travel agents outside the holiday regions and never even enter the area of concern. In order to be able to estimate the spending that actually impacted on local economy, in the case of “package tourists” the process of face-to-face interviews didn't limit itself to the request of the aggregated global cost of the holiday package. Package tourists were asked for a complementary set of ‘disaggregated’ information: e.g., on the kind of accommodation, on the consumption of food and beverages and on the services provided by the package (e.g., hotel, restaurants on board in case of cruises, etc.). Essentially a (data driven) *best guess approach* has been used: the missing entries for package tourists were input on the basis of the quantities emerged from the face-to-face interviews of both package and non-package tourists. For example, if from an interview it emerged that a package tourist spent one night in hotel, the direct impact for accommodation for this tourist was estimated by extracting a random value from the distribution of the accommodation costs sustained by all non-package tourists who also spent one night in hotel. Knowing, in most cases, the daily per capita cost of the package, the aforementioned input procedure could be corrected *a priori*, by assigning higher expenditures to package tourists with higher per capita daily costs. Although rather empirical in nature, the procedure has appeared to be adequate for the problem at hand, also thanks to the fact that only about 1/4 of the available questionnaires in the cases of Bergen and Syracuse and less than 1/7 in Elche concerned package tourists. However, in the post-analysis of the results it has to be remembered that the findings related to this kind of visitors are characterized by higher uncertainties.

Similarly, the transportation costs to reach and leave the destination (e.g., airplane/train/coach or fixed auto expenses) were totally excluded from the local impact analysis, as they were considered to have been most likely made in (and,

therefore, to contribute to) the tourist's residence area rather than in the area of concern. This is especially true when the impact of cultural tourism in urban economies is concerned, since the study areas tend to be limited in size (usually at municipal/regional level) and therefore relatively open to direct leakage.

#### 4.2.1 Spending patterns

In order to better analyze the spending patterns (daily and total, i.e., over the whole length of stay in each case study city), several tourist profiles have been introduced, as reported in Table 4, Table 5 and Table 6 (concerning Bergen, Elche and Syracuse, respectively)<sup>19</sup>.

<b>BERGEN</b>	<b>Number of questionnaires</b>	<b>Daily expenditure per capita</b>	<b>Total expenditure per capita</b>
<b>organization: package/non-package</b>			
<b>package</b>	<b>39</b>	<b>51.4 €</b>	<b>71.1 €</b>
<b>self-organized</b>	<b>122</b>	<b>45.4 €</b>	<b>148.0 €</b>
<b>cruising/non-cruising</b>			
<b>cruising</b>	<b>43</b>	<b>46.0 €</b>	<b>78.6 €</b>
<b>non-cruising</b>	<b>118</b>	<b>47.2 €</b>	<b>148.0 €</b>
<b>motivation: cultural or other</b>			
<b>culture</b>	<b>127</b>	<b>46.9 €</b>	<b>110.0 €</b>
<b>other</b>	<b>13</b>	<b>41.1 €</b>	<b>109.0 €</b>
<b>main reason for travelling</b>			
<b>business</b>	<b>4</b>	<b>75.3 €</b>	<b>404.0 €</b>
<b>friends</b>	<b>15</b>	<b>40.9 €</b>	<b>164.0 €</b>
<b>holiday</b>	<b>140</b>	<b>46.1 €</b>	<b>110.0 €</b>
football match	1	118.0 €	235.0 €
accompanying husband on business	1	62.1 €	1119.0 €
<b>day-tripper/overnight-stay tourist</b>			
<b>day-tripper</b>	<b>52</b>	<b>33.2 €</b>	<b>33.2 €</b>
<b>overnight-stay tourist</b>	<b>109</b>	<b>53.4 €</b>	<b>175.0 €</b>
<b>nationality</b>			
<b>Norwegian</b>	<b>8</b>	<b>47.6 €</b>	<b>147.0 €</b>
<b>foreigner</b>	<b>153</b>	<b>46.8 €</b>	<b>128.0 €</b>
<b>'generic tourist' [all questionnaires]</b>		<b>161</b>	<b>46.9 €</b>
		<b>129.0 €</b>	

Table 4: Number of available questionnaires for the Bergen case study and estimation of the average per capita daily and total expenditure in the Bergen region for each of the tourist profiles used in the segmentation

<b>ELCHE</b>	<b>Number of questionnaires</b>	<b>Daily expenditure per capita</b>	<b>Total expenditure per capita</b>
<b>season</b>			
<b>peak</b>	<b>176</b>	<b>35.5 €</b>	<b>87.6 €</b>
<b>off-peak</b>	<b>187</b>	<b>78.4 €</b>	<b>171.5 €</b>
<b>organization: package/non-package</b>			
<b>package</b>	<b>36</b>	<b>113.4 €</b>	<b>257.3 €</b>

<sup>19</sup> The significance, from a statistical point of view, of the differences in the expenses observed for different tourist profiles will be briefly discussed in Section 4.2.2.

semi-package	12	73.1 €	268.9 €
self-organized	315	50.6 €	111.1 €
motivation: cultural or other			
culture	229	46.2 €	84.6 €
sun&beach	29	36.8 €	110.5 €
other	11	32.4 €	105.3 €
main reason for travelling			
business	48	141.9 €	381.2 €
visiting friends/relatives	39	44.7 €	116.5 €
holiday	269	44.5 €	88.0 €
day-tripper/overnight-stay tourist			
day-tripper	174	39.6 €	39.6 €
overnight-stay tourist	189	74.2 €	214.8 €
nationality			
Spanish	207	59.1 €	149.9 €
foreigner	156	55.6 €	105.5 €
'generic tourist' [all questionnaires]	363	57.6 €	130.8 €

Table 5: Same as Table 4 but for the Elche region

SYRACUSE	Number of questionnaires	Daily expenditure per capita	Total expenditure per capita
season			
peak	268	97.1 €	276.7 €
off-peak	105	84.3 €	233.8 €
organization: package/non-package			
package	91	141.8 €	274.2 €
semi-package	21	129.6 €	555.3 €
self-organized	261	73.8 €	237.9 €
cruising/non-cruising			
cruising	18	50.6 €	280.8 €
non-cruising	355	95.7 €	263.8 €
motivation: cultural or other			
culture	266	95.6 €	223.5 €
sun&beach	15	53.6 €	375.9 €
other	13	41.0 €	213.0 €
main reason for travelling			
business	58	121.2 €	439.9 €
visiting friends/relatives	24	59.5 €	272.4 €
holiday	291	90.8 €	229.1 €
day-tripper/overnight-stay tourist			
day-tripper	88	41.9 €	41.9 €
overnight-stay tourist	285	109.5 €	333.4 €
nationality			
Italian	226	81.0 €	264.9 €
foreigner	147	112.8 €	264.2 €
'generic tourist' [all questionnaires]	373	93.5 €	264.6 €

Table 6: Same as Table 4 but for the Syracuse region

As evident from the above tables the most favourable form of tourism for local economies to invest in, in purely quantitative terms, is represented by business tourism. When sorting by **reason** for visiting the destination, business tourists are found to be the profile with the highest level of expenditure (except in Syracuse), both daily and on total (i.e., over the whole length of stay): 75.3 € and 404 €, respectively, in Bergen; 141.9 € and 381.2 €, respectively, in Elche; 121.2 € and 439.9 €, respectively, in Syracuse. These values are quite similar to those referring to visitors on a package (or semi-package) travel, since these two groups are partly coinciding. Two leading categories explain the higher daily spending: accommodation and food and beverages. In fact, business tourists appear to privilege more expensive hotels than other profiles and to spend more for meals (they prefer restaurants). The higher total expenditure is instead due to the longer period of stay in the destination.

A different spending behaviour is observed in Elche and in Syracuse between the visitors interviewed **off-peak** and the ones interviewed in summer, at the **peak** of the tourist season. From Figure 12 it can be seen that the main difference, in quantitative terms, arises from the expenditure in specific items:

- Accommodation, in the case of Syracuse. This is mainly due to the higher percentage of tourists spending the night in hotel at the peak of the tourist season (42% on-peak vs. 30% off-peak) and to the higher percentage of day visitors (28% off-peak vs. 22% on-peak) and tourists staying at friends or relatives' during the off-peak season (14% off-peak vs. 5% on-peak);
- Food and beverages, plus shopping in Elche.

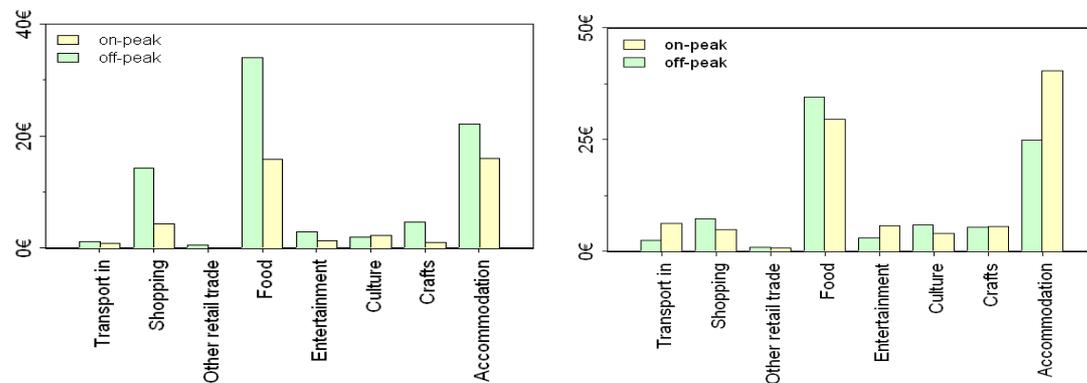


Figure 12, (from left to right): Daily per capita spending pattern of visitors in Elche interviewed at the peak of the tourist season (summer – on the occasion of the Mystery Play – cultural, leisure and religious tourists) and of visitors interviewed off-peak (winter); compared with the daily per capita spending pattern of visitors in Syracuse interviewed at the peak of the tourist season (summer – mainly cultural and leisure tourists) and of visitors interviewed off-peak (winter – on the occasion of the celebrations of St. Lucy's holy day – mainly cultural and religious tourists).

The higher per capita daily spending in the off-peak season in Elche (compared with the peak season average daily spending) is initially rather surprising, especially if one takes into account that in the off-peak season more than half of the tourists visiting Elche actually consisted of day visitors (more precisely, 56.1% against 39.2% registered in the peak season). The explanation seems indeed to be mainly related to the shift in the profile of the tourists visiting Elche: from the holiday-motivated

tourists, typical of the summer season, towards a considerable higher percentage of business tourists, off-peak of the main tourist season. As already anticipated, business-oriented tourists are in fact characterized by considerably higher daily per capita expenditures.

In all the three case studies, culturally motivated visitors are found to present an average **daily spending** (see Table 4, Table 5 and Table 6), higher than that of sun&beach (as regards Elche and Syracuse only) and other tourists (e.g., visiting friends and relatives): 46.9 € vs. 41.1 €, respectively, in Bergen; 46.2 € vs. 36.8 € and 32.4 €, respectively, in Elche; 95.6 € vs. 53.6 € and 41.0 €, respectively, in Syracuse.

In particular, the average cultural tourist is found to spend more than a non-culturally motivated tourist for most of the expenditure items: transport in the destination region, food and beverages and of course cultural visits (see Figure 13). In Bergen and Syracuse the expenditure level is higher for entertainment too; the contrary happens in Elche. Accommodation is another important category in the case of Syracuse cultural tourists. Unlike the Syracuse case, in Bergen and in Elche crafts (souvenirs or typical products) and shopping-related expenditures are higher for cultural tourists compared to other visitors.

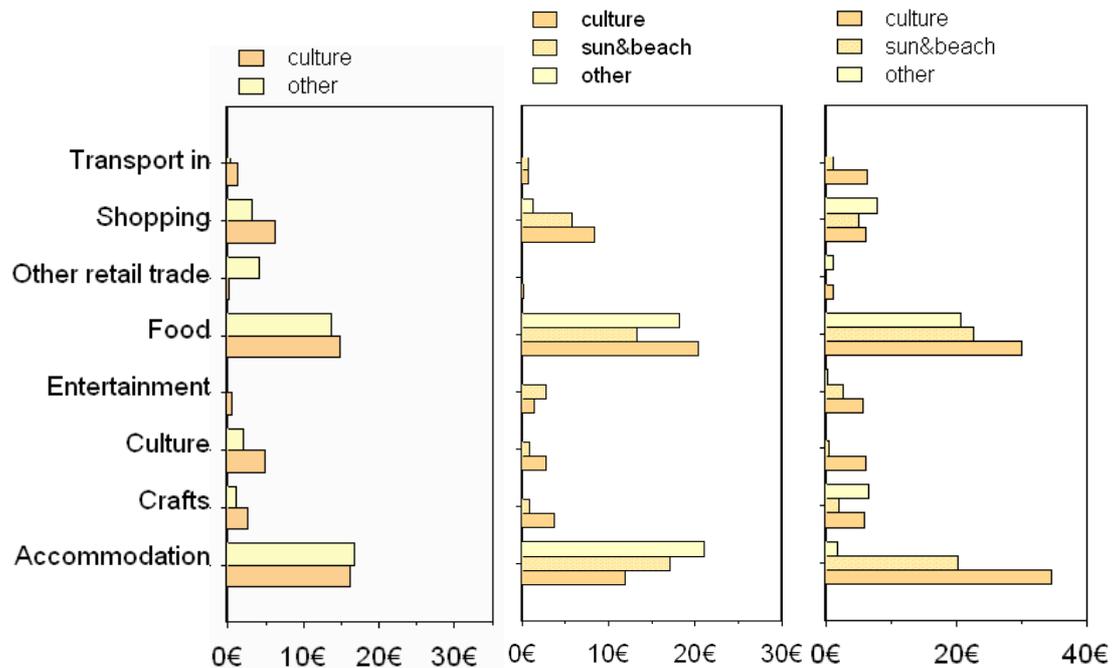


Figure 13: Daily per capita spending patterns for different profiles of tourists, as derived from the questionnaires, in Bergen, Elche and Syracuse, respectively

On the contrary, looking at the **total spending** it is now the ‘culture-motivated’ tourist who presents a lower expenditure. In Bergen the total spending of a culture-driven visitor is very similar to the one of a non-cultural tourist and the same as a generic ‘holiday tourist’ (Table 4). In Elche the cultural tourist’s average expenditure is even lower than the one of a sun&beach or ‘other-motivated’ tourist: 84.6 €, compared with 110.5 € and 105.3 €, respectively (Table 5). Finally, in Syracuse the total spending of a cultural tourist amounts to 223.5 € (very similar to that of one other-motivated tourist – 213 €), which is significantly less than what is spent on average by a sun&beach tourist (375.9 € – see Table 6). In all the three case studies, the cultural

tourist presents a below-the-average level of expenditure (when compared with a generic tourist).

Although cruise visitors do not necessarily avail themselves of local ‘on shore’ accommodations (they sleep on the cruise ship or stay in hotel, arranged by the tour operator as part of the package tour), their average per capita daily spending is found to be comparable to that of non-cruising tourists (Table 4). This implies that the minor spending in accommodation is compensated by higher expenditures in other items, as can be seen in Figure 14. Cruise tourists are mostly shore-dependent for food only; they are more interested in sightseeing and in less than 50% of the cases they visit a museum; they are more interested in shopping than in buying local crafts. However, when reasoning in terms of the per capita economic impact over the whole length of stay, cruising tourists are found to spend on average less money than their non-cruising counterparts. The main reason for this is that cruise tourists tend to stay for a shorter period in Bergen than other visitors: their length of stay is measured in hours (see Figure 9).

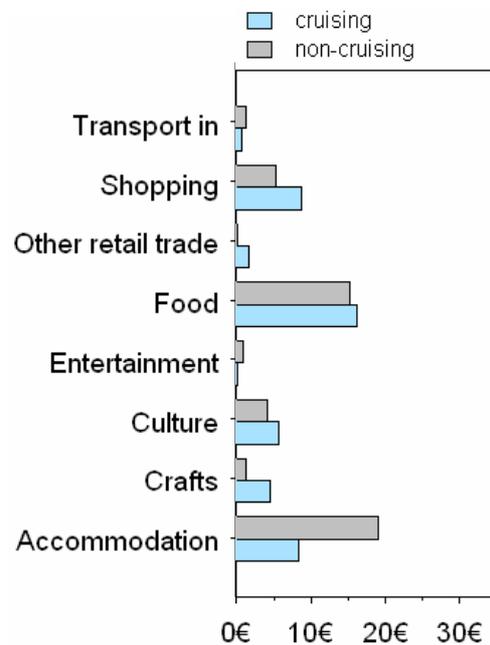


Figure 14: Per capita spending patterns for cruising and non-cruising tourists, as derived from the Bergen questionnaires

Uniquely ‘on shore spending’ of cruise tourists in Bergen has been taken into account here. Consideration about the **impact of cruises** should require information that trespass the aim of this paper. To sum up, industry-wide, cruise ship spending comes from a variety of other sources (see e.g. Moloney, 2004):

- Ships crews also have an impact on local economy, as part of the crew has ‘shore leave’ for at least some time during a ship stop. Per capita expenditures by crew members are, however, considered to be relatively low compared to per capita expenditures of cruise passengers;
- In the course of a cruise stopover, each cruise ship incurs a number of auxiliary expenditures, which might provide a beneficial contribution to the local economy. These include, e.g., vessel spending (the amount cruise lines pay for fuel, food and

provisions, agency fees, line handling, garbage removal, sludge removal, water, ship repairs/parts, etc.), harbour dues, pilotage and other port charges;

- Another intangible benefit accruing from cruise ship business is the enhanced return to the region of passengers who have previously visited the area on cruise ships<sup>20</sup>.

However, taken as a whole, the cruise industry is not necessarily a “cash cow”. It does come with its own multifaceted array of costs, as e.g. those mentioned in Regan and Prisloe (2004): advertising and marketing expenses for the port; organization of shuttle coaches from the harbour to the tourist attractions and consequent congestion, crowding and pollution; construction and maintenance of piers and terminals; potential demand on local health care system for passengers; environmental hazards; increased costs for infrastructure, port security and other services.

This is just a ‘sample’ of the level of complexity that has to be approached in a site-specific cost/benefit analysis.

#### 4.2.2 Robustness of the results

From Table 4, Table 5 and Table 6 it can be seen that, for several profiles, the number of available questionnaires is very limited. The consequent lack of representativeness could therefore limit the ‘robustness’ of the aforementioned results. In other words it couldn’t be excluded, with a reasonable amount of certainty, that the differences observed between two different profiles of tourists just reflect a ‘statistical artefact’ originating from the variability intrinsic to any random sampling procedure.

As a consequence, **confidence intervals** have been determined, through the application of non-parametric *bootstrap* resampling techniques, for the two most relevant categories taken into account in the determination of the spending pattern: accommodation and food and beverages. In addition, in order to answer the question of which tourist profiles present a significantly different behaviour in their daily and/or total per capita spending, appropriate statistical tests have been carried out. As the most common assumption of a normal distribution of spending is not supported by experimental data, a *non-parametric* standard statistical test has been preferred: the Wilcoxon Rank Sum Test. The test compares two sets of data and expresses the eventual disparity between the two medians, evaluated from the two sets, in terms of a *p-value*<sup>21</sup>.

From the test it emerged that:

- Package tourists are confirmed to exert a significantly higher direct impact on the Elche and on the Syracuse economy than self-organized tourists, when considering both daily and total expenditure; on the contrary, in Bergen self-organized tourists are found to spend more during their whole stay than package tourists;

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<sup>20</sup> The International Cruise Market Monitor estimates that up to «50% of all cruisers expect to return to the areas they have visited on a cruise» (Moloney, 2004, p. 26).

<sup>21</sup> On the basis of the available data the difference between the median expenditures of the different profiles was not always found to be significant (*p-value* < 0.05), because of the limited number of interviewed tourists. For brevity sake, the statistical analysis is not included in the present paper. Interested readers can refer to Annex 2 (Syracuse), Annex 3 (Elche) and Annex 4 (Bergen) of PICTURE “D13-Impact of Cultural Tourism upon urban economies”, available at <http://www.picture-project.com> (Deliverables section).

- In Elche, the behaviour of business tourists is found to significantly differ from that of tourists on holiday or visiting friends/relatives (the latter presenting, however, significantly higher spending over the whole length of stay than those on holiday);
- Cruising tourists in Bergen are confirmed to have a significantly lower total expenditure than their counterparts;
- Tourists spending at least one night in the destination have a bigger economic impact than day-trippers – as could be obviously expected, since the cost for accommodation represents one of the most relevant items in the spending pattern;
- Both in Bergen and in Elche domestic tourists are confirmed to be characterized by significantly higher total spending than tourists coming from abroad;
- In the two Mediterranean case studies, the median values for sun&beach and culture-motivated tourists do not differ significantly in terms of daily per capita spending (although cultural tourists tend on average to spend more than their sun&beach counterparts)<sup>22</sup>; reasoning, however, in terms of total expenditures, a sun&beach tourist seems to have a stronger direct impact than a cultural tourist. No peculiar behaviour can instead be established in the spending characteristics of cultural tourists, nor in daily neither in total expenditures, in Bergen<sup>23</sup>;
- In terms of daily per capita spending, culture-driven tourists in Syracuse present a significantly different behaviour with respect to other tourists (i.e., belonging neither to the cultural nor to the sun&beach profiles);
- In Elche, sun&beach and culture-motivated tourists appear to be characterized by significantly higher total spending than other tourists (characterized by both relatively low daily per capita expenditures and not so long lengths of stay);
- As already mentioned, in Elche and in Syracuse the spending of off-peak tourists and their on-peak counterparts differ significantly.

The fact that, in most cases, the medians of the daily per capita expenditures were not found to be significantly apart while those of the total per capita spending appeared to be significantly different strongly suggests that the source of dissimilarity between the different tourist profiles is more related to the different lengths of stay than to different spending behaviours.

### 4.3 Economic impact

In order to implement the Input-Output analysis, the expenditures evaluated over the spending categories used in the questionnaire (i.e., accommodation, food and beverages, transport in, entertainment, culture, shopping, crafts and other retail trade) had to be transposed into the respective **sectors of the economic classification** used by the Statistical Office relevant for each case study in the formulation of the Input-Output table.

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<sup>22</sup> However, the relatively low number of ‘sun&beach-driven’ visitors decreases the discriminatory power of the statistical test.

<sup>23</sup> Again, it has to be noticed that Bergen was perceived as a ‘cultural destination’. In fact, nearly all the interviewed tourists (over 90%) declared ‘cultural experience’ to be the main reason for travelling to Bergen.

A difficulty was represented by the fact that the economic classification routinely used by European Statistical Offices, although rather adequate for the description of the industrial component of economy (about 20-30 sectors are related to manufactory activities), appears to be relatively poor with respect to tourism-related analysis. For example, no distinction is done between hotels and restaurants (hence between accommodation and food and beverages) and, with a particular focus on cultural tourism, between cultural and recreational/sporting activities.

Due to limited information on the items bought by tourists during their stay in the case study cities, the conversion has been done by taking into account only the economic sectors related to:

- Retail trade; repairs;
- Hotels and restaurants;
- Transport;
- Personal services.

The conversion from the spending categories used in the questionnaire into the economic sectors used by the Input-Output tables was implemented as follows:

- retail trade; repairs      ←  $weight \cdot \text{food \& beverages} + \text{shopping} + \text{crafts} + \text{other retail trade}$
- hotels and restaurants   ←  $(1 - weight) \cdot \text{food \& beverages} + \text{accommodation}$
- transport                   ← transport in
- personal services         ← entertainment + culture

where *weight* is a parameter that refers to the fraction of the ‘food and beverages’ expenditure that is purchased at retail trades; consequently,  $(1 - weight)$  is the complementary fraction that is consumed at hotels and restaurants. A value of the parameter *weight* very close to .3 in the case of Elche and Syracuse and .5 in Bergen was statistically estimated on the basis of auxiliary information contained in the questionnaires (i.e., where and how breakfast, lunch, dinner and other eventual meals were consumed).

The main subject of the following paragraphs will be the estimation of the incremental economic impact related to a single additional tourist. Use will be made of the average total spending<sup>24</sup> derived for different tourist profiles from the site-specific questionnaires<sup>24</sup>.

#### 4.3.1 Sale multipliers

The value assumed by the sale multiplier can be useful in selecting policy strategy: e.g., if a local government were trying to determine in which sector of the economy to spend an additional € (or whatever amounts), it would always be rational to invest in the sector (or to attract those profile of tourists) whose sale multiplier is the largest in

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<sup>24</sup> Alternatively, the average daily spending could have been used, in case the main interest were the estimation of the economic benefits related to a tourist spending one more day in the city.

order to attain the greatest impact in terms of total € value of sales generated throughout the local economy<sup>25</sup>.

Table 7 shows the sale multipliers identified for the different profiles of visitors in the case study of Syracuse.

The sale multipliers for the different profiles of tourists are found to be rather similar, when considering each case study separately. Only slight differences can be noticed. In particular, in the case study of Syracuse the profiles showing the highest values, as regards both the indirect and the indirect + induced effects, at regional as well as at province level, are the semi-package and the business tourists. When looking at the impact on the Sicilian economy, cruise tourists and day-trippers are instead found to exert the lowest effects. On the contrary, in the Bergen's case study day-trippers are found to present the highest values, as regards both the indirect and the indirect + induced effects (with 1.68 and 2.71, respectively, at the national scale; and with 1.23 and 1.34, respectively, at County scale). Here cultural tourists present the lowest sale multipliers (with 1.55 and 2.34, when considering the indirect effects, at the national and the County scale, respectively; and with 1.18 and 1.27, respectively, when considering the indirect + induced effects). Finally, in the case of Elche day-trippers and tourists driven by other reasons (i.e., neither culture nor sun&beach assets) present the lowest and the highest sale multipliers, respectively (except for the indirect + induced effects at national scale).

The resemblance remains relatively high also when the effect on sales is analyzed in terms of the four economic sectors that tend to be stimulated by tourist spending. Among these four sectors, *Hotels and restaurants* appears to be the 'most efficient' in 'amplifying' the tourist spending, for the characteristics of the Spanish and of the Sicilian economies (in the latter case only if direct + indirect effects are taken into account). On the contrary, as far as Norway is concerned, this sector (with 1.44 and 2.01, when considering the indirect and the indirect + induced effects, respectively) appears to have the 'lowest efficiency' in 'exciting' the local economy. Here *Retail trade service* (with 1.78 and 3.04, respectively) appears to be the most efficient. *Transport, storage and communication* in the Sicilian case (showing a sale multiplier equivalent to 1.75 and 2.10, when induced effects are added) and *Other community, social and personal services* in the Spanish one (with 3.43, when induced effects are considered) appear to be very efficient as well.

As expected, the multipliers at district/county scale are considerably smaller than those related to the impact on the economy at larger scale (evaluated at national/regional scale), since the extent of indirect and induced effects depends both on the size of the region under study and on the strength of the inter-relationships between the different sectors of the economy<sup>26</sup>.

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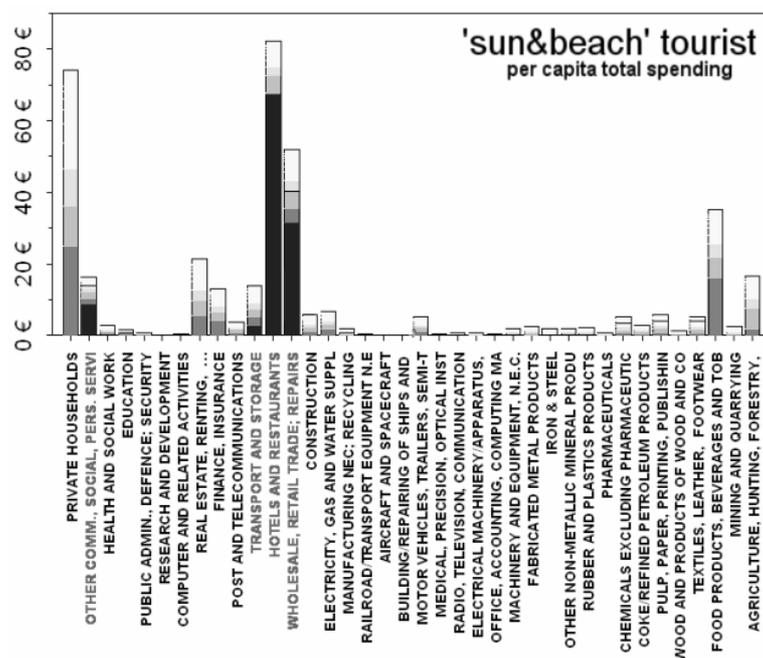
<sup>25</sup> Note, however, that under the assumptions of Input-Output methodology sale multipliers may overstate the effect on the economy in case some sectors were operating at or near capacity and so some of the needed new inputs had to be imported to the economy and/or outputs from some sectors would be shifted from exports to inputs in the economy. This kind of consequences assumes even more importance in local models (i.e., at municipality or County scale).

<sup>26</sup> In general, the smaller the scale of the economy, the little is the extent to which business firms in the area supply each other with goods and services and the higher the share of initial expenditure that leaks out of the local area.

	Sale Multiplier [indirect effects]		Sale Multiplier [indirect and induced effects] [impact on households excluded]	
	Sicily	Syracuse Province	Sicily	Syracuse Province
package	1.67	1.26	2.09	1.33
semi-package	1.69	1.26	2.12	1.32
self-organized	1.68	1.26	2.10	1.32
cruising	1.65	1.27	2.07	1.34
non-cruising	1.68	1.26	2.10	1.32
culture	1.68	1.26	2.10	1.32
sun&beach	1.68	1.26	2.10	1.32
other	1.66	1.28	2.07	1.35
business	1.69	1.26	2.12	1.32
friends	1.66	1.26	2.08	1.33
holiday	1.68	1.26	2.10	1.32
day-tripper	1.65	1.27	2.06	1.33
overnight-stay	1.68	1.26	2.10	1.32
Italian	1.68	1.26	2.10	1.32
foreigner	1.68	1.26	2.10	1.32
'generic tourist' [all questionnaires]	1.68	1.26	2.10	1.32

Table 7: Sale multipliers for different profiles of tourists on Sicilian economy and Syracuse Province (after the re-scaling of the Input-Output matrix)

The effects on sales generated in the Spanish and in the Sicilian economy by the total spending of a sun&beach and a cultural tourist during his/her stay in Elche and Syracuse are repropesed in Figure 15 and Figure 16. Here it is evident the difference in the size of the initial tourist expenditure (in most of the expenditure items) between the two profiles, affecting the total (direct+indirect+induced) impact on the economy.



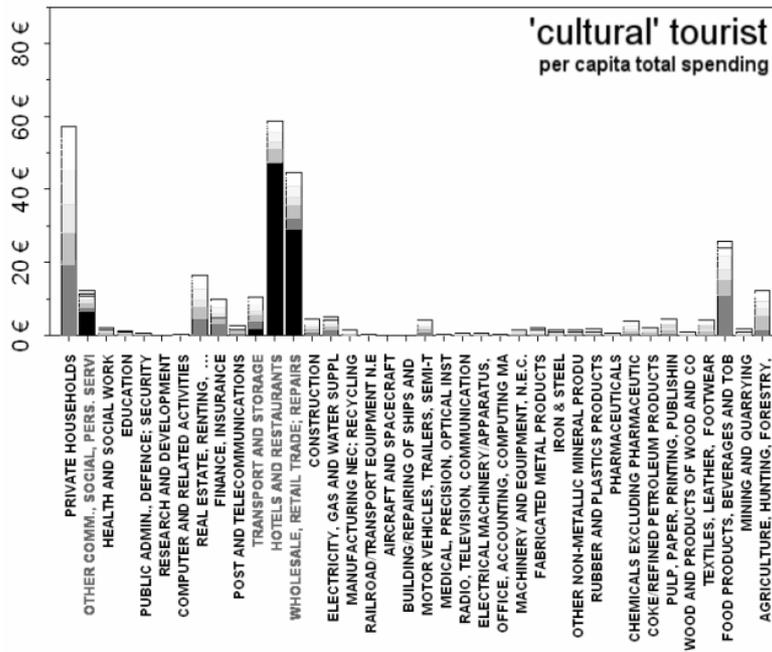
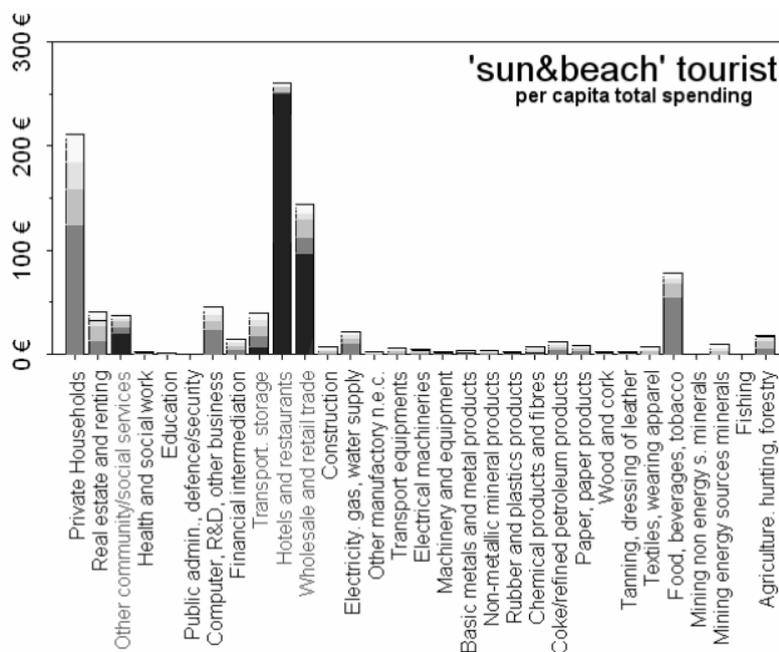


Figure 15: Economic impact on Spanish economy, including direct, indirect and induced effects (now treating the ‘new’ economic sector *Private households* as endogenous). 4 sectors are taken into account as representative of tourism industries directly affected by the expenditures of a sun&beach and of a cultural tourist. The indirect effects are additionally added by using a fading colour scale, for each successive round of supply through local economy



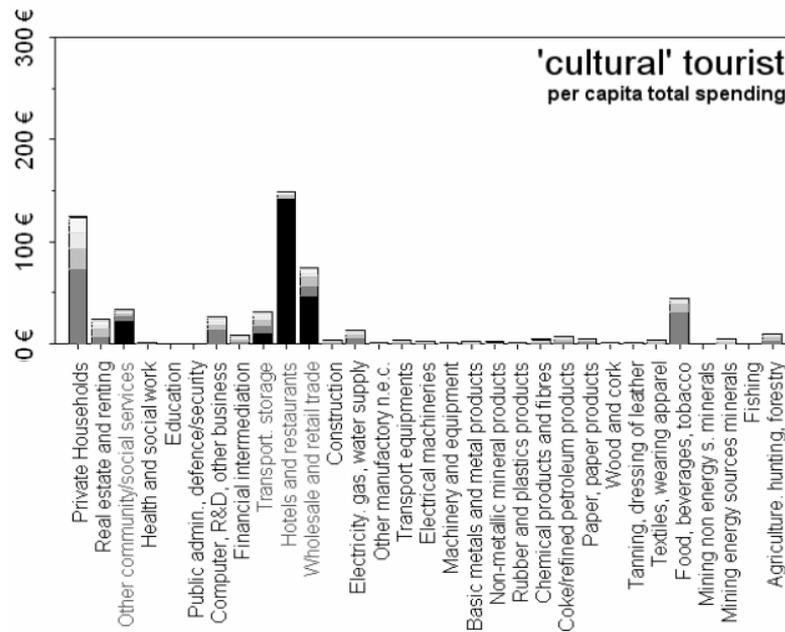


Figure 16: Economic impact on Sicilian economy, including direct, indirect and induced effects (now treating the ‘new’ economic sector *Private households* as endogenous). 4 sectors are taken into account as representative of tourism industries directly affected by the expenditures of a sun&beach and of a cultural tourist. The indirect effects are additionally added by using a fading colour scale, for each successive round of supply through local economy

#### 4.3.2 Income and Employment multipliers

The income multipliers, similarly to the sale multipliers, are relatively ‘insensitive’ of the tourist profiles, tending to vary in the following ranges:

	Norway	Spain	Sicily	Hordaland	Comunidad Valenciana	Syracuse Province
<b>impact on the economy related to direct and indirect effects</b>	<b>0.37 ÷ 0.51</b>	<b>0.34 ÷ 0.40</b>	<b>0.43 ÷ 0.45</b>	<b>0.29 ÷ 0.41</b>	<b>0.26 ÷ 0.32</b>	<b>0.37 ÷ 0.38</b>
<b>impact on the economy related to direct, indirect and induced effects</b>	<b>0.54 ÷ 0.75</b>	<b>0.56 ÷ 0.66</b>	<b>0.52 ÷ 0.54</b>	<b>0.32 ÷ 0.44</b>	<b>0.28 ÷ 0.35</b>	<b>0.38 ÷ 0.39</b>

Table 8: Ranges of variation of income multipliers related to tourism in the case studies

The employment multiplier was estimated taking the relationships between the value of the output of a sector and the employment in that sector (in terms of employees per € worth of output). The values reported in Table 9 refer to additional employees per 1 million € additional tourism expenditure in Bergen<sup>27</sup>.

<sup>27</sup> As in the case of Elche the available Input-Output matrix was relatively old (the implemented matrix refers to 1995), bias could have occurred if the variations in *average salaries* had been ignored and the multipliers not adjusted accordingly. The monetary value, in terms of average salary, from 2006 to 1995 was calculated in terms of *Average compensation per employee* (using the *Compensation of employees* and the *Number of Employees* from the Spanish National Accounting). The *Average compensation per employee* increased from 17,534 € in 1995 to 22,548 € in 2005.

	Employment Multiplier [indirect effects]		Employment Multiplier [indirect and induced effects]	
	Norway	Hordaland	Norway	Hordaland
package	13.3	11.1	18.4	11.7
self-organized	12.6	10.5	17.5	11.1
cruising	14.7	12.5	20.4	13.2
non-cruising	12.3	10.2	17.1	10.8
culture	12.2	10.1	16.9	10.7
other	14.2	12.0	19.5	12.7
business	14.3	12.1	19.7	12.7
friends	14.3	12.0	19.8	12.7
holiday	12.3	10.3	17.2	10.9
day-tripper	16.3	13.9	22.6	14.6
overnight-stay	12.4	10.3	17.2	10.9
Norwegian	13.8	11.7	19.2	12.3
foreigner	12.6	10.5	17.5	11.1
'generic tourist' [all questionnaires]	12.7	10.6	17.6	12.3

Table 9: Ranges of variation of employment multipliers related to tourism in the case study of Bergen

The employment multipliers for the different profiles of tourists (evaluated at national or regional scale) are rather similar when considering each case study separately. Only slight differences can again be noticed. More specifically, in the Bergen case study the cultural tourist shows the lowest values as regards both the indirect and the indirect + induced effects, at national as well as at County level; on the contrary, the day-tripper presents the strongest impact. The same happens in Elche, where the effect of a day-tripper is of 22.1 and 23.8, when considering the indirect and the indirect + induced effects respectively, at the regional scale; it amounts to 26.2 and 40.1, respectively, at the national level. The other-motivated visitor shows instead the lowest values (17.2 and 18.6, when considering the indirect and the indirect + induced effects respectively, at the regional scale; and 22.2 and 34, respectively, at the national level). Finally, in the case of Syracuse the lowest effect is attributable to semi-package tourists, whereas cruise tourist and day-trippers show the strongest impacts (e.g., 11.8 vs. 14.4 when considering the indirect effects at regional scale).

Again – as expected – the multipliers at district/regional scale are considerably smaller than those related to the impact on the economy at larger scale (evaluated at national/regional scale).

The increase in variability (in particular with respect to the employment multipliers) is mainly a consequence of the difference in *labour intensity* of the tourism industries. In particular, since the sector *Retail trade services* is characterized by a relatively high labour intensity in all three case studies, tourist profiles whose spending pattern (in terms of percentage of total spending) insists on this sector are characterized by higher employment multipliers. In the case of Elche, the same is true also for *Other community, social and personal services*.

## 5 Conclusions

Economic impact analysis focuses on the actual flows of money related to market transactions and it reflects how tourists contribute to local economy.

Estimates of the economic impact of tourist spending (and its ‘ripple’ effects) can be accurately made through Input-Output analysis. In the Input-Output framework, the total impact of tourists’ expenditure in the geographic area being studied equals the direct spending mainly accruing to the tourism industries, plus the indirect effect plus the induced effect generated by the successive rounds of spending in the local economy by the supplying industries and by households earning wages and salaries directly or indirectly through tourism. Estimates of the total income and employment generated are calculated in a similar way.

In the present paper, an analysis of the economic impact of tourism activities in three case studies – Bergen (Norway), Elche (Spain), Syracuse (Italy) –, has been presented. Expenditure pattern data for different profiles of tourists, extracted from on-site surveys, have been input into an Input-Output model of the economy of concern in order to estimate the changes in local final demand resulting from the expenditures of tourists. The economic impact on sales, income and employment has been assessed at both national/regional scale and at the local level (county/region/district scale).

The dissimilarities among the selected cities (mature/developing destinations, Northern/Southern Europe cities, characterized by natural/sun&beach/built heritage attractors) allowed to study the behaviour of different typologies of visitors. A fundamental question guiding the research was, in fact, whether and under which dimensions “cultural tourism” may differ from other forms of tourism. Tourists driven by cultural interest are often assumed, in literature, to have a higher than average income and to spend more on holiday. Unlike the two Mediterranean case studies (Elche and Syracuse), where cultural and leisure/sun&beach tourism coexist, in the case of Bergen almost the totality of visitors perceive themselves as attracted by cultural, natural and environmental assets and a clear counterpart does not really exist. A clear distinctiveness is on the contrary represented by ‘cruise visitors’, whose spending behaviour has been also investigated in this paper. Similarly to the case of the cultural tourist, there is still a general misconception that cruising is mainly for wealthy and/or older people. The paper reported the main findings of the analysis, discussing them against these stereotypes.

It has to be underlined that, from a statistical point of view, the number of questionnaires collected in the case studies is relatively small (because of limited available resources), in particular if the small percentage of visitors that perceived themselves as leisure-motivated is considered. Consequently, the results reported in this paper should be seen as a preliminary ‘pilot assessment’, their importance being mainly a study of trends and behaviour of different typologies of tourists rather than an evaluation of quantitatively reliable results.

The case study surveys confirmed the emerging nature of ‘**new cultural tourism**’. No more the prerogative of elderly groups of people with higher than average disposable income, education and travel experience, due to the diffusion of culture, changing patterns of tourism (also supported by the availability of low-cost carriers) and increasing holiday time, cultural tourism in cities emerges as an activity practised at all ages (with a peak in the age group lying between 20 and 30 years old). Cultural

tourists are not generally older than their sun&beach counterparts (in Bergen they are even younger than non-culturally motivated tourists). Furthermore, all ages are more evenly represented for cultural tourists. Contrary to the common stereotype, in the three case studies no substantial difference was found with respect to the level of education. Finally, although the salary distribution of cultural tourists seems to be slightly shifted towards higher incomes, when compared to other tourists, it can't be generally concluded that they are better-off than their counterparts.

The case studies evidenced how diverse forms of tourism impact differently on a destination's economy. In particular, **business tourism** was found to be the real "cash cow", showing the highest level of expenditure (except in Syracuse), both daily and on total (i.e., over the whole length of stay), thanks to the higher spending in the two leading categories (accommodation and food and beverages) and to the longer average period of stay in the destination.

With respect to the daily per capita expenditures, in all the three case studies **culturally motivated visitors** are found to present an average spending (see Table 4, Table 5 and Table 6), higher than that of sun&beach (as regards Elche and Syracuse only) and other tourists (e.g., visiting friends and relatives). In particular, the average cultural tourist is found to spend more than a non-cultural tourist for most of the expenditure classes: transport in the destination region, food and beverages and of course cultural visits (see Figure 13). In Bergen and Syracuse their expenditure level is found to be higher for entertainment too; the contrary happens in Elche. Accommodation is found to be another important item in the case of Syracuse cultural tourists. Unlike the Syracuse case study, in Bergen and in Elche crafts (souvenirs or typical products) and shopping-related expenditures appear to be higher for cultural tourists, compared to other visitors. On the contrary, if one looks at the total spending it is now the culture-motivated tourist that tends to leave behind a smaller amount of money. In Elche the total spending of a cultural tourist is found to be lower than what is spent on average by a sun&beach or 'other' tourist (see Table 5). The cultural tourist's expenditure in Syracuse appears instead very similar to the expenditure level of other-motivated tourists, but significantly less than what is spent on average by a sun&beach tourist (see Table 6). On the contrary, in Bergen the total spending of a culture-driven visitor is very similar to the one of a non-cultural tourist and the same as a generic 'holiday tourist' (see Table 4). In all the three case studies, cultural tourists present a below-the-average level of expenditure (when compared with the generic tourist).

As regards **cruising visitors**, although they do not necessarily avail themselves of local 'on shore' accommodations, their average per capita daily spending is found to be comparable to that of non-cruising tourists, as the minor spending in accommodation is compensated by higher expenditure in other items (see Table 4). However, when reasoning in terms of the per capita economic impact over the whole length of stay, cruising tourists are found to bring on average less money than their non-cruising counterparts.

The main reason for the minor total spending of both cultural and cruise tourists is due to the fact that they tend to stay for a shorter time in the destination than the other tourist profiles (they tend to be 'more mobile'; see Figure 7 and Figure 9), thus calling for a better promotion of sites and attractions, to be combined within larger packages.

Cultural destinations seem therefore to be affected (and, if possible, Bergen more than others) by one of the most typical phenomena related to tourism development in

European cities: the great fragmentation of holidays, which multiplies short visits (see among others Cabrini, 2003). While ‘sun&beach resorts’ may develop substantial numbers of return visits to the region and even to a specific resort or hotel (a ‘loyal clientele’), cultural tourists are ‘sophisticated tourists’, always in search of different and undiscovered backgrounds and locations. «Every visit would be a unique experience» (Malta Tourism Authority, 2002, p. 6): tourists have pre-marked sites and ‘work of art’ that must be visited if the place is to be authentically experienced; once ‘collected’, a repeat visit becomes superfluous and the ‘collection’ must be expanded elsewhere. Ironically the more unique the heritage experience, the less the destination is likely to be re-visited. As a consequence policies aiming at extending tourists’ permanence, as well as at attracting repeat visitors, should be improved. Cultural (mega) events and festivals, for instance, offer interesting opportunities for city destinations for attracting both first time and repeat visitors (ETC & WTO, 2005)<sup>28</sup>.

Quantitatively speaking, **sale, income and employment multipliers** tend to be very similar for both leisure and culture-motivated tourists. As a matter of facts, multipliers are found to reflect more the linkages among the tourism industries and the different sectors of local economy than the slight dissimilarities observed in the spending patterns. The total (i.e., summing up direct, indirect and induced effects) economic impact of a cultural tourist on the Spanish or on the Sicilian economy (during his/her stay in Elche and in Syracuse, respectively) is proportionally lower than that of a sun&beach-motivated visitor, mainly as a consequence of the shorter length of stay. The same is true if the impacts are evaluated at the regional and at the province scale (Comunidad Valenciana and Syracuse Province, respectively). In Bergen, both the indirect and the induced impacts of a cultural tourist on the Norwegian economy (during his stay in Bergen) are instead the lowest among the impacts of the different typologies of visitors. Only after rescaling the Input-Output matrix to the County level, the contribution to the economy of a cultural tourist is found to be comparable with that of other typologies of visitors (see Table 7). This also translates in a lower support to employment than the other typologies of visitors (see Table 9). This behaviour, however, could have been influenced by the characteristics of the economic classification routinely used by European Statistical Offices. While such classification is rather adequate for the description of the industrial component of economy (about 20-30 sectors are related to manufactory activities), it appears to be relatively poor with respect to tourism-related analysis. For example, no distinction is done between hotels (accommodation) and restaurants (food and beverages) and, with a particular focus on cultural tourism, between cultural and recreational/sporting activities. This intrinsic difficulty in properly translating the differences in the spending profiles emerged from the on-site surveys into sectoral expenditures that could be consistently treated by the Input-Output methodology could have constrained the multipliers to assume similar values for the different tourist profiles.

Even though the analysis mainly focused on the quantification of the direct, indirect and induced economic impacts of tourism at local scale (province and region) in a partial equilibrium setting, it shouldn’t be forgotten that cultural tourism is part of a number of synergies including local economic development, environmental conservation, the enhancement of heritage and cultural production, and even the senses of identity and well-being of local communities (Dumont, 2007). In addition to

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<sup>28</sup> According to an Internet poll carried out in 2004, cultural festivals and events are perceived by 88% of the respondents as important reasons for cultural tourists to choose to specifically visit a place (ETC & WTO, 2005, pp. 37 and 101).

that, cultural tourists are expected to have lower local costs and more spread benefits over local business activities (Ashworth, 2004). Among other things, cultural tourism (as can be seen by the preference of cultural tourists for B&B facilities in the sample) shows greater dependence on 'fragmented' small and medium-sized enterprises (therefore also acting as a stimulus for encouraging local entrepreneurs) and seems less dependent on all-inclusive travel packages from big tour operators (with a limited number of local staff and interlinkages with local economy). Secondly, cultural tourism shows greater interest in the consumption of 'heritage features' such as food, wine, speciality shopping, cultural performances and evening entertainment. Thirdly, the traditional beach holiday as well as the cruise journey are by nature spatially concentrated and relatively static, generally offering almost all of the components of the holiday within a single resort or even a single hotel (or ship); little transport is required during the holiday. On the contrary, cultural tourism is mobile, requires transport and spatial networks: cultural tourists not only move into and out of destination regions, they also move around when on holiday. Due to the cultural tourists' mobility in the locality and their more dispersed pattern of arrivals, increased revenues and benefits/costs are more spread spatially and temporally. This is not only expected to reduce high-risk seasonal jobs but is also supposed to moderate some of the main negative impacts of tourism, that are exacerbated by temporally concentrated pressure (as in the case of sun&beach tourism, because of seasonal/weather dependency) on specific sensitive areas with physical environmental shortages or vulnerabilities, which may exceed *physical/carrying capacities*. On the other hand, mobility gives tourists greater access to attractions producing higher negative impact on the environment, which should be taken into account in a cost/benefit analysis.

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