

## **CRUISE TOURISM IN MESSINA: A STUDY ON THE PERCEPTION OF SERVICES<sup>1</sup>**

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### **1. Introduction**

Cruise tourism is one of the fastest growing sectors of global tourism. An estimated 20.3 million cruise passengers will be carried worldwide in 2012, an increase of 5.6% over 2011. In the wake of the several new ships to be added to the market in 2012, eight more new cruise ships will be launched by 2015. These ships will generate a further \$2.3 billion in annual revenue for the cruise industry. By 2015, 22.3 million cruise passengers are expected to be carried worldwide (Cruise Market Watch, 2011). These figures should make us reflect on the importance of cruise tourism to local economies, particularly in a city such as Messina, where the industry has witnessed continuous growth over the past few years and represents one of the most important economic pillars of the city. In 2011 500,000 cruise passengers on 257 cruise ships transited the city. It is expected that this year numbers will continue to grow. In order to optimize the potential of tourism in local development, it is essential to understand the major social and environmental factors that influence visitor satisfaction. In relation to ecotourism this aspect has been widely examined (Lindsey et al., 2007, Hasegawa, 2010, Oliveira and Pereira, 2008) while Devesa et al. (2010) have analyzed the relationships between tourist satisfaction and motivation for travel. The concept of customer loyalty is also of interest to tourism organizations and many implement their own loyalty schemes (H. Song et al., 2012). Empirical studies indicate that obtaining tourist commitment to a destination may lead to reduced marketing costs and increased loyalty. Ozgener and Iraz (2006) estimate that it is at least five times more cost-effective for an organization to retain existing tourists than to acquire new ones.

In the current study we aim to identify the types of cruise passenger who visit Messina, and determine the main social and environmental variables that influence their levels of satisfaction.

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<sup>1</sup> This article was conceived and prepared by all the authors, however Romana Gargano is the author of paragraphs 1 and 4, Giuseppe Arena wrote paragraphs 2 and 5 and paragraph 3 is by Maurizio Mondello.

## 2. Data collection

The data we examine was obtained from a “Vacanze Messinesi” survey conducted by the Statistics Department of the Messina City Council, and is the continuation of a pilot survey (Gargano R., Mondello M. 2011). From July 1 to November 30 2011, a total of 2870 cruise tourists were randomly selected and interviewed. The interviews were carried out at the Messina cruise terminal at the end of the city tour. A face-to-face intercept survey method was used. The questionnaires were available in a number of languages, including Italian, English, Spanish, French and German.

**Table 1** – *Social-demography characteristic (percentages) of respondents.*

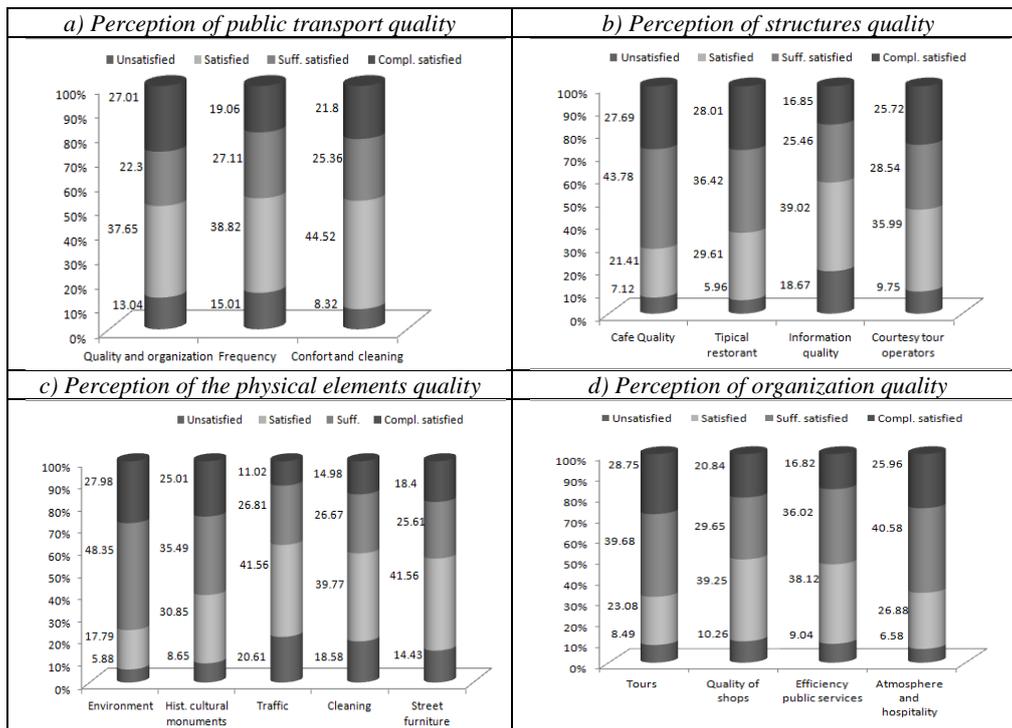
		<i>Freq. %</i>
Country of residence	Italy	25.80
	Europe	51.53
	USA e CND	16.26
	Other countries	6.41
Gender	Male	47.18
	Female	52.82
Age	<25	8.78
	26-35	12.67
	36-45	14.50
	46-55	18.40
	56-65	31.30
	>65	14.35
Educational level	Primary school	1.08
	Middle school	8.76
	Secondary Education	39.64
	University/college	47.42
	Post University	3.13
Previous visits	No	82.90
	Yes	17.10
Company	Friends	15.5
	Family	71.15
	Couple	9.47
	Single	2.29
	Other	1.6

The questionnaire was divided into three sections with a total of 40 items. Responses were given on a Likert type scale ranging from 0 (“completely unsatisfied”) to 4 (completely satisfied). Table 1 shows the socio-demographic characteristics of respondents.

### 3. Perception of the tourism quality in Messina

In this section we examine quality perception in relation to those aspects of tourism that affect the global satisfaction of passengers visiting the city of Messina.

**Figure 1** – Diagrams of perception of public transport quality (a), of structures quality (b), of physical elements (c) of organization quality (d)



The analysis of individual elements will then be reworked into a global view using multivariate analysis and the ECSI measurement of tourist satisfaction. The scores 0 and 1 (“completely unsatisfied” and “sufficiently unsatisfied” respectively) have been recorded as “unsatisfied”. Regarding the global satisfaction of passengers in relation to the visit of the city, 7.69% were unsatisfied, 22.81% were satisfied, 28.08 % were completely satisfied, and 41.42% were sufficiently satisfied. Figure 1 shows diagrams of perceptions analyzed.

#### 4. Methods

Since 1994 different national customer satisfaction indices (CSI) have been developed. In this paper we adopt the European Customer Satisfaction Index (ECSI). This indicator allows us to combine the behaviour of tourists, their satisfaction and the quality of services provided. The ECSI model considers a set of latent factors, each of them linked to multiple indicators. Customer satisfaction can be defined as an overall post-purchase evaluation of product performance or use of a service.

In the ECSI model the antecedents variables are:

- Perceived quality: covering 4 areas related to transport, city services, the environment and organization.
- Perceived value: value is the perceived level of product quality relative to price or the “value for money” aspect of customer experience. Value is influenced by perceived quality and expectations and have a direct impact on satisfaction.
- Tourist expectation: refers to the level of quality that tourists expect to receive and is the result of previous experience or promotional activity.
- Tourist loyalty: concerns the propensity to return to the city.

The idea for the construction of these indices is the structural relationship between latent variables (factors of satisfaction) and manifest variables (the response of tourists). The PLS (Partial Least Square) approach was used to estimate the ECSI model parameters. This approach was grounded on the argument that the other procedures, used to estimate these models (covariance structure analysis models, also called LISREL), make more strict assumptions on the model structure and on the data, mainly regarding identifiability and normality. The PLS approach to Structural Equation Models, also known as PLS Path Modeling has been proposed as an alternative estimation procedure to the LISREL-type approach to Structural Equation Models (Tenenhaus et al, 2005). The manifest variables connected to latent variables are listed in Table 2. In a preliminary step we verified the hypothesis of the model. We evaluated the level of internal consistency of the measurements of the reflective constructs (Table 3) using the Rho Dillon-Goldstein index. The single dimensionality of the blocks was confirmed by a Rho Dillon – Goldstein value of 0.7 which was higher than for all other variables. In order to verify monofactorial validity conditions we calculated the correlation between manifest and latent variables. All correlation coefficients have high values ( $r > 0.653$ ), thus indicating that each manifest variable is significantly strongly linked to the latent variable it measures. Moreover, in order to verify that the indicators for each construct measure what they are supposed to measure, tests for convergent and discriminant validity were performed. The discriminant validity of the construct items was assured by looking at cross-loadings obtained by

correlating the component scores of each latent variable with both their respective block of indicators and all other items included in the model (Chin 1998).

**Table 2** – *Latent variables and manifest variables used in the model.*

<i>Latent variables</i>	<i>Manifest variables</i>	<i>Latent variables</i>	<i>Manifest variables</i>
<i>Expectation tourist</i>	Natural environment (public parks, landscape, etc.); Tourist facilities (bars, restaurants, bakeries, etc.); Personnel to tourism; Mobility Services; Information services.	<i>Organization perceived quality</i>	Excursions Variety and quality of shops; Availability and efficiency of public services (banks, post offices etc.); Atmosphere and hospitality residents.
<i>Transport perceived quality</i>	Quality organization; Frequency of departures; Comfort / cleanliness.	<i>Perceived value</i>	Value for money services; Value for money products.
<i>Structures perceived quality</i>	Quality of the bars; Typical restaurant; Quality of information services; Professionalism tour operators.	<i>Satisfaction</i>	Overall satisfaction;
<i>Physical elements perceived quality</i>	Natural Environment / Landscape; Historical and cultural monuments; Traffic; Cleaning; Street furniture.	<i>Loyalty</i>	Return to Messina; Recommend a visit to the city.

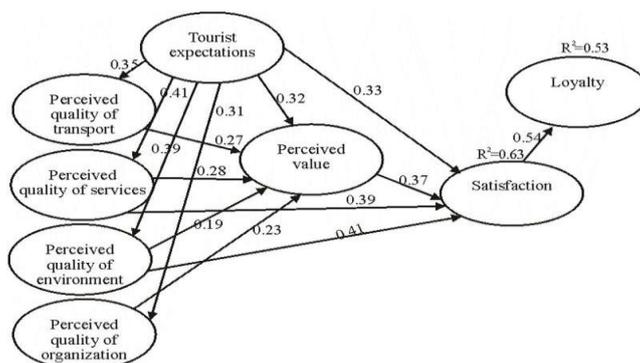
Secondly, we tested the explanatory power of the entire model on the satisfaction index sourcing the predictive power of independent variables as well. In order to comprehend the most important indicators for the construction of the global index we calculated normalized weights (Table 4). The same weights were subjected to a non-parametric validation procedure and values were all significantly different from 0. It can be seen that the most important indicator affecting tourist expectation is the natural environment, for perceived quality of transport it is comfort and cleanliness, for perceived quality of services it is the typicality and originality of restaurants, for the perceived quality of the environment it is the natural environment and landscape, while for perceived value it is the value of products, regarding organization perceived quality is the excursion and finally for loyalty it is recommending a visit to relatives and friends. Figure 2 shows the estimated parameters for the structural model. The explanatory power is examined by looking at the squared multiple correlations ( $R^2$ ) of the main dependent variable. In order to fit the quality of global model we have performed

the *Goodness of Fit* (GoF) index. The index (GoF=0.608) shows that the model seems to fit well the data.

**Table 3 – Internal consistency of blocks**

Construct	Block's dimension	Dillon-Goldstein's $\rho$
Expectation tourist	5	0.9208
Transport perceived quality	3	0.8953
Structures perceived quality	4	0.9362
Physical elements perceived quality	5	0.9511
Organization perceived quality	4	0.8688
Perceived value	2	0.8560
Satisfaction	1	-
Loyalty	2	0.8344

**Figure 2: Path model for the satisfaction of the cruising**



**Table 4 – Normalized weights (%) for construction of latent variables**

Latent variables	Manifest variables	Normalized weights	Latent variables	Manifest variables	Normalized weights
Tourist expectation	Natural environment	0.3589	Physical elements perceived quality	Natural Environment	0.3689
	Tourist facilities	0.2495		Historical monuments	0.2998
	Personnel to tourism	0.1985		Traffic	0.0978
	Mobility Services	0.1019		Cleaning	0.0854
	Information services	0.0912		Street furniture	0.1481
Transport perceived quality	Quality organization	0.3124	Perceived value	Money services value	0.4764
	Departures's Frequency	0.2925		Money products value	0.5236
	Comfort / cleanliness	0.3951	Organization perceived quality	Excursions	0.3014
Structures perceived quality	Quality of the bars	0.3369		Shop's quality	0.1834
	Typical restaurant	0.3886		Public serv. efficiency	0.2165
	Info. services Quality	0.1197		Residents's Hospitality	0.2987
Satisfaction	Overall satisfaction	1	Loyalty	Retourn to Messina	0.4612
				Recommend a visit	0.5388

From the figure it is possible to observe that the satisfaction of cruise passengers (despite its complexity, it explains 63% of total variability) is influenced in a direct manner by tourists' expectations, perceived value, perception of the natural environment and the quality of tourist services. Services play the most important role as the driving factor of satisfaction in the different dimensions of perception. This is followed by environmental aspects, value for money, and finally loyalty, which is strongly determined by satisfaction levels.

## 5. Conclusion

Analysis of the satisfaction level of visitors from cruisers is vital and can act as a barometer to measure the quality of services provided. It is also a useful tool in the design of more efficient management plans. Our results provide new insights into the social and environmental variables that strongly influence cruise tourists' overall satisfaction during visits to the city. Most of the tourists visiting Messina showed relatively high levels of satisfaction, but the satisfaction level was influenced by perceived value which seems to be a dimension of strategic importance as a mediator of the effects on the perception of quality satisfaction.

The information garnered from this survey can provide local operators and business with precious elements for the creation of development policies which aim to directly increase the flow of this type of tourism. It could stimulate development in the asphyxiated and stagnant local economy that characterises Messina. Finding the right models to promote growth in tourism offers the prospect of development and more importantly of revitalising the city.

## References

- CRUISE MARKET WATCH Cruise Market Watch Announces 2012. Cruise Trends Forecast, <http://www.prnewswire.com/news-releases/cruise-market-watch-announces-2012-cruise-trends-forecast-134661918.html>.
- DEVESA M., LAGUNA M., PALACIOS A. 2010. The role of motivation in visitor satisfaction: empirical evidence in rural tourism. *Tourism Management*, Vol. 31, pp. 547-552.
- GARGANO R., MONDELLO M. 2011. Customer Tourists' satisfaction: il caso di studio dei visitatori della città di Messina, *Rivista Italiana di Economia, Demografia e Statistica*, Vol. LXV N. 3/4, pp.103-110.
- HASEGAWA, H. 2010. Analyzing tourist's satisfaction: a multivariate ordered probit approach. *Tourism Management*, Vol. 31, pp. 86-97.

- LINDSEY P. A., ALEXANDER R., MILLS M. G. L., ROMANACH S., WOODROFFE R. 2007. Wildlife viewing preferences of visitors to protected areas in South Africa: implications for the role of ecotourism in conservation. *Journal of Ecotourism*, Vol. 6, pp. 19-33.
- OLIVEIRA P., PEREIRA, P. T. 2008. Who values what in a tourism destination? The case of Madeira island. *Tourism Economics*, Vol. 14, pp. 155-168.
- OZGENER S., IRAZ R. 2006. Customer relationship management in small medium enterprises: The case of Turkish tourism industry. *Tourism Management*, Vol. 27 N.6, pp. 1356–1363.
- SONG H., VAN DER VEEN R., LI G., CHEN J.L. 2012. The Hong Kong tourist Satisfaction index. *Annals of Tourism Research*, Vol. 39 N.1, pp. 459–479,
- TENENHAUS M., ESPOSITO VINZI V., CHATELIN Y.M., LAURO C. 2005. PLS path modeling. *Computational Statistics and Data Analysis*, Vol. 48, pp. 159-205.

## SUMMARY

### **Cruise tourism in Messina: a study on the perception of services**

Cruise tourism is one of the fastest growing sectors of global tourism and it represents one of the more important factor of local economies, particularly in a city such as Messina.

The aim of this study is to identify the types of cruise passenger who visit Messina, and determine the main social and environmental variables that influence their levels of satisfaction. The data was obtained from a “Vacanze Messinesi” survey; the cruise tourists were randomly selected and interviewed. The interviews were carried out at the Messina cruise terminal at the end of the city tour. The results show that most of the tourists visiting Messina showed relatively high levels of satisfaction, but the satisfaction level was influenced by perceived value which seems to be a dimension of strategic importance as a mediator of the effects on the perception of quality satisfaction.

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