



**THE PERCEPTIONS OF AN ISLAND COMMUNITY  
TOWARDS CRUISE TOURISM: A FACTOR ANALYSIS**

**Juan Gabriel Brida  
Giacomo Del Chiappa  
Marta Meleddu  
Manuela Pulina**

**WORKING PAPERS**

---

**2011 / 19**



**CENTRO RICERCHE ECONOMICHE NORD SUD  
(CRENOS)  
UNIVERSITÀ DI CAGLIARI  
UNIVERSITÀ DI SASSARI**

CRENOS was set up in 1993 with the purpose of organising the joint research effort of economists from the two Sardinian universities (Cagliari and Sassari) investigating dualism at the international and regional level. CRENOS' primary aim is to improve knowledge on the economic gap between areas and to provide useful information for policy intervention. Particular attention is paid to the role of institutions, technological progress and diffusion of innovation in the process of convergence or divergence between economic areas. To carry out its research, CRENOS collaborates with research centres and universities at both national and international level. The centre is also active in the field of scientific dissemination, organizing conferences and workshops along with other activities such as seminars and summer schools.

CRENOS creates and manages several databases of various socio-economic variables on Italy and Sardinia. At the local level, CRENOS promotes and participates to projects impacting on the most relevant issues in the Sardinian economy, such as tourism, environment, transports and macroeconomic forecasts.

**[www.crenos.it](http://www.crenos.it)  
[info@crenos.it](mailto:info@crenos.it)**

CRENOS – CAGLIARI  
VIA SAN GIORGIO 12, I-09100 CAGLIARI, ITALIA  
TEL. +39-070-6756406; FAX +39-070- 6756402

CRENOS - SASSARI  
VIA TORRE TONDA 34, I-07100 SASSARI, ITALIA  
TEL. +39-079-2017301; FAX +39-079-2017312

Title: THE PERCEPTIONS OF AN ISLAND COMMUNITY TOWARDS CRUISE TOURISM: A FACTOR ANALYSIS

ISBN: 978 88 8467 695 5

First Edition: October 2011

© CUEC 2011  
Via Is Mirrionis, 1  
09123 Cagliari  
Tel./Fax 070 291201  
[www.cuec.it](http://www.cuec.it)

# The perceptions of an island community towards cruise tourism: A factor analysis

**Juan Gabriel Brida**

*Free University of Bolzano*

**Giacomo Del Chiappa**

**Marta Meleddu**

**Manuela Pulina**

*University of Sassari & CRENoS*

## Abstract

This paper analyses residents' perception toward cruise tourism development and its externalities. The research involved a primary data collection in Messina, during the summer peak of the cruise season in 2011. A correspondence analysis on the local residents' perceptions shows that residents have an overall positive attitude towards cruise tourism development with respect to social, cultural and economic aspects. Nevertheless, they moderately feel that cruise activity has a negative impact on their wellbeing (i.e. increase in micro-crime; increase in road congestion) and the environment (i.e. increase in waste, pollution, congestion in recreational areas). Significant differences, based on residents' characteristics, also exist in the perception and attitude towards cruise tourism development. Implications for policy makers are discussed and suggestions for further research are given.

**Keywords:** cruise; island; residents' perception; correspondence analysis; MANOVA.

**Jel Classification:** L83; C12; C42.

**Acknowledgements:** Our research was supported by the Autonomous Province of Bolzano. Projects: "Tourism, growth, development and sustainability. The case of the South Tyrolean region" and "L'impatto del turismo di crociere. Analisi empirico per il caso del Caraibi Colombiano".

---

· Associate Professor of Economics at the School of Economics and Management-Free University of Bolzano. E-mail: JuanGabriel.Brida@unibz.it.

· Assistant Professor of Marketing at University of Sassari – Faculty of Economics, and CRENoS. E-mail: gdelchiappa@uniss.it.

· Research Assistant at the Free University of Bolzano, TOMTE and Phd student at the University of Sassari and CRENoS. E-mail: mmeleddu@uniss.it.

· Research Fellow at the University of Sassari, DEIR & CRENoS. E-mail: mpulina@uniss.it.

## 1. Introduction

Cruise tourism is growing faster than any other sector of tourism industry, producing different impacts on destinations (Chin, 2008). According to Cruise Lines International Association (2008), the average annual growth rate in the number of worldwide cruise passengers was 7.4% in the period from 1990 to 2007. From a social and economic perspective, the interactions between the different actors of the exchange process – cruise passengers, crew, residents, and producers of the tourism products – can exert both positive and negative outcomes (Brida and Zapata, 2010). To date, the impact of tourism has received much consideration by researchers attempting to investigate the attitude of the host population toward tourism development. Research has focussed on rural, coastal and urban areas. However, very little research has been carried out in tourism island destinations. Furthermore, research aimed at analyzing the perception and attitude of residents toward cruise tourism development is still under-researched (Diedrich, 2010; Gatewood and Cameron, 2009; Brida Riaño and Zapata, 2011).

Residents' perception and attitude toward cruise tourism can be related to several dimensions: economic, politic, socio-cultural and environmental which can be either positive or negative (Brida and Zapata, 2010; Andriotis and Agiomirgianakis, 2010). Based on a literature review on host community's perception on tourism impacts, the aim of this paper is to analyse how local population in an island perceives the impact of cruise tourism and which factors do affect the relationship between impacts and perceptions' formation. The research involved data collection in Messina, a port of call in the island of Sicily (Italy), during the summer peak of the cruise season in 2011. The number and quality of the 1,500 questionnaires collected allows one to run a statistical analysis of the local residents' perception and attitude. Specifically, relevant data was collected via a stratified random sample with questionnaires administered face-to-face to residents living at different distance from the port and in different part of the city. Impact perceptions have been measured using a number of items with a numerical scale of responses. These items have been combined using a correspondence and a MAVOVA analysis.

The paper is structured in the following manner. In the next section, a literature review is provided. In the third section, the methodology is proposed. The fourth section presents the main findings and discussion. Concluding remarks are given in the last section.

## **2. A literature review**

Host communities' perceptions about tourism impacts have been object of research in the past three decades. Different benefits and costs affect residents' perceptions and, as observed by many authors, these can be summarised in three categories: economic, environmental and socio-cultural effects (Murphy, 1983; Gunn 1988; Gursoy, Chi and Dyer, 2009). Considering these type of externalities, several models have been developed to understand resident's opinion and reaction. Doxey's Irridex model (1975), for instance, describes as the frustration of residents increases as the number of tourists increases, identifying four main stages: euphoria, apathy, irritation and antagonism.

Butler (1980) proposes the Tourist Area Life Cycle (TALC) that analyses tourism activity through several distinctive stages: exploration, involvement, development, consolidation, stagnation and decline, that in some cases can turn into a rejuvenation phase. According to the theory, there is a correlation between residents' attitude and these tourism life cycle phases. Initially, residents may have a positive attitude towards their guests, but as their number increases, local community starts to be concern about long-term effects exerted from tourism. This occurs because tourism produces positive effects either for certain stakeholders or because benefits may be unrealistic. Besides, At a concern towards environmental and social costs also may emerge.

Later Ap (1992) suggests adopting social exchange theory to analyse residents' response to tourism. Relationship between residents and guests is considered as a trade-off between costs and benefits for each party. According to this theoretical framework, individuals' attitude towards tourism, and the level of support for its expansion, is influenced by community evaluation of resulting outcomes that depend on the final whole balance between costs and benefits.

As noted by several authors, the understanding of host communities' preferences toward tourism is fundamental for its development and sustainability, especially in the long run (e.g. Allen et al. 1988, Lankford and Howard 1994, Ap and Crapton 1998, Gursoy Jurowski and Uysal, 2002). Residents' acceptance of tourism development is considered a key factor for the long term success and sustainability of tourism in a destination (Andriotis and Vaughan, 2003). As Fridgen (1991) observes residents' negative attitude adversely influences tourists' willingness to revisit a specific destination.

Prior literature found several factors affecting residents' attitude toward tourism. These can be categorized into extrinsic and intrinsic

factors. According to Faulkner and Tideswell (1997), the former refer to the characteristics of the location with respect to its role as a destination, while the latter refer to characteristics of host community members. Among other extrinsic factors, researchers commonly consider the following: the degree or stage of tourism development (Doxey 1975; Gursoy and Rutherford 2004), the level of economic activity in the host area (Johnson, Snepenger and Akis 1994) and the degree of tourism seasonality (Fredline and Faulkner 2000). Among the intrinsic factors, initially one can consider the perceived balance between positive and negative impacts (Dyer, Gursoy, Sharma and Carter 2007). Other intrinsic factors are: geographical proximity to concentrations of activity (Fredline and Faulkner 2000), their rural, urban or coastal area of residence (Nunkoo and Ramkissoon 2010), length of residency (Gu and Ryan 2008), degree of tourism concentration (Pizam 1978), level of contact with tourists, economic reliance and dependence on tourism (Ap 1992). Finally, among the intrinsic factors affecting residents' attitude towards tourism, prior literature included socio-demographic characteristics (Belisle and Hoy 1980), such as gender (Wang and Pfister 2008), age and level of education (Sheldon and Abenoja 2001).

From an empirical perspective, the methodology applied to investigate tourism impacts on residents is relatively vast. Structural Equation Model (SEM) is the most extensively employed framework. Lindberg et al. (1997) use it to understand values and expectancy towards tourism of eight coastal communities in Oregon. Gursoy et al. (2002) employ a SEM to five counties in Virginia and find that host community support is affected by the level of concern, eco-centric values, utilization of resources, perceived costs and benefits of tourism development. The same methodology, but with a two-step approach, is applied in a self-administered survey questionnaire in Australia (Gursoy et al. 2009) to examine local attitude towards tourism development. Vargas-Sánchez et al. (2009) apply a SEM to analyse residents' reaction to tourism in a first stage of development in Spain (province of Huelva). Recently Vargas-Sánchez et al. (2011) improve a SEM theoretical approach by including new variables such as "behaviour of tourist" and "level of tourism development" perceived by residents, showing that perceptions of negative impacts compensate positive ones.

More recently, several works employ factor analysis to assess residents' perception on tourism activity. Haley et al. (2005) apply this method to assess Bath (UK) residents' attitudes. Andereck et al. (2005) carry out a survey with 38-items in Arizona and apply a factor analysis

within the social exchange framework. Overall, the findings are not very supported of the theory. Kibicho (2008) applies factor analysis to 17 survey items to assess tourism development in Kimana Wildlife Sanctuary in Kenya and identifies five key factors: inclusion of stakeholders, recognition of individual and mutual benefits, appointment of legitimate convenor, formulation of aims and objectives, and perception that decisions arrived at will be implemented.

To the best of the authors' knowledge, only a few contributions are aimed to study residents' attitude and perception towards cruise tourism (Hritz and Cecil, 2008; Diedrich, 2010; Brida et al. 2011). Hritz and Cecil (2008), for example, run an exploratory qualitative analysis in Key West, Florida where seven stakeholders (i.e. business owners, city officials, individuals representing specialised markets, representatives of tourist attractions, and entrepreneurs) were interviewed about their perception on cruise tourism, in a such mature destination. It emerges that a threaten is perceived for the island' calmness and preservation. Dietrich (2010) assesses both local and tourist perceptions of socio-economic and environmental impacts of different types of tourism development in Belize. The qualitative analysis does not detect any specific difference in local perception on cruise and overnight tourism. Brida et al. (2011) apply a factor analysis to study residents' attitude and perception towards cruise tourism development in Cartagena de Indias (Colombia). The authors identified five factors: inclusion of people associated with the cruise sector; perception about changes in lifestyle of the city; perception about changes in public places; inclusion of people associated with the cruise sector and a high educational level; finally, inclusion of people who live in small households and have a positive opinion about tourism. The authors conclude that Cartagena residents perceive that tourism brings to the city much more advantages than disadvantages. Overall, there is a positive balance between benefits and costs from cruise tourism.

### **3. Methodology and the case study**

Messina, the third largest city in Sicily (after Palermo and Catania), is the researched site of this study. Cruise tourism is becoming a significant sector of the local economy. The number of cruise passengers increased from 126,023 in 2000 to 374,441 in 2010 thus making Messina the ninth cruise tourism destination in Italy. The number of cruise ships increased from 165 ships in 2005 to 215 in 2010. Messina is a port of call where passengers spend five-six hours visiting the city. Recently, several studies

have been carried out to evaluate the expenditure of cruise passengers (Observatory on Tourism on European Islands, 2009). Most of the expenditure is for tours, food and beverages and shopping. The average spending is approximately 50-70 Euros with an average expenditure for excursions of 20-30 Euros.

The questionnaire constructed for this research included items selected on the basis of an in-depth review of literature and was divided into two sections. The first section focused on socio-demographic information from the interviewees. The second section listed 26 items concerning residents' perceptions toward the economic, environmental and socio-cultural impact generated by the cruise tourism development. A 5-point Likert scale was used (1 = completely agree; 5 = completely disagree) to evaluate their answers. This scale is widely used in empirical studies (e.g. Andereck et al., 2005; Kibicho, 2008; Brida et al., 2011).

The questionnaire was then pilot tested with a sample of 30 residents. This was done to verify the validity of its content, the comprehensibility of the questions and the scale used to make the assessments. No concerns were reported in the pilot-tests.

Respondents were selected with a quota random sampling procedure. Based on the official data published by ISTAT about the socio-demographic characteristics of Messina's residents, the quotas were set on age (specifically, three classes were considered: 16-40, 41-65, over 65) and gender and covered cases characterized by heterogeneous demographic features. Data was collected through face-to-face interviews conducted by ten trained interviewers directly supervised by the authors. Interviewers were instructed about the streets and area where to administer the questionnaire. Only people aged 16 or above were asked to take part in the survey. A total of 1,500 complete questionnaires was obtained thus making up a sample which is representative of Messina population at a 1% level.

The majority of residents were female (52.8%), whereas males accounted for 47.2% of respondents. Most respondents reported not to be economically dependent on cruise tourism (93.4%). Most respondents reported having a secondary school qualification (45.2%) whereas 29.6% had a university or postgraduate degree. Types of respondents' occupation were: administrative worker (26.2%), executive manager (3.9%), free-lance (11.4%), retired (20.15), unemployed (9.5%), students (19.4%) and other jobs (9.5%). The majority of residents belonged to the 36-56 age group and reported living in household of three or four members (57.8%).



#### 4. Empirical investigation: correspondence analysis

Table 1 provides descriptive statistics, mean and standard deviation, of all the items used to assess the residents' perception.

**Table 1 Descriptive Statistics of the whole set of attributes**

<b>Variable</b>	<b>Mean</b>	<b>Std. Dev.</b>
Increase in public investment and infrastructure	3.1399	1.2215
Increase in private investment and infrastructure	3.2622	1.1239
Increase jobs opportunities	3.3331	1.2343
Cruise activity forces to change actual standard of life	2.2303	1.2495
Increase in disposable income	2.9557	1.1505
Increase quality of life	2.9773	1.1132
Enhancement of other cultural and communities knowledge	3.5648	1.1377
Increase in the number of cultural and recreational activities	3.2249	1.0803
Valorisation of local tradition and authenticity	3.4833	1.1278
<i>Enhance the quality of local tourism and commercial infrastructure</i>	<i>3.4057</i>	<i>1.1435</i>
<i>Enhance safety standard in the destination</i>	<i>2.8889</i>	<i>1.0831</i>
<i>Enhance social and cultural life within the local community</i>	<i>3.1286</i>	<i>1.1103</i>
<i>Enhance environmental protection</i>	<i>2.8840</i>	<i>1.1686</i>
Infrastructure improvement (roads, communication, water pipes, etc).	2.7579	1.2414
Public services improvements	2.8417	1.1964
Conservation and valorisation of the historic patrimony	3.2974	1.1531
Urban and rural gentrification	3.0328	1.1668
Increase costs of living for the local community	2.6667	1.2253
<i>The benefits from cruise activity end to external entrepreneurs</i>	<i>3.2701</i>	<i>1.1989</i>
Cruise development has a crowding out effect on other relevant projects	2.6332	1.1513
Increase in traffic and road accidents	2.4464	1.1853
Micro-crime increase	2.5251	1.2384
<i>Cruise tourists influence daily life</i>	<i>2.0295</i>	<i>1.1720</i>
Deterioration of the eco system (sand erosion, damages to flora and fauna)	2.5612	1.2278
Increase of environment and marine pollution	2.8662	1.2614
Increase of congestion in public and recreational areas	2.6337	1.2129
Increase of waste	2.7955	1.3287

**Notes:** in italics the attributes not included in the correspondence matrix

Through a correspondence analysis, that is a factor analysis run with categorical variables, an initial set of attributes is reduced to a more manageable group. The objective is to eliminate the redundancy in original data and reduce the attributes to a set of factors, as a combination of the original attributes. The attributes with a loading score (i.e. variable contribution) less than a critical value (in this case 0.49) are excluded from the analysis (e.g. Hatcher, 1994). Hence, the initial 27-attributes were reduced to 21-attributes.

The procedure leads to  $n=6$  factors, since factors with eigenvalues greater than one are retained, as the Kaiser criterion suggests. The relative weight of each factor in the total variance is calculated, that takes into account how much each factor explains of the total variance. While cumulative inertia shows the amount of variance explained by  $n+(n+1)$  factors (Escofier and Pages, 1988). From Table 2, it emerges that the six factors explain 62.2% of the total data variance.

**Table 2: Factors and variables with higher contribution to each factor (overall sample)**

	Variable Contribution	% Inertia Explained	% Accumulated Inertia	Cronbach's alpha
<b>Factor 1: Improvement of physical capital and services</b> Infrastructure improvement (roads, communication, water pipes, etc). Public services improvements Urban and rural gentrification Conservation and valorisation of the historical asset	0.77 0.77 0.67 0.60	<b>25.9</b>	<b>25.9</b>	<b>0.83</b>
<b>Factor 2: Heritage improvement</b> Enhancement of other cultural and communities knowledge Increase in the number of cultural and recreational activities Valorisation of local tradition and authenticity	0.76 0.73 0.70	<b>15.9</b>	<b>41.8</b>	<b>0.77</b>
<b>Factor 3: Environmental deterioration</b> Increase of environment and marine pollution	0.85	<b>6.8</b>	<b>48.6</b>	<b>0.83</b>

Increase of waste	0.79			
Deterioration of the eco system (sand erosion, damages to flora and fauna)	0.76			
Increase of congestion in public and recreational areas	0.75			
<b>Factor 4: Welfare increase</b>		<b>5.2</b>	<b>53.8</b>	<b>0.81</b>
Increase in public investment & infrastructure	0.75			
Increase in private investment & infrastructure	0.74			
Increase jobs opportunities	0.72			
<b>Factor 5: Crowding out effects</b>		<b>4.3</b>	<b>58.1</b>	<b>0.73</b>
Cruise activity development has a crowding out effects on other relevant projects	0.73			
Increase in traffic and road accidents	0.72			
Micro-crime increase	0.64			
Increase costs of living for the local community	0.62			
<b>Factor 6: Community life</b>		<b>4.1</b>	<b>62.2</b>	<b>0.70</b>
Cruise activity changes ac lifestyle	0.75			
Increase disposable income	0.54			
Increase of quality of life	0.49			

Cronbach's alpha is then applied as the most commonly used measure to test the reliability of the extracted factors. Values higher than 0.7 suggests for the reliability of the factors, as in the present case. To establish the adequacy of the correspondence analysis, two tests are conducted. Specifically, Kaiser-Meyer-Olkin Measure of Sampling Adequacy with values between 0.70 and 0.83 indicates the analysis is satisfactory (Kaiser, 1974). In addition, Bartlett's Test of Sphericity tests ( $=16,730.340$ ;  $\text{significance}=0.000$ ) indicates that the null hypothesis, (i.e. correlation matrix is an identity matrix) is rejected.

On the one hand, analysing the positive effects of cruise tourism from a socio-cultural, economic and environmental point of view, four factors are obtained. The first factor (*Improvement of physical capital and services*) consists of attributes related to improvements in public

infrastructure and services, conservation and valorisation of urban and rural areas. The total data variance explained of 25.9% indicates that this is the predominant factor. The second factor (*Heritage improvement*) includes items related to the positive perception that residents have on their heritage asset and the interaction with other cultures. Factor four (*Welfare increase*) relates to the positive perception that residents have on the actual impact on the local economy, expressed in terms of an increase in public investment, private investment and jobs creation. Factor six (*Community life*) relates to changes in community life and includes attributes that describe residents' opinion about how their quality life may have changed because of cruise activity (i.e. lifestyle, disposable income and quality of life).

On the other hand, two factors relate to the negative perception that residents perceive from cruise activity. The third factor (*Environmental deterioration*) contains attributes related to an increase in marine pollution and waste, deterioration of the eco-system and increase in congestion. Factor five (*Crowding-out effects*) consists of items related to the crowding-out effects perceived by residents given that resources in relevant projects, transportation, crime fighting may be allocated to expand cruise activity.

#### *4.1 Manova analysis*

After having established the main factors, the next step of the investigation consists of running a one-way univariate and multivariate analysis of variance (ANOVA/MANOVA) to evaluate the differences of the respondents' perception on specific variables. MANOVA is used when there are two or more dependent variables under investigation and problems of autocorrelation may arise.

From Tables 3-5, the ANOVA and MANOVA show that significant differences exist in respondents' perception and attitudes towards cruise tourism, based on residents' economic sector, their residence distance from the port and whether they had a cruise experience in the past. Considering Table 3, on the whole, respondents think that cruise tourism exerts more positive than negative externalities, particularly in terms of heritage improvement and welfare increase, as in general means are above three.

**Table 3: Manova for occupation (primary sector=1; secondary sector=2; tertiary sector =3; tourism sector=4; students=5; retired=6; employed=7; other (e.g.housekeeper)=8**

FACTORS ^	Means								ANOVA (for occ)	
	Occ =1	Occ= 2	Occ=3	Occ =4	Occ =5	Occ =6	Occ =7	Occ =8	F-stat	Prob.
<b>Factor 1: Improvement of physical capital and services</b>	2.73	3.02***	2.97***	3.18***	3.09***	2.99***	2.65***	3.08***	128.99***	0.00
<b>Factor 2: Heritage improvement</b>	3.18**	3.30**	3.43***	3.60	3.50***	3.45***	3.26**	3.59	72.58***	0.00
<b>Factor 3: Environmental deterioration</b>	3.09	2.86	2.68***	2.46	2.70***	2.67***	2.83***	2.47**	39.15***	0.00
<b>Factor 4: Welfare increase</b>	2.97	3.01	3.25***	3.34	3.35**	3.25***	3.00**	3.3	24.42***	0.00
<b>Factor 5: Crowding out effects</b>	2.82	2.66	2.48***	2.55	2.53***	2.68	2.59**	2.47	16.57***	0.00
<b>Factor 6: Community life</b>	2.73***	2.79***	2.78***	3.38	2.77***	2.55***	2.51***	2.71***	330.81***	0.00

Notes: ^ The MANOVA is run on attributes for all factors; MANOVA TESTS: Pillai's' Trace =0.031, F-stat =1.514 prob.= (0.040); Wilks' Lambda =0.970, F-stat =1.516 prob.= (0.040); Hotelling's Trace =0.031, F-stat =1.518 prob.= (0.039); Roy's Largest Root =0.019, F-stat =3.795 prob.= (0.000); ANOVA on items of each factor of relevance: \*\* and \*\*\* 5% and 1% level of significance.

Specifically, respondents belonging to the tourism sector ( $occ=4$ ) believe that cruise activity can enhance an improvement in physical capital and services (i.e. infrastructure improvement, public services improvements, urban and rural gentrification, and conservation and valorization of the historical asset), heritage improvement (i.e. enhancement of other cultural and communities knowledge, increase in the number of cultural and recreational activities and valorisation of local tradition and authenticity) and community life (i.e. cruise activity changes actual lifestyle, increase disposable income and increase of quality of life). Only residents belonging to the primary sector ( $occ=1$ ) believe that the cruise activity can have a negative externality on the environment (i.e. increase of environment and marine pollution, increase of waste, deterioration of the eco system and increase of congestion in public and recreational areas). Students ( $occ=5$ ) think that cruise activity is likely to increase welfare (i.e. increase in public investment and infrastructure, increase private investment and infrastructure, and increase jobs opportunities). Crowding out effects (i.e. on relevant projects, increase traffic and road accidents, increase in micro-crime, increase costs of living for the local community) are less perceived by respondents, and residents within the primary sector presents the highest mean (2.82).

Table 4 presents residents' perspective regards how far they live from the port. Overall, respondents who are farer away from the port think that the cruise activity is able to exert higher positive externalities. Also, these residents believe that this activity has a relatively higher impact on the environment and drains resources from other economic activities.

**Table 4: Manova for distance from the port (between zero and one km=KMP01; two km=KMP02; three km=KMP03; four km=KMP04; five km=KMP05; between six and ten km=KMP06; higher than ten km=KMP07)**

FACTORS ^	Means							ANOVA (for KMP)	
	KMP01	KMP02	KMP03	KMP04	KMP05	KMP06	KMP07	F-stat	Prob.
	<b>Factor 1: Improvement of physical capital and services</b>	2.99***	2.96***	2.93***	3.03***	2.84***	3.02***	3.04***	140.57***
<b>Factor 2: Heritage improvement</b>	3.46***	3.45***	3.40***	3.41***	3.48***	3.46***	3.36***	75.56***	0.00
<b>Factor 3: Environmental deterioration</b>	2.52**	2.74***	2.72***	2.69***	2.63***	2.80***	2.78***	39.79***	0.00
<b>Factor 4: Welfare increase</b>	3.20***	3.26	3.15	3.20***	3.24***	3.33***	3.24**	24.86***	0.00
<b>Factor 5: Crowding out effects</b>	2.60***	2.53**	2.55	2.48	2.48	2.56***	2.66***	16.97***	0.00
<b>Factor 6: Community life</b>	2.85***	2.71***	2.69***	2.64***	2.56***	2.67***	2.85***	344.69***	0.00

Notes: ^ The MANVA is run on attributes for all factors, for each variable of interest; ANOVA/MANOVA on items of each factor of relevance: \*\* and \*\*\* 5% and 1% level of significance; MANOVA TESTS: Pillai's Trace =0.112, F-stat =1.282 prob.= (0.019); Wilks' Lambda =0.892, F-stat =1.286 prob.= (0.018); Hotelling's Trace =0.116, F-stat =1.291 prob.= (0.016); Roy's Largest Root =0.048, F-stat =3.198 prob.= (0.000); ANOVA on items of each factor of relevance: \*\* and \*\*\* 5% and 1% level of significance.

Finally, it is of interest to understand whether residents who had a cruise trip in the past have a different perception than those who did not have any (see Table 5). Except for the crowding-out effects, respondents who took a cruise have a higher perception on the positive externalities produced within the local community. Besides, they are relatively more aware of the negative externalities on the environment (mean 2.74).

**Table 5: Manova for cruise (residents who did not go on a cruise=0;**

FACTORS ^	Means		ANOVA (for croc)	
	Croc =0	Croc= 1	F-stat	Prob.
<b>Factor 1: Improvement of physical capital and services</b>	2.88***	3.16***	58.08****	0.00
<b>Factor 2: Heritage improvement</b>	3.32***	3.58***	39.16***	0.00
<b>Factor 3: Environmental deterioration</b>	2.70***	2.74***	16.32***	0.00
<b>Factor 4: Welfare increase</b>	3.11***	3.45***	11.04***	0.00
<b>Factor 5: Crowding out effects</b>	2.57***	2.57***	9.71***	0.00
<b>Factor 6: Community life</b>	2.57***	2.95***	135.54***	0.00

Notes: ^ The MANOVA is run on attributes for all factors; MANOVA TESTS: Pillai's Trace =0.065, F-stat =4.475 prob.= (0.000); Wilks' Lambda =0.935, F-stat =4.475 prob.= (0.000); Hotelling's Trace =0.070, F-stat =4.475 prob.= (0.000); Roy's Largest Root =0.070, F-stat =4.475 prob.= (0.000); ANOVA on items of each factor of relevance: \*\* and \*\*\* 5% and 1% level of significance.

## 5. Conclusions

Despite cruise sector has been experiencing a remarkable growth in recent years, there are a very few papers that investigate such a sector. In particular, research aimed at analysing the perception and attitude of residents toward cruise tourism development is still under-researched. The aim of this study was to investigate this strand of tourism research with the objective to investigate residents' perception toward the cruise tourism development within the city of Messina, a key port of call in Sicily. To this aim, a sample of 1,500 face-to-face interviews was gathered during the summer 2011 and a correspondence analysis has



been run to analyse positive and negative effects perceived by residents about the cruise activity.

Given the importance of residents' contribution in tourism development (Gursoy and Rutherford, 2004), these findings can usefully add to the academic debate on community-based tourism and can also support policy makers in their effort towards a more sustainable model for cruise tourism destinations.

The findings reveal that residents have an overall positive perception towards cruise tourism development regard to an improvement in the economic and cultural activities. Nevertheless, they moderately feel concern on the negative impact that cruise activity may exert on their wellbeing (for example, increased congestion and criminality) and the environment (more pollution, waste, congestion in recreational areas). Besides, significant differences in residents' perception and attitude towards cruise tourism development are based on their economic activity, place of residence and cruise past experience.

The empirical outcomes can be used as a guide in planning the future of this cruise tourism destination. Policy makers should run internal marketing and communication activities delivering tailored messages and describing the positive balancing between the positive and negative impacts of tourism (Brida et al., 2011). Furthermore, the findings remind destination managers and policy makers the importance in involving the local community before tourism actions are taken and the need to truly understand and monitor over time how resident perceive the impacts of cruise tourism development. The measurement of residents' perception should be used as one of several indicators to monitor and assess the tourism sustainability of a destination (Choi and Sirakaya, 2005) as well as its likelihood of decline (Diedrich and García-Buades, 2009).

Aside from the limitations just discussed, the present study does highlight several possible future research paths. The study may be repeated in other cruise tourism destinations in order to verify if its findings can be generalized and/or if they change according to the extrinsic factors of the tourism destination chosen as research site (i.e., the degree or stage of tourism development, the level of economic activity in the host area, the seasonality of tourism, etc). Besides, future research may investigate the role that other intrinsic variables (community involvement, community attachment, etc) can exert in discriminating residents' perceptions and attitudes toward cruise tourism development.

## References

- Allen, L. R., et al., (1988). The Impact Of Tourism Development On Residents' Perceptions Of Community Life. *Journal of Travel Research*. 27, 16-21.
- Andereck, K. L., et al., (2005). Residents' perceptions of community tourism impacts. *Annals of Tourism Research*. 32, 1056-1076.
- Andriotis, K., & Agiomirgianakis, G. (2010). Cruise visitor's experience in a Mediterranean port of call. *International Journal of Tourism Research*, 390-404.
- Andriotis, K., & Vaughan, R. D., 2003. Urban residents' attitudes toward tourism development: The case of Crete. *Journal of Travel Research*. 42, 172-185.
- Ap, J. (1992). Residents' perceptions on tourism impacts. *Annals of Tourism Research*. 19 (4), 665-690.
- Ap, J., Crompton, J. L., (1998). Developing and testing a tourism impact scale. *Journal of Travel Research*. 37, 120-130.
- Belisle, F.J. & Hoy, D.R. (1980). The Perceived Impact of Tourism by Residents: A Case Study in Santa Maria, Columbia. *Annals of Tourism Research*, 12(1), 83-101.
- Brida, J.G. & Zapata Aguirre, S. (2010). Cruise tourism: Economic, socio-cultural and environmental impacts. *International Journal of Leisure and Tourism Marketing*. 1(3), 205-226.
- Brida, J.G., Riaño, E. & Zapata, A.S. (2011). Resident's attitudes and perceptions towards cruise tourism development: a case study of Cartage de Indias (Colombia). *Tourism and Hospitality Research* 11(3), 187-202.
- Butler, R.W. (1980). The Concept of a Tourism Area Cycle of Evolution: Implications for Management Resources. *The Canadian Geographer*, 24(1), 5-16.
- Chin, C.B.N. (2008). *Cruising in The Global Economy: Profits, Pleasure and Work at Sea*. Ashgate, Aldershot: England.
- Choi, H.C. & Sirakaya, E. (2005). Measuring Resident's Attitude toward Sustainable Tourism: Development of Sustainable tourism Attitude Scale. *Journal of Travel Research*. 43(4), 380-394.
- Cruise Lines International Association. (2008). *Cruise market overview. Statistical cruise industry data through 2007*. Retrieved October, 25, 2009, from <http://www.cruising.org/press/overview2008/printPDF.cfm>.
- Del Chiappa, G. & Abbate T. (2012). Resident's perceptions and attitude toward the cruise tourism development: insights from an Italian tourism destination, forthcoming in U. Collesei - J. C. Andreani (a cura di), *Proceedings of International Conference Marketing Trends, Marketing Trends Association, Paris-Venice*.
- Diedrich, A. (2010) Cruise ship tourism in Belize: The implications of developing cruise ship tourism in an ecotourism destination. *Ocean & Coastal Management*. 53, 234-244

- Diedrich, A., & García-Buades, E. (2009). Local perceptions of tourism as indicators of destination decline. *Tourism Management*. 30(4), 512-521.
- Doxey, G. V., (1975) A Causation Theory of Visitor–Resident Irritants, Methodology and Research Inferences. The Impact of Tourism., Sixth annual conference proceedings of the Travel Research Association, San Diego, 195–198.
- Dyer, P., Gursoy, D., Sharma, B. & Carter, J. (2007). Structural modelling of resident perceptions of tourism and associated development on the Sunshine Coast, Australia. *Tourism Management*. 28(2), 409-422.
- Escofier, B. and Pages, J, (1988). *Analyses factorielles simples et multiples*. Paris: Dunod.
- Faulkner, B. & Tideswell, C. (1997). A framework for monitoring community impacts of tourism. *Journal of Sustainable Tourism*. 5(1), 3-28.
- Fredline, E. & Faulkner, B. (2000). Host community reactions: A cluster analysis. *Annals of Tourism Research*. 27(3), 763-784.
- Fridgen, J. D., (1990). *Dimensions of tourism*. East Lansing, MI.
- Gatewood, J.B. & Cameron, C.M. (2009). *Belonger perceptions of tourism and its impacts in the Turks and Caicos Islands*. Research Project report. Retrieved July 2011, from <http://www.lehigh.edu/~jbg1/Perceptions-of-Tourism.pdf>.
- Gu, H., & Ryan, C. (2008). Place attachment, identity and community impacts of tourism – the case of Beijing hutong. *Tourism Management*. 29(4), 637-647.
- Gunn, C. A., (1988). *Tourism planning*. Taylor and Francis, New York.
- Gursoy, D, Chi, C G, & Dyer, P K., (2009). An examination of locals' attitudes. *Annals of Tourism Research*. 36, 723-726.
- Gursoy, D. & Rutherford, D. (2004). Host Attitudes Toward Tourism. An improved Structural Model. *Annals of Tourism Research*. 31(3), 495-516.
- Gursoy, D.J., Jurowski, C. & Uysal, M. (2002). Resident Attitudes: A Structural Modeling Approach. *Annals of Tourism Research*, 29(1):79-105.
- Haley, A.J. , Snaith, T. & Miller, G. (2005). The social impacts of tourism a case study of Bath, UK. *Annals of Tourism Research*. 32, 647-668.
- Hatcher, L. (1994). A step-by-step approach to using the SAS system for factor analysis and
- Hritz, N. & Cecil, A. (2008). Investigating the sustainability of cruise tourism: A case Study of Key West. *Journal of Sustainable Tourism*, 16(2), 168-181.
- Johnson, J.D., Snepenger, D.J. & Akis, S. (1994). Residents' perceptions of tourism development. *Annals of Tourism Research*. 21(3), 629-642.
- Kibicho, W. (2008). Community – based Tourism: A Factor – Cluster Segmentation Approach. *Journal of Sustainable Tourism* 16(2): 211-221.
- Lankford, S.V., & Howard, D.R. (1994). Developing a tourism impact scale. *Annals of Tourism Research*, 77(4), 121-139.

- Lindberg, K., & Johnson, R. L., (1997). The Economic Values of Tourism's Social Impacts. *Annals of Tourism Research*. 24, 90-116.
- Murphy, P. E., (1983). Perceptions and Attitudes of Decisionmaking Groups in Tourism Centers. *Journal of Travel Research*. 21, 8-12.
- Nunkoo, R. & Ramkissoon, H. (2010). Small island urban tourism: a residents' perspective. *Current Issues in Tourism*. 13(1), 37-60.
- Observatory on Tourism on European Islands (OTIE). (2009). *Cruise tourism effects on The Mediterranean islands' economies*. Retrieved June 2011, from <http://www.otie.org/it/studi-ricerche.xhtml>.
- Pizam, A. (1978). Tourism's Impacts: The Social Costs to the Destination Community as Perceived by its Residents. *Journal of Travel Research*. 16(4), 8-12.
- Sheldon, P. J., and T. Abenoja. (2001). Resident Attitudes in Mature Destination: the case of Waikiki. *Tourism Management*. 22(5), 435-443.
- structural equation modeling. Cary, NC: SAS.
- Vargas-Sánchez, A., Plaza-Mejía, M. & Porras-Bueno, N. (2009). Understanding resident's attitudes toward the development of industrial tourism in a former mining community. *Journal of Travel Research*. 47, 373-387.
- Wang, Y.A. & Pfister, R.E. (2008). Resident's Attitudes Toward Tourism and Perceived Personal Benefits in a Rural Community. *Journal of Travel Research*. 47(1), 84-93.

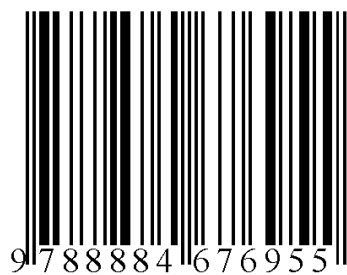
## Ultimi Contributi di Ricerca CRENoS

I Paper sono disponibili in: <http://www.crenos.it>

- 11/18 *Fabio Cerina, Francesco Mureddu*, “Structural Change and Growth in a NEG model”
- 11/17 *Juan Gabriel Brida, Manuela Deidda, Nicolàs Garrido, Manuela Pulina* “Exploring the dynamics of the efficiency in the Italian hospitality sector. A regional case study”
- 11/16 *Juan Gabriel Brida, Nicolàs Garrido, Francesco Mureddu*, “Italian economic dualism and convergence clubs at regional level”
- 11/15 *Adriana Di Liberto, Marco Sideri*, “Past dominations, current institutions and Italian regional economic performance”
- 11/14 *Juan Gabriel Brida, Marta Meleddu, Manuela Pulina*, “Museum visitors can be regarded as specific cultural tourists? A length of stay analysis”
- 11/13 *Edoardo Otranto*, “Classification of Volatility in Presence of Changes in Model Parameters”
- 11/12 *Alessandro Fiori Maccioni*, “The risk neutral valuation paradox”
- 11/11 *Leonardo Becchetti, Vittorio Pelligra*, “Don’t Be Ashamed to Say You Didn’t Get Much: Redistributive Effects of Information Disclosure in Donations and Inequity-Aversion in Charitable Giving”
- 11/10 *Alessandra Colombelli, Marta Foddi, Raffaele Paci*, “The knowledge regions in the enlarged Europe”
- 11/09 *Emanuela Marrocu, Raffaele Paci, Stefano Usai*, “Proximity, Networks and Knowledge Production in Europe”
- 11/08 *Vittorio Pelligra*, “Empathy, Guilt-Aversion and Patterns of Reciprocity”
- 11/07 *Claudio Detotto, Edoardo Otranto*, “Cycles in Crime and Economy Revised”
- 11/06 *Juan Gabriel Brida, Marta Meleddu, Manuela Pulina*, “The attractiveness of a modern and contemporary art museum”
- 11/05 *Juan Gabriel Brida, Marta Meleddu, Manuela Pulina*, “An urban icon? The case of the Iceman Ötzi ”
- 11/04 *Silvia Balia, Rinaldo Brau*, “A Country for Old Men? An Analysis of the Determinants of Long-Term Home Care in Europe”
- 11/03 *Luciano Mauro, Francesco Pigliaru*, “Social Capital, Institutions and Growth: Further Lessons from the Italian Regional Divide”
- 11/02 *Juan Gabriel Brida, Claudio Detotto, Manuela Pulina*, “How efficient is the Italian hospitality sector? A window DEA and truncated-Tobit analysis”
- 11/01 *Berardino Cesi, Dimitri Paolini*, “University choice, peer group and distance”
- 10/33 *Oliviero A. Carboni, Giuseppe Medda*, “A Neoclassical Growth Model with Public Spending”
- 10/32 *Vittorio Pelligra, Luca Stanca*, “To Give or Not To Give? Equity, Efficiency and Altruistic Behavior in a Survey-Based Experiment”
- 10/31 *Emanuela Marrocu, Raffaele Paci*, “Education or just Creativity: what matters most for economic performance?”

[www.crenos.it](http://www.crenos.it)

ISBN 978-88-84-67-695-5



9788884676955