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

Abstract

This paper analyses residents' perceptions 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.

Key words*: cruise; island; residents' perceptions; correspondence analysis; MANOVA; Italy*

Introduction

Cruise tourism is growing faster than any other sector of the tourism industry and inevitably produces different effects on different destinations (Chin, 2008). According to the Cruise Lines International Association – CLIA, (2008), the average annual growth rate in the number of worldwide cruise passengers for CLIA members 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 & Zapata, 2010). To date, the impact of tourism has received much attention by researchers attempting to investigate the attitude of the host population towards tourism development. Research has focused on rural, coastal and urban areas. However, very little research has been carried out for island destinations. Furthermore, research aimed at analyzing the perception and attitude of residents

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towards cruise tourism development has been recognized as still being under-researched (Diedrich, 2010; Gatewood & Cameron, 2009; Brida, Riaño & Zapata, 2011).

Residents' perceptions and attitudes towards cruise tourism can be mapped onto different dimensions: economic, political, socio-cultural and environmental which can be either positive or negative (Brida & Zapata, 2010; Andriotis & Agiomirgianakis, 2010). Based on a literature review on the host community's perception on the impact of tourism, the aim of this paper is to analyse how a local island population perceives cruise tourism. Specifically, since current statistics in the field of community-based tourism report that residents' attitudes are significantly influenced by several socio-economic and demographic characteristics, this study also examines whether these differences exist, together with other specific determinants. The research presented involves data collection in Messina, a port of call on the island of Sicily (Italy), during the summer peak of the cruise season in 2011. A total 1,500 complete questionnaires were administrated based upon a representative stratified random sample, by age and gender. This data collection allows one to run a statistical analysis of the local residents' perceptions on the impact of cruise tourism on the host community. Specifically, face-to-face interviews were administered to residents living at different distances from the port and in different parts of the city. Impact perceptions have been measured using a number of questions, or items, with a numerical scale applied to the responses. These items have been combined using a correspondence and a MANOVA analysis as a novel statistical tool within this strand of research.

A literature review on tourism impact

Host communities' perceptions on the impact of tourism have been object of research over the past three decades. Different benefits and costs affect residents' perceptions and, as observed by many authors, these can be summarised into three categories: economic, environmental and socio-cultural effects (Murphy, 1983; Gunn 1988; Gursoy, Chi & Dyer, 2009). Considering these types of externalities, several models have been developed to understand residents' opinion and reaction. Doxey's Irridex model (1975), for instance, describes the change in frustration of residents as the number of tourists increase and identifies 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' attitudes and these tourism life cycle phases. Initially, residents may have a positive attitude towards their guests but, as their number increases, the local community starts to be concerned about long-term effects of tourism. This occurs because tourism produces positive effects either for certain stakeholders or because external companies derive the most benefit. Besides, concern towards environmental and social costs also may emerge.

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

A common theme in the literature is the understanding of host communities' preferences towards tourism as it is fundamental for its development and sustainability, especially in the long run (Allen, Long, Perdue, & Kieselbach, 1988; Lankford & Howard 1994, Ap & Crapton 1998; Gursoy, Jurowski & Uysal, 2002). Residents' acceptance of tourism development is considered as a key factor for the long term success and sustainability of tourism in a particular destination (Andriotis & Vaughan, 2003). As Fridgen (1991) observes, residents' negative attitude adversely influences tourists' willingness to revisit a specific destination.

The large body of research into the impact of tourism has found rather mixed results on residents' support for tourism and, often, this thread of research lacks a strong theoretical base. Faulkner and Tideswell (1997), based on the insights provided by the studies on social impact, developed a model in which factors that affect residents' attitudes towards tourism are categorized into extrinsic and intrinsic. 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, authors commonly consider the following: degree or stage of tourism development (Doxey, 1975; Gursoy & Rutherford, 2004), the level of economic activity in the host area (Johnson, Snepenger & Akis, 1994) and the degree of tourism seasonality (Fredline & Faulkner, 2000). Among the intrinsic factors are: the perceived balance between positive and negative impacts (Dyer, Gursoy, Sharma & Carter, 2007); geographical proximity to concentrations of tourism activity (Fredline & Faulkner, 2000); their rural, urban or coastal area of residence (Nunkoo & Ramkissoon, 2010); length of residency (Gu & Ryan, 2008); degree of tourism concentration (Pizam, 1978); level of contact with tourists and economic reliance and dependence on tourism (Ap, 1992). Finally, among the intrinsic factors affecting residents' attitudes towards tourism, the literature cites socio-demographic characteristics (Belisle & Hoy, 1980), gender (Wang & Pfister, 2008), age and the level of education (Sheldon & Abenoja, 2001).

From an empirical perspective, the methodology applied to investigate tourism impacts on residents is vast. For example, Lindberg and Johnson (1997) use Structural Equation Models (SEM) to understand values and expectancy towards tourism in eight coastal communities in Oregon, while Gursoy et al. (2002) employ it to five counties in Virginia and find that host community support is affected by the level of concern, eco-centric values, utilization of resources and the perceived costs and benefits of tourism development. The same framework, but with a two-step approach, is applied in a self-administered survey questionnaire in Australia to examine local attitude towards tourism development (Gursoy et al. 2009). Vargas-Sánchez, Plaza-Mejía and Porras-Bueno (2009) apply a SEM to analyse residents' reaction to tourism in a first stage of development in the province of Huelva (Spain). 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, for their case study, perceptions of negative impacts compensate positive ones.

Most research on social impacts of tourism uses Factor Analysis to summarise the large number of items on the scale, then proceed with testing differences between respondents in terms of level of engagement in tourism, proximity of their residence to tourism activities, length of residence in a destination and socio-demographic variables using t-tests, ANOVA and, more rarely, multivariate analysis of variance (MANOVA). The advantage of using MANOVA is that one can analyse variance when two or more dependent variables are under investigation that may arise problems of autocorrelation. Several studies

employ factor analysis to assess residents' perceptions of tourism activity. Haley, Snaith and Miller (2005) apply this method to assess Bath (UK) residents' attitudes. Andereck, Valentine, Knopf and Vogt (2005) carry out a survey with 38-items in Arizona (USA) and apply a factor analysis within the social exchange framework. More recently, 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.

In the literature, only a few contributions are aimed at studying residents' attitudes and perceptions towards cruise tourism (Hritz & Cecil, 2008; Marušić, Horak & Tomljenović, 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 what is a mature destination. It emerges that a threat for the island' calmness and preservation from cruise tourism is perceived. 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' attitudes and perceptions 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 more advantages than disadvantages. Overall, there is a positive balance between benefits and costs from cruise tourism. Marušić et. al. (2008) investigated the impact of cruise tourism among residents of Dubrovnik, Croatia's most popular cruise destination. While supporting cruise tourism in general, residents also reported the adverse impact of cruisers and their passengers relating mostly to the excessive crowdedness created in short time.

The objective of this paper is to take into account residents' perceptions and attitudes toward cruise activity, with the assumption that there is a high degree of similarity between the impact exerted by tourists and cruise passengers. Overall, one expects that those perceiving to benefit directly from cruise tourism, being less exposed to cruise tourists via distance of their residence from the port, will perceive cruise tourism more favourable. Furthermore, this paper expands the general tourism impact assessment by taking into account whether residents had made a cruise in the past. Such cruise experience is likely to make residents more tolerant of the presence of cruises and cruise passengers.

Methodology and the case study

The study of residents' reaction to cruise tourism was conducted in Messina. It is the third largest city in Sicily, after Palermo and Catania, where cruise tourism is becoming a significant sector of the local economy. In 2010 Messina was the ninth most important cruise destination in Italy, receiving about 375 thousand cruise passengers. It is a threefold increase in a decade as, in 2000, there were only 126 thousand cruise passengers. This, of course, meant that Messina's port is receiving greater number of

cruise ships. In 2010, there were 215 ships, an increase of 30% in comparison to 2005. Cruise passengers spend in Messina and surroundings about 50-70 Euro, of which an average 20-30 Euro on excursions and the rest on food, beverages, and shopping (Observatory on Tourism on European Islands, 2009).

The main purpose of this study is to ascertain residents' perceptions of cruise tourism impacts and investigate whether their perceptions vary according to the residents' involvement, distance of residence from the port and whether in the past they have had a cruise trip. The tourism impact scale, featuring economic, social and environmental impact of tourism was adapted from some pillar research in the field of community-based tourism (e.g. Dyer et al., 2007; Gursoy & Rutherford, 2004; Perdue, Long & Allen, 1990) to suit the context of cruise tourism (Brida, et al, 2011; Diedrich, 2010; Gatewood & Cameron, 2009; Hritz & Cecil, 2008). The questionnaire consisted of 26 items, with responses measured on a 5-point Likert-type scale. An economic benefit from tourism was ascertained by asking respondents in what type of occupation sector they work, while the personal benefits from cruise tourism were measured by the extent to which resident income depends on cruise activity. In this way, it is possible to draw a more demarcated line on the separation between tourism and other economic sectors. Residence's distance from the port was measured by how far they actually live from the harbor, while the experience with cruise was measured by taking into consideration the number of times that the resident had been on a cruise in the past.

A questionnaire was used as a data collection instrument. It consisted of two parts: the first part contained socio-demographic variables (e.g. gender; age, educational level; number of family members and whether they are involved in the cruise activity; type of occupation and economic sector; years of residence in Messina; how far they live from the harbor area as well as from the most known tourism areas; whether residents have contacts with tourists in their daily life; if they had done a cruise trip in the past); the second part consisted of questions on residents' perceptions on the impact of tourism from an economic, social, cultural and environmental point of view. All questions were close-ended. To verify the clarity of the questionnaire, in terms of understanding and simplicity of exposition, a pilot-test was conducted with a random stratified sample of 30 residents. No concerns were reported in the pilot-tests.

Population for this study was defined as all residents of Messina older than 16 years of age. The sample method used was a stratified random sampling, with strata being the age and gender to ensure an even representation. Sample frame consisted of all household in Messina. Face-to-face interviews were conducted in different parts of the city: Messina port area, city center, different neighborhoods, suburbs and surrounding areas.

Data was collected by trained administrators in the period April-August 2011, on weekdays and weekends, during the day and in the early evening, to ensure that those working or going to school have an even chance of being represented. Ten trained interviewers, directly supervised by the authors, were in charge of data collection. Interviewers were instructed about the streets and area where to administrate the questionnaire. A total of 1,500 complete questionnaires were obtained thus making up a sample which is representative of Messina population at a 1% level.

In the sample, females were slightly more represented (52.8%). The majority of residents belonged to the 36-56 age group and reported living in a household of three or four members (57.8%). In terms of education, 45.2% reported having a secondary school qualification, while 29.6% had a university

or postgraduate degree. A vast majority of respondents (93.4%) reported not to be economically dependent on cruise tourism, while only 6.6% reported having an income related to the cruise sector. In terms of occupation, administrative workers were most numerous (26.2%), followed by retirees (20%) and students (19%). The rest was made of free-lancers (11.4%), unemployed (9.5%), executive manager (3.9%) and other professions (9.5%).

Results and discussion

In general, residents' reaction to cruise tourism was mostly neutral. Most responses were in the range from 2.5 to 3.5, indicating that respondents did not have clear perceptions on cruise tourism impacts. On balance, residents perceived the social impacts of cruise activity as most positive (especially those related to the enhancement of other cultural and communities knowledge), followed by economic impact. Nevertheless, residents perceive that tourism has a negative impact on the environment, although their responses tend to converge on the average value (indifferent effect) (Table 1).

Correspondence analysis was used to summarise responses that is to eliminate the redundancy in the original data and reduce the original 27 items to a set of factors. Six items were removed from the final solution, due to the low sampling adequacy that was in this case set at 0.49, followed Hatcher's (1994) recommendation.

Table 1
Respondents perceptions of cruise tourism impacts (means and standard deviation)

Variable*	Mean**	Std. dev.
Economic and welfare impact		
Increase in public investment and infrastructure	3.10	1.20
Increase in private investment and infrastructure	3.30	1.12
Increase jobs opportunities	3.33	1.23
Cruise activity forces to change actual standard of life	2.23	1.24
Increase in disposable income	2.95	1.15
Infrastructure improvement (roads, communication, water pipes, etc)	2.75	1.24
Public services improvements	2.84	1.19
Conservation and valorisation of the historic asset	3.29	1.15
Urban and rural gentrification	3.03	1.16
Cruise tourists influence daily life	2.02	1.17
Increase of quality of life	2.97	1.11
Social and cultural impacts		
Enhancement of other cultural and communities knowledge	3.56	1.13
Increase in the number of cultural and recreational activities	3.22	1.08
Valorisation of local tradition and authenticity	3.48	1.12
Enhance the quality of local tourism and commercial infrastructure	3.40	1.14
Enhance safety standard in the destination	2.88	1.08
Enhance social and cultural life within the local community	3.12	1.11

Table 1 **Continued**

Variable*	Mean**	Std. dev.
Crowding-out effects		
Cruise development has a crowding out effect on other relevant projects	2.63	1.15
Increase in traffic and road accidents	2.44	1.18
Micro-crime increase	2.52	1.23
Increase costs of living for the local community	2.66	1.22
The benefits from cruise activity end to external entrepreneurs	3.27	1.19
Environmental effects		
Enhance environmental protection	2.88	1.16
Deterioration of the eco system (sand erosion, damages to flora and fauna)	2.56	1.22
Increase of environment and marine pollution	2.86	1.26
Increase of congestion in public and recreational areas	2.63	1.21
Increase of waste	2.79	1.32

*Items in italic are omitted from the Correspondence analysis
**Response based upon a 5-Likert scale range from 1 (strongly disagree) to 5 (strongly agree)

Six factors were extracted. As they all met Kaiser's criterion with an eigenvalues greater than one, all six factors were retained in the further analysis. The relative weight of each factor in the total variance was calculated, taking into account proportion of total variances explained by each factor, while cumulative variance showing the amount of variance explained (Escofier & Pages, 1988). To establish the adequacy of the correspondence analysis, two tests were conducted: the Kaiser-Meyer-Olkin Measure of Sampling Adequacy, with values between 0.70 and 0.83, indicating that the analysis is satisfactory (Kaiser, 1974) and Bartlett's Test of Sphericity (16,730.340; significance=0.0) indicating that the null hypothesis (i.e. correlation matrix is an identity matrix) is rejected. As Table 2 illustrates, the six factors accounted for 62.2% of the total variance, with all factors exhibiting acceptable alpha levels greater than 0.7.

Table 2
Correspondence analysis

	Variable contribution	% Variance explained	% Cumulative variance	Cronbach's alpha
Factor 1: Improvement of infrastructure and services		**25.9**	**25.9**	**0.83**
Infrastructure improvement (roads, communication, water pipes, etc).	0.77			
Public services improvements	0.77			
Urban and rural gentrification	0.67			
Conservation and valorisation of the historical assets	0.60			

Table 2 **Continued**

	Variable contribution	% Variance explained	% Cumulative variance	Cronbach's alpha
Factor 2: Heritage improvement		**15.9**	**41.8**	**0.77**
Enhancement of other cultural and communities knowledge	0.76			
Increase in the number of cultural and recreational activities	0.73			
Valorisation of local tradition and authenticity	0.70			
Factor 3: Environmental deterioration		**6.8**	**48.6**	**0.83**
Increase of environment and marine pollution	0.85			
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			
Factor 4: Welfare increase		**5.2**	**53.8**	**0.81**
Increase in public investment and infrastructure	0.75			
Increase in private investment and infrastructure	0.74			
Increase jobs opportunities	0.72			
Factor 5: Crowding out effects		**4.3**	**58.1**	**0.73**
Cruise activity development has a crowding out effects	0.73			
Increase in traffic and road accidents	0.72			
Micro-crime increase	0.64			
Increased costs of living for local community	0.62			
Factor 6: Community life		**4.1**	**62.2**	**0.70**
Cruise activity changes actual lifestyle	0.75			
Increase disposable income	0.54			
Increase of quality of life	0.49			

The first factor, accounting for 26% of variance, has been labelled "Improvements in infrastructure and services", as it consists of attributes related to improvements in public infrastructure and services, conservation and utilisation of urban and rural areas. 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. 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. The examination of the raw scores reveals that these are perceived slightly negatively by respondents. 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 five, "Crowding-out effects", consists of items related to the increased in so called 'people pollution' (Baekkelund, 1999; Klein, 2009, 2010) and relates to the

number of people, crime, traffic congestions. Just like the factor three, this is perceived by residents to exert a slightly negative impact. 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).

It has been assumed that residents' perceptions of the impact of cruise tourism will vary according to their involvement or direct economic benefits that they derive from it, by the distance of their place of residence from the port area and by previous cruising experience. To test these set of propositions, ANOVA was used when there was one variable and multivariate analysis of variance (MANOVA) when there were two or more dependent variables under investigation and problems of autocorrelation may arise.

From Tables 3 to 5, the ANOVA and MANOVA show that significant differences exist in respondents' perceptions and attitudes towards cruise tourism, based on residents' occupation, as well as their dependency on the tourism sector, their residence distance from the port and whether they had a cruise experience in the past. Respondents perceive that cruise tourism exerts more positive than negative impacts, particularly in terms of heritage improvement and welfare increase as, in general, their means are above three.

Table 3
Residents' reactions to cruise tourism by occupation

Factors *	Means**								ANOVA	
	Primary sector	Secondary sector	Tertiary sector	Tourism sector	Students	Retired	Unemployed	Other occupation	F-stat	Prob.
Factor 1: Improvement of physical capital and services	2.73	**3.02**	**2.97**	**3.18**	**3.09**	**2.99**	**2.65**	**3.08**	**128.99**	0.00
Factor 2: Heritage improvement	3.18	**3.30**	**3.43**	3.60	**3.50**	**3.45**	**3.26**	3.59	**72.58**	0.00
Factor 3: Environmental deterioration	3.09	2.86	**2.68**	2.46	**2.70**	**2.67**	**2.83**	**2.47**	**39.15**	0.00
Factor 4: Welfare increase	2.97	3.01	**3.25**	3.34	**3.35**	**3.25**	**3.00**	3.3	**24.42**	0.00
Factor 5: Crowding out effects	2.82	2.66	**2.48**	2.55	**2.53**	2.68	**2.59**	2.47	**16.57**	0.00
Factor 6: Community life	**2.73**	**2.79**	**2.78**	3.38	**2.77**	**2.55**	**2.51**	**2.71**	**330.81**	0.00

*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: in bold at least 5% level of significance

As expected, those employed in the tourism sector are slightly more favorable disposed to cruise tourism. Most than any other occupational group, they 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), foster 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 contribute to 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 believe that the cruise activity may have a negative impact 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 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). Overall, crowding out effects are perceived more by residents involved in the primary sector.

Table 4 presents residents' reaction to cruise tourism regarding how far they live from the port. Overall, respondents who are farther 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
Residents' reaction to cruise tourism by distance of their residence from the port

Factors*	Means**							ANOVA	
	Between zero-one km	Two km	Three km	Four km	Five km	Between six-ten km	More than 10 km	F-stat	Prob.
Factor 1: Improvement of physical capital and services	**2.99**	**2.96**	**2.93**	**3.03**	**2.84**	**3.02**	**3.04**	**140.57**	0.00
Factor 2: Heritage improvement	**3.46**	**3.45**	**3.40**	**3.41**	**3.48**	**3.46**	**3.36**	**75.56**	0.00
Factor 3: Environmental deterioration	**2.52**	**2.74**	**2.72**	**2.69**	**2.63**	**2.80**	**2.78**	**39.79**	0.00
Factor 4: Welfare increase	**3.20**	**3.26**	**3.15**	**3.20**	**3.24**	**3.33**	**3.24**	**24.86**	0.00
Factor 5: Crowding out effects	**2.60**	**2.53**	**2.55**	**2.48**	**2.48**	**2.56**	**2.66**	**16.97**	0.00
Factor 6: Community life	**2.85**	**2.71**	**2.69**	**2.64**	**2.56**	**2.67**	**2.85**	**344.69**	0.00

*MANOVA is run on attributes for all factors, for each variable of interest; ANOVA/MANOVA on items of each factor of relevance: 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: in bold at least 5% level of significance.

Finally, it is of interest to understand whether residents who had been on a cruise in the past have a different perception than those who had not (Table 5). Overall, respondents who had been on a cruise have a higher perception on the positive effects that cruise tourism produce within the local community. Nevertheless, they are also relatively more aware of the negative impacts that cruise activity generates in terms of the environment and marine pollution.

Table 5
Residents' reaction to cruise tourism in relation to their past cruise experience

Factors*	Means**		ANOVA	
	No cruise experience	With cruise experience	F-stat	Prob.
Factor 1: Improvement of physical capital and services	**2.88**	**3.16**	**58.08**	0.00
Factor 2: Heritage improvement	**3.32**	**3.58**	**39.16**	0.00
Factor 3: Environmental deterioration	**2.70**	**2.74**	**16.32**	0.00
Factor 4: Welfare increase	**3.11**	**3.45**	**11.04**	0.00
Factor 5: Crowding out effects	**2.57**	**2.57**	**9.71**	0.00
Factor 6: Community life	**2.57**	**2.95**	**135.54**	0.00

*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: in bold at least 5% level of significance.

Conclusions

Despite the fact that the cruise sector has experienced a remarkable growth in recent years, there are a very few research papers that investigate this 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 ascertain residents' perceptions toward the cruise tourism development within the city of Messina, a key port of call in Sicily. To this end, a total of 1,500 face-to-face interviews was completed during the summer 2011 and a correspondence analysis was used to analyse positive and negative effects perceived by residents about the cruise activity.

Given the importance of residents' contribution to tourism development (Gursoy & 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, overall, a positive perception towards cruise tourism development with regard to an improvement in the economic and cultural activities. Nevertheless, they moderately feel concerned about the negative impact that cruise tourism may exert on their wellbeing, increased congestion, crime and the environment in terms of pollution, waste and congestion in recreational areas. Besides, significant differences in residents' perceptions and attitudes towards cruise tourism development are observed based on their economic activity, place of residence and past cruise experience.

The empirical outcomes can be used as a guide in planning the future of cruise tourism for this destination. Policy makers should run internal marketing and communication campaigns that deliver tailored messages and describe both the positive and negative impacts of tourism (Brida et al., 2011). Furthermore, the findings remind destination managers and policy makers about the importance in involving the local community before tourism development actions are taken and the need to truly understand and monitor over time how local residents perceive the impacts of cruise tourism development. Although not tested in this paper, it is reasonable to expect that resident' perceptions and attitudes towards cruise tourism may change over time along with its development. Hence, local policy makers should monitor and consider them dynamically in order to be able to react to changes when planning further future tourism development of the destination. Nevertheless, the measurement of residents' actual perceptions should be used as one of several indicators to monitor and assess tourism sustainability of a destination as a whole (Choi & Sirakaya, 2005) and/or of a specific type of tourism product, as well as its likelihood of decline (Diedrich & García-Buades, 2009).

Although the findings in this paper contribute to this area of tourism research, it is also worthwhile considering further possible contributions to this strand of research. Specifically, the present study may be repeated in other cruise tourism destinations in order to verify the findings or to see how they change according to the extrinsic factors of the specific tourism destination chosen (e.g. to measure the impact of the degree or stage of tourism development, the level of economic activity in the host area, the seasonality of tourism). Besides, future research may also investigate the role that other variables (community involvement, community attachment, etc.) have in discriminating residents' perceptions and attitudes towards cruise tourism development.

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