

**Consumer Behavior in Tourism Symposium 2013 (CBTS 2013)**  
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# **Cruise Tourism Impact: A Cluster Analysis**

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# Overview

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- ✓ Literature overview
- ✓ Aims of the research
- ✓ Methodology
- ✓ Findings
- ✓ Conclusions
- ✓ Managerial implications, limitations and future steps

# Literature overview (1)

- **Sustainability as a source of competitiveness** (Ritchie & Crouch, 2000)
  - **Economic, environmental, socio-cultural and marketing impacts of cruise activity** (e.g. Brida and Zapata, 2010, Dwyer & Forsyth, 1998; Dwyer et al. 2004; Brida and Risso, 2010; Mckee, 1998)
- **Analysis of residents' perceptions and attitude and community integration as conditions to achieve tourism sustainability** (Chen, 2006; Fredline and Faulkner, 2000; Mowforth and Munt, 2003)
  - **Prior literature categorized the factors into extrinsic and intrinsic factors** (Faulkner & Tideswell, 1997)

# Literature overview (2)

- **Resident's perceptions toward cruise tourism development** (e.g: Brida, Riaño & Zapata-Aguirre, 2011; Brida, Del Chiappa, Meleddu, Pulina 2012a,b; Del Chiappa & Abbate, 2013; Hritz & Cecil, 2008)
- **Convergence among the different stakeholders who influence cruise tourism development** (Del Chiappa, 2012; Del Chiappa, Gallarza & Zaragoza-Viguer, 2013)
- **Residents' preferences toward different types of tourism development** (Pulina, Meleddu & Del Chiappa, 2013; Del Chiappa & Abbate, 2013; Del Chiappa, 2012)

# Gaps in the available research

- ✓ However, still poor research exist aimed at examining residents' perceptions and/or attitudes towards cruise tourism development (Brida, Riano and Zapata, 2011; Diedrich, 2010; Gatewood and Cameron, 2009; Hritz and Ceci, 2008)
  - Usually studies on the topic are developed in the arctic/polar area
  - Very few research do exist in the context of Mediterranean area (e.g. Brida et al., 2012a,b; Del Chiappa & Abate, 2013; Pulina, Meleddu & Del Chiappa, 2013; Del Chiappa & Melis, 2013), and are mostly related to port of call
  - Very few studies apply cluster analysis
- ✓ It could be argued that knowledge of residents' attitudes toward cruise activity still needs to be further expanded

# Aims of the research

- ✓ To analyze the different residents' perception toward the impact of cruise tourism
- ✓ To profile residents based on their opinion and their socio-economic and demographic characteristics

# Background to Cagliari



- ✓ The capital of the 2<sup>nd</sup> largest island of the Mediterranean Sea
- ✓ A port of call, where passengers spend 5-6 hours visiting the city
- ✓ Is a key-point for the transshipment activities (11 miles away from the line Gibraltar-Suez)
- ✓ It shows in 10 years a significant growth in the number of cruise passengers (from 16.607 in 2001 to 232.000 in 2011)

# Methodology

- ✓ **Quantitative research**
- ✓ **Sample:** 1039 complete questionnaires (administered face-to-face)
- ✓ **Data collection** - participants were asked:
  - to give us their general socio-demographic characteristics (17 items)
  - to assess their perceptions toward economic, environmental and socio-cultural impact (26 items)
  - to express to what extent they agreed or disagreed with a list of 5 statements chosen to investigate their attitude towards further cruise tourism development (5- point Likert Scale)
  - to express to what extent they would support different types tourism (cruise tourism, sport tourism, cultural tourism and sea/sun/beach tourism) by using a 5–point Likert Scale

# Methodology

- ✓ **Data were coded and analyzed using R (version 3.0)**
  - Missing data were replaced by median
  - Exploratory hierarchical analysis (manhattan distance - ward method - “cluster” package)
  - Non hierarchical cluster analysis (manhattan distance - k-means method – “stats” package)
  - To validate the analytical approach, an additional cluster analysis was conducted on the first six principal components extracted by applying a Principal Component Analysis
    - Results show that the units follow the same grouping pattern in about 80% of the cases (“stats” package)

# Methodology

- To validate the fit of clustering

	[,1]	[,2]	[,3]	[,4]	[,5]
[1,]	<b>30,29</b>				
[2,]	37,79	<b>30,26</b>			
[3,]	49,94	35,39	<b>29,36</b>		
[4,]	40,52	41,67	53,96	<b>35,86</b>	
[5,]	50,42	36,75	37,74	43,66	<b>31,29</b>
diagonal: average within distance					
value matrix: average between distance					

# The sample

<b>Gender</b>		<b>Distance from home to tourist area</b>	
Male	51,4	Less than two	36.2
Female	48,6	Between 3 and 5	32.5
<b>Age</b>		Between 6 and 10	21.2
Young (18-35)	46,4	Between 11 and 20	5.5
Middle aged (36-56)	38,9	More than 21	4.6
Senior (more than 56)	14,7	<b>Distance from home to port of Cagliari</b>	
<b>Education</b>		Less than two	31.9
Below high school	10.7	Between 3 and 5	41.0
High school	51,3	Between 6 and 10	19.8
Bachelor's degree- Master's degree	38,0	Between 11 and 20	5.3
<b>Occupation</b>		More than 21	2.1
Administrative worker	27,1	<b>Does your income relate to the cruise tourism</b>	
Executive manager	2,9	Yes	4.3
Freelance	12,7	No	95.7
Retired	13.7	<b>Years of residence in Cagliari</b>	
Unemployed	5.2	Less than five	7.6
Student	24.3	Between 6 and 10 years	7.5
Other	14.0	Between 11 and 20 years	11.7
		Between 21 and 30 years	44.1
		More than 31 years	29.1

# Findings: Residents clusters

- ✓ We identify five different segments and named as follow:
  - “Indifferents”
  - “Cultural-Lovers”
  - “Lovers”
  - “Critics”
  - “Cautious”

	Indifferents	Cultural-Lovers	Lovers	Critics	Cautious
Increase in public investment and infrastructure	2,03	3,15	4,17	2,25	3,70
Increase in private investment and infrastructure	2,10	3,25	3,87	2,61	3,51
Increase jobs opportunities	2,24	3,57	4,47	2,51	4,07
<b>Cruise activity forces to change actual standard of life</b>	1,21	1,44	2,15	1,42	2,30
Increase in disposable income	1,79	2,82	3,85	1,82	3,36
Increase of quality of life	1,86	2,89	3,93	1,68	3,35
Enhancement of other cultural and communities knowledge	2,76	3,65	4,38	2,49	4,04
Increase in the number of cultural and recreational activities	2,17	3,55	4,29	2,58	3,66
Valorisation of local tradition and authenticity	2,47	3,79	4,46	2,71	3,89
Enhance the quality of local tourism and commercial infrastructure	2,47	3,70	4,46	2,75	3,78
Enhance safety standard in the destination	1,89	3,11	4,04	2,36	3,43
Enhance social and cultural life within the local community	2,07	3,29	4,23	2,15	3,54
Enhance environmental protection	1,74	2,76	3,81	1,82	3,08
Infrastructure improvement (roads, communication, water pipes, etc)	1,51	2,63	4,02	1,94	3,38
Public services improvements	1,63	2,79	4,07	2,02	3,37
Conservation and valorisation of the historic asset	2,07	3,40	4,31	2,48	3,72
Urban and rural gentrification	1,76	3,08	4,08	2,31	3,40

	Indifferents	Cultural-Lovers	Lovers	Critics	Cautious
Increase costs of living for the local community	1,73	2,32	2,73	3,07	3,25
The benefits from cruise activity end to external entrepreneurs	2,57	2,92	2,83	3,81	3,56
Cruise development has a crowding out effect on other relevant projects	1,53	2,15	2,09	3,33	3,09
Increase in traffic and road accidents	1,33	1,59	1,59	2,23	2,66
Micro-crime increase	1,47	1,63	1,71	1,95	2,71
Cruise tourists influence daily life	1,31	1,36	1,37	1,75	2,34
Deterioration of the eco system (sand erosion, damages to flora and fauna)	1,56	1,70	1,58	2,99	3,19
Increase of environment and marine pollution	1,70	2,04	1,87	3,43	3,45
Increase of congestion in public and recreational areas	1,64	1,78	1,79	2,63	3,16
Increase of waste	1,61	1,93	1,91	3,23	3,40
Benefits from tourism development are higher than costs	3,54	3,72	3,87	2,70	3,46
Cruise ship numbers should be limited	1,84	2,34	2,26	3,50	3,21
It's usefull to revitalize historic center activities to acctract an highest number of cruise tourists	4,61	4,40	4,69	3,40	4,16
It's usefull to revitalize activities over the historic center to acctract an highest number of cruise tourists	4,30	3,90	4,35	3,38	3,81
Institution should give economic incentives to attract an highest number of cruise ships	3,76	3,36	4,21	2,52	3,58

	cluster1	cluster2	cluster3	cluster4	cluster5
<b>Genre</b>					
Male	51,3%	51,3%	49,1%	<b>53,4%</b>	52,8%
Female	48,7%	48,8%	50,9%	46,6%	47,2%
<b>Age</b>					
Young (18-25)	33,6%	<b>50,3%</b>	46,5%	<b>57,3%</b>	43,1%
Middle aged (36-56)	<b>50,4%</b>	35,9%	39,0%	33,0%	39,4%
Senior (more than 56)	16,0%	13,8%	14,5%	9,7%	<b>17,5%</b>
<b>Education</b>					
No education	0,0%	0,0%	0,0%	0,0%	0,0%
Primary school	0,8%	0,9%	0,9%	1,0%	1,9%
Middle scholl	13,4%	5,6%	7,5%	8,7%	14,6%
High degree	55,5%	50,0%	58,3%	45,6%	47,4%
Bachelor degree	24,4%	<b>31,3%</b>	25,0%	<b>37,9%</b>	30,6%
Master degree	5,9%	<b>12,2%</b>	8,3%	6,8%	5,6%
<b>Occupation</b>					
Administrative worker	27,7%	24,0%	<b>32,3%</b>	24,3%	27,2%
Executive manager	2,5%	3,5%	1,8%	3,9%	3,0%
Freelance	16,0%	15,8%	11,9%	9,7%	9,3%
Retired	20,2%	12,6%	10,6%	8,7%	16,8%
Unemployed	1,7%	4,7%	5,3%	5,8%	7,1%
Student	18,5%	25,9%	21,2%	<b>36,9%</b>	22,8%
Other	13,4%	13,6%	16,8%	10,7%	13,8%
<b>Years of residence</b>					
Less than five	6,7%	6,3%	6,1%	<b>13,6%</b>	8,6%
Between 6 and 10 years	8,4%	7,2%	7,9%	6,8%	7,5%
Between 11 and 20 years	5,0%	10,3%	13,6%	10,7%	14,9%
Between 21 and 30 years	<b>54,6%</b>	44,7%	44,7%	40,8%	39,6%
More than 31 years	25,2%	31,6%	27,6%	28,2%	29,5%

<b>Distance from home to tourist area</b>					
Less than two	29,0%	<b>37,4%</b>	<b>41,3%</b>	36,4%	33,6%
Between 3 and 5	37,0%	31,5%	26,9%	36,4%	34,7%
Between 6 and 10	23,0%	19,6%	21,6%	19,2%	22,8%
Between 11 and 20	4,0%	6,3%	7,7%	5,1%	3,5%
More than 21	<b>7,0%</b>	5,2%	2,4%	3,0%	5,4%
<b>Distance from home to port</b>					
Less than two	31,9%	32,5%	34,1%	33,0%	28,9%
Between 3 and 5	38,1%	43,6%	35,0%	43,7%	43,2%
Between 6 and 10	23,9%	17,0%	20,5%	19,4%	20,7%
Between 11 and 20	3,5%	4,6%	7,7%	3,9%	5,3%
More than 21	2,7%	2,3%	2,7%	0,0%	1,9%
<b>Does your incomes relate to the cruise tourism?</b>					
Yes	1,7%	3,2%	<b>8,0%</b>	1,0%	4,7%
No	98,3%	96,8%	92,0%	99,0%	95,3%
<b>Contact whit tourists in everiday life?</b>					
Not at all	37,0%	24,8%	24,3%	22,5%	28,1%
Few	43,7%	55,2%	53,5%	63,7%	53,9%
Enough	10,1%	15,7%	16,8%	5,9%	13,5%
Very much	3,4%	1,9%	3,5%	3,9%	1,9%
Great deal	4,2%	1,3%	1,3%	0,0%	1,9%
Doesn't know	0,8%	0,9%	0,0%	0,0%	0,4%
Doesn't answer	0,8%	0,3%	0,4%	3,9%	0,4%
<b>Family members involved in business activities that get advantages from the presence of cruise passengers in the area</b>					
Yes	6,7%	<b>12,5%</b>	<b>15,8%</b>	8,7%	11,2%
No	93,3%	87,5%	84,2%	91,3%	88,8%
<b>Have you ever had contact whit cruise tourists?</b>					
Yes	28,0%	<b>35,6%</b>	<b>38,6%</b>	22,3%	26,4%
No	72,0%	64,4%	61,4%	77,7%	73,6%

# Findings: ‘Indifferents’ (n=119)

- ✓ 50% middle aged people (36-56) with high degree, whom live more than 20 years in Cagliari, within 10 Km from the tourist areas
- ✓ They don't perceive in prevalence nor the positive nor the negative aspects of the phenomenon, showing little interests in its impact on the social texture and on the local economy
- ✓ However, they acknowledge the importance of the participation of the entire city to the phenomenon and delegate to others the decisions, such as to institutions

# Findings: Cultural-Lovers (n=320)

- ✓ Mostly young aged people (18-25), with a superior degree or master degree or post graduates. They live for more than 20 years in Cagliari in proximity to tourists areas.
- ✓ They come into contact with tourists in everyday life, also with cruise passengers
- ✓ Cultural-lovers give a certain weight to the cultural impact of the phenomenon, saying that cruise tourism increase the knowledge of other cultures, strengthen cultural activities and add value to local traditions
- ✓ However they don't recognize the phenomenon in the ability to improve the environmental, economic, social and territorial context, but only as an incentive for some private operators.

# Findings: “Lovers” (n=320)

- ✓ Both young and middle aged people with a superior degree and working as employers
- ✓ They live in the town for more than 21 years old less than 2 Km from the tourist areas and they come into contact with tourists and cruise passengers in everyday life
- ✓ They consider the cruise tourism phenomenon as an opportunity to be seized, giving a strong weight to the positive elements and giving little importance or not at all recognizing negatives impacts to it
- ✓ They express a strong agreement with the possibility that institutions give economic incentives to attract cruise tourism

## Findings: “Critics” (n=320)

- ✓ The cluster is the youngest and has the highest percentage of graduates among the clusters, a good part students who live in town for less than 5 years within 5 Km from the tourist areas
- ✓ They come few in contact with tourists in everyday life and only 1% of those belonging to the cluster state a relationship between their incomes and cruise tourism
- ✓ They on average, strongly disagree with positive statements, but consider that the cruise tourism doesn't change their lifestyle
- ✓ However, they see the phenomenon managed by foreign parties and therefore they think that local resources are used improperly
- ✓ The costs arising from cruise tourism outweigh the benefits, since disfigure the environment and steal wealth to the area.

# Findings: “Cautious” (n=269)

- ✓ Well composed by aged groups, with a greater percentage of over 56 with high degree or master degree.
- ✓ They live into 10 Km from tourists areas, but they doesn't enter in contact with tourists in everyday life
- ✓ They express a certain level of agreement towards the positive impacts from cruise tourism related to the development potential of investment and working, but are cautious in expressing opinions about the effects that the cruise tourism could have on the environment and on social wealth

# Conclusions

- ✓ It's possible to profile the residents based to their perceptions on cruise tourism
- ✓ Much of the residents express a positive attitudes toward cruise tourism, recognizing the economic and socio-cultural benefits
- ✓ However, some groups of residents show themselves critical or rather wary of some aspects of economic, social and environmental impacts related to cruise tourism
- ✓ Residents would like to support further developments of this tourism market in the area

# Managerial implications, limitations and future steps

## ✓ Managerial implications

- To study residents' perceptions and attitude towards cruise tourism development
- To run internal marketing/communication operations in order to increase the favourableness of residents' attitudes toward tourism
- To personalize the messages according to the different segment of residents to be considered (Brida, Riaño and Zapata, 2011; Madrigal, 1995).

## ✓ Limitations

- The research suffers coverage-bias, thus findings cannot be generalized

## ✓ Future steps

- To repeat the study in other cruise tourism destination to verify if its findings can be generalized and/or if they change according to the extrinsic factor of the area
- To compare residents' perceptions' and attitude in port of call and home port cruise tourism destination
- To investigate the role of other intrinsic variables in discriminating residents' perceptions and attitudes toward cruise tourism development
- To predict residents' support to cruise tourism development

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*Thanks for your attention!*

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