

# Residents' perceptions of tourism impacts on Andros Island, Greece

K. Chazapi & D. Sdrali

*Department of Home Economics and Ecology, Harokopio University, Athens, Greece*

## Abstract

Tourism is frequently regarded as a tool for promoting local jobs, raising the level of economic and social welfare and improving international peace and cooperation. However, tourism can also create a lot of problems, such as low wages, seasonal employment, environmental degradation etc. It is indicated that the level of tourism development and the sociodemographic characteristics of the residents influence the residents' perceptions of tourism impacts. The aim of this study was to measure the residents' perceptions of tourism impacts on a Greek island, Andros. The study also estimated the wish of the residents about further tourism development over the next five years on the island. Results indicated that demographic and socio-economic factors influenced the residents' attitude toward tourism development. Furthermore, it is argued that Andros could attract more tourists by promoting its cultural elements leading therefore itself to sustainability.

*Keywords: tourism impacts, perceptions, attitudes, development, Andros, Greece.*

## 1 Introduction

Tourism has remarkably increased since the 1970s in all the developed countries, so nowadays it constitutes a big economic and social activity. It represents the 10-12% of the gross world product and it constitutes one of the most important economic activity having effects on society, environment and culture.

Much research has focused on the impacts of tourism development, having identified both positive and negative economic, social and environmental impacts.



For many countries tourism is frequently regarded as a tool for promoting local jobs [2, 12], generating new employment opportunities -particularly for women and young adults [2, 7, 11, 12, 14, 21], raising the level of economic and social welfare [1, 2, 7, 12, 14] and advancing the international peace and cooperation between the host and the guests. Furthermore, tourism helps to be kept at high standard local facilities and provides incentives for the restoration of historical buildings and monuments [1, 2, 7, 14, 21], improving thus the image of the host community [2, 11, 21].

However, apart from its benefits, tourism can also create a lot of problems, such as low wages, seasonal employment [19], environmental degradation [1, 7–9, 11, 14, 21], cultural change [9] etc. Tourism development also creates adverse impacts on occupational distribution by sector and may affect the community's traditional work patterns. For example, Tsartas [19] noted that traditional agricultural jobs were abandoned by the local population because tourism related jobs were regarded as highly profitable and more attractive.

The work of Butler [3] and others [6, 16] indicates that the level of tourism development influences the residents' perceptions of tourism impacts. Generally, it has stated that there is an inverse relationship between the level of tourism development and the residents' perceptions of economic, social, and environmental impacts upon the host community. For example, Smith and Krannich [16], studying the residents' perceptions of tourism of four different rural areas on USA, that they were characterized by a different tourism level development, concluded that the high rates of tourism development had negative effects on the residents' perceptions of tourism impacts.

Furthermore, several researchers tried to explain the correlation between the residents' sociodemographic characteristics and their perceptions of tourism. Researchers [9, 10, 15, 18, 21] have concluded that age and educational level are important and must be taken into account. For example, Lindeberg et al [10], studying the tourism impacts on Denmark and residents' attitudes toward tourism, argued that the high-educated residents had more favorable attitude toward tourism development. On the other side, the older the residents were, the less supported the tourism development. Uriely et al [20] concluded that certain sociodemographic variables are important, including ethnicity and religion. It has also mentioned sex as a factor in explaining attitudes toward tourism. Several writers [6, 9] found that women were more positive toward tourism development than men. Conversely, other researchers [11, 14, 18] found that men were positively aware of tourism, while women suggested that tourism is responsible for many problems, such as less safety among people, alcoholism, crime, noise etc.

It has also mentioned that the dependency on tourism activities is a factor that explains the residents' attitudes toward tourism. Generally, researches [4, 5, 8, 10, 13] have shown that economic benefits from tourism play an important role in shaping residents' attitude toward tourism. More specifically, the residents who were occupied in tourism activities were more positive toward tourism supporting tourism development.



Finally, Prentice [13] noted that the length of residence was a factor affecting the residents' attitudes toward tourism, with the long-term residents to be negative toward tourism, a result that was consistent with the result of other studies [5, 14, 15].

The aim of this study was to measure the residents' perceptions of tourism impacts on a Greek island, Andros. The study also estimated the wish of the residents about further tourism development the next five years on the island.

## 2 Methodology

### 2.1 The study area

Andros is situated in the northern part of the southern Aegean archipelago and it has 41 kilometers length, 17 kilometers width and 111 kilometers perimeter. Its total land area is approximately 380 square kilometers of which only the 10% is cultivated.

Much of the island is a mountainous landscape with a lot of capes, while the plains are very limited. In the eastern side of Andros where the rainfalls are more frequent, there are most of the 93 mineral springs of the island.

Andros has 10,009 residents, while during the summer period the population can be reached to 34,000 people. The active population is 3,567 people, of which 29% are occupied in the primary sector (mainly in stock farming), and 27% and 44% in the second and tertiary sector respectively [17]. The unemployment rate is around 18%, while the country's unemployment rate is 10%. The island's economic development is heavily based on the tertiary sector, such as tourism, trade and shipping. The proportion of the tertiary sector to the whole economy becomes more and more important, with a parallel increase of the employees in the private sector. A proportion of the tourist-related businesses are owned by local people and managed by family members. However, entrepreneurship is quite low because of the ageing of the population, the depopulation of the island and the lack of enterprising initiatives.

The climate of Andros is characterized by intense humidity, strong winds during the summer period and northern winds during winter.

Since the 1980s Andros has experienced high rates of growth, providing a mass of services and facilities to support tourism, such as hotels, rooms to let, taverns, bars, cafes, craft stores etc.

During the summer period the island is heavily dependent on day visitors and it is one of the most popular trip destinations in Greece. In 1997 it was estimated that around 54,000 domestic and foreign tourists visited the island, of which 69% were Greeks.

Andros is an island that is characterized by rich cultural heritage and infrastructure. Culture is offered in a number of the island's packages, including antiquities, archaeological, Byzantine and post-Byzantine monuments, castles, medieval towers, neoclassical buildings, monasteries and churches, monuments of pre-industrial technology, museums, exhibition centers and a library.



Table 1: List of variables.

Variable	Type	Description
Age	Continuous	Years of age
Years	Continuous	Length of residence on the island (years)
Benefits	Binary	1 if respondent has benefits from tourist industry in a personal or family level; 0 otherwise
Noise	Categorical	Tourism impact on noise (1=by no means, 2=little, 3=enough, 4=much, 5=very much)
Enviprotect	Categorical	Tourism impact on the environmental protection (1=by no means, 2=little, 3=enough, 4=much, 5=very much)
Facilities	Categorical	Tourism impact on the use of facilities (1=by no means, 2=little, 3=enough, 4=much, 5=very much)
Churches	Categorical	Tourism impact on the restoration of churches and monasteries (1=by no means, 2=little, 3=enough, 4=much, 5=very much)
Builtanarchy	Categorical	Tourism impact on "anarchy" planning of the island (1=by no means, 2=little, 3=enough, 4=much, 5=very much)

## 2.2 Data and methods

A questionnaire survey was conducted to collect primary data for this study (July-August 2005). The questionnaire gathered information about major sociodemographic and economic characteristics of 350 residents in Andros. Moreover, the study measured the residents' perceptions of tourism, regarding the fields of economy, community, environment and culture.

All the participants were aged 18 and over and only one adult from each household could respond to the questionnaire.

The collected data were analyzed using descriptive statistics for calculating the means and standard deviations of continuous variables and the frequencies and percentages of discrete variables. The residents' preference to be developed tourism further on the island was studied using linear regression analysis.

The preference of the respondents for further tourism development used as a dependent variable in the regression analysis. The dependent variable was based on the residents' responses to a 5-point scale: by no means, little, enough, much, very much. The change in the opinion of the residents about the further tourism development was measured with the statement: "It would be wishful that tourism would be developed further the next 5 years". Variables used as independent variables in the regression analysis included age, length of residence on the island, benefits from tourism, tourism impact on noise, tourism impact on the

environmental protection, tourism impact on local facilities, tourism impact on the restoration of churches and monasteries and tourism impact on “anarchy” planning of the island (Table 1).

Table 2: Sociodemographic and economic characteristics of the respondents.

Characteristics		Respondents (n=350)
		%
Age (years)	<20	8
	21-30	20
	31-40	23
	41-50	22
	51-60	14
	61+	12
	Total	100
Education	Elementary school	3
	Middle school	10
	High school	38
	Undergraduate studies	7
	University	23
	Postgraduate studies	4
	Other	15
	Total	100
Type of occupation	Employee in the civil sector	9
	Employee in the private sector	33
	Entrepreneur	25
	Sailor	5
	Constructional worker	2
	Technician	1
	Housewife	10
	Other (university students, retired)	15
	Total	100
Monthly family income (€)	<1000	14
	1001-2000	36
	2001-3000	21
	3001-4000	12
	4001-5000	6
	5000+	10
	Total	100

### 3 Findings

#### 3.1 Sociodemographic and economic characteristics of the sample

According to the data analysis, the majority of the respondents (52%) were men. Most of the individuals were married (63%) and the average number of children per respondent was two. Eighty seven percent of the sample was permanent residents who had lived on the island an average of 25 years. The most important characteristics of the sample are presented in Table 2.

#### 3.2 Residents' perceptions of tourism impacts on Andros

Residents were asked to express their opinion about the impacts of tourism on a variety of socioeconomic issues. As it can be seen from Table 3, the mean responses indicated that according to the sample the current level of tourism has generated employment opportunities (mean=2.9), has increased family income (mean=3.0) and prices of goods and services (mean=3.5).

Table 3: Residents' perceptions of tourism impacts on socioeconomic issues.

Variables	Mean*	Standard Deviation
Employment opportunities	2.9	0.80
Family income raise	3.0	0.82
Increased prices of goods and services	3.5	1.05
Remain of local people	2.5	0.87
Improved status of woman	3.1	0.97
Limited safety	2.2	1.23
Crime	1.6	0.99
Drug addiction	2.5	1.13
Alcoholism	2.6	1.13
Road accidents	2.8	1.09

\*Scale: 1=by no means, 2=little, 3=enough, 4=much, 5=very much.

As to the rest of the variables, such as safety among people, crime, drug addiction, alcoholism and road accidents, their mean may well indicate that the residents perceived that the current level of tourism development had no great effect on them. Conversely to other studies [11, 14, 21], according to which tourism is responsible for phenomena such as crime, drug addiction etc., on Andros there are no such phenomena in a great extent. Andros is an island with a cultural background and is regarded as a place for family type vacation and for these reasons it attracts tourists who are searching for calm and relaxation.

Furthermore this study questioned the respondents about the tourism impacts on women and young residents, since it is stated that women and young adults are affected by tourism development. The results indicated that the respondents believed that tourism has improved enough the social and economic status of

women at home and in the community (mean=3.1). However, tourism development has not been able to make the young residents to remain to the island (mean=2.4). Andros, as peripheral and isolated region, faces multiple development constraints, which influence the residents' perceptions and lead them to move to another place far away from the island.

As to the impacts of tourism on environmental issues (Table 4), the respondents felt that tourism was responsible enough for waste (mean=3.8), traffic congestion (mean=3.7), water overconsumption (mean=3.8) and overcrowded outdoor places (mean=3.1). However, according to the sample, the limited spaces of parking were the most significant impact of tourism on the environment of the island (mean=4.2).

Table 4: Residents' perceptions of tourism impacts on environmental issues.

Variables	Mean*	Standard Deviation
Noise	2.9	1.23
Waste	3.8	1.04
Traffic congestion	3.7	1.16
Limited spaces of parking	4.2	1.02
Water overconsumption	3.8	1.08
Overcrowded outdoor places	3.1	1.23
Environmental protection	2.6	0.93

\*Scale: 1=by no means, 2=little, 3=enough, 4=much, 5=very much.

Finally, the residents were asked to express their opinion about the impacts of tourism on a variety of cultural issues (Table 5). According to the respondents, tourism has provided an incentive for the restoration of churches and monasteries (mean=3.3), the re-establishment of traditional paths, windmills and watermills (mean=3.5) and the organization of cultural events (mean=3.5). It is important to note that the respondents argued that tourism has not harmed local culture in a great extent (mean=2.6).

Table 5: Residents' perceptions of tourism impacts on cultural issues.

Variables	Mean*	Standard Deviation
Alteration of local culture	2.6	1.19
Restoration of churches and monasteries	3.3	0.88
Re-establishment of traditional paths, windmills and watermills	3.5	0.91
Protection of archaeological sites	3.1	1.10
Organization of local cultural events	3.5	0.99

\*Scale: 1=by no means, 2=little, 3=enough, 4=much, 5=very much.

### 3.3 Residents' characteristics and tourism development on Andros

According to the results, demographic and socioeconomic variables are significant determinants of the residents' attitudes toward tourism development.



Furthermore, specific costs and benefits of tourism on Andros explain the residents' attitudes toward tourism (Table 6).

More specifically, the residents' perceptions of further tourism development were influenced by age. The older residents did not prefer the further tourism development. Generally, the elderly are particularly circumspect and critical toward tourism.

Moreover, the length of residence showed to influence the residents' perceptions of tourism development. The longer people lived in the island, the more positive they were toward tourism development, since they have realized the benefits they can anticipate from tourism development, suggesting that tourism development is a tool for improving their living conditions.

In accordance to the results of other studies [4, 5, 8, 10, 13], dependency on tourism activities influenced the residents' perceptions of further tourism development. Those who had an involvement with the tourism related industry were more favored further tourism development to the next 5 years.

Table 6: Relationship between residents' characteristics and further tourism development.

Variables	Estimation
Constant	3.835*** (11.199)
Age	-0.026*** (-7,554)
Years	0.075*** (2.700)
Benefits	0.552*** (0.386)
Noise	-0.171*** (-3,748)
Enviprotect	0.143** (2.403)
Facilities	-0.116*** (-2.664)
Churches	0.166*** (2.664)
Builtanarchy	-0.108*** (-2.767)
Adjusted R-squared statistic	0.396
F-statistic	26.449

Note: t – statistics in brackets.

\*\*\*  $p < .0001$ , \*\*  $p < .005$ .

The residents' perceptions of tourism development were also influenced significantly by the impacts of tourism on environmental and cultural issues. The more the residents believed that tourism had negative affects on natural and



cultural environment, the more discouraged they were about further tourism development. In general, cultural and environmental benefits of tourism are related to the positive attitude of the host population toward tourism. On the other side, the negative impacts of tourism on sociocultural and environmental issues make the residents to be concerned for their quality of life.

## 4 Conclusions

The study examined the residents' perceptions of the consequences of tourism on a Greek island, Andros. The results of the study concluded that respondents had a mixed attitude toward tourism.

There was a high degree of agreement among the respondents with regards to the positive economic impacts of tourism on the area. Such impacts included employment, personal family income, role of woman in the community's social and economic life and cultural change. Furthermore the respondents believed that tourism had no great effects on limited safety, crime, alcoholism, drug addiction and road accidents. On the other hand, they felt that tourism was responsible for the environmental degradation on the island.

However, there is a strong relationship between respondents' socioeconomic characteristics and their perceptions of tourism development. According to the regression analysis, economic dependency on the tourist industry, age and years of living on the island are significant determinants of residents' attitude toward tourism development. The young residents, those who were permanent and had a business relation with tourism, had more positive attitude toward tourism than those who were older, temporary and were not involved in or associated with the tourist industry. Moreover, the positive or negative impacts of tourism can influence the residents' attitude toward tourism.

Although Andros is an island that has not be harmed by tourism in a great extent, it should be placed greater emphasis on alternative tourism by correctly using the natural and cultural resources of the island.

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