



## Socio-demographic effects on Anzali wetland tourism development



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### HIGHLIGHTS

- Residents' attitudes of Anzali wetland toward tourism development are examined.
- The Partial least squares (PLS) is used to test both the model and the hypothesis.
- A positive link between the tourism impacts and residents' attitudes was found.

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### ABSTRACT

This study explores the attitudes of residents of Iran's Anzali wetland toward tourism development. The investigators examine how these attitudes are mitigated by three different socio-demographic variables; family size, length of residency, and distance from tourist zone. This study assumes that the development process is affected by residents and that their attitudes are predictive of the success or failure of a tourism development. Partial Least Squares (PLS) analysis is used to test both the research model and the hypotheses. The results reveal a positive and direct relationship between the perceived impact of development and residents' attitudes toward tourism development in the Anzali wetland.

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### 1. Introduction

Tourism is regarded as a gateway for the economic development of local communities, especially in the context of developing economies (Ko & Stewart, 2002). Consequently, tourism development is often used by communities to improve the quality of life of local residents (Jurovski & Gursoy, 2004). Such improvements in the quality of life of residents were thought to be particularly pronounced in developing countries where the infrastructure established in support of tourism development would invariably contribute toward the economic development of the local community (Cooke, 1982). Such infrastructure, supporting both tourism and local economic development includes accommodation, transportation, hospitality, and leisure services; these services growing to meet the demands of a thriving tourism industry (Marzuki, 2011).

According to Honey, Vargas, and Durham (2010), the tourism industry and its management differs across countries. Although the importance of tourism development and its impact on local communities is well recognised (Russo & Borg, 2002), little attention has been given to understanding the significance of tourism to local residents and communities in the rural and wetland areas of developing countries. Developing countries, such as Iran, may be predisposed toward certain adverse socio-cultural, economic, and environmental side effects associated with the development of tourism.

Iran constitutes an ideal setting for this case study due to its rich natural resources which lend themselves to the development of a vibrant tourism industry. Bordered to the north by the Caspian Sea and to the south by both the Persian Gulf and the Gulf of Oman, Iran possesses a scenic 2800 km coastline. Accessible throughout the year, the Caspian Sea is a highly sought after tourism destination (Panow, 2007) due to its natural beauty. The snow capped Alborz and drier Zagros mountain ranges present Iran with a range of additional tourism opportunities (Pak & Farajzadeh, 2007). Iran's temperate climate, with its four very distinct seasons (Zamani-

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Farahani, 2010), present an additional asset to the country's tourism destination competitiveness. Iran's rich historical and cultural heritage is also a significant feature of the country. With various cultures stretching across Iran's length and breadth, Iran presents the tourist with an array of destination options (Panow, 2007).

However, while Iran's tourism capacity develops, some attention must be afforded to maintaining the country's natural assets; such as wetlands, lagoons, deserts, lakes and other natural resources. International experiences have demonstrated that wetland conservation programmes benefit from well thought-out participatory planning and management approaches which take into consideration the economic, social, and environmental concerns of stakeholders (Allendorf, Smith, & Anderson, 2007; DSE, 2007; Whitten, Bennett, Moss, Handley, & Phillips, 2002). However, according to Rezaei (2003), such participatory approaches are virtually non-existent in Iran and have certainly never been implemented in Iran's wetland areas.

As key stakeholders in any tourism development, the needs and expectations of local residents must be taken into consideration throughout a development's strategic planning and implementation process (Allendorf et al., 2007). Understanding the attitudes of local residents toward the development is fundamental to identifying these needs and expectations. Consequently, by observing the processes and outcomes of the Anzali wetland's resource allocation management and conservation project, insight can be gained into the relationship between local residents and the tourism development.

The Anzali wetland is situated in the northern Iranian province of Gilan. Protected by the Ramsar Convention due to its international significance, the Anzali wetland appeals to both local and international tourists alike (Dadras & Kardovani, 2010). One of the largest freshwater coastal lagoons in the world, the Anzali wetland is separated from the high salinity Caspian Sea by the harbour city of Bandar-e Anzali (Kardovani, 1998). Therefore, the Anzali wetland is precariously located and understanding the attitudes of local residents toward tourism development is essential if a successful tourism industry is to be established in this area, while simultaneously maintaining the local ecology.

It is hoped that the communities of the wetland area will benefit from the prospect of tourism development. Consequently, promoting the wetland is essential in order to attract domestic and international visitors. In addition to revitalizing the economy of the region, tourism provides a context for conservation efforts to maintain the region's natural resources (Dadras & Kardovani, 2010). The wetland area receives about 40,000 tourists annually, contributing around 3 billion Rials (approx. \$112,355 USD) per year to the local economy. Around 184,000 domestic tourists visit Gilan province each year to visit the wetland area, while around 3100 international tourists do likewise. These tourists come to visit the major tourist attractions at Bandar Anzali, Rasht, Masuleh and Fuman (JICA, 2005).

In this study, we quantify local residents' attitudes according to several demographic variables; including family size, distance from tourist zone and length of residency. Furthermore, we investigate the impact of tourism development in terms of its cultural, economic and environmental effects. In the proceeding section, we outline the context for this research and describe the conceptual model with regard to the existing literature in terms of the impact of tourism and relational indicators such as family size, length of residency, and distance from tourist zones. We will subsequently formulate our conceptual framework describing the relationship between these variables. We will then elucidate upon our research methods and discuss our determination of goodness of fit, construct validity, convergent validity, discriminant validity, and the reliability of the constructs. In the results section, we will

analyse our findings and test our hypotheses. We then conclude with a discussion of the implications of our findings and suggestions for future research ( see Fig. 1).

## 2. Research context and research model

This study represents part of a much larger research effort to investigate the relationship between the impact of tourism and the attitudes of residents in Iran's Anzali wetland.

### 2.1. Socio-demographic characteristics and residents' attitudes

Eagly and Chaiken (1993) describe an attitude as 'a psychological tendency that is expressed by evaluating a particular entity with some degrees of favour or disfavour ... [where] ... evaluating refers to all classes of evaluative responding, whether overt or covert, cognitive, affective or behavioural' (p.1). Many tourism researchers believe that these attitudes and perceptions can have a profound influence on the success of tourism development programmes (Ap, 1992; Lawson, Williams, Young, & Cossens, 1998). Therefore, successful destination development demands that planners understand residents' attitudes toward tourism development and evaluate the impact of such developments post implementation.

Attitudes are comprised of three basic elements; namely beliefs (cognitive elements), feelings (affective elements), and behaviours (action-tendency elements) (Shortt, 1994). Yen and Kerstetter (2009) correlated the difference between these diverse components of attitudes with the existing tourism industry and future tourism. It was their observations which motivated this study, to examine the impact of tourism by measuring local residents' attitudes toward tourism development. Residents' attitudes toward tourism are based on the perceived impact of development on population structures, the cultural expression of host communities, social structures and patterns of consumption, employment and occupational structures, crime, prostitution and gambling (Ap & Crompton, 1998; Haralambopoulos & Pizam, 1996). These perceived effects can be further classified into intrinsic and extrinsic effects, based on Social Exchange Theory (SET) (Ap, 1992), that influence residents' attitudes (Haralambopoulos & Pizam, 1996; Pizam, 1978; Snaith & Haley, 1994; Weaver & Lawton, 2001). The extrinsic dimension refers to location characteristics, which include nature, tourism development stage, as well as the reflective factors that include tourism activity levels and tourist types. The intrinsic dimension refers to characteristics of the host community members. Tourism affects each member of the host community differently as a function of their unique characteristics.

Personal characteristics, as well as the perceived positive and negative impact of tourism, can influence residents' attitudes toward tourism development (Allen, Hafer, Long, & Perdue, 1993). Brida, Osti, and Barquet (2010) argued that analyses of socio-demographic variables have long been a mainstay of tourism-related research. This earlier research indicates the significance of these demographic variables in influencing residents' attitudes toward tourism, as well as the socio-cultural, economic, and environmental impact of tourism (Andereck, Valentine, Knopf, & Vogt, 2005; Cui & Ryan, 2011; Nyaupane & Thapa, 2006; Teye, Sirakaya, & Sönmez, 2002; Tosun, 2002). However, few studies have explored the relationship between family size and attitudes toward the effects of tourism (Brida, Osti, & Faccioli, 2011; Kuvan & Akan, 2005; Teye et al., 2002; Tosun, 2002; Wang & Pfister, 2008).

Wang and Pfister (2008) observed that residents' attitudes are statistically interrelated with the number of family members. In other words, family size influences attitudes toward tourism development. Additionally, family members' attitudes are a

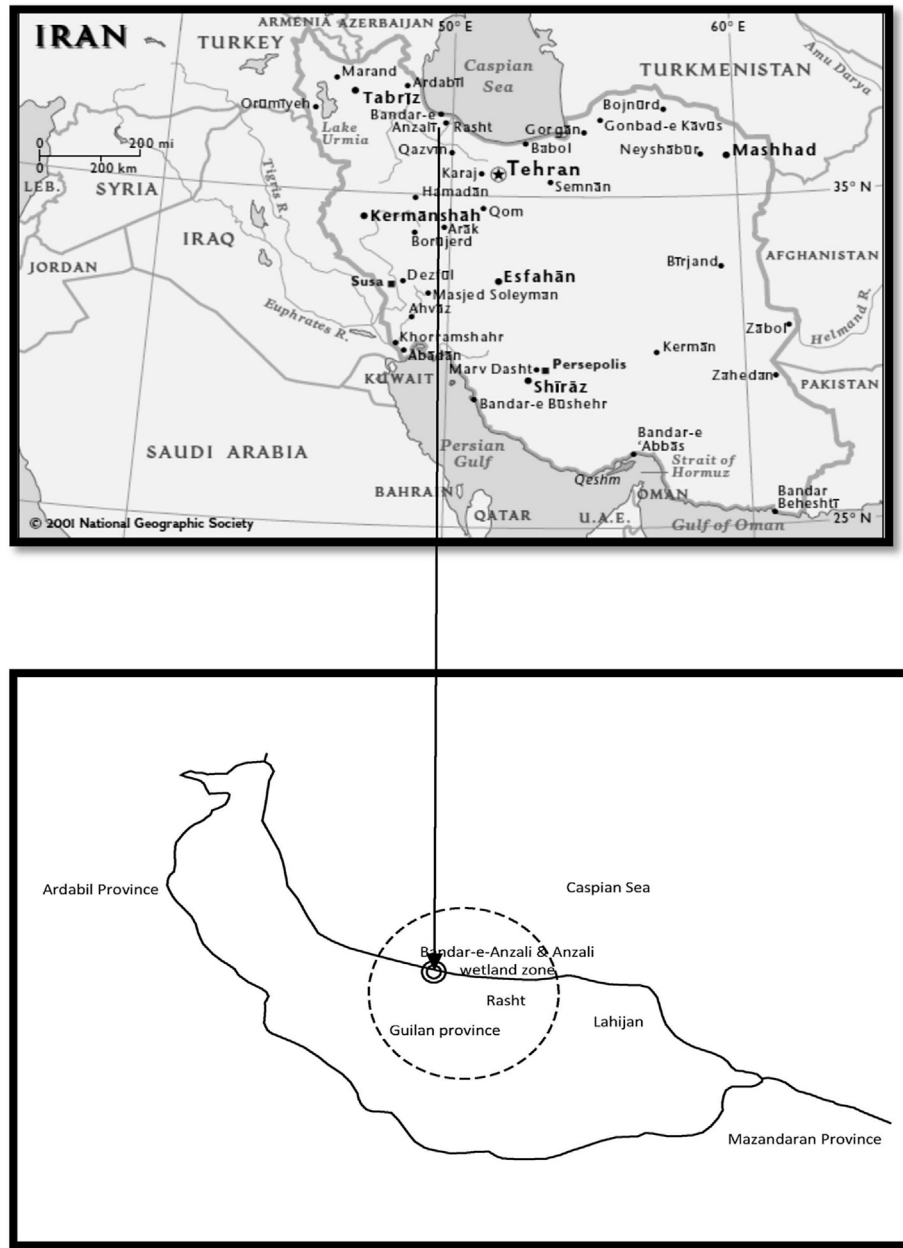


Fig. 1. Location map of Anzali wetland.

function of their age, income, role in the family, community attachment and the benefits they derive from the tourism industry.

Jurowski and Gursoy (2004) also observed that residents who live nearest the tourist zone tend to be the most supportive of tourism development. Counter-intuitively, it is also those residents who live nearest the tourist zone that perceive the greatest negative impact of tourism. Residents living furthest from the tourist zone tend to regard tourism positively, while those who live in-between had similar attitudes to those who lived further away (Jurowski & Gursoy, 2004). Conversely, Haley, Snaith, and Miller (2005) reported that residents who live nearest the tourism zone perceive the tourism industry less positively and have the least favourable attitudes toward development. Consequently, the validity of the relationship between residents' attitudes and residential-tourism zone distance is questioned by a number of researchers (Faulkner & Tideswell, 1997; Haralambopoulos & Pizam, 1996; Harrill & Potts, 2003; Lankford, 1994; Sharma, Dyer,

Carter, & Gursoy, 2008). According to a number of researchers, length of residency in a geographic location may be a better predictor of residents' attitudes toward the effects of tourism (Gu & Ryan, 2008; Lankford, 1994; Liu, Sheldon, & Var, 1987; Ross, 1992; Walpole & Goodwin, 2001).

In this study, we investigated the impact of tourism on local residents' attitudes toward tourism development in the Anzali wetland area and how these attitudes were influenced by various socio-demographic characteristics. SET is concerned with: Understanding the exchange of resources between individual and groups in an interaction of situation "anywhere" actors supply one another with valued resources' (Ap, 1992, p. 668). SET assumes that the support for tourism development signifies the resident's 'willingness to enter into an exchange' (Gursoy & Rutherford, 2004, p. 82). SET has been shown to be a reliable theoretical framework for analysing residents' perceptions toward tourism (Ap, 1992; Perdue, Long, & Allen, 1990).

The Index of Tourism Impacts (ITI), developed by Ap and Crompton (1998), is based on the theoretical framework of SET (Ap, 1992). The ITI is a 35-item scale which explores respondents' attitudes in relation to the effects of tourism; including crowding and congestion, services, taxes and community attitudes. Consequently, the ITI provides a pragmatic tool for the measurement of the impact of tourism and associated attitudes of individual community members.

## 2.2. Socio-demographic characteristics and tourism impact

Several studies have examined the role of socio-demographic characteristics in regard to residents' attitudes toward the positive and negative impact of tourism development (Eraqi, 2007; Harrill, 2004; Jurowski & Gursoy, 2004; Nunkoo & Ramkissoon, 2010). Similarly, a number of studies have applied various tourism theories to analyse the effects socio-demographic variables on tourism (Amuquandoh & Dei, 2007; Andereck et al., 2005; Andriotis & Vaughan, 2003; Haley et al., 2005; Harrill, 2004; Jurowski & Gursoy, 2004; Nunkoo & Ramkissoon, 2010; Wang, Pfister, & Morais, 2006). These studies are described below.

### 2.2.1. Distance from tourist zone

According to SET, residents living in close proximity to the tourist zones should exhibit the most favourable attitudes toward tourism development and its impact (Faulkner & Tideswell, 1997; Jurowski & Gursoy, 2004; Williams & Lawson, 2001). Perdue et al. (1990) employed SET to study the perceptions of rural residents toward the impact of tourism and residents' support for tourism development. Understanding the perceptions of rural residents in relation to the impact of tourism is crucial for determining support for tourism development.

### 2.2.2. Length of residence

Few studies have used duration models in the context of tourism (Barros & Machado, 2010). Allen et al. (1993) examined the correlation between length of residency and attitudes toward tourism development, with seven other dimensions; access to public services, economic opportunities, environmental change, medical services, formal education, community involvement, and recreational services. They demonstrated that length of residency is of little consequence when it comes to residences' attitudes toward tourism development. However, several studies have contradicted these findings, indicating that residents' attitudes toward the environmental impact of tourism are affected by length of residency (Haralambopoulos & Pizam, 1996; Liu & Var, 1986; Madrigal, 1995; Pizam, 1978; Ross, 1992; Um & Crompton, 1987). Few studies have investigated the relationship between length of residency and the impact of tourism development in Iran.

### 2.2.3. Role of family size

There are limited studies investigating the relationship between family size and the impact of tourism development. Thrane (2008) used the general human model of earnings differentiation, specially gender and time of socio-demographic effects, to investigate the role of family size or the number of family members in the family unit as a control variable. He observed that males working in the tourism industry were paid disproportionately more than females performing the exact same job and that the length of one's service had a more pronounced effect on wages for males than it did for females. Similarly, Koc (2004) discussed the role of the wife, as well as the roles of other family members, in selecting and purchasing a family holiday package.

Based on the above-mentioned concepts, the proposed conceptual framework incorporates variables related to residents'

attitudes toward the impact of tourism and to their beliefs and socio-demographic characteristics. We examined the effects of socio-demographic characteristics as exogenous variables, and the ITI and residents' attitudes as endogenous variables. This examination involved three steps:

*Step 1:* Six socio-demographic variables; namely age, gender, income, education, occupation and marital status were incorporated into the conceptual framework based on previous studies reporting that socio-demographic variables are not significant to the impact of tourism or supportiveness (Cui & Ryan, 2011; Nunkoo & Ramkissoon, 2010; Teye et al., 2002; Tosun, 2002). In this study, the socio-demographic characteristics are integrated as independent variables (exogenous variables).

*Step 2:* The relationship between the exogenous demographic variables (i.e. family size, distance and length of residence) and the endogenous ITI variables (i.e. socio-cultural impact, economic impact and environmental impact) was examined. Previous studies had demonstrated that these independent variables can affect the residents' attitudes and perceptions. However, to our knowledge, no previous study has integrated these variables into a coherent framework.

*Step 3:* Examination of the impact of tourism on attitudes (i.e. socio-cultural, economic and environmental) as latent variables in support of tourism development. Variations in these attitudes were examined based on family size, distance from tourist zone, and length of residency. Furthermore, the positive and negative attitude toward the three dimensions of tourism (i.e. socio-cultural, economic and environmental) was assessed.

This study contributes to the ongoing development of the ITI and our knowledge concerning what constitutes 'best practice' with respect to tourism development, especially in regard to the Anzali wetland area. With this study, we aim to fill a void in the tourism literature and to provide a guide for the development of the Anzali wetland. The model, developed with the aid of *smart PLS*, provides a better explanation for residents' attitudes toward tourism and for identifying factors related to the impact of tourism and tourism development supportiveness.

## 3. Research hypothesis

We investigate the contribution of socio-demographic factors on local residents' attitudes toward tourism impacts and tourism development in the Anzali wetland of Iran. To this end, we have proposed twelve hypotheses to guide the assessment of the relationships among variables in the model. The ensuing research hypotheses will be addressed throughout this study.

H1: Family size will be positively correlated with attitudes toward the socio-cultural impact of tourism development in the Anzali wetland area.

H2: Distance from the tourist zone will be positively correlated with attitudes toward the socio-cultural impact of tourism development in the Anzali wetland area.

H3: Length of residency will be negatively correlated with attitudes toward the socio-cultural impact of tourism development in the Anzali wetland area.

H4: Family size will be positively correlated with attitudes toward the economic impact of tourism development in the Anzali wetland area.

H5: Distance from tourist zone will be positively correlated with attitudes toward the economic impact of tourism development in the Anzali wetland area.



H6: Length of residency will be positively correlated with attitudes toward the economic impact of tourism development in the Anzali wetland area.

H7: Family size will be positively correlated with attitudes toward the environmental impact of tourism development in the Anzali wetland area.

H8: Distance from tourist zone will be positively correlated with attitudes toward the environmental impact of tourism development in the Anzali wetland area.

H9: Length of residency will be positively correlated with attitudes toward the environmental impact of tourism development in the Anzali wetland area.

H10: There is a relationship between the socio-cultural impact of tourism and residents' attitudes toward the impact of tourism development.

H11: There is a relationship between the economic impact of tourism and residents' attitudes toward the impact of tourism development.

H12: There is a relationship between the environmental impact of tourism and residents' attitudes toward the impact of tourism development.

The literature supports the research framework, elaborating on the relationships between the three major variables (i.e. length of residency, distance and family size) and the impacts of tourism (i.e. socio-cultural, economic, and environmental) in the Anzali wetland area (Fig. 2).

**4. Research method**

The aim of this study is to examine the attitudes of local residents in the Anzali wetland area in regard to local tourism development and its impact. The sample includes residents from towns and cities surrounding the Anzali wetland and working in the tourism industry. According to Hair, Black, Babin, and Anderson (2010), the minimum number of respondents needed, or the sample size, can be determined based on a 5:1 ratio; five samples per independent variable to be tested. A quantitative research design

was chosen in order to substantiate the results of the survey tool used in this study. Please refer to the SPSS output in Appendix A.

**4.1. Data collection**

Data collection was conducted over three consecutive days in March 2012. Respondents were administered the questionnaire by the researchers who availed themselves to clarify any questions the respondents might have had. Because we wanted to explore the relationship between residents' attitudes toward tourism development and their distance from the tourist zone, multistage cluster systematic random sampling was used. This method of sampling allows for the sampling of random clusters of populations across geographic boundaries. The municipality of Anzali is divided into three major sectors which are further apportioned into five divisions, each made up of a number of different districts. From the overall 54 districts, 25 districts were selected using random simple sampling methods (Table 1). A total of 700 households participated in the survey which yielded 653 completed questionnaires (81.6% return rate). Next, we describe the 'goodness of fit' measure which is crucial for ensuring the reliability and validity of the research framework.

**4.2. Measurement and assessment of goodness of measures**

The preamble to the questionnaire provided a brief introduction to the researchers, outlined the objectives of the study, and described the reason for the study. This served a twin purpose, conforming to local requirements for research and establishing rapport between the researcher and potential respondents. The questionnaires were in both Persian and English, and both language sets were checked by several experts in the fields of tourism studies and linguistic translation for consistency and accuracy to reflect the intent of the questions. The questions themselves were designed based on similar tools used by Andereck and Vogt (2000), Ap and Crompton (1998), Nunkoo and Ramkissoon (2010), Osti, Coad, Fisher, Bomhard, and Hutton (2011), and Zhang and Lei (2012). The questionnaire was designed as a self-report tool consisting of

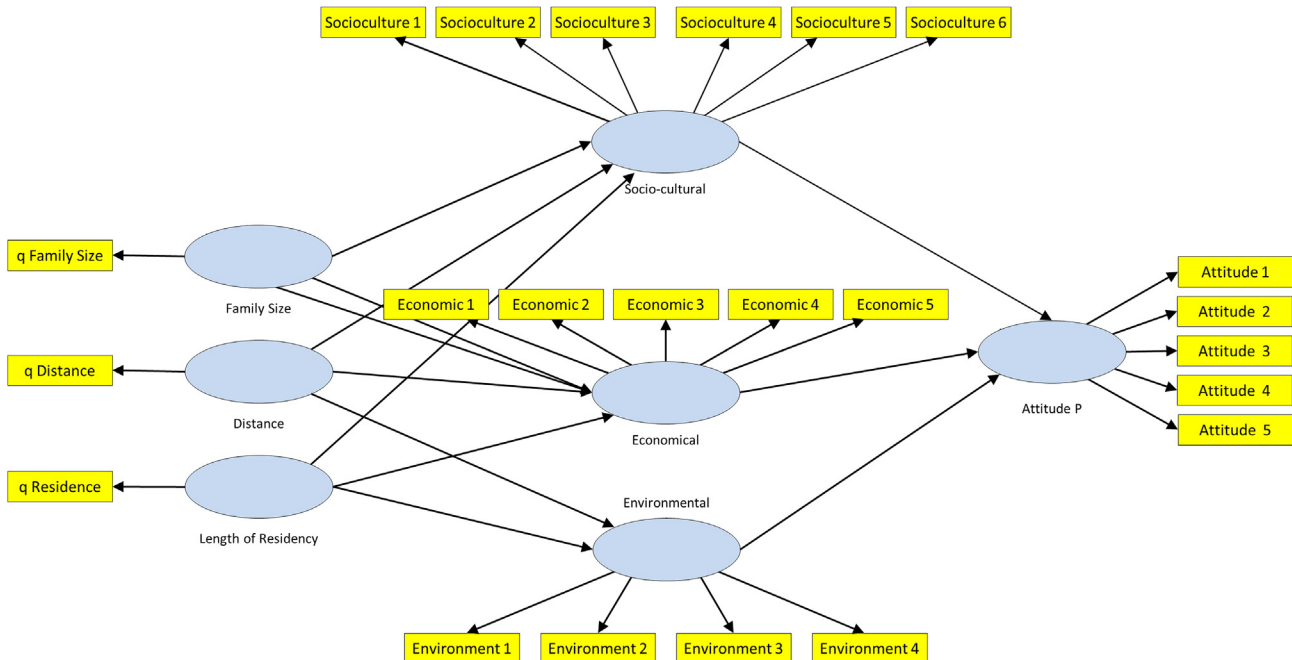


Fig. 2. Research Model.

**Table 1**  
Number of questionnaire distribution in separate division.

Division	Block	Cluster random sampling	Sample size	Questionnaires (distributed)
Ghaziyan	7	(7*100)/37 = 19%	85	133
Central zone of Anzali	20	(20*100)/37 = 54%	240	378
Small islands of Anzali	10	(10*100)/37 = 27%	120	189
Total	37	100%	n = 445	n = 700

five sets of questions with Likert scales to simplify the responses. Please refer to the sample questionnaire in [Appendix B](#).

#### 4.3. Convergent validity

Convergent validity describes the degree to which two constructs are related. According to [Hair et al. \(2010\)](#), convergent validity is a function of composite reliability, average variance extracted and the factor loadings. [Table 1](#) describes the outer loadings of the reflective constructs or the construct reliability of the variables. In our model, the composite reliability index for all constructs exceeded the minimum acceptable value of 0.7, whereby attitudes had the highest value of 0.912 and economics had the lowest value of 0.848. Convergent validity can also be determined via factor loading. [Table 1](#) shows that the factor loading for most of the variables was 0.7 or higher, where the measures ranged from 0.704 to 0.911. This result indicates that all of the constructs identified in this study were valid.

#### 4.4. Discriminant validity

Discriminant validity is the extent to which a construct is truly distinct from other constructs in this study. Therefore, through the application of discriminant validity, a construct that is unique and has the capacity to capture a phenomenon will be distinguished from other constructs in the model ([Hair, Hult, Ringle, & Sarstedt, 2013](#)). According to [Chin \(1998\)](#), discriminant validity is obtained by calculating the correlation between the latent variables (LVs), component scores, and other indicators. If an indicator loads higher with other LVs than it does with the one it is intended to measure, then two or more constructs are inclined toward measuring the same thing ([Chin, 1998](#)). [Table 2](#) indicates the discriminant validity coefficient of the dependent variable and independent variables. The discriminant validity for the two independent variables (i.e. socio-cultural and attitude) were not strongly correlated.

#### 4.5. Reliability analysis

Cronbach's alpha coefficient was used to test the reliability of the questionnaire by measuring the internal consistency of the indicators. [Table 3](#) summarizes the alpha values which were above 0.6, indicative of reliability ([Nunnally & Bernstein, 1978](#)). [Hulland \(1999\)](#) indicated that the ideal composite reliability was >0.7. A similar value range was indicated by Cronbach's alpha for internal consistency reliability. The composite reliability values in this study ranged from 0.912 to 0.900. Please refer to the Smart PLS output in [Appendix A](#).

#### 4.6. Hypothesis testing

To provide a better understanding of residents' attitudes toward tourism development, this study developed and tested a conceptual model that incorporated the following key factors; socio-demographic characteristics (i.e. family size, distance of tourist zone, and length of residency), socio-cultural impact, economic impact, environmental impact, and attitudes toward the current

wetland area tourism development. Partial Least Squares (PLS) analysis was used to explore the research questions and the twelve previously mentioned hypotheses.

**H1.** Family size will be positively correlated with attitudes toward the socio-cultural impact of tourism development in the Anzali wetland area.

Hypothesis 1 predicted that family size would have a positive effect on the attitude of residents toward the socio-cultural impact of tourism development. This hypothesis was supported by a coefficient of  $\beta = 0.211$  with a P-value of <0.05. This confirms the results of previous studies ([Brida et al., 2010](#); [Haralambopoulos & Pizam, 1996](#); [Kuvan & Akan, 2005](#); [Teye et al., 2002](#); [Tosun, 2002](#)).

**H2.** Distance from the tourist zone will be positively correlated with attitudes toward the socio-cultural impact of tourism development in the Anzali wetland area.

Hypothesis 2 predicted that the greater the distance from a tourist zone, the more negative a residents' attitudes toward tourism will be, and this will in turn have a negative effect on their attitudes toward the socio-cultural impact of tourism. This hypothesis was supported by a coefficient of  $\beta = -0.098$  with a P-value of <0.05. This result is at odds with the findings of [Jurowski and Gursoy \(2004\)](#). [Haley et al. \(2005\)](#) indicated that residents living further from the tourist zones have generally less favourable attitudes and less positive perceptions of the socio-economic impact of tourism development. Residents living closer to the tourism site enjoy more benefits from tourism activities; thereby contributing to the formation of positive attitudes ([Haley et al., 2005](#)). Conversely, those who live further from the site are largely unaffected by tourist activities and tourism does not play a significant role in their household income.

**H3.** Length of residency will be negatively correlated with attitudes toward the socio-cultural impact of tourism development in the Anzali wetland area.

Hypothesis 3 predicted that length of residency would have a negative effect on Residents' attitudes toward the socio-cultural impact of tourism development. This hypothesis was supported by a coefficient of  $\beta = -0.062$  with a P-value of >0.05. These results support the findings of [Tosun \(2002\)](#) with regard to the impact of length of residency in Turkish families and their perception of the impact of tourism. Furthermore, [Haralambopoulos and Pizam \(1996\)](#) indicated that the relationship between length of residency and attitudes toward the socio-cultural impact of tourism development is a function of the negative impact of tourism; including rising prices, vandalism, drug addiction, brawls, sexual harassment, and other undesirable effects. Paradoxically, [Allen et al. \(1993\)](#) found that length of residency does not affect residents' attitudes toward tourism development. The coefficient of determination for H1, H2, and H3 concerning the final model, or how well these hypotheses relate to socio-demographic characteristics (i.e. family size, distance to tourist zone, and length of residency) and the socio-cultural impact of tourism development was  $R^2 = 0.055$ . This implies that there is a relationship between family size and the socio-cultural impact of tourism. Furthermore, it also shows that length of residency and distance from tourist zones are not related with support for the socio-cultural impact of tourism. In

**Table 2**  
Outer loadings of reflective constructs.

Construct	Indicator	Loading
Socio-cultural	Tourism causes more awareness/recognition of the local culture and heritage	0.895
	Tourism helps to develop the life and vitality of the community.	0.800
	Tourism has created too large concentration of visitors in the peak season.	0.786
	Tourism increase social life opportunities for local residents.	0.738
	Tourism causes more projects to restore and protect local historical structures.	0.709
Economic	Tourism improves the quality of life for local residents.	0.704
	Tourism increases the personal income of local residents.	0.817
	Tourism causes more investment and development in the area.	0.793
	Tourism brings a variety of shopping facilities in Anzali Wetland.	0.784
Environmental	Tourism generates amount of income going to local businesses.	0.746
	Tourism can improve the appearance of Anzali Wetland.	0.911
	Tourism development is likely to provide an incentive for the conservation of natural resources.	0.897
	Tourism increase the quality of natural environment	0.888
Present attitude	Wildlife (plants, birds, and animals) in the local area.	0.836
	Environmental journalism can create opportunities in Anzali Wetland for tourism development.	0.862
	If carrying capacities can be determined, then economic, social, and environmental benefits can be optimized and negative consequences minimized in the area.	0.842
Future attitude	Residents have positive attitudes toward tourists.	0.814
	Life experience of local residents can help them to conserve Anzali Wetland.	0.806
	Tourism is a major contributing factor to development of Anzali Wetland.	0.777
	New environmentally oriented programmes aimed at natural resource preservation should be developed.	0.864
	New cultural attractions should be offered on the territory, such as museums, displays and cultural workshops.	0.839
	New service providers and commercial activities (restaurants, shops) should be presented in the territory.	0.816
	Event/outdoor programmes should be supported (e.g., recreation facilities, exhibition, performance, sport event, business/public event, etc.).	0.814
Clearing and dredging of Anzali wetland in the future can increase migrant birds in the Anzali wetland.	0.780	
The development policies of Anzali Wetland should focus on the implementation and expansion of ecotourism.	0.767	
Changing petrol boats to electric boats can decrease the pollution of the wetland.	0.765	

**Table 3**  
Squared correlations of among constructs (Discriminant Validity).

Constructs	AVE	Composite reliability	Present attitude	Economic	Environmental	Sociocultural
Attitude present	<b>0.674</b>	0.912	<b>0.674</b>			
Economic	0.610	0.887	0.421	<b>0.610</b>		
Environmental	0.781	0.934	0.658	0.299	<b>0.781</b>	
Socio-cultural	0.600	0.9	0.725	0.293	0.643	<b>0.600</b>

Note: Average variances extracted (AVEs) are shown [as bold] on diagonal.

summary, the residents of the Anzali wetland area felt that tourism would improve the quality of their lives and allow for their culture to be recognised. This finding confirms those of previous studies (Ap & Crompton, 1998; Brida et al., 2010; Perdue et al., 1990; Pizam & Milman, 1984).

**H4.** Family size will be positively correlated with attitudes toward the economic impact of tourism development in the Anzali wetland area.

Hypothesis 4 predicted that the size of a resident's family would have a positive effect on their attitude toward the economic impact of tourism development. This hypothesis was supported with a coefficient of  $\beta = 0.140$  and a P-value of  $<0.05$ . This finding confirms those of previous studies (Chen, Wang, Fan, Zhang, & Jia, 2005; Haralambopoulos & Pizam, 1996; Kuvan & Akan, 2005; Teye et al., 2002; Tosun, 2002; Wang & Pfister, 2008; Williams & Lawson, 2001).

**H5.** Distance from tourist zone will be positively correlated with attitudes toward the economic impact of tourism development in the Anzali wetland area.

Hypothesis 5 predicted that the distance from the tourist zone would have a positive effect on the residents' attitude toward the economic impact of tourism development. This hypothesis was supported by a coefficient of  $\beta = 0.323$  with a P-value of  $<0.05$ . Residents living nearest the tourist zones indicated that they derive more benefits and were more involved in economic activities associated with the development. This finding confirms the results of previous studies (Faulkner & Tideswell, 1997).

**H6.** Length of residency will be positively correlated with attitudes toward the economic impact of tourism development in the Anzali wetland area.

Hypothesis 6 predicted that the length of residency, or how long a resident has been living in the target area, would have a positive effect on their attitude toward the economic impact of tourism development. This hypothesis was confirmed with a coefficient of  $\beta = -0.308$  with a P-value of  $<0.05$ . This finding confirms those of Haralambopoulos and Pizam (1996), and Liu and Var (1986). However, a similar study by Harrill and Potts (2003) reported no such relationship between the length of residency and attitudes toward the economic benefits of tourism. The results of this study are further supported by Faulkner and Tideswell (1997) who reported that resident characteristics are fundamental to the relationship between residents and the impact of tourism development and that these characteristics "affect variations in the impacts of tourism within the community" (p. 6). In other words, residents' perceptions concerning the economic impact of tourism development mediate their economic interaction with the development. Consequently, the residents themselves determine the actual economic impact of tourism. Based on hypothesis testing of H4, H5, and H6, where  $R^2 = 0.088$ , the relationship between the socio-demographic characteristics (i.e. family size, distance to tourist zones, and length of residency) and the economic impact of tourism development was confirmed per the model.

**H7.** Family size will be positively correlated with attitudes toward the environmental impact of tourism development in the Anzali wetland area.

Hypothesis 7 predicted that family size would have a positive effect on residents' attitudes toward the environmental impact of tourism development (coefficient of  $\beta = 0.144$  with a P-value  $< 0.05$ ). These findings would indicate that family size positively affects attitudes toward the environmental impact of tourism development. No previous study had tested for the influence of family size on attitudes toward the environment.

**H8.** Distance from tourist zone will be positively correlated with attitudes toward the environmental impact of tourism development in the Anzali wetland area.

Hypothesis 8 predicted that the distance of a resident's place of dwelling would have a negative effect on their attitudes toward the environmental impact of tourism development. Our analysis revealed a coefficient of  $\beta = -0.029$  with a P-value of  $>0.05$  for this hypothesis. This was unexpected because [Jurowski and Gursoy \(2004\)](#) reported that residents who live in close proximity to a tourism zone believe that the density of the tourist population positively influences the impact of tourism development. However, [Faulkner and Tideswell \(1997\)](#) observed that residents who live near to a tourist zone have less positive perceptions and less favourable attitudes toward tourism. Consequently, H8 was not supported.

**H9.** Length of residency will be positively correlated with attitudes toward the environmental impact of tourism development in the Anzali wetland area.

Hypothesis 9 predicted that length of residency would exert a negative effect on Residents' attitudes toward the environment (coefficient of  $\beta = -0.082$  with a P-value  $> 0.05$ ). This result was not consistent with the hypothesis. Moreover, we found that length of residency has a significant impact residents' attitudes toward the wetland environment, thus the hypothesis was rejected. Based on hypothesis testing for H7, H8, and H9, where  $R^2 = 0.025$ , the relationship between the socio-demographic characteristics (i.e. family size; distance to tourist zone; and length of residency) and the environmental impact was confirmed per the model. Hypothesis testing of H8 and H9 indicated that the length of residency and distance from tourist zone were negatively related to attitudes toward the environmental impact of tourism development, while testing for H7 revealed that family size was positively related.

**H10.** There is a relationship between the socio-cultural impact of tourism and residents' attitudes toward the impact of tourism development.

Hypothesis 10 predicted that the perceived socio-cultural impact of tourism development would have a positive effect on overall attitudes toward tourism development (coefficient of  $\beta = 0.50$  with a P-value  $< 0.05$ ). This result was consistent with our hypothesis and confirms the findings of previous studies ([Gursoy & Rutherford, 2004](#); [Haley et al., 2005](#); [Jurowski & Gursoy, 2004](#); [Nunkoo & Ramkissoon, 2010](#); [Sirakaya, Teye, & Sönmez, 2002](#)). Conversely, [Zamani-Farahani and Musa \(2012\)](#) found a negative relationship between Residents' perceptions of the socio-cultural impact of tourism and their overall attitudes toward tourism development. The Anzali wetland area has considerable tourism potential and given the large number of visitors to the wetlands, especially during peak season, priority must be given to the restoration of local historical/social/cultural sites and to the enhancement of community infrastructure. The restoration of the wetland's historical/social/cultural sites is an important component of the Anzali wetland tourism development. This is further supported by [Ap and Crompton \(1998\)](#) and [Perdue et al. \(1990\)](#).

**H11.** There is a relationship between the economic impact of tourism and residents' attitudes toward the impact of tourism

development.

Hypothesis 11 predicted that the perceived economic impact of tourism has a positive effect on overall attitudes toward tourism development (coefficient of  $\beta = 0.220$  with a P value  $< 0.05$ ). Previous studies have reported that the economic impact of tourism has a direct and positive effect on residents' support for tourism development ([Ap, 1992](#); [Jurowski, Uysal, & Williams, 1997](#); [Pizam & Milman, 1984](#)). In explaining this phenomenon, tourism development has been demonstrated to reduce unemployment, increase government revenues, as well as increasing the economic capacity of individuals and communities ([Gursoy & Jurowski, 2002](#); [Gursoy & Rutherford, 2004](#); [Walpole & Goodwin, 2001](#)). Consequently, residents are inclined to support tourism development as that they might realize the economic benefits of tourism ([Perdue et al., 1990](#)). Such benefits might be accessed through participation in the local tourism industry or through the creation of small businesses by local residents to cater to the needs of tourists (e.g. the development of mobile restaurants that can travel to and penetrate the major tourism hubs).

**H12.** There is a relationship between the environmental impact of tourism and residents' overall attitudes toward tourism development.

Hypothesis 12 predicted that the perceived environmental impact of tourism has a positive effect on residents' overall attitudes toward tourism development (coefficient of  $\beta = 0.289$  with a P-value  $< 0.05$ ). This result was supported by previous studies ([Assante, Wen, & Lottig, 2010](#); [Nyaupane & Thapa, 2006](#); [Schofield, 2011](#); [Walpole & Goodwin, 2001](#)). In contrast, [Yoon, Gursoy, and Chen \(2001\)](#) reported that tourism negatively affects the environment and that residents are so concerned about this environmental deterioration that it decreases their overall support for tourism development. These findings allude to the concerns of local residents with respect to the sustainability of environmental and conservation approaches used in the wetland's tourism development planning and management.

In this study, we investigated residents' attitudes based on the ITI ([Ap & Crompton, 1998](#)) which explores three domains; socio-cultural, economic, and environmental. However, for the purpose of this study, we included an additional three sub-domains; namely family size, distance, and length of residency, which were expressed as dimensions related to the socio-cultural impact of tourism development ([Tables 4–6](#), and [Fig. 3](#)).

## 5. Discussion and conclusion

We investigated the attitudes of residents in the Anzali wetland area of Iran toward tourism development. These attitudes are based on the perceived impact of tourism these attitudes are based on the perceived impact of tourism development and are a function of how the residents perceive the tourism industry. The results of this study indicate overall support for both the present and future development of tourism in the Anzali wetland area. Variations in residents' responses were a result of the residents' attempts to balance the benefits and costs of tourism. Consequently, a positive relationship was found between the economic impact of tourism development and family size, distance from tourism zone, and length of residency. Specifically, the increased demand for tourism services drives development in the Anzali wetland area which, in turn, positively affects residents' incomes and quality of life. Therefore, in accordance with [Ap and Crompton \(1998\)](#), these variables form the foundation of the ITI used for reviewing the multidimensionality of the impact of tourism.

The purpose of this model is to describe the attitudes of residents in the Anzali wetland in relation to the present and ongoing



**Table 4**  
Overview on the quality criteria of all reflective constructs.

Constructs	Cronbach's $\alpha$	Composite reliability <sup>a</sup>	Average Variance extracted (AVE) <sup>b</sup>
Attitude (Present)	0.879	0.912	0.674
Economic	0.848	0.887	0.610
Environmental	0.907	0.934	0.781
Socio-cultural	0.866	0.900	0.600
Family size	–	–	–
Length of residency	–	–	–
Distance	–	–	–

Threshold: Cronbach's  $\alpha$ : >0.7, (Nunnally & Bernstein, 1978); Composite reliability: >0.7, (Hulland, 1999); Average variance extracted (AVE): >0.5

<sup>a</sup> Composite Reliability (CR) = (square of the summation of the factor loadings) / ((square of the summation of the factor loadings) + (square of the summation of the error variances)).

<sup>b</sup> Average Variance Extracted (AVE) = (summation of the square of the factor loadings) / (( summation of the square of the factor loadings) + (summation of the error variances)).

**Table 5**  
The relationship between perceived impacts in present and tourism development.

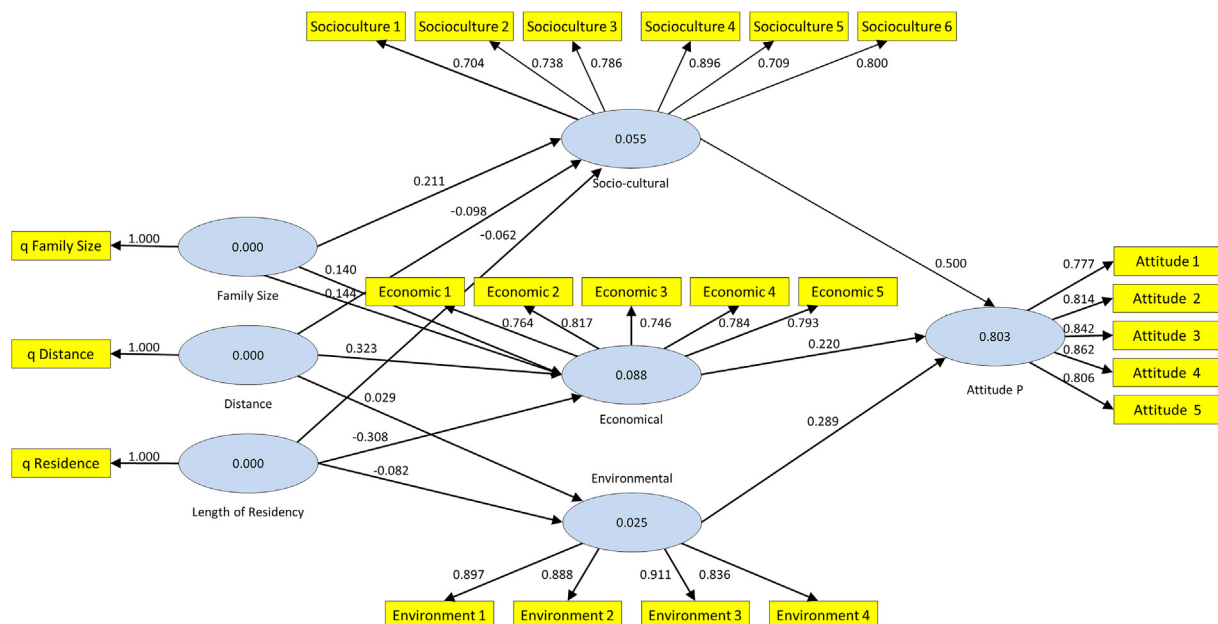
Present			
Path coefficient	Beta	T-statistics	P-value
Economic impact → attitude	0.220	8.38	0.000**
Environmental impact → attitude	0.289	6.316	0.000**
Socio-cultural impact → attitude	0.500	11.019	0.000**

\*p < 0.05; \*\*p < 0.01.

tourism development. However, it is important to note that our results offer insights for assisting future tourism development in the area. Based on our model, tourism development will influence residents' attitudes toward the impact of tourism. Therefore, confirmation of the model helps to inform future developments in the area. The results indicate that, rather than simply developing attractions and highlighting the area's natural resources, stakeholders in the Anzali wetland tourism development can offer a

**Table 6**  
Path coefficient and hypothesis testing.

Hypothesis	Relationship	Coefficient	t-value	Supported
H1	Family size → socio-cultural impacts	0.211	4.901	YES
H2	Distance → socio-cultural impacts	-0.098	1.722	NO
H3	Length of residency → socio-cultural impacts	-0.062	1.148	NO
H4	Family size → economic impacts	0.14	2.817	YES
H5	Distance → economic impacts	0.323	4.979	YES
H6	Length of residency → economic impacts	-0.308	4.428	NO
H7	Family size → environmental impacts	0.144	2.811	YES
H8	Distance → environmental impacts	-0.029	0.816	NO
H9	Length of residency → environmental impacts	-0.082	1.598	NO
H10	Socio-cultural impacts → present attitude	0.5	11.019	YES
H11	Economic impact → present attitude	0.22	8.38	YES
H12	Environmental impact → present attitude	0.289	6.316	YES



**Fig. 3.** Results of the path analysis.

greater variety of tourism benefits to residents in the development.

The results strongly support the research hypothesis by demonstrating the existence of a structural relationship between the socio-demographic factors (i.e. family size, distance, and length of residency) and the perceived impact of the socio-cultural, economic, and environmental dimensions of tourism development. Therefore, we conclude that the additional socio-demographic factors as used in this study should be included in the ITI.

Following this study, we hope to inspire future research in order to better understand the socio-cultural, economic, and environmental impact of tourism development activities. Attitudes toward tourism development vary between individuals. Consequently, the investigators believe that with an expanded knowledge of the impact of tourism, particularly in developing countries, a more inclusive theory of tourism might be formulated, especially in the context of Iran. Moreover, the results of this study have practical applications for local authorities when designing and planning future tourism developments in the Anzali wetland area.

More specifically, the residents of the Anzali wetland area acknowledged the benefits of the socio-cultural and economic impacts of development and, at the same time, recognized the negative impact of development on the natural environment. Therefore, the findings of this study can, managerially and academically, contribute toward endorsing the region's natural resources, particularly in the Anzali wetland area. We demonstrated that attitudes toward tourism development vary between individuals. In summary, we posit that a more holistic approach to knowledge regarding the impacts of tourism, particularly in developing countries, can serve as a foundation for the development of a grand model or theory of tourism impacts. Beyond just focussing on the environmental impact of tourism development, tourism planners and managers should account for the concerns of local residents based on their feedback and comments. It is imperative that local authorities ensure that residents are comprehensively informed of programmes relating to tourism development, how such developments might affect them and the opportunities available to them. Such actions might shape residents' involvement and supportive for tourism development and facilitate the development of more sustainable tourism plans.

## Appendix A. Supplementary data

Supplementary data related to this article can be found at <http://dx.doi.org/10.1016/j.tourman.2015.10.012>.

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