



Validating a tourism development theory with structural equation modeling

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Received 9 May 1999; accepted 13 June 2000

Abstract

This study attempts to examine the structural effects of four tourism-impact factors on total impact and on local residents' support for tourism development. To achieve the above goal, five research hypotheses are proposed. Three hundred and four questionnaires from a mail survey of randomly selected residents from the Norfolk/Virginia Beach/Newport News area were analyzed. A confirmatory factor analysis and structural equation modeling procedure were performed, respectively, by utilizing the LISREL procedure. Four exogenous constructs dealing with economic, social, cultural, and the environmental impacts and two endogenous constructs, including the variable of total impacts and support for tourism development were analyzed with structural equation modeling procedures. In the resulting structural equation model, five hypotheses are supported. The implications for tourism practitioners and academicians are discussed. © 2001 Elsevier Science Ltd. All rights reserved.

Keywords: Tourism impacts; Support of tourism; Structural equation model

1. Introduction

Understanding local residents' reactions towards tourism development and the factors that may influence their reactions is essential in achieving a host community's support for tourism development. Therefore, residents' reactions towards tourism have been studied extensively by tourism researchers (Akis, Peristianis, & Warner, 1996; Ap, 1992; Belisle & Hoy, 1980; Chen, 2000; Getz, 1994; Hernandez, Cohen, & Garcia, 1996; Jurowski, Uysal, & Williams, 1997; King, Pizam, & Milman, 1993; Lankford, 1994; Lankford & Howard, 1994; Liu & Var, 1986; Long, Perdue, & Allen, 1990; McCool & Martin, 1994). These resident attitude studies frequently suggest that local residents' support for community tourism business affects their perception of tourism impacts including economic (Davis, Allen,

& Consenza, 1988; Getz, 1986; Perdue, Long, & Allen, 1990), environmental, social, and cultural elements (Fesenmaier, O'Leary, & Uysal, 1996; Gee, Mackens, & Choy, 1989; Gunn, 1988; McIntosh & Goeldner, 1990; Murphy, 1985).

Although tourism researchers agree that residents' support is tied to economic, social, cultural, and environmental consequences, the structural effects of tourism impacts on local residents' support for tourism business have not been rigorously investigated. This research uses an integrated approach mirrored from disciplines (e.g., marketing and education) other than tourism management to profile the structural effects of tourism impact on local residents' support for tourism development. The tenet stipulated in this study is that perceived total tourism impact has four impact factors, and each impact factor influences the perception of other impact factors and the perceived total impact in varying degrees and different directions. Therefore, each impact factor has varying effects on local residents' support for tourism development and these effects are mediated by perceived total impact. In order to examine the structural relationship between the perceived total impact of tourism and

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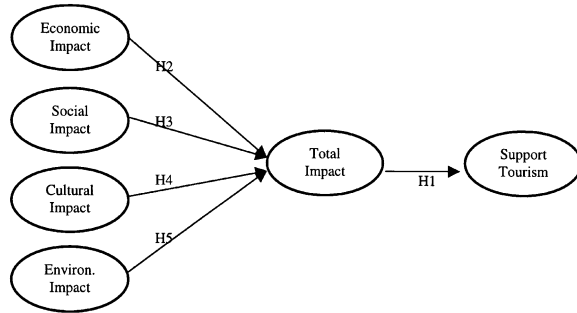
The Theoretical Proposed Model

Fig. 1. The theoretical proposed model.

the local residents' support for tourism development, a hypothetical model is proposed by using data collected from residents of the Norfolk/Virginia Beach/Newport News area in 1998.

2. The hypothetical model

Fig. 1 displays the hypothetical model. Each component of the model is selected based on the literature review. Past research discloses that residents' support for future tourism is influenced by their perceived impacts of tourism. The above causal relationships between residents' support and tourism impacts are referred to as tourism development theory. In this study, the hypothetical model breaks down the perceived impact of tourism development into four areas: economic, social, cultural, and environmental impacts. The model examines the structural relationship among the dimensions of perceived tourism impacts, total impacts, and support for tourism development. Hypothetically, each tourism impact dimension influences total tourism impact, which affects the support for tourism development.

The theoretical underpinning is social exchange theory, which proclaims that residents are likely to participate in an exchange with tourists if they believe that they are likely to gain benefits without incurring unacceptable costs. If residents perceive that the positive impacts of tourism development will be greater than the negative impacts, they are inclined to be involved in the exchange and, therefore, endorse future tourism development (Getz, 1994) in their community.

3. Tourism impact studies

Several researchers have investigated the host community's reactions towards tourism development in the context of social exchange theory (Turner, 1986) by examining how residents assess the expected cost and benefits of tourism (Ap, 1990, 1992; Lindberg & Johnson,

1997; Perdue et al., 1990; Yoon, 1998). In the tourism context, social exchange theory suggests that local residents are likely to participate in exchange (support tourism development) as long as the perceived benefits of tourism exceed the perceived costs of tourism. Several researchers have examined the factors being exchanged by local residents including economic, social, and environmental factors. The general conclusion is that the host community residents are likely to participate in an exchange with tourists if they perceive the exchange is likely to result in a gain. In summary, the tourism literature suggests that the economic, social, cultural, and environmental factors are likely to affect residents' perceptions of tourism and their willingness to participate in an exchange (support for or opposition to tourism development).

In the following sections, several elements of exchange that are found to affect the way tourism is perceived and the manner in which residents react to tourism are examined in detail.

3.1. Support for tourism development

Because tourism relies heavily upon the goodwill of the local residents, their support is necessary for the development, successful operation, and sustainability of tourism. If residents have a positive perception of tourism, they will render support for additional tourism development and, therefore, they will be willing to participate in an exchange with visitors. However, if they believe that tourism development would have more costs than benefits they are likely to oppose tourism development. The success of any tourism development project is threatened to the extent that the development is planned and constructed without the knowledge and support of the local residents. Anger, apathy, or mistrust will ultimately be conveyed to the tourists. For the most part, tourists tend to be reluctant to visit places where they feel unwelcome. Therefore, it is important to know how residents perceive total impact and the factors that influence perceived total impact of tourism development.

3.2. Perceived total impacts

Several researchers have examined the overall perceived impacts of tourism development by local residents. Since tourism has multi-faceted phenomena involving different impact factors and resulting from a complex process of social exchange between tourists and host communities, the residents' perception of tourism may have both negative and positive aspects. Residents' perceptions of total tourism impact may be influenced by the level of tourism development or/and different tourism sites. However, the results of several studies suggest that the host community's perception of the total impact is affected by perceived impact of several

costs and benefit factors on the host community such as economic, environmental, cultural, and social benefits and costs (Gee et al., 1989; Gunn, 1988; McIntosh & Goeldner, 1990; Murphy, 1985).

With the above review, the following hypothesis is proposed:

- H1: There is a direct relationship between residents' perceived total impacts and support of tourism development.

3.3. *Dimensions of perceived tourism impacts*

Economic benefits are the most important elements sought by local residents from tourism development (Akis et al., 1996; Husband, 1989; Liu, Sheldon, & Var, 1987; Ritchie, 1988; Sheldon & Var, 1984). Accordingly, whenever scholars examine residents' perception of the effect of tourism, the perceived economic impacts are often assessed. The majority of these economic impact studies have focused on employment opportunities (Belisle & Hoy, 1980; Davis et al., 1988) and the revenues derived from tourism activities (Davis et al., 1988; Murphy, 1983).

The host community's perception of social and cultural impacts of tourism development has been extensively examined by several tourism researchers. However, the findings of those studies have contradictory results. Some scholars have demonstrated that residents tend to perceive the economic impacts of tourism positively and the social, cultural, and environmental impacts of tourism development negatively (Jurowski et al., 1997; Liu & Var, 1986; Perdue, Long, & Allen, 1987; Pizam, 1978; Prentice, 1993). On the other hand, some researchers conclude that host community residents view tourism as providing various social, cultural and environmental benefits to the community. For example, tourism creates opportunities for cultural exchange, the conservation and preservation of natural areas, archaeological sites, and historic monuments (McCool & Martin, 1994; Mathieson & Wall, 1982).

The existing tourism literature also discloses mixed results for host community residents' perception of the physical and environmental impacts of tourism. Tourism researchers suggest that host community residents may view tourism as having both positive and negative physical and environmental impacts (Liu & Var, 1986; Liu et al., 1987). Perceived negative physical and environmental impacts of tourism include destruction of natural resources, pollution, and deterioration of cultural or historical resources. Perceived positive physical and environmental impacts of tourism include preservation of historic and cultural resources, recreation opportunities for visitors and residents, and better roads and public facilities.

In sum, the tourism literature suggests that the local residents' perception of tourism is varied. Some residents

are apt to view tourism as having both positive and negative impacts; some are likely to perceive tourism as having negative social, cultural or environmental impacts; and some are inclined to regard tourism as having positive impacts on the local economy, community, or/and environment. As for the support for tourism development, if residents believe that tourism creates more benefits than costs for the community, they tend to have a favorable view of tourism. Conversely, if the residents believe that tourism brings more costs than benefits and deteriorates community quality of life, they are not likely to endorse tourism development.

Four hypotheses are proposed according to the above literature review. These hypotheses focus on whether relationships exist between the four dimensions of tourism impacts and the total impact of tourism.

- H2: There is an indirect relationship between residents' perceived economic impacts and residents' support for tourism development, and this indirect relationship is mediated by total impacts
- H3: There is an indirect relationship between residents' perceived social impacts and residents' support for tourism development, and this indirect relationship is mediated by total impacts
- H4: There is an indirect relationship between residents' perceived cultural impacts and residents' support for tourism development, and this indirect relationship is mediated by total impacts
- H5: There is an indirect relationship between residents' perceived environmental impacts and residents' support for tourism development, and this indirect relationship is mediated by total impacts

4. Research design

4.1. *Study sites and population*

The Norfolk/Virginia Beach/Newport News area is the research site based on its offering of fine multi-faceted tourism attractions, such as historical and cultural sites, theme parks, and beaches. The study population is the household members of Norfolk/Virginia Beach/Newport News MSA (metropolitan statistical area). Specifically, this target population consists of residents who are over 18 years old in the communities of Gloucester, York, Hampton, Newport News, Norfolk, Poquoson, Virginia Beach, and Williamsburg Cities in Virginia.

4.2. *Sampling procedure*

The data for this study were collected by a stratified random sampling method based on population size. A stratified random sample was used to reflect the diverse geographical distribution of the residential area of the

community (Zikmund, 1997). First, these areas were divided into eight district regions, then the sample size for each city/town was determined by the proportional population of each city/town over the total population of the research area.

4.3. Survey instrument

A self-instructed questionnaire was developed for the purpose of this study. An expert panel consisting of three tourism professors reviewed and revised the questionnaire. The questionnaire was then pilot tested with a series of on-site interviews ($n = 30$). A Cronbach

reliability test was performed to further stabilize the questionnaire.

4.4. Research variables

As shown in Table 1, the perceived impacts of tourism by local residents were measured by 24 impact items embodying both the benefits and costs of tourism. These impact items mirrored the works by Liu et al. (1986) and Akis et al. (1996). A five-point Likert scale was used as the response format for these 24 impact items with assigned values ranging from 1 = strongly disagree to 5 = strongly agree. Total tourism impact, one of the dependent

Table 1
Statements of tourism development impacts

Perceived tourism impacts

A. Economic impacts

1. Tourism has created more jobs for your community^a
2. Tourism has attracted more investment to your community^a
3. Tourism has led to more spending in your community^a
4. Our standard of living has increased considerably because of tourism^a
5. The prices of goods and services have increased because of tourism^a
6. Tourism has given economic benefits to local people and small businesses^a
7. Tourism revenues are more important than revenues from the other industries for local government^a
8. The costs of developing public tourist facilities are too much^a

B. Social impacts

1. High-spending tourists have negatively affected our way of life^a
2. Tourism has changed our precious traditional culture^a
3. Local residents have suffered from living in a tourism destination area^a
4. Improving public tourist facilities is a waste of tax-payer money^a
5. Tourism has led to more vandalism in your community^a
6. Tourism has increased the crime rate^a

C. Cultural impacts

1. Tourism has encouraged a variety of cultural activities by the local residents^a
2. Tourism has resulted in more cultural exchange between tourists and residents^a
3. Meeting tourists from other regions is a valuable experience to better understand their culture and society^a
4. Tourism has resulted in positive impacts on the cultural identity of our community^a

D. Environmental impacts

1. Tourism has resulted in traffic congestion, noise and pollution^a
2. Construction of hotels and other tourist facilities have destroyed the natural environment^a
3. Tourism has resulted in unpleasantly overcrowded beaches, hiking trails, parks and other outdoor places in your community^a
4. Tourism provides more parks and other recreational areas for local residents^a

E. Total impacts

1. How do you perceive the overall impacts of tourism development in your community?^a
2. Do you agree or disagree that the benefits of tourism are greater than the costs to the people in your community?^b

Supports for tourism developments

1. Nature-based development (e.g., ski, camping area, park, climbing, etc.)^c
2. Attractions designed for large number of tourists (e.g., theme park, resort complex, Disney World, etc.)^c
3. Cultural or historic-based attractions (e.g., museum, palace, folk village, historic site, etc.)^c
4. Event/outdoor programs (e.g., recreation facilities, exhibition, performance, sport event, business/public event, etc.)^c
5. Supporting service development (e.g., hotel, travel agency, restaurant, entertainment, souvenir center, etc.)^c

^aA five-point Likert scale was used measure with the word “strongly disagree” at the low end of the scale and the word “strongly agree” at the high end.

^bA five-point Likert scale was used measure with the word “very negative” at the low end of the scale and the word “very positive” at the high end.

^cA five-point Likert scale was used measure with the word “strongly oppose” at the low end of the scale and the word “strongly support” at the high end.

variables, contained two indicators: (1) the benefits of tourism are greater than the costs (1 = strongly disagree, 5 = strongly agree); (2) overall impact of tourism impact (1 = very negative, 5 = very positive) (Table 1). Support for tourism development, the ultimate dependent variable, is measured by five indicators adapted from Jurowski (1994): (1) nature-based tourism development (e.g., ski, camping area, park, climbing), (2) attraction designed for large numbers of tourists (e.g., theme park, resort complex, Disney World), (3) cultural/historic-based attraction (e.g., museum, palace, temple, folk village, historic cities), (4) event/outdoor programs (e.g., performance, recreational facilities, sport event, exhibition), and (5) supporting service development (e.g., hotel, travel agency, restaurant, entertainment, souvenir center) (Table 1).

5. Results

Out of 2400 questionnaires mailed, 321 questionnaires were returned, yielding a 13.4 per cent response rate. Five questionnaires were excluded due to a large percentage of missing values. Prior to LISREL analyses, distribution of all measured variables was investigated by the review of the skewness and kurtosis of data. Zero-order Pearson correlations were calculated, and missing observations were managed by a listwise procedure. Correlation matrices and standard deviations were utilized to conduct structural equation modeling tests. All reported results were based on completely standardized solution.

The properties of the six research variables (four exogenous and two endogenous) in the proposed model were tested with a LISREL procedure (Joreskog & Sorbom, 1993), and the maximum likelihood (ML) method of estimation (for recommendations for ML, see Anderson & Gerbing, 1988; Bentler, 1983) and the two-stage testing process recommended by Sethi and King (1994) and Anderson and Gerbing (1988) were also adopted.

5.1. Measurement model

First, a confirmatory analysis of the measurement model specifying the posited relations of the observed variables to the underlying constructs, with all constructs allowed to be inter-correlated freely, was tested. Before testing the overall measurement model, each construct in the model was analyzed separately. The fit of the indicators to the construct and construct reliability and validity were tested. Since the item having a coefficient α below 0.3 is unacceptable, and thus should be deleted from the further analysis (Joreskog, 1993), a total of 11 indicators for exogenous variables and two indicators for the last endogenous variable (support for tourism development) were deleted. Thus, as shown in Table 2, 11 indicators of exogenous variables for tourism impacts,

two items for total impacts, and three items for support of tourism development were identified.

The resulting measurement model (Table 2) with six constructs and 16 indicators was derived by the confirmatory factor analysis (CFA). Three types of overall model fit measures were utilized in this study: absolute fit measures, incremental fit measures, and parsimonious fit measures. An absolute fit index directly assesses how well a priori model reproduces the sample data. On the other hand, an incremental fit index measures the proportionate in fit by comparing a target model with a more restricted, nested baseline model (for a more detailed discussion of fit indices, see Hu & Bentler, 1995). As Table 3 shows, the overall measurement model exhibits a good level of fit on all three types of model fits: $\chi^2(92) = 104.88, p = 0.17$, goodness-of-fit index (GFI) = 0.96, root-mean-square residual (RMSR) = 0.047, root-mean-square error of approximation (RMSEA) = 0.021, adjusted goodness-of-fit (AGFI) = 0.94, nonnormed fit index (NNFI) = 0.99, parsimonious normed fit index (PNFI) = 0.73, comparative fit index (CFI) = 0.99, incremental fit index (IFI) = 0.99, relative fit index (RFI) = 0.94.

After assessing the overall model, each of the constructs is evaluated separately by examining the completely standardized loading, error variance, the construct reliability, and variance extracted as shown in Table 2. The *t*-value associated with each of the completely standardized loading exceeds the critical value (2.58) at $p < 0.01$ significance level and the construct reliability of all six constructs (0.89, 0.83, 0.83, 0.82, 0.73, and 0.76) exceeds the recommended level of 0.70.

5.2. Structural equation model

The review of the initial theoretical structural model reveals that the *t*-value of all completely standardized coefficients are statistically significant. However, the chi-square value of the theoretical model is not significant which indicates that the proposed theoretical model might be underidentified and could be improved. Examination of the modification indices reveals a direct path, which was not hypothesized, from the environmental impacts to support for tourism development. Accordingly, the new path is added to the revised model.

Finally, the revised model was estimated with six latent variables, and six paths. The addition of a new path improved the model fit. As shown in Table 4, the revised model's chi-square value is not significant at 0.05 significance level ($\chi^2(89) = 105.87, p = 0.11$) and all other fit indices indicate that the revised model is acceptable: GFI = 0.96, RMSR = 0.039, RMSEA = 0.025, AGFI = 0.94, NNFI = 0.99, PNFI = 0.71, CFI = 0.99, IFI = 0.99, and RFI = 0.94. The revised model explains 63 per cent of the variance in total impacts, with 43 per cent of the variance in support for tourism development.

Table 2

Overall CFA for the modified measurement model ($N = 304$)^a

Construct and indicators	Completely standardized loading	Construct and indicator reliability	Variance extracted and error variance
<i>Economic impacts (EX)</i>		0.89 ^b	0.73 ^c
Creating jobs (E1)	0.86	0.67	0.36
Attracting investments (E2)	0.94	0.83	0.18
Economic benefits for local business (E3)	0.74	0.66	0.28
<i>Social impacts (EX)</i>		0.83 ^b	0.83 ^c
Negative affection by tourist's high spending (S1)	0.69	0.53	0.42
Changing culture (S2)	0.81	0.64	0.38
Residents' suffering (S3)	0.89	0.67	0.39
<i>Cultural impacts (EX)</i>		0.83 ^b	0.61 ^c
Cultural identity and activity (C1)	0.72	0.80	0.12
Cultural exchange (C2)	0.74	0.64	0.31
Valuable meeting experiences (C3)	0.65	0.45	0.51
<i>Environmental impacts (EX)</i>		0.82 ^b	0.61 ^c
Congestion, noise, pollution, and crowding (EN1)	0.85	0.60	0.49
Destroying environment (EN2)	1.09	0.78	0.33
<i>Total impacts (ED)</i>		0.73 ^b	0.57 ^c
Overall impacts	0.70	0.75	0.16
Benefits and costs	0.65	0.45	0.53
<i>Support for development (ED)</i>		0.76 ^b	0.52 ^c
Large designed attraction	0.92	0.46	1.01
Event/outdoor program	0.65	0.41	0.60
Supporting service development	0.89	0.75	0.27

^aEX, exogenous variable, ED, endogenous variable.^bComposite reliability of each construct.^cVariance extracted.

Table 3

Goodness-of-fit measures for the modified measurement model ($N = 304$)^a

Absolute fit measures				Incremental fit measures			Parsimonious fit measures			
χ^2	GFI	RMSR	RMSEA	NULL χ^2	AGFI	NNFI	PNFI	CFI	IFI	RFI
(92) 104.88	0.96	0.047	0.021	2237.38 120 df	0.94	0.99	0.73	0.99	0.99	0.94
$p = 0.17$										

^a χ^2 , Chi-square; GFI, goodness-of-fit index; RMSR, root-mean-square residual; RMSEA, root-mean-square error of approximation; AGFI, adjusted goodness-of-fit; NNFI, nonnormed fit index; PNFI, parsimonious normed fit index; CFI, comparative fit index; IFI, incremental fit index; RFI, relative fit index.

After assessing the revised structural model, a post hoc test titled sequential chi-square difference tests (SCDTs) were conducted to provide successive fit information (Anderson & Gerbing, 1988). Table 5 indicates that there is a significant difference in chi-square value between the theoretical model and the measurement model which has the smallest possible chi-square value for any structural model at 0.05 significance level. This indicates that the

theoretical model is ill-fitted compared to the measurement model. There is no significant difference at 0.05 significance level between the measurement model and the revised model ($p > 0.05$, $\chi^2(3) = 0.99$). Therefore, the revised model that is a parsimonious model of the measurement model is accepted as the best model and adapted to test the hypotheses for this study. Fig. 2 presents the accepted revised model.

Table 4
Goodness-of-fit measures for the structural equation model ($N = 304$)^a

	Absolute fit measures				Incremental fit measures			Parsimonious fit measures			
	χ^2	GFI	SRMR	RMSEA	NULL χ^2	AGFI	NNFI	PNFI	CFI	IFI	RFI
Theoretical model	(90) 128.70 $p = 0.0047$	0.95	0.048	0.038	(120) 2237.38	0.92	0.98	0.71	0.98	0.98	0.92
Revised model	(89) 105.87 $p = 0.11$	0.96	0.039	0.025	(120) 2237.38	0.94	0.99	0.71	0.99	0.99	0.94

^a χ^2 , Chi-square; GFI, goodness-of-fit index; RMSR, root-mean-square residual; RMSEA, root-mean-square error of approximation; AGFI, adjusted goodness-of-fit; NNFI, nonnormed fit index; PNFI, parsimonious normed fit index; CFI, comparative fit index; IFI, incremental fit index; RFI, relative fit index

Table 5
Sequential Chi-square testing of model comparison

Comparison model	d.f. difference	χ^2 difference	P
Measurement model vs. theoretical model	2	23.82	> 0.05
Theoretical model vs. revised model	1	22.83	> 0.05
Revised model vs. measurement model	3	0.99	< 0.05

(completely standardized $b = 0.50$; t -value = 5.15); H2 (completely standardized $b = 0.42$; t -value = 7.18); H3 (completely standardized $b = -0.28$; t -value = -3.72); H4 (completely standardized $b = 0.20$; t -value = 30.01); and H5 (completely standardized $b = -0.22$; t -value = -3.25). The new proposed path from the environmental impacts to support tourism development is also found to be significant at 0.05 significance level (completely standardized $b = -0.38$; t -value = -4.55).

5.3. Results of hypotheses testing

All of the proposed hypotheses are supported at 0.05 significance level. The completely standardized coefficient and t -value of each hypothesis are as follows: H1

6. Discussion and implications

The objective of this research is to model the local residents' support for future tourism development according to critical factors that are proven to influence the host community's reaction towards tourism development. Based on current impact literature, a tourism

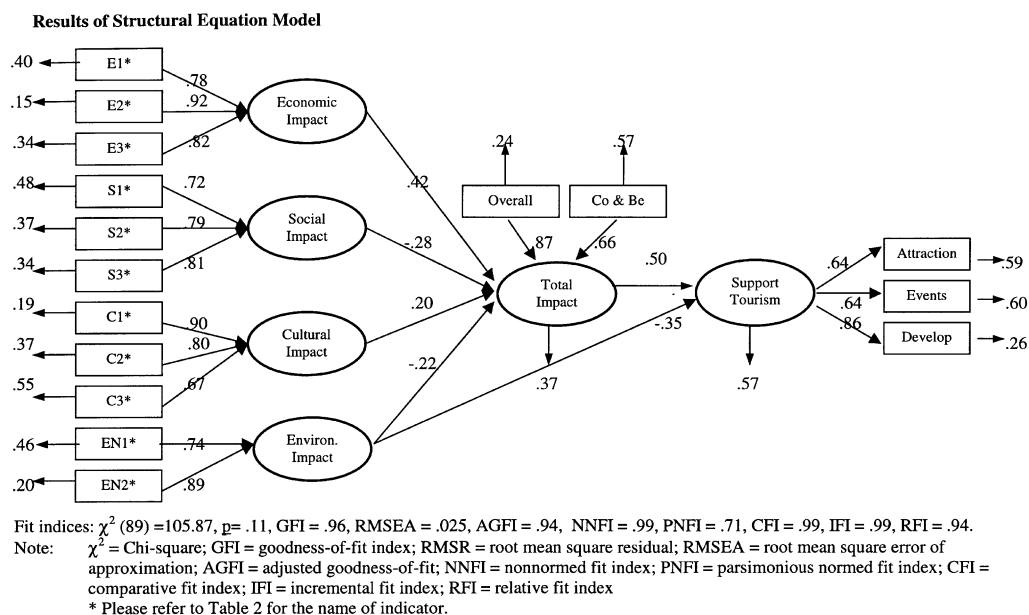


Fig. 2. Results of structural equation model.

support model with six paths was proposed. Using data obtained from the Norfolk/Virginia Beach/Newport News area, the hypothesized paths were tested with a two-stage structural equation modeling approach. After the measurement model was derived, the hypothetical model specifying the interrelation among impact constructs was investigated. The results of the analysis suggest that the revised model is better than the proposed theoretical model. Therefore, the proposed theoretical model is rejected and the revised model is accepted as the best model. All of the six hypothesized paths are retained and a new significant path is added into the final model.

The findings of the study confirm the existence of four tourism-impact constructs pertaining to economic, social, cultural, and the environmental impacts. The economic and cultural impacts are positively associated with the total tourism impacts, while the social and environmental impacts negatively affected the total tourism impacts. In addition, perceived environmental impact is found to affect local residents' support for tourism development. The direct negative effect of environmental impact on tourism support indicates that local residents are highly concerned with the negative effects of tourism development on the environment. Perceived negative impacts of tourism on the environment, such as deterioration and destruction of environment, were likely to decrease the level of local residents' support for tourism development. The above findings are consistent with the research findings reported by Chen (2000), who found that urban residents were concerned about social and environmental costs due to tourism development.

A positive significant relationship is found between residents' perceived economic impacts and total impacts (H2). It implies that residents believed that tourism created more jobs, attracted more investment in their community, and generated economic benefits to local people and businesses. The proposed path from social impact to total impact is also supported (H3). This result suggests that regardless of the perceived benefits of tourism development, residents perceived tourism as a development, which creates social problems. The fourth hypothesis — that there is an indirect relationship between cultural impacts and local residents support for tourism development, and this indirect relationship is mediated by total impacts — is supported. The findings reveal that local residents perceived tourism as a development that provides cultural identity and activity, cultural exchange, and valuable meeting experiences with tourists. The fifth hypothesis that an indirect relationship exists between residents' perceived environmental impacts and this indirect relationship is mediated by total impacts is supported. Accordingly, H5 suggests that local residents believed that tourism development created congestion, noise, pollution, crowding, and destruction of the natural environment. In addition to

the indirect effect of environmental impacts on the support for tourism development, a direct structural path from environmental impacts to support for tourism development was added to the model. This new structural path is found to be significant at 0.05 significance level. This new significant structural path indicates that local residents placed more importance on the environmental impacts of tourism and perceived tourism as having more negative impact on the environment.

Even though residents perceived that tourism development created negative environmental and social impacts, the structural path from total impact to support for tourism development is positive and significant at 0.05 significance level (H1). This positive and significant path indicates that residents' perception of overall impacts of tourism development was positive and residents perceived that the benefits of tourism were greater than the costs of the tourism. Therefore, local residents were likely to support additional tourism development, such as theme parks, resort complexes, recreation facilities, sporting events, hotels, restaurants, and entertainment. However, the significant structural path from environmental impacts to support for tourism development suggests that the environmental impacts were negatively associated with support for tourism development. Thus, the less environmental impacts residents perceive, the more support they have for tourism development.

Destinations attempting to win a community support's for tourism development might find the information provided by this research useful. This research demonstrates that the perception of economic and cultural benefits were important determinants of support for tourism. This suggests that internal marketing techniques designed to inform residents of the economic and cultural benefits they receive from tourism may be helpful in gaining the host community's support that is necessary for the development, successful operation, and sustainability of tourism. Promotion of positive economic and cultural benefits of tourism may alter the opinion of residents who perceive that they have little to gain economically and culturally from the tourism industry.

The result of this research shows that community opposition against tourism will be based on perceived negative environmental and social impacts of tourism development. Tourism services and businesses should be sensitive to these issues. The application of conservation and preservation programs might help alleviate these concerns. For an effective planning strategy, tourism practitioners should ensure that the residents with greater environmental and social concerns are involved in the planning process that assist practitioners to better understand these residents' concerns. Once the social and environmental concerns are addressed, the conflict between tourism planners and developers should be minimal, promising a sustainable tourism business in the host community.

In addition, since the research site possessed a comparatively high level of tourism development, residents might be more concerned about the negative environmental impacts of tourism development. Local residents of highly developed tourism sites were likely to value the negative impacts of tourism more than the positive impacts of tourism because they were the ones who had to live with the problems created by the tourism development such as crowding, congestion, noise, and destruction of their environments. Therefore, tourism planners and policy makers need to ensure that proposed tourism development will create more benefits than costs for the community and the environment.

7. Recommendations for future research

One of the purposes of this study is to develop a refined model of host community's support for tourism development. Findings of this study indicate that the developed tourism supports model fit was acceptable and the model explained an acceptable percentage of variance in host community support for tourism development. However, more rigorous testing of the model is required with different samples. In addition, researchers should further identify and examine other factors that may influence host community support for tourism development, such as community involvement, perception of local economy, community attachment, and utilization of tourism resources by residents. Integration of these constructs into the model might help researchers and practitioners further grasp the factors that influence local residents support for tourism development.

Acknowledgements

The authors wish to thank Dr. Muzaffer Uysal for initial knowledge and research direction as well as anonymous reviewers for their valuable comments.

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