

## Residents' Attitudes Towards Sustainable Tourism in Cancun

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### Abstract:

This article analyzes local resident's opinions of the sustainability of tourism in Cancun. A random survey was conducted with 429 people and complemented with documentary research as a way to test fieldwork data. A descriptive and variance analysis (ANOVA) of results was run on the statistical program SPSS 25. Though Cancun residents proved to have little knowledge of the meaning of sustainability in general, when associating the concept to tourism their attitude was straightforward. They saw tourism as a favorable activity in economic and socio-cultural terms but less favorable in environmental terms. A more detailed analysis showed significant variations among survey participants according to their birthplace, educational level, and occupation, especially when the latter was related to tourism.

**Key words:** Sustainability, Tourism, Residents' attitudes, Cancun.

### 1. Introduction

Despite its adverse environmental and social consequences, mass tourism has been justified as an activity that yields substantial economic benefits (Hasani et al., 2016). With the reckoning of the side-effects of mass tourism in the 1970s, sustainability emerged as a theoretical formula to address territorial problems and find solutions to them (Wang, 2019). Sustainability is understood as a local development strategy that focuses on the socio-cultural, economic and environmental aspects (Butler, 1999; Kitnuntaviwat & Tang, 2008; Marzo et al., 2015).

Although sustainable tourism approaches with a focus on the participation of the local inhabitants have so far been limited, the realization that knowing their perception of tourism can help reduce the negative impacts of tourism is leading to more research on the matter (Yu et al., 2011; Lee, 2013; Blasco et al., 2018). Residents' involvement in the entire tourism process is important, since their opinions have the potential to influence decision-making in their communities. Participation of local residents is an essential condition of sustainability (Ansari & Phillips, 2001; Carmin et al., 2003; Yu et al., 2011; Boley, McGehee & Hammett, 2017; Blasco et al., 2018). Blasco, et al. (2018) posit that whenever local residents perceive some benefit out of tourism, they tend to show a positive attitude towards it; and Yoon et al. (2001) add that when this is not the case, not only a negative attitude can be expected, but even hostility towards visitors, which makes it essential to know the perception of a community beforehand.

This article purports to analyze Cancun residents' perception of tourism as a sustainable activity, according to the socio-demographic variables of gender, age, educational level, and tourism-related occupation. This is the first research project to deal with the relationship between tourism and sustainability from the point of view of the local residents in one of the most important littoral tourism centers in Latin America (Sedetur, 2017). Given the lack of consensus in the specialized literature as to how to measure sustainability, several indicators have been developed here to suit the local context of Cancun, drawing from documentary sources on the economic, socio-cultural, and environmental impact of tourism in this important tourist destination. In Section 2, the studies on sustainability and residents' attitudes according to socio-demographic variables are reviewed. In Section 3, the methods employed in this study are described, including the characteristics and results of the survey.

In Section 4, the results obtained from the statistical descriptive and variance analysis (ANOVA) by SPSS are presented. Finally, in Section 5, some conclusions are drawn.

### 2. Theoretical framework

#### 2.1. Sustainability

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Sustainability has been identified as a desirable strategy for territorial planning, and has received increasing attention within the scientific community, as well as international policy-makers and organized civil society (Dymond, 1997; Cottrell et al., 2013). The theory of sustainable development has exposed the unsustainability of mass tourism, a model that, among other adverse effects, has led to the commodification and degradation of nature (regarded as a “resource” for everybody’s use), the gentrification and banalization of tourist destinations, and job insecurity (Sánchez, 2013).

Aside from demonstrating the unsustainability of other development models, sustainable development stresses the need to involve local communities (Yu et al., 2011; Lee, 2013; Blasco et al., 2018). The overall acceptance of this model and the preoccupation with the negative impacts of mass tourism (a depredatory model despite its economic success) has led to the inception of the concept of sustainable tourism (Vera & Ivars, 2003; Hritz & Cecil, 2008; Wang, 2019). Sustainable tourism rests on three fundamentals: 1) economic benefit (infrastructure, employment, quality of life, etc.); 2) socio-cultural well-being (the conservation of patrimony, the consciousness, experience, knowledge, abilities and behavior of local populations, and the guarantee of basic human rights); and 3) environmental conservation and protection of natural “resources” and ecosystems to guarantee their long-term viability (Cottrell et al., 2013; Farmaki et al., 2015; Marzo et al., 2015).

Of these three fundamentals, the socio-cultural one has received less attention so far (Pierri, 2005). However, an increasing number of studies have started to recognize the importance of ensuring the right of local communities to participate in the design of their own future (Inskeep, 1991). Local actors’ opinions have the potential to influence local decision-making at the community level (Ansari & Phillips, 2001; Carmin et al., 2003).

Sustainability in tourism is understood as a strategy for local development (Butler, 1999; Kitnuntaviwat & Tang, 2008; Marzo et al., 2015), one that minimizes costs while maximizing community benefits (Lindberg & Johnson, 1997), improves the quality of life of local residents (Choi & Sirakaya, 2006; Pérez et al., 2013), and produces satisfactory tourism experiences (Dymond, 1997; Liu, 2003; Choi & Sirakaya, 2005; Lu & Nepal, 2009; Aall et al., 2015).

In practice, however, sustainability has been more a dominant discourse (Cottrell et al., 2013) or a politically correct formula than a real approach to solve territorial problems in tourist destinations. Naredo (1997) and Velayos (2008) state that, under the ambiguity of this paradigm, environmental and social motives have often been used as an excuse to justify economically driven decisions that do nothing but extend the Capitalistic, short-term maximum-benefit approach and its search for unlimited growth, which is, by definition, unsustainable (Sánchez & Pulido, 2008).

## **2.2. Case studies on residents’ attitudes**

The focus of this article is on the attitudes of Cancun residents towards sustainable tourism in relation to socio-demographic variables, such as gender, age, educational level, and tourism-related employment. While some authors have concluded that these variables do not predict the attitudes in question (Williams & Lawson, 2002), others argue they are closely linked (Lankford & Howard 1994; Sirakaya et al., 2002; McGehee & Andereck, 2004).

As for gender differences, Mason & Cheyne (2000) and Nunkoo & Gursoy (2012) have concluded that women are more likely to perceive the impacts of tourism and, for that reason, they are less prone to support tourism initiatives. On the age front, Tomljenovic & Faulkner (2000) and McGehee & Andereck (2004) have found older residents to be more favorably inclined to support tourism development than the young, whereas Ritchie (1988) observed that youngsters had a more positive attitude.

As for birthplace, McGehee & Andereck (2004) and Haley et al. (2005) conclude that native residents are more likely to perceive the negative impacts of tourism than non-native residents. Time of residence also plays a role, and it has been found that those who have been living in the community for a shorter time may have moved there for work reasons and therefore better appreciate the economic benefits of tourism (Kuvan & Akan, 2005). Conversely, those who have been living there for longer are more sensitive to the impacts of tourism and feel they are sacrificing their peacefulness and their relation with the surrounding nature (Kuvan & Akan, 2005).

As for educational level, residents with higher education are less likely to put up with the impacts of tourism than those at medium and lower levels (Andriotis & Vaughan, 2003), although Kuvan & Akan, (2005) concluded that a lower educational level is often associated with a critical view point. Finally, as for occupation, residents with a tourism-related job tend to have a more positive attitude towards the sector than those who are employed elsewhere (Lankford & Howard 1994; Andriotis & Vaughan, 2003; Kuvan & Akan, 2005; Andereck et al., 2005).

Studies on local residents’ understanding of and attitude towards sustainability have for the most part relied on measuring tourism impact indicators (Diedrich & García, 2009; Nunkoo & Gursoy, 2012; Lee, 2013; Lundberg, 2015; Lee & Hsieh, 2016), for the simple reason that these indicators are accessible and easy to grasp.

Of the three spheres of sustainability, the economic one is the most likely to elicit positive attitudes among local communities in tourist places, as it is associated to employment opportunities (Dyer et al., 2007; Diedrich & García, 2009; Andereck & Nyaupane, 2011), the improvement of community infrastructure, such as roads and other public facilities (Mason & Cheyne, 2000; Andereck et al., 2005), and public transport (Korca, 1996; Yoon et al., 2001). More contradictory are residents' attitudes towards the socio-cultural impact of tourism. Though some studies report a dominant negative perception (Andereck et al., 2005), others report a positive one (Besculides et al., 2002; Sirakaya et al., 2002), as tourism is perceived to improve the quality of life (McGehee & Andereck, 2004), create leisure and entertainment opportunities (Korca, 1996; Yoon et al., 2001; Andereck & Nyaupane, 2011), and help preserve local culture through the conservation of historic buildings and archaeological sites (Korca, 1996; Yoon et al., 2001; Besculides et al., 2002; Andereck et al., 2005; Oviedo et al., 2008).

As for environmental sustainability, tourism is perceived to contribute to the preservation of nature and lead to a rational use of resources (including fresh and sea water) (Andereck et al., 2005; Andereck & Nyaupane, 2011), as well as contribute to improve the provision of electricity, the treatment of sewage, and, in general, pollution control.

### 3. The socio-spatial context

Located on the Caribbean littoral, Cancun is the most visited tourist center in Mexico and one of the most famous in the world (Sedetur, 2017) (Map 1).

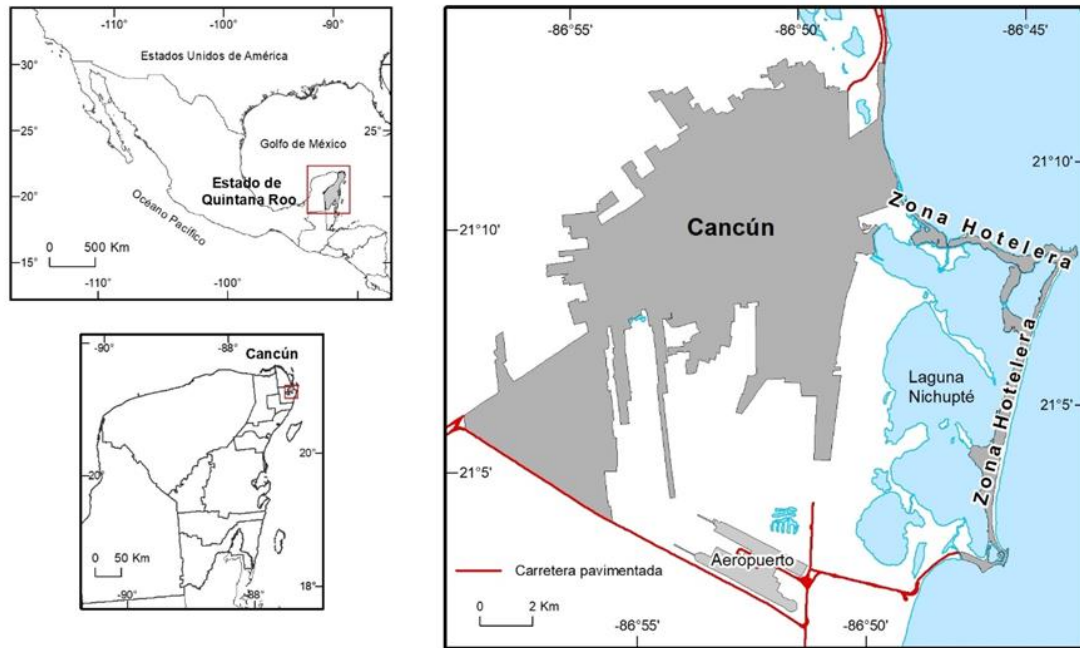
In December 2017, the number of hotels had increased to 185 and the number of rooms to 35,272, with 85 percent occupancy, and almost six million tourists in 2018 (Sedetur, 2017; Sedetur, 2018). Cancun's territorial expansion as a mass beach tourism destination has encouraged the appropriation by private capital of natural and cultural patrimony with a limited regional development (Arroyo et al., 2015).

Cancun's economic impulse attracted a large number of immigrants from all parts of the country, an important workforce that made possible the construction of not only hotels but also housing and infrastructure. Today, this leading tourist pole is also the country's most rapidly growing urban center in both demographic and economic terms. In 1990, 167,730 people lived there (Castillo & Villar, 2011), and by 2015 the population had soared to 743,626 people (INEGI, 2015), that is, more than half a million people in 25 years.

However, most jobs in Cancun are temporary, require little qualification, and employees are forced to take unpaid leave during low season, which induces marginalization and poverty, and enhances spatial segregation (Oehmichen, 2010; Espinosa, 2013). In the marginal settlements that have come about, deprived of social infrastructure, illicit practices such as small-scale drug trafficking are common. This leads to family disintegration and lack of social cohesion (Jiménez & Sosa, 2007; Oehmichen, 2010).

Lately, the new government has come up with the project of building the so-called Mayan Train, which will have Cancun as a distribution center to circle the Yucatan peninsula taking tourists to several destinations. Those who support the project see it as a good opportunity to propel the economy, improve the quality of life of the local inhabitants, and contribute to preserve the environment by having more control bases, from which illegal forestry and species trafficking would be monitored. Conversely, those who criticize the project argue that indigenous communities will be adversely affected, and that mass tourism will increase the pressure on an already fragile environment (Muñoz, 2019). The impending construction of this train is one of the sustainability issues to be examined in this research project.

Map 1. Geographic location of Cancun



Source: Built by the authors

#### 4. Materials and methods

The survey was applied to 429 Cancun residents. Questionnaires were the main data-collection tool, applied between December 2018 and March 2019. After conducting a pilot test with 50 residents, the questionnaire was revised and reworded so as to avoid ambiguity. Respondents were selected by a systematic random sampling method, which consisted in the surveyor remaining in a public place of transit (entrance points to stores and educational institutions, bus stops, and parks) for one full day on only one occasion, soliciting adult passersby to participate in the survey. Invitation to participate began by asking people whether they would be interested in answering a few questions on sustainability in Cancun, and once they accepted, they were asked to state their age.

According to Nicholas et al., (2009) and Holladay & Powell (2013), our sample of 429 people is representative of Cancun's population of 743,626 inhabitants (INEGI, 2015), with an error margin of  $\pm 5\%$  and a confidence level of 95 percent.

The existing literature on the attitude of local residents to tourism and sustainability was taken as a reference to build the questionnaire. Given that no consensus exists on the indicators to be used, specialists recommend using indicators adapted to the local context (Roberts & Tribe, 2008; Marzo et al., 2015; Pérez et al., 2013; Boley et al., 2017). Our indicators are designed to reflect Cancun residents' perceptions of the economic, socio-cultural, and environmental impacts of tourism, and the degree to which tourism practices are sustainable (Diedrich & García, 2009; Nunkoo & Gursoy, 2012; Lee, 2013; Lundberg, 2015; Lee & Hsieh, 2016).

Our instrument comprises two blocks: one for the socio-demographic data, and the other one for the attitudes towards economic, socio-cultural, and environmental sustainability (Annex-survey). The socio-demographic variables are: gender (male, female), age (from 18 to 32, from 33 to 47, from 48 to 62, and over 63 years old), place of birth (Cancun, another municipality of the state of Quintana Roo, another state, another country in Latin America, another country outside Latin America), number of years of residence in Cancun (less than 1, from 1 to 5, from 6 to 10, and over 11), education (no school, primary school, secondary school, pre-university school, undergraduate degree, postgraduate degree) and tourism-related job (yes, no). The sustainability indicators are:

A) socio-cultural sustainability (customs and crafts, accessibility to beaches and natural areas, spatial differentiation between residential and hotel areas, quality of life, leisure opportunities, civil security, and social expectations of the Maya Train);

B) economic sustainability (economic benefits, employment opportunities, work conditions, number of tourists, public transport, public services, and economic expectations of the Maya Train);

C) environmental sustainability (environmental protection and conservation, quality of sea water, energy use, water use, treatment of sewage, pollution; gulf weed, and environmental impact of the Maya Train).

Answers related to sustainability were bound to the five-point Likert scale: “strongly disagree”, “disagree”, “neither agree nor disagree”, “agree”, and “strongly agree” (Nunkoo & Gursoy, 2012). The information was processed using the statistical program SPSS 25, which allowed for descriptive and variance (ANOVA) analyses.

## 5. Analysis of results

The sample considered only residents of Cancun; 58.3 percent of them were women and the rest men; the majority of them (63.6 percent) were between 18 and 32 years old (the youngest group); the majority were immigrants from other states (50.3 percent), but with over 11 years of residence in Cancun, and the rest were born in Cancun to immigrant parents or grandparents attracted by job opportunities in the tourist sector; 45 percent of them had university studies, 23.3 percent pre-university studies, and the rest primary and secondary studies; 70.1 percent of the people interviewed said to have no tourism-related job, even though their occupation (trade, real estate, transport, etc.) was directly or indirectly linked to tourism—albeit unacknowledgedly.

Results showed a high Cronbach’s alpha for all sets: socio-cultural sustainability: 0.76 (n=8); economic sustainability: 0.77 (n=8); environmental sustainability: 0.87 (n=8); sustainability: 0.90 (n=24), which indicates a good reliability level.

### 5.1. Socio-cultural sustainability

In the analysis of items in the socio-cultural sustainability set, three cases were found in which the “agree” and “strongly agree” categories accounted for the large majority of answers (over 60 percent): tourism increases leisure opportunities (73.4 percent), improves quality of life (64.4 percent), and helps preserve traditions, customs and local crafts (64.4 percent). In the first case, this is explained by the fact that, in a place like Cancun, tourism has favored leisure-oriented economic activities, although it remains to be seen whether residents in general have access to theme parks and other expensive places. In the second case, results are explained by the fact that tourism has provided a living to many of the immigrants (who make for the majority of the population) and an opportunity to improve their quality of life. Finally, in the third case, results are explained by the fact that tourism has helped promote local crafts and Mexican folklore in general, especially in the Xcaret park (Khafash et al., 2015).

In a slightly higher proportion (more than 50 percent and less than 60 percent) are those who answered “agree” and “strongly agree”; some of them think that the Maya Train will enhance local culture (51.6 percent) and/or agree with the existence of an area exclusive for tourists (50 percent). This peculiar circumstance may be explained by the fact that, since its inception, Cancun was conceived as a project with two well-differentiated areas, one residential and the other exclusively for tourists (Castillo & Villar, 2011). Early and later immigrants, and those who have been born in Cancun, cannot conceive of an integrated tourist and residential space, and seem to feel comfortable with not having to suffer the side-effects of coexisting with tourists (such as noise, drunkenness, drug consumption, etc.).

As for the categories “strongly disagree” and “disagree”, a slightly larger group (51.4 percent) of residents do not feel safe in their community, and a little less than half of the respondents declared that they couldn’t freely enjoy any beach (47.5 percent). In the first case, warfare among drug cartels and local bands for the control of drug traffic in the region has led to a situation of insecurity among residents (BBC News, 2019). Poli & Torres (2013) report a similar situation in Brazil. There is also a group that declares not having free access to natural spaces (46.2 percent), given that many of these spaces are kept private by hotel companies or because paths are unsafe and without facilities (López et al., 2006; Jiménez & Sosa, 2007).

Finally, the “neither agree nor disagree” category represented more than 40 percent on both questions.

### 5.2. Economic sustainability

On the economic sustainability set, the categories “agree” and “strongly agree” accounted for a large majority of answers (over 60 percent) on two of the questions: tourism provides employment (90.1 percent), and tourism brings economic benefit (85.3 percent). In the first case, Cancun clearly attracts an important number of tourists, and the industry requires manpower for services and other needs, which translates into constant employment opportunities, especially during high season. The second case is a consequence of the first one, as residents—many of whom work directly or indirectly in tourism—think that tourism brings money.

The categories “agree” and “strongly agree” accounted for a moderately higher proportion of answers (between 60 and 50 percent) on the following items: the Maya train will bring economic benefits (60 percent), the number of visitors is adequate (59.4 percent) there are attractive tours for the enjoyment of both visitors and residents (54.8 percent), and tourism brings good quality jobs (52.4 percent).

The number of residents who agree with their employment conditions is a case in point, since the literature on the impacts of tourism underlines the precariousness of employment conditions, as employees depend on the

seasonality of the tourism sector and receive minimum salaries, which translates into social problems, including the vicious cycle of drug addiction and small-scale drug trafficking (Oehmichen, 2010).

As for the category “disagree/strongly disagree”, only one majority group (71.4 percent) emerged on the item of satisfaction with public transportation. Another indicator with an important proportion was “tourism improves public services”. Both are aspects of everyday life and continually experienced by residents. The “neither agree nor disagree” category obtained a proportion below 30 percent.

### 5.3. Environmental Sustainability

Residents of Cancun have a negative opinion of tourism in relation to environmental sustainability, as can be observed in the analysis of indicators.

The category “agree/strongly agree” did not obtain a high percentage.

The category “disagree/strongly disagree” concentrates the answers pertaining to all the items relative to the environment. In a salient position (over 60 percent) are: “Tourism helps reduce pollution” (74.7 percent), “Tourism improves water quality” (68.1 percent), “Tourism improves wastewater treatment and sea discharges” (62.5 percent), and “Tourism makes a fair use of electricity, air conditioning, etc.” (60.2 percent).

The same category “disagree/strongly disagree” obtained a less marked prevalence (between 50 and 60 percent) in the following items: “Tourism makes a fair use of drinking water” (59.6 percent), “Tourism helps protect and preserve the environment” (54.9 percent), and “Tourism helps combat gulf weed” (53.3 percent).

Lastly, within the same category of “disagree/strongly disagree”, only one indicator obtained a proportion below 50 percent: The Maya Train will not harm the environment” (41.9 percent). In the “neither agree nor disagree” category, no item obtained more than 40 percent.

From the analysis of environmental indicators can be concluded that residents of Cancun are concerned about the environment, which might be explained by their having witnessed the devastation of the forest in order to make room for buildings, even if the latter are deemed necessary to economic progress and social betterment. The environmental destruction of almost 60 hectares of mangle in less than 72 hours in the Tajamar area in 2016 is a painful event many residents still remember. This event was possible thanks to lax environmental regulations, complicity, and outright corruption by government officials and development enterprises.

A large public demonstration took place at the time just as bulldozers and excavators razed this fragile ecosystem so familiar to Cancun residents, with the only end of satisfying Capitalist gains. Social networking played an important role in the organization of these demonstrations (Brown, 2016). Another reason for residents’ unfavorable opinions about the environmental sustainability of tourism is the accumulation of gulf weed coming from the Atlantic Ocean that gathers in many of the beaches of the so-called Mayan Riviera, affecting tourist arrivals.

In short, while Cancun residents have a slightly positive attitude towards the economic sustainability of tourism (3.36), their perception of its socio-cultural sustainability is less positive (3.22) and, regarding environmental sustainability, it is definitely unfavorable (2.32). Overall, their attitude towards the relationship between tourism and sustainability is ambivalent or, at best, indecisive (2.97) (Table 5). This matches the findings of Shen et al., (2017) in Hong Kong, where residents reportedly had an ambivalent attitude towards tourism development.

**Table 1. Descriptive statistical data on sustainability**

	Average	Deviation
Socio-cultural Sustainability	3.2269	.65573
Economic Sustainability	3.3621	.61149
Environmental Sustainability	2.3225	.78894
Sustainability	2.9700	.58479

Source: Fieldwork data.

### 5.4. Analysis of variance for socio-demographic and sustainability variables

In order to identify different attitudes among groups towards socio-cultural, economic, and environmental sustainability, as well as sustainability in general, an analysis of variance (ANOVA) was conducted. The objective was to differentiate between the groups that are more strongly against tourism and those that are less strongly so (Table 6). The overall results follow:

*Educational level.* Significant differences were found among different groups ( $F=3,968$  [ $-p = 0.001$ ]). The post-hoc test (Scheffé) showed economic differences between residents with an intermediate educational level and those with technical training ( $-p=0.020$ ), the former having a comparatively more positive perception.

Thus, *educational level* can be a predictor for the perception of economic sustainability. Those with intermediate level studies are most probably young people, motivated to find a job or continue their studies to obtain a better one; they are likely to be comparatively more enthusiastic to join the job market and change jobs as needed. On the other hand, those with technical training are comparatively older and more likely to find it difficult to change their jobs. These results are in line with Andriotis & Vaughan (2003), who found that residents with higher education had a less favorable attitude than those with basic education.

*Place of birth.* Significant differences were found among the four spheres of sustainability:  $F = 4.031$  ( $-p = 0.003$ ) for socio-cultural sustainability,  $F = 3.988$  ( $-p = 0.003$ ) for economic sustainability,  $F = 4.142$  ( $-p = 0.003$ ) for environmental sustainability, and  $F = 5.416$  ( $-p = 0.000$ ) for sustainability in general.

As for socio-cultural sustainability, the post-hoc test (Scheffé) determined that those hailing from other states have a more positive perception than those who were born in Cancun. Those from other municipalities of the state of Quintana Roo showed a more positive perception than those from abroad. As for economic sustainability, environmental sustainability and sustainability in general, Cancun-born residents tend to have a more negative perception than those coming from another state.

*Place of birth* came to be identified as a predictor of attitudes. Native residents have a comparatively less favorable attitude towards tourism sustainability in general, as well as in the three spheres analyzed (economic, socio-cultural and environmental). Cancun being a relatively recent tourist destination (built 44 years ago), native residents make for a young sector of society that has witnessed changes in their community. They tend to be more conscious of the city's development and of the consequences brought about by tourism. This result is in line with the study by Almeida et al. (2016) in the municipality of Benalmadena on the coast of Malaga, Spain, where native residents showed a less favorable attitude towards tourism than those from elsewhere. Reportedly, residents' awareness of the negative aspects of living in a mature tourist destination made them feel "burnt out".

Coexisting with tourism and its negative effects (lack of public services, environmental degradation, among others) might lead to a negative perception of tourism in general (Yoon et al., 2001). Similarly, native residents of Cancun might have a stronger sense of community and have a greater concern with the impacts of tourism than those coming from elsewhere (Besculides et al., 2002). The studies by Aguiló et al., (2004) and Davis et al., (1988) in beach resorts of the Balears islands and Florida, respectively, have reached similar conclusions.

*Tourism-related occupation.* Differences among groups were found in the spheres of socio-cultural sustainability ( $F = 5.715$  [ $-p = 0.017$ ]), environmental sustainability ( $F = 8.087$  [ $-p = 0.005$ ]), and sustainability in general ( $F = 7.647$  [ $-p = 0.006$ ]).

In all of these spheres, it was found that those working in tourism had a more negative attitude towards the industry than those working elsewhere. This variable was significant to predict socio-cultural sustainability, environmental sustainability and sustainability in general. Workers in the tourist sector are comparatively more aware and concerned about the social and environmental conditions in which the industry evolves, maybe as a result of their direct contact with these consequences.

No significant differences were found with the rest of the variables (gender, age and years of residence).

Table2. ANOVA results. Attitudes towards sustainability profile

<b>Favorable attitude</b>	<b>Less favorable attitude</b>
<b>Socio-cultural Sustainability</b>	
From another state	Natives
From a municipality of Quintana Roo	From another country
Working in another sector	Tourism-related job
<b>Economic Sustainability</b>	
Secondary school	Technical training
From another state	Natives
<b>Environmental Sustainability</b>	
From another state	Natives
Working in another sector	Tourism-related job
<b>Sustainability</b>	
From another state	Natives
Working in another sector	Tourism-related job

Source: Fieldwork data.

## 6. Conclusions

This study has sought to analyze local residents' perceptions of sustainability in Cancun, a massive beach tourism destination experiencing the economic, socio-cultural and environmental impacts of tourism. The

overriding argument in the relevant literature is that tourism is justified only when it helps improve the quality of life of local residents. This is why, to guarantee the industry's success, it is essential to know the perceptions and opinions of local residents, and to involve them in the management and planning of tourism activities in their community.

By means of a questionnaire, the opinion of 429 residents was collected. The analysis of indicators showed that, in the socio-cultural sphere, most residents thought that tourism increases leisure opportunities. Cancun offers a wide variety of thematic parks (Xcaret, Xel Há, Xplor, and others) and, apart from sea sports it offers tours to the different sites of the archaeological patrimony of the so-called Mayan Riviera. Though these activities are especially designed for tourists, and are offered at prices that most local residents can't afford, the latter have a favorable perception of them.

As for economic sustainability, statements like "tourism brings economic benefits to the community", and "tourism provides employment", have obtained the most positive evaluations. Without question, Cancun is a tourist center that generates economic opportunities and employment. However, residents have an unfavorable opinion of public transport, which is both unreliable and limited, and does not adequately serve the more remote areas. Service is contrastingly better in the hotel sector of the city. The same can be said about other public infrastructure items, since public resources are focused on satisfying tourists' demands.

On the other hand, all indicators pertaining to the environmental sphere received a negative evaluation. The devastation of forest resources in recent history—notably mangroves in the Tajamar area—has made a strong impression on the minds of most residents.

In general, economic sustainability did better than socio-cultural and environmental sustainability in terms of residents' perceptions and attitudes. Finally, sustainability in general elicited ambivalent replies, which is in line with the study by Shenet al. (2017). This leads us to insist in the importance of including local residents into strategic planning and decision-making efforts, as a way to not only attenuate the negative impacts of tourism, but also to avoid a conflictive tourist-resident interaction by taking into account local resident's concerns. On the other hand, the results of this study can contribute to improve local public policy in areas like transportation and environmental conservation.

Our study has also revealed the predictive quality of variables such as place of birth, educational level, and tourism-related occupation. Natives of Cancun tend to have a less favorable and more critical attitude towards the relation between tourism and sustainability than those with technical training and with a tourism-related job.

Finally, although Cancun's characteristic geographical layout avoids the everyday interaction of tourists and residents (including those who lend their services in the tourist industry), the already unfavorable opinion of residents towards tourists and tourism might evolve into irritation, as the model presented by Doxey (1975) suggests. It is therefore wise to periodically check the attitudes of the local population, so as to avoid any negative predispositions.

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