Tourists’ level of awareness and perceptions of the impacts of tourism in Lake Titicaca, Peru

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Abstract
The indigenous communities of Taquile and Amantani in Lake Titicaca, Peru, once sole players in the tourism industry they developed, have lost control of tourism activities to external tour operators. This study sought to understand tourists’ level of awareness of and perception regarding sustainable tourism impacts within Lake Titicaca, Peru, through a quantitative study of 125 respondents. The findings showed that the consumer demands and behaviour of tourists is a contributing factor to the rise in mass day-tourism and the reduced economic benefits to communities in Lake Titicaca. Tourists were also willing to pay more to ensure community development in the region but do not believe that they are responsible for the negative economic impacts in Lake Titicaca.

Introduction
Tourism is an attractive industry for least developed countries (LDCs) as it allows participation in the global economy, especially with the decline of other industries such as farming, mining, and fishing (Carter, Thok, O’Rourke, & Pearce, 2015; Pratt, 2015). Tourism provides many benefits including creating employment and entrepreneurship opportunities, improving infrastructure, the creation of indirect employment and increased economic impact to related areas including transportation, agriculture, and retail (Archer, Cooper, & Ruhanen, 2005; Neto, 2003). Despite these many positive contributions, tourism has many negative impacts including the generation of pollution and waste, leading to environmental degradation, hyper-exploitation of natural, cultural, and human resources, and leakage of profits outside the destination (Ahmed & Nadasen, 2013; Kavoura & Katsoni, 2013; Supradist, 2004). The Indigenous communities within Lake Titicaca, Peru, has also been subject to these issues, especially the islands of Taquile and Amantani.

Once the sole players in the tourism industries they developed, the residents of Taquile and Amantani have lost control of tourism to external tour operators, as the region has been transformed largely to mass day-tourism, resulting in little to no economic benefits to the local Indigenous population. In their struggle to regain control, the locals have sought the assistance of many stakeholders including government, NGOs, and even tourists, however, little has been done to ease their plight (Cheong, 2008). Previous studies have examined the socio-economic impacts external tour operators have in Lake Titicaca (Cheong, 2008; Zorn, 2006; Ypeij & Zorn; 2007), however, none have examined this issue from the tourists’ perspective.

Literature
Tourism first emerged in Lake Titicaca in 1976 when the inhabitants of the island of Taquile, traditionally poor farmers and textile weavers, developed communitarian tourism, without external aid (Cherro Osorio & Best, 2015; Zorn, 2006; Zorn & Farthing, 2007). This form of tourism utilized an ancient Inca practice, whereby community members pool their resources allowing even distribution of benefits to all community members (Zorn, 2006). Utilizing communitarian tourism, community members purchased their first motorboats for the transportation of tourists to the island, established a community textile shop for the purchase of souvenir, and implemented a rotational accommodation system, whereby each family hosted one
Tourism provided many economic and social benefits to the Taquileña including increased incomes, poverty reduction, increased access to education, as well as part ownership and control of the boat groups and community textile shop (Carnaffan, 2010; Zorn, 2006). Additionally, Taquileña households (approximately 350) were able to use the revenue from tourism to improve their homes, adding rooms and purchasing supplies to support their burgeoning tourism industry (Mitchell, 2009). Community members gained these benefits because they owned and controlled all the resources necessary for tourism and because they petitioned for and were granted a government-sanctioned monopoly on transportation (Cheong, 2008). Recognizing Taquile’s success and using it as a blueprint, residents in Amantani established their own tourism industry and both Taquile and Amantani continued successfully until the late 1980s and early 1990s, when external tour operators pressured the Peruvian government to lift the transportation sanction, effectively ending the control the Taquileña and Armantais had over their tourism activities (Cheong, 2008; Saayman & Giampiccoli, 2016). A direct result of the residents losing control of transportation, was that community members were forced to compete with wealthy external tour operators, many internationally-owned, who had access to resources the residents of Taquile and Amantani did not. According to Zorn and Farthing (2007), external tour operators gained better access to tourists because of their ability to speak English, access to financial and technological resources, leaving the islands and their residents vulnerable to economic leakage and exploitation. Tour operators became key players in tourism on the islands as they controlled the supply of tourists, essentially dictating the number of tourist arrivals to the islands and how long they stayed (Zorn & Farthing, 2007). This created Lake Titicaca’s biggest tourism issues: mass day-tourism and economic leakage (Cheong, 2008; Cherro Osorio & Best, 2015; Saayman & Giampiccoli, 2016; Zorn, 2006; Zorn & Farthing, 2007). Negative issues caused by tourism demonstrate the need for the industry to become more sustainable. Sustainable tourism is defined by the United Nations Environment Program (UNEP) and the World Tourism Organization (UNWTO) (2005) as “tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment and host communities” (p. 12). Achieving sustainable tourism development has increasingly become the responsibility of all tourism stakeholders and one important stakeholder group are tourists. According to Dodds and Graci (2009), sustainable tourism development should be the shared responsibility of all tourism stakeholders and the consumer demands of the tourist stakeholder group can influence how destinations are managed.

This study focuses on the tourist stakeholder and offers insight into tourists’ awareness and perception of socio-economic issues within the destination, and their assessment of whose responsibility it is to alleviate these impacts. Previous studies (e.g., Beeken, 2007; Budeanu, 2007; Dodds & Graci, 2010; Hillery, Nancarrow, Griffin, & Syme, 2001) have applied stakeholder theory in the context of tourists’ perception of and role in achieving sustainable tourism. While these studies all focus on the tourist as the key stakeholder, a gap exists in the literature as these studies do not address the tourists’ perception of socio-economic impacts of tourism and whose responsibility they believe it is to reduce these impacts.

Methodology
To understand tourists’ awareness and perception of the impacts of tourism in Lake Titicaca, Peru, the researcher utilized quantitative data collection methods in the form of structured questionnaires. Items for the questionnaire were determined through conducting a literature
review of previous studies on tourists’ perception of sustainable tourism issues (Dodds & Graci, 2010; Hillery et. al, 2001; Passafaro et. al, 2015; Petrosillo, Zurlini, Corliano, Zaccarelli, & Dadamo, 2007; Szell, 2012). The questionnaire used a five-point Likert scale to reduce respondents’ “frustration level” and to increase both the response rate and response quality (Babakus & Mangold, 1992; Sachdev & Verma, 2004). Data were collected (face-to-face intercept survey) from a convenience sample of tourists who traveled to Lake Titicaca and who visited any of the islands on the Peruvian side of the lake. A total of 125 completed surveys were collected at Terminal Terrestre Puno, in May 2018.

Findings
Of the 125 respondents, 61% were females while 38% were males, with the majority between the ages of 25 and 34 (56%) followed by those aged 18-24 (16%), 35-45 (13%), 55+ (8%), and 45-54 (3%). Approximately half of the respondents (46%) earned less than US $25,000 per year, while 24% earned annual incomes between US $26,000 and $40,000. Lake Titicaca attracts visitors from many countries, the top three countries in this research was found to be France (20%), domestic tourists from Peru (14%), and Argentina (12%).

Tourists’ length of stay in Lake Titicaca. Of the 125 tourists surveyed, only 15 took part in a local homestay in Lake Titicaca, therefore, 88% of tourists engaged in day tours. These findings support the findings of previous studies (Cheong, 2008; Saayman & Giampiccoli, 2016; Zorn, 2006; Zorn & Farthing, 2007), which state that the tourism industry in Lake Titicaca is largely comprised of mass day-tourism. The findings of this study also revealed that approximately half of the participants (44%), spent two hours or less on the island they visited, 33% spent between 3 and 6 hours, 9% stayed 7 to 12 hours, while 12% stayed one night or more in Lake Titicaca. The study found that 54% of day tourists spent most of their time in the floating islands of Uros, while the other half (46%), spent most of their time in Taquile. The majority of overnight tourists visited Amantani (87%) while 13% visited the island of Taquile.

Motivation for visiting Lake Titicaca. The study found that the vast majority of day tourists (62%) and overnight tourists (69%) visited Lake Titicaca for culture and heritage. If culture and heritage of the indigenous locals was the main attraction, then it would be expected that tourists would spend more time in the local communities engaging with the local people and their cultures. Visitors to Lake Titicaca have a choice to partake in a day tour, spending a few hours on one or more of the islands or they can participate in a multi-day homestay. The local homestay experience is focused on the daily life of the Indigenous residents and tourists have an opportunity to observe, or if they choose to, participate in cooking local dishes, weaving, and other cultural expressions (Carnaffan, 2010). The findings of this study reveal that a large majority of tourists (88%) choose to partake in half-day or full-day excursions, instead of a local homestay, which support the findings of Cheong (2008).

Mode of transportation within Lake Titicaca. The participants were then asked to indicate their mode of transportation to the islands within Lake Titicaca. The findings revealed that 89% of day tourists and 80% of overnight tourists traveled within Lake Titicaca by way of group tour boats. These findings also support previous findings by Cheong (2008), that tour operators have largely overtaken transportation of tourists within Lake Titicaca.

Tourists’ awareness of the impacts of tourism in Lake Titicaca, Peru. Respondents were asked the open-ended question, “please specify any impacts of tourism, positive or negative, observed during your excursion in Lake Titicaca”. A content analysis was completed
and responses fell within the following categories: inauthentic, overcrowded, environment, economic, preservation of culture, erosion of culture, and residents (see Table 1).

<table>
<thead>
<tr>
<th>Impacts Observed</th>
<th>Description of Observation</th>
<th>Sample Quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic (30%)</td>
<td>Positive Economic Impacts</td>
<td>“Tourism bring income”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“Tourism develops community”</td>
</tr>
<tr>
<td>Inauthentic (28%)</td>
<td>Inauthentic experience</td>
<td>“Uros felt more like a visit to the zoo than having an authentic experience”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“Felt like a show”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“Uros felt like Disney”</td>
</tr>
<tr>
<td>Environment (26%)</td>
<td>Negative Environmental Impacts</td>
<td>“Degradation”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“Trash everywhere”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“Pollution in bay”</td>
</tr>
<tr>
<td>Residents (12%)</td>
<td>Issues with residents</td>
<td>“Residents too pushy selling craft”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“We are like wallets for them”</td>
</tr>
<tr>
<td>Preserve culture (11%)</td>
<td>Tourism helps to preserve or share the local culture</td>
<td>“Positive because it allows the islanders to share their culture and daily lives.”</td>
</tr>
<tr>
<td>Erosion of culture (10%)</td>
<td>Negative impacts on traditions and culture</td>
<td>“A lot of things are designed for tourism. Can affect culture”</td>
</tr>
<tr>
<td>Overcrowded (9%)</td>
<td>Too many tourists all at once</td>
<td>“Overcrowded”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“Too many tourists”</td>
</tr>
</tbody>
</table>

n does not add up to 125 as not all participants gave responses to this question and some participants had multiple responses

**Tourists’ awareness of the impacts of tourism in Lake Titicaca.** Participants were then given a list of statements and asked to indicate their level of agreement with each to understand the tourists’ perception of the impacts of tourism in Lake Titicaca. This study found that the participants have an overall positive perception of the impact of tourism in Lake Titicaca, however, as seen in Table 2, differences are observed between the perception of day tourists and overnight tourists. One reason why day tourists have a more positive perception of the impacts of tourism in Lake Titicaca than overnight tourists, is because almost 50% of day tourists stayed less than two hours in the destination, having very limited contact with residents. The overnight tourists engage in a homestay with a family and have more opportunities to speak with their hosts regarding their own perceptions of tourism as well as having the ability to make more nuanced observations while there.
Table 2. Tourists’ level of awareness and perception of tourism impacts in Lake Titicaca

<table>
<thead>
<tr>
<th>Local Prosperity</th>
<th>Day tourists (Mean)</th>
<th>Overnight Tourists (Mean)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tourism is important to the local economy</td>
<td>4.46</td>
<td>4.20</td>
</tr>
<tr>
<td>Tourist activities and spending will positively impact the local economy</td>
<td>4.12</td>
<td>3.90</td>
</tr>
<tr>
<td>The residents are happy having tourism on their island(s)</td>
<td>3.77</td>
<td>3.64</td>
</tr>
</tbody>
</table>

Social Equity

| Tourism creates employment opportunities for indigenous women | 3.94 | 3.53 |
| The residents have equal participation and involvement in tourism | 3.81 | 2.79 |
| The residents have equal access to tourism benefits         | 3.45 | 3.00 |
| Tour companies practice responsible tourism                 | 3.13 | 2.73 |

Local Control

| The residents are in control of tourism in their community | 3.24 | 3.21 |

n does not always add up to 125 as some participants did not give a response to all the statements. Responses measured on a 5-point Likert scale, where 1 corresponds to “strongly disagree” and 5 with “strongly agree”.

Tourist willingness to pay for economic and social sustainability in Lake Titicaca. The tourists were then asked to indicate their willingness to pay an additional tax to support community development in Lake Titicaca, how much they were willing to pay, and the initiatives they would like to see developed as a result of this tax. This study found that day tourists’ willingness to pay (63%) was similar to overnight tourists’ willingness to pay for community development within the communities they visited (see Table 3).

Table 3. Tourists’ willingness and maximum willing to pay for community development

<table>
<thead>
<tr>
<th>Stated willingness to pay an additional tax (%)</th>
<th>Maximum visitors would be willing to pay (in US $)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 to 2 (% )</td>
</tr>
<tr>
<td>Day tourists 63</td>
<td>18.0</td>
</tr>
<tr>
<td>Overnight Tourists 60</td>
<td>15.0</td>
</tr>
</tbody>
</table>

n = 122 as not all participants gave responses to this question

Differences are observed, though minor in some instances, in the kinds of initiatives day tourists and overnight tourists would like to see implemented as a result of a potential visitor tax. Day tourists were more willing to pay to support local business development in Lake Titicaca (26%) than overnight tourists (7%). Additionally, day tourists expressed a willingness to pay for initiatives to promote entrepreneurship (9%) compared to none of the overnight tourists. Interestingly, 12% of day tourists indicated they would like to see the tax be used to support housing development compared to none of the overnight tourists.

Who should be responsible for equal distribution of benefits in Lake Titicaca? Participants were asked to indicate who they believe should be responsible for ensuring the residents in Lake Titicaca benefit from the economic contributions as a result of tourism activities in the destination. Only 6% of the 125 respondents believe tourists should be held
responsible, all of which were day tourists, as none of the overnight tourists believe that ensuring the residents benefit from tourism was the responsibility of tourists. Instead, the vast majority of both day tourists and overnight tourists believe that the local government should be most responsible, followed by the national government and then tour operators (see Table 4).

Table 4. Who should be responsible for ensuring the residents benefit from tourism

<table>
<thead>
<tr>
<th></th>
<th>Day tourists (%)</th>
<th>Overnight Tourists (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local government</td>
<td>59</td>
<td>53</td>
</tr>
<tr>
<td>National government</td>
<td>43</td>
<td>33</td>
</tr>
<tr>
<td>Tour operators</td>
<td>21</td>
<td>27</td>
</tr>
<tr>
<td>NGOs</td>
<td>11</td>
<td>0</td>
</tr>
<tr>
<td>Tourists</td>
<td>11</td>
<td>0</td>
</tr>
<tr>
<td>Residents</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

\( n \) does not always add up to 125 as participants had multiple responses

Discussion

Lake Titicaca is a very popular Peruvian destination and despite a steady increase in the number of tourists to the destination, the indigenous residents now receive little to no economic benefits as a result of tourism activities in the region. The residents have become increasingly frustrated with the state of tourism in their communities due to the activities of external tour operators and despite turning to multiple tourism stakeholders to assist them in their struggle to regain control of their tourism activities, there are few initiatives are in place to ensure the residents benefit.

As with the study by Dodds and Graci (2010), this study examined the tourists’ perceptions of sustainability issues and willingness to pay for sustainability. Both studies believe that tourists are an important stakeholder in the sustainable tourism discourse because their consumer demands and behaviour influences destination planning and management. Dodds and Graci (2010) found that the tourists were willing to pay for sustainable initiatives and that along with the local government, they themselves were responsible for ensuring the sustainability of the destination. As in Dodds and Graci (2010), this present study revealed that most tourists (62%) were willing to pay an additional tax per visit to support the implementation of sustainable initiatives in Lake Titicaca, however, unlike the Dodds and Graci (2010) study, the tourists largely believed they should not be held responsible for ensuring sustainability in Lake Titicaca. Instead, the tourists in this study largely believed that the responsibility of sustainability should be placed on the national and local government. Though the large majority of tourists in this study indicate a willingness to pay for the implementation of sustainability initiatives in Lake Titicaca, only 6%, all of which were day tourists, believe the burden of responsibility should be placed on them. This indicates that the tourists in this study do not believe they are an important stakeholder in Lake Titicaca benefit and this attitude may be due to the limited time spent in the destination. Since 88% of tourists engaged in mass day-tourism, half of which spent two hours or less, the tourists in this study seem to believe they have limited control of how tourism operates in Lake Titicaca, however, by paying a tax, they show a willingness to do something. None of the overnight tourists believe that they should be responsible for ensuring the locals benefit from tourism activities. This attitude may be due to the fact that unlike day tourists, overnight tourists have spent one or more nights engaging in a homestay with a local family and this experience costs significantly more than day tours. The overnight tourists may believe that
they have made enough of a contribution to the economic wellbeing of the community and as such, the burden of responsibility should be placed elsewhere. Though none believed the responsibility should be placed on them, a large majority of overnight tourists (60%), were still willing to pay a tax for the implementation for sustainability initiatives in Lake Titicaca. Since tourists are largely willing to pay a tax each visit, it is strongly advised that the local government should take advantage of this inclination. Unlike the docking and entrance fees, which is already collected by tour operators with no oversight, the tourist tax should be collected by agents of the local government and used to implement sustainable initiatives in the indigenous communities in Lake Titicaca. The tax can be used to allow the residents to gain access to well needed resources which would level the playing field between them and external tour operators. One initiative which requires immediate attention is addressing the kinds of tourism experiences available in Lake Titicaca and how they are promoted to tourists.

Budeanu (2007) stated that one of the barriers to sustainable tourism is the lack of involvement of the tourist consumer. As with Budeanu (2007), this study examined barriers to sustainable tourist behaviour. Like Budeanu (2007), this study found that tourists generally want to engage in more sustainable behaviours, however, barriers to desired behavior lies within the nature of tourism products and services. In this present study, 52% of those who did not stay overnight in Lake Titicaca stated that they were constrained by their organized tour schedule. This indicates that the nature of the tourism product influenced tourists’ behaviour.

Peru consists of a number of regional attractions, connected by a well-developed transportation network. Most tours operators provide packages with multiple destinations with the most popular regions being Lima, Cusco, Arequipa, and Lake Titicaca (Cheong, 2008). The nature of the tours may be negatively impacting how much time tourists believe they need to stay in Lake Titicaca as it is promoted as a stopover destination on the way to Bolivia. This research found that 65% of tourists who did not stay overnight believed that spending only a few hours on the island they visited was an adequate amount of time. Additionally, 64% of respondents who visited Taquile and did not stay overnight indicated that they did not know it was possible to do a homestay on the island. This is significant as 42% of the 125 participants selected Taquile as the island on which they spent the most time. The Taquileña are the pioneers of tourism in Lake Titicaca, which was developed as an immersive, cultural experience through multi-day homestays with local families, however, the findings of this study reveal that the vast majority of those who visited the island is unaware of the offering. Tourists might be willing to spend more time in Lake Titicaca if the experiences are promoted differently.

Study Limitations
This study has a small sample size, but it has provided a glimpse into the tourists’ viewpoint in this region and how to solve the negative issues of tourism.
References


World Travel and Tourism Council (WTTC), 2015. Travel & Tourism: Economic Impact 2016, Annual Update Summary.


