The Viability of Further Growth: An Integrated Analysis of Ecotourism in the Galapagos Islands

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Introduction

Tourism is the world's largest service industry and contributed upwards of 7 trillion to the world economy in 2015[1] (Self, Self and Haynes 2010). It is also a rapidly growing industry with 1.5 billion people expected to be traveling around the world in 2020. Ecotourism, in turn, is the fastest growing segment of the tourism industry, estimated to be growing up to 7 times faster than the rest of the tourism industry (Self, Self and Haynes 2010). Since it was first conceptualized in the 1980s, ecotourism has been championed by many as a viable way to generate economic growth while conserving sensitive ecosystems, especially for developing countries. However, ecotourism's ability to fulfil what might be competing goals, of conservation and development, has been called into question as researchers debate its supposed sustainability.

The Galapagos Islands are an Ecuadoran archipelago lying about 1000 kilometers off of its mainland coast. The iconic islands are notable for their wealth of endemic fauna and flora, remarkable geological formations as well as playing a key role in the development of Charles Darwin's theory of evolution. Since the 1960s, Galapagos has been one of the world's premier ecotourism destinations, offering tourists an unparalleled nature experience as a relatively untouched natural sanctuary. Tourism to the islands has also grown rapidly from 17,500 in 1980 to over 200,000 in 2013[2], a rate of growth which has alarmed many conservationists (Taylor, Dyer, Stewart, Yunez-Naude, Ardila 2003).

[1] http://www.statista.com/topics/962/global-tourism/
[2] http://www.cnhtours.com/news/2014/4/6/2013-tourism-statistics-released/

The purpose of this paper is to provide key insights on ecotourism to the Galapagos Islands, taking an integrated approach to the economic, social and environmental issues that ultimately determine its sustainability. Upon reading two ecotourism literature reviews, major trends and gaps in the literature have become clear and this paper was designed to address these. After detailing how efforts to understand the different impacts of ecotourism have flourished over the years, Weaver and Lawton argue that these studies have remained "separate" and the literature would benefit from an "interdisciplinary approach". Similarly, in undertaking a content analysis of papers published in the Journal of Sustainable Tourism from 1993 to 2007, Lu and Nepal concluded that the journal appeared "to be multidisciplinary rather than interdisciplinary", highlighting the need for an integrated approach (Lu and Nepal 2009). Lu and Nepal also highlight the geographical underrepresentation of Latin America in sustainable tourism studies, which this paper also addresses (2009). In addition, both literature reviews highlight the emerging trend of sociocultural foci, underscoring the importance of taking into account "empowerment issues" of indigenous communities (Weaver and Lawton 2007). This paper seeks to capitalize on this trend by providing new survey data on the relationship between ecotourism providers and local communities. Qualitative observations from a trip to the Galapagos, where different ecotourism products were sampled will also figure into the analysis. Therefore, the paper will be structured as an integrated literature review of Galapagos ecotourism with new findings on the social interactions between community and ecotourism firms (this approach is consistent with the approach followed by Peake, Innes and Dyer).

First I will set the stage by defining the parameters of this discussion by overviewing key definitions and historical context. Then, I will look at substantive debates over the nuances of the

term ecotourist by distinguishing between “soft” and “hard” forms of ecotourism. Next, I will cover specific characteristics of the Galapagos ecotourism model such as differences between land and sea based tours. Subsequently, I will present the results of my literature analysis and qualitative observations which led to the conclusion that ecotourism growth should be stopped.

Ecotourism

The term ecotourism is relatively new. An early definition by Ceballos-Lascurain defined ecotourism as “Traveling to relatively undisturbed or uncontaminated natural areas with the specific objective of studying, admiring, and enjoying the scenery and its wild plants and animals, as well as any existing cultural manifestations (both past and present) found in these areas”. The overarching concept has its origins in the 19th century, when the first major national parks were established in the United States, New Zealand and Australia, because of political pressure from hikers and individuals wishing to preserve sites for minimal impact recreation (Mercer 1996). The first recorded use of the term in academic literature was in the mid-1980s and referred broadly to travel that included any aspect of nature. According to Kruger, the rise in interest in ecotourism runs parallel to the rise of the term “sustainability”, itself being popularized after 1987 (2003). In the 1990s, ecotourism organizations such as the International Ecotourism Society and the Ecotourism Society were formed and with them came the definition that in broadest usage today - “responsible travel to natural areas that conserves the environment and sustains the well-being of local people” (Self, Self and Haynes 2010).

Ecotourism has become one of conservation’s hottest “buzzwords” which has created the need to refine its understanding (Alyward et al. 1996). Since some have used the term interchangeably

with “nature tourism”, “adventure tourism” and “responsible tourism”, attention has been devoted to distinguish ecotourism from its counter parts by identifying characteristics that are unique to it. In 2006, the International Ecotourism Society listed six principles that tourism activities should adhere to in order to be considered ecotourism. These include “(1) minimize impacts, (2) build environ- mental and cultural awareness and respect, (3) provide positive experiences for both visitors and hosts, (4) provide direct financial benefits for conservation, (5) provide financial benefits and empowerment for local people, and (6) raise sensitivity to the host countries’ political, environmental, and social climates” (Rivera and Croes 2010). As Weaver and Lawton point out, the scholarship appears to have reached a near consensus on the core definitional aspects of ecotourism which tend to converge around the aforementioned principles (2007).

Despite largely agreeing on what theoretical steps are needed to achieve sustainable ecotourism, such as supporting local economies, generating revenue for conservation, etc., the practical accomplishment of these goals have been more controversial. Kruger points out that although ecotourism seems to provide a solution to “the dilemma of conserving nature while achieving short-term economic gains”, especially in struggling, developing countries, there are compelling arguments against it. For instance, he cites several scholars who argue that any type of tourism is a threat to protected areas, that revenues generated by ecotourism are too small to support conservation or that ecotourism and conservation are inherently antagonistic goals (Kruger 2003). Due to the inherent unsustainability of air travel, which generates the largest negative environmental impacts in the ecotourism consumption chain, ecotourism can hardly be sanctioned through the prism of a cost-benefit analysis (Gossling 1999). As such, some have

acknowledged that negative impacts are unavoidable and that expectations of "Zero Impact" are unrealistic (Khan 1997). Lu and Nepal have suggested a trend toward seeing ecotourism as an end-goal to be strived toward as opposed to a specific product (2009). Therefore, it appears to be more beneficial to work towards the amelioration of the ecotourism model, devising best practices and policies as opposed to condemning an inevitable economic activity.

Due to differences in definition, attempts to isolate ecotourists as a defined group of consumers has been problematic. Whereas some scholars group all visitors to highly protected areas as ecotourists, others set more stringent criteria and expect higher levels of differentiation from non-ecotourists (Weaver and Lawton, 2007). Hence, ecotourists are generally characterized by higher levels of education, income and environmental awareness, as well as trending female and originating from the developed world (Self, Self and Haynes 2010). In addition, a relevant distinction has been noted between "hard" and "soft" ecotourism. Hard ecotourism refers to intense exposure to nature at the expense of modern travel luxuries in accommodation and meals, whereas soft ecotourism offers a mix of nature interaction with comforts of regular tourism (Weaver, 2001). Expectations of quality between these two subsets of ecotourists tend to diverge significantly which complicates the design of ecotourism products (Rivera and Croes, 2010). The

Table 1: Nature Tourism versus Ecotourism

	Nature Tourism	Ecotourism
Focus (Honey & Stewart, 2002)	What travelers do	Impact of travel on the environment & host country
Management Decisions (Stem, et al., 2003)	Based on Utilitarian values	Based on Nature's intrinsic values, community self-determination & participation
Education (Adamson, 2005)	Does not contain an educational component	Educational is a significant component and teaches travelers about the environment, the wildlife and the local area
Motivation for participation (Powell & Ham, 2008)	Entertainment, comfort & consumption	Appreciation and education
Type of Participation (Kim, 2009)	Passive participation through scenery	Active participation through experience oriented characteristics
Conservation Emphasis (Leach, 2004)	Travel in the environment without a conservation dimension	Low or zero impact travel with focus on environmental conservation
Size of tour & guide (Kim, 2009)	No limit on participation, no guide/interpreter required	20 members or less with on-site education and interpreter/guide
Area visited (Thomson 2000)	Natural area	Protected area

hard/soft distinction is also useful as a frame of analysis towards ecotourism destinations like Galapagos. Attracting soft ecotourists is a natural step towards regular mass tourism which is generally synonymous with the emergence of a host of environmental issues at the site in question. The hard/soft distinction is similar to the tenuous but important divide between nature tourism and ecotourism, exemplified above in Table 1, devised by Self, Self and Haynes (2010). The tension between genuine, nature-focused and education-oriented ecotourism and more commercial, entertainment-oriented trips is noticeable in different Galapagos ecotours. More structured, rigorous types of ecotourism can be used as a measure of that site's degree of commitment to conservation or whether it is being motivated by short-term financial gain.

The Galapagos Ecotourism Model

The Galapagos Islands have been an ecotourism mecca since before the term was even popularized. Located 1000 kilometers off the Pacific coast of Ecuador, the Galapagos Islands became a designated UNESCO World Heritage Site in 1978 and a UNESCO Man and Biosphere Reserve in 1984 (Self, Self and Haynes 2010). In addition to holding a special place in the collective consciousness due to its association with Charles Darwin's Galapagos voyages and his subsequent development of the theory of evolution, Galapagos is home to at least 7,000 species, of which 97% of reptiles, 80% of land birds, 50% of insects and 30% of plants are endemic (Viteri Mejia and Brandt 2015). Comprised of about 120 islands and about 8000 square kilometers, the Islands are managed by the Ecuadoran government through the Galapagos National Park (GNP). Around 97% of the islands are protected under the purview of the GNP and only three of its islands are inhabited – Santa Cruz, Isabela and San Cristobal, with the remaining 3% for human habitation (Powell and Ham 2008). An important institutional

collaborator to the GNP is the Charles Darwin Research Station which since the late 1950s has functioned as a scientific research hub and conservation advocate (Rozzi et al, 2010).

The National Park was willed into existence by the combined efforts of UNESCO, the International Union for Conservation of Nature and the Charles Darwin Foundation in 1959. Military bases established in Galapagos by the United States during World War II provided naval and aerial infrastructure that enabled connectivity with the continent (Rozzi et al, 2010). Organized ecotourism to the islands began in 1969 when the first cruise ship arrived to the islands, an event that inaugurated world ecotourism (Honey 2008). During this early period, about 1000 tourists visited the islands per year but it would increase drastically to 40,000 in the 1990s and then even further to 180,000 in 2008 (Self, Self and Haynes 2010). The causes of this unprecedented growth included market liberalizing policies adopted by the Ecuadorian government in the 1980s as well as the rise of ecotourism as a marketing buzzword, leading to hefty investments in vessels and hotels and growing tourist demand (Rozzi et al, 2010). The growth of short-term, profit-oriented tourism ran parallel to uncontrolled overfishing and an explosive increase in invasive species which threaten the delicate ecological balance of the islands (Powell and Ham 2008). With the goal of mitigating these negative processes, the Special Law for the Conservation and Sustainable Development of Galapagos was enacted by the government in 1998. The law banned industrial fishing, established stricter demarcations for tourist activity and curbed migration (Rozzi et al, 2010). However, despite the law's good intentions, immigration and visitation numbers have continued to grow at alarming rates throughout the 2000s (Self, Self and Haynes 2010). Due to the "biocultural impacts of distorted ecotourism", UNESCO declared Galapagos a World Heritage Site in Danger in 2007, only to controversially remove it from the list in 2010 (Rozzi et al, 2010). The current predicament of

the Galapagos can be seen, then, as being in a crossroads – the ecotourism that was once viewed so positively as a way to conciliate development and conservation is threatening to crumble under the pressure of unbridled, unsustainable growth.

Tourism to the islands can take two forms: maritime, in which visitors fly in to one of the three airports located on the inhabited islands and then board a vessel for the duration of their stay or terrestrial, in which visitors fly in but opt to stay in island hotels throughout their visit. Maritime tourism is the original form of experiencing the Galapagos, allowing tourists to visit a greater number of islands; it used to be the only form available prior to the development of land infrastructure. Conversely, land-based tourism is a more recent and growing mode, in which tourists experience local cuisine and have greater opportunities to experience local life. In the 15 years leading to 2006, the number of hotels grew from 33 to 65 and restaurants/bars from 31 to 114 whereas the number of vessels grew from 67 to 80, a much lesser pace (Rivera & Croes, 2008). Staying on shore renders visiting islands that are farther away impractical (i.e. while staying in the port town of Puerto Ayora, Santa Cruz, one would be unable to visit islands such as Floreana) but also allows tourists to explore local attractions such as the solar energy center, diverse geological formations (i.e. lava caves, “Las Grietas” and “Los Gemelos”) and several beaches. Land-based tourists may also take day-trips to nearby islands (i.e. Bartolomé, Pinzón or Plazas from Santa Cruz), organized through local firms and in which naturalist guides are also present.

The two forms of tourism offer distinct benefits and problems. Land-based tourism is in large part looser and less structured than marine tourism, which is always led by certified naturalist guides. Powell and Ham have shown that a well-designed ecotourism product (in their study, a 7-day maritime cruise) can lead to knowledge gain, increases in support and

philanthropic intention for conservation and general improvement of environmental behavior (2008). Though Powell and Ham's survey is limited to one cruise-ship experience, it is reasonable to infer that maritime tours are at least better poised to deliver proper interpretive messages to visitors, given the constant presence of nature guides. Land-based tourists, on the other hand, do not require naturalist guides to access most onshore attractions and thus can easily be left unexposed to education and conservation messages. Whereas seaborne visitors are in contact with trained guides at almost every turn, land-based visitors would have to be proactive in seeking out such sources of information in day-trips or research centers. The land-based education experience is thus much more prone to be fragmented and less effective than its maritime counterpart. It could also be argued that land-based tourism is a direct consequence of the emergence of "soft" tourism to the Galapagos, one that is more interested in comfort and amenities over authentic learning.

Nevertheless, maritime tourism is not without its detractors. Sea-based tourists tend to spend much less in the local economy and more than 90% of the income generated by their visit is absorbed by the airlines servicing the islands and cruise ships maintained physically in the islands but owned by companies in mainland Ecuador (Taylor et al, 2003). This is problematic for a variety of reasons. Many researchers point towards community-based ecotourism that includes and generates revenue for locals as the solution to ecotourism's unsustainable woes (Weaver & Lawton, 2007; Scheyvens 1999; Mehta & Kellert 1997). Kruger has shown, in a review of sustainability case studies of ecotourism ventures, that among unsustainable cases, the 2nd and 4th most cited reasons for failure are lack of community involvement and lack of revenue creation for locals (2003). Furthermore, the leading reason for success among sustainable cases was involvement of local community in most stages (Kruger 2003). Therefore, maritime tourism,

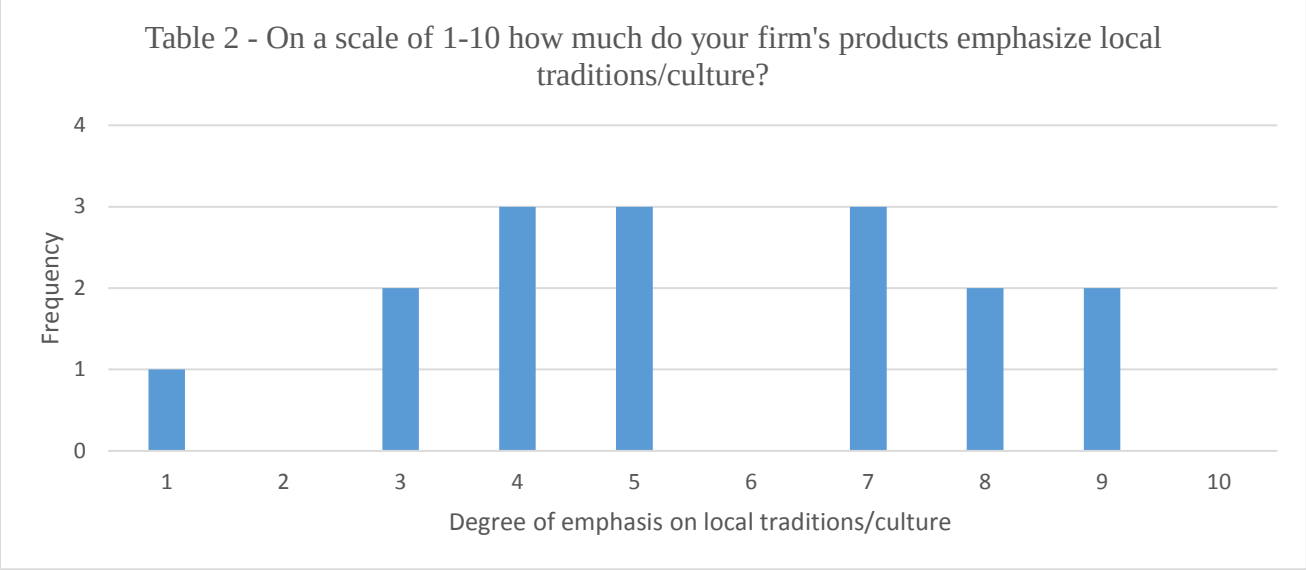
with its detachment from local revenue generation might alienate community support for tourism in the long run. As Scheyvens proposes, ecotourism success is only possible if the local community is being empowered by equitable, lasting economic gains and maritime tourism appears to be antithetical to that goal (1999). To investigate this further, I designed and conducted a survey to assess policies of international ecotour operators, shedding light on how these firms approach the question of empowering local communities.

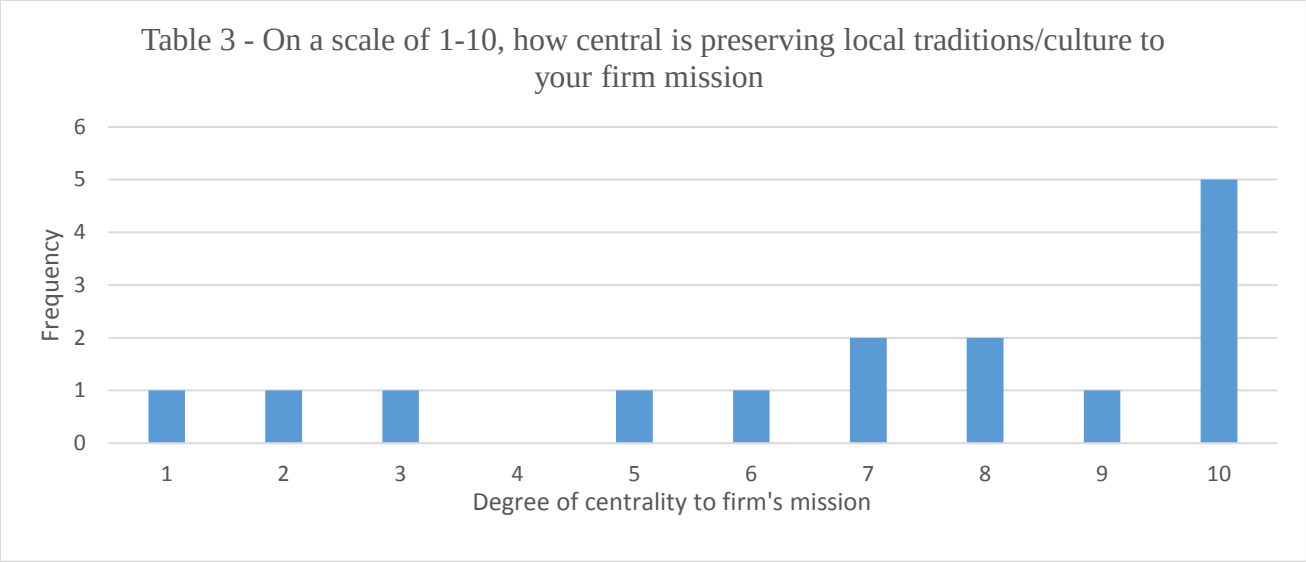
Survey of Ecotourism Providers

This survey was conducted over the months of June through August and was sent to responders via email. Targeted responders were all organizations listed under the member directory of the International Galapagos Tour Operators Association and a $25 gift card drawing was used as an incentive. 15 responses were recorded from a total of 38 firms listed (response rate: 40%). Questions were developed to probe the question of local community economic empowerment as laid out by Scheyvens's framework and inspired by questions asked in a case study conducted in the Makalu-Barun Conservation Area in Nepal by Mehta and Kellert (1999, 1997).

In terms of services, four respondents provided boat-based tours exclusively, five provided only land-based tours and six offered a mix of both along with snorkeling and trails. In total, 73% of the firms had their headquarters overseas and 27% in mainland Ecuador, none in Galapagos itself. Over 50% of firms serviced Galapagos along with other places around the globe, 27% serviced Galapagos and other Latin American countries and only 13% serviced Galapagos exclusively. Only two firms had been in operation for less than ten years with a majority running for at least 20 years.

6 firms employed under 10 people, 8 firms employed between 20 and 60 individuals and one firm employed 120. Seven of these firms employed zero Galapagos locals, three had between five and 25% of employees be locals and five had at least 50% of employees be locals. Of the eight firms that employed locals, only four employed at least 50% locals who were Galapagos residents for at least ten years. 69% of firms said they had hiring policies in place to favor locals while the rest said they did not. When asked to elaborate on their hiring policies, seven firms noted that they worked with “local partners” who hire locals, but did not employ these directly. All respondents claimed to contribute economically to local communities via local charities, educational initiatives or cultural sponsorships.The firms were also asked to what extent their ecotourism product and their mission emphasized local traditions and culture. The results are displayed in the tables below:





Discussion

Firstly, it must be noted that the response rate of the survey is not ideal. Despite multiple reminders sent via email and the economic incentive, a majority of target responders did not complete the survey. Hence, the data might not offer statistically representative information or sufficiently illuminate trends. Nevertheless, there is information gleaned from the data that is worth discussing. For instance, the data lends support to the argument that Galapagos ecotourism at the moment doesn't sufficiently support the local economy. No firms are based in Galapagos which indicates surplus revenue and profits are not staying in the islands. In addition, despite stated inclusion policies, a large portion of firms did not employ locals directly. When prompted about the emphasis of culture and tradition in their firm's mission and products, results were more positive but ultimately impossible to verify. Due to the small data set and questions about de facto versus stated practices, it would be highly encouraged to design a more appropriate data collection method (i.e. phone or in-person interviews to ask follow-up questions).

Insights were also gleaned from qualitative observations of the Galapagos during a visit. One of the most striking aspects of Puerto Ayora, the biggest city of the Islands, is the quickly expanding urbanization. Construction sites and new roads are aplenty, with the boundaries of the city being pushed outward in a disorganized fashion. These developments, many unfinished, appear to occur in the absence of central planning but rather as a response to booming demand for housing for recent immigrants. The infrastructural developments (roads, hot water, ports, buses, etc.) observable are largely positive but have space to improve. Water heating systems in hotels are highly inefficient and wasteful despite a state of the art solar energy matrix powering the islands. Common trails such as Las Grietas and Tortuga Bay also lack trash cans to prevent any littering.

According to Scheyvens, signs of local community empowerment include equitable participation in the economy as well as a sense of social/psychological wellbeing (1999). Based on personal observations, many of these signs were present. The center of the city is well developed, with multiple souvenir shops, restaurants, parks and tourism offices. Locals are equal participants in the local economy, many of them dining and consuming at the same restaurants and shops as tourists. In addition, there are plenty of cultural manifestations which locals participate in that do not appear to have been diluted by the presence of tourists such as outdoor theater performances, traditional Ecuadoran dance acts and participation in sports.

I also had the opportunity to participate in three hybrid tours (sea and land based mix) to the Pinzón, Bartolomé and Plazas Islands, all of which were led by local naturalist guides. Overall one could observe a lack of overarching conservation message in these tours. Though they were

usually instructive and nature-oriented, tour guides made no effort to tie in endemism and natural beauty to the need to conserve. Donations to the GNP were never requested and discussion over sustainability of tourism in regards to conservation of the islands also did not occur. Granted, they weren't branded overtly as ecotours, but are still part of the larger Galapagos ecotourism complex. Notwithstanding, tour guides were solidly trained, making sure to adhere to strict GNP regulatory hurdles such as a nautical speed limit when crossing to a different island, frequent reminders not to touch or feed animals and insisting on not stepping on rocks when visiting uninhabited islands.

Conclusions

The biggest dilemma facing Galapagos is how to grow ecotourism in a way that empowers the local community economically while safeguarding conservation. It is clear that uncontrollable growth would jeopardize the sensitive equilibrium of Galapagos's unique ecosystem. Visitation and immigration to the islands have grown at extremely high rates and the prospect of further growth is alarming. Galapagos was on UNESCO's endangered habitats list just recently and critics have already pronounced the ecotourism experiment there a failure[3].

Yet, despite the massive growth of tourist flow, locals haven't always benefitted economically from ecotourism. Part of this can be attributed to the boat-based tours which expropriate revenues to either mainland Ecuador or other nations. Yet, boat-based tourism can provide more authentic learning experiences, as shown by Powell and Ham, than land-based alternatives, thus posing another conundrum. Furthermore, encouraging land-based tours or ways to increase local

[3] http://voices.nationalgeographic.com/2015/01/05/galapagos-tourism-backfires/

wages and revenues would have significant impacts in migration to the Galapagos. Taylor et al conducted an important modeling of the Galapagos economy and concluded that a "10% increase in tourism stimulates migration by an amount equivalent to 5% of the existing island workforce" (2003). Wage increases are usually erased by increased labor supply to the Islands from the mainland, where wages are usually lower. As such the "migration stimulus" to the Islands has caused the Galapagos population to increase at rates above 6% per year. The "tourism-income-population growth spiral at nature-tourist destinations" can create incentives "either to conserve or to exploit the natural resource base" and thus, must be addressed by the local government (Taylor et al, 2003).

To make sure the former occurs over the latter, ecotourism growth must be stopped. In order to achieve that, the GNP can institute a visitation cap per year which has been implemented in diverse places such as Venice, Antarctica and Fernando de Noronha. Visitation caps would be more effective and efficient at limiting the number of visitors than attempting price controls (i.e. increase in entry fee). Studies show that tourists would already be willing to pay more and thus, a fee hike would likely fail to curb numbers (Viteri Mejia, Brandt 2013). Higher fees should still be levied as a way to fund better planning and management of the GNP and to increase the stimulating impact of conservation in the local economy (Gossling 1999, Taylor et al, 2003). Indeed, imposing a cap might lead to an increase in the price for visitors in light of reduced supply. The visitation cap would be indirectly useful in controlling migration but a better immigration policy should also be implemented, especially to curb illegal immigration. The GNP should also create stricter messaging guidelines for tour guides so that a consistent conservation message is conveyed and donations to the GNP encouraged.

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