“Nobody Came Down”: The Effect of the Financial Crisis on Tourism in Two Roatán Communities

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Abstract

This article examines the effects of the 2008 financial crisis on the tourism sector in the communities of West End and Punta Gorda on the island of Roatán, Islas de La Bahia (Bay Islands), Honduras. This article is based on ethnographic field research conducted in these two communities from April 2011 to April 2012 for a dissertation project. This project is both biocultural and political ecological in nature and utilizes a mixed methods approach incorporating participant observation, semi-structured interviews that delve into household livelihoods and foodways, and surveys that assess dietary diversity. Overall, the tourism sector on Roatán suffered a drastic setback from June of 2009 until 2010 and has recovered at different rates depending on the particular type of tourism work practiced by the household. Among other things, occupational group has a significant relationship with dietary diversity. From this research I make recommendations to improve income and dietary diversity for households engaged in sectors that have not recovered. This includes adjustments to cruise ship schedules to enable more souvenir and food sales, courses to improve local residents’ marketability in higher paying tourism jobs such as scuba diving instruction, and community gardens to improve access to food and dietary diversity. The primary goal of this article is to spark discussion of the differential effects of the financial crisis on tourist receiving locations through the detailed presentation of one empirical example of these effects.

Keywords: Tourism, political ecology, financial crisis

Introduction

With a great deal of scholarship extant regarding the biocultural and political ecological effects of tourism on communities in developing nations (Leatherman and Goodman 2005; Himmelgreen et al 2006; Torres 2003; Torres and Momsen 2005; Daltabuit et al 2006; Telfer and Wall 1996), this article expands this literature through the exploration of the effect of the recent global financial crisis on household ability to make a living through tourism in places that already have a heavy investment in this sector. This article focuses on the challenges of making a living in tourism in the communities of West End and Punta Gorda on the island of Roatán, Islas de La Bahia (Bay Islands), Honduras, and how these challenges differentially affect household dietary diversity. The basis for the article is a dissertation project with research conducted in the two communities from April 2011 to April 2012. It is my contention that, while I have not been able to establish a statistical linkage between the financial crisis and the vicissitudes of tourism work in these two communities in recent years, the preponderance of semi-structured interview data, coupled with other examples of tourism in the wake of the financial crisis (Li et al. 2010; Chan 2011) suggest a lagging effect of the crisis on tourism income, but with different intensity depending on the type of tourism work. There may be an
effect on dietary diversity as well, as the occupational group least associated with tourism has the best mean dietary diversity. In this article I begin by summarizing the theoretical perspective of the project. In subsequent sections I explain my research methodology followed by a results summary, discussion, and recommendations for future actions.

A Biocultural Political Ecology of Tourism and Nutrition

This research is couched within a broader theoretical framework of bioculturalism and political ecology, with specific attention to the political economic and health effects of tourism on diet and nutrition. While Alan Goodman and Thomas Leatherman (1998; see also Dressler et al 2005; Ulijaszeck and Lofink 2006) define a biocultural synthetic approach as one that integrates political economic, cultural, and biological factors in the study of the human condition, Paul Robbins (2004; Hvalkof and Escobar 1998; Guha 1997; Bryant 1992) positions political ecology as an approach which combines political, economic and ecological factors in exploring how human societies and their environments affect each other. For instance, one may use political ecology to link the cultural and economic processes of tourism development with the consequences of this development to human health and local habitats.

According to much of the anthropological and geographic literature on tourism (e.g. MacLeod 2004; Juarez 2002; Faulkenberry et al. 2000; Brown 1999; Stonich 1998; Pleumaron 1994; McElroy and Albuquerque 1992; Mader 1992; Escobar 1999), tourism tends to have profound, and often negative environmental, economic, and cultural effects on local communities in much of the world; the evidence for this argument is especially strong in developing nations. While the ecotourism ethos may sometimes mitigate negative environmental impacts of this sector, other dislocations, such as to livelihoods and food systems can persist (Himmelgreen et al. 2006). Susan Stonich (2000; Daltabuit 2000; Leatherman and Goodman 2005; Juarez 2002) discusses the common phenomenon of the planning and control of tourism development as outside the control of residents in the local community. Donald MacLeod (2004; see also Stonich 2000; Stonich 2005) presents a political ecological narrative of resort development causing substantial ecological changes including competition with more traditional land uses such as cultivation and artisanal fishing. In the Mexican state of Quintana Roo, Leatherman and Goodman (2005; see also Torres 2003; Himmelgreen et al 2006) detail negative effects of resort development including the disruption of traditional agrarian social relations and production, increasing commoditization of local food systems, disparity in food access, increased malnutrition in some communities, increased incidence of respiratory infections and cardiovascular disease, and increasing socio-economic disparities.

The aforementioned studies, both political ecological and bicultural, validate Kathryn Dewey's (1989) assertion of increasing disparity in food access and dietary health in much of Latin America is associated with increasing commoditization of food from the latter part of the twentieth century to the present. Biocultural tourism research also touches on the effects of malnutrition that precipitate from uneven access to the benefits of tourism development; childhood stunting is of particular interest because it is associated with chronic undernutrition, and obesity, which relate to chronic overnutrition (Leatherman and Goodman 2005; Himmelgreen et al. 2006). Chavez et al. (2000; Allen 1984; Martorell 1980) define stunting as low height for a given age. They link stunting to several long term negative effects on health,
including physical activity, cognition, somatic and reproductive development, severity and duration of illness, and adult work capacity. In addition to undernutrition, the rise in overnutrition and obesity in many parts of the world (Torres and Momsen 2005; Ellison 2005; Eaton and Konner 2000) has implications for increasing incidence of metabolic disorders and associated pathologies such as diabetes and heart disease, especially in areas experiencing a rapid shift from low fat, high fiber diets, to diets more heavily based on “prestigious” processed foods which tend to by high in fats and cholesterol, simple sugars, and sodium but low in fiber and many micronutrients (Evans 1986; Barker 1995; Adair and Prentice 2004).

Many of these linkages among tourism, food commoditization, and health are also present on Roatán, with evidence of a high degree of commoditization (Brown 2006; Evans 1986), decreasing dietary diversity, increasing reliance on delocalized and processed foods, and health problems associated with overnutrition since the advent of tourism as a major sector on the island in the 1980s (Evans 1986; Stonich 2000). In addition to the biocultural implications of changing food systems, changing diets, and attendant health risks, there is also a strong political ecological component to the study of tourism development on Roatán. The cyclical association between environmental degradation and tourism is of particular importance; both Stonich and I (1998; 2000; Brown 2006) have found that while resort development has contributed to habitat loss and degradation and decline of important food species, the decline of these resources has also pushed people into the wage labor workforce, particularly in tourism.

Implications of the Global Financial Crisis

Given the economic and nutritional processes of globalization discussed above, the global financial collapse that originated in the U.S. housing sector in 2007 has important, if unclear implications for societies in developing nations that have recently become enmeshed in global capitalist economies with a heavy reliance on tourism. In concert, these events may cause severe economic, cultural, and dietary distress for many communities around the world (News Hour 2008; von Braun 2008; Zarger 2009; Richard 2008; Schiller 2008; Shah 2009; Chan 2011; Li et al. 2010). While tourism numbers for Honduras continued their positive trend in 2008, the robustness of this trend remains to be seen when the numbers become available for 2009, when the meltdown had a more dire effect on household income in the U.S. for the entire year (Honduran Institute of Tourism 2010); due to the common attitude of vacations as discretionary spending, a downturn in the number of visitors and in revenue may become apparent once statistics for 2009-2012 are published.

Compounding these effects is the 2009 political crisis in Honduras that occurred in which a sitting president was deposed by the military and a political stalemate, with concurrent protests and international condemnation (Cassel 2009; News Hour 2009). These events severely depressed revenue from tourism for a period of six to eighteen months thereafter (Jim Black personal communication June 2011). While the presidential election of late 2009 tamped down the international and domestic controversy surrounding the aforementioned events somewhat, it remains to be seen what the long term economic ramifications will be (Miller Llana and Faulk 2009; Rozenzweig 2010).
Methodology in Brief

This study is an ethnographic study combing an initial period of data collection and a follow-up round over the course of a year-long period spanning from April 2011 to April 2012. This project utilizes a mixed methodology based on participant observation, informal interviews, semi-structured interviews, and surveys. More specifically, I have complemented an overall framework anchored in participant observation with qualitative data collection via informal interviews over a wide range of topics and semi-structured household interviews eliciting occupational information and general ideas about important foods and changes in food prices. While I have compiled data from participant observation by writing detailed field notes at the first available opportunity, I have compiled data from semi-structured interviews by taking notes during the interview and then fleshing out those notes later with transcriptions from digital audio recordings of the interviews. Additionally, I have collected quantitative data on food availability and price in local markets through market surveys, dietary diversity through food frequency questionnaires (FFQ), and food security or insecurity through a Household Food Insecurity Access Scale (HFIAS). For all semi-structured and structured interview instruments, I have piloted the instrument with a few respondents outside the sample and then adjusted accordingly to make the instruments more cogent and comprehensible to local respondents. Data collection has also involved a constant process of building people’s trust and adjusting to circumstance. For example, I was able to overcome residents’ initial reluctance to participate by taking advice from and enlisting the help of well-respected friends in each community.

In order to obtain the results presented below, I have utilized an analysis plan that incorporates qualitative data from fieldnotes and semi-structured interviews and quantitative data from surveys and anthropometric measurements. While the creation and analysis of codes for the qualitative data have been mostly deductive processes based on the pre-existing research question, I have also used inductive analytical techniques based on themes that emerge with some frequency during the iterative process. Quantitative analysis has involved the compilation of descriptive statistics of dependent variables based on dietary diversity and food security. Specifically, I have found the mean and median for dietary diversity score and food security score for the entire sample as well as broken down by the independent variables of community, occupational group, income level (low, medium, or high), and tourism involvement (no or yes). Table 1 below links the theoretical perspective and research question of this project with the needed data, data collection methods, and analysis plan.
As the quantitative results on dietary diversity below indicate, one may have a more reliable income and access to a broad diet from steady work in tourism or ownership of a fairly well established tourism business than in engaging in a small scale enterprise. For the island as a whole, the two main drivers of tourism are scuba diving and the cruise ship ports at Coxen Hole and Mahogany Bay (in Brick Bay). Resorts and hotels island-wide are dependent on scuba diving for much of their business and the cruise ship ports have helped spawn several ancillary attractions and enterprises such as scooter rentals, zip-line canopy tours in the rainforest, performances, and souvenir sales. Both scuba diving and cruise ship ports of call show a distinct seasonality, with the high season running roughly from October to April and the low season from May to September. Improved weather conditions on the island, combined with continued winter weather further north make for a fairly steady stream of customers January through March and Holy Week marks a high point of the year. For many hotel workers, restaurant workers, and small scale enterprises, the low season makes for dire financial straits. Many respondents report layoffs or decreased hours during the low season. Water taxi operators and vendors may go a week or more without earning any income.

According to several respondents to the semi-structured interview for businesses, revenue from tourism has suffered since 2005. The businesses that survived until 2011 generally report a resurgence of business and revenue. A North American hotel owner stated:

We saw phenomenal growth from 2005 to when the [2009 Honduran] coup happened. I hope tourism returns to that level again. The growth on the island went from one cruise ship a week to as much as four cruise ships a day. When the coup happened, the problem was they kept closing the boarders, closing the airports, and people won’t travel when there’s any uncertainty. There was no danger on the island… Borders were closed… it dried up. So we made money up until the coup, then virtually nothing for the next six months. Then the [financial crisis] hit and Americans weren’t traveling as much… Whether there was less people traveling, or just fewer coming here, we saw a significant drop in business.
This quotation indicates that the hotel owner was doing quite well until the Honduran political crisis of 2009, then started to recover somewhat, but has not attained pre-coup revenue streams yet. He opines that the global financial crisis may play a factor.

A local bar owner describes the impact of the coup on the otherwise steady trajectory of his bar’s revenue over the last several years.

Yeah. This year so far has been pretty good. About two years ago, when they had the “pseudo coup” and all of those political problems was a bad year; because there were about five things Honduras had bad press for. There was the swine flu; there was an earthquake, riots about [price hikes by the Roatán Electric Company] when the electrical prices went up, then the political situation. It was definitely a year when a lot of businesses where going under. I’m very lucky [with this bar], because my family owns the property [that the bar sits on]. In West End a lot of businesses closed down because they couldn’t make the rent. That would have been 2009, which was the worst year for [the bar] since it opened. Every year other than that, there’s been a steady increase in business as we’ve become more popular in the World, through the internet and through maintaining a high level of service...Actually, 2011 may turn out to be a record year.

In counterpoint to the aforementioned hotel owner, this bar owner has been recovering fairly well as of 2011, with many loyal expatriates as customers in addition to tourists.

With the exception of the political crisis of 2009 and early 2010, most owners of established tourism businesses and many of their employees garner some income during the low season. The same is not always true of small scale enterprises. A water taxi operator and tour guide describes the changes tourism has wrought in West End in recent years, including the political turmoil of 2009.

Oh, there's been a lot of changes...especially with the cruise ship. We have had about two cruise ships a week, and are going to go up to about nine a week at the end of this month. Before time there were no cruise ships, so things have gone up with tourism. Tourism has caused a lot of changes...The labor's very cheap... That's what mess up our country is the labor's too cheap. If it weren't for that we'd be alright. The president we just had [Mel Zelaya], he’s the one that brought the labor up to L5500 a month. Before they were making L3000 [$158] a month. But the president fixed it so everyone should make at least L5500, about $250 a [month]...I make more money now... Some days are very slow; some days we don’t make nothin’ bro. We only work for [Jim Black] about one day a week, until the end of the month. In October, it’s going to be raining, but they’ll be a lot of ships. Our busiest time of year is winter, but you don’t get all the days because it’s raining too much...it doesn’t rain every day and you get some good days in between. At the end of this month, we get up to nine ships, which is good...

Another water taxi operator sitting idle with a group of about eight idle water taxi operators in May 2011 said, “...During Semana Santa [Holy Week], we were pretty busy. Now, it’s dead; we’re lucky to get a few tourists in a week. My brother and I decided to move our location from West Bay to West End to cut down on the competition for tourists, but so far we’ve only
had a few customers, and made a little bit of money…” During the periods in May, often lasting up to four hours at a time, that I conducted participant observation on this particular water taxi, the brothers saw a few groups of cruise ship tourists walk by their spot but never had any tourists utilize their service. One or both of the brothers would sit in the boat, or under a palm tree on the beach, and chat with other water taxi operators and food and souvenir vendors, idling away hours of the day. This situation may be part of a larger trend of diminution of spending by tourists in situations where they have greater discretion in spending, versus scuba diving or the cruise tour itself, where a tourist must pay to participate. A common refrain for many souvenir vendors goes, “…we have more tourists now than a few years ago, but they are not spending as much money, they aren’t buying as many [souvenirs as before the coup]…” This quote corroborates frequent observations of women roving the beaches and main road of West End with containers of food or hand-made jewelry and only infrequently making a sale.

Likewise, souvenir vendors at the few tourist attractions generally put forth a great deal of vocal effort to attract tourists’ attention and were rewarded with at most one or two sales per bus load, usually at a value of a few dollars each. A woman living in West End with her extended family describes the sporadic nature of tourism work and other wage labor since 2005, “…My husband does masonry work. My father-in-law is a taxi driver. Santos is a security guard at Sunset Villas. Alfredo does carpentry… My husband does the same work [as he did in 2005]. My brothers used to cut brush [with a weed eater] and take tourists out for charters in a [long narrow boat]…” This circumstance may well be associated with perceptions of reduced discretionary purchasing power on the part of the visiting tourists, and consequently reduced income for the vendors.

Overall, there is indirect evidence of a lagging effect of the financial crisis on tourism in these two Roatán communities. While the immediate impact is not as obvious as that of the coup in Honduras, the fact that many enterprises struggled more than a year after the U.S. travel advisory was lifted indicates that other factors may be at play. The other salient point is the uneven nature of the aftermath of the coup, with more established businesses such as hotels and restaurants having recovered to a greater extent than most small scale enterprises as of the fieldwork period. The vignette below further illustrates the precarious position of many households focused on small-scale enterprises.

One Family’s Quest for Livelihood: Ethnography of Precarity

One may say that collectively the MacLeod Lorenzo family is versatile. Most of the men have at least occasionally worked in commercial fishing and the father of the family, Harold MacLeod, has had several years where he spent the majority of months on a shrimp or lobster boat. His son Sydney has served in the Honduran military and has a certification as a backhoe operator, but does not have full time work right now. Daughter-in-law, Bertha Forest, has extensive experience cooking in restaurants and son, Bubba, is a fairly capable electrician who works sporadically in this capacity and in other types of construction jobs. Currently, Harold spends most mornings on the sea in his dory and hopes to earn enough money soon to fix his

1 In order to protect confidentiality, I have used pseudonyms for any respondent mentioned by name.

2 A type of small craft similar to a canoe, usually either made of wood from one tree trunk or fiberglass.
larger motorized boat and make regular extended fishing trips in order to earn income from seafood sales. His wife Faith Lorenzo runs a *champa*, a type of small scale restaurant made from local wood and other materials, near the beach across the loop road from their home in Punta Gorda.

Recently, Harold embarked on a multi-day fishing trip in his motorized boat with Sydney, his friend Jacob, a man called Eziquiel, and a curious anthropologist. They took the boat to a key near the eastern tip of Roatán and used it as a base camp to fish for several species of fish, conch, and lobster. While they managed to catch several hundred pounds of fish, a few conch, and about fifty pounds of lobster, a tropical storm caused the boat's hull to spring several leaks and only a constant effort by the crew enabled them to return with most of the catch unspoiled. The boat is out of commission until Harold can get fiberglass to repair the leaks. The lobster was unsellable because trace amounts of diesel that leaked into the hold have blackened the shells. Despite all the best efforts, the fishing trip did not yield as much income as the family hoped it would.

Meanwhile, Faith's champa has busy days and slow days. While on some weekends, she gets several customers from nearby towns and even a few tourists, she can also go several days without any sales. Starting in October, the community center across the road has several busloads of cruise ship tourists most days, with many tourists looking in on the champa, but relatively few sales. In one revealing incident, a tourist walks into Faith's champa kitchen and takes several photographs without asking permission, then boards the bus without buying any food or beverages. Faith stands patiently and does not say anything during the encounter. Indeed, it is difficult to make sales, as the tourists usually only have a maximum of fifteen minutes between the end of the entertainment in the community center and the departure of the buses. This short time window is especially onerous when each dish is made to order.
Even with these challenges, Faith usually earns enough money in a week to help pay the electric bill and buy more supplies for the champa.

As with most small scale enterprises in West End and Punta Gorda, Harold’s fishing operation and Faith’s champa incur a certain degree of vulnerability. It is interesting to note that when there is a strong flow of income, meals tend to include more meat, fish, and vegetables. When income is short, meals tend to be more monotonous, with beans replacing animal protein and a higher frequency of tortillas and fritas, or fried cakes of flour.

**Occupational Breakdown of the Sample**

By way of placing the forgoing vignette in broader context, this section details the statistical relationship between household occupation and dietary diversity. In order to conduct a more robust statistical analysis, I have placed the 81 households of the sample into three occupational categories: tourism work; small scale enterprise; and shipping, seafood, and office work. The first category includes the owners of well-established businesses such as restaurants, bars, or dive shops that have a permanent structure and paid employees who work several hours a week. This category also includes tourism workers who have a relatively high wage such as dive instructors and mid-level tourism workers such as dive boat captains, restaurant staff, and hotel staff; these workers are not as highly paid as dive instructors but have steady employment and pay year round or for the high season. The small scale enterprise category includes people who sell food or jewelry on the beach or in stalls at tourist attractions, water taxi operators, taxi drivers, tour guides, artisanal fisherman, security guards, and construction workers. Small scale entrepreneurs have a more variable and less stable income than other tourism workers and tend to be independent operators rather than paid employees. The shipping, seafood, and office category includes those employed by long range commercial fishing operations, employees of seafood processing plants, and those who

![Figure 2: The Fishing Boat with Dory](image-url)
work as sailors aboard commercial ships such as cargo ships or oil rig supplier ships. The office component of this category includes municipal and bank office workers, staff at retail businesses such as grocery stores or clothing stores, and miscellaneous occupations such as cleaning houses or a pastor at a church. The frequency of each category for the entire sample for both rounds of data collection appears below in Table 2 with percentages in parentheses.

<table>
<thead>
<tr>
<th>Round of Data Collection/ Season</th>
<th>Tourism Work</th>
<th>Small Scale Enterprise</th>
<th>Shipping, Seafood &amp; Office</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>R1: Dry/Low</td>
<td>23 (32%)</td>
<td>30 (37%)</td>
<td>25 (31%)</td>
<td>81 (100%)</td>
</tr>
<tr>
<td>R2: Wet/High</td>
<td>22 (33%)</td>
<td>23 (35%)</td>
<td>21 (32%)</td>
<td>66 (100%)</td>
</tr>
</tbody>
</table>

Table 2: Occupational Group Frequencies for Both Rounds of Data

**Occupational Group and Dietary Diversity**

For the sample, I have calculated dietary diversity scores by adding up the frequencies of each food item in each category of the FFQ (dairy, meat, seafood, fruit, vegetables, starch, drinks, junk food), and dividing that number by the number of foods listed in that category. For instance, the frequency of foods in the dairy category would be divided by seven and the frequency of foods in the fruit category would be divided by five. This process corrects for the bias to the results that categories with more items such as starch and junk food would otherwise cause. Scores lower than 84 points fall into the low diversity category, scores between 84 and 140 in the medium diversity category, and scores greater than 140 in the high diversity category. Because the data for this variable do not have a normal distribution, I have created ranked dietary diversity scores and used this ranked variable for all statistical tests and models. Table 3 gives central tendencies for dietary diversity scores and categorical frequencies broken down by occupational group for both rounds of data collection.

<table>
<thead>
<tr>
<th>Occupational Group</th>
<th>Mean</th>
<th>SD</th>
<th>Median</th>
<th>Ranked Mean</th>
<th>SD</th>
<th>Low (46%)</th>
<th>Medium (42%)</th>
<th>High (12%)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tourism Work R1</td>
<td>99.51</td>
<td>44.89</td>
<td>96.20</td>
<td>29.40</td>
<td>20.97</td>
<td>12 (46%)</td>
<td>11 (42%)</td>
<td>3 (12%)</td>
<td>26 (100%)</td>
</tr>
<tr>
<td>Tourism Work R2</td>
<td>91.47</td>
<td>28.47</td>
<td>85.72</td>
<td>28.05</td>
<td>20.00</td>
<td>7 (32%)</td>
<td>14 (63%)</td>
<td>1 (5%)</td>
<td>22 (100%)</td>
</tr>
<tr>
<td>Small Scale Enterprise R1</td>
<td>120.15</td>
<td>48.27</td>
<td>111.57</td>
<td>42.68</td>
<td>22.75</td>
<td>5 (17%)</td>
<td>19 (63%)</td>
<td>6 (20%)</td>
<td>30 (100%)</td>
</tr>
<tr>
<td>Small Scale Enterprise R2</td>
<td>95.35</td>
<td>26.36</td>
<td>96.64</td>
<td>31.21</td>
<td>19.04</td>
<td>5 (22%)</td>
<td>17 (74%)</td>
<td>1 (4%)</td>
<td>23 (100%)</td>
</tr>
<tr>
<td>Ship., Sea., &amp; Off. R1</td>
<td>134.09</td>
<td>44.89</td>
<td>126.44</td>
<td>51.04</td>
<td>22.25</td>
<td>4 (16%)</td>
<td>10 (40%)</td>
<td>11 (44%)</td>
<td>25 (100%)</td>
</tr>
<tr>
<td>Ship., Sea., &amp; Off. R2</td>
<td>106.01</td>
<td>29.47</td>
<td>106.26</td>
<td>40.95</td>
<td>17.01</td>
<td>6 (29%)</td>
<td>12 (57%)</td>
<td>3 (14%)</td>
<td>21 (100%)</td>
</tr>
</tbody>
</table>

Table 3: Dietary Diversity Central Tendencies and Categorical Frequencies by Occupational Group for Both Rounds

A repeated measures analysis of variance (rANOVA) reveals significant cross-seasonal variance among the occupational groups, with a p-value of 0.01, with post hoc testing showing a significant difference between the tourism work and shipping, seafood, and office groups. Though the mode for all occupational groups is medium dietary diversity, seafood shipping, and office has proportionally more representation in the high diversity category than other...
groups while tourism work and small scale enterprise seem to be more heavily represented in the low diversity category. Figures 3 and 4 depict the dietary diversity difference between occupational groups graphically for Rounds 1 and 2, respectively.

Figure 3: Bar Graph Depicting Categorical Frequencies of Dietary Diversity by Occupational Group for Round 1

Figure 4: Bar Graph Depicting Categorical Frequencies of Dietary Diversity by Occupational Group for Round 2
Discussion: Implications of the Results

On the whole, the benefit a household derives from tourism work largely depends on the specific type of work in which its members engage. Livelihoods in tourism range from ownership of fairly profitable tourism related businesses to steady wage work in an established tourism business such as a dive shop or hotel, to small scale independent enterprises mainly based on souvenir and food sales along the island’s beaches, at resorts, or by the roadside; there is a wide disparity of income among these livelihoods. The owners and managers of dive shops, larger restaurants, and hotels show markers of high income such as vehicle ownership, ownership or rental of sturdily made dwellings filled with electric appliances and running water, and steady access to resources such as internet, propane, and the ability to travel to and from the island at will. Additionally, most dive instructors/masters (who are mostly western expatriates) live in conditions that comport with basic Western standards. For workers such as dive boat captains, hotel maids, cruise ship tour guides, and restaurant staff, work and income may hold steady throughout the year or may vary sharply between the high and low season. Most independent sellers of food and souvenirs report fewer physical assets and struggle year round to make ends meet, but with even greater difficulty during the low season than the high season. The quotes from the water taxi operator and souvenir vendors above illustrate the boom and bust nature of disparities in opportunity between the high and low seasons. This disparity of the amount and reliability of income is based on two conditions. In the case of dive instructors, this occupation involves specialized skills that limit the number of people eligible to be certified, especially in the case of Honduran nationals who often have deficient math education according to many informal interview responses. More broadly, tourists must pay to have any substantial interaction beyond inquiring about prices and services with dive shops, restaurants, or hotels. Especially in the case of dive shops and hotels, many tourists book and pay for their services prior to arriving on island. In contrast tourists have much more leeway in choosing whether or not to spend money after leisurely gazing upon the wares or inquiring about the services of small scale entrepreneurs.

According to most respondents of business-based and semi-structured interviews, tourism did not visibly suffer in 2008 when the global financial crisis became apparent, but in the latter half of 2009 after President Zelaya had been put on a plane to Costa Rica at gunpoint. In response to the turmoil in Tegucigalpa and other cities, the U.S. Department of State issued a travel advisory for the entire country. While the Bay Islands remained calmer and safer than many areas of the country, tourism on Roatán dwindled to almost nothing. The consensus among business interviewees is that these dire conditions continued for approximately six months after the coup, with an anemic recovery in 2010 and a more robust visitor-ship and revenue stream in 2011.

Despite the fact that the coup has had a more apparent short-term impact on Roatán’s tourism industry than the financial crisis, the long term impact of the latter may be more complex. The fact that souvenir sales are still depressed despite the upturn in visitors in 2011 and early 2012 may indicate that the financial crisis is taking longer to manifest its full effect on the economic health of Roatán communities than just the drop off in tourism that came in the wake of the coup. This lag in souvenir purchases negatively affects vendors in both communities, but has less of an effect on people pursuing other tourism livelihoods such as cruise tour guide or dive instructor, where customers must pay a fee in order to participate. On
the whole, incomes have fallen since before the financial crisis and the coup, according to the preponderance of household and business interview data. The statistical analysis indicates that households in the shipping, seafood, and office category have the highest mean dietary diversity scores and significantly greater mean scores than households in the tourism work group across the two rounds of data collection. This situation may occur because all of the western expatriates in the sample fall into the tourism work category. The FFQ is more closely attuned to the typical diet of local islanders and other Honduran nationals who comprise the bulk of the sample than it does the reported diet of most expatriates interviewed. There may also be a buffering effect against the seasonal vagaries of tourism in the form of wages and direct access to surplus seafood that the fishing operations or processing plant give to workers rather than sell.

**Recommendations for Addressing Tourism and Dietary Diversity Issues**

Given the problems outlined above, this section outlines recommendations to improve household livelihoods in tourism; these recommendations stem from participant observation of tourism businesses and respondents ideas. The first recommendation deals with the improvement of income generation opportunities for small scale enterprises, the second seeks better equality of opportunity in the tourism sector, and the third seeks an alternative to income for improving dietary diversity.

In order to address the problem of low income from tourism for small scale entrepreneurs, adjusting the schedule of cruise ship tour buses to allow more time at attractions may improve the situation. In many vending areas, it is evident that tourists only have approximately ten to twenty minutes and independent vendors at these attractions make disappointingly few sales. Coordination between cruise ship companies, municipal governments, and local tour operators could ensure that tourists have more time at each attraction, giving small scale entrepreneurs more opportunity to make food or souvenir sales.

Next, equal opportunity in the tourism economy seems problematic. At least one bar owner stated that the majority of his staff is comprised of expatriates because *Islanders* and mainland Hondurans do not have a cultural understanding of customer service that is conducive to maintaining customer loyalty among his mostly western clientele. Likewise, at least one respondent stated that the dearth of Honduran citizens in his dive instructor corps (one of the highest paying jobs in the community) is largely explicable by the fact that Hondurans from any location do not have sufficient math skills to pass scuba dive master or dive instructor courses. The best way to rectify these disparities of opportunity is through subsidized educational and training programs. One respondent suggested something akin to a bartending school, but more comprehensive to train more people how to maximize their relationships with customers and employers. Though such a course may entail some conflict with culturally held attitudes, it would give low income households an opportunity to develop skills in order to participate in a full range of livelihoods related to tourism. As many potential students would be hard pressed to pay for instruction, a subsidy by the municipal government

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3 In this case, the term Islander, or Bay Islander, denotes a descendent of settlers from the eastern Caribbean dating from the 1830s or a Garifuna person descended from the Garinagu who were deported from St. Vincent to Roatán by the British in the late eighteenth century. With the exception of the Garinagu, Bay Islanders speak English as a first language, though most are also fluent in Spanish.
or a group of business owners would be beneficial. It might even be feasible for students to pay back all or part of the cost of instruction over time, at little to no interest, provided payment could be deferred until students are gainfully employed and that installments are not too onerous. Courses in English for Ladinos and Garifuna might also improve opportunity, as well as a practical math course geared toward scuba related math. While some dive shop owners also cited fear of scuba as a barrier, at least the availability of supplemental math and language instruction, under the terms outlined above for customer service courses, would open the opportunity of a scuba career to Islanders and Ladinos who wanted to pursue this avenue.

In terms of improving dietary diversity, using small scale cultivation as a supplement to food bought in stores may have some efficacy despite the fact that it is mostly practiced in the breach. Not only could subsistence cultivation provide foods such as yucca, bananas, melons, and others that may increase in price directly to households, those households that are able to produce a surplus may be able to augment their income during slow periods of the annual tourism cycle. The fact that many households have at least one adult who is unemployed, under employed, sporadically employed, or seasonally employed suggests that many households could supply labor to tend plantations. The major weakness of such a plan is the lack of land access for cultivation for many households. There is also the issue of preservation of remnant terrestrial habitats such as tropical forests on the island. The most workable solution to these problems is for existing tracts of land currently or recently under cultivation or pasturage to be used for something akin to a community garden. Owners of large holdings could rent land to local governments or private cooperative groups that could then be utilized to plant bananas, melons, beans, carrots, peppers, and other crops. Alternatively, people without land to cultivate could volunteer time on Roatán’s few remaining large plantations and receive a commensurate amount of food in return. As many crops are harvested during the dry season, which is also the low season, households with an ebb in tourism income could supplement their diets and food security in this manner.

**Conclusion**

Though further research into the issues treated in this article is necessary, it provides a starting place for useful dialogue and action in improving dietary diversity in West End, Punta Gorda, and possibly Roatán as a whole. It is vitally important to discern the particular contours of economic distress and disparity in tourism work in the wake of the financial crisis because nation-states and communities around the world have made a major investment in tourism and many of these communities do not have the same natural or agricultural resources in reserve as they did before tourism development (e.g., Leatherman and Goodman 2005; Himmelgreen et al. 2006; Zarger 2009). In order to help those who have suffered the greatest adverse effect from the global financial crisis, it is imperative to outline the effects of this crisis in detail. This article is one empirical example to contribute to the broader picture.

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