INTRA-DEMOGRAPHIC DIFFERENTIAL SATISFACTION LEVELS WITH CRUISE SHIP AND DESTINATION EXPERIENCES: THE CARIBBEAN CRUISE

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Abstract- This study examines whether cruise ship passengers in different age groups, with different education and income levels, will have significantly different satisfaction levels in their experiences on the cruise ship as well as cruise destinations. We used a survey data of 304 passengers on five Caribbean Cruise ships while on land at their last destination of the cruise during the 2011-2012 seasons. Factor as well as ANOVA analyses with post hoc comparisons of means yielded some striking observations. Results show: (1) Respondents between ages 45-54 consistently have the lowest satisfaction levels for the entire cruise ship experience as well as destinations experience. (2) There are no differences in satisfaction levels between those in the age group '18-34 years' and those in group '35 to 44 years' across all the variables in their 'cruise ship experiences'. (3) With regards to the food offered on the ship, satisfaction levels seem to differ by education and income levels. (4) Generally, satisfactions with the destination offerings are highest for the younger age groups, and decrease as respondents are in older age groups. (5) All respondents of any income level are equally satisfied with the Caribbean's natural landscapes and scenery, its unique history and culture and the availability of great food in the Islands.

Key words- Caribbean Cruises, Cruise Passengers' Experience, Service Quality, Destinations

I. INTRODUCTION

The global cruise industry has witnessed steady expansion in the past few decades and continues to be one of the most lucrative segments in the tourism sector. Cruise travel is an important contributor to the tourism industry in the Caribbean attracting about 38% of the world's cruise market (Cruise Market Watch, 2014). There are about 32 islands in the Caribbean that are populated. Many of them have developed their infrastructure and service sectors. The main cities where the cruise ports are located offer a wide range of tourist attractions; shopping, tours, entertainment, restaurants and bars. The tourism products in the cities range from cultural heritage attractions, urban visitor resources and recreational and health resources. In terms of its architecture, the Caribbean has retained a number of historic buildings and areas that represent its past; duty-free shopping, tours, dining and entertainment in the Caribbean are also emerging to become a price competitive shopping destination with international quality. The main cities have developed many shopping centers including new retail formats such as hypermarkets, duty-free shopping outlets and discount stores located at the cruise ports.

The augmented competition and growth in the cruise market calls for the need to understand consumer demographics, experiences and preferences in order to retain existing or acquire new customers. However, there is a dearth of customer satisfaction studies in the cruise industry despite the increasing need to examine customer preference trends. Few studies have focus on the subject of cruise passengers experience in the Caribbean (Baker, 2014). The purpose of our research is to identify Cruise passengers experience with the cruise itself while onboard the cruise ship and their experiences while visiting the destinations on the Islands. We posit that the experiences of cruise passengers are likely to be distinguishable based on their demographic profiles. For instance, the experiences and requirements of passengers who are baby boomers are expected to differ from the passengers who are Generation X, Millennials or Generation Y.

II. LITERATURE REVIEW

1.1. Factors affecting the cruise ship experience

There are many factors that affect the cruise passenger experience, more specifically the food and beverage on the ship and at the destinations or ports of call; entertainment, customer service, tours, itinerary and shopping are some of the strong predictors of the cruise experience and the subsequent overall satisfaction. It was recognized that tourism experience was not something that could be "stage-managed" by the service provider (Morgan 2007), but rather that tourists aided in the production of their own experiences through their personal characteristics, social identity, and the agendas they brought with them to the tourist encounters (McIntosh and Siggs 2005). What they can do is set the stage for tourists to create their own experiences (Morgan 2007). This implies that the tourist experience is influenced by a wider range of factors in addition to those under the direct control of the service providers (Baker and Crompton 2000). Given the discussions above and the general research questions outlined in the introduction part of this paper, we make the following propositions:

Proposition 1: The level of passenger satisfaction with their experience on the cruise ship will differ within each demographic group (i.e. age, education level and income level), as follows.

- Proposition 1a: Different age groups will have significantly different satisfaction levels in their experience on the cruise ship
- Proposition 1b: Passengers with different educational levels will have significantly different satisfaction levels in their experience on the cruise ship
- Proposition 1c: Passengers with different income levels will have significantly different satisfaction levels in their experience on the cruise ship

1.2. Destinations (ports of call) and cruise passengers' experience

Designing tourist attractions is not just about designing buildings, cruise-ports and physical spaces, but what is also vital is the way the tangible elements of the attraction is designed that will shape the intangible visitor experience (Swarbrooke, 2002). Gunn (1994) suggests that travelers go to any destination because of its special qualities of place, as every destination possesses a varied set of geographical factors, traditions, relationship to markets and host characteristics. Numerous literatures have suggested the importance of place-making or creating a sense of place in building an identity for the attraction (Gunn, 1994). According to Henthorne (2000) cruise lines select particular ports providing their customers with positive in port experiences and "are willing to change itineraries and drop specific ports of call if an inordinate number of customers experience dissatisfaction (p.247)."

Given the discussion above and the general research questions outlined in the introduction part of this paper, we make the following propositions:

Proposition 2: The level of passenger satisfaction with the destinations (ports of call) will differ within each demographic group (i.e. age, education level and income level), as follows.

- Proposition 2a: Different age groups will have significantly different satisfaction levels in their destination experiences
- Proposition 2b: Passengers with different educational levels will have significantly different satisfaction levels in their destination experiences
- Proposition 2c: Passengers with different income levels will have significantly different satisfaction levels in their destination experiences.

III. METHODOLOGY

Given the scarcity of data on most aspects of cruise visitors' experience in the Caribbean, there is a need for the current study. Following discussion with travel agents on issues related to cruisers experiences, hospitality and tourism professors, a review of past studies, such as Duman and Mattila (2005) and Qu, Wong & Ping (1999), Andriotis and Agiomirgianakis (2010), a self-completed questionnaire was designed. The questionnaire comprised of two sections demographics and the second section dealt with attributes which affect the cruise experience and the destinations experience measured on a 5-point Likert type scale. The population of this study consisted of cruise passengers who were aboard five cruise ships in the Eastern Caribbean on 5 and 7 nights' cruises during the 2011-12 cruise season.

IV. DATA ANALYSIS

For the demographic data the sample size in each sub-category is large, making the ANOVA analysis used later fairly robust. The frequencies are also not disproportionately far apart in the magnitude. In the age category, 30.5 %, 18.5%, 25.2% and 25.8% of the respondents are 18-34 years old, between 35and 44 years, 45 and 54 years and over 55 years, respectively. Most (47.94 %) have only high school education with possibly some college. However, 33 % and 19 % respectively have bachelors or graduate degree. We looked at the income levels of the participants. The mode income levels are between $30,000 and $39,000 (32.3% and between $40,000 and $49,000 (28.6%).

4.1 Variables Considered for the Evaluation

We conducted a Principal Component Factor Analysis with all the variables included and set the Eigen Value at 1. In addition, we rotated the factors using the Varimax rotation. Three of the items (Safety, Relaxing and Clean) that loaded highly on more than one factor were deleted. Two distinct factors emerged. We named the first: 'Cruise Ship Service'. This factor consists of the items: - Value, Service quality, Food on the ship, and Arrangements. The second we named 'Destination Experience" and it consists of the items: Adventure, Scenery, History, Island food and Beaches. The rotated factor loadings and the Cronbach Alpha for these two factors are shown in Table 1. Both the factor loadings and the Cronbach Alphas are well above the threshold lower limits of 0.6 and 0.7 respectively (Hair et al 2006). The total average variance extracted by two factors is 64.5 %, way above the lower limit threshold of 50% (Hair et al, 2006).

4.2. Differential Demographic Cruise Experience

The research questions seek to investigate if there are differences in the satisfaction levels, by (and within each) demography, of the respondents' cruise ship experiences and destination experiences. One-way ANOVA tests were used to explore these research questions, one at a time.

V. RESULTS

Notice that in Tables 2. and 3. the level of significance of the F statistics is indicated for each

ANOVA result. If the p value for the F Statistic is greater than 0.05, then we cannot reject the null hypothesis that the treatment means are equal. In such a case there is no need to conduct any Post Hoc analysis on the difference in the treatment means. Table 2. shows that there are no age group differences in the satisfaction experienced with the food on the ship or the quality of service on the ship. All age groups expressed their undifferentiated liking for the food as well as the quality of the service offered on the ship.

Table 1: Rotated Component Matrix

	Factors		Cronbach Alpha	Average Variance Extracted (AVE)
Items in Each Factor	Destination Experience	Cruise Ship Experience		
Value	.244	**.743**		
Service quality	.144	**.812**	0.792	
Arrangements	.354	**.698**		28.56%
Food on Ship	.215	**.747**		
Adventure	**.797**	.295		
Scenery	**.813**	.244	0.866	
History	**.779**	.267		35.96%
Island food	**.689**	.291		
Beaches	**.779**	.114		

Age Groups

It is particularly striking to observe that there are no differences in satisfaction levels between those in the age group '18-34 years' and those in group '35 to 44 years' across all the variables in the 'Cruise ship experiences' (i.e. Value, Service quality, Arrangements and Food on ship). If this finding holds for all cruise to the Caribbean Islands, it suggests that same marketing efforts can be expended to lure all potential customers under 44 years of age. Respondents 18- 34 years old have significantly greater (at $p < 0.05$ and $p < 0.01$) average satisfaction levels respectively in value for money of the cruise ship experience and the extent to which the cruise arrangements (i.e., itinerary, accommodation, meals, beverages, spa, shows, casino etc.) fit their individual needs when compared with those in age group '45 to 54 years. Identical observations hold for those in age group 35 to 44 years when compared to those in group 45 to 54 years.

Table 2: Demographics Vs Cruise Ship Experiences

	Value	Service Quality	Arrangements	Food on Ship
Age **F Sig**	p=0.011	p=0.282	p = 0.046	p=0.373
(18-34yr) – (35 to 44 yrs.)				
(18-34yrs) - (45 to 54 yrs.)	**		*	
(18-34yrs) – (>55 yrs.)				
(35 to 44 yrs.) – (45 to 54 yrs.)	**		*	
(35 to 44 yrs.) – (>55 yrs.)				
(45 to 54 yrs.) – (>55 yrs.)				
Education **F Sig**	p =0.987	p= 0.604	p = 0.796	p = 0.032
HS - Bachelors				*
HS - Grad				*
Bachelors - Grad				
Income **F Sig**	p =0.403	p=0.09	p = 0.623	p = 0.009
(<30) – (30 to 39)				
(<30) – (40 to 49)				*
(<30) – (> 50)				*
(30 to 39) – (40 to 49)				*
(30 to 39) – (> 50				**
(40 to 49) – (>50)				

Significant at *p<0.05; **p<0.01; ***p<0.001

Education: From Table 2 we observe that the ANOVA analyses reveal that there are no significant differences in the levels of satisfaction on Value, Service quality and Arrangements for every educational or income level. With regards to the food offered on the ship, satisfaction levels seem to differ by education and income levels.

Income: The last column under Income in Table 2 shows that generally, the higher a respondent's income, the less satisfied he/she would be with the food offered on the ship.

Destination Experiences

Age Groups: Age seems to be a strong differentiator when it comes to destination offerings. Here are some of the observations revealed in Table 3. Interestingly, there are no differences in satisfaction levels between those in the age group '18-34 years' and those in group '35 to 44 years' across all the Destination variables. Respondents between ages 45-54 consistently have the lowest satisfaction levels for all the destination experience variables. Other than the observation made above, Table 3. allows us to state that generally (for the most part), satisfaction with the destination offerings are highest for the younger age groups, and decrease as respondents are in older age groups.

Table 3: Demographics and Destination Experiences

	Adventure	Scenery	History	Island Food	Beaches
Age F Sig →	p=0.037	p=0.002	p=0.012	p=0.032	p<0.01
(18-34yr) – (35 to 44 yrs.)					
(18-34yrs) - (45 to 54 yrs.)	*	**	**	**	***
(18-34yrs) – (>55 yrs.)	*	*		*	***
(35 to 44 yrs.) – (45 to 54 yrs.)		**	*		
(35 to 44 yrs.) – (>55 yrs.)		*			*
(45 to 54 yrs.) – (>55 yrs.)	*		*		
Education F Sig →	p=0.314	p=0.940	p=0.708	p=0.424	p=0.504
HS - Bachelors					
HS - Grad					
Bachelors - Grad					
Income F Sig →	p=0.015	p=0.355	p=0.109	p=0.796	p=0.021
(<30) – (30 to 39)					
(<30) – (40 to 49)					
(<30) – (> 50)	**				**
(30 to 39) – (40 to 49)					
(30 to 39) – (> 50	**				**
(40 to 49) – (>50)					*

Significant at *p<0.05; **p<0.01; ***p<0.001

Educational Level: Table 3 shows that there are no differences in the satisfaction level with the five destination variables no matter the respondent's educational level.

Income Level. There are no significant differences in the levels of satisfaction on Scenery, History and Island food for any income. Adventure and Beaches seem to be a destination differentiator for some income levels. For example, in Table 3., respondents earning below $30,000 seem more satisfied with their Caribbean's natural landscapes and scenery when compared with those earning over $50,000. Similar observations can made from Table 3. for those earning between $30,000 and $39,000 when compared with those earning over $50,000.

VI. MANAGERIAL IMPLICATIONS AND CONCLUSION

The findings in the study not only confirm that Passengers in different age groups, with different education and income levels, will have significantly different satisfaction levels in their experiences on the cruise ship and with their destination experiences. Our research makes substantial contribution to the pool of cruise industry literature. Firstly, our study contributes to the literature in the area of cruise passenger demographics and experience. Secondly, it provides actionable implications for the cruise companies and the Caribbean destinations based on cruise passengers post experience reviews of their current and potential repeat customers. Moreover, we use demographics of cruise passengers as our criteria to identify differences in experiences and our findings make it feasible for managers to identify segments and improve their service offerings without further complicated processing on their behalf. One of the strongest advantages of the current study is the utilization of actual cruise passengers as respondents and capturing their responses at the last port of call of an ongoing cruise. Many more studies need to be done in the Caribbean as cruise ship tourism continues to grow significantly with major economic impacts.

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