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Brian Van Blarcom

Acadia University, brian.vanblarcom@acadiau.ca

Burc Kayahan MR

Acadia University

Klein Ross Dr

Memorial University

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ECONOMIC IMPACT OF CRUISE TOURISM IN ATLANTIC CANADA

IS CRUISE PASSENGER SPENDING EXAGGERATED?

Introduction

Cruise tourism is of increasing importance in Atlantic Canada. Average annual growth during the 1990-2015 period in Halifax was 9.24% (Transport Canada, 2016). Total cruise ship visitors to Halifax has grown tenfold over the last two decades, from approximately 24,000 in 1990 to 238,217 in 2015 (Transport Canada, 2016). The number of cruise ship visitors to Newfoundland & Labrador increased from 10,000 in 2000 to 50,000 in 2015. The growth of cruise tourism in the last decades is accompanied by the expected growth of benefits for the hosting ports. On the surface, it is reasonable to expect the cruise tourism to generate economic benefits emanating from spending by various parties (passengers, cruise lines, tour providers, etc.). However, there is growing evidence that studies supported or done by the cruise industry (e.g., Business Research & Economic Advisors (BREA)/Cruise Lines International Association (CLIA)) which serve as the foundation for assessing the economic benefits of cruise tourism, may be exaggerated.

Literature

While the cruise industry reported economic impacts are significant, there are deficiencies in such self-reported/commissioned statistics by cruise associations such as BREA and CLIA (Larsen et. Al., 2013; Falkenhaus, 2012; Scarfe, 2011; Klein 2011; Brida and Zappata, 2011). Economic impact estimates reported by the cruise lines suffer from a variety of theoretical and empirical problems. Benefits, computed in the form of tourism spending by passengers, are commonly calculated by taking the average expenditure times the number of passengers. Ports are quick to claim that each cruise passenger spends more than \$100 during a port call and then simply deduces that a cruise with 4000 passengers and 2000 crew generates revenue of \$6 million (Brida and Zapata, 2010). However, as Stavanger (2012) demonstrates, 20-40% of the passengers do not leave the ship during a stop-over. Using average expenditure values from other studies (ports) is arbitrary, since expenses and their effects will differ depending upon: 1) Type of port function (turn around/port of call), which will impact length of stay, 2) Market segment in terms of ship type, passenger type and nationality, all of which can vary depending upon the time of year, and 3) Attractions/products/services offered in a specific area (Klein 2011 and Torbianelli 2012). To the extent a data collection strategy of surveying cruise ship passengers and crew fails to account for these factors, the results will be biased and the economic impact results inaccurate.

Method

This study draws on data collected during the 2016 cruise season in the four major ports in Atlantic Canada (i.e., Halifax, Nova Scotia; Saint John, New Brunswick; Charlottetown, Prince Edward Island; and St. John's, Newfoundland). Data was subsequently gathered in 2017, however for purposes here we draw mainly on the data for the Port of Halifax in 2016. The Halifax data includes cruise ship passengers visiting the port of Halifax between April 30th and October 28th. A total of 2,205 surveys were collected from 100 (75%) of the 133 cruise ships that visited the port. Passengers were randomly surveyed at the port area beginning 2 hours after the ship's arrival and continuing until 1 hour before the ship's departure. The 23 cruise lines visiting the port were divided for purposes of analysis into four groups; the Halifax Port Authority concurred with the categories. The largest number of passengers (42.5%) are brought by mass market cruises. Close behind are passengers on Premium cruise lines (41%), the remainder is split almost evenly between Luxury cruise lines and European cruise lines. This study attempts to understand the disparity between passenger spending figures produced by cruise industry supported studies, [specifically a 2017 study (2016 data) completed by Business Research & Economic Advisors (BREA)] versus studies undertaken by other, often independent, researchers (specifically our study) for the same geographic (Atlantic Canada)) area.

Average spending per person is compared between this study which uses a probability sampling method versus the BREA study issued in April 2017 that did not. A critical element in producing unbiased sample statistics is the degree to which the sample of respondents in the passenger spending survey correspond to the actual universe (all ship arrivals in the year) of cruise ship and cruise passenger visits. The risk of biased results is reduced if the collected sample is representative of the population. In the BREA study, Luxury and European cruise visitors constitute 16.8% of passengers landing in early Season, yet no respondents were drawn from this group. A further bias is introduced by Mass Market visitors making up 42.7% of the cruise passengers in early season yet they are 64.4% of the early season respondents to the BREA survey. In contrast, the data collected in this study is closely aligned with the proportions of cruise vessel visits. Because all cruise ships visiting in the early season were surveyed, the sample we drew was from the universe of cruise ships visiting Halifax and more closely aligns with actual cruise visitor numbers and proportions than those based on the ships sampled in the BREA study.

Findings/Results

From an economic perspective, the significance of having a biased sample across market segment is made relevant by the fact that passenger spending differed by market segment. Spending was significantly greater for Mass Market cruise visitors (\$70.44) than visitors on Premium lines (\$60.02), Luxury lines (\$57.84) and European lines (\$52.79). The effect of oversampling the cruise market category, where spending is highest, is to artificially increase the overall per passenger spending. The BREA's sampling frame over-represents Mass Market cruise visitors by 50%. At the same time, this market segment spends per passenger 10% more than the population average; more than 15% greater than the Premium lines. There is a cumulative impact of these two conditions, which is likely to bias the derived average spending figure, which is then used as the basis for computing economic impact. The average spending per passenger in this study was \$63.57; in the BREA study it was 31.5% higher at \$83.84. The significance of this difference in per passenger spending can be illustrated for Halifax (Atlantic Canada's largest port for cruise visits) which had 220,351 passenger visits in 2016. Using the BREA figure for average spending, total spending would be \$18.4 million, using our estimate, total spending would be \$14.0 million.

The importance of potential factors that may influence the cruise passenger spending in a port are also investigated. More specifically, regression analysis was conducted to investigate the influence of potential explanatory variables on the cruise passenger spending in Halifax using our data from the 2016 cruise season. The dependent variable of the analysis is the per capita passenger spending in Halifax. Of particular interest is that passenger spending is dependent on demographic characteristics, cruise industry segment, precipitation/temperature and port order placement in cruise itinerary.

Conclusion

The research outlines the importance of using accepted methods of probability sampling. Results otherwise may be inaccurate and mislead per passenger spending. As shown, the sample of ships included in BREA's study of passenger spending in Halifax overstated by 31.5% the amount spent. Our data suggests this is caused by oversampling mass market cruise passengers, who comparatively spend significantly more than all other cruise passengers visiting Halifax. The inflated number is then used in determining economic impact, which consequently is an overstatement. Finally, the regression analysis shows that passenger spending is influenced by socio-economic/demographic/weather/itinerary related variables. A cleared understanding of the variables driving visitors spending could allow ports to adopt strategies that can maximize the local economic benefits. The provision of benchmark data enables assessment of current and future policies related to cruise tourism. An economic perspective is important to the development and management of tourism resources and can play a key role in driving tourism initiatives that balance economic/social/cultural benefits and costs.

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