

Economic features of cruise tourism visits to Belize

Results of a passenger survey

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Cruise tourism economics in Belize: Approach

- Cruise tourism by the numbers: primary & published data, informed by local experience
- General overview of tourism in the Belizean economy
- Profile of Belize's cruise tourists
- Expenditure & activity patterns of cruisers
- Cruise tourists sensitivity to changes in travel costs & environmental quality

Cruise tourism in Belize

Table 1.1: Stayover and Cruise Ship Arrivals to Belize, 1998 – 2005

	1998	1999	2000	2001	2002	2003	2004	2005
Stayover Tourist Arrivals	176,054	180,795	195,766	195,955	199,521	220,574	230,832	236,573
Cruise Ship Tourist Arrivals	14,183	34,130	58,131	48,116	319,690	575,196	851,436	800,331
Cruise Ship % of Arrivals	7.5%	15.9%	22.9%	19.7%	61.6%	72.3%	78.7%	77.2%
Total Arrivals	190,237	214,925	253,897	244,071	519,211	795,770	1,082,268	1,036,904

Source: BTB. (2006). Tourist Arrivals, 1998-2004, email from Raymond Mossiah, April 4, 2006; Belize Tourism Statistics, Retrieved on July 12, 2006 from www.belizetourism.org/arrival.html

Tourist expenditures

Table 3.22: Tourist Expenditures (US \$ millions) in Belize, 1998-2005

	1998	1999	2000	2001	2002	2003	2004	2005
Stayover Tourist Expenditures	108.1	110.9	118.0	118.7	120.6	133.7	140.1	144.1
Cruise Ship Expenditures	0.2	0.6	2.2	1.8	12.2	22.0	32.4	30.6
% Cruise Ship of Total Expenditures	0.2%	0.5%	1.8%	1.5%	9.2%	14.1%	18.9%	17.5%
Tourism Expenditure as % of GDP	15.7%	15.2%	14.4%	13.9%	14.3%	15.9%	16.7%	15.8%

Source: BTB, 2006. Tourist Arrivals, 1998-2004, email from Raymond Mossiah, April 4, 2006. "Belize Tourism Statistics", www.belizetourism.org/revenues.html, accessed July 12, 2006.

Cruise tourism in Belize, 2005: Industry concentration & growth

Table 1.3b: Leading Cruise Line and Passenger Arrivals into Belize, 2005

Cruise Line	Port Calls	Passengers	% of Total Passengers	Average Passengers per Ship
Carnival	200	484,090	60.3	2,549
Royal Caribbean	67	167,983	21.0	2,780
Norwegian	79	148,340	18.6	2,250
Total	370	800,331	99.9	

Source: www.carnival.com, www.royalcaribbean.com, www.norwegiancruises.com (accessed June 20, 2006).

Cruise tourism in Belize: Seasonality

Table 1.2: Monthly Cruise Tourist Visits to Belize, 1998-2005

	1998	1999	2000	2001	2002	2003	2004	2005
Jan	0	2,926	10,485	4,653	18,448	56,689	94,861	94,774
Feb	1,779	3,579	11,665	7,584	19,056	48,172	87,532	96,667
Mar	975	3,725	13,271	8,648	21,822	54,151	89,807	122,802
Apr	692	5,526	6,695	3,517	23,989	46,401	72,260	73,327
May	0	2,489	4,750	0	22,973	24,413	50,642	48,013
Jun	167	0	899	0	17,473	33,623	57,160	55,432
Jul	83	0	0	0	20,502	30,602	56,794	33,140
Aug	0	0	0	0	16,072	38,809	57,018	48,518
Sep	100	0	0	0	23,095	31,430	45,132	32,554
Oct	873	2,302	696	0	33,810	47,356	58,961	23,481
Nov	2,387	2,145	3,648	8,548	46,377	70,377	77,579	73,175
Dec	7,127	11,438	6,022	15,166	56,073	93,173	103,690	98,448
Totals	14,183	34,130	58,131	48,116	319,690	575,196	851,436	800,331

Source: BTB. (2006). Tourist Arrivals, 1998-2004, email from Raymond Mossiah, April 4, 2006; Belize Tourism Statistics. Retrieved on July 12, 2006 from www.belizetourism.org/arrival.html

Belize tourism: Increased traffic at primary attractions

Table 4: Visitation to primary attractions in Belize, 1998-2003

Attraction	1998	1999	2000	2001	2002	2003
Parks & reserves managed by Belize Audubon Society	22,536	22,112	29,717	27,577	28,920	28,670
Hol Chan Marine Reserve	40,048	37,059	36,887	38,687	55,701	74,375
Total Parks/Reserves	62,584	59,171	66,604	66,264	84,621	103,045
Mayan sites	82,529	85,093	95,790	99,755	162,584	269,196
Overall total	145,113	144,264	162,394	166,019	247,205	372,241

Source: Belize Tourism Board, Tourism and Travel Statistics, 2004.

Belize cruise passenger survey

- 10-15 minute, written, in person survey.
- Demographics, trip characteristics, expenditure patterns, tour purchases.
- Conducted at FSTV & on tour busses (return trip).
- July-August 2005
- 609 useable of 623 completed surveys
- Refusals do not appear to have biased results.
- Over sampling of Carnival passengers probably did not bias sample.

Cruise tourists in Belize: Profile

Table 3.1: Cruise tourists in Belize: Demographic information

	Mean*	Median*	Mode*	Max	Min
Male (%)	41%	0	0	1	0
Age (years)	40.26	42	42	75	18
US citizen (%)	96%	1	1	1	0
US or Canada citizen (%)	97%	1	1	1	0
Employed (% yes)	83%	1	1	1	0
Paid vacation (weeks)	3.66	3	2	18	0
Household size	3.12	3	2	9	1
Household Income earners	1.78	2	2	5	1
Household Income (US \$)	91,422.10	90,000	140,000	140,000	30,000

*Mean is the mathematical average of a sample. Median is the middle number in a sample arrayed in order of lowest to highest response. Mode is the number that occurs most frequently in a sample.

Belizean & cruise travel experience

Table 3.2: Travel habits of cruise tourists to Belize

How many...	N	Mean	Median	Mode	Max	Min	Standard Deviation*
...times on a "cruise vacation"	609	2.90	2	1	11	1	2.55
...days on this trip	601	7.07	7	7	15	1	0.84
...days in this country	601	1.01	1	1	3	1	0.13
...hours in this port	540	8.79	8	12	15	1	2.55
...times visited this country	607	1.11	1	1	8	1	0.54

*Standard Deviation measures the average statistical dispersion from the mean.

Cruise tourist activities in Belize

Table 3.4: Cruise tourist activities and excursions in Belize

Activity	% Participating	Rank	Activity	% Participating	Rank
Shopping	47%	1	Horseback ride	5%	12
City tour	37%	2	Drive for pleasure	3%	13
Visit archeological sites	37%	3	Attend local music/ dance	3%	14
Beach	35%	4	Scuba dive	3%	15
Hike/ walk	30%	5	Canopy tour	3%	16
Snorkel	28%	6	Farm/ ranch	3%	17
Cave tubing	23%	7	Bicycle/ Mt. Bike	2%	18
Boat/boat tour	22%	8	Sport fishing	2%	19
Museum/ zoo visit	16%	9	Surf/ boogie board	0%	20
Wildlife watching	12%	10	Windsurf	0%	21
National Park visit	9%	11	Attend sporting event	0%	22

Belize's attractiveness to cruise tourists

Table 3.7: Factors contributing to cruise tourists' decision to disembark in Belize

Feature	Mean Score	Rank	Feature	Mean Score	Rank
Friendly people	4.40	1	High quality restaurants	3.61	10
Personal safety	4.31	2	Local art & crafts	3.53	11
Scenic landscapes	4.21	3	Interesting architecture/ built infrastructure	3.52	12
Cleanliness	4.20	4	Local music, dance or customs	3.48	13
General affordability	4.14	5	"Duty-free" shopping	3.45	14
Quality of national parks & protected areas	3.89	6	Solitude/ lack of crowds	3.43	15
Quality of beaches	3.80	7	High quality services (medicine, dentistry)	3.16	16
Interesting/ high quality food	3.77	8	Entertainment/ nightlife	2.93	17
Quality of coral reefs	3.75	9	Farms & ranches	2.79	18

Note: Rankings based upon a 5-point Likert scale where 5 is the highest ranking (very important), 3 is neutral and 1 is the lowest ranking (very unimportant)

Cruise tourists' enjoyment of Belize

Table 3.8: Cruise tourists' evaluation of their Belizean experience

	N	Mean	Median	Mode	St Dev
How satisfied are you with your visit?	602	4.06	4	5	0.87
How likely are you to visit again on a future cruise?	601	3.83	4	5	1.09
How likely are you to visit on a non-cruise vacation?	585	2.77	3	3	1.31
How likely are you to recommend to friends that they visit on a cruise?	596	4.15	4	5	0.98
How likely are you to recommend to friends that they have a non-cruise vacation here?	588	3.01	3	3	1.33

Note: Rankings based upon a 5-point Likert scale, where 5 is the highest ranking (very satisfied or very likely, as appropriate), 3 is neutral and 1 is the lowest ranking (very unsatisfied or very unlikely, as appropriate)

Belize cruise tourist expenditures: On board

Table 3.3: General cruise vacation travel expenses, 2005, in US \$***

	N	Mean	Median	Mode	Max	Min	St Dev**
Cost of cruise	574	1335.83	1200	1000	5000	75	671.27
Transportation to/from home port	509	370.18	240	200	8000	0	632.37
Daily onboard spending	554	103.77	50	100	2000	0	164.12
Total cruise related expenditures	526	2345.22	1922.5	1900	11750	35	1451.99
Total cruise related expenditures per diem*	521	342.08	271.43	271.43	2850	5	247.13

*Represents total cruise-related expenditures, including transportation, roughly divided over 7 days.

** St. Dev. means Standard Deviation.

Cruise tourist expenditures in Belize

Table 3.6a: Amount spent (per person) while off of the ship, in US \$ 2005 (excluding tour purchases) – All responses

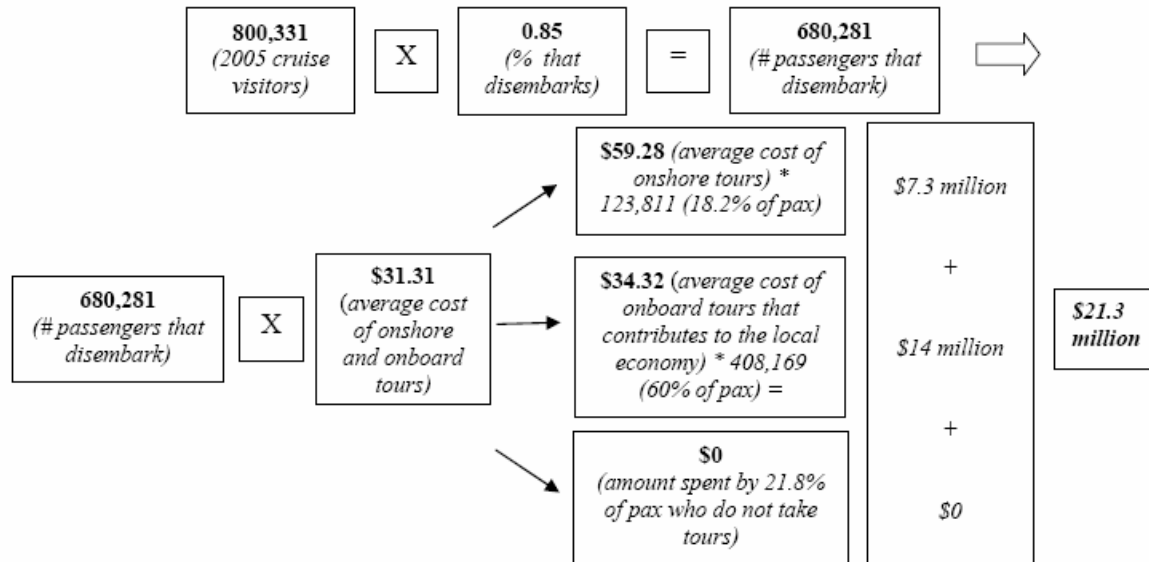
All responses	Mean	Median	Mode	Max	Min
<i>Total</i>	48.18	20	20	940	0
Other gifts/ souvenirs	12.55	0	0	300	0
Food & drink	10.56	5	0	300	0
Local arts & crafts	9.22	0	0	300	0
'Duty-free' shopping	8.73	0	0	600	0
Event tickets, entrance &/or license fees	3.53	0	0	400	0
Local transportation	0.45	0	0	50	0

Table 3.6b: Amount spent (per person) while off of the ship, in US \$ 2005 (excluding tour purchases) – Nonzero responses

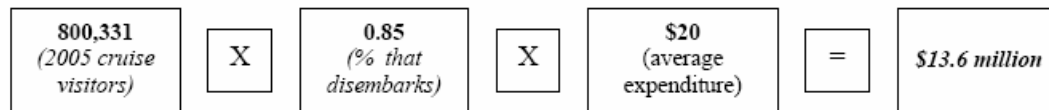
Nonzero responses	% Reporting	Mean	Median	Mode	Max	Min
<i>Total</i>	89	54.36	26	20	940	1
Other gifts & souvenirs	41	30.63	20	10	300	1
Food & drink	64	16.60	10	10	300	1
Local arts & crafts	32	29.13	20	10	300	1
Duty-free shopping	19	45.87	25	20	600	1
Events tickets	6	61.85	15	10	400	1
Local Transportation	3	16.9	10	10	50	5

Average Expenditure Per Cruise Passenger = (A + B) / total # cruise passengers

Tour Expenditures (A) = # passengers purchasing tours * average cost of tours



Additional Expenditures (B) = # cruise passengers disembarking * average expenditure (not including tours)



Average Expenditure Per Cruise Passenger = (A + B) / total # cruise passengers

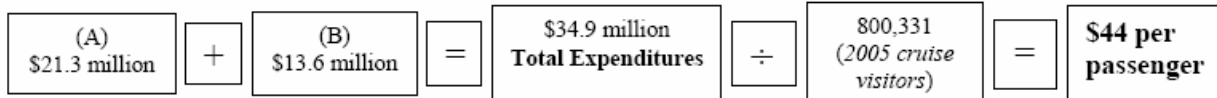


Figure 3.1: Illustration of Cruise Tourist Expenditure Calculations.

Cruise tourists' spending in Belize

- ~\$13.6 million off board non tour expenditures
- ~\$21.3 million local share on board and off board tour expenditures
- ~\$34.9 million (\$44 per passenger) direct local expenditure in 2005.
- ~\$48.9 million in direct, indirect & induced economic impact in Belize in 2005.

Cruise tourists' sensitivity to changes in travel costs or environmental quality

- What is the maximum increase in travel costs you'd pay and...
 - ...still take this cruise vacation?
 - ...and still choose to disembark in this port?
- What would you be willing to pay for protection of Belizean culture and nature?
 - ...how would you divide it between the two?

WTP to cruise, disembark & conserve Belize

Table 3.11: Measures of sensitivity to changes in cruise costs and willingness to pay for conservation in Belize

	N	Mean	Median	Mode
Max WTP for cruise vacation	582	201.43	100	100
Max WTP for Belize	584	47.22	25	25
Max WTP for Belizean culture & nature	588	42.92	25	25
% for culture	528	43.78	50	50
% for nature	528	56.22	50	50

What does this mean?

- ~\$17-34 million in uncompensated consumer surplus.
- WTP \$25-43 per person per trip to protect natural and cultural environment of Belize
 - \$24.13 for nature; \$18.79 for culture
 - 90% of total WTP to disembark
 - ~\$29.2 million (\$16.4 nature; \$12.8 culture) in 2005 for preservation in Belize
- Current head tax is \$7.00. Regional average is \$8.66. Each \$1 is ~\$800 thousand, but not all goes to Belize under current arrangements.