# ECONOMIC IMPACT OF CRUISE SHIPS IN MAINE: 2005 PASSENGER AND CREW EXPENDITURES IN BAR HARBOR AND PORTLAND

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Summary:
The Bar Harbor cruise ship industry, which includes the spending of passengers and crew members while in port, had a total economic impact – counting multiplier effects – of $13.7 million in sales output during the 2005 season. Economic activity associated with this spending supported 174 full- and part-time jobs, and provided $3.7 million in labor income. The cruise ship industry in Portland, which hosted about 45,000 passengers compared to just below 100,000 visitors in Bar Harbor, generated a total impact – including multiplier effects - of $6.7 million in sales output during 2005. This activity supported 96 full- and part-time jobs in the Portland area, and provided $1.8 million in labor income.

# ECONOMIC IMPACT OF CRUISE SHIPS IN MAINE: 2005 PASSENGER AND CREW EXPENDITURES IN BAR HARBOR AND PORTLAND

## 1. INTRODUCTION

The U.S. cruise industry has experienced substantial growth in recent years. Nationwide, direct spending by cruise lines and passengers increased from $9.4 billion to $14.7 billion (56 percent) between 2000 and 2004 (Business Research & Economic Advisors 2001, 2005). Including multiplier effects, the U.S. cruise industry supported 315,830 jobs and provided $12.4 billion in wages and salaries in 2004.

In recent years, the cruise industry has seen remarkable growth in the ports of Bar Harbor and Portland, Maine. Bar Harbor hosted 76 cruise ship visits in 2005, a 36 percent increase above the 56 ships that came to town in 2001 (Chapman 2002). According to Portland's Seaport Statistics, Maine's largest city hosted over 40,000 cruise ship passengers in 2001 and 2002, up from about 14,000 passengers in 1999. Portland welcomed 45,225 cruise ship passengers in 2005.

Cruise ship passengers provide a stimulus to the local retail economy of host ports. A study we conducted in 2002 shows that, including multiplier effects, cruise ship passengers contributed $12.1 million per year to the Bar Harbor economy (Gabe et al. 2003). We found that cruise ship passengers were especially important to the local economy during the month of October, when they accounted for an estimated 64 percent of retail sales and 26 percent of sales in restaurants and bars.

This report provides an update on the economic impact of the cruise ship industry in Maine. Using data from secondary sources, we examine the impacts of passenger and crew spending in Bar Harbor and Portland. This update differs from our analysis conducted in 2002 by (1) considering the impact of crew as well as passenger spending, and (2) examining the cruise ship industry in Portland (in addition to Bar Harbor).

## 2. ECONOMIC IMPACT OF CRUISE SHIPS IN BAR HARBOR

The 76 cruise ship visits that took place in 2005 could have brought, at full capacity, 97,579 passengers and 41,012 crew members to Bar Harbor. As shown in Table 1, September and October are the busiest times for cruise ship visits. Ships visiting in those early autumn months had a capacity of over 66,000 passengers and about 30,000 crew members.

We use the passenger and crew numbers from Table 1 and average expenditure figures from the International Council of Cruise Lines (ICCL) to estimate the impact of the cruise industry on the Bar Harbor economy. According to the ICCL, passengers spent an average of $103.68 per U.S. port-of-call visit in 2004 (Business Research & Economic

Advisors 2005). This figure is very close to our estimate, based on cruise ship passenger survey data collected in 2002, of $105.82 in passenger spending (including cruise-line sponsored tours) per day in Bar Harbor. ICCL statistics show that crew members spent an average of $23.58 per U.S. port-of-call visit in 2004. This figure accounts for the fact that only a portion of the crew is allowed to leave the ship while in port.

Using the ICCL spending figures, we estimate that cruise ship passengers visiting Bar Harbor directly spent $10.1 million in 2005. Our estimate is based on 97,579 passenger days, which reflects the total capacity of the 76 cruise ships that visited Bar Harbor. Although it is possible that some of the ships came with empty berths, ICCL statistics show that the North American cruise industry has been operating at over 100 percent capacity since 2002 (Business Research & Economic Advisors 2005). Cruise ship capacity figures are generally based on two persons per cabin, while most staterooms are large enough to accommodate a family of four. Thus, cruise ships can operate safely at levels that are beyond their stated capacity. We estimate that the 41,012 crew members, aboard the 76 ships that visited Bar Harbor, directly spent about $1.0 million while in port.

Table 2 presents information on the impact of the Bar Harbor cruise industry on local sales, employment and labor income. The direct sales figure of $11.1 million captures the spending of passengers and crew described above. We use the IMPLAN model to estimate the impacts of this spending on local employment and personal income, as well as the multiplier effects associated with the cruise industry. The IMPLAN input-output model accounts for the additional economic activity (i.e., jobs and income) supported by the spending of businesses and workers who serve the cruise industry. The IMPLAN model tracks the flows of expenditures that occur among businesses located in the region, the purchases made by local workers, and the payments made to buy goods and services imported from outside the area.

Results from the IMPLAN model show that $11.1 million in direct passenger and crew spending supported 141 local workers (full- and part-time jobs) and provided $2.8 million in labor income. Including multiplier effects, the Bar Harbor cruise industry generated an estimated $13.7 million in economic activity during 2005. The ratio of total-to-direct spending generates a sales output multiplier of 1.23. This means that each $1.00 of passenger and crew spending contributed a total of $1.23 to the local economy. The relatively modest size of the multiplier is typical of the types of retail sectors impacted by the cruise industry, in which a large proportion of spending covers the costs of goods imported from outside the area. Including multiplier effects, the cruise ship industry supported a total of 174 local workers (full- and part-time jobs) who earned an estimated $3.7 million in labor income.

## 3. ECONOMIC IMPACT OF CRUISE SHIPS IN PORTLAND

Table 3 shows the passenger capacity and crew size of the ships that visited Portland in 2005. As is the case in Bar Harbor, the largest number of ships came to Portland during the early autumn months. Cruise ships visiting Portland in September and October had a capacity of 33,348 passengers and 14,341 crew members.

Using the ICCL passenger expenditure figures described above, we estimate that cruise ship passengers visiting Portland directly spent $4.7 million in 2005. In addition, the crew members directly spent an estimated $443,964 on retail goods and services while in port. The total direct spending of passengers and crew members, estimated at $5.1 million, supported 77 local full- and part-time jobs and provided $1.3 million in labor income.

Table 4 shows the total impacts, including multiplier effects, of the cruise ship industry on sales output, employment and labor income in Portland. Results from the IMPLAN model show that the Portland cruise industry generated an estimated $6.7 million in economic activity during 2005. The ratio of total-to-direct spending generates a sales output multiplier of 1.31. This means that each $1.00 of passenger and crew spending contributed a total of $1.31 to the Portland economy. It is not surprising that the sales output multiplier is larger in Portland (1.31) than in Bar Harbor (1.23), since Portland has a larger and more diversified economy. This allows Portland to capture a higher proportion of direct spending associated with the cruise industry. Including multiplier effects, the cruise ship industry in Portland supported a total of 96 local workers (full- and part-time jobs) and provided an estimated $1.8 million in labor income.

## 4. CONCLUSIONS

To put the local economic impacts of the cruise industry into perspective, we examined 2004 retail sales data for Bar Harbor and Portland. The $11.1 million in estimated direct spending by cruise ship passengers and crew visiting Bar Harbor (in 2005) is about one-sixth the amount of direct spending generated by the local lodging industry ($69.7 million) in 2004. This amount includes expenditures on lodging only, and does not count the spending of overnight visitors at local restaurants and shops. Bar Harbor restaurants and bars brought in $53.5 million, and general merchandise and other retail stores generated $39.4 million in sales during 2004. Sales by restaurants, bars and retail stores, which account for a high proportion of passenger and crew expenditures, include spending associated with the cruise ship industry (in 2004).

The cruise industry extends Bar Harbor's "tourism season" for local retailers into the early autumn months. October 2004 lodging ($5.7 million), restaurant and bar ($3.6 million) and general merchandise and other retail ($3.6 million) sales are, in each case, at least 50 percent lower than comparable sales in the month of July, a peak time for tourism in Bar Harbor. Cruise ship passengers and crew members spent an estimated $3.7 million (direct sales) in October of 2005.

Because of Portland's larger size and more diversified economy, the cruise industry plays a smaller role in the local economy compared to Bar Harbor. The $5.1 million in estimated direct spending by cruise ship passengers and crew visiting Portland (in 2005) is considerably less than the direct spending in 2004 generated by local hotels and motels ($65.7 million), restaurants and bars ($319.3 million), and general merchandise and other retail stores ($834.0 million). Furthermore, the seasonal trends found in Bar Harbor are less pronounced in Portland. Although Portland's lodging establishments and restaurants experience a decline in sales during the fall months, general merchandise and other retail sales are higher in October than in July.

TABLE 1
Cruise Ships Visiting Bar Harbor in 2005

| Month | Ships | Passengers | Crew | Total |
|---|---|---|---|---|
| May | 3 | 4,881 | 1,806 | 6,687 |
| June | 6 | 7,100 | 2,765 | 9,865 |
| July | 11 | 9,449 | 3,591 | 13,040 |
| August | 10 | 9,707 | 3,706 | 13,413 |
| September | 25 | 33,985 | 14,729 | 48,714 |
| October | 21 | 32,457 | 14,415 | 46,872 |
| Total | 76 | 97,579 | 41,012 | 138,591 |

Source: Authors' estimates using data from Cruise Maine.

TABLE 2
Economic Impact of Bar Harbor Cruise Industry, 2005

| | Sales Output | Full and Part-time Jobs | Income |
|---|---|---|---|
| Direct Impact | $11.1 million | 141 | $2.8 million |
| Multiplier Effect | $2.6 million | 33 | $0.9 million |
| Total Impact | $13.7 million | 174 | $3.7 million |

TABLE 3
Cruise Ships Visiting Portland in 2005

| Month | Ships | Passengers | Crew | Total |
|---|---|---|---|---|
| May | 0 | 0 | 0 | 0 |
| June | 0 | 0 | 0 | 0 |
| July | 5 | 3,877 | 1,413 | 5,290 |
| August | 6 | 8,000 | 3,074 | 11,074 |
| September | 12 | 23,580 | 9,694 | 33,274 |
| October | 6 | 9,768 | 4,647 | 14,415 |
| Total | 29 | 45,225 | 18,828 | 64,053 |

Source: Authors' estimates using data from Cruise Maine.

TABLE 4
Economic Impact of Portland Cruise Industry, 2005

| | Sales Output | Full and Part-time Jobs | Income |
|---|---|---|---|
| Direct Impact | $5.1 million | 77 | $1.3 million |
| Multiplier Effect | $1.6 million | 19 | $0.5 million |
| Total Impact | $6.7 million | 96 | $1.8 million |

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