An estimate of the economic contributions of the SC State Ports Authority's 2010 cruise ship activity to the region's economy

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In many port cities, cruise ships are part of the portfolio of tourism activities. Cruise ships have a measurable economic impact on the Lowcountry Economy. This study, commissioned by the S. C. State Ports Authority, projects the amount that will be spent in 2010 as a result of cruise ship activity.

A survey of passengers and crew was administered in November 2009 to determine the spending patterns of passengers and crew of ships that will serve the Charleston in 2010. Two port-of-calls and one origination cruise were selected involving cruise lines that will serve Charleston in 2010. The survey results may be found in the appendix. In addition, cruise lines were contacted to determine their local spending patterns. Based on these survey results, total spending by categories was estimated. This spending pattern is the direct additional spending that takes place each time a cruise ship docks in Charleston. The survey differentiates between cruises that originate in Charleston and those that make Charleston a port-of-call.

Currently 16 port-of-calls and 53 origination cruises have been booked at the SCSPA for 2010. Based upon the survey results, it is estimated that the passengers on ships that will make Charleston a port-or-call, 66.49% will leave the ship and visit the City which will amount to 11,303 additional tourists.[1] Of these visitors, one-half will debark on escorted motor coach tours from the ship to tour the region's attractions while the other one-half will visit the city independently. Passenger spending is estimated to be $5,552,496, while crew members are estimated to spend $2,606,575. Cruise line companies will spend an estimated $14,143,535 in direct spending.

Direct spending generates what are often called multiplier effects. Passengers visiting the city and purchasing a meal is an example of direct spending. The goods and services bought by the restaurant to provide that meal is an example of indirect spending. Salaries are included in the indirect effects. Additional impacts are created as restaurant employees spend their salaries locally. These impacts are termed induced effects. Regional impact models measure these impacts.

In this report, IMPLAN (Impact Analysis for Planning) was used, a model initially developed by the U.S. Department of Agriculture Forest Service and now maintained and marketed by a private firm (Minnesota IMPLAN Group, Inc). IMPLAN is a well recognized regional impact model that is used by many researchers.[2] The study area is the Tri-county local economy consisting of Berkeley, Charleston, and Dorchester Counties. Through various statistical techniques, IMPLAN localizes the impacts of spending to the study area.

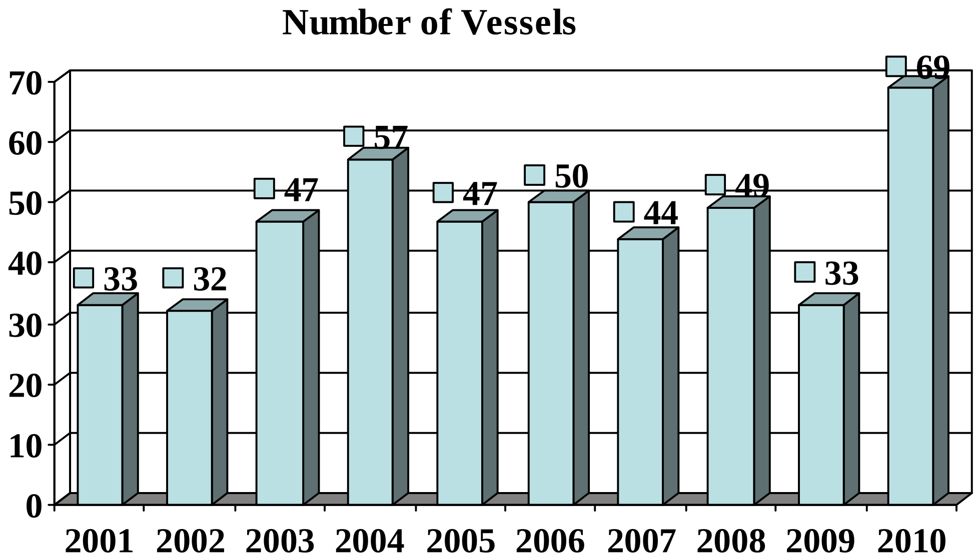
Since each sector has different linkages, each type of spending on a project must be allocated to the correct sector. IMPLAN has 440 sectors. IMPLAN then calculates three kinds of multipliers:

1. Output: This measures the total economic activity that takes place within the economy.[3]
2. Labor Income: This includes all forms of employment income, including employee compensation (wages and benefits) and proprietor income.
3. Employment: Total jobs measured as full time equivalents.

The estimated impact for 2010 is $37,024,340 which generates 407 jobs paying a total of $16,193,200 in labor income. These jobs will average $39,786 in annual wage earnings. The sectors were these jobs will be found are in transportation (117.8 jobs), retail (66), wholesale trade (39.8), food and beverage (33), and retail grocery stores (18.6). In addition, the State sales and income taxes will grow to $3,483,113.[4]

The passenger surveys provided another means to assess the economic value of Charleston's cruise ship activity from a tourism marketing perspective. Passengers surveyed from the cruise originating from Charleston were primarily from the Carolinas, while passengers surveyed during their port of call were mainly from the Washington, D.C., Philadelphia and New York City metropolitan areas. Both groups of survey respondents were predominately couples (73.5%) traveling without children (86.4%) with median annual household income between $100,000-$124,999. 44.3% were first time visitors to Charleston. Asked, "How likely will you visit Charleston again within the next five (5) years," approximately four in five (79%) indicated they would likely do so. Similarly when asked "How likely will you recommend to your friends and relatives to visit Charleston," a high 90.4% indicated they would likely to do so.

Cruise Ship Activity at the SCSPA
2001-2010



Cruise Ship Passengers Primary Residences

In this dataset, port of call passengers primarily resided in the New York- Philadelphia-Washington, DC area; Passengers on the origination cruise were primarily from the Carolinas

Total Economic Impact 2010

Passengers Origination

Impact Type	Output	Employment	Labor Income
Direct Effect	$5,051,568	74.9	$2,006,140
Indirect Effect	$1,537,680	13.6	$513,154
Induced Effect	$1,898,892	17.6	$603,482
Total Effect	$8,488,128	106.0	$3,122,776

Port-of-Call Passengers

Impact Type	Output	Employment	Labor Income
Direct Effect	$488,823	8.2	$251,348
Indirect Effect	$116,642	1.1	$40,127
Induced Effect	$219,628	2.0	$69,801
Total Effect	$825,092	11.3	$361,276

Crew Impact

Impact Type	Output	Employment	Labor Income
Direct Effect	$2,593,016	40.6	$1,139,068
Indirect Effect	$794,300	7.1	$264,297
Induced Effect	$1,055,996	9.8	$335,640
Total Effect	$4,443,312	57.5	$1,739,004

Local Spending by Ships

Impact Type	Output	Employment	Labor Income
Direct Effect	$14,143,535	146.5	$7,863,024
Indirect Effect	$2,462,962	24.2	$989,872
Induced Effect	$6,661,304	61.8	$2,117,244
Total Effect	$23,267,808	232.5	$10,970,144

Total Impact	$37,024,340	407	$16,193,200

Distribution on Employment for 2010 Cruise Ship Impact Top Ten Sectors

Description	Employment	Labor Income	Output
Scenic and sightseeing transportation and support activities for transportation	117.8	$5,758,032	$8,106,397
Retail Stores - General merchandise	66.0	$1,809,645	$4,070,791
Wholesale trade businesses	39.8	$2,718,610	$7,231,954
Food services and drinking places	33.0	$630,225	$1,814,988
Retail Stores - Food and beverage	18.6	$564,210	$1,334,351
Real estate establishments	14.1	$259,537	$1,557,289
Hotels	12.2	$395,980	$1,162,344
Employment services	6.4	$171,915	$239,047
Retail Stores – Miscellaneous	5.8	$112,497	$217,004
Offices of physicians, dentists, and other health practitioners	4.8	$359,130	$594,588
Total impact in Tri-Counties across 440 measures sectors	407.0	$16,193,200	$37,024,340

Total State and Local Tax Impact (Tri County)

$3,483,113

2010 estimated

PASSENGERS

	PORT-OF-CALL	Origination	Total
Number vessels	16	53	69
Passengers	17,000	94,240	111,240
% who visited Charleston	66.49%	100%	
% local residents	0%	19.0% (Calculated from 2004 estimates)	
Sub Total Passengers	11,303	76,334	105,543
Average per person local expenditure	$43.42	$66.31	
Total Direct (Passengers)	$490,789	$5,061,707	$5,552,496

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Retail Stores - Food and beverage	18.6	$564,210	$1,334,351
Real estate establishments	14.1	$259,537	$1,557,289
Hotels and motels, including casino hotels	12.2	$395,980	$1,162,344
Employment services	6.4	$171,915	$239,047
Retail Stores - Miscellaneous	5.8	$112,497	$217,004
Offices of physicians, dentists, and other health practitioners	4.8	$359,130	$594,588
Total of full-time jobs in the tri-counties across 440 economic sectors	407	$16,193,200	$37,024,340

Total State and Local Tax Impact (Tri County)

$3,483,113

Passenger Spending by Category

	PORT-OF-CALL	Origination	Total
Hotels	($0) 0%	($1,143,945) 22.6%	$1,143,945
Eating & Drinking Places	($38,772) 7.9%	($1,118,637) 22.1%	$1,157,409
Food & Supplies	($53,005)10.8%	($415,059) 8.2%	$468,064
Retail Shopping	($207,112) 42.2%	($1,736,165) 34.3%	$1,943,277
Auto	0%	($253,085) 5.0%	$253,085
Local Transport Cabs/buses	($5,889) 1.2%	($101,234) 2.0%	$107,123
Tours	($131,531) 26.8%	($187,283) 3.7%	$318,814
Other	($52,514) 10.7%	($96,172) 1.9%	$148,686
Total with Rounding error	($488,723) 99.6%	($5,051,580) 99.8%	

2010

CREW MEMBERS

	PORT-OF-CALL	Origination	Total
Total Crew	7,391	40,973	
% who come ashore	76.74%	76.74%	
Sub Total	5,671	31,443	
Average Expenditure In Charleston	$70.23	$70.23	
TOTAL DIRECT	$398,334	$2,208,241	$2,606,575

CREW Spending Per Category

	%	Total
Food and supplies (grocery, drug stores)	24.9%	$649,037
Retail Shopping (consumer electronics, clothing)	74.0%	$1,928,865
Local transport	0.5%	$13,033
Other retail	0.08%	$2,085
	99.48%	$2,593,020

Calculated as a ratio of 1 crew member per 2.3 passengers based upon ships document officers

2010

LOCAL SPENDING CRUISE SHIP COMPANIES

Calculated from 2004 estimates on a per passenger basis (NOTE: Not adjusted for Inflation)

	PORT-OF-CALL	Origination	Total
Number vessels	16	53	69
Passengers	17,000	94,240	111,240
Purchases for supplies/services and Fees on a per person basis	$70.07	$137.44	
TOTAL Direct	$1,191,190	$12,952,345	$14,143,535

TOTAL DIRECT IMPACT

	PORT-OF-CALL	ORIGINATION	TOTAL
Passengers	$490,789	$5,061,707	$5,552,496
Crew	$398,334	$2,208,241	$2,606,575
Cruise Lines	$1,191,190	$12,952,345	$14,143,535
Total	$2,080,313	$20,222,293	$22,302,606

ESTIMATED AVERAGE ECONOMIC IMPACT PER SHIP

	Port-of-Call	Origination	Total
Number Vessels	16	53	69
Total Passengers	17,000	94,240	111,240
Average Passengers	1,062	1,778	1,612
Local Impact			
Passengers	$30,674	$95,503	$80,470
Crew	$24,895	$41,664	$37,776
Cruise Lines	$74,449	$244,383	$204,978
Total	$130,018	$530,430	$323,226

264 completed passenger survey
76 crew surveys while coming back from a port-of-call

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[1] Passengers remaining on the ships do not exert an additional impact on tourism spending in Charleston and should not be counted in the economic impact. Similarly, local residents who depart on a cruise do not contribute additional spending and were not included in our analysis. Some analysts argue that local residents should be included since their spending could have taken place elsewhere otherwise, a "captured" impact argument. In order to reflect conservative sound analysis, we did not include that spending.
[2] IMPLAN Version 3 was used in this report, which is the latest version with the most recent data.
[3] Output includes labor income.
[4] IMPLAN estimates state and local taxes from the expenditure data. This includes taxes collected on the direct spending and the resulting multiplier effects.

About the Authors

John C. Crotts, Ph. D., is a Professor of Hospitality and Tourism Management in the School of Business at the College of Charleston. Prior to this position, he lectured in the Advanced Business Programme on tourism subjects at Otago University, Dunedin, New Zealand and was Director of the Center for Tourism Research and Development at the University of Florida. In 2000 the Travel and Tourism Research Association recognized him as one of five stars in tourism research worldwide. Twice in 2007, John was ranked in the top 20 scholars worldwide for his published research productivity in the field's leading (4) research journals. In 2010 Pearce recognized him as one of the 12 most influential scholars in tourism, marketing and psychology. Dr. Crotts received his PhD in Leisure Studies and Services from the University of Oregon in 1989. He also holds a bachelor's degree in Sociology from Appalachian State University, a M.S. in Experiential Education from Mankato State University, and an Ed.S in Adult Education/Higher Education Administration from the Appalachian State University.

Frank Hefner, Ph. D., is a Professor of Economics and director of the Office of Economic Analysis at the College of Charleston. He received his B.A. Degree in Economics from Rutgers College and his M.A. and Ph.D. Degrees from the University of Kansas. He taught at Washburn University in Topeka while he was a research assistant in the Institute for Policy and Social Research at the University of Kansas and at the University of South Carolina where he served as a research economist in the Division of Research. Dr. Hefner's research interests include regional economic development and forecasting. He participates in the Regional Advisory Committee of the S.C. Board of Economic Advisors. He is a past president of the Southern Regional Science Association. He has been quoted frequently in the press and has commented on economic conditions on local television and radio stations and before a number of organizations.