

Thunder Over the Boardwalk –
Atlantic City Air Show 2019:
Economic Impact Analysis- Update



SUBMITTED TO:

Greater Atlantic City Chamber of Commerce

BY:

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March 2020

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PART I. INTRODUCTION AND SUMMARY

Introduction:

The Atlantic City Convention and Visitors Authority (ACCVA) and the Greater Atlantic City Chamber of Commerce (GACC) sent out a request for proposals for an *Atlantic City Air Show Economic Impact Study* in October of 2008. That study was intended to measure the economic impacts on the region that could be attributed to **Thunder Over the Boardwalk 2008**. The show was held in mid-week on August 20, 2008.

That study and subsequent updates for the 2012 – 2018 shows were conducted through the *Center for Regional and Business Research* at Atlantic Cape Community College by Richard C. Perniciaro, Ph.D. who is also the author of the current update for the 2019 air show as an Economic Consultant (see APPENDIX for author’s qualifications). The economic impact estimates are developed from the following data sources:

- The attendance estimates are collected from the show coordinators, police and fire officials.
- Data available on travel and spending patterns is available from the annual *New Jersey Visitor Profile* conducted by DKSHIFFLET for the Division of Travel and Tourism. The latest study for 2018 can be found at: <https://www.visitnj.org/sites/default/master/files/2018-nj-visitor-profile.pdf>.
- Demographics of air show attendees are provided by the International Council of Air Shows (ICAS) from a survey of multiple air shows throughout the country (see: <https://www.airshows.aero/Docs/131>).

This current update uses the same methodology as the previous studies. This study uses multipliers from the Bureau of Economic Analysis’ RIMS II model of Atlantic County. This is the most frequently used model for comparable impact studies. In addition, the multipliers have been updated to the latest available 2016 benchmark and are derived from the actual economic performance of the regional economy.

Three important points need to be emphasized:

1. The spending and impact values are solely for the number of attendees that are estimated to be in the Atlantic City region for the air show. The spending by residents and visitors that would be in the region *absent* the show is not counted as it would have occurred anyway on another activity. Hence, of the 540,000 in attendance, 174,960 are estimated to be in the area solely due to the scheduled date of the air show. The impacts are *net* gains.
2. The dollars actually spent are much higher as many local people – either visitors that would be here anyway or residents – attend the show.
3. The data used in this and all past studies were chosen to be the most conservative possible whenever options were available. In that sense, the impacts are, if anything, understated. In addition, the impacts are calculated from attendance estimates as well as trends in the spending and demographic characteristics of visitors and air show attendee as reported in *annual* surveys. **As a result, when comparing results from one year to another, they are not necessarily proportional to show attendance only.** As with past updates, the 2019 results are derived from the latest and best available information.

The main operational differences between the last decade of annual shows has been the day of the week and the calendar date of each show.



These have depended on the availability of show participants, primarily the service acrobatic team for that year's show. The seasonal economy of the Atlantic City area peaks from July to August in response to the weather as well as the timing of school calendars for families with children visiting the region. The 2019 show was held on Wednesday August 21st at the culmination

of the summer season as has the shows from 2016 - 2018. This and past studies confirm that the best impacts result from shows conducted prior to when families and visitors are already pre-occupied with preparing to return to school. The 2020 show will once again be mid-week and in the last week of August on Wednesday the 26th. This should assure attendance at levels experienced in years with a similar show date.

Purpose of the Current Study:

The scope of services for this update included:

- An estimate of air show attendance
- Estimates of spending by the attendees
- Economic impacts of the direct spending, including total output, earnings and employment
- Room nights generated by the attendees
- Other impacts, including taxes generated

The results of the economic impact study are used for the recruitment of future sponsors as well as funding for the show. In addition, the results give an indication of the positive impact that special events can have on Atlantic City and the regional economy, even events that do not charge an admission fee.

Highlights:

The summary of empirical findings reported in **TABLE 1** below gives an excellent background to the worth of the Atlantic City Air Show to the region. While it should be recognized that more precise estimates could be made by more direct survey research on the viewers of the show, the estimates used are conservative in an effort to not overestimate the results. In light of this, there is no doubt that the show is a tremendous impetus for net new spending.

“We sponsor a lot of events— this [the Atlantic City Air Show, Thunder Over the Boardwalk] is the event that our customers remember throughout the year and start asking early for tickets to.” — Brian Juleskusky, Senior Vice President, Bank of America

While the exact attendance is not easily determined, it is clear to anyone that attends the event that the number of attendees and the resulting economic impacts are substantial.

In addition, there are a variety of other benefits of the event. These include: improving the image of Atlantic City; focusing attention on the beach and boardwalk; providing a family-oriented venue for a full day at the shore; providing a mid-week event at the tail end of peak season; and, a host of other intangibles that obviously are

found to be attractive to tens of thousands of attendees.

One benefit that is quantified but not included directly in the economic impacts is the **value of the media coverage** received by Atlantic City due to the Air Show. The City itself has no formalized marketing effort. However, the Chamber and its partners provide both internet as well as print

information leading up to the show. This information was picked up by national and regional media outlets resulting in 666 news items.

There are, of course, some costs to the event. Some individual businesses can find the show detrimental to its business during the hours of the show itself. There is no doubt that some indoor activities are hurt by the draw and that traffic congestion causes a time cost to employees in the region.

However, the anticipation that many attendees feel for what has become an annual event is a tribute to its positive impact on the regional economy. This is true for the one day of intense activity and has increased as other events have been coordinated with it in the days prior. An event that is free, family-friendly, beneficial to business, and patriotic can only be a plus for the economy and the community.

Thunder Over the Boardwalk 2019:

While it is always dangerous to predict the success of a free event that is a victim of the weather and date, the table below compares the results of the 2018 economic impact study with those of the current study. Given the fact that the 2020 show will also be held on a mid-week August 26th date and feature the Thunderbirds, the 2019 results are a good indication of what can be expected given favorable weather. As always, the event is much anticipated.

While **TABLE 1** reports the summary results, the following sections give more detail on how they were derived.

TABLE 1

ATLANTIC CITY AIRSHOW, 2019			
ECONOMIC IMPACT - SUMMARY TABLE			
COMPARISON OF RESULTS, 2018 vs. 2019			
MARCH 2020			
	2018	2019	% Change
Estimated Attendance	400,000	540,000	35%
Estimated Net, Non-Local Attendance	121,600	174,960	44%
Direct Spending	\$32,267,400	\$50,901,720	58%
Total Output	\$45,537,547	\$72,001,380	58%
Total Earnings	\$11,658,032	\$18,474,902	58%
Total Employment	416	668	61%
Room-Nights	17,665	23,098	31%
Tax Revenues	\$1,925,957	\$2,947,025	53%

In this table, the Direct Spending of \$50.1M is the estimate of spending from the 174,960 estimated net attendees. The “Total” estimates of output (\$72M), earnings (\$18.5M) and employment (668 FTE jobs in Atlantic County) include the secondary or ‘spin-off’ effects of the Direct Spending. The room-nights include all paid accommodations by the net attendees, many more stayed with friends or relatives.

The summary results indicate that the 2019 was a very good year for the Atlantic City Air Show. The increase in attendance to levels reported in years prior to the casino closings (5 closed in 2014) can be attributed to a number of factors, with some of these being proactive changes resulting from efforts of the Chamber and show sponsors. These included:

- **Additional CRDA funds:** based on the past performance of the show to spur the regional economy, the CRDA increased its backing of the 2019 event by \$100,000. This allowed for additional marketing.

- **Adding the Red Arrows:** Adding the Royal Air Force’s acrobatic team, the equivalent of the Thunderbirds and Blue Angels. While the synchronized maneuvers of the U.S. Armed Services teams have always been the highlight of the show, this doubled the excitement for attendees.



- **Overall Atlantic City Recovery:** Total gaming revenue was \$338.8 million, an increase of 13%, in August compared to the same month last year. The summer’s total gaming revenue was up 11.6% over the same three-month period in 2018. With the additions of the Hard Rock and Ocean casino hotels, the opening of the hotel and restaurants at the Showboat property and the success of sports betting, the 2019 summer season was the best since the onset of the national recession in 2008.

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PART II. ESTIMATING ECONOMIC IMPACTS

Attendance at air shows in North America now exceeds 20 million people each year according to the International Council of Air Shows. These range from the Chicago Air Show where attendance is estimated to be 3.5 million to many smaller, regional ones such as the Oregon International Air Show which draws 65,000. In the tri-state area of New Jersey, New York and Pennsylvania, the Jones Beach (Bethpage) Air Show draws about 200,000 and is the largest after the Atlantic City Air Show.

In the Atlantic City marketplace, the air show is held on a date that follows the closing of primary and secondary schools. It provides an attraction for families and youngsters that normally would not visit Atlantic City for a day-long activity. It serves to diversify the visitor profile while drawing large crowds directly to the beach and boardwalk.

The economic impacts of any large event depend upon a number of established facts and estimates. In the case of air shows, the method for turning this information into impacts is consistent and follows that of most economic impact studies. However, the collection of precise information is often difficult, especially in open air shows that are not controlled by admission tickets and centralized parking as would be the case at an air show on the grounds of an airport, such as those that have been held at Lakehurst Naval Air Base or Maguire Air Force Base (both are now part of Joint Base).

To make up for information not collected at the event by ticket sales or surveys of attendees, this study has utilized information from similar events such as concerts or sporting events made

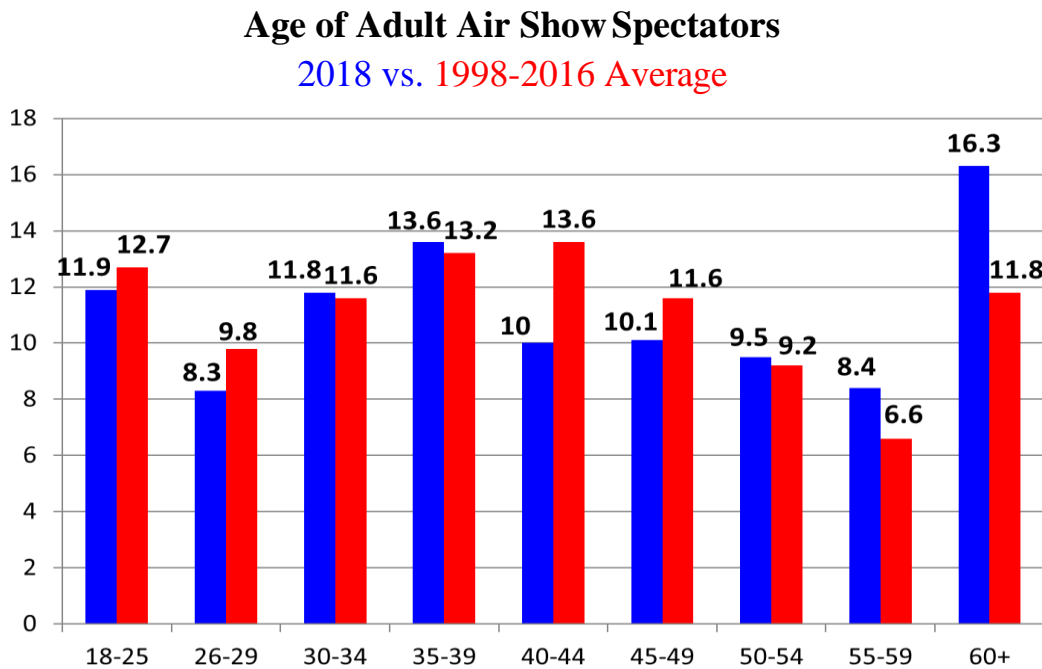


available in surveys done for New Jersey. The latest was performed by the State of New Jersey Division of Tourism in 2018. The earlier ACCVA **Visitor Profile** study from 2008 by Spectrum Gaming used in previous studies is now outdated. The change in data sources explains some of the differences noted in tables.

As Atlantic City drives a large part of the State averages and patterns, the survey information available provides a good approximation to the information needed for this economic impact study.

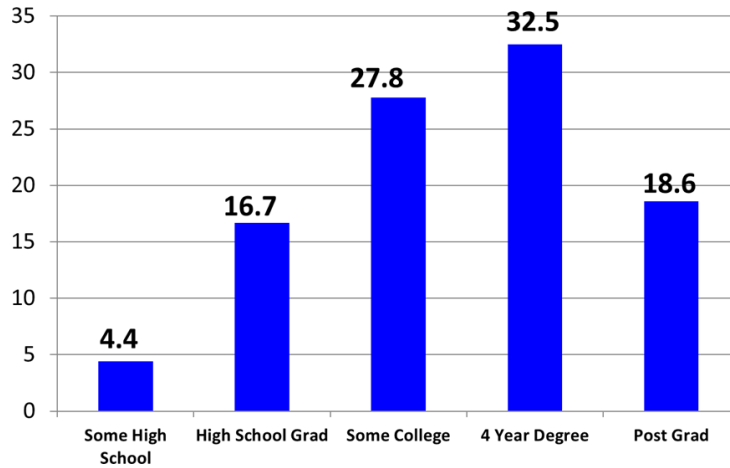
In addition, the show's official attendance, always a controversial estimate, was provided by the show's coordinators, the ACPD and the ACFD.

One of the reasons that air shows are produced as tourism events is the demographic that they attract. The International Council of Air Shows regularly interviews attendees at a number of events throughout the country. The ability to attract attendees from multiple age cohorts from The ICAS chart below helps to explain why air shows are attractive to advertisers. They appeal to younger 18-25 year-olds who then return with kids when they get to their mid-thirties. Finally, as grandparents and/or retirees they again return when in the 60+ year-old cohort. This latter group made up 16.3% of attendees at 2018 air shows as illustrated by the chart below from their latest study (see: *ICAS 2018 Spectator Survey* at <https://www.airshows.aero/>):



In addition, the attendees tend to be well-educated as the ICAS chart below indicates:

Education Level of Air Show Spectators, 2018



In short, the demographics of expected attendees makes the air show an opportunity for sponsors and advertisers to reach an audience that visits Atlantic City for this unique event.

In order to resist the overestimation of economic impacts where some variables have not been directly measured, the most conservative estimates were used. While this has most likely also resulted in conservative overall impacts, the results can be used for audiences that need clear evidence of results.

Economic Impacts - Methodology:

In order to provide measurements of the overall – direct and secondary - impacts, the U.S. Department of Commerce, Bureau of Economic Analysis provides multipliers derived from the actual economic structure of the Atlantic County MSA. It gives estimates of economic impacts that are consistent with those of other large projects and events. The multipliers are directly measured from past transactions that can be traced using the government’s tax and revenue accounts. They are specific to the Atlantic City region and are updated on a regular basis by the Bureau of Economic Analysis, U.S. Department of Commerce. The latest, used in this study, are from the 2016 benchmark.

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PART III. ECONOMIC IMPACTS

This section develops the net economic impacts that can be attributed to the event itself. This implies that both those in attendance that would have normally been in the region on a Wednesday in August as well as residents of the region itself need to be netted out of the attendance estimate. In both cases, the conservative assumption is that any spending at the air show from these attendees would have occurred in the region in its absence and, as a result, the impacts would also have occurred anyway. Therefore, the impacts that follow can be considered the net effects of the event itself.

Attendance:

Actual attendance can only be estimated. The estimate begins with the total viewing population provided by the Air Boss. While the total number of attendees was estimated to be 540,000, to get the net number of visitors – those that would not have been in the region on a Wednesday in August if the show was not scheduled – this number was decreased using information from similar shows as well as seasonal estimates of weekday visitors. The International Council of Air Shows has surveyed many air shows in North America and found that approximately 32.4% of attendees are **not** from the local region (within 40 miles of the show). The net number of attendees estimated is shown in the table below:



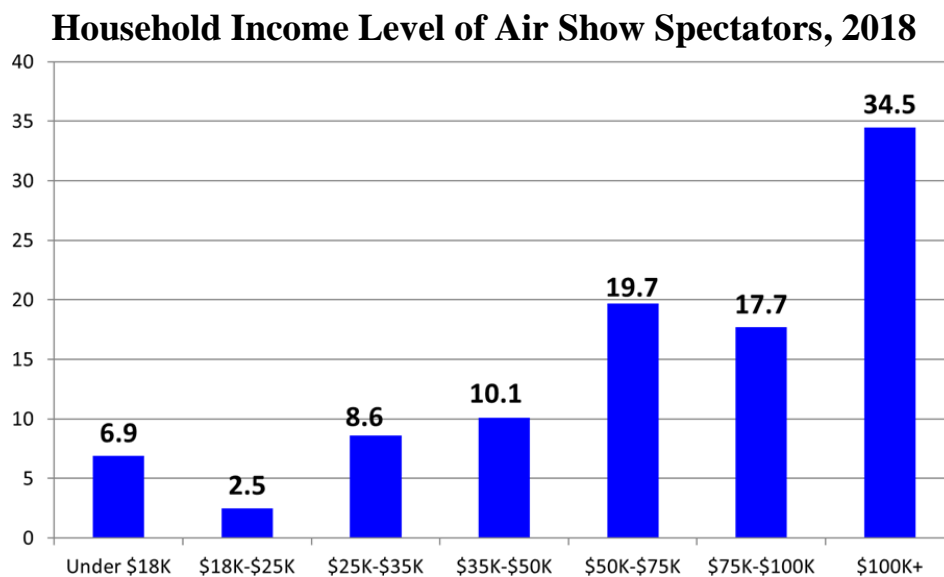
TABLE 2

ATLANTIC CITY AIRSHOW, 2019		
ECONOMIC IMPACT		
ESTIMATE OF ATTENDANCE, 2018 - 2019		
MARCH 2020		
	<u>2018</u>	<u>2019</u>
Estimated Attendance (ACOEM)	400,000	540,000
Estimated Net, Non-Local Attendance	121,600	174,960

In short, an estimated 174,960 people attended the Atlantic City Air Show in 2019 who would not have been in the region in its absence. This number alone makes the air show one of the largest in the region. The fact that an estimated 540,000 people actually viewed the show and also spend dollars on related activities adds greatly to its appeal and its attraction. However, to estimate the net impact only the spending of the 174,960 was used.

Spending:

The direct spending attributed to the show is shown below in **TABLE 3**. The \$50.9M in spending causes a multiple of secondary impacts including earnings and employment. These are known as secondary and induced effects. The household income of air show attendees is extremely high as shown by the ICAS chart below:



While the spending per person used in this study is one for special events in general, resulting in conservative estimates, the overall estimate of \$50.9M reported in **TABLE 3** below is substantial for a one-day event. While some of the overall attendees stay overnight, the large majority do not.

TABLE 3

ATLANTIC CITY AIRSHOW, 2019			
ECONOMIC IMPACT			
DIRECT SPENDING ESTIMATES			
MARCH 2020			
CATEGORY	PER PARTY	PER PERSON	TOTAL EXPENDITURES
Food & Beverage	\$232	\$104	\$18,203,264
Lodging	\$82	\$37	\$6,404,852
Entertainment	\$104	\$46	\$8,129,613
Gambling	\$51	\$23	\$4,005,896
Shopping	\$112	\$50	\$8,764,535
Transportation	\$43	\$19	\$3,370,975
Misc.	\$26	\$12	\$2,022,585
Totals:	\$649	\$291	\$50,901,720

As reported by the NJ Division of Tourism, the typical special event is attended by a party of 2.2 people traveling together. The spending of \$291 per person occurs over an average period of 2.4



days. Therefore, the impacts of the air show are probably spread over 2-3 days as some of those staying in town arrive or depart on days other than the actual show date. This does not include any attendees that commute or stay but live less than 40 miles away. Again, the overall spending at the show far exceeds the direct spending estimated in this study.

In all, the 174,960 net visitors spent approximately \$50.9M while in the region to attend the show. This spending is turned into income and revenue for workers and vendors. As they spend these dollars – and about 80% of all workers in Atlantic City live within 20 miles part of the local region – indirect impacts occur.

Economic Impacts:

The overall expenditures associated with the event exceed \$50.9M and these dollars are

pumped into the local economy to produce the secondary or indirect impacts. By applying the expenditure data to the regional multipliers, the total impacts – both direct and indirect - are estimated. The results of this are shown below:

TABLE 4

ATLANTIC CITY AIRSHOW, 2019				
ECONOMIC IMPACT				
ESTIMATES OF IMPACTS				
MARCH 2020				
<u>RIMS INDUSTRY</u>	<u>DIRECT EXPENDITURES</u>	<u>TOTAL OUTPUT</u>	<u>TOTAL EARNINGS</u>	<u>TOTAL EMPLOYMENT</u>
Food & Beverage	\$18,203,264	\$25,682,985	\$6,957,288	274
Lodging	\$6,404,852	\$8,838,696	\$2,083,498	53
Entertainment	\$8,129,613	\$11,789,565	\$2,866,502	122
Gambling	\$4,005,896	\$5,631,890	\$1,277,881	54
Shopping	\$8,764,535	\$12,202,862	\$3,103,522	92
Transportation	\$3,370,975	\$4,843,754	\$1,397,606	53
Misc.	\$2,022,585	\$3,011,629	\$788,606	20
TOTALS	\$50,901,720	\$72,001,380	\$18,474,902	668

The economic impacts generated by the 2019 air show are substantial. The activities at the 2019 show generated \$72M in overall regional economic activity which created the equivalent of 668 annual regional jobs and \$18.5M in earnings.

The fact that the air show is held in a city that normally attracts over 20 million visitors each year tends to mask its overall impact. **The attraction of 500,000+ viewers to a single event is beyond all expectations for many locations. This number of viewers alone makes the Atlantic City Air Show one of the largest in the country.**

Room Nights Generated:

The spending patterns of event-goers include an average of \$80 per party for lodging. This low spending level reflects the fact that many do not stay overnight or stay with relatives or friends. However, as some air show attendees do pay for their overnight stay, and some stay for more than one night, the number of room nights generated by the event can be estimated as reported below:



TABLE 5

ATLANTIC CITY AIRSHOW, 2019			
ECONOMIC IMPACT			
ROOM NIGHTS GENERATED - HOTEL/MOTEL			
MARCH 2020			
INDUSTRY	DIRECT EXPENDITURES	ESTIMATED AVG. RATE/NIGHT	ROOM NIGHTS
Lodging	\$6,404,852	\$214	23,098

These paid room nights are spread throughout the region.

Tax Revenues:

The direct and indirect economic activity generated by the air show creates a number of tax streams for state and local agencies. While the total earnings and total retail (shopping) spending was used to calculate state taxes, the local taxes are from direct spending only. The secondary spending is more diffuse and would be difficult to attribute directly to any local activity for local tax purposes.

TABLE 6

ATLANTIC CITY AIRSHOW, 2019			
ECONOMIC IMPACT			
TAXES GENERATED			
MARCH 2020			
<u>TAX</u>	<u>SPENDING</u>	<u>RATE</u>	<u>REVENUE</u>
Sales, NJ	\$12,202,862	6.625%	\$808,440
Casino Revenue	\$4,005,896	8.0%	\$320,472
Casino Parking Fee	34,521	\$3/car	\$103,564
Luxury Tax	\$14,534,465	9.0%	\$1,308,102
Income, NJ	\$18,474,902	2.2%	\$406,448
Total			\$2,947,025

The luxury tax is estimated using only entertainment and lodging expenditures, the spending on taxable drinks cannot be separated from the data. In addition, the number of those arriving by car is estimated using data from the Visitor Profile. An assumption of 50% of the cars used by net attendees parking in casino facilities subject to the minimum CRDA parking tax of \$3.00 was used. Most parking costs more on air show day.

Media Value:

The extent and value of the show was recorded and estimated by Cision for both 2018 and 2019. **The 666 news items of the Air Show were available to an astonishing 823M people due to the expansion of social media efforts.** These were valued at \$1.3M if purchased reflecting the efficiency of social media as an advertising tool. This is extremely important to the Atlantic City marketplace as there is no formal marketing effort by the City itself, this is left to individual entities. As the charts show, **the promotional efforts of sponsors and the additional CRDA funds in particular were extremely widely leveraged, no doubt adding to the large increase in attendance.**

More details on this coverage are shown below:

TOTAL NEWS ITEMS BY MEDIA TYPE, 2018 vs. 2019

	Total News Items	
Media Group/Year	2018	2019
Broadcast	179	162
Internet	219	327
Print	26	59
Social Media	116	118
Grand Total	540	666

	Total Reach	
Media Group/Year	2018	2019
Broadcast	44,303,213	49,251,156
Internet	433,531,355	287,700,253
Print	917,971	2,017,193
Social Media	29,362,022	484,761,627
Grand Total	508,114,561	823,730,229

	Total Publicity Value	
Media Group/Year	2018	2019
Broadcast	\$2,888,554	\$644,499
Internet	\$247,025	\$160,978
Print	\$153,872	\$526,523
Social Media	\$443	N/A
Grand Total	\$3,289,894	\$1,332,001

Summary and Conclusion:

This study has made every effort to calculate the economic impacts of the annual Atlantic City Air Show – *Thunder Over the Boardwalk*. The best and most relevant information from reputable and tested sources have been used. And while the study does not take into account some of the negative non-economic costs such as increased traffic congestion, there are many less-tangible benefits of the show that are not included in the study but over time add to the economic well-being of Atlantic City and the region. Not the least of these is the ability of employees from casinos, banks, public entities and other regional stakeholders to spend an enjoyable and anticipated day with clients and supporters and their families. For both these and the economic benefits estimated in the study, the Air Show is now both a unique and positive fixture in the region.

APPENDIX

Author's Qualifications

Richard C. Perniciaro, Ph.D. (phdrpc@gmail.com) has been active in education, economic research and economic development in Southern New Jersey for the past forty years. Most recently, he served as both the Executive Vice President of Facilities, Planning and Research at Atlantic Cape Community College as well as the Director of the *Center for Regional and Business Research* which performed economic, marketing and demographic studies for public agencies and private businesses. He is currently continuing this work as an economic consultant.

Dr. Perniciaro holds a doctorate in Economics from Temple University, a MA degree from the London School of Economics and a BA degree from Columbia University. His areas of specialization include regional forecasting and economic analysis as well as utility deregulation. He has published studies on the economies of Atlantic City and the NJ Pinelands.

The author of this study has performed similar studies for federal, state and local agencies as well as for private concerns. See, for example:

The Atlantic City Expressway, 50th Anniversary:

https://www.sjta.com/acexpressway/time_capsule_items/Celebrating%2050%20Years%20-%20The%20Regional%20Economic%20Impact%20of%20the%20ACE%201964-2014.pdf

Expansion of Teligent's pharmaceutical manufacturing facility:

<http://www.teligent.com/assets/groundbreaking-4pg-lr.pdf>

The ten-year economic impact review for the FAA's William J. Hughes Technical Center:

<http://www.tc.faa.gov/its/worldpac/techrpt/tctn15-45.pdf>