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**ECONOMIC IMPACT ANALYSIS OF THE
PORTSMOUTH INVITATIONAL TOURNAMENT**

by

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B.S. May 1984, Messiah College

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Old Dominion University in Partial Fulfillment of the
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ABSTRACT

ECONOMIC IMPACT ANALYSIS OF THE PORTSMOUTH INVITATIONAL TOURNAMENT

Michael Morris
Old Dominion University, 2001
Director: Dr. Robert Case

The purpose of this study was to determine the economic impact of the Portsmouth Invitational Tournament (PIT) on the Hampton Roads, Virginia economy. The Portsmouth Invitational Tournament is a four-day all-star basketball tournament featuring college seniors from across the United States. No study has been done on the PIT in the past and this presented an additional need for this research to be undertaken. This study provided valuable information to local officials for future planning of this and other City of Portsmouth events. A twenty-one question survey was developed and distributed through a stratified random sample of the spectators attending the tournament. This questionnaire provided demographic information on the attendees and gave an accounting of tournament expenditures by attendees. Results were calculated based on the expenditures of local spectators and scouts who attended the tournament, as well as, out of town spectators and scouts, who attended the tournament. Upon tabulation of a total direct economic impact, a regional input-output model system was employed to determine the indirect economic impact of the Portsmouth Invitational Tournament. The total economic impact of the tournament was then tabulated. This study of the 2000 Portsmouth Invitational Tournament concluded that a total economic impact of \$822,081.53 was generated. The total was comprised of a local direct impact of \$63,136.66, a visitor direct impact of \$390,685.10 and a visitor indirect impact of

\$368,259.77. Local taxes collected from hotel rooms, food and other expenditures amounted to \$21,274.64. This information contributed significantly to the justification for conducting the Portsmouth Invitational Tournament each year and added credibility to the hosting of sporting events of this kind in the Hampton Roads area.

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INTRODUCTION

The Portsmouth Invitational Tournament (PIT) has been a local sporting tradition for over 48 years. The tournament has received tremendous national and international notoriety from individuals in the basketball profession. The PIT as it is known, brings the top 64 college senior basketball players to Portsmouth, Virginia for a four-day all-star tournament. General managers and scouts from every National Basketball Association (NBA) team as well as representatives from international professional leagues make their pilgrimage to Portsmouth each April to evaluate players for their teams prior to the NBA Draft. Many NBA stars have risen from relative obscurity by making a strong showing at the PIT. Rick Barry, Dave Cowens, Dennis Rodman, Scottie Pippen, Tim Hardaway and John Stockton are just a few examples of players who have used the PIT as a springboard to NBA stardom. With such a storied history, it is interesting to note that no previous economic impact study of the PIT has been conducted.

Purpose

The purpose of this study was to identify and quantify the economic impact of the Portsmouth Invitational Tournament so that the significance of this event on the Hampton Roads area could be demonstrated. It is easy to see and measure the media exposure the PIT has received on ESPN, CNN and in newspapers across the nation. Yet, the impact of the PIT on the Hampton Roads economy has never been studied. Moreover, very few studies have been conducted on amateur events of this nature. This study should add significantly to the body of knowledge available to those who study economic impact in sporting events. This research attempted to document the economic impact of the Portsmouth Invitational Tournament on the local economy so that city officials can

carefully examine the benefits that this tournament has for the community. City of Portsmouth officials can now weigh the return on investment received and make appropriate and informed decisions when determining future budgetary considerations for the PIT and the planning of other City events.

This study has created a benchmark by which other City of Portsmouth events and programs can be measured and compared. Expenditures for food, admission fees, entertainment, retail shopping, lodging, transportation and miscellaneous purchases were documented to determine the economic impact of the tournament on the Hampton Roads, Virginia area.

Research Question

Can a four-day sporting event, namely the Portsmouth Invitational Tournament, have a positive economic impact on the Hampton Roads, Virginia economy, and thus justify the cost of its yearly continuance?

Directional Hypothesis

The Portsmouth Invitational Tournament will have a significant impact on the Hampton Roads, Virginia economy.

Variables

Independent – demographic data (age, gender, race, income level, place of residence)

Dependent – expenditures (food, admission, entertainment, retail shopping,
lodging, transportation, other)

Operational Definitions

Direct Economic Impact - the actual expenditures spent by attendees.

Indirect Economic Impact - the effect initial spending has as it is spent again in the local

economy.

Locals - those living in the Hampton Roads Metropolitan Statistical Area.

Visitors - those living outside the Hampton Roads Metropolitan Statistical Area.

Hampton Roads Metropolitan Statistical Area - includes the Cities of Chesapeake, Hampton, Newport News, Norfolk, Poquoson, Portsmouth, Suffolk, Virginia Beach and Williamsburg. Also included are the Counties of Gloucester, Isle of Wight, James City, Mathews and York

Spectators - those who paid admission to watch the Portsmouth Invitational Tournament.

Scouts - representatives of professional basketball teams.

LITERATURE REVIEW

Economic impact has become a dynamic instrument in the study of sports and tourism. What is economic impact? Crompton (1995) stated that economic impact is the net economic change in a host community as a result of spending attributed to a sporting event or facility. A further description of economic impact by Crompton includes:

Residents of a community “give” funds to their city council in the form of taxes. The city council uses a proportion of these funds to subsidize the production of an event or the development of a facility. The facility or event attracts out-of-town visitors, who spend money in the local community, both inside and outside the facility they visit. This “new money” from outside the community creates income and jobs in the community for residents. This completes the cycle – community residents are responsible for creating the funds, and they receive a return on their investment in the form of new jobs and more household income. (p.15)

The study of economic impact focuses on expenditures by visitors to sporting events in a host community to determine the level of impact that is transferred to the local economy. The Maryland Department of Economic and Community Development (1985) noted the key ingredients to measuring economic impact as sales or expenditures, income generated, jobs generated and tax revenues generated. This study further noted that the economic impact of professional sports is measured in terms of quantifiable economic activities, using the “expenditure approach”. Thus, actual expenditures are used to determine the impact on jobs, income and tax revenue within the community. Ayers (1997) indicated that the greatest potential benefits of a community having a college with a distinguished sports team are the increase in household income or earnings, the creation of more jobs and the increase in tax revenue; all due to the expenditures by visitors at local businesses. Touche Ross (1989) also recognized that the direct economic impacts on a city due to a sporting event are an increased sales revenue and thus an increased level of employment and an increased level of city tax revenues. Schaffer and Davidson

(1984) noted similarly that the two key questions in economic impact analysis are the effect of “new money” (visitor spending) on gross revenues of local businesses and how these revenues translate into personal income for the local residents and into tax revenues for the local government.

The determination of economic impact is dependent upon the level of initial expenditures, but the total measurement of economic impact is the recycling of this “new money” within the local community. This phenomenon is referred to as the multiplier or “ripple” effect. Hunter (1988) identified the multiplier effect to be when an individual purchases goods and the recipients of those funds will in turn spend money to restock the shelves and pay employees. Those employees will then spend that income on other goods. Thus, this additional spending tends to increase income and employment, which in turn generates still more spending, and so on. Touche Ross (1989) added that a multiplier is the ratio of total spending (throughout the ripple effect) to the initial or direct expenditures. The multiplier then reflects the concept that a direct increase in spending leads to additional or indirect consumption spending by secondary parties and therefore expands total spending by a larger amount than just the initial or direct increase, which results in the statement of a total economic impact. Crompton (1995) explained that the multiplier recognizes that changes in the level of economic activity created by visitors to a sports facility or event brings change in the level of economic activity in other sectors and, therefore, creates a multiple effect throughout the economy. Economic impact analysis then is more than just determining initial spending by visitors to a sporting event. It is the measurement of the aggregate long range effect each dollar spent will have on the

economy for years to come as that money is spent over and over again within the local economy.

The use of economic impact studies has been well documented and has been beneficial to organizations wishing to determine the contribution that sporting events, teams and/or facilities have on a community. Regan (1995) stated that economic impact analysis was designed to provide quantitative and qualitative measures of the ways professional football impacts the Denver economy. Municipalities and organizations are continually seeking to justify the existence of their chosen endeavors and these studies provide substantial evidence of the positive impact these events have in bringing actual dollars to the local economy. The importance of this particular type of research study was well summed by Yardley, MacDonald and Clarke (1990) in their study of a recreational ice hockey tournament. They note that those who run these events are forever under pressure to justify their purpose. Parks and recreation practitioners, therefore, need to know the significance of their events' impact on the local community. With this knowledge and data, practitioners can justify that parks and recreation events are central, not peripheral, in their contribution to the local community. Proof of economic impact has often justified the existence of an event based upon the return that was received on the investment as compared to other possible events. The information gathered is a tremendous bargaining tool for event promoters and sports teams when the time comes to meet with local government officials in regards to funding and continued support.

Hunter (1988) indicated that private businesses have used economic impact figures as ransom on government officials to keep their business in the local area. Sports franchises

are a prime example of this technique. Sports franchises have used economic impact studies to justify themselves and the local community's need to keep them (Hunter, 1988). They use this to threaten government officials into giving them special consideration or they will take their economic stimulus to another city. So, just as having them has a positive multiplier effect, losing them has the same negative multiplier effect on the local economy. The Maryland Department of Economic and Community Development (1985) stated that in the absence of these (professional sporting) events, the state's economy would lose not only the initial event-related consumer spending, but also the induced economic activities that are dependent upon or related to the scheduling of these professional sporting events in Maryland. Most cities and officials are not willing to take the chance on losing such an impact on their economy.

Economic impact studies are also used as an instrument to validate spending on stadiums and to solicit teams or events to an area. Agarwal and Yochum (1999) indicated that in order to provide community leaders with a clear understanding of the economic potential and benefit of selected sporting events, economic impact studies have proven invaluable. Data from economic impact studies can be used by officials from sport organizations to show community leaders and legislators from potential host communities the economic possibilities that sporting events can offer. The ability to persuade local officials to fund a new event will be greatly enhanced if evidence of a substantial economic impact can be verified. Therefore, economic impact studies are used as a valuable sales tool.

Although economic impact studies have had definite positive uses, one must be cautious when performing and evaluating the results of these studies. There are several

areas of caution where these studies have to be closely examined to determine their accuracy in portraying the true benefit to the local community. Otherwise, the results can be misleading and paint a rosy picture that may not be totally indicative of the impact being generated by the sports event and/or team. For a number of reasons, economic impact studies often over estimate the impact of teams and/or events on the local economy. This is particularly true when those conducting the study have a vested interest in the outcome of the study. Diligence must be taken to maintain an extremely high level of objectivity and not produce results that are biased toward a pre-determined slant. Baade (1996) for example, cautioned those who use economic impact studies as rationale for building new sports stadiums. He pointed out that the results from economic impact studies have over estimated the economic impact of professional sports and have been used inaccurately by professional sports boosters as proof of economic development. Crompton (1995) also noted that, because economic impact studies are often commissioned by potential gainsayers, the results can often be biased. This numerical guesswork is often presented to the public (by local politicians and boosters of the event and/or team) as indisputable evidence that a city or state government should subsidize a sports team or a new stadium.

A seldom-addressed area of concern in the analysis of economic impact is the lack of discussion of opportunity costs. Crompton (1995) was quick to point out that most studies do not indicate the benefit of a sports team, event and/or facility as compared with another project. The question should be asked, would a mall or other industry provide as much or more impact on the economy as a sports team or event. Often larger cities have other issues that need to be addressed. These may include new schools, roads or some

other infrastructure. Although it would be interesting to see comparisons with these other projects, it is beyond the scope of an economic impact study of a sports team or event to examine the impact of these other projects. This would be the responsibility of another study. It is true, however, that local officials should spend more time examining the potential of sports events and teams against that of other projects.

The use of liberal and exorbitant multipliers that do not adequately estimate leakage of funds within the local economy is another potential source of contention. Multipliers of the ripple effect must be accurate for the community being studied. The federal government has determined multiplier coefficients for regions of the country and even these multipliers may be modified to a more conservative coefficient where leakage dictates. Leakage is the amount of money that is spent outside of the local community in each successive round of spending. Touche Ross (1989) defined expenditure leakage as a phenomenon that occurs when revenue recipients pay federal taxes, spend income on goods and services outside the area and put earnings into savings. Since no community can supply the entire needs of each individual and business, they must rely on imports. Each item that is imported to meet the demand for goods constitutes leakage of local money to suppliers outside the area. Regan (1995) pointed out that imports are a problem in any local, regional, or national economy. Denver's regional area cannot produce locally all the goods and services needed to supply the metropolitan region's needs. Thus, 13.4% of goods and services are imported. The multiplier for the Denver economy must parallel this import rate. Depending upon the business, such as sports teams or events, the import level may be even higher. This would necessitate an adjustment of the multiplier coefficient to a more conservative level to account for more leakage.

The Maryland Department of Economic and Community Development (1985) shed light on the leakage topic by noting that the flow of related expenditures does not continue indefinitely. Recipients of these incomes spend all or part of it on goods and services outside the state, or put part of these earnings in savings. Therefore, for all the income generated by a sports team or event, some will go into savings and thus be leakage. Some money is spent on goods and services produced outside of the area and thus should be considered as leakage. Some monies go to state and federal taxes and are considered leakage. Then, a proportion of this money is spent in the local economy. The multiplier coefficient must be adjusted conservatively to account for this leakage. Eventually, all of the income generated by expenditures related to a team or event will leak out. The question is, how many rounds of spending will it take for this to happen? This determines the multiplier coefficient and its application to the study at hand.

Another area of over emphasis is that of local residents who attend events within the local community. Often these expenditures are given a place of high importance or impact on the local economy. Upon close examination these expenditures are relevant, but not the primary focus of this study. The emphasis of this study was on visitor spending or "new money" into the economy. Hefner (1990) pointed out that in order for growth to occur, injections of outside funds into the economy are necessary. These injections occur because goods and services are exported. Tourism is an export. Each time a visitor comes to a sports event it is the same as an industry making a product and selling it in another area. The product is exported and the money transfers from the foreign area to the local area. Delpy (1999) strongly affirmed that economic impact studies should include only expenditures of non-resident participants and spectators, as

this represents new dollars brought to the area. Baade (1996) also concurred; stating that spectating at a sporting event is but one option with regard to the use of leisure time and money. Adding a sports team or stadium to a city's economy appears to realign leisure spending rather than adding to it and is, therefore, neutral with regard to job creation. Crompton (1995) further added that only spectators who reside outside the area and whose primary motivation for visiting is to attend the sports event should be included. Expenditures by locals is not "new money", it is a recycling of existing money. If the money was not spent at that event, then it would have been spent another way in the local economy. Inclusion of this spending then over estimates the impact. It is important to note that some locals would spend their entertainment dollar out of town if it were not for the local sporting event. This must also be taken into consideration.

The final area of caution is that of including casuals and time-switchers in the study. Casuals are those who are already visiting the area and decide to come to a sports event. It is viewed that they would have spent that entertainment dollar elsewhere in the local community and they chose a sports event instead of a theater or other locale. Time switchers on the other hand are visitors who had already planned to come to the local area and decided to coordinate their visit with a sporting event. It is deemed that they would have spent this money anyway on another source of entertainment had the sports event not taken place. They did not come just for the sports event, but it was an additional incentive to visit. Crompton (1995) pointed out the necessity to use questions on the survey to detect both casuals and time-switchers. They can then be determined as a percentage of the population and their proportion of expenditures removed from the total impact.

With the reasoning of economic impact scholars as a basis, a fair and complete study of the economic impact of the PIT was attempted. All of the areas of benefit and caution were taken into consideration when formulating the methodology and instrumentation for this economic impact study of the Portsmouth Invitational Tournament. The objective of this study was to document an accurate assessment of economic impact of the PIT, that will be deemed valid and usable by City officials for future decisions.

METHODS

Sample Characteristics

The focus of this study was to determine the total expenditures of those who attended the Portsmouth Invitational Tournament. There were two categories of attendees whose expenditures were measured. They included spectators, who paid admission to enter the tournament games, and scouts from professional basketball leagues, such as the National Basketball Association (NBA) and foreign leagues. A sample was taken from each of these categories of attendees to arrive at total expenditures for each category and an aggregate total. By distinguishing these two categories the sample included an accurate reflection of the total population of those who attended.

The vast majority of attendees to the tournament were spectators. To capture the expenditures of the people in this category a survey was handed to every person who entered the front gate to the gymnasium on the final night of the tournament. Using the attendees on the final night gave a more accurate accounting of expenditures due to the fact that attendees knew the amount they had spent throughout the tournament rather than trying to estimate future expenditures each night. Had this information been collected each night it would have caused duplication in responses from those who attended on multiple nights. Public address announcements were made throughout the evening to remind spectators to respond to the survey instruments and return them to boxes located at the exit doors. These boxes were placed at the exit doors for collection of surveys from respondents on the way out of the gymnasium. Survey collectors were also at the doors to help collect surveys as people exited. As an incentive to respond, a Portsmouth

Invitational Tournament pen was given to all those who returned the survey to the box by the exit doors. The survey distributors and collectors underwent training prior to distribution and collection of the instrument to avoid any bias or confusion in the collection process.

Sports agents attended the PIT in hopes of signing potential professional players to contracts. All of these individuals are required to buy their own tickets. These individuals were counted as part of the total paid spectator population and their expenditures were included with the spectator respondents.

Representatives from the National Basketball Association and representatives from other professional basketball leagues around the world were in attendance. These individuals were required to register before receiving admission into the games and were therefore placed in the scout category. These scouts were surveyed in like manner by handing out a questionnaire to each individual as they entered the gymnasium on the final night of the tournament. All scouts entered the gymnasium through a special entrance in the rear of the building reserved for them. Staff distributed surveys to them as they entered. Throughout the night public address announcements were made and staff periodically reminded the scouts to complete the surveys. They were instructed to return the surveys to the box by the reserved entrance/exit, which was used exclusively by the scouts. These attendees received special seating away from other spectators, thus the need to differentiate their responses from the spectators.

Based upon this format of sampling, a total of expenditures for each category of the population was determined. The expenditures were tabulated for each category of the population and a grand total was calculated based on the results of each category.

This method reduced the possibility of over generalization of the calculated results, since scouts traveled further and had corporate funding to offset the cost of their visit to the tournament. This method also allowed for study of the spending habits of the spectators as opposed to those of the scouts. The sampling methods insured that each person in the gymnasium had an equal opportunity for inclusion in the sample, while also removing any possible bias toward a particular type of spectator. Since there are no season tickets, mailing of surveys was impossible and distribution and collection on the final night of the tournament was deemed the most accurate method for collection of data.

Instrumentation

A survey was developed to collect data. Survey questions related to both demographic information and total expenditures. Demographic data were divided into the following categories: age; gender; income level; place of residence; number in party; travel distance; and number of nights in attendance. Expenditure categories included the following: food; admission costs; entertainment; retail shopping; lodging; transportation; and other. These categories were used to arrive at a total expenditure figure per attendee. Questions were also included in the instrument that indicted any casual or time-switching which may have occurred by visitors. Additional questions attempted to identify local attendees who would have spent money on other entertainment if they had not come to the tournament. Expenditures of persons who did not attend the PIT, but traveled to the area with someone who was attending the tournament were included.

The survey included twenty-one questions, thus making completion easily done within one to two minutes. The survey underwent a peer review and was piloted prior to implementation. The questionnaire is attached for review as Appendix A.

The survey was designed to measure expenditures directly associated with the spectators and scouts who attended for the tournament. This allowed for the impact on the economy to be clearly defined. A total economic impact on the region was determined from the responses to the questionnaire. For purposes of this study the local community was defined as the Hampton Roads Area. Thus, anyone from outside of the Hampton Roads Area was deemed a visitor.

Data Procedures

The data was compiled and coded so that the information was more easily identifiable in statistical representations. The statistical analysis included total expenditures by category of attendee and a grand total of all expenditures based upon an extension of the numbers from the sample to the total attendance. Expenditures were also calculated for local residents and for expenditures by visitors from outside Hampton Roads. Whenever possible, actual expenditures from tournament records were compared to calculated expenditures to determine the accuracy of the measured results. Through this comparison, it was determined that an accurate portrayal of total expenditures associated with the Portsmouth Invitational Tournament was tabulated.

Expenditures were totaled and deductions were made for expenditures of casuals and time switching attendees. Deductions were also made for the locals who stated they would have spent their money on entertainment regardless of whether they had come to the tournament. Once a net total of expenditures was calculated it was multiplied out to the total population to arrive at a total direct economic impact for locals and for out of town visitors. A regional multiplier was employed to arrive at a total indirect impact of the initial spending by visitors attributed to the tournament. The indirect economic

impact was added to the direct impact of visitor expenditures to arrive at a total economic impact based upon visitors to the tournament from outside Hampton Roads. A total of expenditures attributed to locals was then added with the total of expenditures attributed to visitors, both direct and indirect, to arrive at a total economic impact.

Descriptive statistics were analyzed and variables were compared to determine significant relationships between the independent variables (demographic information) and the dependent variables (expenditures). One-way ANOVA was done using Statistical Package for the Social Sciences (SPSS) to analyze the effect the independent variables had on the dependent variables. Tukey post hoc tests were also conducted to compare the means of the dependent variables relative to each category of independent variables. SPSS was also used to conduct a univariate analysis of variance to determine the interaction between variables.

RESULTS

Response Rate

Respondents to the economic impact study of the Economic Impact of the Portsmouth Invitational Tournament were divided into two types of attendees, spectators and scouts. Spectators consisted of those who live locally and those who traveled from out of town to watch the tournament. All spectators surveyed were individuals who paid admission to attend the tournament games. Scouts consisted of representatives of the National Basketball Association teams and representatives from foreign professional leagues. These scouts were almost entirely from out of town. Of the 1837 spectators in attendance, 247 responded to the survey. This constituted a 13.4% response rate. In the case of scouts, 35 responses were returned out of the 186 scouts in attendance. This constituted an 18.8% response rate among scouts. Overall, 282 responses were collected from the 2023 people who were in attendance at the tournament on the night of the study, for a 13.9% response rate.

Spectator Demographics

Survey responses from the spectators at the Portsmouth Invitational Tournament provided valuable information about those in attendance at the tournament in April of 2000. From the responses, a profile of attendees was developed to assist tournament officials in identifying their customer base. For example, the highest percentage of spectators in relation to age was in the 36-45 year old age range, with 28.7%. When the 26-35 and 46-55 age groups were combined, a total of 68.4% of the spectators fell within the range of 26-55. The spectators at the tournament were also predominantly male. A total of 180 of the 247 responding spectators, equivalent to 72.9%, were male. The income level of

spectators revealed an interesting finding. The percentages of spectators in each income range were evenly distributed (Figure 1). This gives an indication that the tournament drew spectators from all segments of the community in respect to income level. This even distribution of income levels also indicates that ticket costs were not cost prohibitive to individuals of lower income.

Table 1 – Income Level of Spectators

Income Category	Under 25,000	25,000-34,999	35,000-44,999	45,000-59,999	60,000-74,999	75,000-99,999	100,000 and over
Pct. of Spectators	13.0%	15.0%	14.6%	14.6%	15.4%	10.5%	12.1%

In respect to residency, 83.9% of spectators stated that they were from the Hampton Roads area. Portsmouth had the highest percentage of spectators with 34.4%, while 16.6% were from Chesapeake, 14.2% were from Virginia Beach and 9.3% were from Norfolk. The remainder of the other cities in Hampton Roads combined to make up 9.2% of spectators. In terms of party size, a large majority of spectators indicated that they brought others with them to the tournament. For example, 79.8% stated that they brought other spectators with them to the tournament, which resulted in 20.2% of spectators attending the tournament by themselves. A total of 41.3% brought one other person with them, while 18.2% brought two others and 10.5% brought three others. A party size of five or more then accounted for the remaining 9.7%. Responses to the question of how many nights spectators attended the tournament revealed that 42.5% of spectators came to only one night's games. On the other hand, 27.9% of spectators came to all four night's games. The remainder either attended two nights, 18.6%, or three

nights, 10.9%. This response rate indicated a solid repeat night attendance and a loyal following as 57.5% attended on multiple nights. A surprising fact was discovered in relation to years of attendance at the tournament. A total of 166 out of 247 responding spectators attended the tournament for five years or less. That represents 67.2% of spectators. Yet, the average years in attendance by spectators were seven years.

From this information, it was surmised that the prototypical spectator to the Portsmouth Invitational Tournament was a male between the ages of 26-55, was from the Hampton Roads area, brought multiple people with them and had attended, on average, seven years. Due to the even distribution of income levels it was hard to ascertain a typical income level, however, the median income level was the \$35,000 – 44,999 income range. This information gave tournament officials a clearer picture of the people who typically attend the tournament and provided them with information that can be used in the planning of future tournaments.

Scout Demographics

When compared with the responses from the spectators, the responses by scouts to demographic questions revealed both similarities and stark differences. One similarity between spectators and scouts was seen in the age range of scouts. By comparison, 68.4% of spectators in attendance were between 26-55 and 68.6% of the scouts in attendance were between 26-55 years of age. Another similarity was seen in gender, with 97.1% of the scouts being male. A large number of spectators, 72.9%, were also male. The average years of attendance at the tournament were also similar for scouts and spectators. Scouts averaged nine years in attendance and spectators averaged seven years in attendance. This data indicated that similarities did exist between spectators and

scouts. Yet, evidence revealed more differences than similarities when comparing scouts with spectators.

One area of significant difference was the income level of scouts versus spectators. Surveys showed that 82.9% of scouts had income over \$45,000 compared to only 52.1% of spectators. Even more striking was the fact that 74.3% of scouts had income over \$60,000 as compared to 38% for the spectators. This meant that scouts had more income at their disposal for spending at the tournament. As was expected, the number of scouts from outside Hampton Roads was a very high 85.7%. This was almost a direct inversion of the percentage of spectators who were from outside Hampton Roads. The percentage of spectators from outside Hampton Roads was 16.2%, meaning that 83.8% of spectators were local. Another area of contrast was the number of nights the scouts attended the tournament. Scouts who stayed all four days of the tournament totaled 73.4%, as opposed to 27.9% of spectators. The contrasts between spectator and scout demographics can be found in Table 2. The typical scout attending the PIT can be described as a male between 26-55 years of age with income over \$60,000, visiting from outside of Hampton Roads and staying the entire four days of the tournament.

Table 2 – Spectator Demographics Versus Scout Demographics

	N	Age 26-55	Pct. Male	Income Over 45,000	Out of Town Visitor	Came Four Nights	Years Attended
Spectator	1837	68.4%	72.9%	52.1%	16.2%	27.9%	7
Scout	186	68.6%	97.1%	82.9%	85.7%	74.3%	9

Local Versus Visitor Demographics

The demographic profile of local attendees of the Portsmouth Invitational Tournament mirrored the profile previously discussed for spectators at the tournament. This similarity was reflected due to the fact that 83.8% of spectators were locals. However, attendees from out of town and thus visitors to the region had the most dramatic economic impact. Therefore, it was critical to this study to determine a profile of the visitors in attendance at the tournament. As indicated earlier, 85.7% of scouts were visitors and 16.2% of spectators were visitors from outside of Hampton Roads. When the demographic profiles of these visitors was examined, it was noted that a predominant number of visitors were between the age of 26-55. It was also found that 87.1% of visitors attending the tournament were male. Visitors to the tournament were also found to have larger percentage in the higher income levels than those who were locals. It was interesting that 77.5% of locals who attended the tournament had income under \$75,000, however, 71.4% of visitors had household income over \$75,000.

Another important item to consider was the location of the hotels in which visitors stayed. Even though the tournament was hosted in Portsmouth, only 32.9% of visitors stayed in a hotel located in Portsmouth. The city with the highest percentage of visitors staying in hotels was Norfolk with 38.6%. Chesapeake received 11.4% of the hotel stays and Virginia Beach got 5.7% of the hotel business. Table 3 indicates the top four cities with respect to hotel choices of visiting spectators, visiting scouts and the total of all visitors who stayed in hotels. It was interesting that 67.7% of visiting scouts stayed in Norfolk, and that visiting spectators had a wide distribution of stays in different cities.

Table 3 – Hotel Stays by City

	N	Chesapeake	Norfolk	Portsmouth	Virginia Beach
Visiting Spectators	298	22.9%	17.1%	37.1%	11.4%
Visiting Scouts	159	0.0%	67.7%	32.3%	0.0%
Total Visitors	457	11.4%	38.6%	32.9%	5.7%

Economic Impact

The total economic impact of the Portsmouth Invitational Tournament was a calculation of the total dollars spent as a result of this four day event. The spending by attendees of the tournament was documented for the expenditure categories of food, admission costs, entertainment, retail shopping, lodging, transportation and other miscellaneous expenses. Each category of spending was tabulated for the two types of attendees, locals and visitors. The two types of attendees were further analyzed as either local or visiting spectators and local or visiting scouts. Therefore the impact was determined for local spectators, local scouts, visiting spectators and visiting scouts. The calculated economic impact was then an accumulation of all these subcategories.

The total direct economic impact of local attendees was determined by totaling the spending in each expenditure category for each type of attendee, spectator and scout. The expenditures were totaled and deductions were made for locals who would have spent their money on some other kind of entertainment. This total was then multiplied out to the corresponding total population of local spectators and scouts to reach a total economic impact by locals of \$63,136.66. Of this total \$57,147.44 was from local spectators and \$5,989.22 was from local scouts.

The total economic impact of visitors from outside the Hampton Roads area was calculated in precisely the same manner as that of the local attendees. A total was derived from the responses and a deduction was made for “casual” or “time switchers”, who were already visiting the area and attended the tournament while they were in the region. Once a net total was determined the figures were multiplied out to the corresponding visitor populations to arrive at a total direct economic impact for each spending category (Table 4). From this calculation the total economic impact of visitors was \$390,685.10. Of this total, \$173,532.18 was attributed to visiting spectators and \$217,152.92 was attributed to visiting scouts.

Table 4 – Direct Economic Impact by Attendee Type and Expenditure Category

	Local Spectators	Local Scouts	Total Local	Visiting Spectators	Visiting Scouts	Total Visitors
Food	10,992.18	1,116.00	12,108.18	34,285.49	34,808.66	69,094.15
Admission	19,626.77	37.20	19,663.97	6,477.80	627.08	7,104.88
Entertainment	4,566.44	0.0	4,566.44	17,105.56	9,246.88	26,352.44
Retail	5,540.71	1,169.15	6,709.86	18,563.25	8,263.74	26,826.99
Lodging	5,734.08	1,886.58	7,620.66	48,438.48	105,138.11	153,576.59
Transportation	4,856.49	1,727.15	6,583.64	38,472.64	56,836.44	95,309.08
Other	5,830.77	53.14	5,883.91	10,188.96	2,232.01	12,420.97
Total	57,147.44	5,989.22	63,136.66	173,532.18	217,152.92	390,685.10

Once the direct economic impact of visitor spending was calculated the indirect impact of visitor spending was determined. Indirect economic impact is the ripple effect each dollar of spending had on the local economy as the money was spent over again by

the businesses, their employees and their vendors. The indirect impact was determined by using the Federal Government's Regional Input-Output Model System II (RIMSII). The multiplier coefficient for Hampton Roads was determined by using the United States Department of Commerce models from the economic impact study of the 1998 AAU Junior Olympics held in Hampton Roads (Agarwal and Yochum, 1999). After the multiplier coefficient was applied, the indirect economic impact totaled \$368,259.77. The total indirect economic impact was combined with the total direct impact of locals of \$63,136.66 and the total direct impact of visitors of \$390,685.10 to arrive at a total economic impact of \$822,081.53.

Table 5 – Spending Per Respondent

	Local Spectators	Local Scouts	Total Local	Visiting Spectators	Visiting Scouts	Total Visitors
Food	7.14	42.00	7.96	115.25	218.33	159.43
Admission	12.75	1.40	12.48	21.78	3.93	14.13
Entertainment	2.97	0.0	2.97	57.50	58.00	57.71
Retail	3.60	44.00	4.55	62.40	51.83	57.87
Lodging	3.72	71.00	5.31	162.83	659.47	375.67
Transportation	3.15	65.00	4.61	129.33	356.50	226.69
Other	3.79	2.00	3.70	34.25	14.00	25.57
Total	37.12	225.40	41.51	583.33	1362.07	917.07

During the calculation of the total economic impact, spending per respondent was calculated. This is the amount of money each attendee group spent in association with

their attendance at the tournament. Average spending of local spectators was the lowest per person at \$37.12. Local scouts spent \$225.40 each. It was a natural assumption that visitors would have spent more at the tournament than locals. This was indicated in the figures for visiting spectators, who spent \$583.33 per person. Visiting scouts spent the most per person at \$1362.07. Table 5 shows the impact per respondent for each of the attendee types and for each category of spending by those attendee types. Overall local attendees spent \$41.51 each and visitors spent \$917.07 per person.

After calculating the economic impact of the tournament, the local tax revenue was calculated based on the expenditures of attendees at the tournament. This figure provided an indication of the taxes collected as a direct result of the spending associated with the tournament. Tax rates vary slightly from city to city within Hampton Roads, therefore the tax rates in Portsmouth were used to give an estimate of total taxes collected. The three categories of spending where taxes were assessed were food, retail shopping and lodging. Based on the tax rates in Portsmouth, \$21,274.64 was collected in taxes due to spending associated with the Portsmouth Invitational Tournament.

A comparison was done to test the accuracy of this study's findings. One category of spending was calculated by the study even though the actual expenditures in the category were known. This category was admission costs. The actual total admission or paid attendance for the tournament was \$29,562.45. The figure calculated through the study was \$26,768.86. This calculated admission was 9.45% less than the actual, which indicated the calculations in this study are a close approximation of the actual expenditures associated with the tournament. The fact that the calculated admission was

slightly lower than the actual showed the study was also objective and conservative in the documentation of expenditures.

Statistical Analysis of Variables

Statistical analysis was done on the survey responses to determine the level of significance and interaction between variables. This analysis examined the effect variables had upon one another. It was noted through the use of a one way ANOVA ,that respondents over age 66 spent more on admission than any other age group, even though respondents in that age group were the fewest in number. It appeared that this age group purchased tickets for larger groups of people, thus accounting for this significant effect indicated by $p < .001$. It was also noted when comparing means that men spent four times as much as female respondents. The fact that 76% of attendees were male had to have strongly influenced this result. Another contribution to this marked difference in spending by males was explained by men buying the tickets for a group or family. One would expect, the spending of the attendees in the highest income levels to be more than those in the lower income levels. This was the case in five of the expenditure categories in this study. The food ($p < .001$), entertainment ($p < .001$), retail shopping ($p < .001$), transportation ($p < .001$) and other ($p = .010$) spending categories all had a significant interaction between income level and spending. However, this was not the case in two categories of expenditures, admission ($p = .277$) and lodging ($p = .101$). Admission prices were consistent to all who bought a ticket, which would explain the lack of significant difference in admission in relation to income level. The difference in lodging expenditures did approach significance, but the fact that spending was relatively similar leads to the conclusion that those from lower income levels were willing to pay more for

a hotel for this particular special event. Since the difference in lodging expenditures between income levels approached significance, there was likely some difference in spending on hotel rooms, but not a significant difference among the varying income levels of attendees at the tournament.

The statistical analysis of local and visiting attendees displayed interesting results among the spending categories. Visiting scouts spent significantly more on food ($p < .001$) than any other group of attendee. Due to the fact that the scouts generally received expense accounts to cover their travel expenses it was expected that this group would spend more. There was not a significant difference between the spending on admission by locals and visitors ($p = .799$). This also was anticipated since all pay the same price for admission. Scouts, however, spent far less on admission than spectators ($p = .047$). This was deemed appropriate due to the fact that all spectators were charged an admission fee, but scouts were not required to pay an admission fee. An interesting comparison was discovered in entertainment expenditures. There was no significant difference in spending by visiting spectators as opposed to visiting scouts ($p = .994$). Visiting spectators spent just as much on entertainment as visiting scouts. It was perceived that scouts would have spent more based upon their income level and company expense accounts. Yet, a comparison of means revealed that spending on entertainment was almost identical. Visiting spectators spent \$57.50 each on entertainment, while visiting scouts spent \$58.00 each. This same result was also seen in retail shopping. Both categories of visitors, spectators (\$62.40) and scouts (\$51.83), spent a similar amount each on retail shopping. This translated that visitors, whether spectators or

scouts, spent considerable amounts of money at local attractions ($p=.002$) and retail stores ($p=.042$) while they were here for the tournament.

In terms of lodging and transportation, it was expected that visitors would spend significantly more on these categories than locals. After all, that is the purpose of the tourism industry. It is strongly believed in the tourism industry, that those who stay over night spend more than those who do not. This result was clearly demonstrated in this study. The interaction between visiting spectators and visiting scouts was examined to determine if one group spent significantly more than the other. It was noted that visiting scouts spent significantly more on lodging ($p=.034$) than visiting spectators. These results would be expected due to the distance the scouts traveled and the income levels and expense accounts available to them. Since scouts spent more on lodging, it was assumed that they stayed in more expensive hotels. The process of identifying hotels was outside the realm of this study; however, this appeared to be an accurate statement based on spending. The spending on transportation of visiting scouts versus visiting spectators approached significance ($p=.067$). This result stood to reason since scouts flew in, rented cars and flew back out. How visiting spectators arrived was not studied, but the spending levels indicated that far less visiting spectators flew and rented cars during the tournament. In the category of other expenditures, it was noted that there was not a significant interaction between visitors, locals, spectators or scouts. Reasoning for this could not be determined, since these expenditures were miscellaneous in nature.

DISCUSSION

The Portsmouth Invitational Tournament has a 48 year history of drawing basketball players and scouts from across the United States to the Hampton Roads region. Yet, there is very little data available to show the economic impact of this tournament on the local economy. The purpose of this study was to identify and quantify the economic impact of the Portsmouth Invitational Tournament so that the significance of this event on the Hampton Roads area could be demonstrated. The findings of this study gave tournament officials and government leaders clear evidence of the impact the tournament has on the local economy. The data collected also gave tournament officials valuable demographic information concerning the spectators and scouts who attended the tournament. This information can now be used to target spectators and to solicit sponsors for the tournament in future years. Evidence of hotels stays, food spending and total impact of the tournament will be meaningful when dealing with potential vendor and sponsor negotiations.

The findings of this study showed the Portsmouth Invitational Tournament had a significant impact on the economy of the Hampton Roads Metropolitan Statistical Area. Visitors from outside of Hampton Roads spent \$390,685.10 during their visit to attend the tournament. The resulting indirect economic impact or ripple effect of visitor spending was \$368,259.77. When combined with the impact of local attendees of \$63,136.66, a total economic impact of \$822,081.53 was determined. This measurement of the economic impact of the tournament has given significant evidence that the Portsmouth Invitational Tournament is a valuable tourism attraction for the region and has given credibility to the continuance of this event in future years.

There has been considerable criticism directed at economic impact studies and the motives of those who perform or commission these studies. Crompton (1995) warned that, “often the motives of those commissioning an economic impact analysis appear to lead to adoption of procedures and underlying assumptions that bias the resultant analysis so the numbers support their advocacy position”. Great care was taken in this study to avoid over estimation of the impact of the Portsmouth Invitational Tournament. Diligence was taken to avoid any misrepresentations or over inclusion of any spending. Instead, it appeared more likely that the converse of Crompton’s statement was true and that this study could have easily reached a larger measurement of total impact.

One area of diligence included the distribution of questionnaires on the final night of the tournament to avoid duplication of responses and avoid over estimation by respondents for remaining days of the tournament. Another indication of the objectivity of this study was seen in the fact that there were several items not considered in this study, which would have driven the total impact even higher. For example, the money spent by participating players was not included in this study. The tournament pays for the travel, food and lodging of the players, yet the participants surely spent money on retail shopping, entertainment and other miscellaneous items while at the tournament. Also, not included in the measurement of impact was the money spent by tournament officials to host this event. These expenditures would have been considered local expenditures had they been included. This study did not include them and based the total impact upon spectators and scouts. Another item that was not considered in this study was the revenue generated in sponsorship. Some of these sponsors were from outside the region, but the majority were from Hampton Roads. Due to the careful methodology and

the lack of inclusion of the previous other influences, the total economic impact was recognized as an objective and conservative total.

A comparison of admission expenditure totals between the calculated and the actual additionally revealed the conservative approach taken in this study. The study determined that \$26,788.86 was spent on admission to the tournament. The actual figure was \$29,562.45. This indicated that admission calculated by the study was 9.45% less than the actual. With this statistic in mind, it was determined that the measurement of spending associated with the Portsmouth Invitational Tournament was a close, yet conservative measurement. Another point that is outside the scope of this study, but gives credence to the conservative nature of the study, was the total attendance. The tournament in April of 2000 had 500 less people in attendance than the five previous years. Although this does not effect the total impact of this study, it has to be considered when determining the value of the tournament and its contribution to the Hampton Roads economy. With all of the previous factors considered, it is reasonable to conclude that the \$822,081.53 total economic impact was a fair and valid assessment of the total economic impact of the Portsmouth Invitational Tournament on the Hampton Road Metropolitan Statistical Area.

CONCLUSION

The total impact of the 2000 Portsmouth Invitational Tournament has been measured and deemed to be a significant contribution to the Hampton Roads Metropolitan Statistical Area. Only one other study has been done on the impact of sporting events on the Hampton Roads economy. The event was the 1998 AAU Junior Olympics (Agarwal and Yochum, 1999). A study of the AAU Junior Olympics found a \$30,538,580.00 total economic impact based on a \$2,000,000.00 investment. The return on investment was the key determinant when considering whether to host the Junior Olympics again. In the case of the Portsmouth Invitational Tournament, the total impact of \$822,081.53 was significant, but the return on investment was remarkable. Total expenses to host the tournament were \$129,000.00. However, revenue from sponsors and ticket sales totaled \$131,000.00. Thus, the tournament made money in addition to producing a large economic impact. This has to be deemed a significant return on investment.

Two other factors also weigh into the return on investment of the Portsmouth Invitational Tournament. One was the fact that \$13,000.00 of tournament expenses went toward scholarships and charitable contributions to community organizations in Hampton Roads. The second was the national media exposure the City of Portsmouth received from newspapers, television stations and web sites across the country. It was outside the focus of this study to put a monetary value on this media exposure, but it must be considered when return on investment is determined.

This study has added to the body of knowledge available on economic impact studies. Much like the findings of other economic impact studies, this study supported

the conclusion that significant economic benefit can be realized by hosting a sporting event. The economic benefits of hosting sporting events was evidenced in this study of the Portsmouth Invitational Tournament. The economic benefits received more than justified the continuance of the event. The results of this study demonstrated the potential positive return on investment sporting events can have on their respective communities.

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9. If you drove to the tournament, how many miles did you travel to get here?
 _____ Less than 5 _____ 11-20 _____ 31-40
 _____ 6-10 _____ 21-30 _____ 40 or more
10. Did you stay overnight in a hotel/motel? _____ Yes _____ No
 If yes, what City?
 _____ Chesapeake _____ Norfolk _____ Virginia Beach
 _____ Hampton _____ Portsmouth _____ Williamsburg
 _____ Newport News _____ Suffolk Other (Specify) _____

11. How many nights did you attend the tournament?
 _____ 1 _____ 2 _____ 3 _____ 4
12. If you are from outside of Portsmouth, did you come to Portsmouth just to attend the tournament?
 _____ Yes _____ No
13. How many years have you attended the tournament (including this year)? _____

Please estimate your expenditures associated with your visit to the PIT. If you live locally please indicate expenditures on your trip to and from the tournament. Also include expenditures while at the tournament. If you are from outside the area please include the expenditures of those who traveled with you, but did not attend the tournament.

14. Food & Beverage \$ _____ .00
 (restaurant, concessions, convenience store, etc.)
15. Admission Fees \$ _____ .00
 (cost of ticket, programs, etc.)
16. Entertainment \$ _____ .00
 (movies, museums, golf, nightlife, etc.)
17. Retail Shopping \$ _____ .00
 (clothing, souvenirs, etc.)
18. Lodging \$ _____ .00
 (hotel, motel)

19. Transportation \$_____ .00
(airfare, rental car, taxi, gas, parking fees, etc.)

20. Other \$_____ .00
(miscellaneous)

21. If you live locally, would you have made these expenditures on entertainment even if you were not coming to the tournament? _____ Yes _____ No

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