THE ECONOMIC AND FISCAL IMPACTS OF HOSTING THE 2012 OLYMPIC GAMES ON THE WASHINGTON-BALTIMORE METROPOLITAN AREA

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by

Stephen S. Fuller, Ph.D.
Professor of Public Policy
George Mason University

and

Richard Clinch
Jacob France Center
University of Baltimore

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EXECUTIVE SUMMARY

Spending by the Washington-Baltimore Organizing Committee for the Olympic Games and by visitors attending Olympic-related events during the years preceding the 2012 Olympic Games and during the Olympic Year will generate substantial positive economic and fiscal impacts within the Washington-Baltimore metropolitan area (including Northern Virginia) economy. This direct new spending will total $3.17 billion.

In addition, this new spending will generate economic benefits totaling $2.15 billion in the form of increased transactions among local businesses (indirect effects) and new spending by area households (induced effects) as a result of increases in their personal income. That is, for each new dollar of spending generated by the 2012 Olympic Games in the Washington-Baltimore metropolitan area, an additional 68 cents will be captured within the area economy from the re-spending of these new monies by local businesses and households.

The total economic impact will be $5.3 billion and result in the creation of new jobs and wage and salary payments as well as new tax revenues at both the state and local jurisdictional levels that would not have occurred in the absence of hosting the 2012 Olympic Games.

Summary of Direct Olympics-Related Spending

Direct spending by the Washington-Baltimore Organizing Committee for the Olympic Games (WBOC) to prepare for and conduct the Olympic Games is projected to total $2.04 billion (in Year 2000 dollars)*. This spending will include capital improvements totaling $216 million, operating expenditures of $1.83 billion including construction outlays totaling $205.5 million for temporary facilities, and outlays of $182 million for legacy activities and other initiatives. Of this total spending by the WBOC, it is assumed that 90 percent will be funded from non-local sources and take place in the Washington-Baltimore metropolitan area. This $1.83 billion in WBOC outlays represents new spending in the area economy with this being distributed across its sub-state portions as follows: 38.3 percent in the District of Columbia, 48.3 percent within the State of Maryland, 12.1 percent within the Commonwealth of Virginia, with 1.3 percent representing unassigned inter-regional flows.

*Preliminary budget estimate of 9/1/00

Direct visitor spending, including outlays by contractors, vendors, sponsors, participants and tourists, in preparation for the Olympic Games and during the Olympic Year are projected to total $1.34 billion (in Year 2000 dollars), with 27 percent of these outlays occurring prior to 2012 and 73 percent occurring during the Olympic Year. These visitor outlays will be distributed across all jurisdictions within the Washington-Baltimore metropolitan area with 24.3 percent being captured within the District of Columbia economy, 50.7 percent accruing to Maryland jurisdictions, and 25.0 percent occurring in Northern Virginia.

Indirect and Induced Economic Impacts

Direct spending by the WBOC and visitors attracted to the Washington-Baltimore metropolitan area before and during the Olympic Year will inject a total of $3.17 billion into the area economy. This net new spending will generate an additional $2.15 billion in combined indirect and induced local spending for a total economic impact of $5.32 billion.

Total Economic and Fiscal Impacts

The $5.32 billion in total economic impact projected for the 2012 Olympic Games will support the creation of 69,758 equivalent year-round jobs during the preparation period for the Olympic Games and in the Olympic Year with 63.6 percent of these new jobs being directly related to the Olympic Games. The remainder will occur in firms benefiting from business-to-business transactions related to the Olympic Games and in firms realizing increased revenues from spending by area households as a result of increased personal earnings from jobs associated with the Olympic Games. These new jobs will generate $2.21 billion in wage and salary payments; $1.4 billion as a result of direct spending in support of the Olympic Games with the remaining $807 million in wage and salary payments resulting from new jobs generated by indirect and induced spending.

The new direct and indirect spending generated by the 2012 Olympic Games will have a wide range of state- and local-level fiscal impacts. The principle state-level fiscal impacts will result from taxes on new personal income and retail spending. Other state-level and local taxes will also be generated. These will include revenues collected from increased economic activity in Maryland, Virginia and Washington, DC from taxes on gasoline, meals, lodging, income, parking, alcoholic beverages, utilities, personal property, and corporate income plus revenues from licenses and fees and user charges, among others. A total of $131.0 million in state-level income and sales tax revenue (comprised of $68.1 million of income and $62.9 million of sales tax revenues) will be generated by the 2012 Olympic Games to the benefit of the State of Maryland, the District of Columbia, and the Commonwealth of Virginia.

Other Economic Impacts of the Olympic Games

Hosting the Olympic Games will generate long-lasting economic benefits not quantified in this analysis. The positive worldwide media exposure provided the Washington-Baltimore area will help solidify its competitive position within the travel industry resulting in increased tourism and convention bookings. This media exposure will also have positive impacts on business location decisions as the area's already world class image is further enlarged through its association with the Olympic Games. Beyond advancing the area's world class image, the legacy of the Olympics will include new or improved world class athletic facilities that will be available for use by area residents, college programs, and professional teams. The presence of these facilities will attract national and international competition well into the future with continuing economic benefits for the area. The Olympic spirit will generate other local benefits as communities leverage their physical, social and economic growth due to the prestige and image of the Olympic Games. These benefits will leave an enduring impact on the Washington-Baltimore area as a first class place in which to live and to do business.

The total economic and fiscal impacts generated by the 2012 Olympic Games are summarized in the following table.

Summary of Economic and Fiscal Impacts of the
2012 Olympic Games on the Washington-Baltimore Metropolitan Area
(Millions of Year 2000 Dollars)

State/Hub	Total (Mil. $)	Jobs (# of Jobs)	Earnings(1) (Mil. $)	Fiscal(2) (Mil. $)
Total	**5,321.6**	**69,758**	**2,210.5**	**131.0**
Washington, DC	1,295.0	15,534	623.0	24.4
Baltimore Metropolitan Area*	1,200.9	16,969	477.2	
Suburban Maryland**	1,072.8	13,682	439.4	
Annapolis/Anne Arundel County	225.9	3,290	87.7	
Maryland Subtotal	2,499.6	33,941	1,004.3	78.5
Virginia***	865.0	12,805	364.2	28.1
Inter-Regional Transfers	662.0	7,478	219.0	

Source: WBOC; George Mason University; Jacob France Center
*Baltimore MSA excluding Anne Arundel County;
**Calvert, Charles, Frederick, Montgomery, Prince George's Counties;
***Virginia includes Arlington, Clarke, Culpeper, Fairfax, Fauquier, King George, Loudoun, Prince William, Spotsylvania, Stafford and Warren Counties and the Cities of Alexandria, Fairfax, Falls Church, Fredericksburg, Manassas, and Manassas Park; these jurisdictions define the Northern Virginia portion of the Washington DC metropolitan area.
(1) employee compensation (wage and salary payments) by place of employment
(2) state income and sales taxes

THE ECONOMIC AND FISCAL IMPACTS OF HOSTING THE 2012 OLYMPIC GAMES ON THE WASHINGTON-BALTIMORE METROPOLITAN AREA

1.0 INTRODUCTION

The objective of this Study is to calculate the net economic and fiscal benefits on the Washington and Baltimore metropolitan areas that will be generated by the preparation for the 2012 Olympic Games and their operation and subsequent close out, inclusive of the Paralympics and demolition of temporary facilities. These benefits will include the direct and indirect dollar contributions to these areas' economies reflecting construction, operations, and visitor spending, the full-time equivalent jobs that will be supported over the period prior to 2012 and during the Olympic Year, and the additional personal income that these new jobs will generate. This analysis also measures the state-level tax revenues that will be generated from these economic flows during both the pre-Olympic preparation period and the 2012 Olympic Year.

The scope of this analysis reflects both the broad sources of new spending that will occur in the Washington-Baltimore area if it is selected to host the 2012 Olympic Games and the geographic distribution of this spending within the combined metropolitan areas. This geographic distribution includes state-level aggregates as well as totals for the five Hubs that will serve as the sites for the Olympic events. Only net new spending that will occur within the combined Washington-Baltimore metropolitan area is considered in this impact analysis; that is, externally generated funds that do not enter the area's economy, such as spending on air transportation or non-local Olympic events and projected Olympic spending by area residents are excluded.

The result of this analysis is the projected total economic value of the 2012 Olympic Games on the regional economy with this total reflecting the sum of all new net direct dollar flows into the local economies and their indirect and induced impacts that result from the re-spending of these direct dollars by local businesses and employees benefiting from the income generated by the Olympic Games. Additionally, the state-level revenue impact of this new income and the retail sales it will support are calculated for Washington, DC, the State of Maryland, and the Commonwealth of Virginia. While these new spending flows will also generate other state and local tax revenues, such as from hotel and meals, gasoline, parking, personal property and income, these are not calculated here. Only the potential hotel and meals tax revenues generated in Washington, DC are projected for the Olympic Year to illustrate the potential importance of these other tax revenue sources.

2.0 DERIVATION OF SPENDING PROJECTIONS

2.1 Introduction

To calculate the economic and fiscal impacts that will be generated by the 2012 Olympic Games within the Washington-Baltimore metropolitan area, all sources of new spending are identified and their magnitudes and time frames established. In the process of developing these spending projections, a variety of assumptions are made regarding the proportion of Olympic spending constituting new spending that would not have occurred in the area in the absence of the Olympic Games, the Olympic-related spending funded from local compared to non-local sources, and the non-local and local spending lost (displaced) from the local economy as a consequence of hosting the Olympic Games. To develop the general mix and magnitudes of Olympic spending, reports on previous Olympic Games were reviewed, with particular weight given to the 1996 Atlanta Olympic Games. These historic records are revised and scaled to fit the proposed program scope and facility requirements projected for the 2012 Olympic Games. All spending values are reported in year 2000 dollars.

There are two major sources of spending associated with hosting the 2012 Olympic Games. The first major category is spending by the Washington-Baltimore Organizing Committee for the Olympic Games (WBOC) on preparing for and hosting the games. The second major category of spending is the out-of-the-area visitors attracted to the Washington-Baltimore metropolitan area before and during the Olympic Year as contractors, sponsors, participants and tourists.

2.2 Spending by the Washington-Baltimore Organizing Committee for the Olympic Games

WBOC expenditures represent the first major source of Olympic-related expenditures. Estimating the direct effects associated with this spending consisted of five distinct steps. These were:

1. Detailed budget estimates were obtained from the WBOC; these estimates were dated 9/1/00 and have since been revised upward;

2. WBOC budget outlays were broken down into major industry categories by the research team and WBOC staff and consultants;

3. Budgeted expenditures were reduced to eliminate spending that would occur outside of the Washington-Baltimore metropolitan area;

4. All budgeted expenditures were reduced by 8.5% to reflect the portion of the expenditures that are expected to be funded by local resources; and,

5. Budgeted expenditures were allocated to the Hubs by the research team and WBOC staff and consultants.

The first step in estimating the direct expenditures was to collect information on the total budget of the WBOC. Budget outlays were then allocated to the key industries in which the expenditures are likely to occur, based on the judgments of WBOC staff and consultants and the research team. Table 2-1 presents the $2 billion WBOC budget by major industrial classification. These expenditures were then reduced by the portion of expenditures expected to occur outside of the Washington-Baltimore metropolitan area. For example, expenditures associated with events held outside of the area or purchases of national advertising were excluded. Expenditures were further reduced by the 8.5 percent of WBOC operating expenditures that are expected to be funded from local sources. In the final step, these expenditures were allocated to the five Hubs based on the judgments of WBOC staff and consultants and the research team. Table 2-2 presents the total expenditures associated with new facilities construction, permanent upgrades of existing facilities, and temporary modifications to existing structures (e.g., the construction of removable bleachers) by each Hub location.

Table 2-3 presents the results of the methodology outlined above. Through this methodology, the direct effects of the WBOC operational budget were reduced from the $2.0 billion in the original budget to the $1.8 billion in direct effects used in the modeling effort. Washington, DC is expected to experience the largest direct economic effects with $700.5 million and 38 percent of the total outlays associated with the WBOC operating budget. The Baltimore metropolitan area is expected to experience the second largest direct effect with $414.0 million and 23 percent of the total direct outlays, followed by Suburban Maryland ($383.1 million and 21%) and Northern Virginia ($221.8 million and 12%).

Table 2-1
WBOC Spending, By Industry
(Millions of Year 2000 Dollars)

Source of Spending	Impact Industry	Total Budget
Total WBOC Budget*		**2,038.6**
Capital Improvements		**215.9**
New Facilities	Construction	126.3
Permanent Upgrades	Construction	89.6
Operations		**1,822.7**
Short-Term Investments	Construction	205.5
	Real Estate Leasing	76.7
Sporting Events	Commercial Sports	369.4
Olympic Village	Hotels	98.7
MCP and IBC	Broadcasting	11.7
	Broadcasting Equipment	2.0
	Computer Equipment	2.0
	Other Equipment	3.9
Ceremonies and Programs	Commercial Sports	106.3
Medical Services	Hospitals	4.0
Catering	Eating/Drinking Places	24.5
Transport	Local/Interurban Transport	103.1
Security	Security Services	40.0
Paralympics	Commercial Sports	60.0
Advertising/Promotions	Advertising Agencies	20.3
	Broadcasting Advertising	4.1
	Newspaper Advertising	6.1
	Printing & Publishing	10.1
Administration	Management Services	357.0
	Computer Data Processing	89.2
Pre-Olympic Events	Commercial Sports	46.2
Legacy		100.0
	Management Services	70.0
	Commercial Sports	30.0
Other	Distributed to Operational Categories	82.0

Source: WBOC

*WBOC initial estimate of 9/1/00

Table 2-2
WBOC New Facilities Construction, Permanent Facilities Upgrades, and Temporary Modification Expenditures, By Hub
(Millions of Year 2000 Dollars)

Hub	New Facilities	Permanent Upgrades	Temporary Modifications	Total
Total WBOC*	**126.3**	**89.6**	**205.5**	**421.4**
Washington, DC	72.1	31.4	78.1	181.6
Baltimore Metropolitan Area**	41.9	12.1	27.4	81.5
Suburban Maryland***	7.6	22.8	45.4	75.8
Annapolis/Anne Arundel County	0.2	6.6	13.8	20.6
Virginia****	3.4	10.9	24.7	39.0
Other Regional Venues*****	1.0	2.8	7.5	11.3
Out-of-Region	0.0	3.0	8.5	11.5

Source: WBOC
*WBOC initial estimate of 9/1/00
**Baltimore MSA excluding Anne Arundel County
***Calvert, Charles, Frederick, Montgomery, and Prince George's Counties
****Northern Virginia as defined on page 17.
*****Spending in-Region that can not be allocated to a particular Hub.

Table 2-3
Total Direct Effects, By Hub
(Millions of Year 2000 Dollars)

Spending/Hub	Total Expenditures	% of Total
Total WBOC Operating Budget *	2,038.6	
Less: Out-of-Region Spending	39.7	
In-Region Spending	1,998.9	
Less: Regionally Supported Spending	169.9	
Total Direct Effects	1,829.0	
Washington, DC	700.5	38%
Baltimore Metropolitan Area**	414.0	23%
Suburban Maryland***	383.1	21%
Annapolis/Anne Arundel County	86.1	5%
Virginia****	221.8	12%
Other Regional Venues*****	23.6	1%

Source: WBOC
*WBOC initial estimate of 9/1/00
**Baltimore MSA excluding Anne Arundel County
***Calvert, Charles, Frederick, Montgomery, and Prince George's Counties
****Northern Virginia as defined on page 17.
*****Spending in-Region that can not be allocated to a particular Hub.

2.3 Spending by Olympic Visitors

The sources and levels of visitor spending, with the exception of general public spending, associated with the Olympic Games were developed from a report entitled The Economic Impact on the State of Georgia of Hosting the 1996 Summer Olympic Games, by Jeffrey M. Humphreys and Michael K. Plummer (June 1995). These spending levels were adjusted to reflect the scale differences between the 1996 Atlanta Olympic Games and the proposed 2012 Olympic Games and adjusted for inflation.

The scaling factors for the 2012 Olympic Games reflect the increase in the number of competitive events as well as differences in the seating capacities of the various venues. Overall, the total tickets that would be available for the 2012 Olympic Games is projected to be seven percent (7%) greater than had been available for the 1996 Atlanta Olympic Games. This seven percent (7%) larger ticket count was used to scale up the general spending values associated with visitors having supporting functions. The number of tickets available for sale to the public for the 2012 Olympic Games are projected to be 12 percent greater than for the 1996 Atlanta Olympic Games. This scaling factor was used in the calculation of the projected spending by the general public. The inflation adjustment applied to the spending values from the 1996 Atlanta Olympic Games (escalating 1994 dollar values to 2000 dollar values) was 1.11235; that is, the equivalent-year 2000 dollars are 11.235 percent greater in magnitude than the 1994 dollars used in the June 1995 economic impact analysis of the 1996 Atlanta Olympic Games.

The calculation of new general public spending reflects the assumption that only spending by non-area residents is considered to be spending that would not have been captured within the Washington-Baltimore metropolitan area economy in the absence of the 2012 Olympic Games. All Olympic spending by area residents is considered spending that would have occurred anyway but in a different form. Still, it is recognized that some local resident Olympic spending will be new spending that would not have occurred in the area economy as a result of these persons remaining at home to attend Olympic events rather than taking out-of-town vacations during the Olympic Year. Therefore, this estimate of visitor spending is viewed as being conservative.

The split of public ticket sales between local and non-local residents is based on the experience of the 1996 Atlanta Olympic Games. The non-local share from the Atlanta Games was adjusted downward to reflect the 50 percent larger local population base residing within the Washington-Baltimore metropolitan areas relative to the total number of tickets available for public sale. With this large local population base, it is estimated that 52.5 percent of the public tickets (for Olympic events scheduled within the Washington-Baltimore area) would be sold to area residents leaving 47.5 percent for out-of-town visitors.

Additionally, it is assumed that not all out-of-town visitors attracted by the Olympic Games would attend Olympic events; that is, for every three visitors attending these events, there would be an "accompanying" visitor not attending events. These "accompanying" visitors, while not attending Olympic events would also spend money for lodging, meals, retail

sales and other forms of entertainment. The length-of-stay for out-of-town visitors is assumed to be six days (five nights) with each visitor attending five Olympic events on average. Finally, it is assumed that 50 percent of the visitors would stay in hotels and motels while the remaining 50 percent would stay with friends and family. This lodging share is slightly lower than the regular visitor share for the Washington area (the regular Baltimore area split is not known) but is higher than was experienced during the 1996 Atlanta Summer Games (the actual non-local hotel/motel split of 35% was much lower than the initial forecast of 65%).

The projected dollar values associated with each source of visitor spending during the pre-games period and Olympic Year are presented in Table 2.4.

The visitor spending projections are allocated among the five Hubs that will be the focus of Olympic activities within the Washington-Baltimore metropolitan area, according to a composite percentage reflecting their relative capacity to accommodate the Olympic activities that would generate corresponding spending flows: total ticket sales, hotel rooms, resident population, and employment base. Ticket sales represent the number of visitors attending Olympic events scheduled at each Hub. Hotel rooms account for the distribution of spending associated with non-Olympic event activities. Resident population reflects the potential pattern of lodging for non-hotel-staying out-of-town visitors as well as the supporting retail activities that may benefit from Olympic visitor patronage. The employment base of a Hub provides a proxy measure for the respective Hub's economic scale and potential for supporting activities integral to the operations of the Olympic Games. In aggregate, these measures are used to distribute visitor spending by Hub. These dollar value allocations are shown in Table 2.5.

Table 2-4

2012 Olympic Games Visitor Spending, By Source*
(Thousands of Year 2000 Dollars)

Source of Spending	Direct Spending in Washington-Baltimore Area
Grand Total	**1,342,596**
Pre-Games	
Broadcast	61,046
Cultural Olympiad	10,057
Marketing	28,501
Olympic Family	11,071
Press	30,166
Purchasing	1,259
Security	15,752
Sports Program	114,029
Training	94,636
Subtotal	**366,517**
Olympic Year	
Sponsors	112,474
Broadcast	60,764
International	162,785
General Public	515,000
Olympic Family	118,870
Athletes/Officials	6,186
Subtotal	**976,079**

Source: George Mason University; Jacob France Center
*excludes visitors' air transportation, and spending in support of non-local venues (e.g., Freedom Trail)

Table 2.5
Projected Visitors Spending Distribution By Hub
Washington-Baltimore 2012 Olympic Games
(Millions of Year 2000 Dollars)

Hub	Pre-Games	Games
Total All Visitors	**366.517**	**976.079**
Washington, DC	72.937	252.950
Baltimore Metropolitan Area*	90.163	222.605
Suburban Maryland**	82.466	225.283
Annapolis/Anne Arundel County	18.693	42.055
Virginia***	102.258	233.186

Source: George Mason University; Jacob France Center
*Baltimore MSA excluding Anne Arundel County
**Calvert, Charles, Frederick, Montgomery, and Prince George's Counties
***Northern Virginia as defined on page 17.

2.4 Summary of 2012 Olympic Spending Projections

The total direct spending generated by the 2012 Olympic Games within the combined Washington-Baltimore metropolitan area for both the pre-games period and Olympic Year is projected to total $3.172 billion (in Year 2000 dollars). This total is shown by Hub and source--WBOC and Visitors--in Table 2.6.

Table 2.6

Summary of 2012 Olympic Spending in the Washington-Baltimore Metropolitan Areas By Hub (Millions of Year 2000 Dollars)

Hub	WBOC	Visitor	Total	Percent
Total	**1829.0**	**1342.6**	**3171.6**	**100.0**
Washington, DC	700.5	325.9	1026.4	32.4
Baltimore Metropolitan Area*	414.0	312.8	726.8	22.9
Suburban Maryland**	383.1	307.7	690.8	21.8
Annapolis/Anne Arundel County	86.1	60.7	146.8	4.6
Virginia***	221.8	335.4	557.2	17.6
Other Regional Venues****	23.6		23.6	0.7

Source: WBOC, George Mason University; Jacob France Center
*Baltimore MSA excluding Anne Arundel County
**Calvert, Charles, Frederick, Montgomery, and Prince George's Counties
***Northern Virginia as defined on page 17.
****Spending in-Region that can not be allocated to a particular Hub..

3.0 ECONOMIC IMPACTS

The predicted economic impacts of hosting the 2012 Olympic Games on the Maryland, Virginia, and Washington, DC portions of the combined Washington-Baltimore metropolitan area are analyzed in this section. Economic impacts are calculated using the WBOC and visitor spending estimates discussed in Section 2.0 of this report as inputs to the IMPLAN[1] economic model. Both WBOC and visitor expenditures are divided into and modeled based on IMPLAN industrial classifications.

An economic impact analysis examines the effects of changes in economic activity using input-output analysis. An input-output analysis examines the relationships between businesses and between businesses and final consumers. Input-output analysis is based on the use of multipliers that describe the response of an economy to a change in demand or production. Multipliers measure the effects on an economy stimulated by the introduction of a new source of economic activity, in this case the preparation for and hosting of the 2012 Olympic Games. The economic impact on a region from the introduction of new spending is greater than the simple total of new spending introduced, because as the money is spent, it is in turn, earned and re-spent by other businesses and workers in the regional economy in several successive cycles. However, the spending in each successive cycle is less than the preceding cycle because a certain portion of spending "leaks" out of the economy in each round of spending. Leakages occur through purchases of goods and services from outside of the region, federal taxes, and other out-of-region economic activity.

The IMPLAN multipliers allow for the estimation of four effects:

- Direct effects represent the changes in economic activity, in this case the preparation for and hosting of the 2012 Olympic Games, in the industries to which a final demand change was made;

- Indirect effects represent the changes in inter-industry purchases, for example the purchase of raw materials from a local supplier, in response to the new demands from the directly affected industries;

- Induced effects reflect changes in spending from households as income and population increases (or decreases) due to changes in production; and

- Total effects represent the total impact on the region being studied and is the sum of the direct, indirect, and induced impacts.

[1] IMPLAN (Impact Analysis for PLANing) was originally developed to assist the U. S. Forest Service in land and resource management planning. For a description of input-output analysis and the IMPLAN modeling process, please reference: The Minnesota IMPLAN Group, Inc., IMPLAN Pro Users Guide, (Stillwater, MN: MIG, Inc., 1997) pp. 77-104.

An input-output model allows the estimation of several different economic impacts. This analysis estimates the direct, indirect, induced and total economic output, employment, and employee compensation effects of the 2012 Olympics Games, including pre-Olympic events.

- Economic output represents the value of production by a particular industry or an economy over a given period.

- Employment is the total number of wage and salary earning employees and self-employed individuals in a region. It includes full-time and part-time workers.

- Employee compensation consists of wage and salary payments paid to employees by employers. Employee compensation includes all benefits and non-cash compensation paid to employees.

Six separate economic impact analyses were conducted for the following areas:

1. The combined Maryland, Virginia, and Washington, DC portions of the Washington-Baltimore metropolitan area;

2. Washington, DC;

3. The Baltimore Metropolitan Area, excluding Anne Arundel County, and including Baltimore City and Baltimore, Carroll, Harford, Howard, and Queen Anne's Counties in Maryland;

4. Suburban Maryland, including Calvert, Charles, Frederick, Montgomery and Prince George's counties in Maryland;

5. Anne Arundel County, Maryland; and,

6. Northern Virginia, including Arlington, Clarke, Culpeper, Fairfax, Fauquier, King George, Loudoun, Prince William, Spotsylvania, Stafford and Warren Counties and the independent Cities of Alexandria, Fairfax, Falls Church, Fredericksburg, Manassas, and Manassas Park in Virginia.

It is important to note that the sum of the economic impacts occurring in each of the five Hubs is less than the total impacts estimated for the Washington-Baltimore metropolitan area. This occurs because as predicted spending is modeled at the Hub level, only spending occurring in the geographic area being analyzed is included. This ignores the substantial economic linkages existing between the areas that comprise the Washington-Baltimore metropolitan area; for example, workers commuting from one sub-region to another or businesses in one sub-region purchasing supplies from companies in another. Thus, this analysis underestimates the true economic activity occurring in each of the Hobs because it was outside of the scope of this project to allocate the economic impacts of this regional activity to each of the Hubs. However,

the estimated impacts at the regional level do include the impacts of these transfers, and thus provide a reasonable estimate of the economic impacts than can be expected to occur.[2]

It is also important to note that impacts presented below are for the total impacts of the 2012 Olympic Games over the next twelve to thirteen years. These impacts will occur during the years leading up to, and for a period immediately following, the actual Olympic Games. All monetary impact estimates are in year 2000 dollars.

3.1 Total Washington-Baltimore Metropolitan Area Impact

The 2012 Olympic Games will have a dramatic impact on the Washington-Baltimore metropolitan area through the introduction of nearly $3.2 billion in new spending into the regional economy. The preparation for and spending associated with the Olympic Games will introduce $1.8 billion in spending into the regional economy or 58 percent of total estimate direct Olympic-related expenditures. These expenditures will occur throughout the preparations for the games, but will be highly concentrated in 2012. Out-of-area visitors to the area will spend a predicted $1.3 billion on hotels, restaurants, retail purchases, entertainment, local transportation and services. Visitor spending will account for 42 percent of total direct Olympic-related expenditures. Of this $1.3 billion in visitor spending, 27 percent ($366.5 million) will occur in the years prior to the games and 73 percent ($976.1 million) will occur in the Olympic Year.

The spending associated with the Olympic Games will increase economic activity as the money is circulated in the regional economy. As presented in Table 3-1, the $3.2 billion in Olympics-related expenditures will increase total economic activity in the Washington-Baltimore metropolitan area by more than $5.3 billion. A total of $848.4 million in economic activity will be generated through indirect effects, or the purchases of goods and services from local companies. A total of $1.3 billion in economic activity will be generated through induced effects, or the increase in economic activity attributable to the increase in regional incomes as new workers are hired.

As presented in Table 3-2, the hosting of the 2012 Olympic Games will create nearly 70,000 new jobs in the Washington-Baltimore metropolitan area. A total of 44,369 new jobs are associated with the direct effects of hosting the Olympic Games, with 9,135 jobs created through Olympics-related purchases of goods and services and 16,254 new jobs associated with the increased economic activity generated by increases in regional income. There is a

[2] The economic impacts in this report were derived using multipliers based on 1997 data. All impact estimates have been adjusted into year 2000 dollars. Thus, this report models events occurring in 2012 on the basis of what would occur if they happened more recently. It is unlikely that multipliers in the future will change radically from those existing today. Furthermore, given the diversification of the regional economy away from its reliance on federal government spending and into new areas of economic activity, it is likely that in the future the regional economy would be able to capture even a greater share of regional spending. Thus, the use of multipliers based on more recent data is likely to cause a downward bias in predicted impacts and, therefore, a more conservative forecast of impacts.

projected $2.2 billion in salaries and wages associated with the nearly 70,000 new jobs created by the Olympic Games (see Table 3-3).

Tables 3-4, 3-5 and 3-6 present the total economic output, employment, and employee compensation impacts of the Olympic Games by the industries in which the impacts will occur. As demonstrated in these tables, the impact of hosting the 2012 Olympic Games will be highly concentrated in the services sector of the economy, which will account for 54 percent of total projected economic output. Sixteen percent (16%) of economic output is predicted to occur in the retail and wholesale trades sector (Trade) and 10 percent will be in the finance, insurance and real estate sector (FIRE).

3.2 Hub Level Impacts

The impacts of hosting the 2012 Olympic Games for each of the Hub locations is presented in Tables 3-7 through 3-9. As described above, the impacts in each of the five Hubs do not sum to the total Washington-Baltimore metropolitan area's impact because the effects of inter-regional trade are uncounted in each of the separate Hub-level modeling efforts. The Hub-level impacts are as follows:

- Washington, DC will experience the largest Olympic-related impacts, with nearly $1.3 billion in economic activity generating 15,534 jobs earning $623 million in compensation.

- The Baltimore Metropolitan Area (excluding Anne Arundel County) will experience the second largest impact with $1.2 billion in economic activity generated by the Olympic Games supporting 17,000 jobs earning $477.2 million in wages.

- The 2012 Olympic Games will increase economic activity in Suburban Maryland by nearly $1.1 billion and create 13,682 jobs earning $439.4 million in employee compensation.

- The 2012 Olympic Games will generate new economic activity in Annapolis/Anne Arundel County by $225.9 million and create 3,290 jobs earning $87.7 million in employee compensation.

- The 2012 Olympic Games will increase economic activity in Northern Virginia by nearly $865 million and generate 12,805 jobs earning $364.2 million in wages and salaries.

- The economic activity generated by Olympic-related trade in goods and services among the five Hubs will generate $662 million in regional economic activity and support 7,478 jobs earning $219 million across the entire Washington-Baltimore metropolitan area.

3.3 Displacement Effects

Following the methodology proposed in the 1996 study of the 1996 Olympic Games in Atlanta[3], this analysis assumes that the displacement and enhancement effects of hosting the 2012 Olympic Games are mutually offsetting. Displacement effects are the replacement of economic activity that would occur in the absence of the event being analyzed by the new event. Enhancement effects occur when the event being analyzed expands or retains economic activity that otherwise would occur outside of the region. The operational spending of the WBOC and most of the pre-Olympic events will be spread out over many years and, thus, are unlikely to substantially displace normal spending flows. However, it is likely that normal tourism activities during the 16-day period of the Olympic Games are likely to be nearly entirely displaced as Olympics-related visitors replace the normal flow of tourists to the Washington-Baltimore metropolitan area.

Displacement effects are likely to be relatively small in the Washington-Baltimore metropolitan area. Washington is a major national and international tourist destination and Baltimore is a major regional tourist destination. Both cities are major convention centers. It is likely that many of the conventions and tourists will simply reschedule around the Olympic Games. Furthermore, any short-term displacement effects are likely to be offset by both short- and long-term enhancement effects. Short-term enhancement effects would occur as many local residents cancel or postpone out-of-region vacations for the once-in-a-lifetime opportunity to attend Olympic Games events. Long-term enhancement effects would occur through the "legacy effects" of hosting the Olympic Games. Hosting the 2012 Olympic Games will have the combined effect of increasing national and international recognition of the Washington-Baltimore market and increasing the supply of hotel rooms and other tourism amenities. This will yield benefits in the form of increased tourism activity in the future. It was outside the scope of this project to predict either displacement or enhancement effects, but the assumption of mutually offsetting effects appears reasonable and is, in fact, conservative given reports of substantial positive legacy effects in Atlanta.

[3] Humphreys, J. M. and Plumer, M.K., *The Economic Impact in the State of Georgia of Hosting the 1996 Summer Olympic Games*, Selig Center for Economic Growth, The University of Georgia, June 1995.

Table 3-1
Economic Impact of the 2012 Olympic Games
on the Washington-Baltimore Metropolitan Area
(Millions of Year 2000 Dollars)

Source of Spending	Direct Impacts	Indirect Impacts	Induced Impacts	Total Impacts
Total	**3,171.6**	**848.4**	**1,301.6**	**5,321.6**
WBOC Expenditures	**1,829.0**	**436.3**	**803.0**	**3,068.3**
Visitor Expenditures	**1,342.6**	**412.0**	**498.6**	**2,253.3**
Pre-Games	366.5	112.7	137.2	616.4
Olympic Year	976.1	299.3	361.4	1,636.9

Source: WBOC, George Mason University, Jacob France Center

Table 3-2
Employment Impact of the 2012 Olympic Games
on the Washington-Baltimore Metropolitan Area
(Number of Jobs)

Source of Spending	Direct Impacts	Indirect Impacts	Induced Impacts	Total Impacts
Total	**44,369**	**9,135**	**16,254**	**69,758**
WBOC Expenditures	**19,923**	**4,996**	**10,008**	**34,927**
Visitor Expenditures	**24,446**	**4,139**	**6,245**	**34,830**
Pre-Games	6,845	1,143	1,718	9,706
Olympic Year	17,601	2,996	4,527	25,124

Source: WBOC, George Mason University, Jacob France Center

Table 3-3
Employee Compensation Impact of the 2012 Olympic Games
on the Washington-Baltimore Metropolitan Area
(Millions of Year 2000 Dollars)

Source of Spending	Direct Impacts	Indirect Impacts	Induced Impacts	Total Impacts
Total	**1,403.6**	**329.9**	**477.1**	**2,210.5**
WBOC Expenditures	**916.4**	**182.0**	**284.9**	**1,383.3**
Visitor Expenditures	**487.1**	**147.9**	**192.2**	**827.2**
Pre-Games	133.7	40.5	52.9	227.1
Olympic Year	353.4	107.4	139.3	600.2

Source: WBOC, George Mason University, Jacob France Center

Table 3-4
Economic Impact of the 2012 Olympic Games
on the Washington-Baltimore Metropolitan Area, By Industry
(Million of Year 2000 Dollars)

Industry	Direct Impacts	Indirect Impacts	Induced Impacts	Total Impacts
Total	**3,171.6**	**848.4**	**1,301.6**	**5,321.6**
Agriculture	0.0	4.0	4.7	8.7
Mining	0.0	0.5	0.5	0.9
Construction	384.2	35.4	24.9	444.5
Manufacturing	12.4	76.6	81.9	170.9
TCPU*	175.6	99.5	93.3	368.4
Trade	509.8	76.9	271.8	858.5
FIRE**	68.2	138.6	319.1	525.9
Services	2,021.5	399.7	453.5	2,874.7
Government	0.0	17.2	47.8	65.0
Other	0.0	0.0	4.2	4.2

Source: WBOC, George Mason University, Jacob France Center
*transportation, communications, public utilities; **finance, insurance and real estate

Table 3-5
Employment Impact of the 2012 Olympic Games
on the Washington-Baltimore Metropolitan Area, By Industry
(Numbers of Jobs)

Industry	Direct Impacts	Indirect Impacts	Induced Impacts	Total Impacts
Total	**44,369**	**9,135**	**16,254**	**69,758**
Agriculture	0	104	88	192
Mining	0	3	3	7
Construction	3,022	393	291	3,707
Manufacturing	145	403	381	929
TCPU*	4,396	640	562	5,598
Trade	12,609	1,048	5,703	19,360
FIRE**	294	817	1,301	2,412
Services	23,903	5,512	7,045	36,460
Government	0	215	596	810
Other	0	0	283	283

Source: WBOC, George Mason University, Jacob France Center
*transportation, communications, public utilities; **finance, insurance, real estate

Table 3-6
Employee Compensation Impact of the 2012 Olympic Games on the Washington-Baltimore Metropolitan Area, By Industry (Millions of Year 2000 Dollars)

Industry	Direct Impacts	Indirect Impacts	Induced Impacts	Total Impacts
Total	**1,403.6**	**329.9**	**477.1**	**2,210.5**
Agriculture	0.0	1.5	1.1	2.5
Mining	0.0	0.0	0.1	0.1
Construction	113.0	14.0	10.3	137.3
Manufacturing	3.9	18.8	18.5	41.1
TCPU*	72.8	27.4	25.3	125.5
Trade	198.8	31.6	116.6	347.1
FIRE**	4.6	28.6	53.1	86.3
Services	1,010.6	196.5	217.1	1,424.2
Government	0.0	11.4	31.4	42.8
Other	0.0	0.0	3.7	3.7

Source: WBOC, George Mason University, Jacob France Center
*transportation, communications, public utilities; **finance, insurance, real estate

Table 3-7
Economic Impact By Hub Location
(Millions of Year 2000 Dollars)

Hub	Direct Impacts	Indirect Impacts	Induced Impacts	Total Impacts
Total	**3,171.6**	**848.4**	**1,301.6**	**5,321.6**
Washington, DC	1,026.4	199.7	68.9	1,295.0
Baltimore Metropolitan Area*	726.8	198.6	275.5	1,200.9
Suburban Maryland**	690.8	170.4	211.6	1,072.8
Annapolis/Anne Arundel County	146.9	34.6	44.4	225.9
Virginia***	557.2	138.6	169.1	865.0
Other Regional Venues****	23.6	106.4	532.0	662.0

Source: WBOC, George Mason University, Jacob France Center
*Baltimore MSA excluding Anne Arundel County
**Calvert, Charles, Frederick, Montgomery, and Prince George's Counties
***Northern Virginia as defined on page 17.
****Regional economic activity that can not be allocated to a Hub.

Table 3-8
Employment Impact By Hub Location
(Number of Jobs)

Hub	Direct Impacts	Indirect Impacts	Induced Impacts	Total Impacts
Total	**44,369**	**9,135**	**16,254**	**69,758**
Washington, DC	12,903	1,897	734	15,534
Baltimore Metropolitan Area*	10,836	2,438	3,694	16,969
Suburban Maryland**	9,084	1,910	2,689	13,682
Annapolis/Anne Arundel County	2,251	426	613	3,290
Virginia***	9,228	1,431	2,146	12,805
Other Regional Venues****	67	1,033	6,378	7,478

Source: WBOC, George Mason University, Jacob France Center
*Baltimore MSA excluding Anne Arundel County
**Calvert, Charles, Frederick, Montgomery and Prince George's Counties
***Northern Virginia as defined on page 17.
****Regional economic activity that can not be allocated to a Hub.

Table 3-9
Employee Compensation Impact By Hub Location
(Millions of Year 2000 Dollars)

Hub	Direct Impacts	Indirect Impacts	Induced Impacts	Total Impacts
Total	**1,403.6**	**329.9**	**477.1**	**2,210.5**
Washington, DC	509.3	85.4	28.3	623.0
Baltimore Metropolitan Area*	305.6	73.9	97.7	477.2
Suburban Maryland**	298.6	65.0	75.8	439.4
Annapolis/Anne Arundel County	59.1	12.9	15.7	87.7
Virginia***	247.8	54.5	61.8	364.2
Other Regional Venues****	n.m.	38.2	197.8	219.0

Source: WBOC, George Mason University, Jacob France Center
*Baltimore MSA excluding Anne Arundel County
**Calvert, Charles, Frederick, Montgomery and Prince George's Counties
***Northern Virginia as defined on page 17.
****Regional economic activity that can not be allocated to a Hub.
n.m. = not meaningful

4.0 FISCAL IMPACTS

A summary of the state-level fiscal impacts flowing from the projected spending associated with the 2012 Olympic Games in the Washington-Baltimore metropolitan area is presented in Table 4.1. These tax revenues would be generated by: construction of Olympic facilities, pre-Olympic Games spending by the WBOC and Olympic Games visitors, and spending during the Olympic Year by the WBOC and non-local visitors attracted to the Games.

These fiscal impacts are not all inclusive as they only report income and sales tax revenues captured at the state levels and do not reflect a wide range of county and municipal sources as well as others at the state level that would experience increased revenue flows as a result of Olympic spending, especially during the Olympic Year. These additional revenue sources would include: parking, gasoline, hotel, meals, alcoholic beverages, utilities, corporate income or franchise, personal property, licenses and fees. To illustrate the potential magnitudes of these other revenue sources, revenues that would be generated only by direct hotel and meals spending (excluding any additional revenues resulting from indirect spending effects) in the District of Columbia are estimated to total $21.85 million and $8.3 million, respectively (combined pre-Olympics and Games-related spending in year 2000 dollars).

The state-level tax flows presented in Table 4.1 reflect the revenues generated from the direct, indirect and induced spending projected for the 2012 Olympic Games, as summarized in Table 3.6.

Table 4-1

State-Level Tax Revenues Generated
By The 2012 Olympic Games
(Millions of Year 2000 Dollars)

State	Personal Income	Retail Sales	Total
Total	**68.1**	**62.9**	**131.0**
Washington, DC	10.1	14.3	24.4
Maryland	39.0	39.5	78.5
Virginia	19.0	9.1	28.1

Source: George Mason University; Jacob France Center

To compute the net increase in personal income tax revenue, the percentage of each state's total personal income reported as state income tax collections was calculated and applied against the projected total personal income generated by the Olympic Games in each state portion (this combines the three Maryland Hubs). Similarly, to estimate the sales tax revenue impact, total state sales tax revenue as a percent of gross state product (total output) was calculated for each state and this percentage was applied against each state's share of the total output projected for the 2012 Olympic Games.

These fiscal flows contribute to the financial health of Washington, DC, the State of Maryland, and the Commonwealth of Virginia and illustrate the wide distribution of spending benefits and economic impacts that could be generated within the Washington-Baltimore area by the 2012 Olympic Games. The new employment and personal income supported by this Olympic spending and the indirect (and induced) impacts resulting from the re-spending of WBOC and Olympic visitor outlays would impact all major sectors within the regional economy. With this wide distribution of economic impacts, the tax revenue impact will also be broadly distributed across revenue sources as well as across the area's local jurisdictions. This board geographic base of economic and fiscal impact assures that the financial benefits flowing from the Olympic Games are widely shared by the area's businesses, state and local governments and work force.

5.0 FINDINGS AND CONCLUSIONS

Hosting the 2012 Olympic Games in the Washington-Baltimore metropolitan area will generate significant economic and fiscal benefits for Washington, DC the State of Maryland, and the Commonwealth of Virginia. These economic and fiscal benefits will occur over the years preceding 2012 as well as during the Olympic Year. They include the construction and upgrading of venues, operating outlays of the Washington-Baltimore Organizing Committee for the Olympic Games and visitor spending. These direct outlays will contribute $3.17 billion to the area's gross regional product. Additionally, the spending of these funds within the area economy will generate $2.15 billion in indirect and induced monetary flows within the area economy with the combined economic impact projected to total $5.32 billion. This total economic impact on the Washington-Baltimore metropolitan area constitutes a net addition to the regional economy in the form of new job, personal income and business revenues, and tax revenues.

The projected $5.32 billion in total economic impact from the 2012 Olympic Games within the Washington-Baltimore metropolitan area will support the creation of 69,758 year-round equivalent jobs within the Washington-Baltimore metropolitan area with wage and salary earnings projected to total $2.21 billion. The spending by the WBOC, the non-local visitors attracted to the area to support or attend the Olympic Games, and the increased local business and household income resulting from the re-spending of the direct local outlays flowing from the Olympic Games will yield $131 million in new state income and sales tax revenues. Additionally, a wide range of other state and local tax revenues will result from the spending generated by the Olympic Games.

These economic and fiscal flows will contribute broadly to the health of the Washington, DC, Maryland, and Virginia economies assuring that the financial benefits from hosting the 2012 Olympic Games will be widely shared by the area's businesses, households, and state and local governments. Beyond these measurable economic benefits, the Washington-Baltimore metropolitan area will benefit from its enhanced world class image as a good place to live and do business gained from the positive media exposure during the Olympic Games. Furthermore, the legacy of the Olympic Games will provide long lasting benefits to the area's residents in the form of new and improved world class athletic facilities, enhanced transportation facilities and other infrastructure, and renewed community spirit and inter-regional cooperation. This Olympic legacy will provide the Washington-Baltimore metropolitan area with important positive impacts that will endure long after the Olympic Year.

APPENDIX: HUB DETAIL

HUB DETAIL APPENDIX

Washington, DC Impacts

The economic, employment, and employee compensation impacts of the 2012 Olympic Games on the Washington, DC economy are presented in Appendix Table 1 through Appendix Table 6. As one of the two principal Hubs for the Olympic Games, Washington, DC will experience the largest economic impacts of the five Hub locations. Hosting the 2012 Olympic Games will introduce more than $1 billion in new spending to the Washington, DC economy. The majority of this spending, 68% or $700.5 million will be derived from direct expenditures associated with the hosting of the Olympic Games. These direct expenditures will range from the spending associated with the Olympic Games opening ceremony to the operations of the Washington-Baltimore Organizing Committee for the Olympic Games (WBOC) to the operation of the broadcasting and media centers. Washington, DC is also the proposed venue for events such as archery, athletics, basketball, boxing, tennis and weightlifting. Visitor spending on hotels, dining, retail purchases, entertainment, and other services will account for the remaining 32% of Olympic-related spending in Washington, DC ($325.9 million).

Olympic-related expenditures will increase total economic activity in Washington, DC by nearly $1.3 billion. The Olympic Games will create 15,534 jobs in Washington, DC earning an estimated $623.0 million in salaries and wages. The economic impacts associated with the hosting of the 2012 Olympic Games are highly concentrated in the services, construction, and trades (retail and wholesale) sectors of the Washington, DC economy.

Baltimore Metropolitan Area Impacts

The economic, employment and employee compensation impacts of the 2012 Olympic Games on the Baltimore Metropolitan area economy[4] are presented in Appendix Table 7 through Appendix Table 12. As one of the two principal Hubs for the Olympic Games, the Baltimore Metropolitan area will experience the second largest economic impacts of the five Hub locations, after Washington, DC. Hosting the 2012 Olympic Games will introduce $726.8 million in new spending to the Baltimore Metropolitan area economy. Fifty-seven percent (57%), or $414.0 million of total Olympic-related spending, will be derived from WBOC expenditures, ranging from co-hosting the Olympic Games opening events to the WBOC's purchases of goods or services from local businesses. Visitor spending on hotels, dining, retail purchases, entertainment, and other services will account for the remaining 43% of Olympic-related spending in the Baltimore Metropolitan area ($312.8 million).

Olympic-related expenditures will increase total economic activity in the Baltimore Metropolitan area by $1.2 billion. The Olympic Games will create nearly 17,000 jobs in the Baltimore Metropolitan area, generating an estimated $477.2 million in salaries and wages. The economic impacts associated with the hosting of the 2012 Olympic Games are highly concentrated in the services, trades (retail and wholesale), financial services (FIRE), and construction sectors of the Baltimore Metropolitan area economy.

[4] For the purposes of this analysis the Baltimore Metropolitan area is defined as Baltimore City and Baltimore, Carroll, Harford, Howard and Queen Anne's Counties. Anne Arundel County is not included because it was modeled separately.

Suburban Maryland Impacts

The economic, employment, and employee compensation impacts of the 2012 Olympic Games on the Suburban Maryland economy are presented in Appendix Table 13 through Appendix Table 18. The Olympic Games will introduce $690.8 million in new spending into the Suburban Maryland economy. As the proposed location for the Olympic Village as well as softball, volleyball, handball, and shooting events, the majority of Olympics-related spending in Suburban Maryland (55% and $383.1 million) will be derived from direct WBOC operational and event spending. The remaining 45% of Olympics-related spending, $307.7 million, will be derived from spending on hotels, dining, retail purchases, entertainment, and other services by the visitors attracted into Suburban Maryland to attend the Olympic Games.

Olympic-related expenditures will increase total economic activity in Suburban Maryland by more than $1 billion and create 13,682 jobs, earning an estimated $439.4 million in salaries and wages. These economic impacts will be highly concentrated in the services and trades (retail and wholesale) sectors of the Suburban Maryland economy.

Annapolis/Anne Arundel County Impacts

The economic, employment, and employee compensation impacts of the 2012 Olympic Games on Anne Arundel County, Maryland are presented in Appendix Table 19 through Appendix Table 24. The 2012 Olympic Games will introduce $146.9 million in new spending to the Anne Arundel County economy. Fifty-nine percent (59%), or $86.1 million of this spending will be derived from direct expenditures associated with hosting the Olympic Games, from activities such as Olympic sailing events or the WBOC's purchases of goods or services from local businesses. Visitor spending on hotels, dining, retail purchases, entertainment, and other services will account for the remaining 41% of Olympic-related spending in the County ($60.7 million).

Olympic-related direct expenditures will increase total economic activity in the County by $225.9 million and create 3,290 jobs in the County earning $87.7 million in salaries and wages. The projected economic impacts associated with the hosting of the 2012 Olympic Games are highly concentrated in the services, trades (retail and wholesale) and construction sectors of the County economy.

Virginia Impacts

The projected economic impacts of the 2012 Olympic Games on the Virginia economy are presented in Appendix Tables 25 through 30. The 2012 Olympic Games will introduce $557.2 million in new spending into the Virginia economy. Unlike the other four Hub locations, most of the Olympics-related spending in the Virginia economy will come from the visitors attending the Olympics. Virginia will attract significant numbers of visitors because of its high concentration of hotel rooms and other tourism amenities. Visitor spending on hotels, dining, retail purchases, entertainment, and other services will introduce an estimated $335.4 million into the Virginia economy and account for 60% of Olympics-related direct impacts. The remaining 40% of Olympics-related spending in Virginia will be derived from the $221.8 million in direct expenditures associated with the hosting of the Olympic Games. These include expenditures associated with the diving, equestrian, swimming, wrestling and other events proposed for the Hub.

Olympic-related expenditures will increase total economic activity in Virginia by nearly $865 million. The Olympic Games will create 12,805 jobs in Virginia earning an estimated $364.2 million in salaries and wages. These economic impacts will be highly concentrated in the services and trades (retail and wholesale) sectors of the Virginia economy.

Appendix Table 1
Economic Impact of the 2012 Olympic Games on Washington, DC
By Spending Area
(Millions of Year 2000 Dollars)

Item	Direct Impacts	Indirect Impacts	Induced Impacts	Total Impacts
Total	**1,026.4**	**199.7**	**68.9**	**1,295.0**
WBOC Expenditures	**700.5**	**118.8**	**42.4**	**861.7**
Visitor Expenditures	**325.9**	**80.9**	**26.5**	**433.3**
Pre-Games	72.9	18.4	5.9	97.2
Olympic Games Visitors	253.0	62.6	20.6	336.1

Source: WBOC, George Mason University, Jacob France Center

Appendix Table 2
Employment Impact of the 2012 Olympic Games on Washington, DC
By Spending Area
(Number of Jobs)

Item	Direct Impacts	Indirect Impacts	Induced Impacts	Total Impacts
Total	**12,903**	**1,897**	**734**	**15,534**
WBOC Expenditures	**7,857**	**1,157**	**426**	**9,440**
Visitor Expenditures	**5,046**	**741**	**308**	**6,094**
Pre-Games	1,146	170	69	1,385
Olympic Games Visitors	3,899	571	239	4,709

Source: WBOC, George Mason University, Jacob France Center

Appendix Table 3
Employee Compensation Impact of the 2012 Oympic Games on Washington, DC
By Spending Area
(Millions of Year 2000 Dollars)

Item	Direct Impacts	Indirect Impacts	Induced Impacts	Total Impacts
Total	**509.3**	**85.4**	**28.3**	**623.0**
WBOC Expenditures	**392.0**	**54.4**	**15.9**	**462.3**
Visitor Expenditures	**117.3**	**31.0**	**12.4**	**160.7**
Pre-Games	26.4	7.0	2.8	36.3
Olympic Games Visitors	90.9	24.0	9.6	124.4

Source: WBOC, George Mason University, Jacob France Center

Appendix Table 4
Economic Impact of the 2012 Olympic Games on Washington, DC
By Industry
(Millions of Year 2000 Dollars)

Item	Direct Impacts	Indirect Impacts	Induced Impacts	Total Impacts
Total	**1,026.4**	**199.7**	**68.9**	**1,295.0**
Agriculture	0.0	0.3	0.0	0.4
Mining	0.0	0.1	0.0	0.1
Construction	170.0	5.5	0.8	176.3
Manufacturing	5.6	10.7	1.6	17.9
TCPU	42.5	17.5	3.7	63.7
Trade	124.3	16.7	10.7	151.7
FIRE	23.9	36.0	19.2	79.1
Services	660.1	107.7	25.2	793.1
Government	0.0	5.1	7.3	12.4
Other	0.0	0.0	0.3	0.3

Source: WBOC, George Mason University, Jacob France Center

Appendix Table 5
Employment Impact of the 2012 Olympic Games on Washington, DC
By Industry
(Number of Jobs)

Item	Direct Impacts	Indirect Impacts	Induced Impacts	Total Impacts
Total	**12,903**	**1,897**	**734**	**15,534**
Agriculture	0	6	1	7
Mining	0	0	0	1
Construction	1,320	58	9	1,386
Manufacturing	57	51	7	114
TCPU	824	82	15	921
Trade	2,745	195	203	3,143
FIRE	50	134	52	236
Services	7,908	1,332	351	9,591
Government	0	40	80	120
Other	0	0	16	16

Source: WBOC, George Mason University, Jacob France Center

Appendix Table 6
Employee Compensation Impact of the 2012 Olympic Games on Washington, DC
By Industry
(Millions of Year 2000 Dollars)

Item	Direct Impacts	Indirect Impacts	Induced Impacts	Total Impacts
Total	**509.3**	**85.4**	**28.3**	**623.0**
Agriculture	0.0	0.2	0.0	0.2
Mining	0.0	0.0	0.0	0.0
Construction	56.4	2.6	0.4	59.4
Manufacturing	1.7	3.4	0.5	5.6
TCPU	18.1	4.9	0.9	23.9
Trade	51.3	7.0	4.6	62.8
FIRE	1.8	7.9	3.3	13.0
Services	380.0	56.5	13.7	450.2
Government	0.0	2.9	4.7	7.6
Other	0.0	0.0	0.2	0.2

Source: WBOC, George Mason University, Jacob France Center

Appendix Table 7
Economic Impact of the 2012 Olympic Games on The Baltimore Metropolitan Area (*)
By Spending Area
(Millions of Year 2000 Dollars)

Item	Direct Impacts	Indirect Impacts	Induced Impacts	Total Impacts
Total	**726.8**	**198.6**	**275.5**	**1,200.9**
WBOC Expenditures	**414.0**	**100.7**	**164.9**	**679.6**
Visitor Expenditures	**312.8**	**97.9**	**110.6**	**521.3**
Pre-Games	90.2	28.4	32.2	150.7
Olympic Games Visitors	222.6	69.5	78.5	370.6

(*) Excluding Anne Arundel County which was modeled separately

Source: WBOC, George Mason University, Jacob France Center

Appendix Table 8
Employment Impact of the 2012 Olympic Games on The Baltimore Metropolitan Area (*)
By Spending Area
(Number of Jobs)

Item	Direct Impacts	Indirect Impacts	Induced Impacts	Total Impacts
Total	**10,836**	**2,438**	**3,694**	**16,969**
WBOC Expenditures	**4,855**	**1,275**	**2,186**	**8,316**
Visitor Expenditures	**5,981**	**1,163**	**1,508**	**8,653**
Pre-Games	1,751	340	438	2,530
Olympic Games Visitors	4,230	823	1,070	6,123

(*) Excluding Anne Arundel County which was modeled separately

Source: WBOC, George Mason University, Jacob France Center

Appendix Table 9
Employee Compensation Impact of the 2012 Olympic Games on The Baltimore Metropolitan Area (*)
By Spending Area
(Millions of Year 2000 Dollars)

Item	Direct Impacts	Indirect Impacts	Induced Impacts	Total Impacts
Total	**305.6**	**73.9**	**97.7**	**477.2**
WBOC Expenditures	**198.4**	**40.7**	**57.2**	**296.2**
Visitor Expenditures	**107.2**	**33.3**	**40.5**	**181.0**
Pre-Games	31.2	9.7	11.8	52.6
Olympic Games Visitors	76.1	23.6	28.7	128.4

(*) Excluding Anne Arundel County which was modeled separately

Source: WBOC, George Mason University, Jacob France Center

Appendix Table 10

Economic Impact of the 2012 Olympic Games on The Baltimore Metropolitan Area (*)

By Industry

(Millions of Year 2000 Dollars)

Item	Direct Impacts	Indirect Impacts	Induced Impacts	Total Impacts
Total	**726.8**	**198.6**	**275.5**	**1,200.9**
Agriculture	0.0	0.9	0.8	1.8
Mining	0.0	0.0	0.0	0.0
Construction	76.4	8.5	5.5	90.3
Manufacturing	3.3	19.6	20.6	43.6
TCPU	41.8	22.6	18.5	82.9
Trade	115.5	16.9	57.9	190.3
FIRE	20.3	29.9	63.9	114.1
Services	469.4	96.0	99.0	664.5
Government	0.0	4.2	8.5	12.7
Other	0.0	0.0	0.8	0.8

(*) Excluding Anne Arundel County which was modeled separately

Source: WBOC, George Mason University, Jacob France Center

Appendix Table 11

Employment Impact of the 2012 Olympic Games on The Baltimore Metropolitan Area (*)
By Industry
(Number of Jobs)

Item	Direct Impacts	Indirect Impacts	Induced Impacts	Total Impacts
Total	**10,836**	**2,438**	**3,694**	**16,969**
Agriculture	0	25	17	42
Mining	0	0	0	0
Construction	601	94	64	759
Manufacturing	36	109	96	241
TCPU	917	163	126	1,205
Trade	3,049	247	1,285	4,580
FIRE	97	201	271	570
Services	6,136	1,543	1,658	9,338
Government	0	56	112	168
Other	0	0	66	66

(*) Excluding Anne Arundel County which was modeled separately

Source: WBOC, George Mason University, Jacob France Center

Appendix Table 12

Employee Compensation Impact of the 2012 Olympic Games on The Baltimore Metropolitan Area (*)
By Industry
(Millions of Year 2000 Dollars)

Item	Direct Impacts	Indirect Impacts	Induced Impacts	Total Impacts
Total	**305.6**	**73.9**	**97.7**	**477.2**
Agriculture	0.0	0.3	0.2	0.5
Mining	0.0	0.0	0.0	0.0
Construction	22.4	3.3	2.2	28.0
Manufacturing	1.1	4.8	4.5	10.3
TCPU	17.0	6.3	5.1	28.4
Trade	43.7	6.9	24.5	75.0
FIRE	1.3	5.4	9.7	16.4
Services	220.2	44.2	45.3	309.6
Government	0.0	2.8	5.5	8.3
Other	0.0	0.0	0.7	0.7

(*) Excluding Anne Arundel County which was modeled separately

Source: WBOC, George Mason University, Jacob France Center

Appendix Table 13
Economic Impact of the 2012 Olympic Games on Suburban Maryland
By Spending Area
(Millions of Year 2000 Dollars)

Item	Direct Impacts	Indirect Impacts	Induced Impacts	Total Impacts
Total	**690.8**	**170.4**	**211.6**	**1,072.8**
WBOC Expenditures	**383.1**	**85.6**	**121.2**	**589.9**
Visitor Expenditures	**307.7**	**84.7**	**90.4**	**482.9**
Pre-Games	82.5	22.8	24.5	129.7
Olympic Games Visitors	225.3	61.9	65.9	353.1

Source: WBOC, George Mason University, Jacob France Center

Appendix Table 14
Employment Impact of the 2012 Olympic Games on Suburban Maryland
By Spending Area
(Number of Jobs)

Item	Direct Impacts	Indirect Impacts	Induced Impacts	Total Impacts
Total	**9,084**	**1,910**	**2,689**	**13,682**
WBOC Expenditures	**4,159**	**1,021**	**1,531**	**6,711**
Visitor Expenditures	**4,925**	**889**	**1,157**	**6,971**
Pre-Games	1,346	241	313	1,901
Olympic Games Visitors	3,578	648	844	5,071

Source: WBOC, George Mason University, Jacob France Center

Appendix Table 15
Employee Compensation Impact of the 2012 Olympic Games on Suburban Maryland
By Spending Area
(Millions of Year 2000 Dollars)

Item	Direct Impacts	Indirect Impacts	Induced Impacts	Total Impacts
Total	**298.6**	**65.0**	**75.8**	**439.4**
WBOC Expenditures	**183.1**	**34.9**	**41.8**	**259.9**
Visitor Expenditures	**115.5**	**30.0**	**33.9**	**179.4**
Pre-Games	31.2	8.1	9.2	48.5
Olympic Games Visitors	84.3	21.9	24.7	131.0

Source: WBOC, George Mason University, Jacob France Center

Appendix Table 16
Economic Impact of the 2012 Olympic Games on Suburban Maryland
By Industry
(Millions of Year 2000 Dollars)

Item	Direct Impacts	Indirect Impacts	Induced Impacts	Total Impacts
Total	**690.8**	**170.4**	**211.6**	**1,072.8**
Agriculture	0.0	0.9	0.6	1.4
Mining	0.0	0.0	0.0	0.0
Construction	70.8	8.5	4.1	83.4
Manufacturing	1.6	10.7	8.6	20.9
TCPU	39.4	20.2	14.1	73.7
Trade	124.4	15.3	48.9	188.6
FIRE	20.1	29.0	54.8	103.9
Services	434.5	82.4	71.9	588.8
Government	0.0	3.4	7.9	11.3
Other	0.0	0.0	0.8	0.8

Source: WBOC, George Mason University, Jacob France Center

Appendix Table 17

Employment Impact of the 2012 Olympic Games on Suburban Maryland

By Industry

(Number of Jobs)

Item	Direct Impacts	Indirect Impacts	Induced Impacts	Total Impacts
Total	**9,084**	**1,910**	**2,689**	**13,682**
Agriculture	0	26	15	41
Mining	0	0	0	0
Construction	548	94	46	689
Manufacturing	16	60	42	119
TCPU	811	141	91	1,043
Trade	3,108	204	996	4,308
FIRE	93	178	222	493
Services	4,507	1,165	1,124	6,796
Government	0	40	102	143
Other	0	0	51	51

Source: WBOC, George Mason University, Jacob France Center

Appendix Table 18

Employee Compensation Impact of the 2012 Olympic Games on Suburban Maryland

By Industry

(Millions of Year 2000 Dollars)

Item	Direct Impacts	Indirect Impacts	Induced Impacts	Total Impacts
Total	**298.6**	**65.0**	**75.8**	**439.4**
Agriculture	0.0	0.4	0.2	0.6
Mining	0.0	0.0	0.0	0.0
Construction	21.4	3.5	1.7	26.5
Manufacturing	0.5	2.8	2.1	5.5
TCPU	16.2	5.4	3.8	25.3
Trade	47.7	6.3	21.1	75.1
FIRE	1.4	5.1	8.0	14.5
Services	211.5	39.3	32.9	283.7
Government	0.0	2.2	5.4	7.6
Other	0.0	0.0	0.7	0.7

Source: WBOC, George Mason University, Jacob France Center

Appendix Table 19
Economic Impact of the 2012 Olympic Games on Anne Arundel County
By Spending Area
(Millions of Year 2000 Dollars)

Item	Direct Impacts	Indirect Impacts	Induced Impacts	Total Impacts
Total	**146.9**	**34.6**	**44.4**	**225.9**
WBOC Expenditures	**86.1**	**18.5**	**26.8**	**131.3**
Visitor Expenditures	**60.7**	**16.1**	**17.7**	**94.6**
Pre-Games	18.7	5.0	5.5	29.2
Olympic Games Visitors	42.1	11.1	12.2	65.4

Source: WBOC, George Mason University, Jacob France Center

Appendix Table 20
Employment Impact of the 2012 Olympic Games on Anne Arundel County
By Spending Area
(Number of Jobs)

Item	Direct Impacts	Indirect Impacts	Induced Impacts	Total Impacts
Total	**2,251**	**426**	**613**	**3,290**
WBOC Expenditures	**1,026**	**232**	**360**	**1,618**
Visitor Expenditures	**1,224**	**194**	**253**	**1,671**
Pre-Games	385	61	78	524
Olympic Games Visitors	840	133	175	1,148

Source: WBOC, George Mason University, Jacob France Center

Appendix Table 21
Employee Compensation Impact of the 2012 Olympic Games on Anne Arundel County
By Spending Area
(Millions of Year 2000 Dollars)

Item	Direct Impacts	Indirect Impacts	Induced Impacts	Total Impacts
Total	**59.1**	**12.9**	**15.7**	**87.7**
WBOC Expenditures	**38.8**	**7.4**	**8.9**	**55.1**
Visitor Expenditures	**20.3**	**5.5**	**6.8**	**32.6**
Pre-Games	6.3	1.7	2.1	10.1
Olympic Games Visitors	14.0	3.8	4.7	22.5

Source: WBOC, George Mason University, Jacob France Center

Appendix Table 22
Economic Impact of the 2012 Olympic Games on Anne Arundel County
By Industry
(Millions of Year 2000 Dollars)

Item	Direct Impacts	Indirect Impacts	Induced Impacts	Total Impacts
Total	**146.9**	**34.6**	**44.4**	**225.9**
Agriculture	0.0	0.1	0.1	0.2
Mining	0.0	0.0	0.0	0.0
Construction	19.5	1.5	0.9	21.9
Manufacturing	0.4	1.7	1.2	3.3
TCPU	8.3	4.2	3.3	15.7
Trade	22.7	3.5	10.7	36.9
FIRE	1.2	5.4	11.2	17.7
Services	94.8	17.8	14.6	127.2
Government	0.0	0.4	2.5	2.8
Other	0.0	0.0	0.0	0.0

Source: WBOC, George Mason University, Jacob France Center

Appendix Table 23
Employment Impact of the 2012 Olympic Games on Anne Arundel County
By Industry
(Number of Jobs)

Item	Direct Impacts	Indirect Impacts	Induced Impacts	Total Impacts
Total	**2,251**	**426**	**613**	**3,290**
Agriculture	0	5	3	8
Mining	0	0	0	0
Construction	156	16	11	183
Manufacturing	3	12	8	24
TCPU	215	30	22	268
Trade	558	52	235	845
FIRE	5	37	48	91
Services	1,312	268	244	1,824
Government	0	4	41	45
Other	0	0	2	2

Source: WBOC, George Mason University, Jacob France Center

Appendix Table 24

Employee Compensation Impact of the 2012 Olympic Games on Anne Arundel County
By Industry
(Millions of Year 2000 Dollars)

Item	Direct Impacts	Indirect Impacts	Induced Impacts	Total Impacts
Total	**59.1**	**12.9**	**15.7**	**87.7**
Agriculture	0.0	0.1	0.0	0.1
Mining	0.0	0.0	0.0	0.0
Construction	5.6	0.6	0.4	6.5
Manufacturing	0.2	0.5	0.3	1.0
TCPU	3.3	1.2	0.9	5.4
Trade	8.9	1.4	4.6	15.0
FIRE	0.1	0.9	1.4	2.3
Services	41.0	8.1	6.4	55.5
Government	0.0	0.2	1.8	2.0
Other	0.0	0.0	0.0	0.0

Source: WBOC, George Mason University, Jacob France Center

Appendix Table 25
Economic Impact of the 2012 Olympic Games on Virginia
By Spending Area
(Millions of Year 2000 Dollars)

Item	Direct Impacts	Indirect Impacts	Induced Impacts	Total Impacts
Total	**557.2**	**138.6**	**169.1**	**865.0**
WBOC Expenditures	**221.8**	**45.0**	**74.9**	**341.6**
Visitor Expenditures	**335.4**	**93.7**	**94.3**	**523.4**
Pre-Games	102.3	28.6	29.0	159.9
Olympic Games Visitors	233.2	65.0	65.3	363.5

Source: WBOC, George Mason University, Jacob France Center

Appendix Table 26
Employment Impact of the 2012 Olympic Games on Virginia
By Spending Area
(Number of Jobs)

Item	Direct Impacts	Indirect Impacts	Induced Impacts	Total Impacts
Total	**9,228**	**1,431**	**2,146**	**12,805**
WBOC Expenditures	**2,576**	**500**	**936**	**4,012**
Visitor Expenditures	**6,653**	**930**	**1,209**	**8,792**
Pre-Games	2,045	287	372	2,704
Olympic Games Visitors	4,607	643	838	6,088

Source: WBOC, George Mason University, Jacob France Center

Appendix Table 27
Employee Compensation Impact of the 2012 Olympic Games on Virginia
By Spending Area
(Millions of Year 2000 Dollars)

Item	Direct Impacts	Indirect Impacts	Induced Impacts	Total Impacts
Total	**247.8**	**54.5**	**61.8**	**364.2**
WBOC Expenditures	**119.9**	**19.8**	**26.0**	**165.6**
Visitor Expenditures	**127.9**	**34.8**	**35.8**	**198.5**
Pre-Games	39.1	10.7	11.0	60.8
Olympic Games Visitors	88.8	24.1	24.8	137.7

Source: WBOC, George Mason University, Jacob France Center

Appendix Table 28
Economic Impact of the 2012 Olympic Games on Virginia
By Industry
(Millions of Year 2000 Dollars)

Item	Direct Impacts	Indirect Impacts	Induced Impacts	Total Impacts
Total	**557.2**	**138.6**	**169.1**	**865.0**
Agriculture	0.0	0.8	0.5	1.3
Mining	0.0	0.1	0.1	0.2
Construction	36.6	6.4	3.0	46.1
Manufacturing	1.2	8.5	5.6	15.3
TCPU	42.4	17.9	12.6	72.8
Trade	122.5	10.9	40.4	173.8
FIRE	2.4	26.2	45.4	74.0
Services	352.1	65.1	53.3	470.5
Government	0.0	2.8	7.5	10.3
Other	0.0	0.0	0.7	0.7

Source: WBOC, George Mason University, Jacob France Center

Appendix Table 29
Employment Impact of the 2012 Olympic Games on Virginia
By Industry
(Number of Jobs)

Item	Direct Impacts	Indirect Impacts	Induced Impacts	Total Impacts
Total	**9,228**	**1,431**	**2,146**	**12,805**
Agriculture	0	25	16	40
Mining	0	1	1	2
Construction	288	69	34	392
Manufacturing	14	46	30	90
TCPU	806	108	75	989
Trade	3,006	138	847	3,991
FIRE	10	131	167	308
Services	5,104	874	831	6,809
Government	0	38	105	143
Other	0	0	41	41

Source: WBOC, George Mason University, Jacob France Center

Appendix Table 30
Employee Compensation Impact of the 2012 Olympic Games on Virginia
By Industry
(Millions of Year 2000 Dollars)

Item	Direct Impacts	Indirect Impacts	Induced Impacts	Total Impacts
Total	**247.8**	**54.5**	**61.8**	**364.2**
Agriculture	0.0	0.3	0.1	0.4
Mining	0.0	0.0	0.0	0.0
Construction	10.5	2.4	1.2	14.1
Manufacturing	0.4	2.2	1.4	4.0
TCPU	18.5	4.9	3.3	26.7
Trade	48.4	4.5	17.5	70.3
FIRE	0.2	5.1	6.9	12.1
Services	169.8	33.4	25.4	228.7
Government	0.0	1.8	5.4	7.2
Other	0.0	0.0	0.6	0.6

Source: WBOC, George Mason University, Jacob France Center