

The Likely Economic Impact of a Chicago 2016 Summer Olympics

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Executive Summary

INTRODUCTION

Anderson Economic Group, LLC, is an economic consulting firm with offices in Chicago, Illinois; East Lansing, Michigan; and Los Angeles, California. We have prepared this independent analysis of the likely economic impact of the proposed 2016 Summer Olympics in Chicago, and are making it publicly available before the IOC announcement date of October 2, 2009.

We are preparing this study to provide other Chicago-area businesses, as well as taxpayers and policymakers, a realistic assessment of the actual costs and benefits of hosting the games. Our analysis of past major events, and our past evaluations of the value of sports-related and other businesses, gives us a unique position to carefully examine this question.

Boosters of large sporting events and stadium construction have sometimes claimed economic benefits that later proved far too good to be true. However, our analyses of both sports franchises, and cities in which sporting teams operate, show that some events can provide economic benefits that far exceed the costs. Given the scale of the Olympics, and the exposure it would give to Chicago on a world stage, it is certainly worth carefully considering the costs, risks, and benefits.

We have used a rigorous methodology to estimate the likely economic impact of events like the 2016 Summer Olympics. Specifically, we have:

- Avoided double counting expenditures

Executive Summary

- Considered the fact that the Olympics will substitute for, and even displace, some other economic activity
- Considered the sources of funds being used to pay for the games, and where games' related expenditures will be directed.

As a result of these precautions, our measure of "economic impact" excludes any spending that would have taken place even without the Olympics, and games-related expenditures that are directed to sources outside of Cook County.

KEY FINDINGS

If Chicago hosts the 2016 Olympic Games in a manner consistent with their bid, the City of Chicago and Cook County are likely to realize a net economic impact of more than \$4.4 billion.

Summary of Economic Impact Estimates

Net New Visitor Expenditures	\$409,369,075
Indirect Benefits from Visitor Expenditures	\$286,558,353
Subtotal: Visitor Impacts	<u>\$695,927,428</u>
Net New Local Operating Expenditures by OCOG	\$1,970,526,427
Net New Local Infrastructure Expenditures, Non-OCOG	\$788,850,000
Assumed Costs to City for Revenue Shortfalls, Non-financed Projects	\$(500,000,000)
Assumed Opportunity Costs	\$(52,590,000)
Indirect Benefits from Operating and Infrastructure Expenditures	\$1,544,750,499
Subtotal: Operating and Infrastructure Impacts	<u>\$3,751,536,926</u>
<i>Total Likely Economic Impact</i>	<u>\$4,447,464,354</u>

Source: Anderson Economic Group, LLC

Other findings from our analysis are:

1. The City of Chicago has the potential to stage a successful games, with significant long-run benefits to the entire region.
The scale of the undertaking involves both substantial cost, and substantial risk. In recent decades, only large cities, national governments, and state or provincial governments have had the scale to stage such an event. The City of Chicago has the infrastructure, event space, attributes, and potential to attract future visitors and businesses that could allow it to both stage the games, and receive future benefits that at least match the costs of hosting.
2. The expenditures of visitors, staff, and media as a result of the games is expected to produce a net benefit of nearly \$696 million for Cook County. The net economic benefit from expenditures related to the games' operations and infrastructure will have a positive benefit of about \$3.8 billion for the city and county, assuming successful implementation of the plans set forth in the Chicago 2016 Bid Book.

To arrive at these estimates we properly considered the “net benefit” of the games to include only the additional economic benefits—specifically new earnings to city and county residents—caused by the hosting of the games. Thus, we excluded any earnings or other benefits that were simply substituted for other activities.

3. The host city contract that Chicago will enter into with the International Olympic Committee (IOC), should it be awarded the games, will not allow revenue from the games to be pledged to finance permanent infrastructure improvements that the city plans to make by 2016. Chicago’s bid calls for private financing of the largest such project, the Olympic Village, under the working assumption that a developer would be able to sell or lease the housing after the games to generate a return on their investment.

Should private financing not become available, the city would have to finance the project. To recognize this possibility, our model includes an offset of \$500 million in infrastructure spending. We also factor in a 5 percent “opportunity cost” to account for spending associated with infrastructure projects that may see increased costs due to Olympic deadlines and other such demands.

4. The host city contract will allow a city’s Organizing Committee for the Olympic Games (OCOG) to use revenue from the games to fund the operations of the games. However, the contract requires the host to insure against a shortfall in revenue, exposing taxpayers should revenues from the games not cover the operating costs.

Chicago’s bid sets forth ambitious revenue projections that rely on substantial donations and ticket sales. This has caused some concern that, if the economy stays recessed, revenue will fall short, leaving Chicago taxpayers with the tab. These concerns are legitimate, and partially accounted for in our model as part of the \$500 million offset to infrastructure spending. However, if private financing for infrastructure is not realized, and donations and ticket sales revenues fall short of targets, our estimated economic impact would be reduced as taxpayers see the benefits offset by higher taxes.

IMPORTANT QUALIFICATIONS

This report is based on publicly available information, and regional, industry, and other information known to us that we deem, in our professional judgment, to be reliable or indicative at the current time. No confidential information has been obtained for use in this report. Anderson Economic Group completed this analysis on an independent basis, and has not been retained or otherwise influenced to present anything other than a straightforward analysis. Readers are advised that this report, like all reports analyzing the likely course of future events, contains analyses, projections, and conjectures based on limited and imperfect information. Therefore, the actual future course of events are certain to deviate in some manner from those anticipated in this report. We may revise this report without notice to past readers.

Chicago 2016: Initial Plans and Bid

In early 2009, Chicago 2016, the OCOG in the City of Chicago, released its Olympic Bid Book. This three volume document presents Chicago's plans for seemingly every aspect of hosting the games, from finance and immigration policies, to the athletic venues locations and the transportation infrastructure of the region. The document has been well received by the international and Olympic communities, and presents a clear and compelling case for bringing the Summer 2016 games to Chicago.

Of particular interest to many who are evaluating the bid from Chicago and the other candidate cities is section 7 of the bid book, which addresses finances. Chicago 2016 has proposed a total budget of \$3.78 billion (2008 USD) to organize and host the games. The OCOG, in accordance with IOC guidelines, can not include capital investments in its budget. As such, permanent infrastructure projects, such as stadia and new housing for Olympic officials and athletes, must be funded through other means if adequate facilities do not already exist. Chicago 2016's bid includes an additional expenditure of \$1.03 billion by Non-OCOG sources for such infrastructure, including the Olympic Village.

Overall the OCOG budget appears thorough, though it does leave the city exposed to some financial risk, and is quite ambitious compared to other bids. IOC contracts with host cities require that the host cover any shortfall in revenues so that the IOC is not exposed to losses should either projected revenues not be realized, or projected expenditures be exceeded. If Chicago 2016 does not generate its estimated \$705 million in ticket sales revenue, \$246 million in donations, or \$774 million in local sponsorships, the city will likely end up with a substantial bill should expenditures not be cut to offset the revenue shortfall.¹

In addition to the OCOG budget, the city plans to privately finance most, if not all, of the nearly \$1 billion in costs associated with the Olympic Village and other infrastructure improvements. The Bid Book does not provide cost estimates associated with infrastructure improvements involving transportation, telecommunications, or medical, stating simply that such improvements will occur as part of the city's planned natural growth. This creates some ambiguity as to what the actual cost to taxpayers might be, though given the significant infrastructure already in place in Chicago, it seems reasonable that no major new projects would be needed, and that careful planning can help avoid "bridge to nowhere" infrastructure projects that do not provide long-term returns to taxpayers.

1. Rio De Janeiro, with a \$2.82 billion OCOG budget has ticket sales of only \$361 million and donations of \$30 million. Madrid has ticket sales of \$507 million and donations of \$4.2 million, and Tokyo assumes \$76 million in donations and \$719 million in ticket revenue.

The Problem of Exaggerated “Economic Impact” Claims

Unfortunately, the promoters of many large sporting events and stadium construction projects have claimed economic benefits that proved to be too good to be true. There are now a number of thorough examinations of the actual and claimed “economic impact” of such events that prove, to the extent possible with the available data, that the original claims of many such promoters were grossly exaggerated. Improper handling of substitution effects and economic multipliers are two common sources of such exaggerations.

Substitution Effects. To illustrate how a failure to account for the shifting of economic activity can exaggerate an economic impact, consider the following. The expenditures of a family from Evanston attending a game at Wrigley Field rather than going to dinner and a movie do not have a net economic impact on the county—their expenditures are simply a shift in economic activity away from another local activity. There would be a net economic impact, however, if they went to the game at Wrigley instead of going to one in Milwaukee. The true economic impact of an event only accounts for net benefits, that is, dollars spent in the area otherwise spent elsewhere or not at all.

Multipliers. Another source of exaggeration in other reports is the tendency to use multipliers that overstate the indirect impact of an event. One reason for this is a failure to consider how much of each dollar spent is transferred out of the local economy, such as profits from a restaurant or hotel chain going back to headquarters outside of the area.

However, there is no question that large events, and major construction projects, can and do provide significant economic benefits to a local region. Careful analyses of several sporting events and sports-related construction projects show that, in some cases, the economic benefits of such events far outweighed the local costs.

Chicago 2016: Tourism and Visitorship Impacts

We estimate that the Summer Olympics will generate an additional \$695.9 million of economic activity in Cook County from 2015 through 2017. The majority of the benefit will occur in 2016, while some increases in visitorship will occur prior to and after the games, as visitors come for Olympic trials and related business, or to see the city in advance or after the games. Such visits, however, provide relatively small impacts, and are not likely to stretch to more than a year before or after the games.

To arrive at this economic impact estimate we have assumed:

Attendance by Spectators. To estimate the number of visitors to the city and county during the Olympics we reviewed the Chicago 2016 Bid Book, with particular attention to event attendance and accommodation availability. The bid book estimates 75,000 hotel rooms, plus 13,000 university beds will be available for visitors. We assumed two people per room at hotels, and one per university bed, bringing us to 163,000 visitors per day. We then increased this by 10 percent to account for visitors who may stay with friends, family, or in a rented private residence. This results in a total daily visitorship of 179,300 during the games. Some of these visitors, however, are likely to be from within the county, or “crowding out” residents. To account for this, we assume 90 percent of the total visitorship comes from outside of the county and does not crowd someone out. This results in a total daily visitorship of 161,370, which accumulates to 2.58 million total visitor days over the course of 16 days.

Attendance by Media. The Olympics draws a large global audience, thanks in part to significant media coverage. Overall we estimate that, on average, there will be 19,350 media members in Chicago each day during the games. We reached this estimate based on hotel room (18,800 for media) and university bed (7,000 for media) availability data in the bid book. Assuming one media person per room and bed generates the estimate of 25,800 media visitors. This maximum level of staff and coverage is likely during the opening and closing of the games, and for major events, such as medal games in major sports. However, it is doubtful the entire media contingent will stay the entire 16 days. So, we assumed on average 75 percent of the total media will be present, thus the 19,350 estimate. Over 16 days this accumulates to 309,600 visitor days.

Attendance by Athletes and Officials. The other major group of visitors that will descend on Chicago and Cook County for the Olympics is, of course, the athletes and officials. The Olympic Village is being designed to accommodate some 16,000 people, so we have used this as the basis for our estimate. We assume the 16,000 is a steady figure throughout the games, though some athletes may not stay the entire duration. Over 16 days this accumulates to 256,000 visitor days.

Visitor “Substitution” and “Crowding Out” Effects. Chicago is, with or without a major event like the Olympics, a popular vacation spot, especially in summer months. Should the city host the Olympics in 2016, it is likely many who would have gone that summer as part of a regularly planned vacation may visit another destination to avoid the Olympic crowds and prices. It also seems likely that some who live in the area may leave town that week, or otherwise reduce their normal level of economic activity, as a result of the Olympic crowds. To account for this, we’ve estimated that approximately 60 percent of the total visitorship estimated during the Olympics (3.15 million visitor days including spectators, media, and athletes) would have occurred even if Chicago did not host the Olympics. As a result, our analysis identifies the new visitor days associated with the Olympics, for Cook County, as 1.26 million during the 16 days of the games.

Attendee Expenditures. We assume that each person attending the Olympics will spend, on average, \$256.50 per day, covering meals, accommodations, travel, and other purchases within Cook County. This does not, however, include event tickets or the purchase of official Olympic merchandise. Revenues from these are used by the IOC to pay for operating the games, and are thus accounted for in our analysis of the economic impact from games operations and infrastructure.

Athletes and officials staying in the Olympic Village are likely to incur significantly lower costs while at the games, as we assume the International Olympic Committee (IOC) expenses associated with operating the Olympic Village covers accommodation, meal, and transportation costs for village residents. However, it is likely that athletes and officials will spend some time outside of the village, so we’ve assume they spend, on average, 25 percent of the amount spent by other visitors. This comes to an average of \$64.13 per day.

Expenditure “Substitution” and “Crowding Out” Effects. Just as a significant portion of the visitors are assumed to substitute for people that would otherwise be in Chicago, a significant share of the expenditures that are made will substitute for spending that also would have otherwise occurred, either by regular summer visitors or residents who leave the city to avoid the Olympic crowds. We assume 55 percent of the estimated total expenditures would have occurred even without the Olympics. This is slightly less than the visitorship substitution to account for the likelihood that visitors attending for the Olympics will spend more, on average, than visitors in town for a regular vacation.

Economic Multiplier. To estimate the indirect economic impact of attendee expenditures at the games, we have applied a multiplier of 1.7, which equates to assuming that for every dollar of direct expenditure, there will be an additional \$0.70 of economic activity generated in the area. This is consistent with the Bureau of Economic Analysis (BEA) multiplier used in our analyses of the economic impact of the 2006 Ryder Cup, Super Bowl XL, and Detroit Tigers’

games, including the 2006 playoffs. For these events we used a 1.6 multiplier to estimate the impact on Metro Detroit. Given that Chicago is more populous and dense, we have selected a slightly higher multiplier to account for the additional opportunities for local re-spending of the initially injected dollars.

Visitorship Before and After the Games. In addition to visitors during the Olympic Games, Chicago, if awarded the 2016 games, can expect additional visitorship in the year before and after the games, as well as in the year of the games. Olympic committee members, athletes involved in trial events and training, and curious tourists will likely visit the city during 2015 and in 2016 prior to the games. Some additional tourism activity will also likely linger into 2017, though it is unlikely to carry on much beyond this. To estimate the impact from these additional visits we have assumed 5 percent of the benefit expected during the games will be generated in 2015 and 2017, with an additional 10 percent being generated in 2016 before and after the games.

TOTAL VISITOR IMPACT

If the average daily number of net new visitors attending as spectators (161,370) and media (19,350) each spent \$256.50 per day in Cook County during the 16 days of the Olympics, and each of the athletes and officials spent \$64.13, the total new direct expenditures would be \$758.1 million. However, since Chicago already has significant visitorship during the summer, we assume 55 percent of this spending would have occurred even without the games, bringing net new games related expenditures by visitors to \$341.1 million during the games. We estimate an additional \$68.2 million in net new economic impacts from visitors will be generated before and after the games, bringing the total to \$409.4 million. This is the direct economic impact from visitorship attributable to the games.

To estimate the total economic impact from games-related visitors we have to account for the economic activity stimulated by the direct new expenditures. To do so, we apply our economic multiplier of 1.7. This creates a total of \$695.9 million in net economic impacts (direct and indirect) attributable to Olympic Games' visitorship. The economic impact from visitorship during the actual games is estimated at \$580.0 million, with the additional \$115.9 million accruing before and after the games.

Please see Table 1, beginning on page 16, for a detailed look at our economic model and these above stated assumptions.

Chicago 2016: Operations and Infrastructure Impacts

An event as large as the Olympic Games requires significant planning, financing, infrastructure, and careful execution. This, of course, creates significant costs, which are paid for by a number of sources. Any expenses paid for by monies from outside of Cook County, and that rely on Cook County service providers and sources, are those that generate true economic impacts in the County. Expenditures paid for by local sources, or funds paid to businesses outside of the County, do not generate an economic impact for Cook County or Chicago.

To estimate the total expenditures related to the games that will generate net new economic impacts for Cook County, we first analyzed the Chicago 2016 budget, as presented in the Chicago 2016 Bid Book. This source shows a total budget of \$3.78 billion (2009 dollars) for the OCOG, and another \$1.05 billion in Non-OCOG expenditures for permanent infrastructure expenditures, including the Olympic Village (\$976.6 million) and some stadia (\$68.8 million). We performed our analysis of these expenditures on two levels, first assessing likely sources of revenues, and then focusing on where (geographically) the expended funds will initially flow.

OCOG Revenues. The Chicago 2016 Bid Book estimates OCOG revenues for the games will be \$3.78 billion, in 2009 dollars. This includes revenue from the IOC, ticket sales, sponsorships, and other sources, as outlined in Table 2. Each of these revenue categories will come from different sources, and only the non-local sources are counted as contributing to an economic impact, as it is assumed these sources would have stayed local with or without the games. Our overall estimate is that 74 percent of the total OCOG revenue, or \$2.8 billion, will come from non-local sources. A detailed breakdown of our estimated revenue sources, by revenue category, is shown in Table 2 on page 18, in the “Estimated ‘Local’ Share” column.

OCOG Expenditures. The \$2.8 billion of non-local OCOG revenues that will be spent to run the 2016 Olympic Games, if they are awarded to Chicago, will create an economic impact for Chicago and Cook County only if it is spent in the county. In reality, however, some of these dollars will not be spent in the county. For example, it is quite likely that vendors from around the world will provide up to half of the materials, labor, and other services, for stadia and venue construction. Other expenses, like advertising and catering, will have more of the total share, up to 90 percent in our estimates, spent within Chicago. Overall, we estimate that nearly \$2.6 billion, or 70 percent of total OCOG spending, will be within Cook County. A detailed breakdown of our expense allocation is shown in Table 2, in the “Estimated ‘Local’ Spend” column.

The next step of our OCOG expenditure analysis was to calculate how much of the \$2.6 billion in local spending is backed by non-local sources. Applying our

earlier finding that 74 percent of all OCOG revenue comes from non-local sources yields a local spending of non-local sources estimate of \$1.97 billion.

Non-OCOG Revenues and Expenditures. The OCOG does not have access to revenue sources to support permanent infrastructure associated with the games. This leaves the host responsible for any required infrastructure upgrades, new stadia, and housing for athletes and officials. Chicago 2016's bid book estimates these costs will total over \$1 billion, with most of the funds used for building an Olympic Village. The plan calls for most of this cost to be financed by private developers who would then be able to sell the units within the Olympic Village, after the games conclude, to pay off the debt and realize a return on their investment. There has, however, been some doubt that sufficient private funds will become available. There are also insurance and other costs that the city will face to host the games, and to account for these, and some degree of exposure on the Olympic Village, we assume a \$500 million cost.

Just as with the OCOG expenditures, not all Non-OCOG spending will go to local businesses. Given that the city is likely to have more say over these expenditures, we assume a greater portion, up to 75 percent, will be allocated to local goods and service providers. With this, and after the \$500 million allowance for cost exposures, Non-OCOG expenditures within Cook County are estimated to be \$289 million.

The plan also does not include an estimate of costs associated with transit, medical, telecom, or other such infrastructure that may be necessary to host the games. It is likely that some such costs will be necessary, though they may be incurred with or without the games, as investments in public transit are likely anyway, especially as demands increase in response to raising fuel and automotive transportation costs. Despite the fact that such spending is expected, the Olympics may result in some spending being rushed, and additional costs being incurred to meet tight deadlines. To account for this our analysis includes a 5 percent opportunity cost, bringing the direct economic impact of Non-OCOG spending to \$236.3 million.

**TOTAL ECONOMIC
IMPACT FROM
OPERATIONS AND
INFRASTRUCTURE**

The \$1.97 billion in local spending of non-local sources by the OCOG, plus the \$236.3 million of Non-OCOG spending impacts in Cook County, yields a total direct economic impact of \$2.2 billion. Just as with the tourism related spending, we assume each of these dollars will create an additional \$0.70 in indirect economic activity, yielding a total economic impact of nearly \$3.8 billion from the operating and infrastructure costs that Chicago and Cook County will realize if the city hosts the 2016 Olympic Games in a manner consistent with their bid.

Super Bowl Comparison

The Olympics are a much larger event than any one-day sporting or entertainment event regularly held in the United States. Along with Soccer's World Cup—another multi-venue event involving numerous countries, staged in multi-year intervals—it is the largest sporting event in the world.

However, it is useful to review the net economic benefits of large sporting events, noting where available independent estimates, as well as initial claims of boosters, and any available post-event corroborating economic or financial information.

Anderson Economic Group has completed a number of other impact assessments, which are often recognized afterwards as the most reliable and timely available. The basis for this methodology is stated in the book *Business Economics and Finance* written by Patrick L. Anderson.² Our analysis uses a consistent, conservative methodology that avoids double-counting of costs or benefits, properly accounts for the shifting and substitution of economic activity, and does not inflate the impact by using excessive multipliers.

Super Bowl XL. In February 2006, Detroit hosted Super Bowl XL. The event drew more than 70,000 fans to Detroit's Ford Field for a match-up of the Pittsburgh Steelers and the Seattle Seahawks. The organizing committee for the event claimed an expected economic impact of over \$300 million in advance of the event. Our firm prepared an independent estimate of the event's economic impact, pegging it at \$49.3 million in direct and indirect economic impacts from visitorship and municipal hosting costs.

To compare this Super Bowl impact with our Chicago 2016 estimate, consider that the economic impact attributable to Olympic visitorship over the 16 days of the games totals \$580 million.³ To reach this level requires approximately 12 consecutive Super Bowls, a reasonable proposition considering that each Super Bowl is more or less a two-day event—one day for the game, and another day of parties, demonstrations, and media frenzy—spread over a four- or five-day period.

By comparison, consider a separate economic impact analysis prepared for the Chicago 2016 organizing committee which estimates an expected \$7 billion in incremental visitor spending from the games. Even if we assume only half of this total, or \$3.5 billion, is realized during the actual games, that is still the

2. Patrick L. Anderson, *Business Economics and Finance*, CRC Press, 2004.

3. Our Super Bowl economic impact accounted only for visitor spending and hosting costs, and not the expenditures associated with operating the event, or building facilities, thus the apples-to-apples comparison is done only with the Olympic visitorship impact figure.

equivalent of some 70 Super Bowls at \$49.3 million each. Further, the \$7 billion is a spending estimate, and grows even larger once a multiplier is factored in, while our estimates include direct and indirect (multiplier) impacts.⁴

To validate our Super Bowl XL estimate, we turned to post-event data on sales and use tax collection in Wayne County (a very large county that encompasses both the City of Detroit and some suburban cities and townships), which provides some corroboration of one of these estimates. “Sales and use tax” would have been collected on retail sales of restaurant food and service; merchandise sales; and a large assortment of other goods (and some services) in the area. Thus, it would have presumably captured some, though not all, of the actual spending by attendees in the area. The data showed that sales and use tax collections in the county actually *decreased* slightly from the previous year. Although not directly confirming or disproving either estimate, it clearly indicates that the likely actual economic impact was much closer to the independent estimate, and probably lower than even that estimate.⁵

4. The cited report was authored by Dennis Tootelian, PhD and Sanjay Varshney, PhD (Tootelian & Associates) for the Chicago 2016 organizing committee. It is unclear from a review of their report how the \$7 billion in incremental visitor spending was determined, so we can not be sure it is directly comparable with our estimate of visitorship impact.

5. “Super Bowl's Impact in Michigan Scores Low,” Detroit Free Press, May 2, 2006.

About Anderson Economic Group, LLC

Anderson Economic Group, LLC offers research and consulting in economics, finance, market analysis, and public policy. Our work in these fields is based on our core values of professionalism, integrity, and expertise.

Since our founding in 1996, our work has helped clients including private firms, publicly traded companies, state & local governments, and non-profit organizations. Our experience includes research in markets throughout the continental United States, Alaska, Canada, Mexico, and the Caribbean.

Anderson Economic Group is one of the few professional service firms in the United States that follows a quality assurance program based on ISO 9000 principles. We carefully document our methodology and sources; insist on high standards of organization, writing, and graphics in our reports; and manage projects efficiently. This approach results in work that consistently withstands the scrutiny of business leaders, investors, attorneys, lenders, government officials, and others.

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- Governments, such as the states of Michigan, North Carolina, and Wisconsin; the cities of Detroit, MI, Cincinnati, OH, Norfolk, VA, and Fort Wayne, IN; counties such as Oakland County, Michigan, and Collier County, Florida; and authorities such as the Detroit-Wayne County Port Authority.
- Corporations such as GM, Ford, Delphi, Honda, Metaldyne, Taubman Centers, The Detroit Lions, PG&E Generating; SBC, Gambrinus, Labatt USA, and InBev USA; automobile dealers and dealership groups representing Toyota, Honda, Chrysler, Mercedes-Benz, and other brands.
- Nonprofit organizations, such as Michigan State University, Wayne State University, Van Andel Institute, the Michigan Manufacturers Association, International Mass Retailers Association, American Automobile Manufacturers Association, Automation Alley, and the Michigan Chamber of Commerce.

For additional information, see the AEG web site at: www.AndersonEconomic-Group.com.

ABOUT THE AUTHORS

Scott D. Watkins. Mr. Watkins is a Senior Consultant with Anderson Economic Group, LLC, with expertise in economic, industry, and market analyses, as well as public policy. He manages the firm's market and industry analysis practice area, working with public and private sector clients to deepen understandings of their market and place in the economy, and to develop strategies to strengthen

their positions. In addition to his client focused work, Mr. Watkins is the firm's Finance and IT Director.

Among the clients for whom he has worked are the Project Management Institute, Michigan State University, Wayne State University, Michigan Chamber of Commerce, Michigan Retailers Association, Collier County, Florida; Oakland County, MI; and the West Virginia High Technology Consortium Foundation. Recent reports by Mr. Watkins include: "Economic Impacts from 2008 Detroit Tigers' Game Attendance," "Oakland County's Healthcare and Life Science Industry" and "Benchmarking for Success: Education Performance among the American States." He has also provided testimony to the Michigan House of Representatives on matters of education finance, and is the editor of the annual *The State Economic Handbook*, as published by Palgrave Macmillan in 2008, 2009, and forthcoming for 2010.

Prior to joining Anderson Economic Group in 2001, Mr. Watkins was an analyst in the automotive market and planning group at J.D. Power and Associates, and a marketing assistant with Foster, Swift, Collins, and Smith P.C.

Mr. Watkins holds an M.B.A. from the Eli Broad College of Business at Michigan State University. He also has a B.A. in marketing from Eli Broad College of Business and a B.A. in international relations from the James Madison College, both at Michigan State University.

Patrick L. Anderson. Mr. Anderson founded Anderson Economic Group in 1996, and serves as a Principal and Chief Executive Officer in the company.

He is a recognized authority on business valuation and commercial damages, and has provided expert testimony and consulting advice to organizations such as General Motors, Ford, DaimlerChrysler, Honda, Kmart, SBC and Labatt USA; the states of North Carolina, Michigan, Ohio, and Wisconsin; the International Mass Retailers Association, American Automobile Association, Michigan Manufacturers Association, and University of Michigan; and franchisees of Anheuser-Busch, Molson, Coors, Miller, Harley-Davidson, Mercedes-Benz, Suzuki, and Avis products.

Mr. Anderson has written over 100 published works, including the book *Business Economics and Finance* and the chapter on business valuation in the book *Litigation Economics*. He is also the executive editor of three editions of the *State Economic Handbook*, and his 2004 article "Pocketbook Issues and the Presidency" won the award for the best business economics paper from the National Association of Business Economics. Anderson's views on the economy are often cited by national news media including *The Wall Street Journal*, *New York Times*, *National Public Radio*, and *Fox Business News*.

Anderson is a graduate of the University of Michigan, where he earned a Master of Public Policy degree and a Bachelor of Arts degree in political science. He is a member of the National Association for Business Economics and the National Association of Forensic Economists. The Michigan Chamber of Commerce awarded Mr. Anderson its 2006 *Leadership Michigan Distinguished Alumni* award for his civic and professional accomplishments.

**OTHER AEG
ECONOMIC IMPACT
STUDIES FOR SPORTS
EVENTS**

Anderson Economic Group has provided independent analyses of numerous large sporting events, including the below, which are available as white papers on our web site, www.AndersonEconomicGroup.com.

- “Net Economic Impact of Detroit Tigers’ Opening Day and Regular Season Attendance,” AEG Working Paper 2008-03, March 2008.
- “Economic Impact of Big Ten Football Games in Michigan,” AEG for Michigan’s University Research Corridor, October 2007.
- “Economic Impact: Attendance for Cubs Playoff Games,” AEG Working Paper 2007-10, October 2007.
- “Economic Impact of Big Ten Football Games in Michigan,” AEG for Michigan’s University Research Corridor, October 2007.
- “Economic Impacts from 2006 Detroit Tigers’ Game Attendance,” AEG Working Paper 2006-09 #2, October 2006.
- “Likely Economic Impact to Ireland from the 2006 Ryder Cup,” AEG Working Paper 2006-09, June 2006.
- “Likely Economic Impact of Super Bowl XL,” AEG Working Paper 2006-10, January 2006.

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Table 1. 2016 Chicago Olympics: Net Economic Impact of Visitors to Chicago and Cook County

1) Olympic Visitor Analysis

Spectators and other Visitors		
Avg. Daily Number of Visitors	179,300	
Share not from Chicago or Cook County	90%	
Daily Attendance From Non-Chicago Visitors	161,370	
Event Days	16	
Subtotal: Visitor Days by Spectators and Others During Olympics		2,581,920
Media		
Avg. Daily Number of Visiting Media	19,350	
Event Days	16	
Subtotal: Visitor Day by Meddia During Olympics		309,600
Olympic Officials and Athletes		
Avg. Daily Number of Athletes, Officials, and Visiting Staff	16,000	
Event Days	16	
Subtotal: Staff and Athlete Visitor Day		256,000
Total: Visitor Days		3,147,520
% of visitorship expected w/o olympics	60%	
Net New Visitor Days		1,259,008

2) Visitor Spending Analysis

Spectator and Media Daily Expenditures		
Food and Drink	\$ 60.00	
Local travel	\$ 25.00	
Accommodations	\$ 150.00	
Event Tickets and Other Spending on Official Olympic Merchandise	*	
Other Spending	\$ 50.00	
Average Expenditures Per Visitor Day	\$	285.00
Share spent inside of Chicago and Cook County	90%	
Average Daily Spending by Spectators, Media, and other Visitors	\$	256.50
Athlete and Official Daily Expenditures**		
Share of Avg Daily Visitor Expenditure Incurred by Athletes / Officials	25%	
Average Daily Athlete/Official Spending in Chicago MSA	\$	64.13
Subtotal: Total Expenditures by Spectators and Media	\$	741,674,880
Subtotal: Total Expenditures by Athletes and Officials	\$	16,416,000
Total Direct Expenditures by Visitors		758,090,880
% of expenditures expected w/o olympics	55%	
Net New Visitor Expenditures (during games)		341,140,896

notes: *Revenues from ticket sales and official olympic merchandise are accounted for as revenues used to pay expenses related to conducting the games, and are thus excluded here so as to avoid diuble counting.

** Expenses associated with operating the Olympic Village, which are included in our analysis of expenses related to conducting the games, are assumed to provide for athlete and official accomadations, meals, and transportation

3) Total Net New Expenditures by Olympic Visitors (during games)		\$	341,140,896
Share of impact experienced in 2015, as increase in regular visitorship	5%	\$	17,057,045
Share of impact experienced in 2017, as increase in regular visitorship	5%	\$	17,057,045
Share of impact experienced in 2016, as increase before and after games	10%	\$	34,114,090
Total Net New Expenditures by Visitors due to Olympics		\$	409,369,075
	<i>Multiplier</i>		<i>1.70</i>
Direct and Indirect Economic Impact from Visitors due to Olympics		\$	695,927,428

Table 2. 2016 Chicago Olympics: Net Economic Impact from Operating and Infrastructure Expenditures

	<u>Amount</u>	<u>Estimated "Local" Share</u>	<u>Non-Local Revenue Sources</u>	<u>Local Revenue Sources</u>	
1) OCOG Sources of Revenues					
IOC Contribution	\$ 675,000,000	0%	\$ 675,000,000	\$ -	
TOP Sponsorship	\$ 335,000,000	0%	\$ 335,000,000	\$ -	
Local Sponsorships	\$ 773,800,000	100%	\$ -	\$ 773,800,000	
Official Suppliers	\$ 474,200,000	10%	\$ 426,780,000	\$ 47,420,000	
Ticket Sales	\$ 705,000,000	10%	\$ 634,500,000	\$ 70,500,000	
Licensing Merchandise	\$ 150,000,000	15%	\$ 127,500,000	\$ 22,500,000	
Licensing - Coin Program	\$ 17,000,000	15%	\$ 14,450,000	\$ 2,550,000	
Licensing - Philately (stamps)	\$ 4,000,000	15%	\$ 3,400,000	\$ 600,000	
Donations	\$ 245,700,000	10%	\$ 221,130,000	\$ 24,570,000	
Disposal of Assets	\$ 11,800,000	70%	\$ 3,540,000	\$ 8,260,000	
U.S. Gov. Subsidies	\$ 68,700,000	2%	\$ 67,326,000	\$ 1,374,000	
Other	\$ 320,400,000	10%	\$ 288,360,000	\$ 32,040,000	
Total OCOG Revenues	\$ 3,780,600,000		\$ 2,796,986,000	\$ 983,614,000	Non-Local Share of OCOG Revenue 74%
2) OCOG Expenditures					
	<u>Amount</u>	<u>Estimated "Local" Spend</u>	<u>Local Expenditures</u>	<u>Non-Local Expenditures</u>	<u>Local Expend of Non-Local Sources</u>
Facilities	\$ 162,200,000	50%	\$ 81,100,000	\$ 81,100,000	\$ 59,999,885
Operations - Sport venues	\$ 777,500,000	75%	\$ 583,125,000	\$ 194,375,000	\$ 431,411,009
Operations - Village	\$ 217,500,000	75%	\$ 163,125,000	\$ 54,375,000	\$ 120,684,109
IBC/MPC (int. broadcast and main press centers)	\$ 44,700,000	50%	\$ 22,350,000	\$ 22,350,000	\$ 16,535,110
Other Facilities	\$ 24,000,000	75%	\$ 18,000,000	\$ 6,000,000	\$ 13,316,867
Workforce	\$ 509,100,000	75%	\$ 381,825,000	\$ 127,275,000	\$ 282,484,045
Information Systems	\$ 341,400,000	50%	\$ 170,700,000	\$ 170,700,000	\$ 126,288,290
Telecom and Technology	\$ 87,800,000	50%	\$ 43,900,000	\$ 43,900,000	\$ 32,478,359
Internet	\$ 34,000,000	75%	\$ 25,500,000	\$ 8,500,000	\$ 18,865,562
Ceremonies and Culture	\$ 122,500,000	75%	\$ 91,875,000	\$ 30,625,000	\$ 67,971,509
Medical services	\$ 21,000,000	90%	\$ 18,900,000	\$ 2,100,000	\$ 13,982,711
Catering	\$ 62,400,000	90%	\$ 56,160,000	\$ 6,240,000	\$ 41,548,626
Transport	\$ 225,600,000	90%	\$ 203,040,000	\$ 22,560,000	\$ 150,214,262
Security	\$ 41,100,000	90%	\$ 36,990,000	\$ 4,110,000	\$ 27,366,162
Paralympics	\$ 187,700,000	75%	\$ 140,775,000	\$ 46,925,000	\$ 104,148,999
Advertising and Promo	\$ 75,400,000	90%	\$ 67,860,000	\$ 7,540,000	\$ 50,204,589
Administrative	\$ 272,600,000	50%	\$ 136,300,000	\$ 136,300,000	\$ 100,838,277
Pre-Olympic Events and Coordination	\$ 34,400,000	50%	\$ 17,200,000	\$ 17,200,000	\$ 12,725,006
Other	\$ 89,000,000	75%	\$ 66,750,000	\$ 22,250,000	\$ 49,383,382
Contingency	\$ 450,700,000	75%	\$ 338,025,000	\$ 112,675,000	\$ 250,079,668
Total OCOG Expenditures	\$ 3,780,600,000		\$ 2,663,500,000	\$ 1,117,100,000	\$ 1,970,526,427

<i>Non-OCOG Expenditures</i>	<u>Amount</u>	<u>Estimated "Local" Spend</u>	<u>Local Expenditures</u>
City of Chicago			
Olympic Village	\$ 976,600,000		
Other Venues (perm)	\$ 68,800,000		
Environmental Mngt Systems	\$ 6,400,000		
Transit, Accomadations, Medical, Telecom, etc.	zero, part of "planned natural growth"		
Total Non-OCOG Expenditures	\$ 1,051,800,000	75%	\$ 788,850,000
Allowance for costs for insurance fees, interest, unfinanced projects*			\$ (500,000,000)
Allowance for opportunity costs (foregone value from other uses of funds)		5%	\$ (52,590,000)
Total Non-OCOG Expenditures in area, less allowances			\$ 236,260,000
3) TOTAL NET NEW EXPENDITURES, OCOG + Non-OCOG			\$ 2,206,786,427
multiplier		1.70	
TOTAL ECON IMPACT FROM GAME INFRASTRUCTURE AND OPERATIONS			\$ 3,751,536,926

**The Chicago 2016 Bid Books, and other sources, indicate that Chicago will provide a gaurantee to cover up to \$500 million in cost overruns. Our use of this figure here does not indicate we assume overruns will reach this level. However, the City may not be able to attract full financing by private lenders for the Olympic Village, and will have to pay fees associated with obtaining required insurance policies, and other costs associated with hosting the games. Such costs can not be estimate at this time, though we are comfortable using this as a reasonable estimate given it is the amount the City is prepared to gaurantee.*