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Economic Impact of the 2014 Special Olympics Summer Games on the BC Economy

Tsur Somerville* & Blake Taylor**

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* Real Estate Foundation Professorship of Real Estate Finance, Sauder School of Business, University of British Columbia, 2053 Main Mall, Vancouver, BC, V6T 1Z2, Canada.
Tel: (604) 822-8343, Fax: (604) 822-8477.
Email: tsur.somerville@sauder.ubc.ca

** BComm Student, Sauder School of Business, University of British Columbia, 2053 Main Mall, Vancouver, BC, V6T 1Z2, Canada

THE UNIVERSITY OF BRITISH COLUMBIA

Executive Summary

The Special Olympics offers an exceptional opportunity for persons with intellectual disabilities to come together through sport. The program transforms the lives of all those who participate, assist, or watch the events, changing attitudes about disabilities, and in the process to make all of us and our communities stronger. By bringing people together, Special Olympics teaches us to recognize our similarities rather than focus on our differences.

This past July, UBC and Vancouver hosted the 2014 Special Olympics Canada Summer Games at UBC's Point Grey campus. Over 2000 participants and coaches were joined by an estimated 2000 family members, friends, and other spectators in competition as well as marvel in and celebrate the achievements of the participants.

Hosting a national event may also bring an economic benefit to the host community and province. This report summarizes the analysis of the net economic impact of the July 2014 Games on the Province of British Columbia. Using provincial input-output tables, survey and registration information for participants and attendees, and Tourism Vancouver surveys, the Games is estimated to have provided a boost of $1,027,000 to the provincial GDP, $139,000 for the provincial treasury, and led to an increase in employment for 2014 of the equivalent of 26.5 full-time jobs. While not fully disaggregated, the vast share of the benefit occurs in Vancouver and the Lower Mainland rather than being spread out through the province.

Methodology

This study estimates the net effect of hosting the Special Olympics Canada Summer Games on the BC economy using the standard input-output multiplier approach. [1] Net non-BC based spending on the Games is allocated to different industry and final demand categories, where each of these sectors has a different aggregate impact on the BC economy. These impacts reflect the demands of these industries for BC sourced inputs and the incomes of their employees and proprietors spent locally. It also captures the chain of further expenditures as the Games related spending cascades through the economy. The calculation of these expenditures reflects the on actual expenditures by the games organizing committee for the participants and estimates of local expenditures by family and friends who came to Vancouver from outside of BC for the Games. The latter's expenditures are estimated using the findings in Tourism Vancouver's *2011 Overnight Visitor to Metro Vancouver-Visitor Profile* for.[2] A more detailed description of the methodology is presented in Appendix A.

The first major contribution to the BC economy from hosting the Special Olympics comes from expenditures on athletes for the event. To estimate the net effect it is important to separate out spending by BC residents and committee expenditures financed by donations from BC individuals, companies, institutions, and governments. The operating assumptions are first that all expenditures for and by BC residents and contributors would have occurred here anyway in the absence of the Games; second, that none of the expenditures for and by non-BC persons and institutions would have occurred in BC this year had the Games not been hosted in BC. This is a strong assumption, but we lack the information to determine what would have been the alternative spending patterns in the absence of the Games.

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[1] BC Stats provides a brief description of their input-output model as well as the detailed guide to the application of the model to solving economic impact questions with the appropriate multiplier factors: http://www.bcstats.gov.bc.ca/StatisticsBySubject/Economy/BCInputOutputModel.aspx

[2] http://www.tourismvancouver.com/includes/content/images/media/docs/expenditure_by_industry_sector.pdf

Special Olympics Canada revenue for the Games is presented in Table 1. Of this, only revenues from non-BC sources make a net contribution to the BC economy, as we assume that locally sourced revenues would have been spent in BC in the absence of the Special Olympics. For a similar reason, we reduce the amount of non-BC revenue by the share going to pay for BC athletes: in the absence of the Games, the families of these athletes would have supported them with local expenditures. We use the percentage of athletes from outside BC for this allocation.[3]

Table 1 – Organizing Committee Revenue by Source

BC		Non-BC	
Special Olympics Canada	$100,000	Special Olympics Canada	$657,000
Registration	$30,000	Registration	$100,000
Provincial Government	$300,000	Out of Province Donations	$80,000
City of Vancouver Grant	$35,000		
Local Donations	$623,000		
TOTAL	**$1,088,000**	**TOTAL**	**$837,000**

From Table 1, 43 percent of Games Organizing Committee revenue comes from non-BC sources. BC athletes make up 22 percent of the participants, so the net percentage of Organizing Committee expenditures spent in BC that can be said to be entirely unique to the Games and is not replacing monies that otherwise would have been spent here is 34 percent. We apply this factor to committee expenditures to derive their net contributions to the BC economy. The exception to this is payments for accommodation, for which we also include the expenditures for BC athletes. BC athletes would otherwise be at home; we assume that monthly rent or owner costs are not reduced by their time away, so that the accommodation expenditure is a net increase.[4] In Table 2 we show total committee expenditures by category that will be included in the calculation of the net economic impact.

[3] There is one exception and that is expenditures for accommodation at UBC for BC based participants and coaches. We assume that these are additional Games triggered expenditures because their own costs of home accommodation continues to be spent and is not replaced by Games expenditures.

[4] In comparison, meal expenditures for BC athletes do substitute for spending by them or their families that would have made anyway in BC had they not been in residence at UBC for the event.

The second major contribution to the BC economy from hosting the Special Olympics are expenditures by visitors who come to BC for the Special Olympics. The assumption, which is consistent with survey work on attendees, is that only family and friends of participating athletes travel to BC because of the Games. As a result we need only estimate their expenditures. From the organizing committee as part of the registration process, we have a database of family and friends who attended the Games. As part of their registration process they indicate how many attendees, home province, mode of transportation, expected length of stay, and whether they intend to stay with family, friends, or in rented accommodations. Table 3 provides summary statistics on these attendees. We combine the data presented in Table 3 with Tourism Vancouver numbers on average visitor trip expenditures, persons per trip, and trip length, which can be found in the appendix, to estimate expenditure by type of activity by persons coming to BC for the Special Olympics. The aggregate expenditures by visiting friends and family (F&F) from outside British Columbia are shown in Table 4.

Table 2 – Organizing Committee Expenditures

Finance & Administration	$168,951
Ceremonies	$143,130
Marketing	$56,841
Media	$4,245
Volunteer Committee	$62,920
Operations	$971,317
Accommodations	$400,951
Food & Beverage	$363,075
Security	$3,393
Transportation	$66,650
Logistics	$1,975
Overlay	$46,028
Miscellaneous	$89,245
Sport Operations	$169,978
Medical Services	$46,681
Technology	$8,592
Clothing	$60,244
Total Expenditures	**$1,632,655**

Table 3 - Summary Statistics: Games Attendees

Approximate Attendee Makeup	
BC	1010
Non-BC	990
Total	**2000**
Traveler Makeup	
People per Party	3
Number of Nights Stayed in BC	4
Modes of Transportation for Non-BC Residents	
Own Car	418
Rental Car	48
Transit/Taxi	316
Unpaid Transportation	208
Accommodation Choice for Non-BC Residents	
UBC Residents	160
Staying with Relatives	113
RV	14
Hotel or Other Paid Accommodation	703

Table 4 - Estimated Expenditures by Non-BC Games Attendees

	Approximate Expenditure
UBC Accommodation	$19,000
Other Paid Accommodation	$179,000
Food & Beverage, Places	$78,000
Clothing	$23,000
Recreation and Entertainment	$31,000
Food & Beverage, Stores	$19,000
Vehicle Operations	$5,000
Vehicle Rentals	$2,000
Local Transportation	$8,000
Other	$13,000
TOTAL	$377,000

Source: *2011 Overnight Visitor to Metro Vancouver- Visitor Profile,* Tourism Vancouver

Each of the expenditure categories has economic multiplier factors that are estimated by BC Stats and published in their report *2004 British Columbia Provincial Economic Multipliers*.[5] These multipliers convert the directed expenditures into total spending, gross domestic product (GDP), and municipal and provincial tax revenues. As described in the appendix, a number of adjustments are made to the expenditures to ensure the net multiplier effects are calculated, for direct, indirect, and induced effects of the Games specific spending.

Results

The net economic impact on the BC economy from hosting the 2014 Special Olympics Canada Summer Games at UBC – Pt. Grey is calculated by multiplying total net expenditure made by the Games Organizing Committee and expenditures from visiting friends and family by the appropriate set of multiplier factors as laid out in the appendix. Aggregating across expenditure categories the total estimated net impact of the Games on the BC economy is a follows: an increase in aggregate economic expenditures of $2,047,000, in GDP of $1,027,000, and in provincial tax revenues of $139,000. The increase in GDP is equivalent to an increase in employment for the year of 26.5 full time jobs. These findings are summarized below in Table 5.

[5] http://www.bcstats.gov.bc.ca/StatisticsBySubject/Economy/BCInputOutputModel.aspx

Table 5 – Net Economic Impact of 2014 Special Olympics Canada Summer Games on BC

Games Expenditures	*Output Value*	*GDP Value*	*Provincial Tax Value*	*Municipal Tax Value*
Financial & Legal Services	$1,000	$1,000	$40	$10
Administrative Services	$94,000	$53,000	$3,540	$750
Arts, Entertainment & Recreation	$428,000	$207,000	$14,660	$3,260
Accommodations	$592,000	$322,000	$28,870	$10,230
Food & Beverage Services	$183,000	$85,000	$7,090	$1,600
Advertising, Promotion & Marketing	$61,000	$15,000	$1,150	$250
Clothing	$16,000	$9,000	$620	$200
Transportation	$41,000	$16,000	$1,550	$220
Office Supplies	$17,000	$3,000	$200	$40
Games Expenditures Total	*$1,433,000*	*$711,000*	*$57,720*	*$16,560*
F&F Expected Expenditures				
UBC Accommodations	$31,000	$17,000	$1,520	$540
Other Accommodations	$290,000	$158,000	$14,140	$5,010
Food & Beverage from Places	$125,000	$58,000	$4,840	$1,090
Clothing	$25,000	$22,000	$1,530	$490
Recreation and Entertainment	$65,000	$28,000	$1,960	$440
Food & Beverage from Stores	$21,000	$14,000	$860	$110
Vehicle Operations	$13,000	$3,000	$380	$60
Vehicle Rentals	$5,000	$1,000	$160	$20
Local Transportation	$16,000	$6,000	$650	$90
Other	$25,000	$12,000	$840	$190
F&F Total	*$616,000*	*$319,000*	*$26,880*	*$8,040*
Tax Add Back			*$54,800*	*$6,040*
Total	**$2,049,000**	**$1,030,000**	**$139,400**	**$30,640**

These figures show a clear positive economic impact on BC from hosing the Games. And while the contribution to the treasury from the Games is less than the $300,000 in provincial revenues contributed to the Games, this is surpassed by the nearly $1 million increase in Provincial GDP resulting from the Games, over three times the government expenditures and hard top match as a return on government funding. One final caveat though, this analysis does not take into account the cost to the BC economy of the taxation needed to fund the $300,000 contribution to the event from the provincial treasury. This cost through will be no more than a fraction of the $300,00 raised.[6]

[6] The range of economic losses from income taxation range from 2.5 to 30 percent of the revenue raised through taxation. See Feldstein, M. 1999. Tax Avoidance and the Deadweight Loss of the Income Tax. *Review of Economics and Statistics* . 81 (4). (1999).

Appendix A – Detailed Methodology

Games Expenditures

As described in the body of this report, the net economic impact of the Games is a function of expenditures by the Games Organizing Committee, primarily on athletes, and the expenditures by friends and family (F&F) of the athletes who visit BC for the games. Games Organizing Committee expenditures are as reported. The number of visitors is self-reported as part of the registration process. To estimate the dollars spent by these F&F visitors we use the findings of Tourism Vancouver's *2011 Overnight Visitor to Metro Vancouver-Visitor Profile* report and the findings from the 2014 Special Olympic Games Friends and Family Survey. The sections below are the key classifications for spending that were extrapolated using the findings of these two sources. The expenditures by category and trip details from the Tourism Vancouver survey are presented in Table A1

Accommodations

We calculate spending on accommodations using the total number of individuals who paid for housing in British Columbia in the form of either UBC units or hotel rooms. The number of non-BC spectators who opted for either of these paid accommodation options is as reported in Games' F&F survey.

UBC unit spending is the average nightly rate multiplied by the average number of nights individuals spent in British Columbia to attend the Games and the number of spectators who opted to use this accommodation option.

Table A1: Vancouver Tourist Expenditures

	Approximate Spending per Day	*Number of Persons*	*Approximate Expenditure*
UBC Accommodation	$30.10	160	$19,000
Other Accommodations	$63.64	703	$179,000
Food & Beverage, Places	$19.71	990	$78,000
Clothing	$5.84	990	$23,000
Recreation & Entertainment	$7.86	990	$31,000
Food & Beverage, Stores	$4.80	990	$19,000
Vehicle Operations	$8.15	155	$5,000
Vehicle Rentals	$30.23	16	$2,000
Local Transportation	$2.12	990	$8,000
Other	$3.38	990	$13,000
TOTAL			$377,000

Hotel room spending is calculated using 2011 Tourism Vancouver report total trip spending on accommodations and dividing this figure by average party size and then by average number of days per trip from that report. This estimated per trip per day expenditure on hotel accommodations is then reduced by the front-end tax rate given by the *2004 British Columbia Provincial Economic Multipliers* report and then inflated from 2004 to the present using the Bank of Canada inflation calculator. Once the daily spending value was found, the figure was multiplied by the average number of days F&F stayed in a hotel room and the number of F&F who opted for this accommodation method.

Vehicle Operations

Average spending on vehicle operations has been confined to fuel costs as we assume that all vehicle maintenance by owners occur in their home province. In calculating the vehicle operations expenditure for F&F, the 2011 Tourism Vancouver report was once again used to estimate average expenditure per day by a visitor. All individuals who have reported either "own car" or "rental car" operations as a means of transportation are included in the spending calculation of this category.

The average daily expenditure on fuel was divided by the average fuel price in 2011 in order to estimate the average amount of fuel individuals purchased. This average amount was then multiplied by 2014's average fuel price in order to find average daily spending on fuel by a visitor in 2014. This figure was then reduced by the applicable BC taxes.

Other Spending

The remaining categories for spending by F&F are food and beverage in restaurants, food and beverage in stores, clothing, recreation, vehicle rentals, local transportation and miscellaneous spending. All of these categories were part of the 2011 Tourism Vancouver report and follow the same concept of dividing average total spending in that category per trip by average party size and then again by average number of days per trip. These daily estimates are reduced by the front-end tax rate as per the recommendations in BC's 2004 *British Columbia Economic Multipliers* report and then inflated from 2004 to the present using the Bank of Canada inflation calculator.

The only category that was not multiplied by the total number of F&F who attended the games is the vehicle rental group. This group's average rate is only applied to those who have designated their mode of transportation as "rental car" under the assumption that all members of the party share the vehicle.

Multipliers

We use the multiplier values provided from the BC Provincial input – output model as reported in the *2004 British Columbia Provincial Economic Multipliers* report to estimate the economic impact of the Games on the British Columbia economy. We pool the expenditures for the Games themselves by the Organizing Committee with the estimated spending by F&F and allocate them into their appropriate multiplier categories and apply reported multiplier values. Table A2 designates the components of the multiplier calculation for each class of economic activity.

Table A2: Multiplier Calculation Formulas

Output Value	Actual Expenditure x (1+Indirect+Safety Net)
GDP Value	Actual Expenditure x (Direct+Indirect+Safety Net)
Provincial Tax Value	Actual Expenditure x (Direct+Indirect+Induced)
Municipal Tax Value	Actual Expenditure x (Direct+Indirect+Induced)

All Games expenditures and expected spectator spending is categorized such as to match the appropriate available multiplier category from the provincial input-output tables. The expenditure categories and associated multipliers are presented below in Table A3.

Table A3: Expenditure and Multiplier Categories

Games Expenditures	
Financial & Legal Services	44. Professional, Scientific and Technical Services
Administrative Services	45. Administrative and Support Services
Arts, Entertainment & Recreation	49. Arts, Entertainment and Recreation
Accommodations	50. Accommodation Services
Food & Beverage Services	51. Food Services
Advertising, Promotion & Marketing	56. Travel, Entertainment, Advertising and Promotion
Clothing	**2004 Economic Multiplier report recommends breaking up retail purchases*
Retail	32. Retail Trade
Wholesale	31. Wholesale Trade
Transportation	37.Air, Rail, Water, Sightseeing Transportation
Office Supplies	55. Operating, office, etc. Supplies
F&F Spending	
UBC Accommodations	50. Accommodation Services
Other Paid Accommodations	50. Accommodation Services
Food & Beverage from Restaurants	51. Food Services
Clothing	**2004 Economic Multiplier report recommends breaking up retail purchases*
Retail	32. Retail Trade
Wholesale	31. Wholesale Trade
Recreation and Entertainment	49. Arts, Entertainment and Recreation
Food & Beverage from Stores	**2004 Economic Multiplier report recommends breaking up retail purchases*
Retail	32. Retail Trade
Wholesale	31. Wholesale Trade
Production	11. Food Manufacturing
Vehicle Operations	57. Transportation Margins
Vehicle Rentals	57. Transportation Margins
Local Transportation (Public Transit, etc.)	37.Air, Rail, Water, Sightseeing Transportation
Miscellaneous	49. Arts, Entertainment and Recreation

Upon calculating each category's multiplied value they are all summed into the 4 categories of Output Value, GDP Value, Provincial Tax Value and Municipal Tax Value.

The final step is to add back the direct taxation that happens for both provincial tax and municipal tax values as these represent direct government revenue that stays within British Columbia. Only the categories of accommodation, food in places, food in restaurants, clothing, vehicle operation, vehicle rental and office supplies have direct tax revenues that stay in British Columbia. Direct municipal tax is only applicable in accommodation spending. The add-in's are shown in Table A4

Table A4: Post Multiplier Tax Additions

	Provincial	Municipal
Games Expenditures		
Accommodations	$13,300	$1,800
Food & Beverage Services	$100	
Clothing	$1,800	
Transportation	$1,900	
Office Supplies	$1,100	
F&F Expenditures		
UBC Accommodations	$1,500	$200
Other Accommodations	$13,500	$1,800
Food & Beverage from Places	$100	
Clothing	$3,600	
Food & Beverage from Stores	$1,000	
Vehicle Operations	$500	
Vehicle Rentals	$100	
Total	$38,500	$3,800