Canadian Sport Tourism Alliance



Alliance canadienne du tourisme sportif

2008 Arctic Winter Games

Economic Impact Assessment

September 2008

The following analysis provides an estimate of the economic impact of the 2008 Arctic Winter Games held in Yellowknife, Northwest Territories from March 9 to 15, 2008, as generated by the Sport Tourism Economic Assessment Model Professional version.

Economic Impact Assessment Funding Partners

This report was completed with the financial assistance of the following partners:

Heritage Canada (Sport Canada)

City of Yellowknife

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1.0 Background

The history of the Arctic Winter Games (AWG) begins in 1967, on the occasion of the Canada Winter Games in Quebec City. Stuart Hodgson and James Smith, then Commissioners of the Northwest Territories and Yukon, looked on while athletes from their jurisdictions were decisively bested in competition. These men realized that with a smaller pool of athletes and inadequate facilities and training, northern athletes couldn't effectively compete with their southern counterparts¹.

The first Games, held in Yellowknife in 1970, were attended by 500 athletes, participants and coaches. Originally the three participating regions were the Northwest Territories, Yukon and Alaska. In the years that have followed, the Games have grown dramatically. Since the Games were first created, participating regions in the Games have grown from Alaska, the Northwest Territories and Yukon to include Northern Alberta, Northern Quebec (Nunavik), Nunavut, the Russian province of Yamal, Greenland and the Sami people of Norway and Finland.

With the continuing support of governments, host communities, corporate sponsorships and thousands of individual volunteers and supporters, the Games continue to shine as an outstanding example of international amateur athletic competition, community pride and cultural exchange. From its modest beginnings, the Games have evolved and grown to the point where nearly 2,000 athletes, coaches, mission staff, officials and cultural performers participated in the 2008 Arctic Winter Games in Yellowknife, Northwest Territories.

In addition to the excellent competition at the games, the hosting of the 2008 Arctic Winter Games resulted in a considerable boost in economic activity for the host community as a result of the expenditures of the spectators and the event organizers, which is the subject of this report. The next section of the paper describes visitor spending, including details of the intercept survey methodology and the results collected. Section 3 provides the detail of three other expenditures that contributed to the economic impact of the Games, while Section 4 presents the STEAM results from the combined expenditures of the visitors, athletes, and the organizing committee's operational expenditures. Section 5 concludes the document; with a detailed summary of the survey responses contained within Appendix 1. Additional appendices include additional information regarding the economic impact model, a glossary and a copy of the survey.²

¹Source: Arctic Winter Games 2008 website (<u>www.awg2008.org/games/default.asp</u>)

²The Canadian Sport Tourism Alliance's (CSTA's) **Sport Tourism Economic Assessment Model**, Professional version (STEAM PRO) was used to generate the economic impact estimates detailed in this report. STEAM PRO, which was developed in 2006, is a model that has been designed to incorporate the results of primary data collected from event visitors and the budget / capital expenditures of event organizers and others to prepare economic impact assessments. The model is based on the Canadian Tourism Research Institute's (CTRI - a branch of The Conference Board of Canada) TEAM model, which is the most widely used tourism economic impact model in Canada. The results of STEAM PRO are fully consistent with the CSTA's STEAM model. A more detailed description of STEAM PRO is contained within Appendix 1.

2.0 Methodology / Survey Results

Information regarding the composition and spending of spectators and participants at the 2008 Arctic Winter Games was collected through the administration of a face to face intercept survey that was given on all but the first and last days of the event. The survey captured essential information to determine the composition of spectators attending the event and the expenditures of out of town visitors to Yellowknife. The survey was conducted using Palm PDAs running Techneos Entryware software³. A copy of the survey instrument used can be found in Appendix 4.⁴

Survey Results

A total of 272 visitor parties were approached over the seven days of the event, with 271 parties agreeing to participate (a rejection rate of 0.4%). Of this group, 2 parties had been previously surveyed (0.7%), yielding a total of 269 valid surveys, representing 556 spectators and participants.





The estimated overall attendance at the AWG was calculated as follows. Ticket sales information showed that there were a total of 552 super passes (full event passes) sold; with an additional 387 oneday passes sold. In addition, spectators were required to purchase tickets to medal events and the opening / closing ceremonies (see Table 2.1). The results of the survey were used to determine the

⁴The survey and methodology were prepared in consultation with the "Guidelines for Measuring Tourism Economic Impact At Gated Festivals and Events" as a reference; available at:

³For more information see <u>www.techneos.com</u>.

http://www.tourism.gov.on.ca/english/tourdiv/research/resources.htm

origin of the super pass ticket holders. The number of medal / ceremonies tickets purchased by super pass holders was also calculated from the survey. Similarly, the origin of spectators using day sport passes was determined from the survey, with consideration given to the fact that many day pass users purchased multiple tickets. In total, it is estimated that a total of 1,108 spectators attended the Arctic Winter Games, of which 800 were from outside of the City of Yellowknife.⁵

	Total
Opening Ceremonies	1,100
Closing Ceremonies	1,100
Super Passes	552
Day Sport Passes	387
Soccer Bronze	150
Soccer Gold	462
Basketball Bronze	76
Basketball Gold	140
Curling Bronze	57
Curling Gold	104
Volleyball Bronze	106
Volleybali Gold	177
Hockey Bronze	382
Hockey Gold	726

Table 2.1 AWG Ticket Sales⁶

A breakdown of participant origins by role is detailed in Table 2.2; while Table 2.3 shows basic visitor characteristics, also broken down by visitor origin.

 ⁵ With the survey responses representing 336 out of town spectators from a population of 800 out of town spectators, the confidence interval is +/- 4.1%, 19 times out of 20 for statistics covering the full sample of spectators (e.g. the totals).
 ⁶ Source: AWG Host Society

			Coaches /		Mission	Total
l.	Athletes	Culture	Managers	Chaperones	Staff	Contingent
Alaska	278	4	46	4	14	346
N. Alberta	172	4	33	1	13	223
Yukon	249	7	46	6	14	322
Nunavut	217	7	32	2	14	272
NWT	276	8	47	2	14	347
Greenland	89	6	16	1	7	119
Sami	32	1	5	0	4	42
Yamal	61	4	13	0	6	84
Nunavik	37	7	9	2	11	66
Total	1,411	48	247	18	97	1,821

Table 2.2 Participant Origin by Role

Table 2.3 Spectator Trip Characteristics

	Sample Size (n=)	Est. # of Spectators	Avg. Party Size	Days Attended	Nights in Yellow- knife	Importance
Yellowknife	60	308	2.2	5.4	n/a	n/a
NWT / Nunavik	17	84	1.8	6.3	7.1	9.0
Yukon	34	89	1.7	6.9	6.9	9.8
Nunavut	22	83	2.1	6.6	6.7	10.0
Alberta	50	230	2.0	5.9	6.6	9.7
Other Canada	19	131	1.6	4.9	8.7	8.1
U.S.	45	148	1.6	7.0	7.3	9.9
International	22	35	1.5	7.7	8.9	9.9
Total*	209	800	1.8	6.3	7.2	9.6

*Refers to total out of town (weighted average)





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Information was also collected as to spectator expenditures in Yellowknife over the course of the event. The survey found that the average out of town visitor party spent more than \$1,670 over their stay (which averaged 7.2 nights), or just over \$130 per person per night.

Table 2.4 Visitor Spending

	Spending per	Spending per
Accommodation	\$620.08	\$48.48
Restaurant & Concession	\$410.50	\$32.10
Groceries	\$77.35	\$6.05
Recreation & Entertainment	\$103.12	\$8.06
Event Tickets	\$20.37	\$1.59
Event Merchandise	\$111.56	\$8.72
Retail Clothing/Shopping	\$50.41	\$3.94
Retail Other	\$132.85	\$10.39
Vehicle Rental	\$76.84	\$6.01
Personal Vehicle Exp.	\$57.68	\$4.51
Тахі	\$16.50	\$1.29
Total	\$1,677.26	\$131.14

able 2.5 Visitor Spending – all	VISITOR T	vpes d	v origin
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	NWT /				Other			
	Nunavik	Yukon	Nunavut	Alberta	Canada	U.S.	International	Overall Avg.
Accommodation	\$346.15	\$363.16	\$868.42	\$566.74	\$359.47	\$741.83	\$1,175.00	\$620.08
Restaurant / Bar / Concession	\$253.85	\$270.00	\$464.21	\$425.44	\$534.21	\$373.78	\$632.82	\$410.50
Grocery / Other F&B	\$46.15	\$65.87	\$210.53	\$61.90	\$123.95	\$52.32	\$27.06	\$77.35
Recreation & Entertainment	\$62.00	\$99.52	\$85.53	\$119.90	\$152.37	\$110.63	\$38.24	\$103.12
AWG Tickets	\$13.08	\$9.68	\$1.05	\$16.32	\$120.26	\$6.83	\$0.00	\$20.37
AWG Merchandise	\$80.77	\$73.87	\$201.58	\$150.06	\$82.32	\$96.71	\$58.53	\$111.56
Retail Shopping	\$142.31	\$33.87	\$104.21	\$36.10	\$16.16	\$27.32	\$86.18	\$50.41
Other Shopping	\$115.38	\$24.71	\$665.79	\$106.80	\$103.42	\$57.56	\$38.82	\$132.85
Car Rental in Yellowknife	\$69.23	\$137.10	\$184.21	\$37.00	\$0.00	\$31.71	\$164.71	\$76.84
Personal Vehicle Expenses	\$72.31	\$48.42	\$31.84	\$82.28	\$23.68	\$74.39	\$17.65	\$57.68
Taxi / Transport for Hire	\$15.38	\$13.87	\$26.32	\$11.60	\$5.26	\$30.49	\$4.41	\$16.50
Total	\$1,216.62	\$1,140.06	\$2,843.68	\$1,614.14	\$1,521.11	\$1,603.56	\$2,243.41	\$1,677.26

Table 2.6 Total Spending in Yellowknife - all visitors

Category	Total
Accommodation	\$463,424
Restaurant & Concession	\$485,779
Groceries	\$196,955
Event Tickets	\$112,415
Recreation & Entertainment	\$24,515
Event Merchandise	\$190,460
Retail Clothing	\$58,716
Retail Other	\$241,108
Vehicle Rental	\$81,662
Personal Vehicle Exp.	\$47,794
Тахі	\$22,054
Total	\$1,924,882

3.0 Operational Expenditures

An analysis was also made of the operational expenditures of the organizing committee, with the overall cash operations budget totalling just over \$5.0 million.⁷ Expenditures included salaries, fees and commissions of the organizing committee, advertising, administration, souvenirs, hosting of athletes, etc. Hosting the Arctic Winter Games with the budget at this level would not have been possible without the considerable in-kind support, totalling in excess of \$2.6 million. For example, the administrative, IT and communications in-kind support exceeded \$500,000 alone.

Category	Amount
Salaries, Fees and Commissions	\$1,002,574
Advertising Services	\$186,178
Professional Services	\$214,952
Financial Services	\$4,936
Insurance	\$55,000
Rent	\$163,510
Laundry and Cleaning Services	\$40,924
Other Services	\$521,556
Communication	\$27,723
Office Supplies	\$126,297
Other Goods / Supplies	\$940,498
Repairs	\$145,992
Food and Beverages - Organizing Committee	\$331,799
Food and Beverages - Participants	\$673,785
Accommodation - Organizing Committee	\$85,000
Accommodation - Media / VIP	\$5,079
Merchandise and Retail	\$298,313
Personal Travel	\$42,598
Transportation and Storage	\$151,992
Total	\$5,018,705

Table 3.1 Estimated Operational Expenditures

⁷ Value in-kind donations, as well as the contributed time of the 2,500 volunteers, were of vital importance to the success of the event. However, as both of these are non-traditional economic transactions, and in order to maintain consistency with other studies, they have been excluded from the economic impact.

4.0 Economic Impact Results

The combined spending of operations and visitors to the 2008 Arctic Winter Games exceeded \$6.6 million, generating an estimated \$13.2 million in economic activity for the Northwest Territories, of which \$10.3 million occurred in Yellowknife. These expenditures generated \$3.7 million in wages and salaries in the Territory through the support of 59 jobs, of which 49 were in Yellowknife⁸. The total net economic activity (GDP) generated by the event was \$4.9 million through the Territory, with \$3.5 million occurring in Yellowknife.

Tax revenues totalling \$1.8 million were brought about by the AWG. The event produced federal government tax revenues of \$1.0 million, and Government of the Northwest Territories taxes of \$512,000. Another \$236,000 in NWT municipal taxes was generated, of which \$208,000 was in Yellowknife.

Planning, purchasing, sale of clothing, general spending, and program delivery of the 2008 AWG resulted in significant tax revenues under federal and territorial tax regimes. These taxes were paid on site in Yellowknife, and collected in communities across the Territory wherever goods and services were supplied to the event. The types of taxes collected include the 5% federal GST on all goods and services associated with any AWG activity. Territorial and federal income taxes were collected from AWG staff and workers within the Territory who supplied goods and/or services to the AWG during both the preparation and delivery of the event over the 2006, 2007, and 2008 tax years. Other territorial and federal taxes were collected on tobacco, liquor, and fuel sales. A 2% NWT payroll tax was also collected.⁹

⁸ Jobs reported in this study refers to the number of jobs, vs. full time equivalent (FTE: two people working half time would represent two jobs, or one FTE).

⁹ This discussion of taxes does not consider any post purchase tax rebates or recoveries.

	Total		Rest of			
	N.W.T	Yellowknife	N.W.T.			
Initial Expenditure	\$6,640,713	\$6,640,713	\$0			
	Gross Domestic Pro	duct				
Direct Impact	\$1,639,279	\$1,639,279	\$0			
Indirect Impact	\$2,370,423	\$1,334,518	\$1,035,905			
Induced Impact	\$929,090	\$544,134	\$384,956			
Total Impact	\$4,938,792	\$3,517,931	\$1,420,861			
	Industry Output					
Direct & Indirect	\$9,911,927	\$8,384,307	\$1,527,620			
Induced Impact	\$3,296,886	\$1,931,185	\$1,365,701			
Total Impact	\$13,208,813	\$10,315,492	\$2,893,321			
	Wages & Salaries					
Direct Impact	\$1,462,787	\$1,462,787	\$0			
Indirect Impact	\$1,668,081	\$1,341,457	\$326,624			
Induced Impact	\$615,279	\$379,788	\$235,491			
Total Impact	\$3,746,147	\$3,184,032	\$562,115			
	Employment (Full-ye	ear jobs)				
Direct Impact ¹⁰	11.3	11.3	-			
Indirect Impact	35.1	27.6	7.5			
Induced Impact	12.7	9.8	2.9			
Total Impact	59.1	48.7	10.4			
	Taxes (Total)					
Federal	\$1,042,391	\$838,551	\$203,840			
Territorial	\$512,006	\$413,230	\$98,776			
Municipal	\$236,459	\$202,998	\$33,461			
Total	\$1,790,856	\$1,454,779	\$336,077			

Table 4.1 Total Economic Impact

¹⁰ Direct employment impact is generally extra shifts or overtime for existing workers rather than new employment.

5.0 Conclusion

The 2008 Arctic Winter Games were a success by all measures, with the event showcasing the talent of 1,821 participants, including 1,411 athletes, 48 cultural participants and 362 coaches, team managers, and other team personnel. The event also attracted 800 out of town spectators to Yellowknife, spending an average of \$1,677 per visitor party (or \$950 per person) in the community over the course of their trip. This spending, in combination with the operational expenditures of the organizing committee was \$6.6 million, resulting in a net increase in economic activity of \$4.9 million throughout the Territory, of which \$3.5 million occurred in Yellowknife. Total economic activity reached \$13.2 million, supporting over \$3.7 million in wages and salaries throughout the Territory. In Yellowknife, a total of \$3.2 million in wages and salaries were supported by the event.

Appendix 1: Comprehensive Survey Results

Day of Survey

	Number	Percent
Monday	82	30%
Tuesday	84	31%
Wednesday	57	21%
Thursday	35	13%
Friday	14	5%
Total	272	100%

Which Sport?

	Number	Percent
Arctic Sports	1	1%
Badminton	6	2%
Basketball	13	5%
Biathlon	5	2%
X-Country Ski	20	7%
Curling	8	3%
Dene Games	26	10%
Dog Mushing	6	2%
Figure Skating	19	7%
Gymnastics	3	1%
Hockey	32	12%
Indoor Soccer	54	20%
Snowboarding	2	1%
Snowshoeing	8	3%
Speed Skating	15	6%
Table Tennis	8	3%
Volleyball	20	7%
Wrestling	6	2%
Sub-total	252	94%
Missing	20	6%
Total	272	100%

Hello, my name is _____, and I am conducting a survey as to the economic impact of the Arctic Winter Games on the behalf of the event organizers. Can I please speak to someone in your travel party who is knowledgeable with your trip planning and expenditures?

	Number	Percent
Yes	271	99.6%
No	1	0.4%
Total	272	2 100%

Have you or anyone in your party previously been surveyed at this event?

	Number	Percent
Yes	2	2 0.7%
No	269	99.3%
Total	271	100%

Did you travel from outside of Yellowknife to attend the AWG?

	Number	Percent
Yes, out of town	210	78.1%
No, from Yellowknife	59	21.9%
Total	269	100.0%

[Don't Ask] Gender of principle respondent

	Number	Percent
Male	133	49.6%
Female	135	50.4%
Total	269	100%

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	Number	Percent
1	132	49%
2	79	29%
3	31	12%
4	13	5%
5	6	2%
6	3	1%
7	1	0%
10 or more	4	1%
Total	269	100%
Mean	1.97	

Including yourself, how many people are in your immediate travel party?

What is the role of each member of your immediate travel party?

Role	Number	
Participants	120	
Participant Family Members	221	
Other Spectator	67	
Coach / Manager	50	
Technical Official / Judge	8	
Media	7	
VIP	35	
Other	48	
Total	556	

How many days have you / will you attend the Arctic Winter Games?

	Percent
Mean	6.26

	Number of respondents purchasing	Total num of tickets purchased
Day Pass	41	139
Super Pass (week)	115	220
Basketball Medal rounds	8	7
Curling Medal rounds	6	2
Hockey Medal rounds	28	73
Soccer Medal rounds	29	105
Volleyball Medal rounds	14	19
Opening Ceremonies	61	108
Closing Ceremonies	58	97

For each member of your immediate travel party, how many tickets of each type have you / will you purchase?

Where do you normally reside?

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Total	269
International	22
U.S. (Alaska)	45
Other Canada	19
Quebec	7
Alberta	50
Nunavut	22
Yukon	34
NWT	10
Local	60

Are you making day trips or staying overnight away from home?

	Number	Percent
Same Day	2	1.0%
Overnight	207	99.0%
Total	209	100%

How many nights in Yellowknife?

	Nights in Yellowknife (n=214)
Min.	1
Max.	21
Total	7.3

On a scale of 0 to 10, with 10 indicating that the Arctic Winter Games was the only reason you came, how important was the event in your decision to come to Yellowknife?

9.6

Did you participate in any of the following activities while in Yellowknife?

	Number	Percent
Snow King Castle	23	11%
Beck's Kennels - Dogsled	7	3%
Heritage Museum	7	3%
Dene Cultural Camp	3	1%
Aurora Village - Night Tour	2	1%
Legislative Assembly tour	2	1%
Yellowknife City Tour	1	0%

*Note - low participation numbers are indicative of being heavily involved in the AWG directly.

Did you know that Yellowknife is called the Diamond Capital of North America™ because 15% of the world's gemstone diamonds are mined nearby?

	Number	Percent
Yes	171	82%
No	38	18%
Total	209	100%

Have you / will you purchase a diamond in Yellowknife?

	Number	Percent
Yes	21	10%
No	188	90%
Total	209	100%

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Note - Includes those who would shop for a diamond

Appendix 2: Economic Impact Methodology – Sport Tourism Economic Assessment Model

Background

Briefly, the purpose of STEAM is to calculate both the provincial and regional economic impacts of sport tourism. The economic impacts are calculated on the basis of capital and operating expenditures on goods, services and employee salaries, and on the basis of tourist spending within a designated tourism sector. The elements used to measure the economic impacts are Gross Domestic Product (GDP), Employment, Taxes, Industry Output and Imports. STEAM measures the direct, indirect & induced effects for each of these elements.

Technical Description of the Impact Methodology used by STEAM

STEAM and many other impact studies are based on input-output techniques. Input-output models involve the use of coefficients that are based on economic or business linkages. These linkages trace how tourist expenditures or business operations filter through the economy. In turn, the coefficients applied are then used to quantify how tourism related activity in a particular region generates employment, taxes, income, etc. The input-output approach indicates not only the direct and indirect impact of tourism, but can also indicate the induced effect resulting from the re-spending of wages and salaries generated.

All impacts generated by the model are given at the direct impact stage (i.e. the "front line" businesses impacted by tourism expenditures), indirect impact stage (i.e. those industries which supply commodities and/or services to the "front line" businesses) and the induced impact stage (induced consumption attributable to the wages and salaries generated from both the direct and indirect impact). In this sense, the model is closed with respect to wages. Imports are also determined within the model, so the model is closed with respect to imports. Exports are not endogenized (i.e. additional exports are not assumed with the induced impact) which consequently generates more conservative impacts. Another assumption of the model, which leads to more conservative impacts, is that not all commodities and/or services purchased are assumed to have at least one stage of production within the province. This assumption is crucial for souvenirs, gasoline and other commodities.

Taxes and employment are key economic considerations. However, as these concepts fall outside of the System of National Account Provincial input/output tables, their impacts must be calculated separately. Current tax and employment data for each region is used to econometrically estimate a series of coefficients and rates. These coefficients and/or rates are then applied to measures determined within the input-output framework of the model, yielding the final tax and employment figures.

Regional (Sub-Provincial) Impact Methodology

The method used to simulate intraprovincial commodity flows and ultimately regional impacts follows directly from regional economic principles. The principle is referred to as the "gravity model". Basically the "gravity model" states that the required commodity (& service) inputs will be "recruited" in a manner that takes into consideration economies of scale (i.e. production costs), transportation costs and the availability of specific industries. Economies of scale (i.e. lower production costs) are positively correlated with input demand while greater transportation costs are negatively correlated with input demand from other provincial regions is contingent on the fact that the specific industry does actually exist. An advantage of using the "gravity model" to simulate intraprovincial commodity flows is that as the industrial composition of the labour force changes, or as new industries appear for the first time in specific regions, the share of production between the various sub-provincial regions also changes.

By following this principle of the gravity model, all sub-provincial regions of a province are assigned a coefficient for their relative economies of scale in each industry (using the latest industry labour force measures) as well as a coefficient to represent the transportation cost involved to get each industry's output to the designated market. One variation on the "gravity model" principle involves the estimation of "relative trade distances" by incorporating different "weights" for different modes of transport. Once these coefficients are generated for all regions and over all industries, a measure of sensitivity (mostly relative to price, but in the case of service industries also to a "local preference criteria") is then applied to all commodities. Another variation on the strict "gravity model" approach is that the measure of sensitivity is adjusted by varying the distance exponent (which in the basic "gravity model" is 2) based on the commodity or service required. The variation in distance exponents revolve, principally, around two research hypotheses: (1) the greater the proportion of total shipments from the largest producer (or shipper), the lower the exponent, and (2) the greater the proportion of total flow which is local (intraregional), the higher the exponent.

Appendix 3: Glossary of Terms used by STEAM

Initial Expenditure - This figure indicates the amount of initial expenditures or revenue used in the analysis. This heading indicates not only the total magnitude of the spending but also the region in which it was spent (thus establishing the "impact" region).

Direct Impact - Relates ONLY to the impact on "front-line" businesses. These are businesses that initially receive the operating revenue or tourist expenditures for the project under analysis. From a business perspective, this impact is limited only to that particular business or group of businesses involved. From a tourist spending perspective, this can include all businesses such as hotels, restaurants, retail stores, transportation carriers, attraction facilities and so forth.

Indirect Impact - Refers to the impacts resulting from all intermediate rounds of production in the supply of goods and services to industry sectors identified in the direct impact phase. An example of this would be the supply and production of bed sheets to a hotel.

Induced Impact - These impacts are generated as a result of spending by employees (in the form of consumer spending) and businesses (in the form of investment) that benefited either directly or indirectly from the initial expenditures under analysis. An example of induced consumer spending would be the impacts generated by hotel employees on typical consumer items such as groceries, shoes, cameras, etc. An example of induced business investment would be the impacts generated by the spending of retained earnings, attributable to the expenditures under analysis, on machinery and equipment.

Gross Domestic Product (GDP) - This figure represents the total value of production of goods and services in the economy resulting from the initial expenditure under analysis (valued at market prices).

NOTE: The multiplier (A), Total/Initial, represents the total (direct, indirect and induced) impact on GDP for every dollar of direct GDP. This is a measure of the level of spin-off activity generated as a result of a particular project. For instance if this multiplier is 1.5 then this implies that for every dollar of GDP directly generated by "front-line" tourism businesses an additional \$0.50 of GDP is generated in spin-off activity (e.g. suppliers).

The multiplier (B), Total/\$ Expenditure, represent the total (direct, indirect and induced) impact on GDP for every dollar of expenditure (or revenue from a business perspective). This is a measure of how effective project related expenditures translate into GDP for the province (or region). Depending upon the level of expenditures, this multiplier ultimately determines the overall level of net economic activity associated with the project. To take an example, if this multiplier is 1.0, this means that for every dollar of expenditure, one dollar of total GDP is generated. The magnitude of this multiplier is influenced by the level of withdrawals, or imports, necessary to sustain both production and final demand requirements. The less capable a region or province is at fulfilling all necessary production and final demand demand requirements, all things being equal, the lower the eventual economic impact will be.

GDP (at factor cost) - This figure represents the total value of production of goods and services produced by industries resulting from the factors of production. The distinction to GDP (at market prices) is that GDP (at factor cost) is less by the amount of indirect taxes plus subsidies.

Wages & Salaries - This figure represents the amount of wages and salaries generated by the initial expenditure. This information is broken down by the direct, indirect and induced impacts.

Employment - Depending upon the selection of employment units (person-years or equivalent full-year jobs) these figures represent the employment generated by the initial expenditure. These figures distinguish between the direct, indirect and induced impact. "Equivalent Full-Year Jobs", if selected, include both part-time and full-time work in ratios consistent with the specific industries.

NOTE: The multiplier (B) is analogous to Multiplier (B) described earlier with the exception being that employment values are represented per \$1,000,000 of spending rather than per dollar of spending. This is done to alleviate the problem of comparing very small numbers that would be generated using the traditional notion of a multiplier (i.e. employment per dollar of initial expenditure).

Industry Output - These figures represent the direct & indirect and total impact (including induced impacts) on industry output generated by the initial tourism expenditure. It should be noted that the industry output measure represents the **sum** total of all economic activity that has taken place and consequently involve double counting on the part of the intermediate production phase. Since the Gross Domestic Product (GDP) figure includes only the **net** total of all economic activity (i.e. considers only the value added), the industry output measure will always exceed or at least equal the value of GDP.

Taxes - These figures represent the amount of taxes contributed to municipal, provincial and federal levels of government relating to the project under analysis. This information is broken down by the direct, indirect and induced impacts.

Imports - These figures indicate the direct, indirect and induced final demand and intermediate production requirements for imports both outside the province and internationally.

Appendix 4: Arctic Winter Games Survey

AWG v1

Day

1 Day of Survey

- Sunday
- Monday
- Tuesday
- Wednesday
- Thursday
- Friday
- Saturday
- Practice

Sport

2 Which Sport?

- Arctic Sports
- Badminton
- Basketball
- Biathlon
- X-Country Ski
- Curling
- Dene Games
- Dog Mushing
- Figure Skating
- Gymnastics
- Hockey
- Indoor Soccer
- Snowboarding
- Snowshoeing
- Speed Skating
- Table Tennis
- Volleyball
- Wrestling

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Gender

3 (Don't Ask) Gender of Principal respondent

Male

Female

Intro

4 Hello, my name is _____, and I am conducting a survey as to the economic impact of the Arctic Winter Games on the behalf of the event organizers. Can I please speak to someone in your travel party who is knowledgeable with your trip planning and expenditures?

Yes
No

Previous

5 Have you or anyone in your party previously been surveyed at this event?

Yes
No

Local

- 6 Did you travel from outside of Yellowknife to attend the 2008 Arctic Winter Games?
 - Yes, out of town
 - No, from Yellowknife

Pty_Size

7 Including yourself, how many people are in your immediate travel party?

	1 2 3 4 5 6 7 8			9 10 or m Define	ore Travel Party	
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Role

8 Can you please provide me with a breakdown as to the roles of members in your travel party. How many people are:

Days1

9 In total, how many days have you / will you attend the 2008 AWG?

Answer:

Num_Ticks

10 For all of the members of your travel party, how many tickets in total of each type have you / will you purchase?

Residence

11 Which country do you normally reside in?

Canada

U.S.

International

Province

12 Which province or territory?

- NWT П
- Nunavut
- Yukon
- Alberta
- **British Columbia**
- Manitoba
- New Brunswick
- Newfoundland
- Nova Scotia
- Ontario
- PEI
- Quebec
- Saskatchewan

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State

13 Which state?

Alab	ama		Oregon	
Alas	ka		Pennsylvania	
Arizo	ona		Rhode Island	
Arka	nsas		South Carolina	
Calif	ornia		South Dakota	
Colo	rado		Tennessee	
Conr	necticut		Texas	
Dela	ware		Utah	
Distr	ict of Columbia		Vermont	
Florid	da		Virginia	
Geor	gia		Washington	
Hawa	aii		West Virginia	
Idaho	0		Wisconsin	
Illinoi	s		Wyoming	
India	na			
lowa				
Kans	as			

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Oklahoma

Kentucky

Louisiana

Maryland

Michigan

Minnesota

Mississippi

Missouri

Montana

Nebraska

New Hampshire

New Jersey

New Mexico

North Carolina

North Dakota

New York

Ohio

Nevada

Massachusetts

Maine

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CountryAWG

۰.

- 14 Which Region / Country:
 - Greenland
 - Russia
 - Iceland
 - Finland
 - Sweden
 - Other

Same_Day

15 Are you making day trips to Yellowknife or staying overnight away from home?

Same Day

Overnight

NumDT

16 How many same day trips have you / will you be making?

Answer:

Nights1

17 How many nights have you / will you be spending away from home?

Answer:

Nights2

- 18 Will all of these nights be spent in Yellowknife?
 - Yes No

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NightsNWT

19 How many nights have you / will you spend in the Northwest Territories?

Answer:

NightsYZF

20 How many nights have you / will you spend in Yellowknife?

Answer:

Nights_Comm

21 How many nights have you / will you spend in Commercial Accommodation? (Hotel, Motel, B&B)

Answer:

Spend_Intro

22 Now think about the money that you and your travel party have and/or will spend in Yellowknife on this trip. How much will your party spend on each of the following items? If your trip is not yet over, please provide your best estimate as to what you and your entire travel party will spend for your entire stay in Yellowknife. How much was spent on the following:

Spending

23

Importance

24 On a scale of 0 to 10, with 10 indicating that the Arcitc Winter Games was the only reason you came, how important was the event in your decision to come to Yellowknife?

 0 1 2 3 4 5 6 7 			8 9 10		
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Timing

25 Did you change the timing of a trip that you would normally take to Yellowknife in order to attend the AWG?

	Yes
_	

No

Lengthen

26 Did you lengthen a regular or planned trip to Yellowknife in order to attend the AWG?

Yes
No

Length_Days

27 By how many days?

Answer:

YActive1

28 Did you / will you participate in any of the following activites while in Yellowknife?

- Yellowknife City Tour
- Aurora Village Day Tour
- Aurora Village Night Tour
- YK Outdoor Adventure Snowmobile
- YK Outdoor Adventure Aurora by Snowmobile
- YK Outdoor Adventure Snowshoe
- Beck's Kennels Dogsled
- Air Tindi Scenic Tours
- Dene Cultural Camp
- Aurora World Viewing
- Old Town Tour
- Snow King Castle
- Heritage Museum
- Legislative Assembly tour
- N Frontier VIC

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Package_Spend

ж.

¢ :

29	Did you spend \$ [@Spending.Recreation_	enterta] on tour packages or would a different amount be
	more suitable?	

Answer:

Diamond1

30 Did you know that Yellowknife is called the Diamond Capital of North America because it produces 15% of the world's diamonds?

Yes

🗌 No

Diamond2

31 Have you / will you buy a diamond or diamond jewellry in Yellowknife?

Yes
No

Thank_You

32 Surveyor Comments

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