Canadian Sport Tourism Alliance

Alliance canadienne du tourisme sportif

2012 Grey Cup Festival
Toronto, Ontario

Economic Impact Assessment

February 2013

The following analysis provides the economic impact of the 2012 Grey Cup Festival hosted Toronto, Ontario from November 17 to 25, 2012 as generated by the Sport Tourism Economic Assessment Model – Professional Version.

Economic Impact Assessment Funding Partner

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Executive Summary

The 100th anniversary of the Grey Cup was celebrated in Toronto, Ontario with 11 nights and 10 days of programming which ran from November 17 to 25, 2012. The 2012 Grey Cup Festival had a tremendous impact on the city of Toronto. The event attracted thousands of spectators to the Grey Cup and Vanier Cup games, while thousands more participated in the festivities hosted at the Scotiabank Fan Zone (MTCC), the TELUS Street Festival, the mbna Adrenaline Zone (Nathan Phillips Square) and the Nissan Family Zone (Young and Dundas Square). In total, the 2012 Grey Cup festival was attended by 199,400 people, of which 86,400 were from outside Toronto. The spending of these visitors, along with the considerable investment made by the organizers and sponsors in hosting the 2012 Grey Cup Festival had a tremendous economic impact on the City of Toronto and the Province of Ontario. Total spending associated with the 2012 Grey Cup Festival reached $64.6 million which generated an estimated net economic activity (GDP) of $70.2 million in the Province of Ontario, of which $48.9 million occurred in Toronto. These expenditures supported $38.4 million in wages and salaries in the Province and an estimated 795 jobs, of which 596 jobs and $26.6 million in wages and salaries were in Toronto. The total economic activity (industry output) generated by the event was $133.1 million in the Province, with $94.7 million occurring in Toronto.

($M)	Province of Ontario	City of Toronto
Initial Expenditure	$64.6	$64.6
Gross Domestic Product	$70.2	$48.9
Wages & Salaries	$38.4	$26.6
Employment (FTE)	795	596
Taxes (Total)	$25.3	$17.7
Industry Output	$133.1	$94.7

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1.0 Background

The 100th anniversary of the Grey Cup was celebrated in Toronto, Ontario with 11 nights and 10 days of programming running from November 17 to 25, 2012. The 2012 Grey Cup Festival had a tremendous impact on the city, with the spirit of sportsmanship taking over many venues with special events and free entertainment. Yonge-Dundas square was transformed into the Nissan Family Zone and the holiday ice rink at Nathan Philips Square was replaced by green turf as part of the mbna Adrenaline Zone which featured the tallest urban zipline in North America. A large area on Front Street was taken over by the TELUS Street Festival and the Franks Red Hot Tailgate Party featuring live bands, entertainment and a huge rib festival while the Scotiabank Fan Zone and the Molson Canadian House at the Metro Toronto Convention Centre featured all kinds of activities including the Nissan Official Pre-Game party. Other events included the Scotiabank Gala (Rogers Centre) the Nolitours Football Film Festival (Cineplex) and the Gibson's Finest Player Awards (Koerner Hall). As for football, the Grey Cup Festival included the 48th CIS Championship, the Vanier Cup that featured the University of Laval Rouge et Or against the McMaster Marauders. The CFL Championship Grey Cup game featured the home town Toronto Argonauts competing against the Calgary Stampeders. Overall, the hosting of the 100th Grey Cup Festival in Toronto resulted in thousands of fans from within the city and from all across Canada to coming together to celebrate Canadian football.

In addition to showcasing football and the CFL, the Grey Cup Festival also generated a considerable economic benefit for the host city of Toronto as thousands of fans traveled to take in the event. In measuring the economic impact of the 2012 Grey Cup Festival, spectators at the event were surveyed as to their origin, length of stay, and spending while in Toronto, with the survey methodology and results being the subject of the next section. The Toronto Argonauts Football Club, as the organizers of the Grey Cup Festival, along with their sponsors and partners such as the CFL, invested significantly in hosting the event as noted in Section 3. Finally, section 4 reports the STEAM PRO[1] results from the combined spending of the spectators and the operational expenditures. The appendices include more details about STEAM PRO, the economic impact assessment model used and a glossary of terms.

[1]The 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 at the 2012 Grey Cup Festival was collected through the administration of a face-to-face intercept survey. The survey captured essential information to determine the origin of spectators attending the event and the expenditures of out-of-town visitors to Toronto. The survey was conducted using iPod Touch PDAs running Survey Analytics' Survey Pocket software[2] and took place at various venues of the Grey Cup festival including the Nissan Family Zone, the mbna Adrenaline Zone, the TELUS Street Festival, the various events hosted at the MTCC, the Vanier Cup and the Grey Cup.

Survey Results

A total of 1,483 visitor parties were approached during the event with 1,218 parties agreeing to participate (a rejection rate of 18%). Of this group, 70 parties had been previously surveyed (6%), yielding a total of 1,148 valid surveys.[3] The most surveys were conducted at the Scotiabank Fan Festival / Molson Canadian House (33%), followed by the Grey Cup (29%), the Vanier Cup (19%) and the outdoor events (19%).

The 2012 Grey Cup Festival was hugely successful in that it attracted more than 390,000 site specific visits (not including the Grey Cup, Vanier Cup, or other related events such as fan parties, alumni and player association events, etc.). As people attending the various events were able to wander freely between venues, considerable care has been taken to determine the total number of unique individuals attending the 2012 Grey Cup Festival. To this end, spectators were divided into four categories: Grey Cup visitors, Vanier Cup visitors who did not attend the Grey Cup, visitors who attended one or more events at the MTCC (who did not go to either game), and Nissan Family Zone / mbna Adrenaline Zone visitors who did not attend other events.

Grey Cup

The 2012 Grey Cup attracted a total of 53,208 spectators. Survey respondents were asked as to their origin their responses were compared to the postal codes associated with the tickets sold. As illustrated in table 2.1, the correspondence between the two data sources was quite close.

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[2] The survey and methodology were prepared in consultation with the "Guidelines for Measuring Tourism Economic Impact At Gated Festivals and Events", available at: http://www.tourism.gov.on.ca/english/tourdiv/research/resources.htm

[3] The sample size of 2,456 out of town visitors representing 84,644 visitors overall gives a statistically significant confidence interval of +/- 2.0%, 19 times in 20.

Table 2.1 Survey Origin vs. Ticket Sales Origin

Origin	Survey	Ticket Sales
Toronto & GTA*	68.7%	70.9%
Other Ontario*	10.6%	8.0%
Atlantic	1.5%	0.9%
SK & MB	6.3%	6.1%
AB	7.9%	7.7%
BC	3.1%	5.3%
U.S.	1.9%	1.1%

*Note that Ontario responses do not match exactly due to different definitions used between the two samples; for example the survey defined Toronto as 'within 40km' while the most comparable ticket sales data is to include Toronto as tickets sold to a postal code starting with M.

Table 2.2 below further divides Grey Cup attendees as to their origin but also includes whether or not they stayed overnight in Toronto as a result of attending the Grey Cup. Note that for regional overnight visitors, the average nights spent in Toronto reflects the fact that their stay often included attending the Vanier Cup and other Grey Cup Festival events.

Table 2.2 – Grey Cup Spectator Origin

Origin	Share	Spectators	Avg. Party Size	Days Attending GCF	Nights in Toronto	Importance (1-10)
Toronto	35%	18,357	3.1	2.1	n/a	
Other GTA	19%	9,843	3.6	2.1	n/a	
Regional - Sameday	8%	4,044	3.6	2.0	n/a	9.2
Regional - Overnight	7%	3,565	4.0	2.9	2.7	9.5
Other Ontario	7%	3,937	3.5	3.2	3.0	9.3
Other Canada	24%	12,557	3.5	3.7	3.9	9.0
U.S. & International	2%	851	2.8	4.5	4.3	9.8
Total	100%	53,208	3.4	2.6	3.5	9.2

Survey respondents were asked questions with regards to their spending while attending the 2012 Grey Cup Festival events. Toronto residents were also asked about their spending while on-site however this spending has not been included as part of the economic impact study[4] and is included for information only.

[4] The spending of local residents does not represent 'new' money being spent in the local economy as a result of hosting the event, and is thus excluded. For regional GTA visitors, we are including only spending at the Grey Cup festival plus local restaurants.

Table 2.3 – Spending per Person per Trip

	Accom-modation	Festival	Restaurant	Recreation & Entertainment	Retail Shopping	Local Transport	Total
Toronto	$0.00	$116.72	$0.00	$0.00	$0.00	$0.00	$116.72
Other GTA	$0.00	$128.32	$69.09	$0.00	$0.00	$0.00	$197.41
Regional - Sameday	$0.00	$182.18	$45.37	$10.35	$11.83	$34.53	$284.27
Regional - Overnight	$306.26	$264.94	$125.04	$12.23	$50.95	$49.27	$808.68
Other Ontario	$334.58	$298.05	$156.68	$24.55	$59.28	$24.09	$897.23
Other Canada	$393.78	$283.54	$207.20	$69.53	$108.36	$22.17	$1,084.59
U.S. & International	$436.33	$288.39	$164.18	$83.48	$205.99	$38.40	$1,216.77

The final step is to multiply the average spending per person by the total number of people attending as shown in Table 2.2. In addition, the overall spending is scaled by the importance of the Grey Cup festival in their decision to Travel to Toronto.

Table 2.4 – Grey Cup Attendees Visitor Spending (Scaled by Importance)

	Accom-modation	Festival	Restaurant	Recreation & Entertainment	Retail Shopping	Local Transport	Total
Toronto	$0	$2,142,615	$0	$0	$0	$0	$2,142,615
Other GTA	$0	$1,263,120	$680,060	$0	$0	$0	$1,943,180
Regional - Sameday	$0	$736,714	$183,481	$41,858	$47,827	$139,643	$1,149,524
Regional - Overnight	$1,091,789	$944,485	$445,749	$43,615	$181,618	$175,638	$2,882,894
Other Ontario	$1,317,358	$1,173,551	$616,930	$96,651	$233,425	$94,843	$3,532,759
Other Canada	$4,944,736	$3,560,461	$2,601,855	$873,079	$1,360,715	$278,416	$13,619,263
U.S. & International	$371,457	$245,514	$139,771	$71,069	$175,367	$32,692	$1,035,870
Total	**$7,725,340**	**$10,066,461**	**$4,667,846**	**$1,126,273**	**$1,998,952**	**$721,233**	**$26,306,105**
Total Visitor Spending	*$7,725,340*	*$7,923,846*	*$4,667,846*	*$1,126,273*	*$1,998,952*	*$721,233*	*$24,163,490*

Vanier Cup

The survey found that a number of visitors came to the 2012 Grey Cup Festival to attend the Vanier Cup only. With McMaster University being very close to Toronto, a large number of visitors made day trips only, however many of these visitors also took part in other Grey Cup Festival activities such as the TELUS Street Festival and the Scotiabank Fan Festival. Of the 37,600 people who attended the Vanier Cup, 58% or 21,975 were also attending the Grey Cup, leaving 15,625 visitors who only came to see the Vanier Cup only.

Table 2.5 – Vanier Cup Only - Spectator Origin

Origin	Share	Spectators	Avg. Party Size	Days Attending GCF	Nights in Toronto	Importance (1-10)
Toronto	34%	5,382	3.8	2.1	n/a	
Other GTA	35%	5,469	4.6	1.5	n/a	
Regional - Sameday	17%	2,604	4.2	1.1	n/a	9.1
Regional - Overnight	3%	434	3.6	2.6	2.7	9.0
Other Ontario	4%	694	4.3	3.0	3.0	9.4
Other Canada	7%	1,042	2.6	3.1	3.9	7.6
U.S. & International	0%	0	n/a	n/a	n/a	n/a
Total	100%	15,625	4.0	1.8	3.5	8.8

Survey respondents who only attended the Vanier Cup were also asked questions with regards to their spending while at the 2012 Grey Cup Festival. Again, the spending of Toronto residents has not been included as part of the economic impact study and is included for information only.

Table 2.6 – Vanier Cup - Spending per Person per Trip

	Accom-modation	Festival	Restaurant	Recreation & Entertainment	Retail Shopping	Local Transport	Total
Toronto	$0.00	$88.63	$0.00	$0.00	$0.00	$0.00	$88.63
Other GTA	$0.00	$74.85	$72.73	$0.00	$0.00	$0.00	$147.58
Regional - Sameday	$0.00	$58.09	$40.53	$8.82	$12.11	$13.37	$132.92
Regional - Overnight	$286.46	$386.28	$238.72	$231.48	$23.15	$17.36	$1,183.45
Other Ontario	$409.93	$186.27	$140.13	$67.65	$48.04	$19.16	$871.17
Other Canada	$216.41	$145.35	$152.27	$54.10	$58.14	$12.90	$639.18

Table 2.7 – Vanier Cup Attendees Visitor Spending (Scaled by Importance)

	Accom-modation	Festival	Restaurant	Recreation & Entertainment	Retail Shopping	Local Transport	Total
Toronto	$0	$476,988	$0	$0	$0	$0	$476,988
Other GTA	$0	$409,327	$397,765	$0	$0	$0	$807,091
Regional - Sameday	$0	$151,275	$105,539	$22,973	$31,537	$34,823	$346,147
Regional - Overnight	$47,820	$64,484	$39,850	$38,643	$3,864	$2,898	$197,559
Other Ontario	$98,845	$44,916	$33,788	$16,312	$11,583	$4,619	$210,063
Other Canada	$63,323	$42,530	$44,556	$15,831	$17,012	$3,775	$187,026
U.S. & International							
Total	**$209,987**	**$1,189,520**	**$621,498**	**$93,758**	**$63,997**	**$46,116**	**$2,224,875**
Total Visitor Spending	*$209,987*	*$712,532*	*$621,498*	*$93,758*	*$63,997*	*$46,116*	*$1,747,887*

Scotiabank Fan Fest-MTCC / Telus Street Festival -Front Street

The survey found that there were a small percentage of visitors who came to Toronto as part of the Grey Cup Festival who did not actually attend either the Grey Cup or Vanier Cup games. Overall attendance at the Scotiabank Fan Festival / Molson Canadian House and the TELUS Street Festival / Franks Red Hot Tailgate Party was estimated to reach 43,500 visitors. After excluding the festival visitors who attended the Grey Cup and Vanier Cup games (and would thus be included in the visitor estimates of the previous two groups), there were a total of 10,330 MTCC / Front Street visitors. MTCC / Front Street visitors spent an average of 2.2 days at the 2012 Grey Cup Festival events, thus suggesting there were a total of 4,697 fans who only attended the Scotiabank Fan Festival / Molson Canadian House and the TELUS Street Festival / Franks Red Hot Tailgate Party.

Table 2.8 – Scotiabank Fan Fest - MTCC/ Telus Street Festival Front Street Only – Spectator Origin

Origin	Share	Spectators
Toronto	45%	2,135
Other GTA	18%	854
Regional - Sameday	15%	712
Regional - Overnight	3%	142
Other Ontario	5%	214
Other Canada	11%	498

U.S. & International	3%	142
Total	100%	4,697

As the sample size for this sub-group of visitors was too small to provide the full breakout by visitor origin, the responses have been grouped into Toronto, other GTA, sameday visitors and overnight visitors, with the pertinent spending information detailed below.

Table 2.9 – Scotiabank Fan Fest - MTCC/ Telus Street Festival Front Street Spending per Person per Trip

	Accom-modation	Festival	Restaurant	Recreation & Entertainment	Retail Shopping	Local Transport	Total
Toronto	$0.00	$63.43	$0.00	$0.00	$0.00	$0.00	$63.43
Other GTA	$0.00	$47.29	$27.99	$0.00	$0.00	$0.00	$75.27
Sameday	$0.00	$42.40	$22.29	$2.95	$16.25	$9.51	$93.41
Overnight	$517.50	$165.31	$51.75	$14.38	$431.25	$35.94	$1,216.13

Table 2.10 – Scotiabank Fan Fest - MTCC/ Telus Street Festival Front Street Attendees Visitor Spending (Scaled by Importance)

	Accom-modation	Festival	Restaurant	Recreation & Entertainment	Retail Shopping	Local Transport	Total
Toronto	$0	$135,430	$0	$0	$0	$0	$135,430
Other GTA	$0	$40,384	$23,900	$0	$0	$0	$64,285
Sameday	$0	$30,176	$15,865	$2,102	$11,567	$6,771	$66,481
Overnight	$515,609	$164,708	$51,561	$14,322	$429,674	$35,806	$1,211,681
Total	**$515,609**	**$370,699**	**$91,326**	**$16,424**	**$441,241**	**$42,577**	**$1,477,876**
Total Visitor Spending	*$515,609*	*$235,269*	*$91,326*	*$16,424*	*$441,241*	*$42,577*	*$1,342,446*

Nissan Family Zone / mbna Adrenaline Zone

The final category of event attendees included in this study are those who attended other Grey Cup Festival events such as the Nissan Family Zone at Younge & Dundas square and the mbna Adrenaline Zone at Nathan Phillips square. Both of these areas were freely accessible to the public and ran from Nov 17/18 through to Saturday November 24. Both were extremely well attended, attracting a combined 270,000 visits. The survey found that approximately 37,500 visits were accounted for by Grey Cup and Vanier Cup spectators, leaving 232,500 square visitors. Adjusting for both multiple visits and the fact that many respondents visited both squares finds that approximately 125,900 unique individuals took in the fan festival events at the two squares. A key factor, as illustrated by the relatively low importance scores in Table

2.11 below, is that many visitors came across the event 'by accident' as they were shopping or attending the Cavalcade of Lights parade.

Table 2.11 – Nissan Family Zone / mbna Adrenaline Zone Participant Origin

Origin	Share	Spectators	Importance of GCF
Toronto	69.2%	87,073	
Other GTA	12.0%	15,143	52%
Regional - Sameday	7.5%	9,464	46%
Regional - Overnight	0.8%	946	100%
Other Ontario	3.0%	3,786	50%
Other Canada	3.8%	4,732	36%
U.S. & International	3.8%	4,732	0%

Table 2.12 Nissan Family Zone / mbna Adrenaline Zone - Spending per Person per Trip

	Accom-modation	Festival	Restaurant	Recreation & Entertainment	Retail Shopping	Local Transport	Total
Toronto	$0.00	$25.43	$0.00	$0.00	$0.00	$0.00	$25.43
Other GTA	$0.00	$22.46	$35.41	$0.00	$0.00	$0.00	$57.87
Sameday	$0.00	$30.17	$30.72	$39.06	$107.57	$66.57	$274.09
Overnight	$300.30	$40.86	$126.64	$77.07	$51.94	$25.00	$621.81

Table 2.13 – Nissan Family Zone / mbna Adrenaline Zone Visitor Spending (Scaled by Importance)

	Accom-modation	Festival	Restaurant	Recreation & Entertainment	Retail Shopping	Local Transport	Total
Toronto	$0	$2,213,905	$0	$0	$0	$0	$2,213,905
Other GTA	$0	$176,824	$150,291	$0	$0	$0	$327,116
Sameday	$0	$131,781	$134,170	$170,633	$469,897	$290,785	$1,197,266
Overnight	$865,774	$145,849	$315,357	$220,447	$255,239	$82,655	$1,885,321
Total	**$865,774**	**$2,668,359**	**$599,819**	**$391,080**	**$725,136**	**$373,439**	**$5,623,607**
Total Visitor Spending	*$865,774*	*$454,455*	*$599,819*	*$391,080*	*$725,136*	*$373,439*	*$3,409,703*

Total Attendance

The following table shows the combined attendance from the four spectator categories described above. In total, more than 199,000 individuals attended the 2012 Grey Cup festival, of which 86,400 lived more than 40km from Toronto.

Table 2.14 – Total Grey Cup Festival Attendance

Origin	Grey Cup	Vanier Cup	MTCC / Front Street	Adrenaline / Family Zone	Total
Toronto	18,357	5,382	2,135	87,073	112,947
Other GTA	9,843	5,469	854	15,143	31,309
Regional - Sameday	4,044	2,604	712	9,464	16,824
Regional - Overnight	3,565	434	142	946	5,088
Other Ontario	3,937	694	214	3,786	8,631
Other Canada	12,557	1,042	498	4,732	18,829
U.S. & International	851	0	142	4,732	5,726
Total Attendance	**53,155**	**15,625**	**4,697**	**125,877**	**199,354**
Total Visitors	*34,798*	*10,243*	*2,562*	*38,804*	*86,407*

3.0 Operational Expenditures

An analysis was also made of the operational expenditures made by the event organizers in hosting the 2012 Grey Cup Festival. The operational expenditures included those made by the Toronto Argonauts Football Club, the Canadian Football League as well as on-site sponsor activations and estimated expenditures made by members of the media.

While not included as a direct expenditure in the budget, the 2012 Grey Cup Festival was supported by more than 1,000 volunteers, and the success of the event was due in a large part to the efforts of this group.

4.0 Economic Impact Results

The spending of spectators at the event, in combination with the expenditures made by the event organizers and others in producing the 2012 Grey Cup Festival reached $64.6 million, generating an estimated net economic activity (GDP) of $70.2 million in the Province of Ontario, of which $48.9 million occurred in Toronto. These expenditures supported $38.4 million in wages and salaries in the Province and an estimated 795 jobs, of which 596 jobs and $26.6 million in wages and salaries were in Toronto.[5] The total economic activity (industry output) generated by the event was $133.1 million in the Province, with $94.7 million occurring in Toronto.

The total tax revenues supported by the 2012 Grey Cup Festival reached $25.3 million. Of this total, $11.6 million was attributable to the federal government while provincial tax revenues reached $9.3 million and municipal taxes were $4.3 million, of which $3.4 million was in Toronto.

[5] 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).

Table 4.1 Total Economic Impact

	Total Ontario	Local Area Toronto	Rest of Ontario
Initial Expenditure	$64,616,606	$64,616,606	$0
Gross Domestic Product			
Direct Impact	$31,148,477	$31,148,477	$0
Indirect Impact	$23,204,083	$10,175,370	$13,028,713
Induced Impact	$15,828,898	$7,529,673	$8,299,225
Total Impact	$70,181,458	$48,853,521	$21,327,938
Industry Output			
Direct & Indirect	$98,624,895	$78,292,527	$20,332,368
Induced Impact	$34,498,178	$16,403,472	$18,094,706
Total Impact	$133,123,073	$94,695,999	$38,427,074
Wages & Salaries			
Direct Impact	$14,404,499	$14,404,499	$0
Indirect Impact	$14,207,766	$7,798,784	$6,408,982
Induced Impact	$9,751,584	$4,348,823	$5,402,761
Total Impact	$38,363,849	$26,552,106	$11,811,743
Employment (Full-year jobs)			
Direct Impact[6]	353.3	353.3	-
Indirect Impact	251.1	131.9	119.2
Induced Impact	190.8	111.2	79.6
Total Impact	795.2	596.4	198.8
Taxes (Total)			
Federal	$11,607,353	$7,811,616	$3,795,737
Provincial	$9,349,148	$6,535,623	$2,813,525
Municipal	$4,332,738	$3,368,133	$964,605
Total	$25,289,239	$17,715,372	$7,573,867

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

Appendix 1: Economic Impact Methodology – STEAM

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. Fulfilling that 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 2: 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 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.