Canadian Sport Tourism Alliance

Alliance canadienne du tourisme sportif

2015 Ford World Men's Curling Championships

Halifax, Nova Scotia

Economic Impact Assessment

November 2015

The following analysis provides the economic impact of the 2015 Ford World Men's Curling Championship which took place at the Scotiabank Centre in Halifax, Nova Scotia from March 28 to April 5, 2015, as generated by the Sport Tourism Economic Assessment Model, Professional version.

Economic Impact Assessment Funding Partners

The Canadian Sport Tourism Alliance wishes to acknowledge the financial and logistics support of Tourism Nova Scotia in the completion of this study.

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1.0 Background

The Ford World Men's Curling Championships bonspiel was hosted at the Scotiabank Centre in Halifax Nova Scotia from March 28 to April 5, 2015. The bonspiel featured the top men's teams from around the world and saw skip Niklas Eden of Sweden take the gold; the second time he has taken gold on Canadian soil following his 2013 win in Victoria. Team Canada was knocked out of gold medal contention and settled for defeating Finland in the bronze medal match. With the world's best curlers in attendance, the 2015 Ford World Men's Curling Championship (FWMCC) attracted thousands of spectators to Halifax and the spending of these visitors, along with the expenditures made by the organizers in hosting the FWMCC resulted in a considerable boost in economic activity for the local economy.

The next section of the report provides details of the results obtained from the on-site survey that was given to spectators and participants at the Ford World Men's Curling Championships. The survey results were used to ascertain both the number and origin of visitors and the expenditures that visitors made while in Halifax for the championships. Section 3 provides details of operational expenditures and revenues that further contributed to the impact of the event, while Section 4 presents the STEAM PRO[1] results from the combined expenditures of the visitors and the host committee's operational expenditures. The appendices include additional information regarding the economic impact model and a glossary of the terms used.

[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 origin and spending of spectators and participants attending the 2015 Ford World Men's Curling Championship was collected through the administration of an on-site intercept survey. The survey captured information about the origin and opinions of the spectators attending the event. Out of town visitors were also asked questions about their visit and the expenditures while they were in Halifax. Surveys were conducted using tablet computers running Survey Analytics' Survey Pocket software.[2]

Survey Results

A total of 870 parties were approached over the nine days of the bonspiel, with 69 parties choosing not to participate (8%) and 77 having responded previously (9%).

The survey found that 57% of spectators came from the HRM or within 40km while the majority of other spectator came from within Nova Scotia. However, just over one-quarter (26%) of respondents came from outside of the province including 18% from outside of Atlantic Canada.

The number of unique individuals attending the 2015 FWMCC as spectators was calculated by first allocating the total draw attendance of 56,717 by the origin of visitors and then dividing by the average number of draws each spectator took in. The end result shows that the 2015 Ford World Men's Curling Championship attended by 8,043 individual spectators of which 2,280 were from outside of Halifax (Table 2.1). The average HRM resident went to 5.6 draws which more than doubled for out of town visitors who went an average of 10.7 draws.

Table 2.1 Visitor Origin - Spectators

	Spectator Origin	Spectator share	Days per person	Individuals	Sameday Visitors (%)	Overnight Visitors (%)
Halifax *(HRM under 40km)*	57%	32,215	5.6	5,763	n/a	n/a
Other Nova Scotia	17%	9,642	7.9	1,224	33%	68%
Other Atlantic	8%	4,537	11.7	389	4%	96%
Other Canada	13%	7,146	15.0	476	0%	100%
US	2%	1,248	15.4	81	0%	100%
International	3%	1,872	17.1	110	0%	100%
Total	**100%**	**56,717**	**7.1**	**8,043**	18%	82%
Visitors	*43%*	*24,445*	*10.7*	*2,280*	*411*	*1,868*

[2] For information see www.surveypocket.com

The 2015 FWMCC was the first time visit to Nova Scotia for 30% of out of town visitors, and this was particularly the case for international visitors where 74% were first time visitors to Nova Scotia. The use of websites prior to departure also increased with distance travelled with more than 70% of all respondents visiting at least one website prior to departure. Nearly half of all visitors (48%) visited the event website (www.curling.ca).

Table 2.2 Overnight Visitor Details

	Other Atlantic	Other Canada	International	Total
First visit to Nova Scotia	15%	23%	74%	30%
Event Website (www.curling.ca)	34%	45%	81%	48%
www.novascotia.com	15%	20%	32%	22%
www.tripadvisor.ca	10%	15%	29%	16%
www.novascotiatourismagency.ca	12%	6%	16%	9%
www.explorenovascotia.com	2%	4%	6%	4%
Did not visit a website	41%	27%	13%	29%

Spectator Expenditures

Out of town spectators were also asked what they spent in Halifax while they were attending the 2015 Ford World Men's Curling Championship. With the size of the sample collected, out of town spectators were divided into several categories, sameday travellers and overnight travellers from: other parts of Nova Scotia, other Atlantic Canada, other Canada, and International visitors. The survey found that the average sameday traveller spent $97 per person while overnight visitors spent rising to $879 per person when staying overnight. Combining the spending per person with the overall attendance shows that overall spectator spending reached $1.5 million.

Table 2.3 Spectator Spending per Person

Per person	Sameday	Other NS	Other Atlantic	Other Canada	International	Average
Party Size	*2.6*	*2.5*	*2.6*	*2.4*	*3.4*	*2.6*
Avg. Nights	*n/a*	*4.2*	*6.7*	*9.8*	*10.4*	*7.7*
Accommodation	$0.00	$161.30	$246.01	$487.57	$503.79	$242.92
Restaurant	$36.24	$147.69	$261.16	$374.63	$465.13	$220.22
Recreation & Entertainment	$16.14	$28.72	$38.69	$76.84	$46.32	$39.61
Merchandise	$5.95	$11.99	$14.63	$64.26	$55.38	$25.88
Shopping	$16.99	$62.42	$101.12	$122.25	$140.72	$79.64
Vehicle Expenses	$21.74	$84.82	$37.92	$36.40	$14.94	$49.75
Total	**$97.06**	**$496.94**	**$699.52**	**$1,161.95**	**$1,226.28**	**$658.02**
Per Person Per Daytrip / Night	*$42.39*	*$117.20*	*$104.41*	*$118.45*	*$118.03*	*$115.03*

Table 2.4 Aggregate Spectator Spending

Aggregate	Sameday	Other NS	Other Atlantic	Other Canada	International	Average
Visitors	*411*	*826*	*376*	*476*	*191*	*2,280*
Accommodation	$0	$133,220	$92,451	$231,980	$96,123	$553,775
Restaurant	$14,908	$121,977	$98,145	$178,245	$88,746	$502,021
Recreation & Entertainment	$6,638	$23,721	$14,539	$36,562	$8,838	$90,297
Merchandise	$2,449	$9,904	$5,498	$30,573	$10,567	$58,991
Shopping	$6,989	$51,553	$38,000	$58,165	$26,849	$181,556
Vehicle Expenses	$8,941	$70,055	$14,250	$17,318	$2,851	$113,416
Total	**$39,925**	**$410,431**	**$262,884**	**$552,843**	**$233,973**	**$1,500,056**

As a final step, spectators from outside of Halifax were asked as to the importance of the Ford World Men's Curling Championship in their decision to travel. The survey found that the importance of the event was very high with an overall score of 91%.[3] The attribution factor is then applied to the aggregate expenditure calculation to determine the amount of spending that is directly as a result of hosting the event. The results show that the spending directly attributable to the 2015 Ford World Men's Curling Championship was $1.4 million in 2015.

Table 2.5 Spectator Spending Adjusted for Importance of Event

Aggregate Spend Scaled by Importance	Sameday	Other NS	Other Atlantic	Other Canada	International	Average
Importance	*95%*	*89%*	*88%*	*92%*	*98%*	*91%*
Accommodation	$0	$119,193	$81,450	$212,286	$94,296	$507,225
Restaurant	$14,133	$109,133	$86,466	$163,113	$87,060	$459,905
Recreation & Entertainment	$6,293	$21,224	$12,809	$33,458	$8,670	$82,453
Merchandise	$2,321	$8,862	$4,844	$27,978	$10,366	$54,371
Shopping	$6,626	$46,125	$33,478	$53,227	$26,338	$165,794
Vehicle Expenses	$8,476	$62,679	$12,554	$15,847	$2,797	$102,354
Total	**$37,849**	**$367,215**	**$231,601**	**$505,910**	**$229,528**	**$1,372,102**

[3] Using a scale of 0-10 with 0 indicating the event had no influence in the decision to travel and 10 indicating it was the only reason for coming to Halifax.

3.0 Operations Expenditures

The organizers of the 2015 Ford World Men's Curling Championship invested significantly in producing a high-caliber event in Halifax, with expenditures covering items such as rental of the venue, volunteers, advertising, food and beverages and the business operations of supporting the event.

Even though they are not included directly in the budget, the 2015 Ford World Men's Curling Championship was supported by hundreds of volunteers from Halifax who donated considerable amounts of their time to make the event happen.

4.0 Economic Impact Results

The combined spending of out of town spectators, in combination with the expenditures made by the organizers through hosting the 2015 Ford World Men's Curling Championship totaled $3.4 million. This generated an estimated $7.4 million in economic activity for the Province of Nova Scotia, of which $5.3 million occurred in Halifax. These expenditures supported $2.5 million in wages and salaries in the Province through the support of 53 jobs, of which an estimated 41 jobs and $1.8 million in wages and salaries were supported in Halifax.[4] The total net economic activity (GDP) generated by the event was $3.8 million through the Province, with $2.5 million occurring in Halifax.

Considerable tax revenues were also produced by the event, totaling $1.5 million. The event supported federal government tax revenues of $638,000 with an additional $644,000 in taxes accruing to the Province of Nova Scotia. Moreover, $187,000 in municipal taxes were supported in Nova Scotia municipalities with $154,000 of the municipal tax base in the HRM being supported by the 2015 Ford World Men's Curling Championship.

Table 4.1 Ford World Men's Curling Championship Economic Impact – Summary Table

	Total Nova Scotia	Halifax
Initial Expenditure	$3,393,763	$3,393,763
GDP	$3,829,101	$2,485,338
Wages & Salaries	$2,516,854	$1,859,845
Employment	53.2	41.1
Industry Output	$7,450,400	$5,309,267
Total Taxes	$1,469,251	$1,071,013
Federal	$638,153	$451,143
Provincial	$644,476	$466,181
Municipal	$186,622	$153,689

[4] Jobs reported in this study refer to the number of jobs, vs. full time equivalent (i.e.: two people working half time in a job that typically features half time employment would represent two jobs or one FTE). Additionally, the direct employment effects are generally extra shifts or overtime for existing workers rather than new employment.

Table 4.2 Total Economic Impact

	Total Nova Scotia	Total Halifax	Rest of Nova Scotia
Initial Expenditure	$3,393,763	$3,393,763	$0
Gross Domestic Product			
Direct Impact	$1,152,088	$1,152,088	$0
Indirect Impact	$1,633,924	$833,577	$800,347
Induced Impact	$1,043,089	$499,673	$543,416
Total Impact	$3,829,101	$2,485,338	$1,343,763
Industry Output			
Direct & Indirect	$5,247,166	$4,254,113	$993,053
Induced Impact	$2,203,234	$1,055,153	$1,148,081
Total Impact	$7,450,400	$5,309,267	$2,141,134
Wages & Salaries			
Direct Impact	$938,590	$938,590	$0
Indirect Impact	$946,166	$612,978	$333,188
Induced Impact	$632,097	$308,277	$323,821
Total Impact	$2,516,854	$1,859,845	$657,009
Employment (Full-year jobs)			
Direct Impact [5]	18.8	18.8	-
Indirect Impact	20.3	13.3	7.0
Induced Impact	14.1	9.0	5.1
Total Impact	53.2	41.1	12.1
Taxes (Total)			
Federal	$638,153	$451,143	$187,010
Provincial	$644,476	$466,181	$178,295
Municipal	$186,622	$153,689	$32,932
Total	$1,469,251	$1,071,013	$398,238

[5] Jobs reported in this study refer to the number of jobs, vs. full time equivalent (i.e.: two people working half time in a job that typically features half time employment would represent two jobs or one FTE). Additionally, the direct employment effects are generally extra shifts or overtime for existing workers rather than new employment.

Appendix 1: 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 and event based 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.