

*Canadian Sport Tourism Alliance*



*Alliance canadienne du tourisme sportif*

# 2013 Devour! Food Film Festival Wolfville, Nova Scotia

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## Economic Impact Assessment

June 2014

*The following analysis provides the economic impact of the 2013 Devour! Food Film festival hosted from November 13 to 17, 2013 in Wolfville Nova Scotia as generated by the Sport Tourism Economic Assessment Model – Professional Version.*

## **Economic Impact Assessment Funding Partner**

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## 1.0 Background

The Devour! Food Film Festival is a celebration of cinema, food and wine culture that takes place annually in Wolfville, Nova Scotia. The event features five days of food films around the world along with industry sessions, farmer's market events, wine tours, chef demos, tastings & pop-ups, and hosts receptions and special dinners celebrating the very best of local and international food and wine. The 2013 edition was the 3<sup>rd</sup> time the event had been held and ran from November 13-17. The event attracted a considerable number of out of town visitors to Wolfville and their spending along with that of the event organizers generated a significant economic impact for the host community, which is the subject of this report.

In measuring the economic impact of the Devour! Food Film Festival, participants at the event were surveyed as to their origin, length of stay, and spending in Wolfville, with the survey methodology and results being the subject of the next section. The event organizers also invested significantly in hosting the Devour! Food Film Festival, as noted in Section 3. Finally, section 4 reports the STEAM PRO<sup>1</sup> results from the combined expenditures of visitors to Wolfville and the event organizers' operational expenditures. The appendices include more details about STEAM PRO, the economic impact assessment model used and a glossary of terms.

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<sup>1</sup>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 2013 Devour! Food Film Festival was collected through the administration of a face-to-face intercept survey. The survey captured essential information to determine the origin of participants taking part in the festival and the expenditures of out-of-town visitors to Wolfville. The survey was conducted using iPod Touch PDAs running Survey Analytics' Survey Pocket software.<sup>2</sup>

### Survey Results

A total of 125 visitor parties were approached during the event with 116 parties agreeing to participate (a rejection rate of 7%). Of this group, an additional 9 parties had been previously surveyed (7%), yielding a total of 106 valid surveys. The overall sample of valid surveys found that less than half of the respondents were from Wolfville (43%), 37% were from the Halifax Regional Municipality (HRM), 11% were from other parts of Nova Scotia and 9% were out of province visitors.<sup>3</sup> Among the out of town visitors 32% were making day trips to Wolfville while 68% spent one or more nights in the community.

The average respondent attended the Devour! Food Film Festival for 2.3 days over the duration of the event. Participants took part in a number of activities including attending films (87%), dinners and meals (56%) taking part in tours (31%) and attending industry sessions (11%). They typical Devour! movie viewer went to 2.74 movies during the festival.

The movie attendance information was used to determine the overall number of visitors who came to Wolfville. The organizers reported total attendance at all of the movie screenings in the festival reached 1,143. Dividing by the average number of movies per person gives 417 individuals who attended a movie as part of Devour! Adjusting for the share of people who didn't attend Devour! movies (13%) shows that the total attendance at the Devour! Food Film Festival was 481 people, of which 270 came from outside of Wolfville to participate in the event.

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<sup>2</sup>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>

<sup>3</sup> The sample size of 446 visitors representing 3,371 visitors gives a statistically significant confidence interval of +/- 4.3%, 19 times in 20.

**Table 2.1 Attendance Calculations**

Origin	Origin Share	Attendance by Origin	Number of Days Attended
Wolfville and region (<40km)	44%	212	2.5
Halifax HRM	37%	178	2.1
Other NS	11%	53	2.5
Other Atlantic	3%	14	2.3
Other	5%	24	2.4
<b>Total</b>	100%	481	2.3
<i>Total Visitors</i>	56%	270	2.2

The most common information source cited by survey respondents was hearing about the event from others, followed by newspaper ads & articles. Facebook was an important information source for out of town respondents.

**Table 2.2 Information Sources**

Information Source	Local	Visitor	Overall
Word of Mouth	42%	53%	49%
Newspaper	38%	18%	27%
Facebook	4%	15%	10%
Devour! Website	4%	13%	10%
Poster	11%	8%	10%
Radio	16%	5%	10%
Other	4%	12%	9%
Magazine	2%	7%	5%
Twitter	2%	5%	4%
Television	0%	5%	3%

### Visitor Spending

Out-of-town visitors were asked about their expenditures while in Wolfville. For the analysis, spectators were divided into two categories: those who made day trips to Wolfville and those who stayed one or more nights in the community. Overall the survey found that 31% of out of town visitors made day trips, with the most common source being HRM residents where 41% of visitors made day trips to Wolfville. The average same day visitor spent \$86 per person in Wolfville while the average overnight visitor spent \$273 per person.

**Table 2.3 Visitor Spending per Person**

	Sameday	Overnight	Average
<i>Party Size</i>	2.2	3.3	2.9
Accommodation	\$0.00	\$88.56	\$98.57
Food & Beverage	\$54.83	\$112.07	\$97.74
Recreation & Entertainment	\$10.60	\$33.10	\$26.64
Event Merchandise	\$2.79	\$9.81	\$7.99
Shopping	\$5.38	\$11.79	\$10.19
Vehicle Expenses	\$13.25	\$15.14	\$14.63
Taxi / Transport	\$0.00	\$2.42	\$1.82
<b>Total</b>	<b>\$86.85</b>	<b>\$272.91</b>	<b>\$257.57</b>

Combining the attendance estimates of Table 2.1 with the average spending per person from Table 2.3 shows that visitors to the Devour! Food Film Festival spent nearly \$58,000 in Wolfville.

**Table 2.4 Aggregate Visitor Spending**

	Sameday	Overnight	Total
<i>Visitors</i>	85	185	270
Accommodation	\$0	\$16,361	\$16,361
Food & Beverage	\$4,649	\$20,706	\$25,355
Recreation & Entertainment	\$899	\$6,116	\$7,015
Event Merchandise	\$237	\$1,812	\$2,049
Shopping	\$456	\$2,179	\$2,635
Vehicle Expenses	\$1,124	\$2,798	\$3,922
Taxi / Transport	\$0	\$448	\$448
<b>Total</b>	<b>\$7,364</b>	<b>\$50,420</b>	<b>\$57,784</b>

The final step is to incorporate the attribution factor, or the importance of the Devour! Food Film Festival in travellers’ decision to visit Wolfville. Survey respondents were asked to rate the importance of Devour! in their decision to travel using a scale of 1-10, with the results and attributable spending reported Table 2.5.

**Table 2.4 Visitor Spending Attributable to Devour!**

	<b>Sameday</b>	<b>Overnight</b>	<b>Total</b>
<i>Importance (1-10)</i>	9.3	8.6	8.8
Accommodation	\$0	\$14,054	\$14,054
Food & Beverage	\$4,310	\$17,786	\$22,096
Recreation & Entertainment	\$833	\$5,254	\$6,087
Event Merchandise	\$219	\$1,557	\$1,776
Shopping	\$422	\$1,872	\$2,294
Vehicle Expenses	\$1,042	\$2,403	\$3,445
Taxi / Transport	\$0	\$385	\$385
<b>Total</b>	<b>\$6,827</b>	<b>\$43,311</b>	<b>\$50,137</b>

### 3.0 Operational Expenditures

An analysis was also made of the operational expenditures made by the event organizers in hosting the 2013 Devour! Food Film Festival. The total budget for the event which was spent in Wolfville reached \$176,000.

While not included as a direct expenditure in the budget, the 2013 Devour! Food Film Festival was supported by a considerable number of volunteers whose time and effort greatly contributed to the success of the event.

## 4.0 Economic Impact Results

The spending of participants attending the Devour! Food Film Festival, in combination with the expenditures made by the event organizers in producing the event reached \$217,000, generating an estimated net economic activity (GDP) of \$271,000 in the Province of Nova Scotia, of which \$170,000 occurred in Wolfville. These expenditures supported \$192,000 in wages and salaries in the Province and an estimated 5 jobs, of which 4 jobs and \$141,000 in wages and salaries was in Wolfville.<sup>4</sup> The total economic activity (industry output) generated by the event was \$505,000 in the Province, with \$345,000 occurring in Wolfville.

The total tax revenues supported by the 2013 Devour! Food Film Festival reached \$96,500. Of this total, \$44,300 was attributable to the federal government while provincial tax revenues reached \$43,600 and municipal taxes were \$8,700, of which \$6,200 was in Wolfville.

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<sup>4</sup> Jobs reported in this study refers to the number of jobs not. Full-time equivalent (i.e. if a typical occupation featured 20 hours of employment and the event supported 40 hours of work, it would support 2 jobs or 1 FTE).

**Table 4.1 Total Economic Impact**

	<b>Total Nova Scotia</b>	<b>Local Area Wolfville</b>	<b>Rest of Nova Scotia</b>
Initial Expenditure	\$217,446	\$217,446	\$0
<b>Gross Domestic Product</b>			
Direct Impact	\$84,456	\$84,456	\$0
Indirect Impact	\$105,806	\$50,107	\$55,699
Induced Impact	\$80,719	\$35,419	\$45,300
Total Impact	\$270,982	\$169,982	\$101,000
<b>Industry Output</b>			
Direct & Indirect	\$334,597	\$270,040	\$64,557
Induced Impact	\$169,932	\$74,544	\$95,388
Total Impact	\$504,529	\$344,584	\$159,945
<b>Wages &amp; Salaries</b>			
Direct Impact	\$78,398	\$78,398	\$0
Indirect Impact	\$64,903	\$41,443	\$23,459
Induced Impact	\$48,713	\$21,371	\$27,342
Total Impact	\$192,013	\$141,212	\$50,801
<b>Employment (Full-year jobs)</b>			
Direct Impact <sup>5</sup>	1.9	1.9	-
Indirect Impact	1.8	1.2	0.5
Induced Impact	1.4	0.9	0.5
Total Impact	5.0	4.0	1.0
<b>Taxes (Total)</b>			
Federal	\$44,311	\$30,108	\$14,203
Provincial	\$43,565	\$29,437	\$14,128
Municipal	\$8,659	\$6,195	\$2,464
Total	\$96,535	\$65,740	\$30,795

<sup>5</sup> Direct employment impact is generally extra shifts or overtime for existing workers rather than new employment.

## **Appendix 1: Economic Impact Methodology – STEAM PRO**

### *Background*

Briefly, the purpose of STEAM PRO 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 PRO measures the direct, indirect & induced effects for each of these elements.

### *Technical Description of the Impact Methodology used by STEAM PRO*

STEAM PRO 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 PRO

**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.