



Where ideas take root.

Riverside International Speedway – Komatsu 300

September 18th – 20th, 2009

Economic Impact Assessment

The following report presents the economic impact of the Riverside International Speedway Komatsu 300 Race, hosted in Antigonish, Nova Scotia from September 18th – 20th 2009, as generated by the Sport Tourism Economic Assessment Model.

Economic Impact Assessment Funding Partners

The Antigonish Regional Development Authority would like to recognize the following financial supporters:

Nova Scotia Economic and Rural Development



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1.0 Background

The Riverside International Speedway is located in James River, Nova Scotia (15 minutes outside of Antigonish). The speedway originally opened on May 24, 1969, playing host to some of the best short track racing in Eastern Canada. The track was originally modelled after the Bristol Motor Speedway. After undergoing a major cosmetic lift, which included a new racing surface, concrete walls, lighting, grand stands, control tower, tech shed, and additional parking - the track re-opened on August 19, 2006. The track is oval in shape, 1/3 mile in distance and has a seating capacity for approximately 10,000 people.¹

The racing event drew over 4200 unique spectators, and 300 unique participants throughout the three day period. Spectator and participant expenditures, combined with the organizers expenditures produced considerable economic benefits within the community of Antigonish and for Nova Scotia as a whole. Within the next section (2.0), you will find details of the survey that was conducted in order to gain insight into the number of visitors and the impact in which they had on the local economy. Section 3.0 provides a window into the operational expenditures and revenues of the hosting organization, as these figures also have a major effect on the overall economic impact on Antigonish. Section 4.0 provides the STEAM² results of the collective expenditures from both the organizer's operational expenditures and the visitor's expenditures. Section 5.0 wraps up the assessment with a review of the assessment's results. The appendices consist of supplementary information regarding the economic impact model, a glossary of terms used throughout the document, and a copy of the survey used to gather the information required to complete the economic impact assessment.

¹For more information please visit http://www.riversidespeedway.ca/track_specs.html

²The Canadian Sport Tourism Alliance's **Sport Tourism Economic Assessment Model (STEAM)** was used to produce the economic impact estimates outlined throughout this assessment. STEAM was officially launched in 2002. It is a model that includes survey results from the event visitors and the budget/capital expenditures of event organizers in efforts of completing an economic impact assessment.

2.0 Methodology/Survey Results

The background information that was gathered on the participants and spectators of the Riverside International Speedway Komatsu 300 was collected by conducting face-to-face surveys. The surveys were designed in such a way that would depict where the subject was coming from, if they were staying in commercial accommodations and if so – how many nights, and specific information regarding their party. The specific design of the survey was based on the online STEAM Model and the information required in successfully completing this model. A copy of the survey used to carry out this assessment can be found in Appendix 3.

Survey Results

There were 4200 unique spectators and 300 unique participants for the three day racing event, Komatsu 300.

To ensure the quality of the data presented, a sample size calculator³ was used to calculate the appropriate sample size required to ensure accurate representation of the population within the results. The sample size of 1125 spectators (4200 total spectators) yields a statistically significant confidence interval of +/- 2.5%, and a 95% confidence level. We obtained survey results from 1165 spectators. The sample size of 169 participants (300 total participants) yields a statistically significant confidence interval of +/- 5.0%, and a 95% confidence level. We obtained survey results from 169 participants.

As represented in **Figure 2.1**, 14% of total participants were local to Antigonish (Antigonish Town and County). Total visitor origin is clearly outlined in **Figure 2.2**.

Of the 4200 total spectators, 1165 were surveyed. A total of 41% of visiting spectators chose to stay overnight. Those visiting spectators who chose to commute back and forth daily represented 59% of the total spectator population. Of the visiting Canadian spectators, 9% travelled from outside of the province of Nova Scotia and 91% from within. Of those visiting spectators who chose to stay the night in Antigonish, the average overnight length of stay was 2.3 nights. For those visiting spectators who chose to commute daily, the average number of day trips taken by each spectator was 1.5.

Of the 300 total participants, 169 were surveyed. Visiting participants that chose to stay overnight in Antigonish represented 88% of the total participant population, and those visiting participants who chose the daily commute represented 12% of the total participant population. Of the visiting Canadian participants, 67% were from out of province, with the remaining 33% from within Nova Scotia. For those visiting participants who chose to stay overnight in Antigonish, the average overnight length of stay was 2.3 nights. For those visiting participants who chose to commute daily, the average number of day trips taken by each participant was 1.6.

³ For more information please visit <http://www.surveysystem.com/sscalc.htm>.

Figure 2.1

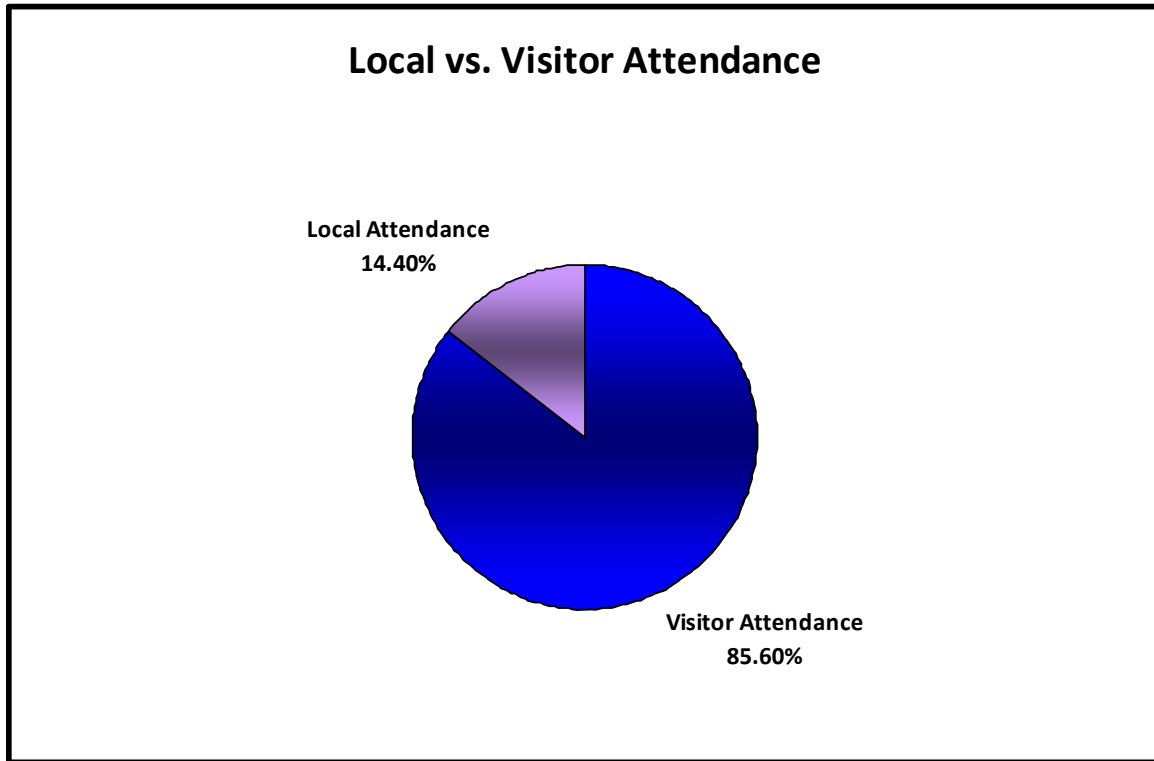
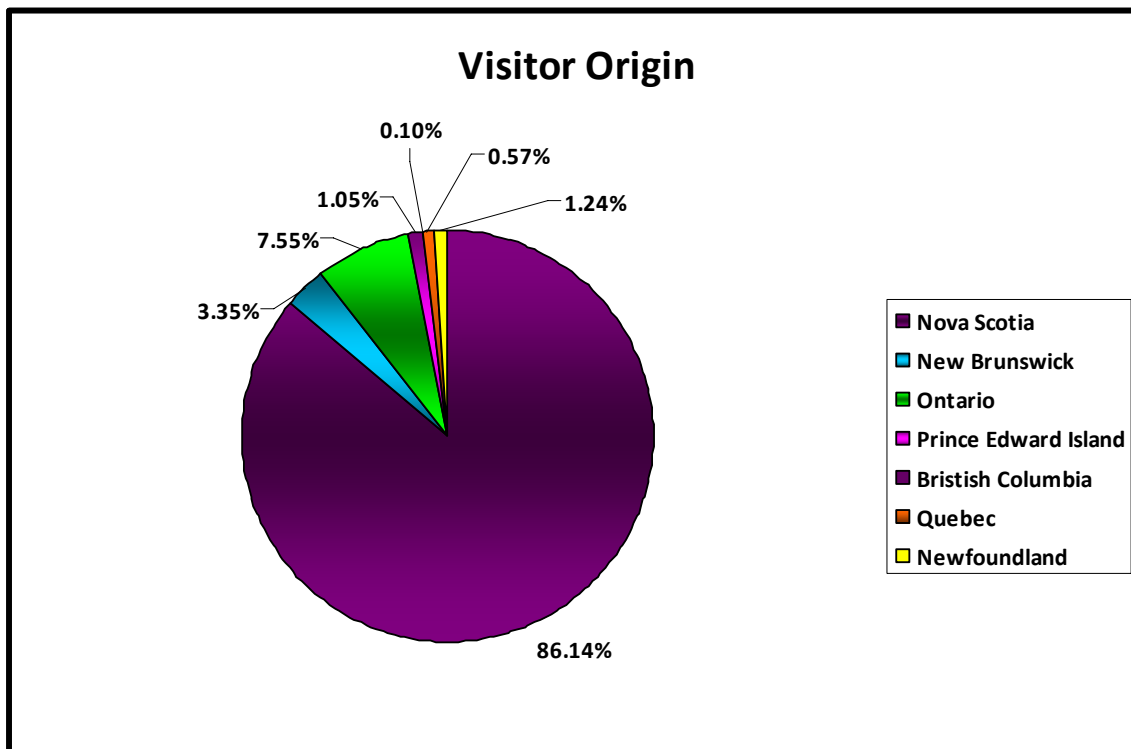


Figure 2.2



3.0 Operational Expenditures

The Riverside International Speedway is continuously making investments into the speedway ensuring that the experience had by each spectator and participant is in every way, a positive one. The investments accounted for within this assessment are those pertaining to the specific and individual event that was held on the weekend of September 18th – 20th, 2009 – the Komatsu 300. Spending for the Komatsu 300 by the organizers totalled \$115,000. This amount covered many items inclusive of, but not limited to: salaries, fees and commissions, advertising, food and beverages, and merchandise and retail.

4.0 Economic Impact Results

The collective spending of the 4,500 spectators and participants, plus the revenues and expenditures of the Riverside International Speedway as a result of hosting the event totalled \$706,727. This \$706,727 generated \$1,554,592 in economic activity for the Province of NS, of which approximately \$1,062,724 occurred in Antigonish. This spending supported \$514,701 in wages and salaries for the Province of NS through the support of 36 jobs, of which 32 were in Antigonish⁴. The total net economic activity (GDP) produced by the Komatsu 300 was \$760,335 for the Province of NS, with \$497,849 of that amount occurring within Antigonish.

Both the Province of NS and the Municipalities of Antigonish will see the direct benefits of the significant tax revenues generated by this weekend long event, which totalled \$311,996. The Komatsu 300 supported tax revenues for all three governmental levels. Federal Government tax revenues were in the amount of \$141,937 and Provincial Government tax revenues were in the amount of \$140,206. Municipal Government tax revenues were in the amount of \$29,852.

⁴ Jobs accounted for throughout this study pertain 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 Nova Scotia	Local Area Antigonish	Rest of Nova Scotia
Initial Expenditure	\$706,727	\$706,727	\$0
Gross Domestic Product			
Direct Impact	\$303,165	\$303,165	\$0
Indirect Impact	\$248,127	\$105,239	\$142,888
Induced Impact	\$209,043	\$89,445	\$119,598
Total Impact	\$760,335	\$497,849	\$262,486
Industry Output			
Direct & Indirect	\$1,110,601	\$872,879	\$237,722
Induced Impact	\$443,992	\$189,845	\$254,146
Total Impact	\$1,554,592	\$1,062,724	\$491,868
Wages & Salaries			
Direct Impact	\$244,092	\$244,092	\$0
Indirect Impact	\$143,500	\$61,005	\$82,495
Induced Impact	\$127,109	\$55,355	\$71,754
Total Impact	\$514,701	\$360,452	\$154,249
Employment (Full-year jobs)			
Direct Impact	27.9	27.9	0.0
Indirect Impact	3.9	1.8	2.0
Induced Impact	3.8	2.3	1.5
Total Impact	35.6	32.1	3.5
Total Taxes			
Federal	\$141,937	\$98,531	\$43,406
Provincial	\$140,206	\$102,098	\$38,108
Municipal	\$29,852	\$23,307	\$6,545
Total	\$311,996	\$223,936	\$88,060

5.0 Conclusion

The Riverside International Speedway Komatsu 300, which took place from September 18th-20th, 2009, had a major impact on the economy of the community of Antigonish. The racing event brings together an assortment of spectators and participants, of whom represent a wide spectrum of demographic profiles. More than 4500 spectators and participants attended the weekend event, and as a result of their attendance, the economic activity within the community of Antigonish was increased by \$591,727. Operational expenditures and revenues of the Riverside International Speedway brought the economic activity increase from \$591,727 to \$706,727. This increase resulted in a net increase in economic activity of \$760,335 throughout the province of Nova Scotia, of which \$497,849 occurred in Antigonish. The total industry output (gross economic activity) upheld by the event was \$1,554,592, which supported \$514,701 in wages and salaries throughout Nova Scotia. In Antigonish, 32 jobs and \$360,452 in wages and salaries were supported by the event.

Appendix 1. Economic Impact Methodology – Sport Tourism Economic Assessment Model⁵

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. Additional exports are not assumed with the induced impact. 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.

⁵ The "Economic Impact Methodology of STEAM" has been quoted in its entirety from the Canadian Sport Tourism Alliance's STEAM User's Guide. The guide can be found at: http://www.canadiansporttourism.com/app/DocRepository/1/Products/STEAM_Users_Guide_2.pdf

Regional (Sub-Provincial) Impact Methodology

The method used to simulate interprovincial 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 interprovincial 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 (intra-regional), the higher the exponent.

Appendix 2: Glossary of Terms Used by STEAM⁶

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.

⁶ The "Glossary of Terms Used by STEAM" has been quoted in its entirety from the Canadian Sport Tourism Alliance's STEAM User's Guide. The guide can be found at: http://www.canadiansporttourism.com/app/DocRepository/1/Products/STEAM_Users_Guide_2.pdf

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 3: Riverside International Speedway Komatsu 300 Survey

1. Where are you from?
2. Will you be spending the night in Antigonish?
3. How many nights?
4. How many nights will be spent in commercial accommodations?
5. If not staying the night, how many day trips will you be making?
6. # of people travelling in your party
7. # of those people participating?
8. # of those people who are spectators?
9. of your total party size how many are:
 - under 19
 - 19 – 44
 - 45 and over

Disclaimer: The results of this economic impact analysis are intended to act as a guide and are not considered definitive of the actual events. All projections should be considered an event's potential economic impact. The projections are based on standardized spending estimates that may or may not reflect that of the highlighted event's attendees. In addition, the projections are based on the organizer's data regarding attendance, composition and characteristics. These forecasts are subject to uncertainty and evolving future events, therefore actual results may vary from forecasted results. Additionally, these forecasts only recognize the economic benefits of the event, and do not consider any displacement or substitution costs that may occur as a result of hosting the event.