

2000 Arctic Winter Games Economic Impact Statement

Final Report

(Revised Version)

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By

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Executive Summary

- The 2000 Arctic Winter Games (AWG) were held in Whitehorse and Haines Junction, Yukon from March 5-11. The Games had a considerable impact on the economies of the City of Whitehorse, the village of Haines Junction and the Yukon Territory.
- This final report provides a detailed analysis of the overall economic impact of the 2000 AWG. It includes an evaluation of the 'direct', 'indirect' and 'induced' economic impacts of the Games, as well as an analysis of the employment effects of the event. In addition, the report describes and provides an analysis of data compiled from surveys of AWG patrons.
- The analysis of the data suggests that the 2000 AWG resulted in 'autonomous spending' of \$4.585 million in the Territorial economy (arising from spending in the Yukon by both the Host Society and various out-of-territory visitors). The overall impact of this autonomous injection into the economy was an increase in spending in the Yukon of \$5.869 million.
- Given the limited economic base of the Yukon, some of the additional expenditures were made on 'imports' from outside the Yukon. Therefore, the effect of this increased spending on Gross Domestic Product (GDP) of the Yukon Territory was projected to total \$3.289 million. Of this amount, some \$2.503 million was accounted for by increases in labour income. This resulted in an estimated effect on the Yukon Territory economy of 99.13 person years of employment.
- The overall spending multiplier attributed to initial injections into the Yukon economy was 1.280. Total spending attributed to all levels of government (federal, provincial, municipal, and lottery funding) amounted to \$1.615 million. Therefore, the government spending multiplier in the Yukon of the Games was 3.635.
- The same analysis reveals that the 2000 AWG resulted in 'direct autonomous spending' in the Whitehorse economy of approximately \$4.877 million. Although detailed models of the specifics of the Whitehorse economy are not available, an attempt was made to estimate the impact that the 2000 AWG had on the host city's economy. By extrapolating from the spending, GDP, labour income, and employment impacts on the Yukon Territory economy, the AWG had an overall estimated economic impact on the Whitehorse economy (as measured by spending) of \$6.252 million.
- The effect of this increased spending on the GDP of Whitehorse is estimated at \$3.489 million. Of this, labour income accounted for an estimated \$2.647 million. This resulted in an estimated increase of 106.12 person years of employment in Whitehorse.
- The overall spending multiplier attributed to initial injections into the Whitehorse economy was 1.282. The government spending multiplier of the Games for Whitehorse was 3.872.
- The 'direct impact' of the 2000 AWG on the Haines Junction economy was estimated to be \$0.050 million. Because of the relative size of its economy, and in order to avoid presenting misleading information, no attempt was made to generate estimates for 'indirect' and 'induced' spending in the village of Haines Junction.
- In addition to the measurable economic benefits of hosting the Games, an overwhelming majority of those attending the event considered that the Games were both worthwhile and a successful venture. Furthermore, visitors to Whitehorse received a positive impression of the city and its residents.

- It must be stressed that these results rely upon the assumptions outlined in the analysis. The estimates of economic impact and the assumptions are inextricably linked.

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Introduction

The 2000 Arctic Winter Games (AWG) were held in Whitehorse, Yukon, from March 5-11. This represented the sixteenth edition of this biennial festival that combines athletic competition, cultural exhibition, and social interchange between residents of the North. The AWG brought together over 2,700 athletes, cultural performers, coaches, officials, special guests, and spectators from across the North and beyond. Although the focus of the AWG is to provide competitive and artistic opportunities for athletes and cultural performers, who reside in the North, it is becoming increasingly imperative for event organisers and promoters to estimate the impact that the Games have on the economies of the host jurisdictions. In part, this is because of the steady increase in magnitude of the Games since its inaugural edition in 1976, when 500 participants attended.

This final report of the economic impact of the 2000 AWG focuses on the financial aspects of the Games (as opposed to social, cultural, or environmental impacts). It should be stressed that the results contained in this report are based on the assumptions contained within the document. These results and assumptions are inextricably linked. The Client (the AWG International Committee) was provided with an interim report in which the various assumptions were outlined and was invited to provide feedback if the presumptions were thought to be invalid. Some of these original assumptions have been modified as a result of Client feedback. Furthermore, slight modifications have been made to the use of employment multipliers to account for inflation between 1990 and 2000.

In addition to an economic impact statement, the final report also includes a brief analysis of data that were collected from patrons by the Consultant during the 2000 AWG. In combination with other studies of the social impact of the 2000 Arctic Winter Games, these findings will be useful in highlighting the economic and social benefits that were derived from hosting these Games.

Scope of the Report

The economic impact of the 2000 AWG is defined as “*The net change in spending in the host economy as a result of spending attributed to the event*”.

The ‘host economy’ is defined as “*The Yukon Territory*”. By investigating the impact of spending at the 2000 AWG on the Yukon Territory, it was possible to use the input-output model, and associated multipliers, employed by the Yukon Government Bureau of Statistics. This model has been developed to assess the secondary impact of autonomous spending in different areas of the Yukon economy. For example, if new spending is made on providing food for athletes, the model provides an estimate of the total effect that that injection of money will have on the territorial economy. In addition, an (albeit somewhat less reliable) estimate is also provided of the impact of the Games on the city of Whitehorse, and (at the request of the Client) on the village of Haines Junction (see explanations below).

It is important to note that many of the patrons who attended the AWG who normally reside outside of the Yukon incurred considerable expenditures (for example in the form of team levies, or through participation in various contingent qualification tournaments) in other regions of the North. Since the majority of these expenditures took place outside the Yukon (or, in the case of Yukon team members, were considered to be re-distributions of expenditure within the territorial economy), they have not been considered as a part of this economic impact statement.

The study provides an assessment of the economic impact of the 2000 AWG on the economy of the Yukon Territory. In broadening the analysis to the impact at the Territorial level, it is important to note that a number of patrons attended the Games from across the Yukon. In economic impact studies, it is normally assumed that any expenditures incurred at an event by residents of the host jurisdiction in that area merely represents a redistribution of spending within the local economy. In other words, if the Games had not taken place, it is normally assumed that local residents would simply have spent their money elsewhere in the region. Given the limited nature of the Yukon economic base, it is likely that at least some of the spending made at the AWG by a resident of Mayo (for example) in Whitehorse might otherwise have been made outside the Territory (for example, on a trip to Vancouver). Thus, the impact on the Yukon economy has likely been slightly underestimated under this assumption. In order to preserve the integrity of the final economic impact statement, it is preferable to underestimate (as opposed to exaggerate) the spending impact. Nevertheless, an illustration of how a relaxation of this assumption might affect the overall impact of the Games has been provided in the body of the report.

In addition to evaluating the effect of the Games on the Territorial economy, estimates of the impact of the Games on the City of Whitehorse and (based on limited information) the village of Haines Junction have been made. Unfortunately, there is no suitable model for evaluating the impact of ‘ripple-effect’ spending engendered by the initial increase in spending in Whitehorse or Haines Junction alone. Therefore, it should be stressed that the estimates for the so-called ‘indirect’ and ‘induced’ impacts of the Games on Whitehorse were based on educated assumptions regarding the nature of the Whitehorse economy in relation to that of the Yukon. The impact on the City of Whitehorse includes all spending made by residents of the Yukon who do not live in Whitehorse. This is because, for

Whitehorse, these expenditures represent injections into the local economy. Given the size of Haines Junction's economy, no local multiplier was applied to the autonomous spending estimates as this could have lead to grossly misleading results.

The overall economic stimulus comprises of autonomous (or 'direct') impacts and secondary (or 'indirect' and 'induced') impacts on economic activity. These terms are briefly explained below.

Direct Impact

The direct economic impact of the AWG comprises of transactions that are related to the event. These include construction, labour, the host society budget, and expenditures by event patrons (including spectators, special guests, media, athletes, cultural performers, officials, coaches, and team staff). These expenditures occurred both at the AWG venues and at various commercial establishments in Whitehorse. It is assumed in this study that any in-kind contributions to the Games from local suppliers are similar to cash expenditures by those vendors. The majority of in-kind contributions appeared to have been made by relatively large organisations. Therefore, the assumption that these donations are similar to actual expenditures is a close approximation. However, this analysis does not include an estimate of the economic value of the numerous hours of volunteer labour that was essential for the staging of the Games. Furthermore, no account is made of the value of Yukon Territory Government employees' time that was 'donated' by various departments of the Yukon during the Games.

It is assumed that the Host Society's budget represents a new and autonomous injection of spending into the economy. In other words, these expenditures would not have been spent in the community if the AWG had not been held. This is probably a simplification of the true situation in that some of the corporate and Territorial/city government support provided for the Games might have been spent on other projects had the Games not been hosted in Whitehorse. Given that Whitehorse might be hosting the 2007 Canada Winter Games, some spending made for the 2000 AWG may have been done in preparing for the eventuality of hosting the national event. Nevertheless, it would be unrealistic to suggest that these expenditures were not made as part of the 2000 AWG preparations. Also, it is reasonably clear that funding provided by the federal government for the Games would not have been made available for alternative projects in the Yukon.

In addition to evaluating the increased spending in the Yukon and Whitehorse that is attributable to the 2000 AWG, this economic impact statement also provides information on the effect that the 2000 Arctic Winter Games had on the Gross Domestic Product (GDP) of the Yukon Territory economy. Given the limited industrial base of the economy of the Yukon Territory, it must be recognised that the total expenditures made by the Host Society (even if they were initially made in the Territory) will not have an equal impact on the GDP of the Territory. The following example illustrates why this is the case. If the Host Society spent \$10,000 on computing equipment and supplies, a large proportion of that spending would effectively be an 'import' into the economy of the Yukon. This is because the majority of computing equipment and supplies that are consumed in the Yukon are produced out of the Territory. Such spending on 'imports' has little impact on the economic wellbeing of residents of the Yukon (because it represents a net outflow of resources produced within the Territory). Similarly, a

large proportion of spending made by visitors from out of the region at retail outlets and on restaurant meals ultimately found its way out of the Territory because many of the supplies and goods had to be imported from elsewhere. Thus the overall effects on GDP are lower than the effects on spending.

Indirect and Induced Impacts

The indirect impact of the AWG involves the chain of economic transactions that resulted from the direct impacts. Such indirect effects are the ripple effects that occurred when the Host Society, patrons, and their service providers purchased inputs from other agents in the Yukon economy. The induced, or re-spending, effects of initial spending occur when agents producing for, or supplying, the Games (and its patrons) hire more staff or pay additional wages. This results in an increase in the incomes of households. After they withdraw a certain portion of this increased income for taxes and savings, these households spend this additional income. In turn, this increases demand for other commodities within the Yukon.

As is stated above, it is difficult to evaluate the indirect and induced impacts of spending on the economy of the City of Whitehorse alone. However, an attempt has been made to estimate these effects on the Whitehorse economy in this report. This estimate is based on the simplifying assumption that there are no secondary spillover effects from the Whitehorse economy to the economies of other areas of the Yukon. Initial increases in spending in Whitehorse are assumed to have resulted in Yukon spillover spending concentrated in Whitehorse, rather than other areas of the Territory. This does not imply that all increases in economic activity were concentrated in the City, but merely that the increases in Yukon economic activity did not occur elsewhere in the Territory. This has the effect of slightly over-emphasising the so-called 'multiplier effect' of initial spending in Whitehorse. Nevertheless, it is highly likely that only a very small amount of economic activity will have resulted in other parts of the Yukon as a result of initial spending in Whitehorse.

The final estimate of the total economic impact of the 2000 AWG considers the combination of direct, indirect, and induced economic impacts, and is based on data collected prior to, during, and after the completion of the Games. The various estimates incorporate the considerable feedback that was provided by members of the AWGIC and Host Society. Much of this feedback resulted from a thorough review of an interim report containing preliminary estimates that was provided to the Client by the Consultant.

Data and Methods

Host Society Expenditures

The latest financial statements of the Host Society were provided to the Consultant. Since the final audited statement of accounts was not available at the time of completing this report, these figures have been used to evaluate the Host Society expenditures. Information provided by both the AWGIC and the Host Society indicates that it is highly likely that there would only be very minor differences between these interim statements and the final audited budget figures. Therefore, any such variance in the budget figures will have an insignificant effect on the economic impact statement contained in this report.

While the majority of organisational spending was incurred by the Host Society in Whitehorse, some events took place in the village of Haines Junction. The Consultant contacted a representative of the Haines Junction organising group, who provided spending figures that were incurred there.

Visitor Expenditures

In addition to considering the spending of the Host Society, a survey was developed to provide an accurate measure of visitor expenditures for all categories of possible spending. These categories included lodging, meals, groceries, gasoline, retail shopping, and entertainment. (See Appendix A). Other questions included on the survey were designed to determine residency of patrons, the size of the visitor group, and the main reason for visiting Whitehorse. In addition, the opinions of the respondents about the services available in Whitehorse and the AWG concept were also sought.

Interviews were conducted with a random sample of AWG patrons during the latter part of the weeklong event. The sample was, strictly speaking, one of convenience in that respondents were selected by trained survey personnel who were instructed to sample as wide a variety of patrons as possible. Every effort was made to ensure that the sample was representative of the population of the patrons. The spending patterns of the members of the sample are assumed to be representative of those of the patron population as a whole.

A total of 353 completed patron surveys were obtained during the last three days of the AWG. These responses recorded the spending patterns of some 405 visitors to Whitehorse who were in the city for the prime purpose of attending the AWG. The difference between these two figures (405 and 353) is accounted for by the fact that the questions on the surveys dealt with 'visitor group' (such as family), rather than individual spending patterns.

In order to estimate the total number of visitors that attended the AWG in Whitehorse, representatives from a variety of groups were contacted. These included the 'chefs de mission' for each contingent, the AWGIC, and the Host Society. Feedback provided by these groups allowed for a more accurate estimate of visitor numbers than was possible at the time of writing the previously submitted Interim Report on Economic Impact at the 2000 AWG.

In addition to the patron surveys and the financial statements of the Host Society, the Consultant was provided with the numbers of athletes, cultural performers, coaches, officials, and team staffs of the attending delegations. Furthermore, brief interviews were conducted with members of the Mission staff of each delegation to determine the number of spectators, special guests, and media representatives that accompanied the teams. Subsequent discussions with representatives of the AWGIC and the Host Society indicated that these original estimates erred on the conservative side. For example, it was claimed that major hotels in Whitehorse were full for the duration of the Games. The normal occupancy rate for the first week in March is approximately 10% of available beds. While residents of rural Yukon stayed in some of the rooms, it is evident that others were occupied by Games patrons from across the North and elsewhere. Additionally, spectators from across North America made a number of inquiries for accommodation directly to the Host Society. These spectators would not have been accounted for by Mission staff estimates for each contingent's 'accompanying spectators'. Therefore, adjustments were made to the original estimates of patron figures to more accurately reflect the actual number of visitors to Whitehorse during the AWG.

From these various sources, the following numbers of non-Whitehorse residents in various categories were estimated to have attended the Games: athletes and cultural performers (1136), coaches, chaperones and mission staff (257), officials (74), spectators (755), media (105), guests and sponsors (253), and volunteers (150). A number of non-Whitehorse-resident Yukoners included in these totals. These figures are illustrated in Table 1. This table provides a breakdown of the numbers of non-Yukon visitors and non-Whitehorse-resident Yukon patrons by each category.

Table 1 Estimated AWG 2000 Patron Population (non-Whitehorse Residents)

	Non-Yukoners	Non-Whitehorse Yukoners	Total
Athletes & Cultural Performers	1092	44	1136
Coaches, Chaperones & Mission Staff	250	7	257
Officials	70	4	74
Spectators	530	225*	755
Media	94	11	105
Sponsors* & Guests	223	30	253
Volunteers	57	93	150
<i>Totals</i>	<i>2316</i>	<i>414</i>	<i>2730</i>

*The figures for sponsors and visiting Yukon spectators represent have been adjusted for '7-night-stay' equivalents (e.g., a total of 53 sponsors are assumed to have stayed for 5 nights each, representing 38 7-night-stays)

As is indicated in Table 1, it is estimated that the Games attracted a total of 2730 'week-long-equivalent' visitors to the city. Survey data were coded and entered into a computer software program for analysis. Thus, it is estimated that 14.8% of the non-Whitehorse-resident patron population was surveyed. A sample accounting for the spending pattern of 405 patrons within the population produces

a sampling error of plus or minus 5% in 19 cases out of 20. The margins are wider for demographic sub-samples.

As a point of comparison, the total out-of-territory visitor numbers represent an increase from those estimated for the 1998 AWG in Yellowknife of 567 patrons or 32.4%. The total number of estimated out-of-town patrons increased by 486 patrons or 21.7%. The differences are largely accounted for by increases in both out-of-Territory spectators (250 more in Whitehorse) and in-Territory but out-of-town (160 more in Whitehorse). The number of visiting guests, sponsors, and media is estimated to have increased from 273 in 1998 to 358 in 2000. These figures highlight both the steady growth of the reach and importance of the Arctic Winter Games, and the considerable efforts of the Host Society to promote the Games to a wider potential audience (particularly through web-site advertising and information).

Yukon Territory Multipliers

In order to determine the actual effect of the estimated injection of spending into the Territorial economy, data obtained from the input-output (IO) model developed by Statistics Canada were employed. The Yukon Bureau of Statistics and Yukon Economic Development supplied these data. The Yukon Territory IO model is designed to analyse the employment, income, and other impacts associated with expansion of territorial economic activity. The Yukon Territory IO model provides useful information regarding the various economic linkages that exist between different industries in the Territory. The IO accounts also provide a basis for the determination of economic multipliers, which are particularly important in economic impact studies. Furthermore, they provide a means of estimating the impact on Territorial spending and GDP of expenditures made in the Yukon.

Unfortunately, the latest available IO tables area based on the economic activity that existed in the Yukon in 1990. There have clearly been considerable changes in the type of economic activity in which Yukon residents engage in the previous decade. Thus, these multipliers represent a best estimate of the impacts of autonomous spending in the Yukon using the information that is currently available regarding economic linkages between industries in the territory.

While the labour and GDP multipliers are relative and are therefore unaffected by price inflation, this is not true of the employment multipliers. In order to account for price and wage inflation between 1990 and 2000, the following adjustments were made to the data provided by the Yukon Bureau of Statistics. Weekly earnings in selected industries for the years 1999 and 1991 were compared in order to determine the wage inflation that had occurred over this period. This provided a deflator for selected industries. These were most recent and oldest available figures (obtained from the Yukon Statistical Review Annual Report, 1999, Table 2.8). In order to account for an additional year of inflation (i.e., 1990-1991), the deflator was augmented by a further 0.11 (i.e., one ninth). Although the AWG occurred in 2000, it was felt that 1999 wage figures were more appropriate to use as the majority of the employment effects were felt either prior to the Games (in 1999) or in the first three months of 2000. This resulted in changes to the 1990 employment multipliers of between 0% and 14%, depending on the industry.

The Arctic Winter Games are assumed to have generated a one-time injection of spending into the economy, similar to a one-time tourist event. Some of this money flowed directly out of the economy, for example where funds were used to purchase goods and services from outside the Yukon. Other spending circulated through the Territorial economy; for example where residents locally spent increased wages that resulted from initial expenditures associated with the Host Society or patron spending. The IO model provides an estimate of the effects on the Yukon GDP of ‘direct’ and total (accounting for ‘indirect’ and ‘induced’) spending arising from the hosting of the 2000 AWG.

Table 2 provides a summary of the Yukon Territory labour (income), GDP, employment, and output multipliers for selected industries. The table is derived from data provided by the Yukon Bureau of Statistics, and the Government of Yukon Economic Research and Analysis section of Economic Development.

Table 2 Yukon Territorial Multipliers (Selected Industries)

	Labour Direct	Labour Total	GDP Direct	GDP Total	Employment Direct*	Employment Total*	Output Multiplier
PRINTING, PUBLISHING & ALLIED IND.	0.43	0.47	0.60	0.67	0.012828	0.014140	1.18
CONSTRUCTION INDUSTRIES	0.34	0.40	0.41	0.49	0.010533	0.012570	1.18
TRANSPORTATION INDUSTRIES	0.28	0.37	0.45	0.59	0.004655	0.006986	1.32
COMMUNICATION INDUSTRIES	0.65	0.71	0.84	0.92	0.013096	0.014693	1.15
OTHER UTILITY INDUSTRIES	0.13	0.18	0.64	0.70	0.002156	0.003376	1.15
WHOLESALE TRADE INDUSTRIES	0.54	0.61	0.66	0.76	0.014870	0.017188	1.26
RETAIL TRADE INDUSTRIES	0.45	0.56	0.54	0.71	0.018196	0.021717	1.40
FINANCE & REAL ESTATE INDUSTRIES	0.28	0.39	0.57	0.73	0.005218	0.008635	1.35
BUSINESS SERVICE INDUSTRIES	0.61	0.69	0.70	0.82	0.026662	0.029082	1.26
ACCOMMODATION & FOOD SERVICE IND.	0.40	0.48	0.55	0.67	0.022331	0.024640	1.27

Notes:

- Labour income, GDP, and Spending multipliers are per \$1.00 of exogenous industry output “shock”
- *Direct and total employment effects per \$1,000 of output and are deflated as described in the body of the report
- Multipliers were provided by Yukon Government Bureau of Statistics, and Yukon Economic Development and are based on Statistics Canada IO Tables

These multipliers enable us to estimate the various income, employment, GDP, and spending effects of increases in expenditures in particular sectors of the Yukon economy. For example, for each thousand dollars spent in the construction industry in the Yukon, the direct GDP impact is 410 dollars (i.e. 0.41 x \$1000), while the total (direct, indirect, and induced) GDP impact is 490 dollars. The same thousand dollars result in a direct increase in labour income of 340 dollars and a total increase of 400 dollars (after allowing for indirect and induced effects). The overall ‘output’ effect of the initial thousand dollars of expenditure on construction in the Territorial economy is \$1180. The employment effect of a one hundred thousand-dollar rise in output in the construction industry is 1.257 jobs (i.e., 0.01257 x \$100,000) as measured in person-years of employment). Similarly, each thousand dollars spent on retail trade industries results in a direct GDP impact of 540 dollars and a total GDP effect of

710 dollars. The 'output' effect of an initial thousand dollars of expenditures in retail trade is \$1400, etc.

Results

Host Society Spending

From the final expenditure estimates contained in the financial statements provided by the Host Society (dated June 30, 2000), the following table (Table 3) was devised. The objective here was to categorise expenditures made by the Host Society into the industrial sectors for which labour, employment, GDP, and spending multipliers are available. These categorisations were subsequently used to determine the direct, indirect, and induced economic impact of the initial expenditures that were made by the Host Society.

It is assumed that all spending made by the Host Society was new spending which would not otherwise have been made. Although some of the facilities developed and improved upon for the 2000 AWG may be used for future events in Whitehorse, the AWG served as the initial stimulus for these improvements and developments. Therefore, it is considered that these are impacts of the 2000 AWG. Some of the direct Host Society spending was made outside of the Yukon Territory. Information provided by the Host Society indicated the amount of spending that it made elsewhere. As is stated above, it is not assumed that each commodity purchased by the Host Society was actually produced in the Yukon Territory. Given the limited nature of the economic base in the Yukon, this would have been an unrealistic assumption that would have resulted in an incongruously high evaluation of the impact of the AWG on the Territorial GDP. The Yukon input-output model provides estimates of the GDP effect of a dollar spent in the Territory on specific goods and services.

In order to evaluate the induced effects of the autonomous spending of the Host Society, various assumptions were required to divide the general-spending categories outlined in the budget statements into the industries for which multipliers in the Yukon economy are available. Since the financial statements were not designed for estimating the economic impact of the AWG, it is difficult to determine precisely those industrial sectors in which the funds were spent. Nevertheless, having consulted with a representative of the Host Society, it is felt that reasonable assumptions have been made regarding to actual industrial sectors in which spending occurred. The financial statements indicate that the Host Society has a contingency surplus of \$69,247. It is assumed that this amount has been (or will be) reinvested into the local economy. For example, the profit may be used as seed money for hosting future Games projects of this nature, or it may be invested into local recreation programming.

Based on these assumptions, the information provided by the Host Society, and the budget statements, the various industries in which Whitehorse Host Society expenditures were incurred are illustrated in Table 3. Thus, for example, it was estimated that a total of \$47,431 was spent by the Host Society in “construction industries”, \$402,591 was spent in the “transportation” industrial sector, \$87,484 was spent in “communication industries”, etc. Again, it must be stressed that the financial statements of the Host Society were not designed to track the specific industry in which expenditures were incurred, and so Table 3 represents the best estimate of industry spending, based on the detail available.

Table 3 Whitehorse Host Society Expenditures by Industry

<i>Industrial Sector</i>	<i>Amount (\$)</i>
Construction Industries	47431
Transportation Industries	402591
Communication Industries	87484
Other Utility Industries	30500
Wholesale Trade Industries	601470
Retail Trade Industries	305329
Finance & Real Estate Industries	121170
Business Service Industries	1319432
Printing, Publishing, & Allied Industries	341243
Accommodation & Food Service Industries	435961
TOTAL	3692611

Information provided by the Host Society indicated that a total of \$551,000 of its purchases (or in-kind donations) was made outside the Yukon Territory. This figure comprised of \$275,000 for merchandising and fixtures, \$62,000 for banners, signage, flags, mascot, \$79,000 for equipment, \$25,000 for staging and technical equipment, and \$110,000 for bags and accreditation equipment. It was estimated that the out-of-territory spending was accounted for in the following industries: transportation (\$75,000), wholesale trade (\$310,000), retail trade (\$89,000), business services (\$12,000), printing, publishing and allied services (\$50,000), and accommodation and food services (\$15,000).

Some events during the 2000 AWG were held in the community of Haines Junction. Information provided to the Consultant indicated that the organisers there had their own budget from which they made facility improvements totalling \$30,000. Also, it was indicated that the local organisers provided meals and refreshments for athletes, coaches and officials who participated in events in the village. The total amount spent on meals and refreshments by the Haines Junction organisers was \$9,000. An additional \$2,000 was spent on equipment rental. Thus, the Haines Junction organisers spent a total of \$41,000 in new spending, attributable to the 2000 AWG. In addition, a 'Zamboni' ice cleaner was purchased and used during the Games, but this expenditure would have been incurred anyway, even if none of the events in the 2000 AWG had been hosted in the village. Therefore the expenditures on this item are not considered to be attributable to the 2000 AWG.

Once these amounts are deducted from (in the case of out-of-Territory spending) and added to (in the case of Haines Junction) the total budget of the Whitehorse Host Society, the autonomous injection of spending that was made by Games organisers to the Yukon economy in each industry can be determined. These amounts are shown in Table 4. For example, Host Society spending in the construction industry is estimated to have totalled \$77,431 for the Yukon as a whole, with \$47,431 of this estimated to have been incurred in Whitehorse. Total Host Society spending in the Yukon is estimated to have been \$3,182,611, of which \$3,141,611 was spent in Whitehorse.

Table 4 AWG 2000 Host Society Expenditures in Yukon and Whitehorse by Industry (\$)

<i>Industrial Sector</i>	<i>Yukon</i>	<i>Whitehorse</i>
Construction Industries	77431	47431
Transportation Industries	329591	327591
Communication Industries	87484	87484
Other Utility Industries	30500	30500
Wholesale Trade Industries	291470	291470
Retail Trade Industries	216329	216329
Financial & Real Estate Industries	121170	121170
Business Service Industries	1307432	1307432
Printing, Publishing, & Allied Industries	291243	291243
Accommodation & Food Services Industries	429961	420961
TOTAL	3182611	3141611

Patron Spending

The results of the surveys provided a basis by which the spending patterns of different patron groups could be estimated. Table 5 indicates the amount spent per person in Whitehorse by patrons in different areas of the economy. For example, spectators, media, guests, and sponsor are each estimated to have spent \$422.96 on lodging, \$169.70 on meals, \$84.72 on local transport, \$195.64 on retail shopping, \$79.88 on entertainment, \$16.84 on grocery items, \$18.52 on gas and oil, and \$4.88 on other items. The total expenditure for this category of visitor is estimated to have been \$993.14 per person. Similarly, Officials (whose accommodation was provided by the Host Society) are estimated to have spent \$464.64 each, coaches, mission staff and chaperones \$481.63 each, athletes and cultural performers \$199.75 each, and volunteers \$676.12 each. This is based on the assumption that half of out-of-town volunteers paid for their own accommodation, while the remaining volunteers were provided with free accommodation either by the Host Society or by friends or relatives in Whitehorse.

Table 5 Per Patron Visitor Spending (\$)

	Lodging	Meals	Transport	Retail	Entertain	Grocery	Gas	Other	TOTAL
Spectator/media/guest/sponsor	422.96	169.7	84.72	195.64	79.88	16.84	18.52	4.88	993.14
Official	Included*	154.95	12.8	221.51	54.09	6.34	6.99	7.96	464.64
Coach/Mission/Chaperone	16.99	154.95	12.8	221.51	54.09	6.34	6.99	7.96	481.63
Athlete/Cultural	Included*	49.33	0.87	127.14	12.19	9.2	0	1.02	199.75
Out-of-town Volunteers	211.48	154.95	12.8	221.51	54.09	6.34	6.99	7.96	676.12

* Lodging expenses for Officials and Athletes/Cultural performers are included in the Host Society budget

Based on these findings, and the estimated number of patrons in each category of visitor, the direct autonomous expenditures of patrons are shown in Tables 6 and 7. In the case of Yukon (Table 6), as described earlier, it is assumed that this spending merely represented a redistribution of spending in the Yukon¹. Table 6 shows the estimated new spending occurring in the Yukon in a variety of categories. For example, it is estimated that spectators, media, guests and sponsors combined spent a total of \$841,190. Of this, spending amounted to \$358,247 on accommodation, \$143,736 on restaurant meals, \$71,758 on local transport, \$165,707 in the retail sector, \$67,658 on entertainment, \$14,263 on groceries, \$15,686 on gas, and \$4,133 on other items. Similarly, new spending by other groups of patrons is estimated as follows: officials \$32,525; athletes and cultural performers \$218,127; chaperones, coaches and mission staff \$120,408; and volunteers \$38,539.²

Host societies that will be hosting future editions of the AWG (notably Nuuk and Iqaluit), as well as bid teams from potential host communities for future editions of the Arctic Winter Games made expenditures in addition to personal expenditures already accounted for in the analysis. For example, these additional expenditures include receptions, hosted meals, vehicle rentals, etc. The accommodation costs of these groups are accounted for under the spending made by guests and special guests and therefore are not double-counted. The AWG International Committee also made certain expenditures in Whitehorse either before or during the Games on items such as room rentals, car rentals, awards and gifts. Not included are the airfares incurred by the AWGIC in bringing its members to meetings: this is because these expenditures were made outside of the Yukon. Also, each of the mission staffs made expenditures in the local economy on sundry items. In addition, some contingents rented automobiles for use by mission staff during the Games. These expenditures totalled \$142,490.

Finally, an estimate has been made of patron spending in Haines Junction. It was ascertained that ten hotels per night (for three nights) were occupied by Games patrons. The estimated cost per room is \$75, for a total of \$2250. Organisers in the village estimated that an average of 40 spectators and guests per day attended the events from out of town, for a total of 160 'spectator visits'. The spending of these patrons in Haines Junction was estimated as follows. For each category of spending other than lodging (e.g., meals, transport, retail, etc.), the average amount spent in Whitehorse for the entire week of the Games was divided by 7 to provide a daily spending rate for each category. It was assumed that patrons spent 50% of the amount that was spent in Whitehorse per day (given that the majority of patrons did not stay for the entire day in Haines Junction). The total spending by patrons in Haines Junction was estimated to have been \$8,766. This spending was considered additional to that reported in the patron survey, which specifically asked respondents about their spending in Whitehorse.

¹ If this assumption were modified such that 25% of non-Whitehorse-Yukon-resident spending is assumed to be 'new Yukon' patron spending, the overall increase in patron spending direct impact would be \$108,358.85 (or 7.2%). However, when the patron spending is added to Host Society spending, the difference would amount to less than 2.5%. Given the overall sampling error inherent in the analysis, this would represent an insignificant difference in the overall impact statement.

² For the volunteers from out of town, it is evident that some were provided with free accommodation in Whitehorse by friends or relatives. Information obtained from the Host Society indicates that some volunteers paid for accommodation during the Games. It has been estimated that half of the out-of-town volunteers paid for their accommodation and stayed in hotels in addition to other spending on meals, entertainment, groceries, etc.

The total amounts of estimated expenditure by new to the Yukon in each category of spending are shown in the bottom row of Table 6. The overall total (direct) autonomous spending in the Yukon by patrons is estimated to have been \$1,402,044

Table 6 New Yukon Spending by AWG 2000 Patrons (in \$)

	Lodging	Meals	Transport	Retail	Entertain	Grocery	Gas	Other	TOTAL
Spectator/media/guest/sponsor	358247	143736	71758	165707	67658	14263	15686	4133	841190
Official	Included	10847	896	15506	3786	444	489	557	32525
Coach/Mission/Chaperone	4248	38738	3200	55378	13523	1585	1748	1990	120408
Athlete/Cultural	0	53868	950	138837	13311	10046	0	1114	218127
Volunteers	12054	8832	730	12626	3083	361	398	454	38539
Host/AWGIC/Other	Included	59600	27400	12900	29890	500	3650	8550	142490
Haines patrons (all)	2250	1,939	968	2236	913	192	212	56	8,766
TOTAL	376799	317560	105902	403189	132165	27393	22183	16854	1402044

Notes: Lodging expenditures incurred by future host societies, bid teams, or the AWGIC are accounted for under 'guest' spending. Lodging expenses for Officials are included elsewhere in the analysis under the Host Society budget. Totals may not add due to rounding.

Again, it should be stressed that these figures represent estimates of direct autonomous expenditures by patrons who do not reside in the Yukon. These data are based on the various assumptions contained elsewhere in this report.

A similar exercise was conducted to estimate the spending patterns of non-Whitehorse-resident patrons to determine new spending in Whitehorse. In this case, all spending made by non-Whitehorse-resident Yukon patrons is considered to have been new spending in the City attributable to the AWG. The results of these estimates are shown in Table 7. Total new Whitehorse spending by patrons is estimated to have been \$1,735,190.

Table 7 New Whitehorse Spending by Patrons (\$)

	Lodging	Meals	Transport	Retail	Entertain	Grocery	Gas	Other	TOTAL
Spectator/media/guest/sponsor	510090	180391	90057	207965	84912	17901	19687	5187	1116191
Official	Included*	11466	947	16392	4003	469	517	589	34383
Coach/Mission/Chaperone	4366	39822	3290	56928	13901	1629	1796	2046	123779
Athlete/Cultural	0	53572	945	138074	13238	9991	0	1108	216929
Volunteers	31722	23243	1920	33227	8114	951	1049	1194	101418
Host/AWGIC/Other	Included*	59600	27400	12900	29890	500	3650	8550	142490
TOTAL	546178	368094	124559	465486	154058	31442	26699	18674	1735190

* Lodging expenditures incurred by future host societies, bid teams, or the AWGIC are accounted for under 'guest' spending. Lodging expenses for Officials are included elsewhere in the analysis under the Host Society budget. Figures may not add due to rounding.

The overall estimated expenditure categories of non-Whitehorse-resident patrons are highlighted in Table 8. This shows the industries in which patron spending was incurred. These figures were calculated from the overall patron spending estimates as follows. ‘Transportation’ patron spending is the sum of ‘transportation’ and ‘gas’ expenditures by patrons. Spending in ‘retail trade industries’ is the sum of patron expenditures in ‘retail’, ‘grocery’, and ‘other’ categories. ‘Accommodation and food services’ spending is the sum of ‘lodging’, ‘meals’, and ‘entertainment’ categories.

Table 8 New Yukon and Whitehorse Patron Spending by Industry (\$)

<i>Industrial Sector</i>	<i>Yukon</i>	<i>Whitehorse</i>
Transportation Industries	128,085	151,258
Retail Trade Industries	447,436	515,601
Accommodation & Food Services Industries	826,524	1,068,331
TOTAL	1,402,044	1,735,190

Direct Impact

Based on the assumptions outlined, the financial statements, and the analysis conducted, the following estimates of the direct, indirect, and induced economic impacts of the 2000 AWG on the economies of the Yukon Territory, Whitehorse, and Haines Junction were determined.

Direct Impact of the 2000 AWG on the Yukon Territory Economy

The autonomous spending that resulted from the 2000 AWG in the Yukon Territory was estimated to have been \$4,584,655. This amount was the sum of the Host Society spending in the Yukon (\$3,182,611) and the expenditures of Non-Yukon patrons (\$1,402,044). As has already been explained in this report, although all this spending was made in the Yukon, many of the items purchased were not made in the Yukon. The effect that this spending had on the GDP of the Yukon Territory was estimated from the input-output model developed by Statistics Canada and employed by the Bureau of Statistics within the Government of the Yukon Territory. The overall ‘direct’ impact on Territorial GDP was estimated to have been \$2,733,186. Of this amount, \$2,136,065 was accounted for by an increase in labour income. This translates into an increase of 87.85 person years of employment. These results are summarised in Table 9.

Table 9 Direct Impact of 2000 AWG on Yukon Economy

<i>Direct Impact</i>

<i>Autonomous Spending (\$)</i>	4584655
<i>GDP (\$)</i>	2733186
<i>Labour (\$)</i>	2136065
<i>Employment (person years)</i>	87.85

Direct Impact of the 2000 AWG on the Whitehorse Economy

The autonomous spending in Whitehorse resulting from the 2000 AWG was estimated to have been \$4,876,801. The effect that this spending had on the GDP of the Whitehorse economy was estimated from extrapolating from the data provided by the Yukon Territory IO model. It must be stressed that these are merely best estimated based on the data and model detail available. It is assumed that the ‘direct’, ‘indirect’, and ‘induced’ effects of an initial increase in spending in Whitehorse are of the same magnitude as for autonomous injections of spending into the Territorial economy. The overall ‘direct’ impact on Whitehorse GDP was estimated to have been \$2,895,483. Of this amount, \$2,256,187 was accounted for by an increase in labour income. This translates into an increase of 94.08 person years of employment. These results are summarised in Table 10.

Table 10 Direct Impact of the 2000 AWG on the Whitehorse Economy

	<i>Direct Impact</i>
<i>Autonomous Spending (\$)</i>	4876801
<i>GDP (\$)</i>	2895483
<i>Labour Income (\$)</i>	225617
<i>Employment (person years)</i>	94.08

Direct Impact of the 2000 AWG on the Haines Junction Economy

The autonomous spending in Haines Junction resulting from the 2000 AWG was estimated to have been \$49,766. This amount was the sum of the Host Society spending in Haines Junction (\$41,000) and the expenditures of visiting patrons to Haines Junction (\$8,766). Unfortunately, it is not possible to estimate the GDP, labour income, or employment effects of an initial increase in spending in Haines Junction. This is because reliable statistics describing the nature of interactions in the village are not available. Furthermore, given the extremely limited economic base of the town of Haines Junction, the multiplier effect is likely to be negligible. In other words, additional spending made in Haines Junction during the Games is likely to have had a one-time effect on the economy of the town. Any ripple effects are likely to have been felt in larger centres, such as Whitehorse.

Indirect and Induced Impacts

Having determined the direct impact of the AWG on the economies of the Yukon and of Whitehorse, the next stage was to evaluate the ripple effects that this new injection of spending on the respective

economies would have. As was explained above, it is not possible to provide reliable estimates of ripple effects on the economy of Haines Junction. Tables 11 and 12 summarise the results of this analysis. Table 11 illustrates that the indirect and induced effect of the initial increase in economic activity resulting from the AWG included an increase in spending in the Territory of \$1,284,628. This resulted in an increase in GDP of \$555,635, of which labour income accounted for \$366,650 or 11.28 person years of employment.

Table 11 Indirect and Induced Impact of the 2000 AWG on the Yukon Economy

	<i>Indirect & Induced Impact</i>
<i>Spending (\$)</i>	1284628
<i>GDP (\$)</i>	555635
<i>Labour Income (\$)</i>	366650
<i>Employment (person years)</i>	11.28

Table 12 shows the estimated indirect impact of the initial increase in economic activity in Whitehorse. Again, these are estimates based on an extrapolation from the Territorial IO model, assuming that the indirect effects are in the same proportion for Whitehorse as for the Yukon.

Table 12 Indirect and Induced Impact of the 2000 AWG on the Whitehorse Economy

	<i>Indirect & Induced Impact</i>
<i>Spending (\$)</i>	1375662
<i>GDP (\$)</i>	593946
<i>Labour Income (\$)</i>	391194
<i>Employment (person years)</i>	12.04

Total Economic Impact

The overall economic impact of the 2000 AWG on the Yukon Territory GDP is determined by summing the direct, indirect, and induced impacts. Based on the output multipliers provided by the Yukon Government Bureau of Statistics, the impact of the 2000 AWG on overall spending in the economy is estimated to be \$5,869,283. The Yukon Territory's GDP is estimated to have increased by \$3,288,552 as a result of hosting the 2000 AWG. The increase in labour income in the Territory is calculated to have been \$2,502,706, and the overall increase in Territorial employment is assessed to have been 99.13 person years. These figures are illustrated in Table 13.

Thus the overall spending multiplier for the Yukon economy was estimated to be 1.280. In other words, for every initial injection of \$1,000 into the Yukon economy that was not spent directly on

imports, total expenditures (including spillover or secondary spending) amounted to \$1,280 in the Territory.

The total contribution to the budget of the 2000 AWG from all levels of government (including federal, territorial, municipal, as well as lottery funding) amounted to \$1,614,846. When this is compared to the overall estimated spending generated by the Games, the government spending multiplier for the Yukon, as a whole, is 3.635. In other words, every \$1,000 contributed to the operations of the 2000 AWG by government entities added \$3,635 in spending in the Territory.

Table 13 Total Impact of the 2000 AWG on the Yukon Economy

	<i>Direct</i>	<i>Indirect / Induced</i>	<i>Total</i>
<i>Spending (\$)</i>	4584655	1284628	5869283
<i>GDP (\$)</i>	2733186	555365	3288552
<i>Labour Income (\$)</i>	2136056	366650	2502706
<i>Employment (person years)</i>	87.85	11.28	99.13

Using a similar multiplier for the Whitehorse economy (as explained above), the overall economic impact of the 2000 AWG on the host community is estimated as follows. Based on the output multipliers provided by the Yukon Government Bureau of Statistics, the impact of the 2000 AWG on overall spending in the Whitehorse economy is estimated to be \$6,252,463. The resulting increase in GDP is projected to have been \$3,489,249. The increase in labour income in Whitehorse is estimated to have been \$2,647,381 and the increase in employment in the City was 106.12 person years. These figures are illustrated in Table 14.

Thus the overall spending multiplier for the Whitehorse economy was estimated to be 1.282. In other words, for every initial injection of \$1,000 into the Whitehorse economy that was not spent directly on imports, there were total expenditures (including secondary spending) amounting to \$1,282 in Whitehorse.

The total contribution to the budget of the 2000 AWG from all levels of government (including federal, territorial, municipal, as well as lottery funding) amounted to \$1,614,846. When this is compared to the overall estimated spending generated by the Games, the government spending multiplier for Whitehorse is 3.872. In other words, every \$1,000 contributed to the operations of the 2000 AWG by government entities added \$3,872 in economic spending in Whitehorse.

Table 14 Total Impact of the 2000 AWG on the Whitehorse Economy

	<i>Direct</i>	<i>Indirect / Induced</i>	<i>Total</i>
<i>Spending (\$)</i>	4876801	1375662	6252463
<i>GDP (\$)</i>	2895483	593946	3489429
<i>Labour Income (\$)</i>	2256187	391194	2647381
<i>Employment (person years)</i>	94.08	12.04	106.12

The estimated impact on the Whitehorse economy is greater than that on the Yukon economy for the following reasons. Given that spending made by non-Whitehorse-resident Yukon patrons was considered to be a redistribution of spending in the Yukon economy, this is not considered to have an impact on the Territorial economy. However, spending by non-Whitehorse Yukon patrons in the City represents new spending in Whitehorse and therefore is included in the analysis of the Whitehorse economy.

Visitor and Patron Impressions of the Arctic Winter Games and Whitehorse

As was indicated at the beginning of this report, and should be stressed again, it is important to remember that the prime purpose of events such as the Arctic Winter Games is more philosophically based than the bottom line economic impact. Although the scope of this report is, by its nature, limited to concentrating on the economic effect of the Games, some data were collected that illustrate the wider impact of the Games on the people of the North. A series of questions were posed in the patron surveys (see appendix A, questions 14 & 16) that focussed on the impressions that participants and visitors had of the Games and the host community. The results of these responses are summarised in this section.

It is extremely difficult, if not impossible, to put an economic value on traits such as the personal enjoyment of participants, the learning of new skills, the making of new friends, and the increase in self-worth that many of the participants in the Games realised. However, for the questions regarding civic pride in Whitehorse and understanding of what the city has to offer visitors, it is possible that an increased awareness could result in repeat visits. Even if small number of the visitors to Whitehorse for the Arctic Winter Games returned in the future as a result of their experiences, this would result in a lasting economic impact on the city and the Yukon. At this stage, it is not possible to provide an accurate assessment of how many return visitors of this kind there will be. Therefore, such potential future visits have not been accounted for in determining this economic impact statement.

Patrons were asked to respond to a series of statements on a scale of 1-5 where 1 represented “strongly disagree”, 2 represented “disagree”, 3 represented “neutral” response, 4 represented “agree”, and 5 represented “strongly agree”. Overall, patrons had a good overall impression of Whitehorse (4.40 average response), with spectators, media, and guests having the strongest agreement (4.59). Similarly, there were positive responses to a statement asking whether patrons felt the Games had been worthwhile. The overall average (mean) response was 4.63. Those that most strongly agreed with this statement were spectators, media, sponsors, and guests (4.79), followed by coaches, officials, and mission staff (4.72). Athletes and cultural performers also agreed with the statement (4.48), but not quite as strongly as other patrons. Finally, and perhaps of greater relevance to the potential for a lasting economic impact of the Games, patrons tended to agree with the statement that “based on what I have experienced at the AWG, I would visit Whitehorse again”. The overall response for this statement was 4.12. Spectators, media, and guests ranked their agreement as 4.56. Coaches, officials, mission staff, and chaperones also agreed (4.53). Athletes and cultural performers tended to agree, but not quite as strongly as other patrons (3.99). The responses to the statements on item 16 of the Patron survey are summarised in Table 15.

In addition to responding to these statements, those surveyed were asked if they felt that Whitehorse offered a good range of businesses and services. Of the 353 individuals who responded to the question, only 35 (or 10.0%) indicated that there were amenities that the visitors felt were missing. Many of these were specific to the needs of AWG participants, such as late night restaurants. Other services that visitors indicated were hard to find in Whitehorse included theatre, extended opening hours for shopping, a larger variety of stores, and clothing stores for women and girls. The majority of

those who felt that something was lacking were athletes or cultural performers who relied on Games transport to get to various locations around the City. Therefore, these patrons may not have had the opportunity to experience everything that the City has to offer during the Games.

Table 15 Patron Impressions of the Arctic Winter Games and of Whitehorse

Statement	<i>Athletes / Cultural Performers</i>	<i>Coaches / Officials / Mission Staff / Chaperones</i>	<i>Spectators / Media / Guests</i>	<i>All Patrons</i>
I have a good overall impression of Whitehorse	4.25	4.48	4.59	4.40
I feel that these Games have been worthwhile	4.48	4.72	4.79	4.63
Based on what I have experienced at the AWG, I would visit Whitehorse again	3.99	4.53	4.56	4.12

Answers on a scale of 1-5 where: 1=Strongly Disagree; 2=Disagree; 3=Neutral; 4=Agree; 5=Strongly Agree.

Conclusions

For the City of Whitehorse and the Yukon Territory, the 2000 Arctic Winter Games generated considerable economic and non-economic benefits. The region received positive television coverage across the North and beyond, as a result of the Games. Over the longer term, the City and the Territory are likely to benefit from the construction and upgrading of high quality sports and recreation facilities. An estimated 2,730 out-of-town patrons visited Whitehorse during the weeklong festival to participate in some form or other. Their expenditures represented an autonomous injection of spending into the Territorial economy of an estimated \$4.585 million, which generated an overall economic impact of \$5.869 million in increased spending in the economy. This resulted in an estimated increase in GDP in the Yukon of \$3.289 million. The increase in Yukon labour income is estimated to have been \$2.503 million, and the increase in employment in the Yukon was 99.13 person years. The autonomous injection of spending into the Whitehorse economy was estimated to be \$4.877 million, with a total economic impact for the City of an estimated \$6.252 million in increased spending. It is estimated that this increased labour income in the City by \$2.647 million, and employment in the City by 106.12 person years. Finally, it is estimated that the Games resulted in direct increased spending of \$0.050 million in Haines Junction.

Recent statistics published by the Yukon Executive Council Office, Bureau of Statistics (May 2000) indicate that total retail sales³ in the Yukon in March 2000 (the month in which the Games occurred) were \$26.9 million. This figure represented an increase of 9.3% (or approximately \$2.5 million) over retail sales in March of 1999. It is clear that not all of this increase in retail spending can be directly attributed to the AWG. However, an assessment of the increase in retail sales in the months immediately preceding and following the Games provides some context for assessing the magnitude of the Games' impact on the Yukon economy. Yukon retail sales in the February and April 2000 also increased over 1999 figures, but not by as much as during March. February 2000 retail sales increased by 2.9% from February 1999, and in April 2000 the figures were 3.8% higher than the same month in 1999.

In addition, the general impressions of Whitehorse held by visitors to the City for the Games were positive, and the overwhelming majority of participants and spectators felt that the Games had been a worthwhile experience. As was stated earlier in the report, there has been no attempt to evaluate the considerable benefits resulting from volunteer labour during the Games. Unfortunately, it is not possible to provide an estimate of the economic effects of such volunteer support. Similarly, it is impossible to place an economic value on the friendships that were developed during the Games between individuals from across the North.

Nevertheless, it is clear that the economic and non-economic benefits have far exceeded the direct costs of hosting the Games. And, when the immeasurable social well-being of the participants is taken

³ The definitions used in the Yukon Bureau of Statistics retail trade survey (from which these figures are derived) is somewhat different from the definition of retail trade industries used in the analysis elsewhere in this report. Therefore, it would be misleading to provide direct comparisons between the two estimates.

into consideration, the 2000 Arctic Winter Games appear to have had a positive economic and social impact on Whitehorse, the Yukon Territory, and indeed the whole of the North and beyond.

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Appendix A

AWG 2000 Patron Survey

1. *Have you already been questioned about your spending patterns or sponsorship during these Games?*

Yes [] No [] If YES, thank the person and select another person. If NO, continue.

2. *General Information:*

Age Range: Under-19 [] 19-29 [] 30-49 [] 50+ []

1 Gender: Male [] Female []

3. *What is your primary role at the 2000 Arctic Winter Games?*

a) Athlete [] Team Leader [] Coach [] Cultural Performer [] Delegation _____

b) Official [] Sponsor [] VIP/Guest [] Media [] Spectator [] Volunteer [] Other _____

c) Not involved in the AWG [] (if so, thank the person & select another)

4. *What event category is of primary interest to you?*

[] Traditional Sports (i.e. Arctic or Dene Games)

[] Cultural Events

[] Outdoor Sports (e.g. skiing, snow-shoeing, snowboarding, dog mushing, biathlon)

[] Indoor Ice Sports (e.g. hockey, curling, skating)

[] Indoor Off-Ice Sports (e.g. soccer, basketball, volleyball, gymnastics, badminton, wrestling)

[] All events/activities – no primary interest

5. *Are you a resident of Whitehorse?* Yes [] No [] (If 'Yes', go to question 14)

6. *Have you visited Whitehorse previously?* Yes [] No []

7. *Where do you live?* _____ (province/state/territory)

8. *How long will you be staying on this trip?* _____ (number of nights)

9. *If 1 night or more, how many will be spent at:*

Games Village Accommodation _____ Hotel/Motel/Bed & Breakfast _____

Visiting Friends & Relatives _____ Other _____ (specify)

10. *How much (in Canadian \$) will you spend in Whitehorse during your stay for:*

Lodging _____ Entertainment _____

Restaurant meals _____ Groceries _____

Transport/Parking (local) _____ Gasoline/oil _____

Shopping/Souvenirs _____ Other _____

11. *How many people, including yourself, are in your expense estimates?* ____ (If '1', go to question 14)

12. *How many of these individuals are non-Whitehorse-resident:*

Adults (>18 years old) ____; Teens (13-17) ____; children (<12) _____?

13. *What is the composition of the group that these expenditures are on:*

Team [] Business Associates [] Friends & Family [] Other _____ (specify)

14. *Do you feel that Whitehorse provides a good variety of businesses and services to you?*

Yes [] No [] If 'No', what was missing? _____

15. Name as many sponsors of the 2000 Arctic Winter Games as you can (Do NOT prompt)

Alphabetical Listing (Tick those mentioned – DO NOT PROMPT responses)

- | | | |
|--|---|---|
| <input type="checkbox"/> AON Reed Stenhouse | <input type="checkbox"/> National Tilden/Norcan | <input type="checkbox"/> Yukon Elec. Co. Ltd. |
| <input type="checkbox"/> Brooks | <input type="checkbox"/> NMI Mobility | <input type="checkbox"/> Yukon Lotteries |
| <input type="checkbox"/> CBC North | <input type="checkbox"/> Nortel Networks | |
| <input type="checkbox"/> Canadian Tire | <input type="checkbox"/> NorthwesTel | OTHERS MENTIONED |
| <input type="checkbox"/> Enbridge | <input type="checkbox"/> Polaroid | _____ |
| <input type="checkbox"/> First Air | <input type="checkbox"/> Shell | _____ |
| <input type="checkbox"/> Gold Rush Inn | <input type="checkbox"/> Super A Foods | _____ |
| <input type="checkbox"/> Hougen Group | <input type="checkbox"/> Westm'k Htl/Holl. Am. | _____ |
| <input type="checkbox"/> Matco | <input type="checkbox"/> Whitehorse Daily Star | _____ |
| <input type="checkbox"/> MicroAge | <input type="checkbox"/> Whitehorse Elks Lodge | _____ |
| <input type="checkbox"/> Millennium Bur. of Can. | <input type="checkbox"/> Xerox | _____ |

16. On a scale of 1 to 5 (where 1 is “strongly disagree”, 2 is “disagree”, 3 is “no opinion”, 4 is “agree”, and 5 is “strongly agree”), how would you rate your belief in the following statements?

	SD	D	N	A	SA
Corporate sponsorship benefits the AWG	1	2	3	4	5
Companies that sponsor the AWG are good corporate citizens	1	2	3	4	5
The AWG are over-commercialized	1	2	3	4	5
I feel that it is important for corporations to support events such as the AWG	1	2	3	4	5
Corporate sponsorship is appropriate at the AWG	1	2	3	4	5
I am more likely to buy a company’s product as a result of their sponsorship of the AWG	1	2	3	4	5
A company’s sponsorship of the AWG positively affects my perception of the company	1	2	3	4	5
AWG corporate sponsors are only trying to sell me something	1	2	3	4	5
I would select an AWG sponsor’s product over a non-sponsor’s product	1	2	3	4	5
I have a good overall impression of Whitehorse	1	2	3	4	5
I feel that these Games have been worthwhile	1	2	3	4	5
I/my team have performed up to my expectations during my/its events at this AWG (N/A if VIPs, Guests, Sponsors, Media)	1	2	3	4	5
Winning at these Games is important to me (N/A if VIPs, Guests, Sponsors, Media)			N/A		
Based on what I have experienced at the AWG, I would visit Whitehorse again (N/A if Whitehorse resident)	1	2	3	4	5
			N/A		

17. Which of the following corporations do you recognize as official sponsors of the 2000 AWG? (Yes, No, Maybe)

- | | | |
|---------------------------|---------------------------|-----------------------------|
| CBC North | Aon Reed Stenhouse | Kodak |
| CTV | Nike | Matco |
| AT &T | Brooks | Millennium Bureau of Canada |
| NorthwesTel | NMI Mobility | |
| Norcan/National Tilden/GM | Yukon Electrical Co. Ltd. | |
| Budget | Westmark Hotels/Holl. Am. | |
| Canon | MicroAge Computer Centres | |
| Xerox | Nortel Networks | |
| Whitehorse Daily Star | Super A Foods | |
| Yukon News | Lotteries Yukon | |
| First Air | Hougen Centre | |
| Canadian North | Polaroid | |

Appendix B

Summary of Assumptions

The following assumptions were made in determining the estimates contained in this report.

- The 2000 Arctic Winter Games represents a one-time injection of spending into the host economy.
- Any in-kind contributions to the Games from local suppliers are similar to cash expenditures by those vendors.
- All spending made by the Host Society is new spending which would not otherwise have been made.
- Any expenditures made at the Games by Yukon residents who do not live in Whitehorse merely represents a redistribution of spending within the Territorial economy. However, these expenditures represent new spending in Whitehorse.
- Autonomous spending in Whitehorse did not result in ‘spillover’ effects to elsewhere in the Yukon economy
- The spending patterns of Yukon patrons per day were the same as non-Yukon patrons. However, the average length of stay of out-of-town Yukon spectators was estimated to be 4 nights.
- Out-of-town sponsors are estimated to have stayed in Yukon for 5 nights
- Fifty percent of out-of-town volunteers paid for accommodations in Whitehorse. The remaining out-of-town volunteers were provided with free accommodation either by the Games organisers or friends/relatives etc. In the case of Games organiser-provided accommodation, the costs are included in the analysis elsewhere.
- All ‘direct’ economic impact of the AWG was concentrated in Whitehorse and Haines Junction. However, secondary impacts may have been experienced elsewhere in the Yukon.
- The GDP impacts of autonomous spending in Whitehorse (including the ‘indirect’ and ‘induced’ impacts), as well as the labour income and employment effects, occurred in the same proportion as impacts in the remainder of the Yukon.
- In order to use the latest multiplier figures available, the inter-industry linkages within the Yukon economy in 2000 are assumed to have been those that existed in the economy in 1990. Adjustments have been made for inflation in wages from 1990 to 2000.