



1998 Arctic Winter Games

Economic Impact

Final Report Submitted to the

Arctic Winter Games International Committee

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Executive Summary

- The 1998 Arctic Winter Games (AWG) were held in Yellowknife, NWT

from March 15-22. The Games had a considerable impact on the economies of the city of Yellowknife and the Northwest Territories.

- This final report provides a detailed analysis of the overall economic impact of the 1998 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 local business operators, volunteers, and AWG patrons that were not contained in the previously delivered draft document.
- The analysis of the data suggests that the 1998 AWG resulted in 'autonomous spending' of approximately \$3.385 million in the Territorial economy (arising from spending by both the Host Society and various out-of-territory visitors). The overall influence of these expenditures on the Gross Domestic Product at factor cost (GDP) of the Northwest Territories was projected to total \$2.279 million. Of this amount, some \$1.526 million was accounted for by increases in labour income. This resulted in an estimated effect on the NWT economy of 35.8 person years of employment.
- The same analysis reveals that the 1998 AWG resulted in 'direct autonomous spending' in the Yellowknife economy of approximately \$3.679 million. Although detailed models of the specifics of the Yellowknife economy are not available, an attempt was made to estimate the impact that the 1998 AWG had on the host city's economy. By extrapolating from the GDP and employment impacts on the Northwest Territorial economy, it is estimated that the AWG had an overall economic impact on the Yellowknife economy (as measured by GDP at factor cost) of \$2.456 million. Of this, labour income accounted for an estimated \$1.640 million, or about 40.3 person years of employment.
- In addition to these overall economic impacts on the host economies, there were considerable positive benefits for individual business operators in the region. Of some sixty-two Yellowknife businesses surveyed, 79.0% reported an increase in sales. The average magnitude of this increase in sales during the event was 29.3%.
- 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 Yellowknife received a positive impression of the city and its residents. The athletes attending the Games generally found that they had learned new skills, but this sentiment was not held as strongly by spectators and guests.
- 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.

Acknowledgements

The assistance provided in employing the Northwest Territories input-output model by David Stewart and Angelo Cocco of the Bureau of Statistics, Government of Northwest Territories is greatly acknowledged.

Introduction

The 1998 Arctic Winter Games (AWG) were held in Yellowknife, NWT, from March 15-22. This represented the fifteenth edition of this biennial festival that combines athletic competition, cultural exhibition, and social interchange between residents of the North. The AWG brought together over 2000 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 organizers 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 1998 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. The Client agreed that the assumptions made by the Consultant were acceptable.

In addition to an economic impact statement, the final report also includes an analysis of data that were collected by the Consultant during and immediately after the 1998 AWG. These data provide a more complete picture of the impact of the AWG on the host community and the region. In combination with other studies of the social impact of the 1998 Arctic Winter Games, these findings could be used to illustrate the potential for both economic and social benefits derived from hosting future editions of these Games.

Scope of Report

The economic impact of the 1998 AWG is defined as *"The net change in the host economy's gross domestic product as a result of spending attributed to the event"*.

The 'host economy' is defined as *"The Northwest Territories"*. By investigating the impact of spending at the 1998 AWG on the Northwest Territories, it was possible to use the input-output model employed by the Government of Northwest Territories Bureau of Statistics. This model

has been developed to assess the secondary impact of autonomous spending in different areas of the NWT 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 Yellowknife (see explanation below).

It is important to note that many of the patrons who attended the AWG who normally reside outside of the NWT incurred considerable expenditures in other regions of the North. For example, Appendix C (4) indicates that participants at the 1998 AWG were required to pay a team fee ranging between \$0 (in the case of Team Alberta North and Team Tyumen) and \$2,900 (in the case of Team Magadan) to take part in the Yellowknife festivities. In addition, members of Team NWT paid up to \$530 each in regional, territorial, or AWG fees by the time they participated in the 1998 Arctic Winter Games. Since the majority of these expenditures took place outside the NWT (or, in the case of NWT 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 1998 AWG on the economy of the Northwest Territories. 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 NWT.

It is assumed that any expenditures made at the Games by NWT residents who do not live in Yellowknife merely represents a redistribution of spending within the Territorial economy. In other words, if the Games had not taken place, it is assumed that non-Yellowknife NWT residents would simply have spent their money elsewhere in the Territory. In most economic impact studies, this is a reasonable assumption. However, given the limited nature of the NWT economic base, it is possible that spending made at the AWG by a resident of Inuvik in Yellowknife might otherwise have been made outside the Territory (for example, on a trip to Alberta). Thus, the visitor estimates for the impact on the NWT economy are likely to be on the conservative side.

In addition to evaluating the effect of the Games on the Territorial economy, an estimate of the impact of the Games on the city of Yellowknife has been made. Unfortunately, there is no suitable model for evaluating the impact of additional spending engendered by the initial increase in spending in Yellowknife alone. Therefore, it should be stressed that the estimate for the so-called 'indirect' and 'induced' impacts of the Games on Yellowknife was based on educated assumptions regarding the nature of the Yellowknife economy vis à vis that of the NWT. The impact on the city of Yellowknife includes spending made by residents of the NWT who do not live in Yellowknife. This is because, for Yellowknife, these expenditures represent injections into the local economy.

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 Yellowknife. 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 organizations. 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 GNWT employees' time that was 'donated' by various departments of the GNWT 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 Yellowknife. However, it is reasonably clear that funding provided by the federal government for the Games would not have been made available for alternative projects.

It is important to realise that this economic impact statement focuses on the effect that the 1998 Arctic Winter Games had on the Gross Domestic Product (GDP) of the Northwest Territories economy. Given the limited industrial base of the economy of the Northwest Territories, 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 NWT. This is because the majority of computing equipment and supplies that are consumed in the NWT are produced out of the Territory. Such spending on 'imports' has little impact on the economic wellbeing of residents of the NWT (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 these goods had to be imported (and paid for) elsewhere.

Indirect Impact

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 NWT economy. As is stated above, it is difficult to evaluate the indirect impact of spending on the economy of the city of Yellowknife alone. However, an attempt has been made to estimate the indirect impact on the Yellowknife economy in this report. This estimate is based on the simplifying assumption that there are no secondary spillovers from the Yellowknife economy to the economies of other areas of the NWT.

Induced Impact

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 NWT.

The final estimate of the total economic impact of the 1998 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.

Data and Methods

Host Society Expenditures

The unaudited interim financial statements (dated June 30, 1998) 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 interim estimates have been used to evaluate the Host Society expenditures. It is unlikely that any differences between the unaudited statements and the final budget figures will have a significant effect on the economic impact statement contained in this report.

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 Yellowknife. In addition, the opinions of the respondents about the services available in Yellowknife 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 one of convenience in

that respondents were selected at random 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. However, it should be noted that some difficulties were encountered in surveying some of the non-English speaking patrons (particularly those from Magadan and Tyumen). Nevertheless, 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 376 completed patron surveys were obtained during the last three days of the AWG. These responses recorded the spending patterns of some 413 visitors to Yellowknife who were in the city for the prime purpose of attending the AWG. The difference between these two figures (413 and 376) is accounted for by the fact that the questions on the surveys dealt with 'visitor group' (such as family), rather than individual spending patterns. As is indicated in Table 1, it is estimated that the Games attracted 2,244 visitors to the city. Survey data were coded and entered into a computer software program for analysis. Thus, it is estimated that 18.40% of the non-Yellowknife-resident patron population was surveyed. For this study, the chances are at least 95 in 100 that the "true" population expenditure figure resides within the range equal to the reported figures plus or minus 5 percent, given the assumptions that accompany the analysis.

In addition to the patron surveys and the preliminary 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. Given the nature of the AWG, it is argued that the team leaders of each delegation were likely to know most accurately these figures for visitors from their contingent. From these various sources, it was estimated that the following numbers of non-Yellowknife residents attended the Games: 345 spectators; 273 guests, security, and media; 1193 athletes and cultural performers (it is estimated that 130 of the NWT contingent's athletes and cultural performers are Yellowknife residents); and 383 officials, coaches and mission staff (it is estimated that 40 of the NWT coaches, officials, and mission staff are Yellowknife residents). (These figures are illustrated in Table 1).

It was also determined from the surveys that a small number of volunteers who were not residents of Yellowknife assisted the Games operations. It is assumed that some 15 non-NWT-resident individuals and 35 non-Yellowknife-residents from elsewhere in the NWT acted as volunteers during the Games. It is assumed that none of these individuals paid for accommodation.

Table 1 AWG Patron Population and Survey Sample (non-Yellowknife Residents)

	Sample (n)	Population	Percent Sampled (%)
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		(N)	
Spectators	63	345	18.26
Guests/Media	37	273	13.55
Athletes & Cultural Performers	216	1193	18.11
Officials/Coaches/Mission Staff	89	383	23.24
Other	8	50	16.00
TOTAL	413	2244	18.40

In order to determine the direct economic impact of patron expenditure on the NWT economy, it was necessary to estimate the number of non-NWT residents who attended the Games. The total number of such individuals was estimated to be 1749. Of these, there were 280 spectators, 110 media representatives, guests, or special guests, 1002 athletes or cultural performers, 342 officials, coaches, or mission staff, and 15 volunteers. These figures are illustrated in Table 2.

Table 2 Non-NWT Resident Patron Population

	Population
Spectators	280
Guests/Media	110
Athletes & Cultural Performers	1002
Officials/Coaches/Mission Staff	342
Other (Volunteers)	15
TOTAL	1749

Similarly, it was necessary to estimate the number of non-Yellowknife-resident NWT inhabitants who attended the Games in order to evaluate the direct economic impact of patron expenditure on the Yellowknife economy. The total number of such individuals was estimated to be 495. Of these,

65 were spectators, 163 were media representatives, security officials, guests, or special guests, 191 were athletes or cultural performers, 41 were coaches, officials, or mission staff, and 35 were volunteers. These figures are shown in Table 3.

Table 3 NWT (non-Yellowknife) Resident Patron Population

	Population
Spectators	65
Guests/Media/Security	163
Athletes & Cultural Performers	191
Officials/Coaches/Mission Staff	41
Other (Volunteers)	35
TOTAL	495

Northwest Territories Input Output Model

In order to determine the actual effect of the estimated injection of spending into the Territorial economy, the input-output (IO) model developed by the Bureau of Statistics of the Government of the Northwest Territories was employed. The Northwest Territories IO model is designed to analyse the employment, income, and other impacts associated with expansion of territorial economic activity. The Northwest Territories IO model was developed at a highly disaggregated level involving 627 commodities and 216 industries. The 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 GDP of expenditures made in the NWT. A more detailed account of the IO model is available from the Northwest Territories Bureau of Statistics (GNWT, 1993).

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 that are not produced in the NWT. Other spending circulates through the Territorial economy; for example where residents locally spend 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

NWT GDP of 'direct', 'indirect' and 'induced' spending arising from the hosting of the 1998 AWG.

A caveat must be made regarding the use of the IO model to estimate the explicit effects of changes in economic activity in the NWT. It has been noted that "due to methodological limitations associated with input-output models, users should be cautioned that ... industry multipliers are best used for comparing of economic impacts rather than for absolute comparisons" (GNWT, 1993, pp.). In other words, IO tables are unlikely to provide *exact and precise* data regarding the impacts of particular events and are intended more to generate a means of comparing the impacts of two projects or events. However, IO tables do provide the most accurate means of *estimating* the indirect and induced spending effects of an autonomous injection of spending into the economy.

Results

Host Society Spending

From the unaudited financial statements provided by the Host Society (dated June 30, 1998), the following table (Table 4) was devised. The objective here was to categorize expenditures made by the Host Society into specific industrial sectors. These categorizations were subsequently used to determine the indirect economic impact of the initial expenditures 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. It is also assumed that all direct Host Society spending (including all suppliers and contracts) was made in the Yellowknife region of the Northwest Territories. However, as is stated above, this assumption does not imply that each commodity purchased by the Host Society was presumed to have been produced in the Northwest Territories. Given the limited nature of the economic base in the NWT, 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 NWT input-output model provides estimates of the GDP effect of a dollar spent in the Territory on specific goods and services. For example, for each dollar of meat, fish and dairy products purchased in the NWT, the GDP impact is only 6.07 cents; a dollar spent on beverages results in a GDP impact of 0.04 cents. On the other hand, for each dollar spent on communication services, the GDP impact is 98.8 cents.

Table 4 Host Society Expenditures by Industry

Industrial Sector	Amount (\$)
Accommodation	31,500.47
Business Services	300,700.29

Communications	93,860.99
Construction	115,237.65
Finance/Insurance	20,912.29
Food/Beverages	221,974.28
Freight	120,993.21
Furniture/Fixtures	83,980.12
Households/Salaries	549,283.23
Machinery/Equipment	205,562.44
Medical Services	18,060.57
Printing/Publishing	148,546.15
Real Estate	255,098.23
Retail Trade	158,376.40
Security	17,284.43
Transport/Travel	194,602.92
Utilities	20,000.00
Wholesale Trade	162,704.49
Other	13,727.38
TOTAL	2,732,405.54

In order to evaluate the induced effects of the autonomous spending of the host society, further assumptions were required to subdivide these general-spending categories into some 627 industrial link codes that are used in the GNWT input-output model. A detailed breakdown of the assumptions regarding industrial sectors in which the Host Society expenditures occurred is provided in Appendix B. Since the interim

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, it is felt that reasonable assumptions have been made regarding to actual industrial sectors in which spending occurred. The interim unaudited financial statements indicate that the Host Society generated a net income (profit) of \$4887.78. 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.

Patron Spending

The results of the surveys provided a basis by which the spending patterns of different patron groups could be estimated. Based on these findings, the direct expenditures of patrons are shown in Tables 5 and 6. Table 5 shows the estimated spending patterns of non-NWT-resident patrons in a variety of categories. For example, it is estimated that non-NWT-resident spectators spent a total of \$189,902.22. Of this, spending amounted to \$63,555.56 on accommodation, \$46,928.89 on restaurant meals, \$2,306.67 on local transport, \$51,422.22 in the retail sector, \$11,600.00 on entertainment (including event tickets, bars, etc.), \$4,355.56 on groceries, \$8,355.56 on gas, and \$1,377.78 on other items. Similarly, it is estimated that: guests, special guests, and media representatives in this category spent a total of \$126,845.71; athletes and cultural performers spent a total of \$165,979.44; officials, coaches and mission staff spent a total of \$146,214.61; and other visitors spent a total of \$2,512.50.

It is estimated that each of the mission staffs made expenditures in the local economy of \$1,000 on sundry items. In addition, some contingents rented automobiles for use by mission staff during the Games. It is also estimated that host societies that will be hosting (or hope to be hosting) future editions of the AWG (notably Whitehorse 2000 and Nuuk 2002) made expenditures totaling \$15,750 in addition to personal expenditures already accounted for in the analysis.

The total amounts of estimated expenditure by non-NWT-resident patrons in each category of spending are shown in the bottom row of Table 5. The overall total (direct) spending of non-NWT-resident patrons is estimated to have been \$652,351.40.

Table 5 Non-NWT Resident Patron Spending (in \$)

	<i>N</i>	<i>Lodging</i>	<i>Restaurant</i>	<i>Transport</i>	<i>Retail</i>	<i>Entertainme nt</i>	<i>Groceries</i>	<i>Gas</i>	<i>Other</i>	TOTAL
<i>Spectators</i>	280	63555.56	46928.89	2306.67	51422.22	11600.00	4355.56	8355.56	1377.78	189902.22
<i>Guests/</i>	110	55078.57	23021.43	5955.71	34084.29	4541.43	1461.43	1854.29	848.57	126845.71
<i>Media</i>										
<i>Athletes/</i>	1002	8257.22	52076.17	2342.64	77260.69	16199.00	3674.00	5427.50	742.22	165979.44

Cultural

Officials/ 342 11105.39 39695.06 9433.82 51741.91 17080.79 4034.83 941.46 653.26 **146214.61**

Coaches/

Mission

Other 15 0.00 1406.25 75.00 2775.00 571.88 206.25 140.63 112.50 **2512.50**

Mission & 1500.00 5500.00 8850.00 4000.00 6000.00 1550.00 1250.00 1000.00 **29650.00**

Bid Spend

TOTAL 1764 139496.74 168627.79 28963.84 221284.11 55993.09 15282.07 17969.43 4734.33 652351.40

Again, it should be stressed that these figures represent estimates of direct expenditures by patrons who do not reside in the NWT. These data are based on the various assumptions contained in this report. As was the case with the host society budget, the Consultant had to make educated assumptions regarding the precise make up of these visitor expenditures in order to run the data through the GNWT input-output model. Details of the assumptions made in this analysis are summarized in appendix B.

A similar exercise was conducted to estimate the spending patterns of non-Yellowknife-resident patrons from the NWT. The results of these estimates are shown in Table 6 and appendix B.

Table 6 NWT (non-Yellowknife) Resident Spending Patterns (in \$)

	<i>N</i>	<i>Lodging</i>	<i>Restaurant</i>	<i>Transport</i>	<i>Retail</i>	<i>Entertainme nt</i>	<i>Groceries</i>	<i>Gas</i>	<i>Other</i>	TOTAL
<i>Spectators</i>	65	14753.97	10894.21	535.48	11937.30	2692.86	1011.11	1939.68	319.84	44084.44
<i>Guests/</i>	163	81616.43	34113.57	8825.29	50506.71	6729.57	2165.57	2747.71	1257.43	187962.29
<i>Media</i>										
<i>Athletes/</i>	191	1573.98	9926.69	446.55	14727.34	3087.83	700.33	1034.58	141.48	31638.80
<i>Cultural</i>										
<i>Officials/</i>	41	1331.35	4758.76	1130.96	6202.98	2047.70	483.71	112.87	78.31	16146.63
<i>Coaches/</i>										
<i>Mission</i>										
<i>Other</i>	35		3281.25	175.00	6475.00	1334.38	481.25	328.13	262.50	12337.50
<i>Mission Spend</i>				1400.00	500.00		500.00	150.00		2550.00
TOTAL	495	99275.73	62974.49	12513.27	90349.33	15892.33	5341.97	6312.97	2059.57	294719.66

The overall estimated expenditures of non-Yellowknife-resident patrons are highlighted in Table 7. This combines the total spending shown in Tables 5 and 6. Thus, it can be seen that an estimated total of \$947,071.05 was spent by AWG patrons who are not residents of Yellowknife. Of this amount, \$238,772.47 was spent on lodging, \$231,602.28 on restaurant meals, etc.

Table 7 Overall Spending (in \$) Non-Yellowknife AWG Patrons

<i>Lodging</i>	<i>Restaurant</i>	<i>Transport</i>	<i>Retail</i>	<i>Entertainment</i>	<i>Groceries</i>	<i>Gas</i>	<i>Other</i>	Total
238772.47	231602.28	41477.11	311633.44	71885.42	20624.04	24282.40	6793.90	947071.05

Direct Economic Impact

Based on the assumptions outlined, the interim financial statements, and the analysis conducted, the following estimates of the direct economic impact of the 1998 AWG on the economies of the Northwest Territories and of Yellowknife were determined.

Direct Impact of the 1998 AWG on the Northwest Territories Economy

The autonomous spending that resulted from the 1998 AWG in the Northwest Territories was estimated to have been \$3,384,756.94. This amount was the sum of the Host Society spending (\$2,732,405.54) and the expenditures of Non-NWT patrons (\$652,351.40). As has already been explained in this report, much of this spending was made on imports to the NWT. The effect that this spending had on the GDP of the Northwest Territories was estimated from the input-output model employed by the Bureau of Statistics within the Government of the Northwest Territories. The overall 'direct' impact on Territorial GDP was estimated to have been \$1,538,485. Of this amount, \$1,162,564 was accounted for by an increase in labour income. This translates into an increase of 27.3 person years of employment. These results are summarised in Table 8.

Table 8 Direct Impact of 1998 AWG on NWT Economy

	<i>Host Society</i>	<i>Non-NWT Patrons</i>	Total
Autonomous Spending	\$2,732,405.54	\$652,351.40	\$3,384,756.94
GDP at Factor Cost	\$1,296,594	\$241,891	\$1,538,485

Labour Income	\$983,592	\$178,972	\$1,162,564
Employment (person years)	20.8	6.5	27.3

Direct Impact of the 1998 AWG on the Yellowknife Economy

The autonomous spending in Yellowknife resulting from the 1998 AWG was estimated to have been \$3,679,476.60. This amount was the sum of the Host Society spending (\$2,732,405.54) and the expenditures of Non-Yellowknife patrons (\$947,071.06). The effect that this spending had on the GDP of the Yellowknife economy was estimated from extrapolating from the data provided by the GNWT input-output 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 Yellowknife are of the same magnitude as for autonomous injections of spending into the Territorial economy. The overall 'direct' impact on Yellowknife GDP was estimated to have been \$1,647,767. Of this amount, \$1,243,420 was accounted for by an increase in labour income. This translates into an increase of 30.5 person years of employment. These results are summarised in Table 9.

Table 9 Direct Impact of the 1998 AWG on the Yellowknife Economy

	Host Society	Non-Yellowknife Patrons	Total
Autonomous Spending	\$2,732,405.54	\$947,071.06	\$3,679,476.60
GDP at Factor Cost	\$1,296,594	\$351,173	\$1,647,767
Labour Income	983,592	\$259,828	\$1,243,420
Employment (person years)	20.8	9.7	30.5

Indirect Impact

Having determined the direct impact of the AWG on the economies of the NWT and of Yellowknife, the next stage was to evaluate the ripple effects that this new injection of spending on the respective economies would have. Tables 10 and 11 summarise the results of this analysis. Table 10 illustrates that the indirect effect of the initial increase in economic activity resulting from the AWG included an increase in GDP of \$301,217, of which labour income accounted for \$154,555 or 3.4 person years of employment.

Table 10 Indirect Impact of the 1998 AWG on the NWT Economy

	<i>Host Society</i>	<i>Non-NWT Patrons</i>	Total
<i>GDP at Factor Cost</i>	\$221,606	\$79,611	\$301,217
<i>Labour Income</i>	\$117,147	\$37,408	\$154,555
<i>Employment (person years)</i>	2.6	0.8	3.4

Table 11 shows the estimated 'indirect' impact of the initial increase in economic activity in Yellowknife. Again, these are estimates based on an extrapolation from the Territorial IO model, assuming that the 'indirect' effects are in the same proportion for Yellowknife as for the NWT.

Table 11 Indirect Impact of the 1998 AWG on the Yellowknife Economy

	<i>Host Society</i>	<i>Non-Yellowknife Patrons</i>	Total
<i>GDP at Factor Cost</i>	\$221,606	\$115,578	\$337,184
<i>Labour Income</i>	\$117,147	\$54,308	\$171,455

Employment (person years)	2.6	1.5	4.1
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Induced Impact

Finally, the 'induced' impacts on the NWT and Yellowknife economies were determined from the IO model. The results of this analysis are shown in Tables 12 and 13. Table 12 shows that the 'induced' impact on GDP in NWT totaled \$438,882. Of this amount, \$209,250 was accounted for by increases in labour income. This translates to an employment impact of 5.1 person years.

Table 12 Induced Impact of the 1998 AWG on the NWT Economy

	Host Society	Non-NWT Patrons	Total
GDP at Factor Cost	\$366,781	\$72,101	\$438,882
Labour Income	\$174,874	\$34,376	\$209,250
Employment (person years)	4.3	0.8	5.1

Table 13 shows the estimated 'induced' impact of the initial increase in economic activity in Yellowknife. Again, these are estimates based on an extrapolation from the Territorial IO model, assuming that the 'induced' effects are in the same proportion for Yellowknife as those for the NWT.

Table 13 Induced Impact of the 1998 AWG on the Yellowknife Economy

	Host Society	Non-Yellowknife Patrons	Total
GDP at Factor Cost	\$366,781	\$104,674	\$471,455
Labour Income	\$174,874	\$49,906	\$224,780

Employment (person years)	4.3	1.4	5.7
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Total Economic Impact

The overall economic impact of the 1998 AWG is determined by summing the direct, indirect, and induced impacts. Therefore, the overall economic impact on the Northwest Territories is estimated to have been a GDP increase of \$2,278,584. The increase in labour income in the Territory is calculated to have been \$1,526,369, and the overall increase in Territorial employment is assessed to have been 35.8 person years. These figures are illustrated in Table 14.

Thus the overall multiplier for the NWT economy was estimated to be 1.481. In other words, for every initial injection of \$1,000 into the NWT economy that is not spent directly on imports, there are spillover (or secondary) expenditures amounting to \$481 in the Territories.

Table 14 Total Impact of the 1998 AWG on the NWT Economy

	<i>Direct</i>	<i>Indirect</i>	<i>Induced</i>	Total
GDP at Factor Cost	\$1,538,485	\$301,217	\$438,882	\$2,278,584
Labour Income	\$1,162,564	\$154,555	\$209,250	\$1,526,369
Employment (person years)	27.3	3.4	5.1	35.8

Using a similar multiplier for the Yellowknife economy (as explained above), the overall economic impact of the 1998 AWG on the host community is estimated as follows. The increase in GDP is projected to have been \$2,426,406; the increase in labour income is estimated to have been \$1,639,655; and it is argued that the increase in employment in the city was 40.3 person years. These figures are illustrated in Table 15.

Table 15 Total Impact of the 1998 AWG on the Yellowknife Economy

	<i>Direct</i>	<i>Indirect</i>	<i>Induced</i>	<i>Total</i>
<i>GDP at Factor Cost</i>	\$1,647,767	\$337,184	\$441,455	\$2,426,406
<i>Labour Income</i>	\$1,243,420	\$171,455	\$224,780	\$1,639,655
<i>Employment (person years)</i>	30.5	4.1	5.7	40.3

Business Impacts

In addition to the data on the economic impact of the AWG, a number of surveys were conducted with local business operators immediately following the Games. The data resulting from these surveys are summarized briefly here. A total of sixty-three businesses responded to the Business Survey, which was conducted via telephone and personal interviews with business operators in the week immediately following the completion of the Games. It should be noted that the sample of businesses surveyed was in no means a representative one of the Yellowknife economy as a whole. Instead, the intention was to generate some data at the individual business level in a variety of industrial sectors that were most likely to have been affected by the Arctic Winter Games. The industrial sectors included retail trade, accommodation and food services, photographic finishing, computing, and amusement/recreation services.

Approximately 79.0% of respondents indicated that sales had increased during the Games, while 19.4% indicated no change in sales during the Games. Only one business operator (1.6% of respondents) indicated a decline in sales during the Games.

This impact on the business community of Yellowknife is likely to have been dependent on a number of factors, some of which were under control of the business operators, others of which were not. For example, businesses involved in the broadly defined tourism industry (including accommodation, restaurants, bars, and retail sales) were more likely to see a direct benefit than those involved in heavy industry, the professions, and manufacturing. However, within the subsection of businesses that stood to gain most from the Games, it was evident that some had made more efforts than had others to generate increased sales.

Some 43.4% of the business operators who responded to the survey reported that they had been involved in some form of special advertising during the Games. This advertising was through newspapers, on-site signage, in-

store specials, the AWG Passport and local radio or television. Just over one fifth (20.9%) of businesses introduced new products or services during the Games. Of these, the majority involved extending opening hours, or related to special promotions to Games participants. Specialized products or services included an auction, special breakfasts, wild meat, hair dye (for athletes!), AWG souvenir items, and special wrapped candy.

The average growth in sales during the week of the Games amongst those business operators surveyed who indicated a change was 29.3%. At the upper extreme of the range was one business operator who suggested that her sales had increased by 225%. Given the largely positive benefit that local business operators in these sectors experienced, it is interesting to note that just under half of those responding (47.1%) reported that they had made a direct contribution (either in cash or in-kind) to the organization of the 1998 AWG.

In addition to the survey conducted as part of the Economic Impact statement, newspaper reports during the games indicated similar positive sentiments among business operators in Yellowknife. A selection of these reports is provided in Appendix C.

Impressions of the Arctic Winter Games and Yellowknife

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 17 & 18) that focussed on the impressions that participants and visitors had of the Games and the host community. The results of these responses are summarized 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 realized. However, for the questions regarding civic pride in Yellowknife and understanding of what the city has to offer visitors, it is possible that an increased awareness could result in repeat visits. In fact at least three respondents to the statement regarding what Yellowknife has to offer indicated that they were pleasantly surprised to the extent that they were seriously contemplating a return visit at some other time of year. Such testimony was completely unprompted by the interviewer. Even if small number of the visitors to Yellowknife 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 NWT. 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.

The responses to the statements on item 18 of the Patron survey are summarized in Table 16. It can be seen that almost everyone who attended the 1998 AWG in Yellowknife had an enjoyable time (statement 1). In addition, an overwhelming majority considered that the Games were both worthwhile (statement 4) and a successful venture (statement 6). Furthermore, visitors to Yellowknife received a positive impression of the city and its residents (statement 2). The athletes attending the Games generally found that they had learned new skills, but this sentiment was not as strong among spectators and guests (statement 3).

In addition to responding to these statements, those surveyed were asked if they felt that Yellowknife offered a good range of businesses and services. Of the 421 individuals who responded to the question, only 30 (or 7.1%) 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, skate sharpening services, and tickets for the opening and closing ceremonies for the Games. Other services that visitors indicated were hard to find in Yellowknife included a fast photographic developing and printing service, entertainment for teenagers and youth, and restaurant variety.

Table 16 Patron Impressions of the Arctic Winter Games and of Yellowknife

<i>Statement</i>	<i>Spectators (non-NWT) (n=35)</i>	<i>Guests (non- NWT) (n=23)</i>	<i>Athletes (non-NWT) (n=187)</i>	<i>Other (non- NWT) (n=86)</i>	<i>Spectators/ Guests (NWT) (n=13)</i>	<i>Athletes (NWT) (n=12)</i>	<i>Other (NWT) (n=14)</i>	<i>Volunteer (all) (n=51)</i>
1) I have enjoyed myself at these Arctic Winter Games	4.83	4.74	4.67	4.77	4.69	4.67	4.64	4.45
2) People have a lot of civic pride in Yellowknife	4.11	4.39	4.06	4.19	4.46	3.83	3.71	4.04
3) I have gained new skills as a result of these Games	2.94	2.78	4.03	4.12	3.38	4.25	4.00	3.65
4) I feel that these Games have been worthwhile	4.89	4.87	4.82	4.90	4.92	4.92	5.00	4.61
5) Because of these Games, I have a better understanding of what Yellowknife has to offer	4.40	4.48	4.22	4.44	3.38	4.00	3.79	3.75
6) These Games have been a success	4.77	4.65	4.70	4.69	4.69	4.67	4.79	4.49

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 Yellowknife and the Northwest Territories, the 1998

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. In addition, an estimated 2,244 people visited Yellowknife during the weeklong festival. Their expenditures represented an autonomous injection of spending into the Territorial economy of an estimated \$3.385 million, which resulted in an overall economic impact of \$2.279 million in increased GDP. This resulted in an estimated increase in employment in the NWT of 35.8 person years. The autonomous injection of spending into the Yellowknife economy was estimated to be \$3.679 million, with a total economic impact for the City of an estimated \$2.426 million in increased GDP. It is estimated that this increase in economic activity increased employment in the city by 40.3 person years.

In addition to these overall economic effects of the AWG, a sample of individual business operators in the host economy reported increases in sales averaging 29.3% during the event. Furthermore, the general impressions of Yellowknife 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 into consideration, the 1998 Arctic Winter Games appear to have had a positive economic and social impact on Yellowknife, the Northwest Territories, and indeed the whole of the North and beyond.

References

Government of Yukon (1991). Economic Impacts of the 1992 Arctic Winter Games. Economic Research and Analysis - Economic Development.

GNWT (1993). Northwest Territories Economic Multipliers - 1992. Bureau of Statistics, Government of Northwest Territories.

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Appendix A

AWG Patron Survey

1. 1. Have you already been questioned about your spending patterns during these

Games?

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

2. What is your role at the 1998 Arctic Winter Games?

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

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

If (a) Sport/Activity _____ (except Team Leader) Delegation

3. What is your PRIMARY reason for being in Yellowknife?

Attending Arctic Winter Games [] Shopping []

Visiting Friends and Relatives [] Business [] Other _____ (specify)

4. General Information:

Age Range _____ (under 19; 19-29; 30-49; 50+) Male [] Female []

5. How many events will you be attending during these Games? _____

6. Will any of your family and friends be attending the Games as spectators?

Yes [] No [] If 'Yes', how many? _____

7. Are you a resident of Yellowknife? Yes [] No [] (If 'Yes', go to question 16)

8. Where do you live? _____

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

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

Games Village Accommodation _____ Hotel/Motel/Bed & Breakfast

Visiting Friends & Relatives _____ Other _____

(specify)

11. How did you arrive in Yellowknife?

Air [] Automobile [] Bus [] Other _____ (specify)

12. How much (in Canadian \$) will you spend outside AWG venues for:

Lodging _____ Entertainment _____

Restaurant meals _____ Groceries _____

Transport (local) _____ Gasoline/oil _____

Retail shopping _____ Other _____

13. How much (in Canadian \$) will you spend at AWG venues for:

Food/beverages _____ Souvenirs _____

Entertainment _____ Other _____

Parking _____

14. How many people, including yourself, are in your expense estimates? (If '1', go to question 16)

15. How many of these individuals are non-Yellowknife-resident:

_____ adults (>18 years old); _____ teens (13-17); _____ children (<12)?

16. Please describe the composition of your group:

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

17. Do you feel that Yellowknife provides a good variety of businesses and services to you?

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

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

S
D
D
N
A
S
A

I have enjoyed myself at these Arctic Winter Games 1 2 3 4 5

People have a lot of civic pride in Yellowknife 1 2 3 4 5

I have gained new skills as a result of these Games 1 2 3 4 5

I feel that these Games have been worthwhile 1 2 3 4 5

Because of these Games, I have a better understanding 1 2 3 4 5

of what Yellowknife has to offer

These Games have been a success 1 2 3 4 5

Appendix B

Assumed Host Society and Visitor Expenditures in

NWT by Industry at the 1998 AWG

Industrial Sector	Link Code	Expenditures by Host Society (\$)	Expenditures by Non-NWT Visitors (\$)	TOTAL EXPENDITURES (\$)
Carbonated soft drink	126	1965.61	5000.00	6965.61
Distilled alcohol etc	127	3500.00	10000.00	13500.00
Beer etc	128	3520.00	25000.00	28520.00
Wine etc	129	3000.00	5000.00	8000.00
Cigarettes	131	0.00	3000.00	3000.00
Luggage	152	34010.00	0.00	34010.00
Tents etc.	177	76822.34	0.00	76822.34
Household textile	179	275.03	0.00	275.03
Other textile	181	34039.43	0.00	34039.43
Women's clothing	186	3000.00	0.00	3000.00
Men's & boys clothing	188	3000.00	0.00	3000.00
Other clothing	192	18830.30	0.00	18830.30
Custom tailoring	195	3802.00	0.00	3802.00
Household furniture	212	722.25	0.00	722.25
Office furniture	214	11235.00	0.00	11235.00
Mattresses	216	7022.87	0.00	7022.87
Paper stationery	241	11703.19	0.00	11703.19
Other stationery	242	491.07	0.00	491.07
Photographic paper	243	1395.84	0.00	1395.84
Newspapers	245	15000.00	0.00	15000.00
Printed bus. Forms	250	30312.44	0.00	30312.44
Advert, flyers etc.	251	6486.73	0.00	6486.73
Other printing	252	60.00	0.00	60.00
Advertising in media	253	17898.99	0.00	17898.99
Specialised publishing	254	571.58	0.00	571.58

Movers etc.	324	1642.65	0.00	1642.65
Other heating	325	9657.82	0.00	9657.82
Non electric Furnaces	326	8539.74	0.00	8539.74
Computers etc.	360	21517.66	0.00	21517.66
Office Mach	361	38423.96	0.00	38423.96
Commercial trailers	374	92263.00	0.00	92263.00
Snowmobiles	389	6305.61	0.00	6305.61
Radio, TV, etc.	395	13872.50	0.00	13872.50
Telephone etc.	396	10275.00	0.00	10275.00
Electronic alarm	403	10000.00	0.00	10000.00
Gasoline	437	1772.58	12969.43	14742.01
Diesel	439	0.00	5000.00	5000.00
Explosives	504	10000.00	0.00	10000.00
Medical supplies.	517	786.81	0.00	786.81
Watches, clocks	521	1000.00	0.00	1000.00
Optical & photo equip	522	2500.00	0.00	2500.00
Photocopy equipment	523	24944.30	0.00	24944.30
Photographic film	524	2500.00	0.00	2500.00
Advertising signs	532	11667.92	0.00	11667.92
Custom work	535	49264.06	0.00	49264.06
Recordings etc	539	10973.36	0.00	10973.36
Art & décor.	541	26358.08	0.00	26358.08
Repair Construction	542	15000.00	0.00	15000.00
Non-residential construction	544	100317.95	0.00	100317.95
Air transport	550	77476.98	0.00	77476.98
School bus transit	551	56433.80	0.00	56433.80
Truck transport	556	107185.11	0.00	107185.11
Urban transit	558	737.12	2000.00	2737.12
Taxis	559	5234.58	8000.00	13234.58

Storage	562	4936.23	0.00	4936.23
Radio & TV broadcast	563	13000.00	0.00	13000.00
Telephone & other	564	91562.26	0.00	91562.26
Postal services	565	2298.73	0.00	2298.73
Electric power	566	15000.00	0.00	15000.00
Water & other util.	569	5000.00	0.00	5000.00
Retailing margins	573	168531.90	0.00	168531.90
Imputed service bank	574	2316.18	0.00	2316.18
Imputed service	575	48751.19	0.00	48751.19
Insurance	578	16683.00	0.00	16683.00
Imputed rent	579	3000.00	20000.00	23000.00
Other rent	581	265162.00	0.00	265162.00
Hospital services	584	17171.37	0.00	17171.37
Other health services	586	102.39	0.00	102.39
Motion picture production	587	10000.00	0.00	10000.00
Other recreation services	590	49130.29	4734.37	53864.66
Accounting & legal	592	2063.11	0.00	2063.11
Advertising service	593	19035.75	0.00	19035.75
Laundry	594	0.00	1000.00	1000.00
Accommodation service	595	28500.47	119496.70	147997.17
Meals	596	16014.21	168627.80	184642.01
Service margin on alcohol etc.	597	1200.00	0.00	1200.00
Photographic service	599	6475.97	0.00	6475.97
Services to buildings	600	23177.95	0.00	23177.95
Computer service	601	13633.63	0.00	13633.63
Other services to business	602	35661.01	0.00	35661.01
Automobile Rental	603	57442.12	18963.84	76405.96
Office supplies	607	5360.10	0.00	5360.10
Cafeteria supplies	608	5520.81	0.00	5520.81

Travel & entertainment	611	13208.23	6993.09	20201.32
Advertising & promotion	612	55926.72	0.00	55926.72
Wages & salaries	624	529362.18	0.00	529362.18
Supplemental lab income	625	19921.05	0.00	19921.05
Net income	626	4887.78	0.00	4887.78
Catered food/beverages	596*	177053.65	0.00	177053.65
Retail shopping	*	0.00	221284.10	221284.10
Groceries	*	0.00	15282.07	15282.07
TOTAL 'NEW' NWT SPENDING		2732405.54	652351.40	3384756.94

* - Estimates of spending in these categories were made according to average Territorial expenditures

Appendix C

Assumed Host Society and Visitor Expenditures in Yellowknife at the 1998 AWG

Industrial Sector	Link Code	Host Society Expenditures (\$)	Yellowknife Visitor Expenditures (\$)	TOTAL EXPENDITURES (\$)
Carbonated soft drink	126	1965.61	7000.00	8965.61
Distilled alcohol etc	127	3500.00	12000.00	15500.00
Beer etc	128	3520.00	33000.00	36520.00
Wine etc	129	3000.00	7000.00	10000.00
Cigarettes	131	0.00	4500.00	4500.00
Luggage	152	34010.00	0.00	34010.00
Tents etc.	177	76822.34	0.00	76822.34
Household textile	179	275.03	0.00	275.03
Other textile	181	34039.43	0.00	34039.43
Women's clothing	186	3000.00	0.00	3000.00
Men's & boys clothing	188	3000.00	0.00	3000.00
Other clothing	192	18830.30	0.00	18830.30
Custom tailoring	195	3802.00	0.00	3802.00
Household furniture	212	722.25	0.00	722.25

Office furniture	214	11235.00	0.00	11235.00
Mattresses	216	7022.87	0.00	7022.87
Paper stationery	241	11703.19	0.00	11703.19
Other stationery	242	491.07	0.00	491.07
Photographic paper	243	1395.84	0.00	1395.84
Newspapers	245	15000.00	0.00	15000.00
Printed bus. Forms	250	30312.44	0.00	30312.44
Advert, flyers etc.	251	6486.73	0.00	6486.73
Other printing	252	60.00	0.00	60.00
Advertising in media	253	17898.99	0.00	17898.99
Specialised publishing	254	571.58	0.00	571.58
Movers etc.	324	1642.65	0.00	1642.65
Other heating	325	9657.82	0.00	9657.82
Non electric Furnaces	326	8539.74	0.00	8539.74
Computers etc.	360	21517.66	0.00	21517.66
Office Machinery	361	38423.96	0.00	38423.96
Commercial trailers	374	92263.00	0.00	92263.00
Snowmobiles	389	6305.61	0.00	6305.61
Radio, TV, etc.	395	13872.50	0.00	13872.50
Telephone etc.	396	10275.00	0.00	10275.00
Electronic alarm	403	10000.00	0.00	10000.00
Gasoline	437	1772.58	18282.40	20054.98
Diesel	439	0.00	6000.00	6000.00
Explosives	504	10000.00	0.00	10000.00
Medical supplies.	517	786.81	0.00	786.81
Watches, clocks	521	1000.00	0.00	1000.00
Optical & photo equip	522	2500.00	0.00	2500.00
Photocopy equipment	523	24944.30	0.00	24944.30

Photographic film	524	2500.00	0.00	2500.00
Advertising signs	532	11667.92	0.00	11667.92
Custom work	535	49264.06	0.00	49264.06
Recordings etc	539	10973.36	0.00	10973.36
Art & décor.	541	26358.08	0.00	26358.08
Repair Construction	542	15000.00	0.00	15000.00
Non-residential construction	544	100317.95	0.00	100317.95
Air transport	550	77476.98	0.00	77476.98
School bus transit	551	56433.80	0.00	56433.80
Truck transport	556	107185.11	0.00	107185.11
Urban transit	558	737.12	3000.00	3737.12
Taxis	559	5234.58	15000.00	20234.58
Storage	562	4936.23	0.00	4936.23
Radio & TV broadcast	563	13000.00	0.00	13000.00
Telephone & other	564	91562.26	0.00	91562.26
Postal services	565	2298.73	0.00	2298.73
Electric power	566	15000.00	0.00	15000.00
Water & other util.	569	5000.00	0.00	5000.00
Retailing margins	573	168531.90	0.00	168531.90
Imputed service bank	574	2316.18	0.00	2316.18
Imputed service	575	48751.19	0.00	48751.19
Insurance	578	16683.00	0.00	16683.00
Imputed rent	579	3000.00	35000.00	38000.00
Other rent	581	265162.00	0.00	265162.00
Hospital services	584	17171.37	0.00	17171.37
Other health services	586	102.39	0.00	102.39
Motion picture production	587	10000.00	0.00	10000.00
Other recreation services	590	49130.29	5793.90	54924.19
Accounting & legal	592	2063.11	0.00	2063.11

Advertising service	593	19035.75	0.00	19035.75
Laundry	594	0.00	1500.00	1500.00
Accommodation service	595	28500.47	203772.50	232272.97
Meals	596	16014.21	231602.30	247616.51
Service margin on alcohol etc.	597	1200.00	0.00	1200.00
Photographic service	599	6475.97	0.00	6475.97
Services to buildings	600	23177.95	0.00	23177.95
Computer service	601	13633.63	0.00	13633.63
Other services to business	602	35661.01	0.00	35661.01
Automobile Rental	603	57442.12	23477.11	80919.23
Office supplies	607	5360.10	0.00	5360.10
Cafeteria supplies	608	5520.81	0.00	5520.81
Travel & entertainment	611	13208.23	7885.41	21093.64
Advertising & promotion	612	55926.72	0.00	55926.72
Wages & salaries	624	529362.18	0.00	529362.18
Supplemental lab income	625	19921.05	0.00	19921.05
Net income	626	4887.78	0.00	4887.78
Catered food/beverages	596*	177053.65	0.00	177053.65
Retail shopping	*	0.00	311633.40	311633.40
Groceries	*	0.00	20624.04	20624.04
TOTAL 'NEW' Y'KNIFE SPENDING		2732405.54	947071.06	3679476.60

* - Estimates of spending in these categories were made according to average Territorial expenditures

APPENDIX D

Press Clippings

1) Kerry McCluskey, March 17, 1998, Yellowknifer

"Thousands of Arctic Winter Games participants are painting the town red which means big business for Yellowknife's entertainment scene.

Lisa Tesar, the managing director of the Gallery and the Cave reports seeing packed houses since the onset of the Games last weekend.

"We're definitely busier. We've had representatives from practically all the teams in here. Everyone in the city is making money off this", says Tesar.

Sam Yurkiw, the owner of one of the busiest bars in the North, says that business at the Gold Range has doubled or tripled.

"Everybody figures it's a big holiday, the local people and the communities. Not too many athletes though, they're all underage," says Yurkiw.

Fred Squires, owner of three bars and a hair salon says business is booming because of the Games.

"We're getting lots of Arctic Winter Games people, even at my hair salon yesterday there were two full teams in there getting their hair dyed. The (adult) Russian team spent the whole night at Freddy's (on Franklin) and they left all kinds of badges and emblems and at the Richter, they're giving the staff all kinds of pins," says Squires.

Nico Bastas, the manager of the Unicorn Pub & Loft says his sales have increased significantly.

"People are happy to be in town. The coaches, the teams, it's the Arctic spirit and people want to get out because of it. Everybody in this industry should benefit", says Bastas.

Not all of the teams are bellying up to the bar though. Restaurants in town are also noticing a huge surge in revenue.

Bullock's Bistro has noticed a 30 to 40 per cent hike in sales.

"It's just unreal. It's like the summer with triple capacity inside. It has affected the local economy," says Renata Bullock.

Ranilo Ramirez has seen his pizza sales go through the roof.

"Mostly people who come here are from out of town, from Alaska, Yukon, Greenland and Russia," says the co-manager of Boston Pizza...

"We've been to the Gallery, the Black Knight Pub, the Polar Bowl and Broadway" says Jeramie Ford [an athlete from Alaska] during his dinner at Boston Pizza.

Alaskan dog mushers, Mark and Debbie Moderow, didn't want to mention how much money they will have left behind in the Yellowknife economy.

"This is our vacation of the year...nine days of hotels restaurants, souvenirs, I don't even want to think about it," says Mark Moderow..."

2) Jeff Colbourne, Yellowknifer, March 20, 1998, p.A17

"Automobile Shortage for Visitors

Games participants use up all car rentals in the city

Finding a rental vehicle in Yellowknife this past week was no easy task.

Most car rental companies contacted in the city on Tuesday were sold out buy the calls kept coming in.

"Yeah, we're booked solid," said Tony Vane, owner of Yellowknife Motors.

The Chevrolet/GM dealer had about 20 vehicles rented out and no other vehicles left on the lot. Most are booked until the weekend.

"I have one truck that was just returned just today. Other than that we're out", said Roger Romard, manager of Budget Rent-a-Car.

"I bought 10 more vehicles last week and they are all gone. I've never seen it this busy before. Last week I was probably turning away five to 10 calls a day. I think the word's kind of out there there's not as many vehicles around or something," said Romard.

It will be Monday before the company is back with any vehicles in his fleet.

People are taking anything they can get their hands on.

"it turns out that mine are all pretty new vehicles, but nonetheless people area saying they'll take anything that moves. People are taking all my trucks. Things that I normally rent out to government, transportation or send out to the mines."

Romard is thrilled with the increased business. The only disappointment he has is everything is gone to the Arctic Winter Games committee, the Yukon team and the Sport North Committee. He really has nothing for the general public coming into town or parents of athletes.

"I'm looking at probably about \$2,500 a day in business, probably even closer to \$3,000 a day. Over 10-day[s] that's \$30,000. That's twice more than my normal month would be. My normal month would only fall between \$15,000 to \$20,000"

Thrifty car rentals is also reporting record rentals this week because of the games. This week they have approximately 15 vehicles out.

"It's really good business. It means a lot," said Jim MacNeill, Thrifty's location manager.

The only time he has seen it this busy is during the very busiest month of summer.

"This is 150 per cent more than I usually do. We're talking a real big

increase".

3) Richard Gleeson, *Yellowknifer*, 18, March, 1998, p19-20.

" Money in the Games"

Arctic Winter Games sets local cashregisters ringing

It's just what the doctor ordered.

After months of the economic doom and gloom of falling gold prices, the Arctic Winter Games arrives as a soothing balm for many local businesses.

Though hard to put a number on it (estimates range up to \$4 million), with an influx of 1,729 athletes and organizers comes an influx of dollars.

"It has picked up since the weekend and there's even more today," said Janna Pick, clerk at San Francisco, a Centre Square Mall gift shop.

Pick's hours have also picked up as a result of the Games. While off for the March break she's working "basically full-time" to keep up with the extra business.

"It looks like it will be good," said Bill Joss, manager of the Top Forty record store. Joss added it was tough to tell on Monday, how much of an impact the Games will have on sales.

"Ask me this time next week and I'll have a better idea," he suggested.

Though the host society has organized plenty of free meals and free fun for athletes and coaches, one of the sectors that stands to gain the most are fast food businesses.

"Crazy, insanity" was how Subway manager Edna Greenfield described the weekend.

"Yesterday after opening ceremonies we were really swarmed," said Greenfield. "But they're lots of fun, and we love to have them here."

With the focus of the Games downtown, the businesses there will reap most of the benefit.

"So far, I really haven't noticed that much of a difference," said general manager of the Trapper's Cabin Diane Rhoddy.

"We're certainly looking forward to some of the business, but there was so much happening downtown yesterday," said Rhoddy. The Trapper's Cabin is on Latham Island, a fair hike from downtown.

A worker at the Northwest Company Trading Post said that though weekend

traffic was up, sales were about normal.

Both businesses are hoping to see more action when the Games move to Old Town for the dog races and Dene games."

4) Bill Braden, News/North, March 30 1998, p.B7

"What's the tab?

What was the cost of getting to the Arctic Winter Games? Plenty, if you were an athlete or coach from Magadan. If you're from Tyuman [sic] or Alberta, nothing. Each of the seven contingents at the '98 Games in Yellowknife had a different approach to funding their teams, and whether or not a direct cash contribution was required from each person. Here's a brief survey of how the various plans work:

Alberta: No direct cost, but some athletes might have been required to pay a fee to their respective sports organization, said Roger Kramer, assistant chef de mission. Alberta's AWG participation was co-ordinated and funded by Alberta Sport, Recreation, Parks and Wildlife, a provincial government corporation and through lottery funds. Corporate support was not extensive.

Alaska: \$450 US (about \$630 Cdn) each. There was limited state funding, some reliance on corporate and service club dollars. It's not easy to put it together. You're on pins and needles right to the end, said Loren Smith, Alaska chef de mission.

Greenland" \$1,500 kroner (about \$300 Cdn) each. Heavy additional funding comes from government and corporations, and co-ordination services from the Homeland Sports Federation. Athletes were monitored for school and regular practice attendance as another condition of travel to the AWG, said Grace Nielsen of the Team Greenland mission staff.

Magadan: \$2,100 US (about \$2,900 Cdn) each, or the full cost. Magadan had no playoffs and could only issues an invitation to those who could afford it to make up their delegation. It's a very difficult financial situation now, from when we were in Eagle River in 1996, said Lucy Ptchelkina, of the Team Magadan mission. The government did pay the way for the three mission staff.

Northwest Territories: Up to \$530 each, based on a separate fee scale for each of the three competitive stages: regional, territorial and the Games themselves. Regionals, depending on travel costs were \$30 to \$175. If you made it to the territorial playoffs, it was another \$80 for juniors and \$130 for seniors. All participants to the actual Games paid another \$225. Assistant chef de mission Gail Nesbitt said corporate sponsors, and government, made a big part of the overall revenue for Team NWT.

Tyuman [sic]: No direct cost. Arctic sports competitor Alexander Tasmanov said the Tyuman government paid all costs for all competitors. Tyuman does hold regional runoffs to pick competitors.

Yukon: Fees ranged from \$260 for adults, \$245 for juniors and \$210 for coaches and mission staff. But chef de mission Vern Haggard said a lot of Team Yukon members sold tickets for a big lottery, and built up credit that way. The lottery was a \$2 ticket for a trip for four to Hawaii."

APPENDIX E

Summary of Assumptions

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

- It is assumed that any expenditures made at the Games by NWT residents who do not live in Yellowknife merely represents a redistribution of spending within the Territorial economy
- 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
- It is assumed that all spending made by the Host Society is new spending which would not otherwise have been made.
- It is assumed that all direct Host Society spending (including all suppliers and contracts) was made in the Yellowknife region of the Northwest Territories.
- The spending patterns of the sampled patrons are assumed to be representative of those of the visitor population as a whole.
- It is estimated that the following numbers of non-Yellowknife residents attended the Games:

345 spectators;

273 guests, security, and media (including 24 security personnel from the NWT who were housed in hotel accommodation);

1193 athletes and cultural performers (*it is estimated that 130 of the NWT contingent's athletes and cultural performers are Yellowknife residents*); and

383 officials, coaches and mission staff (*it is estimated that 40 of the NWT coaches, officials, and mission staff are Yellowknife residents*). Included in this figure, it is assumed that 10 Medical Personnel (not from NWT) were housed in Homestay accommodation for 7 nights and 10 Translators (not from NWT) were housed in Homestay accommodation for 7 nights.

In addition, an estimated 50 volunteers from outside Yellowknife assisted in running the Games. Of these, 15 are estimated to have been from outside the NWT and 35 from other parts of the NWT. It is assumed that these volunteers did not pay for accommodation.

- The spending patterns of NWT patrons were the same as non-NWT patrons.
- Some athletes, cultural participants, coaches, officials, and mission staff chose to stay in hotel accommodation (evidence in support of this was provided by survey responses).
- Mission spending for each mission staff of \$1,000 on miscellaneous sundries (groceries and retail).
- Spending by future (and potential future) Host Societies on entertainment and hospitality was estimated to amount to \$15,750.
- All direct economic impact of the AWG was concentrated in Yellowknife.
- Host Society expenditures are assumed to have occurred in the industrial sectors outlined in Appendix B.
- The GDP impacts of autonomous spending in Yellowknife (including the 'indirect', and 'induced' impacts), as well as the labour income and employment effects, were assumed to have occurred in the same proportion as impacts in the remainder of the NWT.



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