NWT DIAMONDS

THE ECONOMIC IMPACT OF THE DIAMOND INDUSTRY ON THE ECONOMY OF THE NWT, 1991-2004

A REPORT BY THE NWT & NUNAVUT CHAMBER OF MINES, MAY 2005

TABLE OF CONTENTS

EXECUTIVE SUMMARY

The impact of the diamond industry started with the announcement of the discovery of diamonds in the Northwest Territories (NWT) in 1991. In 1998 Canada's first diamond mine, the EKATI™ Diamond Mine, began production. In 2000, construction started on the Diavik Diamond Mine and production commenced in January of 2003. The Diavik Mine will be followed by De Beer's Snap Lake Diamond Project which is scheduled to begin operations in 2007. The development of the EKATI™ mine was also accompanied by the establishment of a small cutting and polishing industry located in Yellowknife and N'dilo (an Aboriginal community adjacent to Yellowknife).

All economic indicators demonstrate that the NWT economy has grown significantly as a direct result of the diamond industry. Since 1997, which was the year of the start of construction of the EKATI™ mine and the main impact of the diamond industry, GDP and personal incomes have risen rapidly, new capital investment has grown to record levels, unemployment has fallen to below the national rate and retail and wholesale trade sales have increased dramatically.

The strong growth in business activity and employment fostered by the diamond industry has lead to an increase in revenues and expenditures of both the Federal Government and the Government of the Northwest Territories (GNWT). Most of the indicators appear to demonstrate that the diamond industry has been a positive net contributor to both Federal and GNWT revenues.

Prior to the growth of the diamond industry GNWT own source revenues (those revenues not received directly through grants from the federal government) comprised about 20% of total revenues but have averaged 33% since 1999 and the impact of the diamond industry. In addition to the growth in GNWT own source revenues federal government grants per person to the GNWT have remained relatively stable. As a result the GNWT has enjoyed strong growth in real revenues per person. In 1999 the year territories were split, the GNWT had $18,894 (in constant 2004 dollars) in revenue per person and revenues grew by $5,288 per person to $24,182 in 2004 – a rise of 28%.

In total, the two operating diamond mines have contributed $54.4 million in property and fuel taxes directly to the GNWT over the period 1998 to 2004. In addition the diamond companies pay royalties, corporate income taxes, capital taxes and other miscellaneous taxes to both the Federal Government and the GNWT.

While GNWT revenues have increased there has been no significant net increase in the NWT population and no significant increase in school enrolments as a result of the diamond industry. This is because the employment demand generated by the diamond industry has replaced other economic activities that have declined (gold mining, oil and gas and the government sector).

Over the period 1991 to 2004 it is estimated that diamond mining contributed $5.2 billion or 91.1% of the total impact of the diamond industry on GDP in the NWT. Exploration activities contributed another $449 million or 7.9% of the total GDP impact while manufacturing (cutting and polishing) generated $58 million or 1.0% of the total impact.

In 2004 the mining industry generated 97.1% of total GDP impacts while exploration and manufacturing contributed 2.1% and 0.8% respectively.

Over the period 1991 to 2004, diamond mining generated 19,742 person years of employment or 89.1% of the total impact on NWT employment. Exploration activities contributed another 1,541 person years, or 7.0% of the total employment impact, while manufacturing generated 883 person years, or 4%, of the total impact.

In 2004 the mining industry generated 89.1% of total employment impacts while exploration and manufacturing contributed 4.0% and 6.9% respectively.

Over the period 1996 to 2003 the two diamond mines spent over $4.1 billion on goods and services. Of this total, $3.0 billion or 73% has been from northern businesses and 31%, or $1.3 billion, has been from Aboriginal businesses in the north.

The development of business capacity has created employment opportunities in Aboriginal enterprises and currently they directly employ hundreds of band members and other northerners.

Employment in Aboriginal businesses along with direct employment at the diamond mines has lead to a reduction in social assistance payments and to a rise in employment income in Aboriginal communities. Over the period of 1996 to 2002, real employment income per person (measured in 2002 constant dollars) in the communities directly impacted by the diamond mining industry rose 79%, from $7,323 to $13,099. In contrast, employment income per person in the NWT rose only 4%.

The rapid rise in income demonstrates the positive impact of both the direct employment in diamond mining and in band owned businesses that serve the diamond and other mining industries.

In addition to increasing employment income, greater employment and falling social assistance payments, the diamond communities have also had a tremendous growth in the number of people enrolled in post-secondary education programs.

In summary all indicators show that the development of the diamond industry in the NWT has been accompanied by strong economic growth with rising government revenues, higher levels of employment and income.

INTRODUCTION

The announcement of the discovery of diamonds in the Northwest Territories (NWT) in 1991 led to the greatest staking rush in the history of Canada. In 1998 Canada's first diamond mine, the EKATI™ Diamond Mine, began production. In 2000, construction started on the Diavik Diamond Mine and production commenced in January of 2003. The Diavik Mine will likely be followed by at least one more mine in the NWT, at Snap Lake. This Project is owned by De Beers Canada Corporation and received approval on October 10, 2003 to start the regulatory permitting process and is scheduled to begin operations in 2006.

The development of the EKATI™ mine has been accompanied by the establishment of a small cutting and polishing industry located in Yellowknife and N'dilo (an Aboriginal community adjacent to Yellowknife).

The objective of this report is to provide a view of the impact of the various aspects of the diamond industry on the economy of the NWT and is an update of an earlier report covering the period 1991 to 2002. This report will review and provide estimates of the exploration, mine construction, production and cutting and polishing activities related to the diamond industry.

The first part of the report describes the development of the NWT economy over the period 1991 to 2003. It looks at the changes in major economic indicators with particular reference to the periods 1991 to 1996 and 1997 to 2003. The latter period encompasses the construction and operation of the EKATI™ Diamond Mine and the construction and first year of operation of the Diavik Diamond Mine. This is the period when the diamond industry had the largest impact on the NWT economy.

The second portion of the report describes the impact of all parts on the diamond pipeline that are active in the NWT and provides an estimate of their contribution to the NWT economy.

The third portion of the report provides more information on the impact of the diamond industry on Aboriginal communities and specifically on the Rae Band.

The economy of the NWT has gone through a major transition over the last decade with the closure of both the Miramar Con and Giant Gold Mines. On the positive side, the construction and operation of the EKATI™ and Diavik Diamond Mines have opened up many new employment and business opportunities that provided a needed boost to the economy.

This section looks at economic change in the NWT by presenting a number of indicators that help measure the changes in the economy. Data for Nunavut has been presented for comparison purposes.

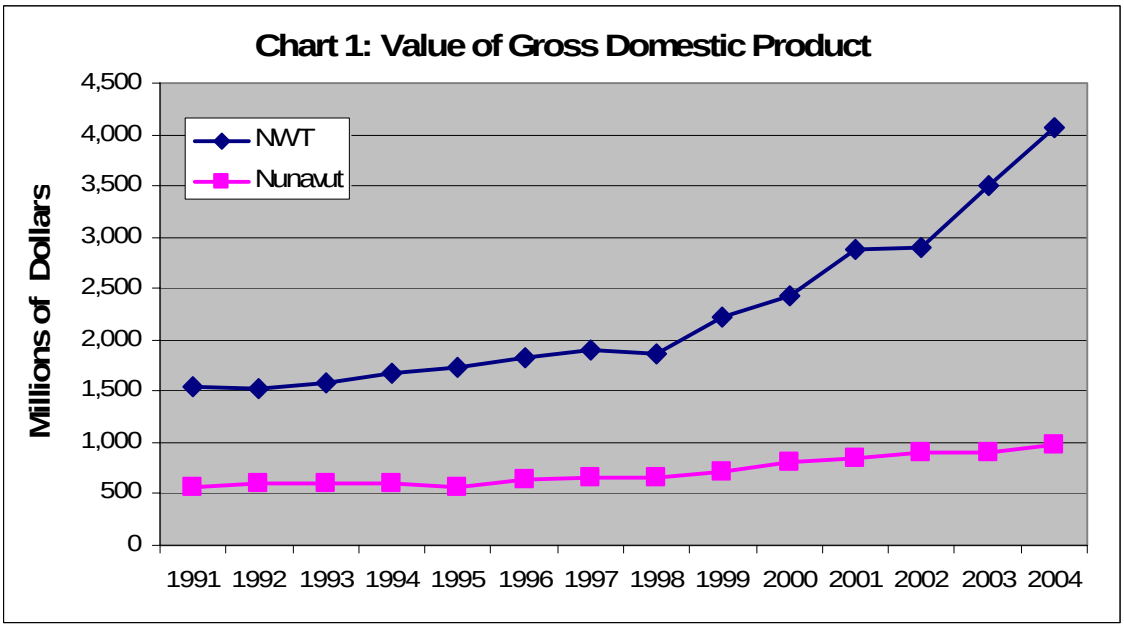

Table 1: Value of Gross Domestic Product at Basic Prices
Millions of Dollars

	1991	1992	1993	1994	1995	1996	1997	1998
NWT	1,537	1,517	1,584	1,681	1,733	1,823	1,911	1,872
Nunavut	564	601	596	611	568	635	661	658

							Change	
	1999	2000	2001	2002	2003	2004	91-96	96-04
NWT	2,213	2,421	2,872	2,901	3,503	4,073	286	2,250
Nunavut	718	805	838	896	908	974	71	339

Table 1 and Chart 1 present an estimate of level and change in Gross Domestic Product (GDP) for the NWT and Nunavut[1] from 1991 to 2004.

It is estimated that in 1991 GDP in the NWT was $1.5 billion and by 1996 it had grown to $1.8 billion, a rise of $286 million. During the same period it is estimated that Nunavut's GDP increased by $71 million.

In contrast over the period 1996 to 2004, when the impact of the diamond industry was largest, the economy of the NWT grew by $2.3 billion to reach $4.1 billion; while Nunavut's economy increased by only $339 million to $974 million.

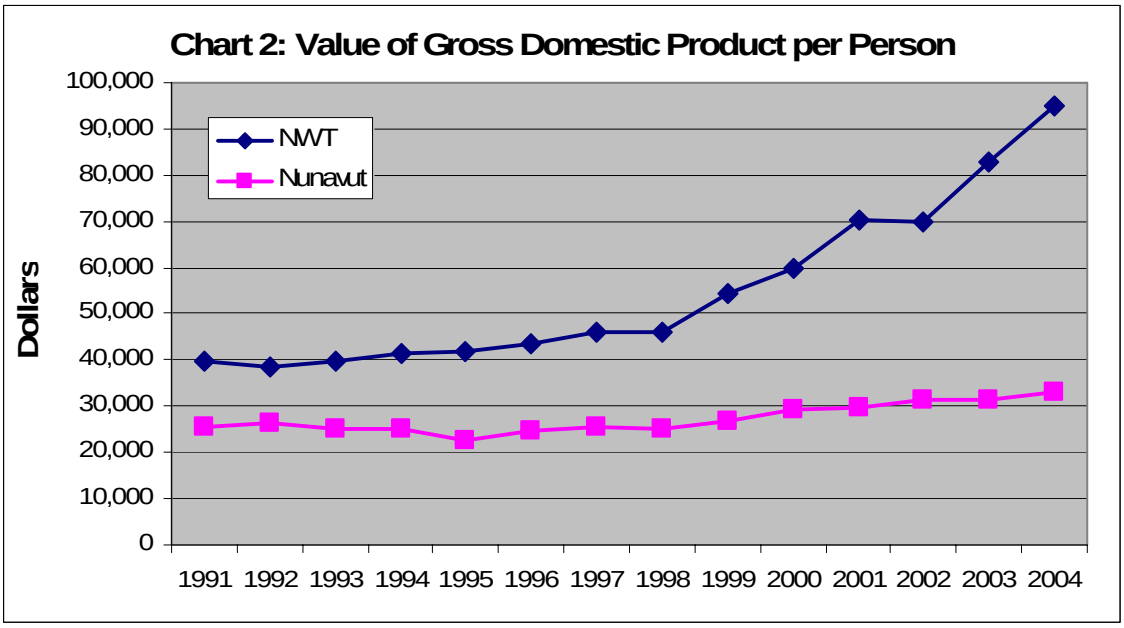

Table 2: Value of Gross Domestic Product per Person
Dollars

	1991	1992	1993	1994	1995	1996	1997	1998
NWT	39,669	38,472	39,770	41,424	41,833	43,667	45,899	45,864
Nunavut	25,429	26,241	25,281	25,023	22,734	24,739	25,537	24,949

	1999	2000	2001	2002	2003	2004	Change 91-96	Change 96-04
NWT	54,435	59,779	70,354	69,922	82,998	95,141	3,998	51,475
Nunavut	26,769	29,273	29,800	31,176	31,203	32,905	-690	8,166

[1] The value of GDP for the period 1991 to 1998 are Ellis Consulting Services estimates while the period from 1999 to 2004 are from Statistics Canada. Prior to division of the territories in 1999 Statistics Canada published only a single estimate for both territories combined.

Chart 2 and Table 2 present GDP on a per person basis. It is estimated that in 1991 GDP per person in the NWT was $39,669 and grew to $43,667 by 1996. During the same period it is estimated that Nunavut's GDP per person fell marginally from $25,429 to $24,739.

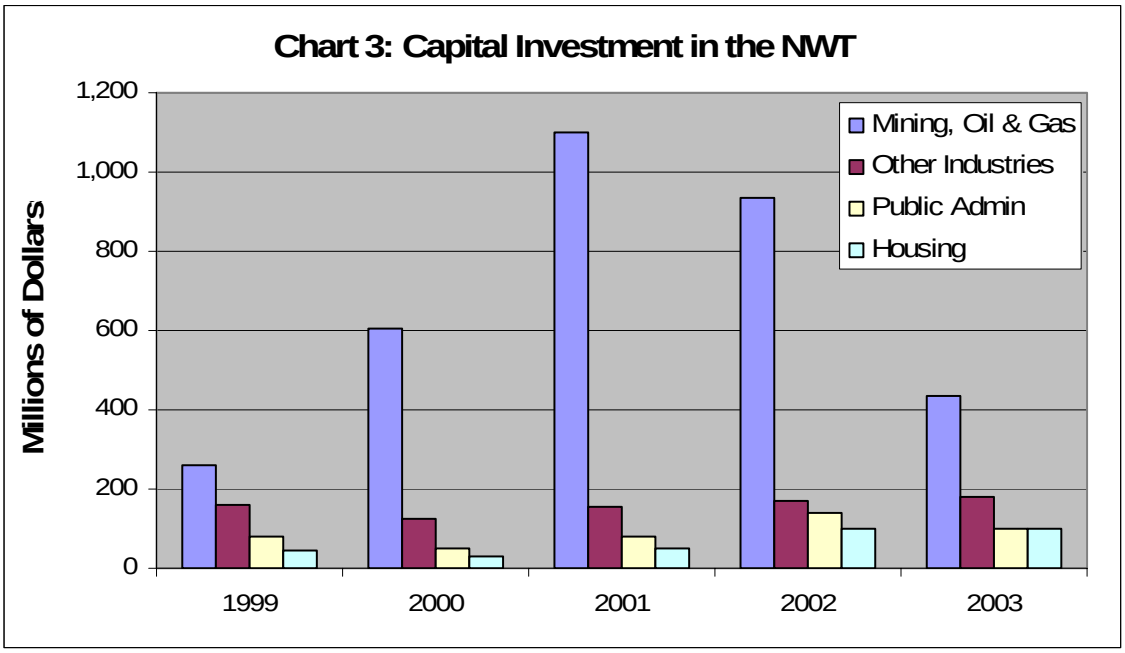

Table 3: Capital Investment in the NWT

	Mining, Oil & Gas	Other Industries	Public Admin	Housing	Total
			($Million)		
1999	262	163	81	47	552
2000	606	125	52	32	815
2001	1,099	156	79	53	1,386
2002	936	171	142	101	1,350
2003	434	180	101	102	817
2004	758	173	126	133	1,190
Total	4,049	968	581	467	6,109
			(Percent of Total)		
1999	47.4%	29.4%	14.7%	8.4%	100.0%
2000	74.4%	15.3%	6.4%	3.9%	100.0%
2001	79.3%	11.3%	5.7%	3.8%	100.0%
2002	69.3%	12.7%	10.5%	7.5%	100.0%
2003	53.1%	22.0%	12.3%	12.5%	100.0%
2004	63.7%	14.5%	10.6%	11.2%	100.0%
Total	67.0%	15.8%	9.5%	7.6%	100.0%

In contrast over the period 1997 to 2004, when the impact of the diamond industry was largest, GDP per person in the NWT grew by $51,475 to reach $95,141. In Nunavut over the same period GDP per person increased $8,161 to grow to $32,905.

Table 3 and Chart 3 give total capital expenditures in the NWT from 1999 to 2004. Mining and oil & gas investment have always helped drive the NWT economy and over the period 1999 to 2004 mining capital expenditures were $4.0 billion and accounted for 67.0% of total capital expenditures.

During the period 2000 to 2002 the construction of the Diavik Diamond Mine accounted for over $1.2 billion or 43% of the total new capital investment in the NWT.

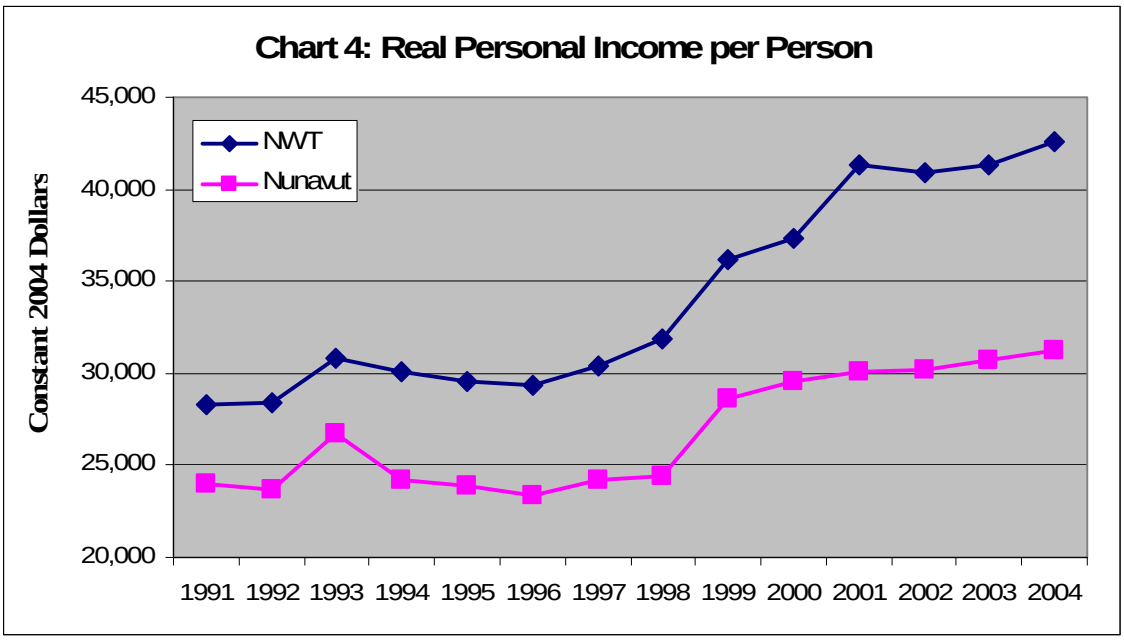

Table 4: Personal Income per Person
Constant 2004 Dollars

	1991	1992	1993	1994	1995	1996	1997	1998
NWT	28,250	28,371	30,796	30,058	29,544	29,312	30,361	31,824
Nunavut	24,006	23,683	26,713	24,249	23,937	23,347	24,174	24,445

							Change	
	1999	2000	2001	2002	2003	2004	91-96	96-04
NWT	36,155	37,334	41,336	40,853	41,315	42,584	1,062	13,271
Nunavut	28,569	29,611	30,082	30,138	30,730	31,250	-660	7,903

Chart 4 and Table 4 present total real personal income per person for the NWT and Nunavut personal income[2] including wages and salaries, income of unincorporated businesses, interest and other investment income and transfer payments to persons from governments. It has been deflated using Statistics Canada's Consumer Price Index (CPI) to express it in "real" dollars which in this case reflects the spending power of persons.

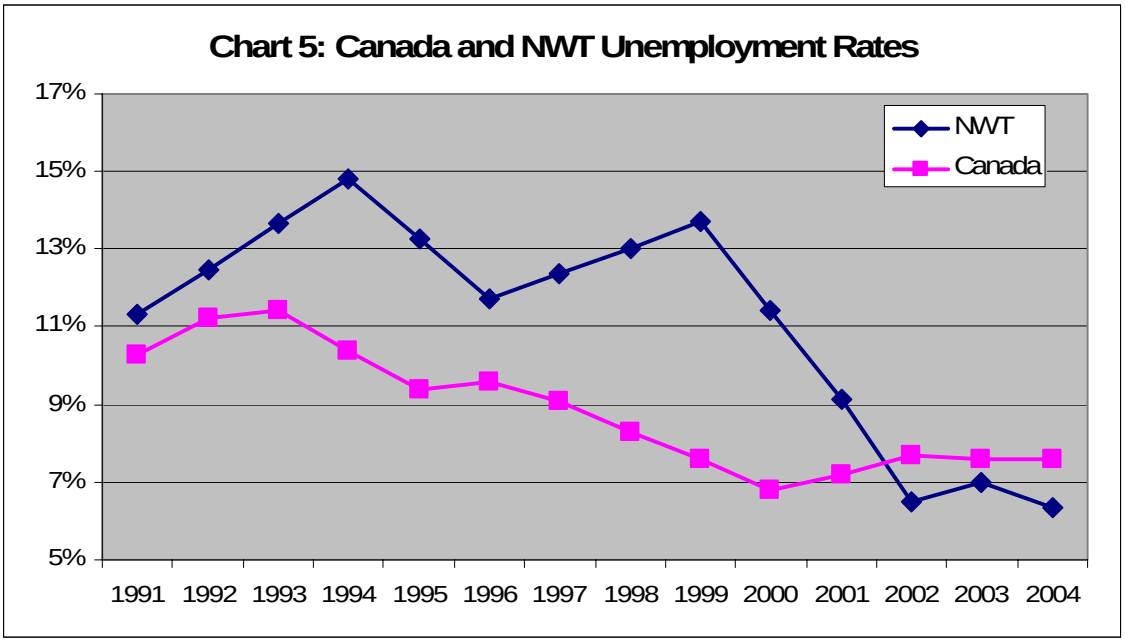

Table 5: Canada and NWT Unemployment Rates
Percent

	1991	1992	1993	1994	1995	1996	1997	1998
NWT	11.2	12.4	13.6	14.8	13.3	11.7	12.4	13.1
Canada	10.3	11.2	11.4	10.4	9.4	9.6	9.1	8.3

	1999	2000	2001	2002	2003	2004	Change 91-96	Change 96-04
NWT	13.7	11.2	8.7	6.5	7.0	6.3	0.5	-5.4
Canada	7.6	6.8	7.2	7.7	7.6	7.6	-0.7	-2.0

It is estimated that in 1991 real personal income per person in the NWT was $28,250 and it grew to $29,312 by 1996. During the same period it is estimated that Nunavut's personal real income per person fell slightly from $24,006 to $23,347.

[2] The value of Personal Income in the NWT and Nunavut for the period 1991 to 1998 are Ellis Consulting Services estimates while the period from 1999 to 2004 are from Statistics Canada. Prior to division of the territories in 1999 Statistics Canada published only a single estimate for both territories combined.

In contrast over the period 1996 to 2004 real personal income per person in the NWT grew by $13,271 to reach $42,584 while in Nunavut it increased by $7,903 to $31,250.

Chart 5 and Table 5 give the unemployment rate for the NWT for the period 1991-2004[3]. The unemployment rate in the NWT fell from the 12-15% range that was experienced over the period 1991 to 1999 to 6.3% by 2004, below the national rate of 7.6%. The fall from 1999 to 2004 corresponds with the development of the diamond mining industry.

Retail sales also showed a similar pattern to the other economic indicators. Chart 6 and Table 6 present real retail sales on a per person basis.

In 1993 real retail sales per person in the NWT were $7,784 and grew $425 to $8,209 by 1996. During the same period Nunavut's retail sales per person rose from $6,846 to $6,951, a rise of $105.

In contrast, over the period 1996 to 2004 when the impact of the diamond industry was largest in the NWT, real retail sales per person grew by $4,013 to reach $12,222. In Nunavut during the same period, sales rose only $896 to $7,847.

Wholesale trade also showed the same dramatic growth during the period of impact of the diamond industry. Chart 7 and Table 7 present this information.

In 1993 wholesalers in the NWT had $126 million in sales and they grew by $18 million to $144 million by 1996. During the same period, Nunavut's wholesale trade industry sales rose by $5 to $39 million.

Over the period 1996 to 2004 when the impact of the diamond industry was largest, NWT wholesale industry sales grew by $29 million to reach $173 million. In contrast Nunavut's sales from 1996 to 2004 fell $14 million to a level of $25 million.

[3] The NWT unemployment rates have been taken from the census for the years 1991 and 1996, from the NWT Bureau of Statistics Labour Force Surveys for the years 1994 and 1999 and from Statistic's Canada monthly labour force survey for 2001 to 2004. Intervening years have been interpolated to provide estimates for the years 1992-1993, 1995, and 1997-1998. Nunavut is not covered in Statistics Canada's monthly labour force survey and therefore data for Nunavut has not been included in this section. The Canada rates are from Statistics Canada.

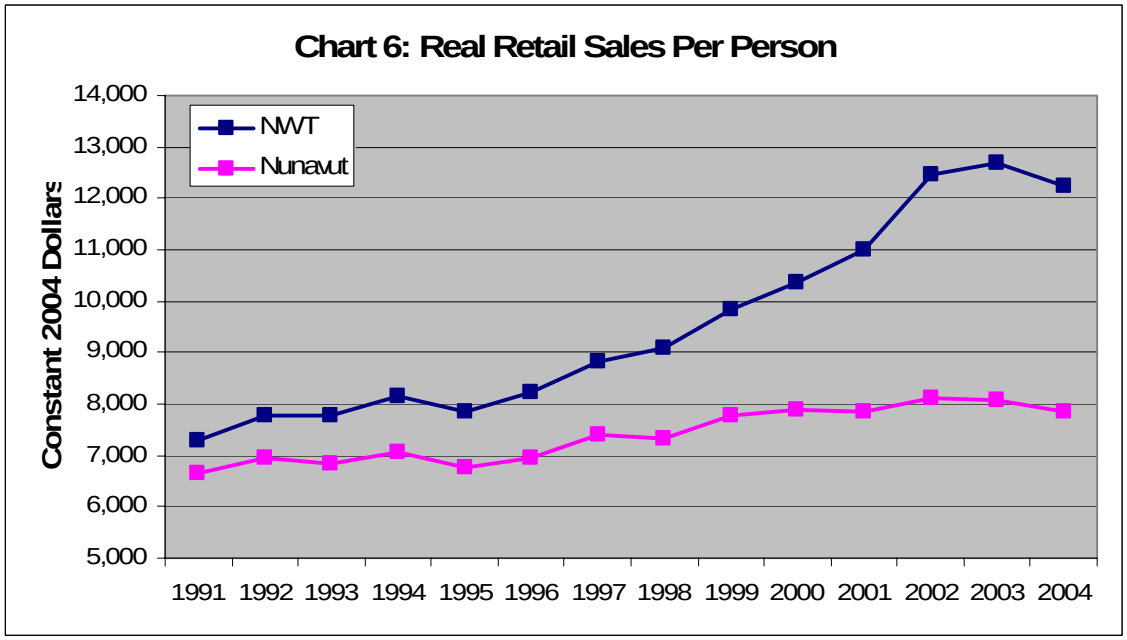

Chart 6: Value of Retail Sales per Person
Millions of Constant 2004 Dollars

	1993	1994	1995	1996	1997	1998	1999	2000
NWT	7,784	8,149	7,847	8,209	8,824	9,073	9,844	10,345
Nunavut	6,846	7,050	6,773	6,951	7,390	7,310	7,768	7,878

					Change	
	2001	2002	2003	2004	93-96	96-04
NWT	11,016	12,465	12,691	12,222	425	4,013
Nunavut	7,844	8,124	8,079	7,847	105	896

The large growth in the wholesale trade industry from 1997 to 2002 was the result of large contracts with the diamond industry for mine re-supply and the construction of the Diavik Diamond Mine. Although the absolute levels of sales fell in 2003 and again in 2004 with the completion of the Diavik Mine the on-going operation of Diavik and EKATI™ will continue to support the industry in the NWT.

In summary, all economic indicators demonstrate that the NWT economy has grown significantly since 1997 as a result of the diamond mining industry. GDP and personal incomes have risen rapidly, new capital investment has grown to new record levels, unemployment has fallen and retail and wholesale trade sales have increased dramatically.

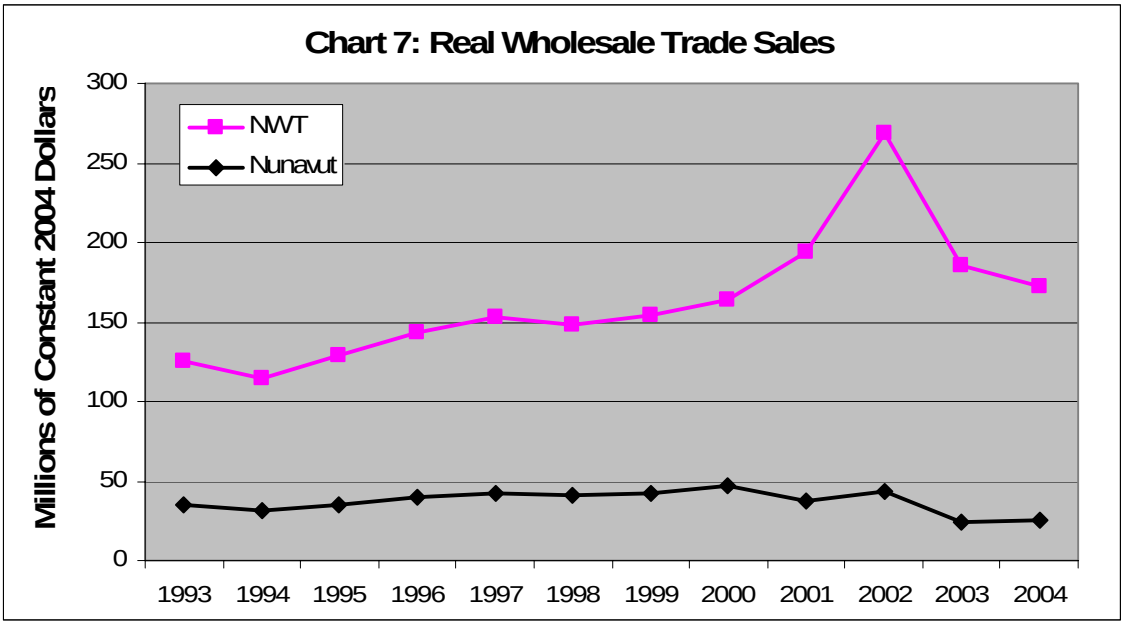

Table 7: Value of Wholesale Trade Sales
Millions of Constant 2004 Dollars

	1993	1994	1995	1996	1997	1998	1999	2000
NWT	126	115	129	144	153	148	154	163
Nunavut	34	31	35	39	42	40	42	47

					Change	
	2001	2002	2003	2004	93-96	96-04
NWT	194	268	186	173	18	29
Nunavut	38	43	24	25	5	-14

IMPACT ON TERRITORIAL GOVERNMENT FINANCES

It has been demonstrated that there has been strong growth in business activity and employment in the NWT during the period of development of the diamond industry. This new economic activity has lead to an increase in both revenues and expenditures for all levels of governments.

The revenue impact on the GNWT of the economic growth fostered by the diamond industry is complicated by the fact that the GNWT's annual federal grant entitlement is impacted by incremental revenues. When the GNWT experiences an increase in revenues it can have the impact of reducing the amount the GNWT receives from the federal government through the Formula Financing Grant (FFG).

The federal government, through provision of the Formula Financing Grant, provides to the GNWT a level of revenue that acts as a "floor" which is intended to enable the territorial government to provide a basic basket of goods to NWT residents that meets the minimum standard of government services that has been established for all Canadians. The FFG is intended to provide the difference between what the GNWT should be able to recover through its own tax structure[4] and the level of expenditure required to provide the established basket of services.

A strong economy will raise the ability of the territorial governments to garner required tax revenues from their own sources and hence lower the FFG requirement. In essence, the level of the FFG can be a good indicator of the level of economic activity in the territory as the smaller the Grant the stronger the economy.

As shown on Chart 8 and Table 8, in 1999 own-source revenues accounted for 19% of total GNWT revenues and grants and transfers from the Government of Canada made up the remaining 81%. Since 1999 own source revenues in the NWT have averaged 33%[5] of total revenues.

[4] The Formula Financing Grant has a number of provisions that can limit its growth regardless of the level of actual GNWT expenditures. The formula is structured on the basis that the GNWT will meet a certain level of "tax effort" – an average set for all provinces and territories. If the tax effort is less than this average, which is the case in the NWT, the territory is "penalized" or has revenues "clawed back". Hence the GNWT only keeps about 20% of all new revenues due to the grant reduction, because the GNWT "should" have been able to raise more revenues if it taxed at the average rate. The GNWT disputes the basis for the formula and is continuing to negotiate with the Federal Government so that they may retain more revenues.

[5] Under the FFG, payments to the GNWT are based on preliminary statistical data and are subject to change once final data becomes available. These adjustments are reflected in future FFG payments and can lead to swings in the percentage of total own source revenues. For example, an overpayment in year one can be adjusted through a deduction made in year two. This makes the FFG in year one look much larger than if the amounts received were put on an accrual basis. If an accrual basis was used it would have the effect of offsetting extra revenues in the year they were earned with a fall in the Grant. But regardless of these swings in payments, the overall trend is that the GNWT is receiving more of it revenues from its own sources and less from the FFG.

In contrast the Government of Nunavut own source revenues have declined from 13% to 8% of total revenues over the same period.

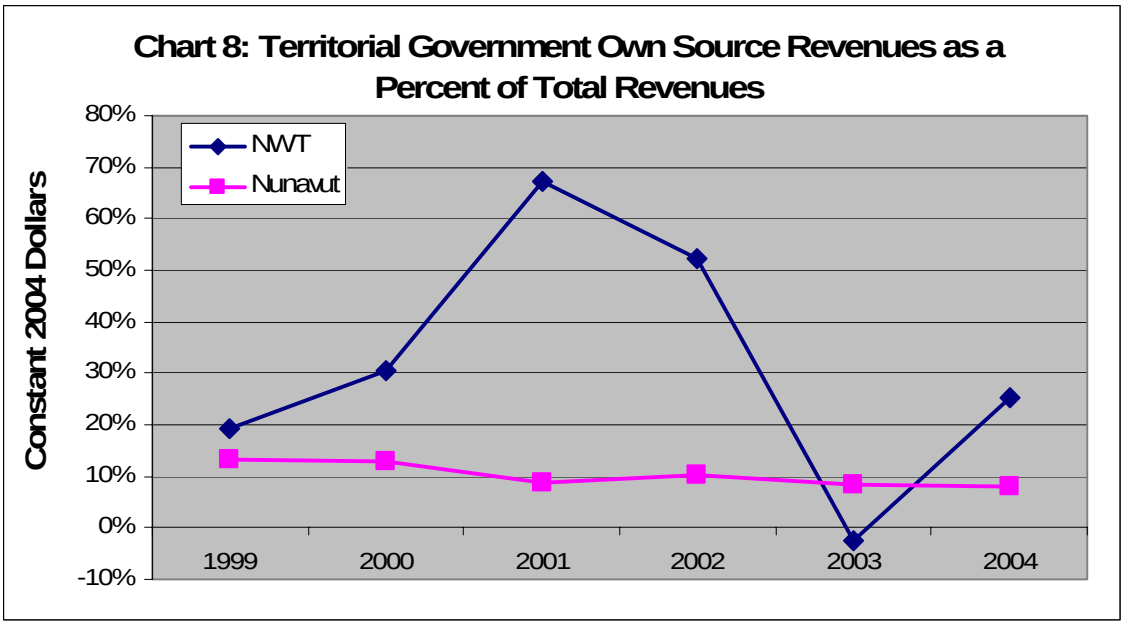

Table 8: Territorial Government Own Source Revenues

	1999	2000	2001	2002	2003	2004	Average
	(millions of constant 2004 dollars)						
NWT	148	285	673	451	-21	260	300
Nunavut	103	107	70	87	72	74	85
	Percent of Total Revenues						
NWT	19%	30%	67%	52%	-2%	25%	33%
Nunavut	13%	13%	9%	10%	8%	8%	10%

Chart 9 and Table 9 present total federal government grants on a per person basis for both the NWT and Nunavut. In 1999 the average grant per person was $15,249 in the NWT and $25,441 in Nunavut.

Since 1999 federal grants per person have remained relatively constant and averaged $14,895 over the period 1999 to 2004. In contrast in Nunavut federal grants per person rose to $26,475 in 2004.

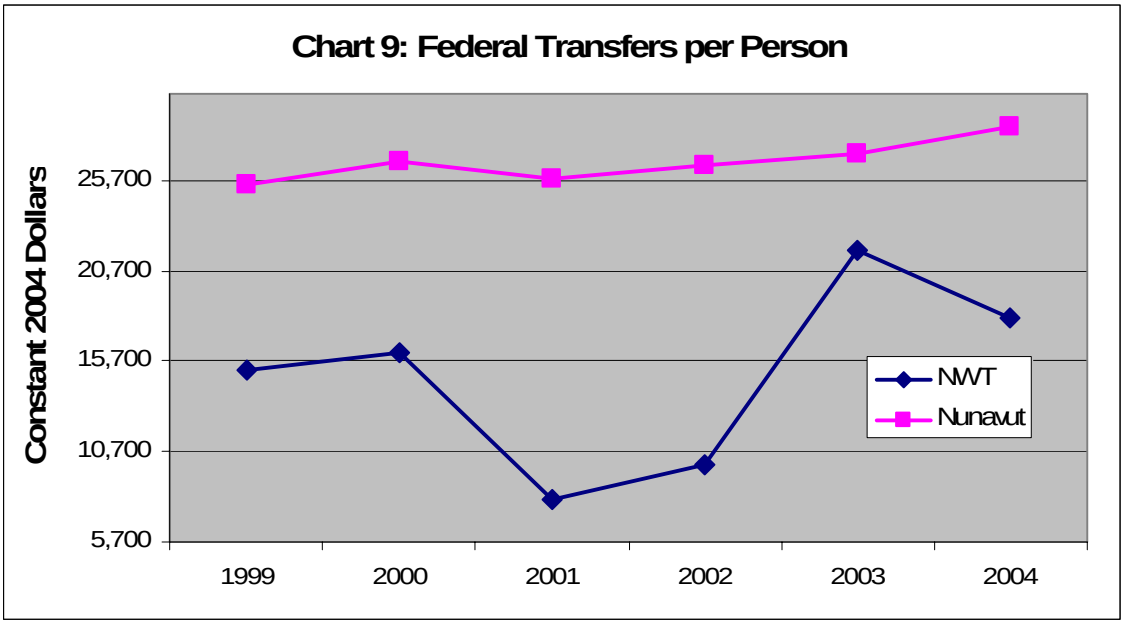

Table 9: Total Federal Government Grants per Person
(Constant 2004 dollars)

	1999	2000	2001	2002	2003	2004	Average
NWT	15,249	16,175	8,086	9,961	21,800	18,102	14,895
Nunavut	25,441	26,727	25,794	26,573	27,148	28,649	26,722
Ratio NWT/NT	0.599	0.605	0.313	0.375	0.803	0.632	0.557

The fact that the GNWT own source revenues have increased while federal grants have remained relatively stable indicates that the GNWT has been relatively successful in it negotiations with the Federal Government to retain Grant revenues.

Chart 10 and Table 10 presents total territorial government revenues per person for the NWT and Nunavut. In 1999, the year the territories were split, the GNWT had $18,894 in revenue per person while Nunavut had $29,282 (measured in constant 2004 dollars).

If 1999 is used as the base, GNWT revenues per person grew $5,288 by 2004 and this represents an increase in real revenues per person of 28%. In contrast, in Nunavut revenues per person grew by $1,880 representing an increase of only 6%. This is after the claw back from the FFG is factored in.

In conclusion the GNWT's revenue base has been growing much faster than the Government of Nunavut's and the main reason has been the increased economic activity that has resulted from the diamond industry. The remaining question is whether the level of this new revenue is sufficient to offset incremental costs that result from the industry.

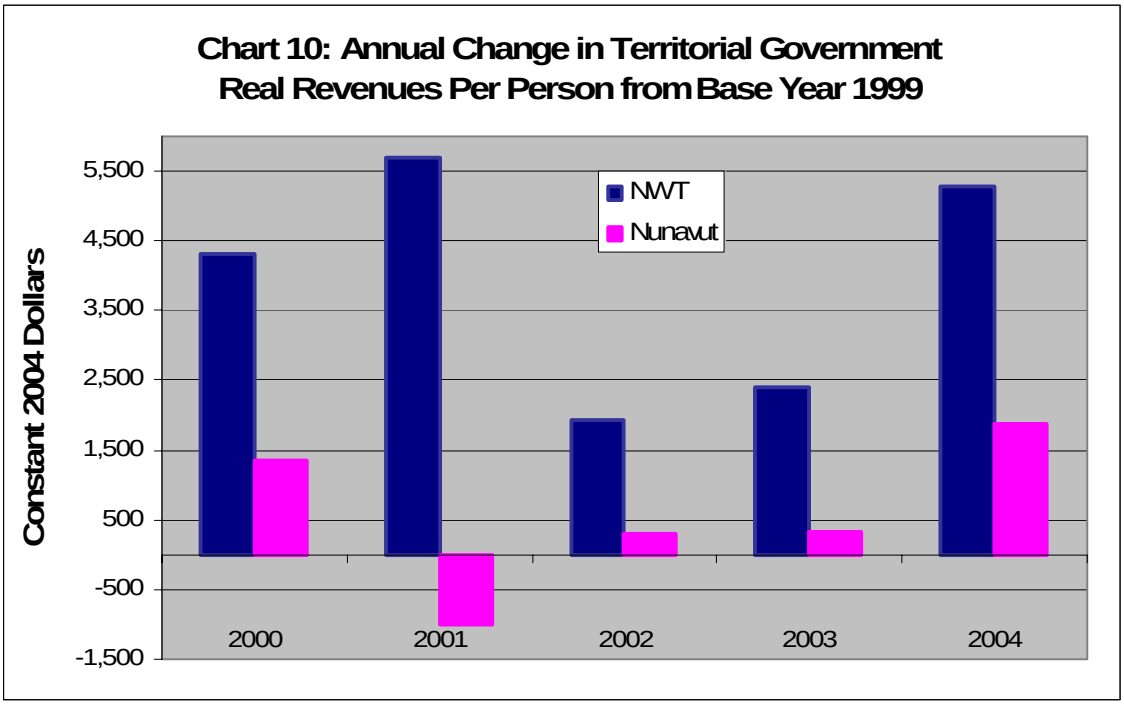

Table 10: Territorial Government Total Revenues per Person (Constant 2004 dollars)

NWT	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**
Value	18,894	23,218	24,577	20,838	21,303	24,182
Annual % Change	-	23%	6%	-15%	2%	14%
Change from 1999						
Value	0	4,324	5,683	1,944	2,409	5,288
% Change	-	23%	30%	10%	13%	28%
Nunavut	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**
Value	29,282	30,635	28,275	29,584	29,609	31,162
Annual % Change	-	5%	-8%	5%	0%	5%
Change from 1999						
Value	0	1,353	-1,007	302	326	1,880
% Change	-	5%	-3%	1%	1%	6%

While it is clear that GNWT revenues have grown as the diamond industry has developed it is not as obvious how its expenditures have been impacted. The GNWT has stated that the diamond industry has put new demands on its expenditures and in particular, the need to improve and expand public infrastructure such as roads.

There is little information currently in the public domain that substantiates the argument that the diamond industry has forced new public infrastructure expenditures.

One argument is that the diamond industry has led to a serious deterioration in public highways. Currently the major impact generated by the diamond mines on the road system is the re-supply of fuel and goods which is undertaken every winter. During this time the Mackenzie River ice bridge is operating (and hence there is no demand from the mines for a permanent bridge over the river) and travel is made at a time when the roads are frozen and less prone to damage. This is not to say that trucks undertaking the re-supply do not contribute to a deterioration of the roads, but no empirical evidence has been presented to substantiate how significant this is. In addition, the diamond mines pay a significant amount in property and fuel taxes to the GNWT which, although are not specifically targeted to road expenditures, have led to increased revenues that could be used to offset new road expenditure needs.

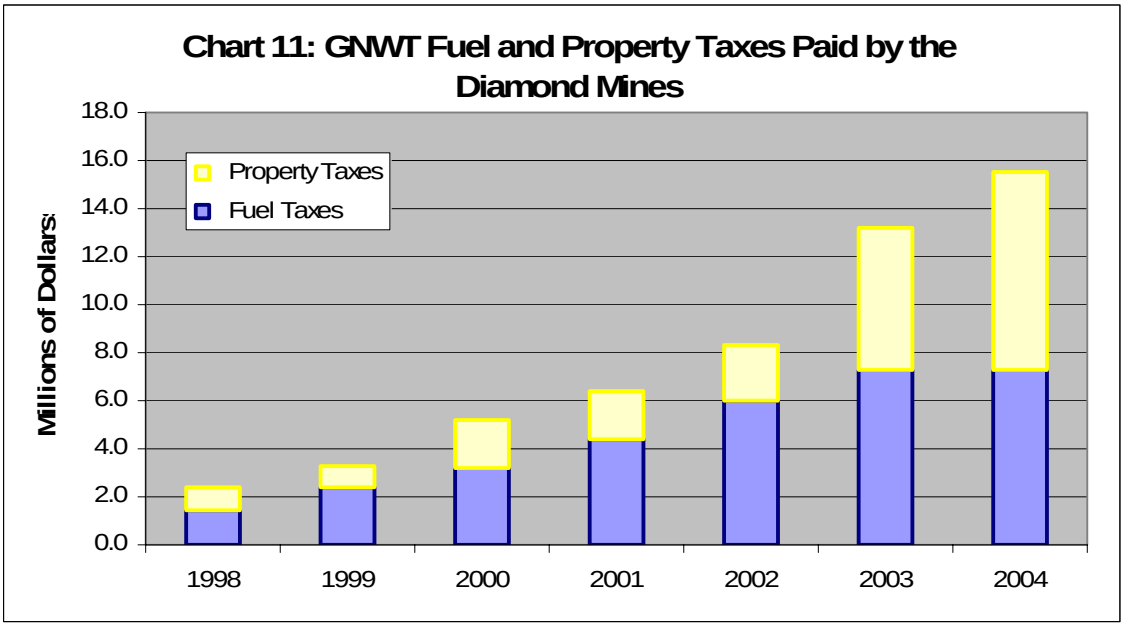

Table 11: Fuel and Property Taxes Paid to the GNWT by the Diamond Industry

	1998	1999	2000	2001	2002	2003	2004	Total
				(Millions of Dollars)				
Fuel Taxes	1.5	2.4	3.2	4.4	6.0	7.3	7.3	32.1
Property Taxes	1.0	0.9	2.0	2.0	2.3	5.9	8.2	22.4
Total	2.4	3.3	5.2	6.4	8.3	13.2	15.5	54.4

Chart 11 and Table 11 show the amount of fuel and property taxes paid by diamond companies for mine construction and operations. It should also be recognized that the mines receive no direct services (although mine employees do use schools in their home communities) for these payments as they provide, at their own expense, all power, roads, water, waste and other infrastructure services normally provided by local governments with money in part raised from property taxes.

Table 11 shows that the two NWT diamond mines have paid $22.4 million in property taxes since 1998 and in 2004 paid $8.2 million. In total, the diamond mines[6] over the period 1998 to 2004 have contributed $32.1 million in fuel taxes to the GNWT. In 2004 they contributed $7.3 million and it is expected that payments in the future will grow by close to a third as Snap Lake begins construction and operation.

In total, the two operating diamond mines have contributed $54.4 million in fuel and property taxes over the period 1998 and 2004. In 2004, the two operating diamond mines paid $15.5 million in property and fuel tax and when De Beer's Snap Lake Mine begins production, this value will likely rise to over $20 million per year.

In addition to fuel and property taxes all diamond companies will pay royalties, corporate income taxes, capital taxes and other taxes to both the Federal Government and the GNWT.

There has also been no obvious increase in overall demand for school and health services. Even though the diamond industry has led to greater economic prosperity it has not led to a significant net increase in the population of the NWT because, in large part, it has replaced other economic activities, such as gold mining and government services that have declined. Therefore, there has been no significant net in-migration into the NWT and hence no major aggregate change in demand for many public services.

For example Chart 12 and Table 12 present enrolment numbers for NWT schools during the period of diamond industry activity. While over the period 1996-97 to 2003-04 there has been a 1.5% increase in school enrolment, it has been the result of more students at the senior level. The number of students enrolled in kindergarten and Grades 1–6 has actually declined. The small rise in overall school enrolment has occurred because more students appear to be staying or returning to school rather than from pressures due to population growth.

Population is one of the major driving factors in the cost of providing government services and a rising population can put pressure on the capacity of government services and infrastructure, leading to higher costs. Chart 13 and Table 13 present the change in population since the start of the diamond industry. As shown on Table 13 the population of the NWT has remained relatively stable over the period with the population increasing only 2.8 percent therefore presenting no major new pressures on the demand for government services.

However, there are a number of areas where it can be demonstrated that GNWT expenditure has been decreased as a result of the growth of the diamond industry and the improvement in the economy.

[6] The winter re-supply represents all the traffic on the winter road. A small portion of the loads represent deliveries to mining operations and exploration activities that are not diamond related.

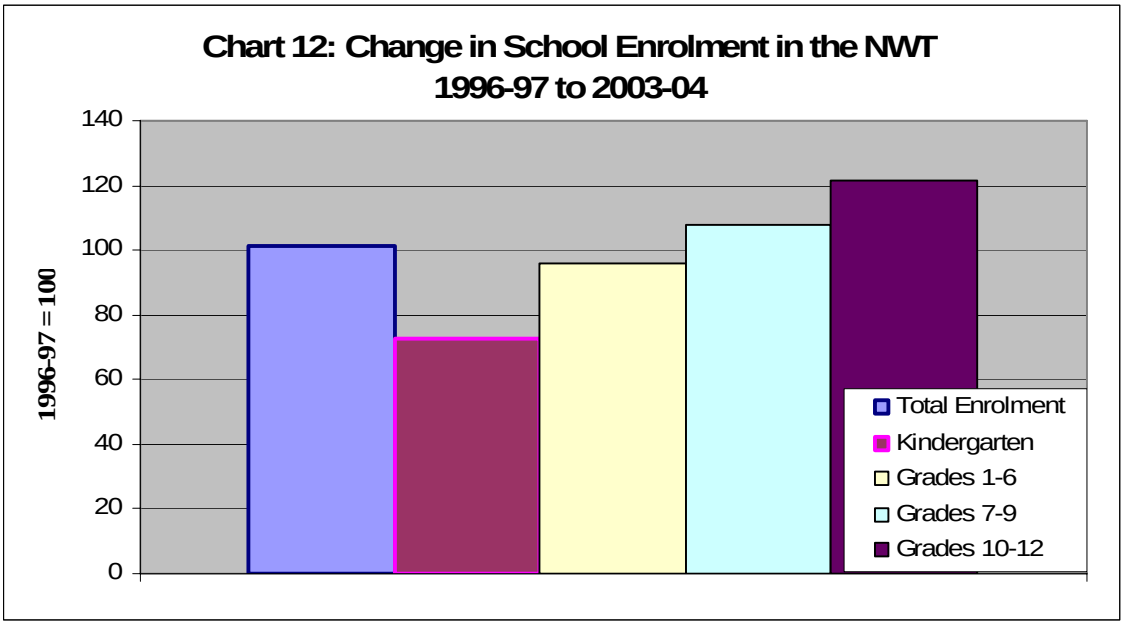

Table 12: Student Enrolment in NWT Schools

	96-97	97-98	98-99	99-00	00-01	01-02	02-03	03-04
				(Number of Students)				
Total Enrolment	9,585	9,793	9,767	9,998	9,871	9,766	9,872	9,727
Kindergarten	844	862	757	748	781	693	657	613
Grades 1-6	4,766	4,777	4,851	4,820	4,747	4,791	4,690	4,563
Grades 7-9	2,092	2,139	2,056	2,138	2,175	2,217	2,239	2,260
Grades 10-12	1,883	2,015	2,103	2,292	2,168	2,065	2,286	2,291
				(Index 1996-97 = 100.0))				
Total Enrolment	100	102.2	101.9	104.3	103.0	101.9	103.0	101.5
Kindergarten	100	102.1	89.7	88.6	92.5	82.1	77.8	72.6
Grades 1-6	100	100.2	101.8	101.1	99.6	100.5	98.4	95.7
Grades 7-9	100	102.2	98.3	102.2	104.0	106.0	107.0	108.0
Grades 10-12	100	107.0	111.7	121.7	115.1	109.7	121.4	121.7

For example, Table 14 and Chart 14 present the impact on the expenditures by the GNWT on Social Assistance payments since 1993. Social Assistance payments have been converted to a per person basis to permit comparisons between the groups of communities and have been deflated using the CPI to convert them to "real" dollars to allow comparisons over time. Separate numbers have been presented for three "community" groupings. They are: 1) Yellowknife, 2) the "diamond" impact communities[7] (which include Rae Lakes, Wekweti, Detah, Rae-Edzo, Wha Ti, and Lutsel k'e) and 3) all of the rest of the communities in the NWT.

[7] Diamond impact communities are those that have signed an IBA (Impact Benefit Agreement) with the diamond mines. Although it is a diamond impact community, data for N'dilo is not included in this group because the GNWT includes this data with the City of Yellowknife.

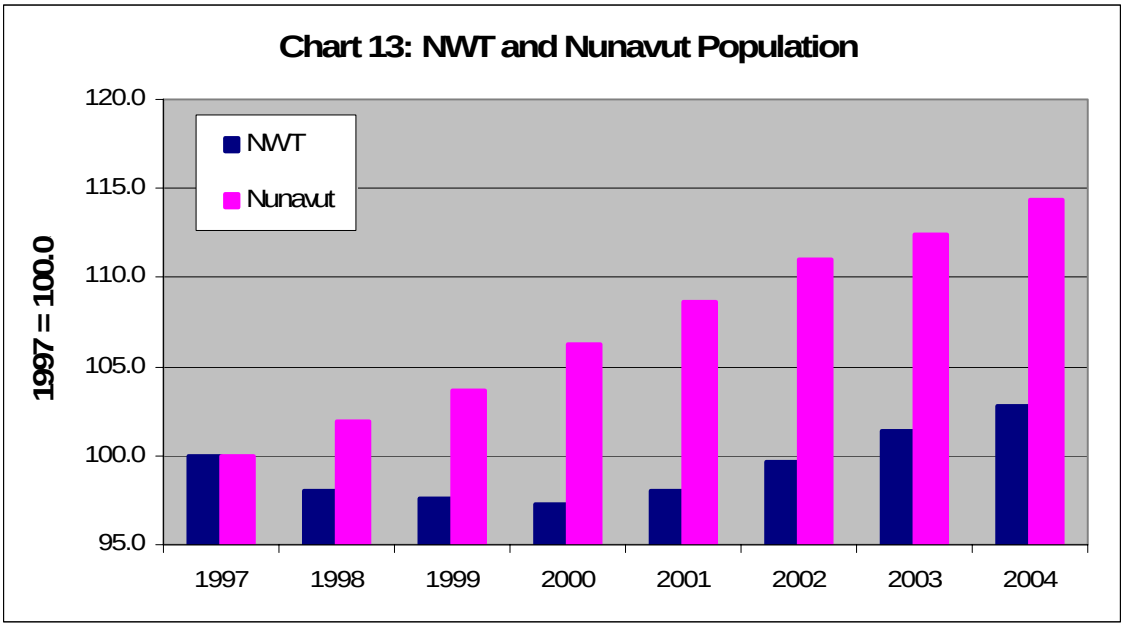

Table 13: NWT and Nunavut Population 1997 to 2004

	1997	1998	1999	2000	2001	2002	2003	2004
				(Number of Persons)				
NWT	41,635	40,816	40,654	40,499	40,822	41,489	42,206	42,810
Nunavut	25,884	26,374	26,822	27,500	28,121	28,740	29,100	29,600
				Index (1997=100.0)				
NWT	100.0	98.0	97.6	97.3	98.0	99.6	101.4	102.8
Nunavut	100.0	101.9	103.6	106.2	108.6	111.0	112.4	114.4

In 1993 per capita Social Assistance Payments were $948 in the diamond impact communities, $102 in Yellowknife and $384 in the rest of the communities in the NWT. By 1996 there was little change in the diamond communities where payments had rose $8 while those in Yellowknife increased by $108 and by $9 in the remainder of the communities in the NWT. In 2004, after the impact of the diamond industry, Social Assistance Payments per person had fallen $581 from 1996 levels in the diamond communities, in Yellowknife by $35 and by $168 in the rest of the communities in the NWT.

The large fall in the diamond communities can be attributed in major part to the employment opportunities presented by the diamond industry. The fall in social assistance payments has been a benefit to the GNWT in reducing expenditures and along with new revenues can be used as an offset for any new expenditure demands resulting from the diamond mining industry.

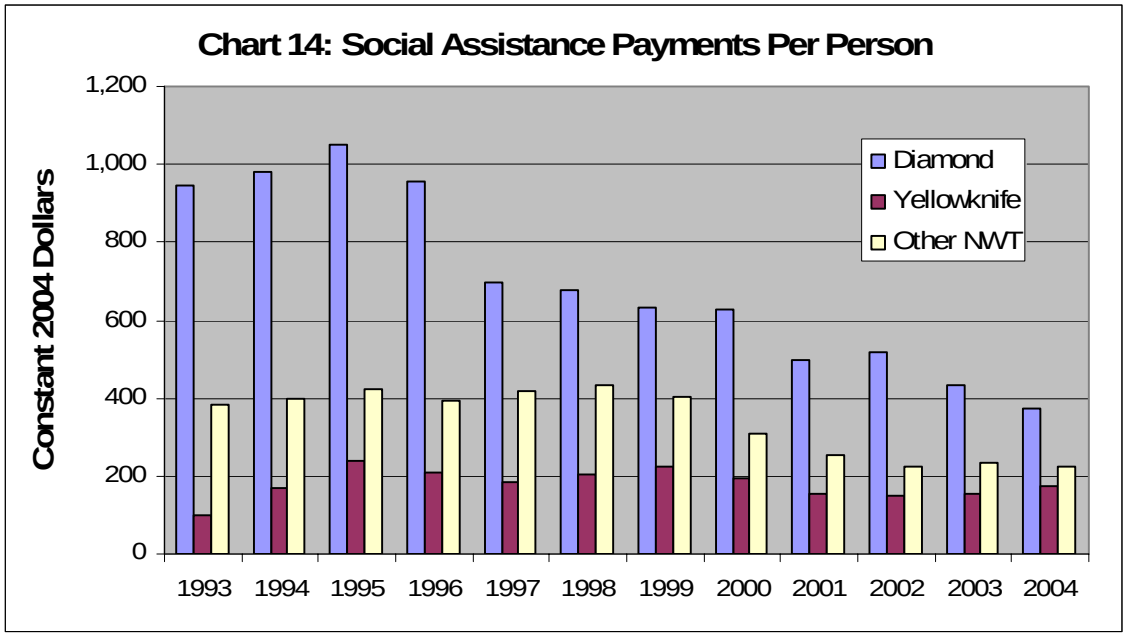

Table 14: Social Assistance Payments per Person
Constant 2004 Dollars

Communities	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**
Diamond	948	980	1,051	956	695	679	631	629
Yellowknife	102	171	238	210	187	206	223	193
Other NWT	384	397	422	394	417	434	405	308

					Change	
Communities	**2001**	**2002**	**2003**	**2004**	**93-96**	**96-04**
Diamond	498	516	431	375	8	-581
Yellowknife	154	151	155	175	108	-35
Other NWT	254	225	232	226	9	-168

Most of the indicators appear to demonstrate that the diamond industry has been a net contributor to GNWT revenues, but because of the uncertainty it would be necessary to undertake a thorough benefit-cost analysis before a definitive conclusion can be reached.

The first way the diamond industry impacted the NWT economy was through exploration. Chart 15 and Table 15 present exploration expenditures for diamonds in the NWT from 1991 to 2004.

The main period of diamond exploration was from 1994 to 1996 and expenditures peaked at just under $139 million in 1996.

In total over the period 1991 to 2004 over $1 billion has been spent on exploration for diamonds in the NWT.

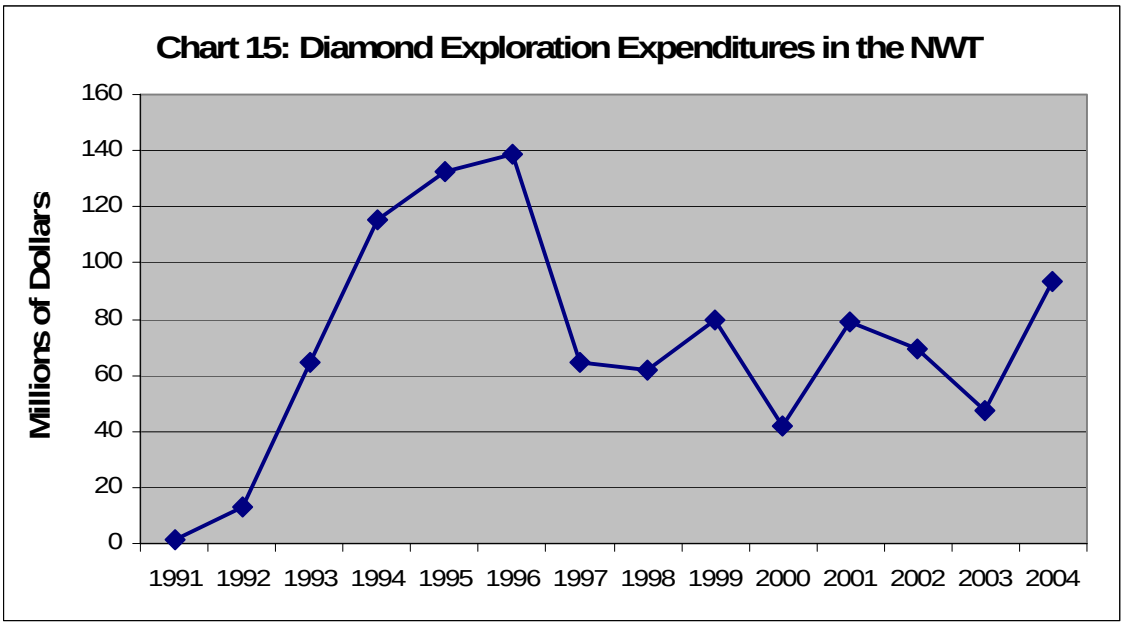

Table 15: Diamond Exploration Expenditures in the NWT
(Millions of Dollars)

1991	1992	1993	1994	1995	1996	1997	1998
1.1	13.2	64.5	115.6	132.6	138.8	64.6	62.1
1999	**2000**	**2001**	**2002**	**2003**	**2004**	**Total**	
79.7	41.7	78.9	69.6	47.7	93.3	1,003.6	

Table 15A presents the direct and total[8] economic impact of diamond exploration expenditures on the NWT economy.

Exploration expenditures peaked in 1996. During that year it is estimated that mineral exploration increased NWT GDP directly by $50 million and when indirect and induced impacts are included, by a total of $62 million. In addition, exploration impacts contributed $14 million to labour income and added 337 person-years of employment to the NWT economy.

Table 15A: Economic Impacts of Diamond Exploration on the NWT Economy

	GDP ($Million)		Labour Income ($Million)		Employment (Person Years)	
	Direct	**Total**	**Direct**	**Total**	**Direct**	**Total**
1991	0.4	0.5	0.1	0.1	2	3
1992	4.8	5.9	0.7	1.3	20	32
1993	23.3	28.9	3.4	6.4	99	157
1994	41.7	51.7	6.0	11.5	178	281
1995	47.9	59.3	6.9	13.2	204	322
1996	50.1	62.1	7.2	13.8	213	337
1997	23.3	28.9	3.4	6.4	99	157
1998	22.4	27.8	3.2	6.2	95	151
1999	28.8	35.6	4.2	7.9	122	193
2000	15.0	18.6	2.2	4.1	64	101
2001	28.5	35.3	4.1	7.8	121	192
2002	25.1	31.1	3.6	6.9	107	169
2002	17.2	21.3	2.5	4.7	73	116
2004	33.7	41.7	4.9	9.3	143	227
Total	362.2	448.8	52.4	99.5	1,541	2,437

In total over the 1991 to 2004 period, diamond exploration expenditures in the NWT were more than $1.0 billion. During this period it is estimated that mineral exploration increased the NWT GDP directly by $362 million and by $449 million when indirect and induced impacts are included. In addition, exploration impacts contributed $52 million in direct labour income and $100 million in total labour income. As well, mineral exploration accounted for 1,541 direct person-years of employment to the NWT economy and 2,437 when spin-offs are included.

8 Total impacts are a sum of the direct, indirect and induced effects. An increase in demand for any good or service will produce three effects which are described by economic multipliers. The first is the impact on industries (firms) which expand production to satisfy increased demand – in this case those that produce mineral exploration products. These effects are termed the direct impacts. Secondly, there is a ripple effect as these firms purchase additional required inputs from other firms. These effects are termed the indirect impacts. Lastly, as all firms expand production, they also hire more staff and pay out wages thereby increasing the income received by employees. Households, after withdrawing a certain portion for taxes and savings, spend this income which in turn increases demand for other commodities. These impacts are termed induced effects.

PRIMARY PRODUCER OR MINE IMPACTS

PRIMARY PRODUCERS IN THE NWT

At the end of 2002, the EKATI™ Diamond Mine was the only producing diamond mine in the NWT. Construction of the EKATI™ Diamond Mine began in 1997 and was completed before the end of 1998 and the mine began full production in early 1999. Diavik, which was constructed from 2000 to 2002, began production in early 2003 and almost doubled the NWT's value of diamond output. De Beers Snap Lake Project received approval to enter the regulatory process on October 10, 2003 and could begin operation as early as 2006.

There is also a good chance that there will be at least one other diamond mine developed in the NWT over the next decade. In addition, there could be an expansion of production or extension of existing mine lives, as new economic pipes are identified.

DIAMOND PRODUCTION IN THE NWT

The EKATI™ Diamond Mine was the only diamond mine in production in the NWT for the period 1998 to 2002. Diavik began production in early 2003.

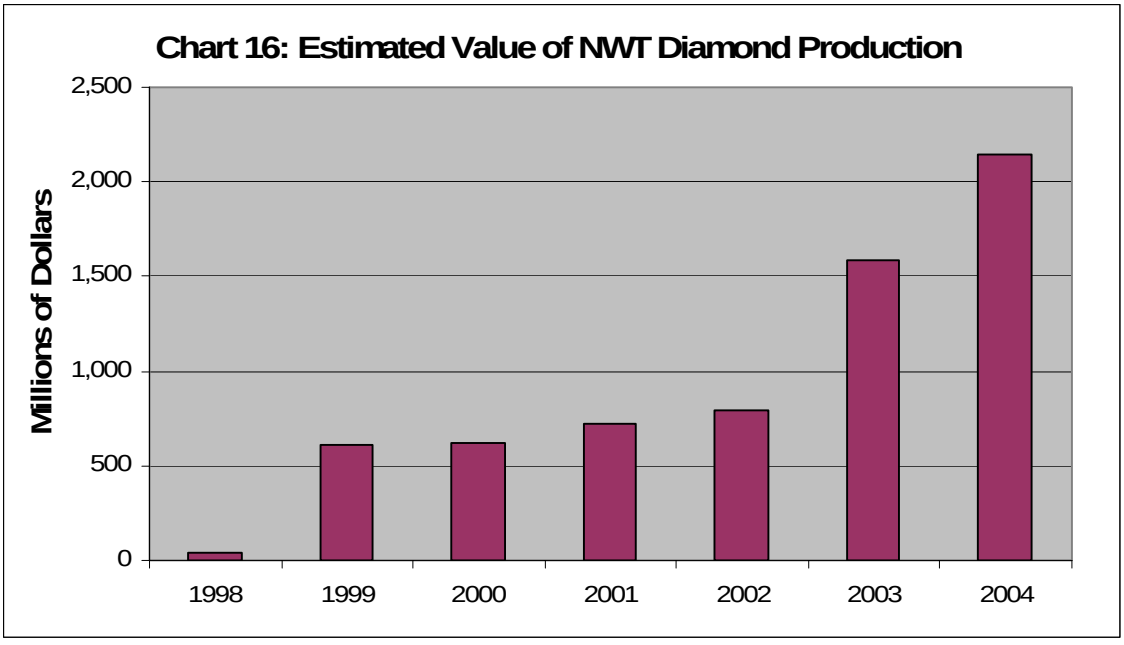

Table 16: Value of Diamond Production in the NWT
$Million

1998	1999	2000	2001	2002	2003	2004	Total
41	606	625	718	792	1,588	2,140	6,509

Chart 16 and Table 16 present the value of diamond production in the NWT. Production has risen from $41 million in 1998 to over $2.1 billion in 2004.

Chart 17 and Table 17 present the number of carats produced in the NWT. Production has risen from 203 thousand carats in 1998 to 12.7 million in 2004.

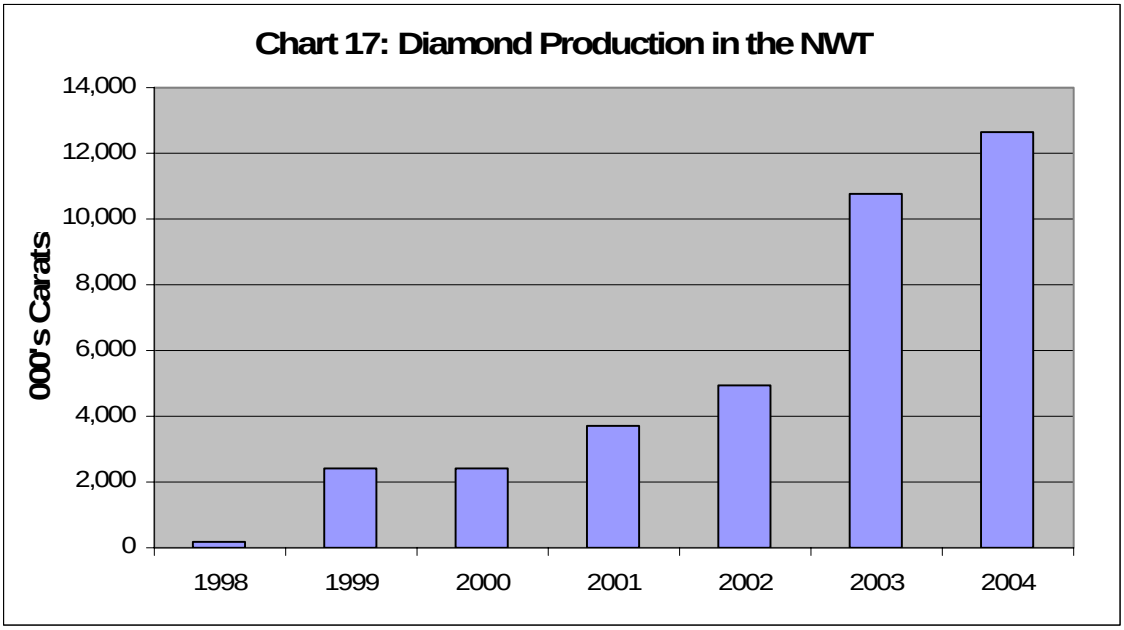

Table 17: Diamond Production in the NWT
Thousands of Carats

1998	1999	2000	2001	2002	2003	2004	Total
203	2,429	2,435	3,716	4,937	10,794	12,661	37,175

CONTRIBUTION OF PRIMARY PRODUCERS TO THE NWT ECONOMY

DIRECT CONTRIBUTION

The diamond industry, both through the production of diamonds and the construction of mines, has made a very large direct contribution to the NWT economy. Prior to the discovery of diamonds, the mineral industry, while making a substantial contribution to the economy, was smaller than the government sector. Prior to

diamonds, the major driver in the NWT was the government sector (although the mineral sector has always been the largest source of wealth creation[9]).

Direct GDP Impacts

As shown on Chart 18 and Table 18, in 1999 it is estimated that the diamond mining industry (including mine production and construction) accounted for 24% of the NWT economy, while the government sector (including public administration, education, health and social services) also contributed 23%.

Chart 18: Diamond Mining Direct Contribution to NWT GDP

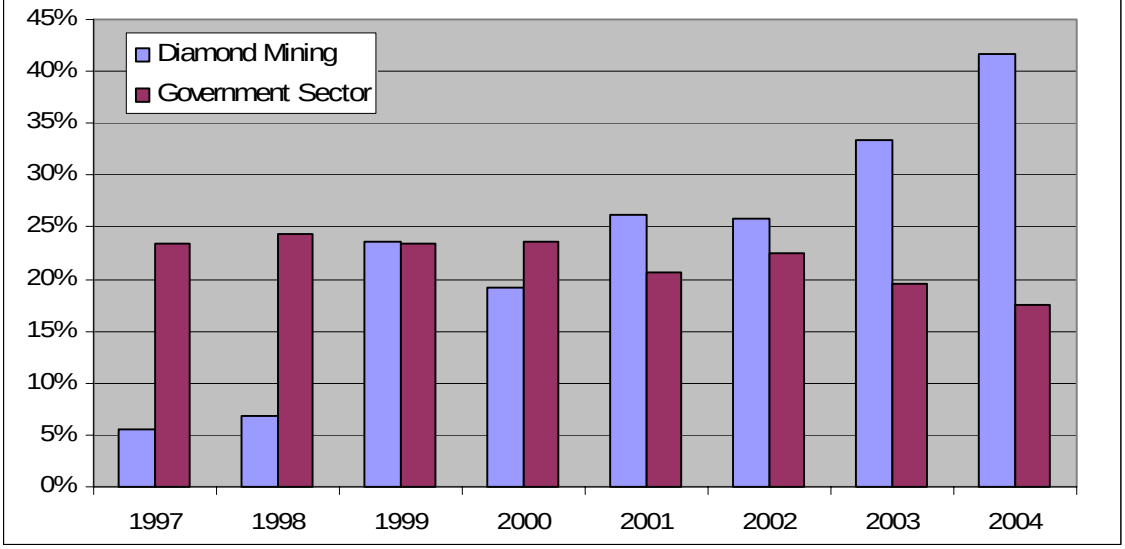

Table 18: Diamond Mining Direct Contribution to GDP at Basic Prices in the NWT

	Millions of Dollars							
	1997	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**
Diamond Mining	105	127	522	465	750	751	1,169	1,695
Government Sector	447	454	520	572	594	652	685	711
Total GDP	1,911	1,872	2,213	2,421	2,872	2,901	3,503	4,073
	Percent of Total GDP							
	1997	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**
Diamond Mining	5%	7%	24%	19%	26%	26%	33%	42%
Government Sector	23%	24%	23%	24%	21%	22%	20%	17%

[9] Governments (with the exception of commercial government business enterprises) do not create wealth. Governments tax wealth which has been created by the business sector and then redistributes it through the provision of services and direct transfers to persons and other sectors. Since the 1930s in the north, the mining industry has been the largest source of wealth creation in the market based economy. Wealth has always been, and continues to be, created in the traditional economy.

With the operation of both Diavik Diamond Mine and the EKATI™ Diamond Mine, in 2004 it is estimated that the diamond industry directly accounted for $1.7 billion of total GDP in the NWT representing 42% of the of or economy. It is estimated that the government sector's contribution was $711 million or 17%.

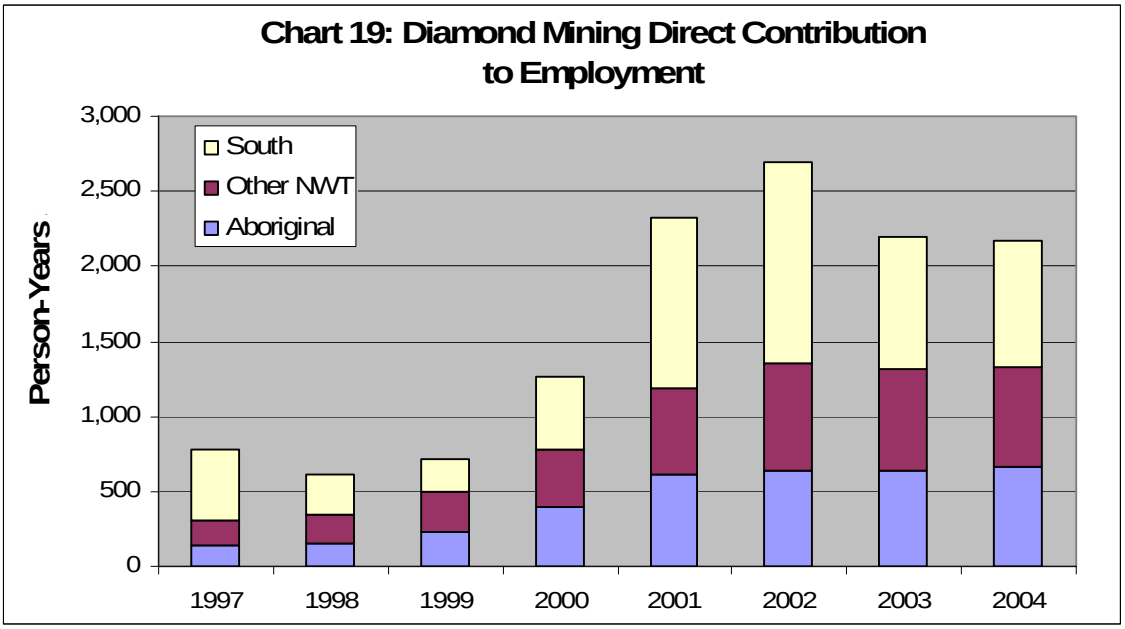

Table 19: Diamond Mine Direct Construction and Operations Employment

	1997	1998	1999	2000	2001	2002	2003	2004	Total
					(Person-Years)				
Aboriginal	137	155	235	390	618	637	639	663	3,474
Other NWT	175	192	259	386	572	720	679	664	3,647
Total NWT	311	346	495	776	1,190	1,357	1,318	1,327	7,121
South	465	261	214	482	1,140	1,339	877	839	5,617
Total	776	607	709	1,258	2,330	2,696	2,195	2,166	12,738
					(Percent of Total)				
Aboriginal	18%	25%	33%	31%	27%	24%	29%	31%	27%
Other NWT	22%	32%	37%	31%	25%	27%	31%	31%	29%
Total NWT	40%	57%	70%	62%	51%	50%	60%	61%	56%
South	60%	43%	30%	38%	49%	50%	40%	39%	44%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%

Direct Employment Impacts

The diamond mining industry has also provided a wide range of direct employment opportunities over the period 1997 to 2004. Chart 19 and Table 19 present employment by residence[10] and ethnicity.

In 1997 there were 776 person-years of employment generated by the construction of the EKATI™ Mine. Of these, 311 jobs, or 40% of the total, were filled by northern residents. Aboriginal northerners filled 137 or 18% of total jobs.

In 1998 when the EKATI™ Diamond Mine construction was finished and production began, northerners accounted for 57% of total direct employment. In 1999, the first year of full production, the percentage of northern employment had risen to 70% including 33% Aboriginal northerners.

During the period 2000 to 2004, the EKATI™ Mine was operating at full production and the Diavik Mine was under construction and began operations in 2003. Generally, northerners fill a lower percentage of construction jobs than operating jobs[11] and the percentage of northern employment fell to 62% in 2000, 51% in 2001 and 50% in 2002. In 2003 the Diavik Mine began production and northern employment rose to 60% and Aboriginal employment rose to 29% of total employment. In 2004 Aboriginal employment rose to 31% of the total and northern employment reached 61%.

In total, over the period 1997-2004 diamond mining generated 7,121 person-years of employment for Northern residents, which represented 56% of the total diamond mine direct employment. Aboriginal northerners accounted for 3,474 person-years or 27% of total employment (about 50% of the total employment in the north).

INDIRECT AND INDUCED CONTRIBUTION

In addition to the direct contribution, diamond mines generate "spin-off" employment and business opportunities as a result of expenditure on goods and services to re-supply the mines. These expenditures produce GDP (value added) and employment opportunities for the north. Impacts on Southern Canada have not been included but they are significant because, while most of the goods and services are purchased in the NWT, most of the production takes place in Southern Canada.

Chart 20 and Table 20 show that it is estimated that the diamond mine operation and construction contributed $5.6 billion in direct GDP and another $918 million in indirect

[10] Because it was not possible to separate employment from Kugluktuk and the rest of Nunavut from NWT employment, they have been included in the NWT total. In most cases in this report "northern" is used in the place of NWT to reflect this.

[11] This is because construction generally requires a higher proportion of skilled trade positions required for only short periods than does operations and there are very few unemployed trades people in the north.

and $302 million in induced GDP in the NWT over the period 1997-2004. In total diamond mining contributed $6.8 billion to NWT GDP over the period.

In 2004 diamond mining accounted for 50% of the economy in the NWT and will likely grow over the next few years as Snap Lake begins construction and operation.

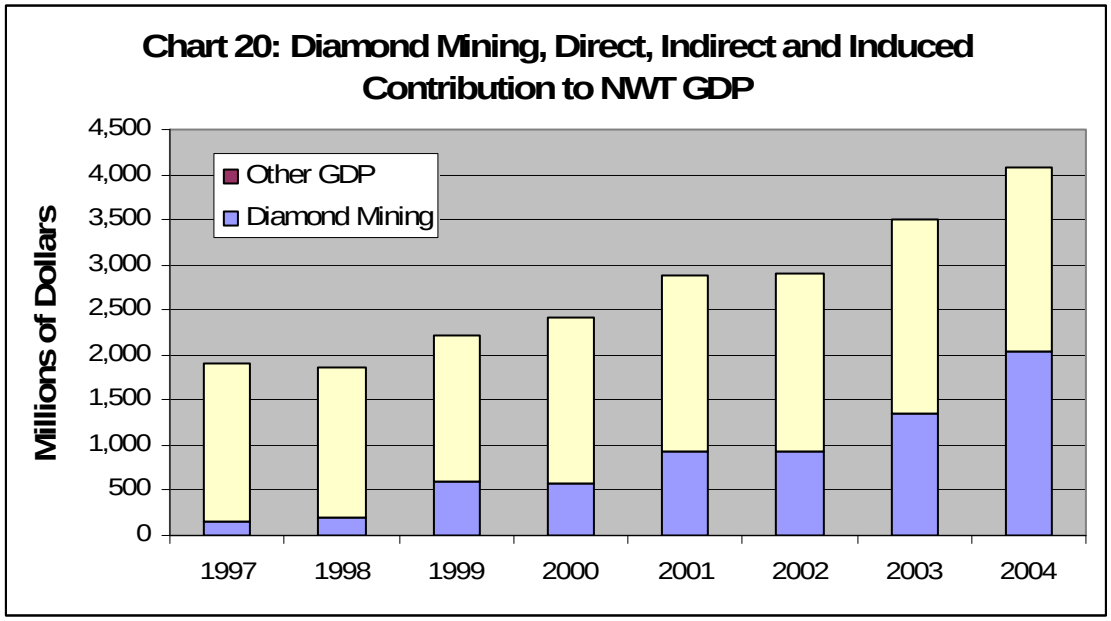

Table 20: Diamond Mining Total Contribution to GDP at Basic Prices in the NWT

	Millions of Dollars								
	1997	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**Total**
Direct	105	127	522	465	750	751	1,169	1,695	5,584
Indirect	43	53	60	83	127	123	127	302	918
Induced	17	19	23	34	50	55	52	52	302
Total	165	199	605	582	928	928	1,347	2,050	6,803
% of Total	9%	11%	27%	24%	32%	32%	38%	50%	31%
Total GDP	1,911	1,872	2,213	2,421	2,872	2,901	3,503	4,073	21,766

Diamond mines have also generated large indirect and induced employment impacts in the NWT. Chart 21 and Table 21 show that it is estimated that the mines have contributed 16.6 thousand person-years of employment in the NWT over the period 1997-2004.

In 2004 it is estimated that diamond mine operation and construction contributed a total of 3,314 person-years of employment in the NWT. This represented approximately

15% of total employment in the NWT which means that more than one out of every seven NWT residents[12] was working as a result of the diamond mining industry.

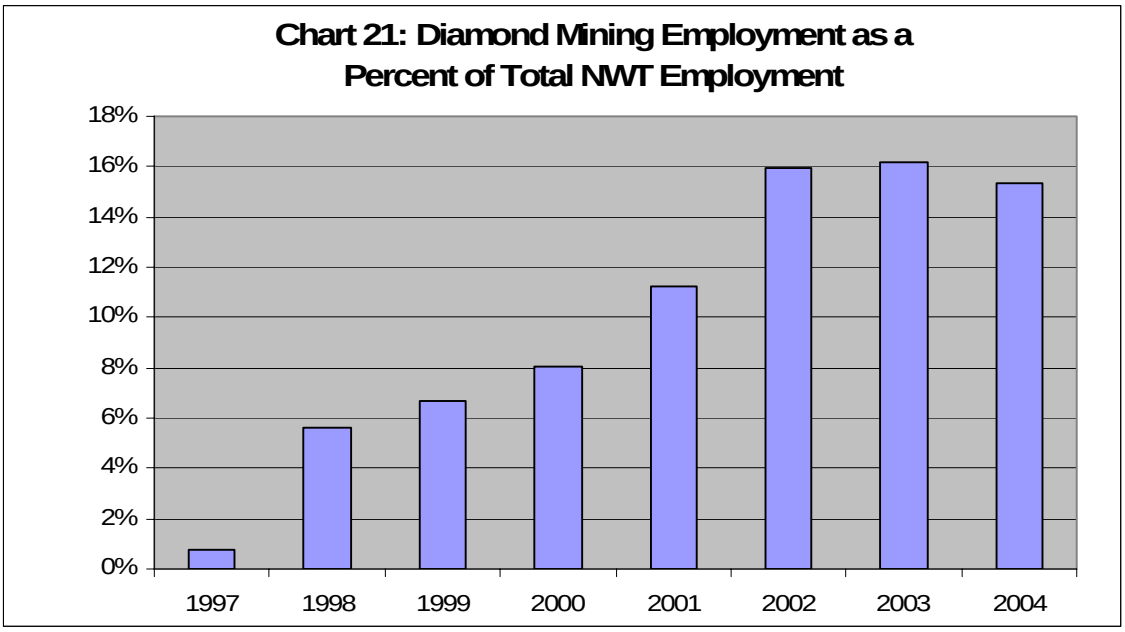

Table 21: Diamond Mining Total Contribution to Employment in the NWT

	Person-Years								
	1997	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**Total**
Direct	0	295	330	476	755	1,149	1,312	1,274	5,591
Indirect	129	621	776	885	1,190	1,672	1,532	1,558	8,362
Induced	21	191	222	258	380	514	534	483	2,602
Total	150	1,107	1,328	1,618	2,325	3,335	3,379	3,314	16,556
% of Total	1%	6%	7%	8%	11%	16%	16%	15%	10%
Total Employment	20,183	19,815	19,781	20,128	20,742	20,925	20,850	21,617	164,041

[12] Over the period 1997 to 2004 the number of employed persons in the NWT averaged close to 20,000.

IMPACTS OF SORTING FOR ROYALTY VALUATION

The Canada Mining Regulations require that all rough diamonds be valued by the Government Diamond Valuator prior to sale or export, and in addition so that the federal government can be confident that the sale price as reported by the company is reasonable. The government of Canada policy is that all diamonds are to be valued in the NWT for this purpose.

Sorting for government valuation is a highly skilled occupation and offers only a handful of employment opportunities. The Government Diamond Valuator employs two Northern Aboriginals who join a team of an additional 3 to 4 expert rough diamond sorters who undertake the valuation of the two producing company's diamonds 10 times a year for a period of five days each time.

Both BHP Billiton and Diavik have facilities in Yellowknife to undertake this initial sort. In the case of Diavik, the sort is also required to split the rough into shares for the two partners (Rio Tinto and Aber Diamond Corporation). In the case of both mines, after this initial sort is completed the rough is transported out of the NWT for the final sort for marketing purposes.

Currently the Diavik facility has about 10 employees while the BHP Billiton facility employs 13. When the Snap Lake Mine opens employment should reach about 35. This activity has an important but small impact on the NWT economy.

The GNWT has stated that the establishment of a secondary diamond industry is a high government priority and has introduced a number of substantial governmental incentives, both in the form of grants for the purposes of training and acquisition of equipment, and loan guarantees to facilitate purchase of the raw material[13].

PRODUCER SUPPORT TO LOCAL INDUSTRY

BHP Billiton, after negotiations with the GNWT, agreed to supply rough diamonds to qualified diamond manufacturers in the Northwest Territories. In total BHP Billiton agreed to allocate 2,500 carats per factory (three factories); which can represent up to ten percent of the value of the Ekati Mine output. The rough is sold at market prices and there is no difference between the price for rough diamonds in Antwerp or in Yellowknife. The factories in Yellowknife do have an advantage: the quality and size of the rough diamonds is constant, predetermined and there is no competition for supply compared to the open market in Antwerp. Also, contrary to normal diamond marketing practice, they are not forced to buy the entire allotment; they can buy only what they need. Without this agreement the factories would be forced to buy rough diamonds much further down the pipeline and incur higher costs due to dealer mark-ups and other marketing costs.

Diavik Diamond Mines Inc. signed an agreement with the GNWT in 1999 to supply diamonds to the local NWT cutting and polishing industry. Diavik rough diamonds began flowing to NWT plants in July of 2003. The terms have not been made public but it is likely that they are similar to the BHP Billiton agreement.

Currently, the GNWT is attempting to finalize a Socio-Economic Agreement with De Beers that covers the Snap Lake Project. The GNWT is seeking guarantees that De Beers will supply the local NWT cutting and polishing industry with rough from the Snap Lake mine.

THE LOCAL CUTTING AND POLISHING INDUSTRY

At the end of 2004 there were four local cutting and polishing operations in the NWT. Although there were a number of northerners employed the majority of employees were skilled foreign workers.

[13] The GNWT makes training funds (subject to budget restrictions) available for any company coming into the Northwest Territories. The GNWT does offer loan guarantees to the diamond industry that are not normally made available to other industries.

Sirius Diamonds NWT Ltd.

Sirius Diamonds, the NWT's first cutting and polishing operation began production in June of 1999 at its location at the Yellowknife airport. The investment in plant and equipment cost was about $2.0 million. The facility employs about 25 cutters and another 5 people in administration and management. Currently about five of these employees are Aboriginal. Sirius processes mid-grade to higher quality stones and markets its output primarily in Canada and the United States under the Polar Bear brand.

Deton' Cho Diamonds

Deton'Cho Diamonds Inc. (DDI) was formed in 2000 and is located in N'dilo (an Aboriginal community adjacent to Yellowknife). The plant encountered organizational and financial difficulties and in the fall of 2002 closed, laying off approximately 35 workers.

The plant reopened in June of 2003 under the name "Canada Dene Diamonds" and is now owned by Deton'Cho Corporation, in partnership with Schachter & Namdar Polishing Works. The plant currently employs about 15 workers who are all foreign nationals.

Arslanian Cutting Works (NWT) Ltd.

The NWT factory is jointly owned by the Arslanian family and Rosy Blue. Arslanian Cutting Works is a family-owned and operated business with major operations in Armenia and offices over the world. Headquartered in Antwerp, Belgium, Rosy Blue is one of the largest diamond manufacturing companies in the world.

The Arslanian Cutting Works (NWT) factory began production in 2000 and is located at the Yellowknife airport. Arslanian produces triple A EKATI cut diamonds (a high end product) and markets them in Canada. Currently there are about 45 persons employed at the factory and almost all are skilled foreign nationals that were brought in to work.

In December of 2003, Rosy Blue announced its intention to sell its interest in the plant, citing the challenges in operating a factory in such a remote location.[14]

Laurelton Diamonds

Established in 2003, Laurelton Diamonds is 100% owned by Tiffany & Co. and is located at the Yellowknife Airport.

[14] From an article in Rapaport News Weekly, January 14, 2004

Polishers were recruited from India and Tanzania under three year contracts, with a commitment to help during the startup phase and assist in training local northern staff. As of October 2004, the factory had a total labour force of 46 including 38 in production (of which 21 are Northern polishing trainees) and 8 support staff (of which six are Northern hires).

All production is shipped to Tiffany and Company in Pelham, New York.

ESTIMATED ECONOMIC IMPACT OF THE NWT CUTTING AND POLISHING INDUSTRY

Chart 22 and Table 22 presents the estimated value of manufacturing shipments for the cutting and polishing (diamond) industry and other manufacturing in the NWT from 1997 to 2004.

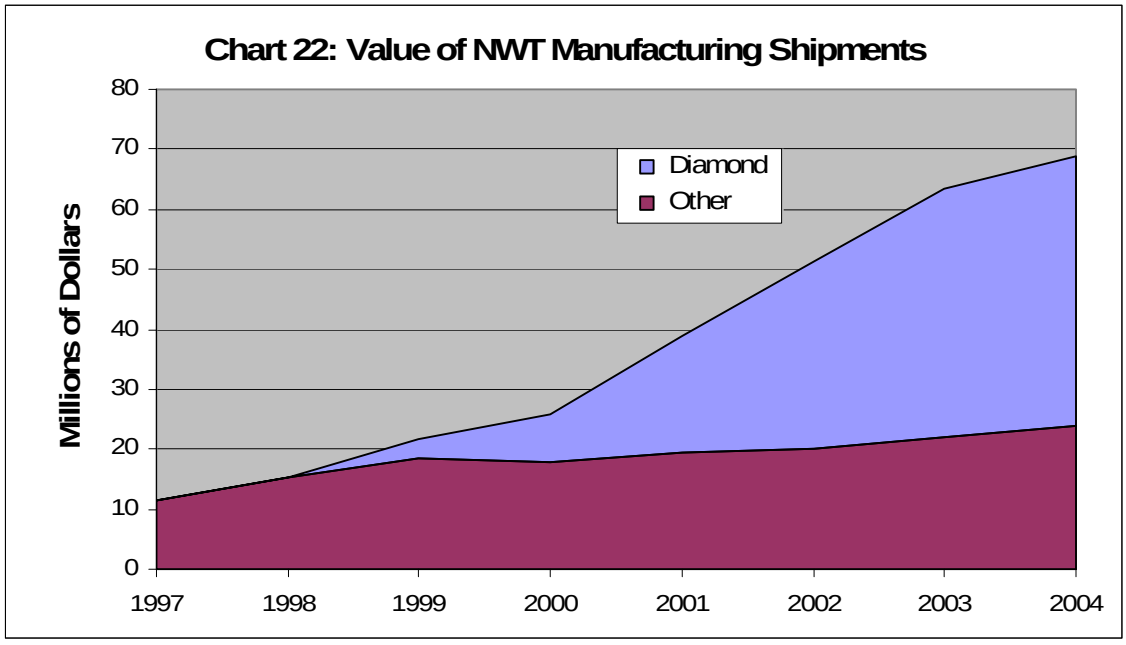

Table 22: Diamond Cutting and Polishing Contribution to Manufacturing Shipments in the NWT

	1997	1998	1999	2000	2001	2002	2003	2004	Total
				(Millions of Dollars)					
Diamond	0	0	3	8	20	31	41	45	148
Other	11	15	18	18	19	20	22	24	148
Total	11	15	22	26	39	51	63	69	297
				(Percent of Total)					
Diamond	0%	0%	15%	31%	50%	61%	65%	65%	50%
Other	100%	100%	85%	69%	50%	39%	35%	35%	50%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%

Manufacturing shipments rose with the opening of the Sirius Diamonds facility in 1999 and continued to grow as the other two diamond cutting facilities came on stream in 2000 and Laurelton was added in 2003.

It is estimated (Ellis Consulting Services estimate) that the value of shipments from the NWT cutting and polishing industry rose from $3 million in 1999 to $45 million in 2004.

The value of shipments shows the gross contribution to the economy while GDP or value-added gives its net impact.

Chart 23 and Table 23 give the estimated contribution of the cutting and polishing industry to GDP at basic prices in NWT.

It is estimated that over the period 1999 to 2004, the cutting and polishing industry directly contributed $30.5 million in GDP and a total of $58.1 million when indirect and induced impacts are included.

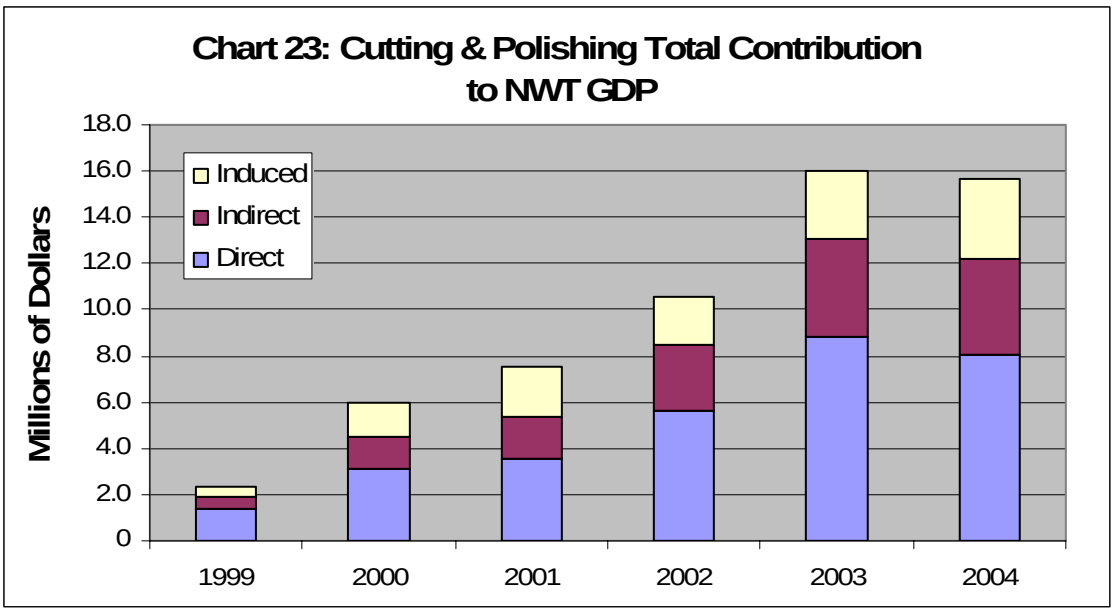

Table 23: Diamond Cutting & Polishing Total Contribution to GDP at Basic Prices in the NWT

	Millions of Dollars						
	1999	**2000**	**2001**	**2002**	**2003**	**2004**	**Total**
Direct	1.3	3.1	3.5	5.6	8.8	8.1	30.5
Indirect	0.6	1.4	1.8	2.9	4.3	4.1	15.0
Induced	0.4	1.4	2.2	2.1	3.0	3.5	12.6
Total	2.4	6.0	7.5	10.6	16.0	15.7	58.1

In 2004 it is estimated that the cutting and polishing industry contributed $15.7 million to GDP in the NWT. This was comprised of $8.1 million in direct and another $7.3 million in indirect and induced impacts.

Chart 24 and Table 24 gives the estimated contribution of the cutting and polishing industry to employment in the NWT.

It is estimated that over the period 1999 to 2004, the cutting and polishing industry directly contributed 564 person years of employment and another 319 person years when the indirect and induced impacts are included for a grand total of 883 person years of employment.

In 2004, it is estimated that the cutting and polishing industry contributed 246 person years of employment comprised of 161 person-years of direct employment and another 85 person-years in indirect and induced impacts.

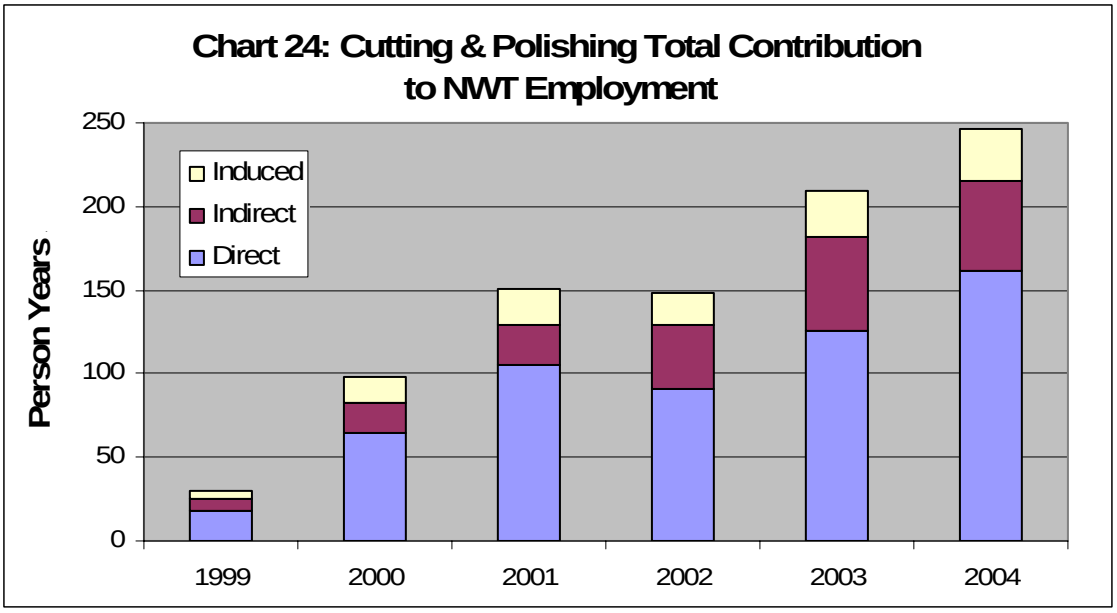

Table 24: Diamond Cutting & Polishing Total Contribution to Employment in the NWT

	Person-Years						
	1999	**2000**	**2001**	**2002**	**2003**	**2004**	**Total**
Direct	18	64	105	91	125	161	564
Indirect	7	18	24	38	56	54	197
Induced	5	16	22	20	28	31	121
Total	30	98	151	148	209	246	883

SUMMARY OF THE ESTIMATED ECONOMIC IMPACT THE NWT DIAMOND INDUSTRY BY ACTIVITY

Table 25 presents a summary of the estimated economic impact of the diamond industry on GDP in the NWT from 1991 to 2004.

Over the period 1991 to 2004 diamond mining contributed $5.2 billion or 91.1% of the total impact on NWT GDP. Exploration activities contributed another $449 million or 7.9% of the total GDP impact while manufacturing (cutting and polishing) generated $58 million or 1% of the total impact.

In 2004 the mining industry generated 97.1% of total GDP impacts while exploration and manufacturing contributed 2.1% and 0.8% respectively.

Table 25: Diamond Industry Contribution to the NWT GDP by Activity

	Exploration		Mining		Manufacturing		Total	
	$Million	Percent	$Million	Percent	$Million	Percent	$Million	Percent
1991	0.5	100.0%	0	0.0%	0	0.0%	0.5	100.0%
1992	5.9	100.0%	0	0.0%	0	0.0%	5.9	100.0%
1993	28.9	100.0%	0	0.0%	0	0.0%	28.9	100.0%
1994	51.7	100.0%	0	0.0%	0	0.0%	51.7	100.0%
1995	59.3	100.0%	0	0.0%	0	0.0%	59.3	100.0%
1996	62.1	100.0%	0	0.0%	0	0.0%	62.1	100.0%
1997	28.9	100.0%	0	0.0%	0	0.0%	28.9	100.0%
1998	27.8	35.2%	51.1	64.8%	0	0.0%	78.9	100.0%
1999	35.6	6.5%	507.2	93.0%	2.4	0.4%	545.2	100.0%
2000	18.6	4.4%	396.6	94.2%	6.0	1.4%	421.1	100.0%
2001	35.3	6.0%	545.2	92.7%	7.5	1.3%	587.9	100.0%
2002	31.1	5.1%	566.2	93.1%	10.6	1.7%	607.9	100.0%
2003	21.3	1.7%	1,203.4	97.0%	16.0	1.3%	1,240.8	100.0%
2004	41.7	2.1%	1,926.8	97.1%	15.7	0.8%	1,984.3	100.0%
Total	448.8	7.9%	5,196.5	91.1%	58.1	1.0%	5,703.4	100.0%

Table 26 presents a summary of the economic impact of the diamond industry on employment in the NWT from 1991 to 2004.

Over the period 1991 to 2004, diamond mining generated 19,742 person-years of employment, or 89% of the total impact on NWT employment. Exploration activities contributed another 1,541 person-years, or 7% of the total employment impact, while manufacturing generated 883 person-years, or 4% of the total impact.

In 2004, the mining industry generated 3,186 person-years (89.1%) of employment while exploration and manufacturing contributed 143 (4.0%) and 246 (6.9%) respectively.

Table 26: Diamond Industry Contribution to NWT Employment by Activity

	Exploration		Mining		Manufacturing		Total	
	PY's	Percent	PY's	Percent	PY's	Percent	PY's	Percent
1991	2	100.0%	0	0.0%	0	0.0%	2	100.0%
1992	20	100.0%	0	0.0%	0	0.0%	20	100.0%
1993	99	100.0%	0	0.0%	0	0.0%	99	100.0%
1994	178	100.0%	0	0.0%	0	0.0%	178	100.0%
1995	204	100.0%	0	0.0%	0	0.0%	204	100.0%
1996	213	58.8%	150	41.2%	0	0.0%	363	100.0%
1997	99	8.2%	1,107	91.8%	0	0.0%	1,206	100.0%
1998	95	6.7%	1,328	93.3%	0	0.0%	1,423	100.0%
1999	122	6.9%	1,618	91.4%	30	1.7%	1,771	100.0%
2000	64	2.6%	2,325	93.5%	98	3.9%	2,487	100.0%
2001	121	3.4%	3,335	92.5%	151	4.2%	3,607	100.0%
2002	107	2.9%	3,379	93.0%	148	4.1%	3,634	100.0%
2003	73	2.0%	3,314	92.1%	209	5.8%	3,597	100.0%
2004	143	4.0%	3,186	89.1%	246	6.9%	3,575	100.0%
Total	1,541	7.0%	19,742	89.1%	883	4.0%	22,165	100.0%

BHP-Billiton entered into individual "Impact and Benefit Agreements" with the Dogrib Treaty 11 Council (Rae-Edzo, Wha Ti, Rae Lakes and Wekweti), Akaitcho Treaty 8 (Dettah, N'dilo, Lutsel K'e and Fort Resolution), the North Slave Metis Alliance and the Inuit of Kugluktuk.

Diavik Diamond Mines Inc. signed "Participation Agreements" with the Dogrib Treaty 11 Council, the Yellowknives Dene First Nation (Dettah and N'dilo), the Lutsel K'e Dene Band, the Kitikmeot Inuit Association (Kugluktuk), and the North Slave Métis Association.

These are confidential agreements that contain provisions for annual financial payments, employment and business opportunities, as well as training initiatives and scholarships. In addition, both BHP Billiton and Diavik have entered into Socio-Economic Agreements with the GNWT and in the case of Diavik, with other directly impacted Aboriginal partners (Dogrib, Lutsel K'e, North Slave Métis, Yellowknives Dene and KIA) as well.

All seven NWT communities and Kugluktuk provide employment services to the diamond mines and all have established business enterprises that provide goods and services to the mines, both for construction and operation.

Chart 27 and Table 27 shows the extent of diamond mine purchases from both Aboriginal and other northern businesses.

Over the period 1996 to 2003, the two diamond mines spent $4.1 billion on goods and services. Of this total, $3.0 billion or 73% has been from northern businesses and 31%, or $1.3 billion, has been from Aboriginal businesses in the north.

As capacity has been developed, Aboriginal businesses both increased the value and their share of expenditures.

In 1997 (the first full year of construction of the EKATI™ mine), purchases from Aboriginal businesses amount to $78 million, or 24% of total expenditures. By 2003 diamond mine purchases from Aboriginal businesses reached $202 million and represented 28% of all expenditures.

The development of business capacity has created employment opportunities in Aboriginal enterprises and currently they directly employ hundreds of band and other First Nation members.

Employment in Aboriginal businesses, along with direct employment at the diamond mines, has not only lead to a reduction in social assistance payments (see Chart 14 and

Table 14 on page 22) but has also lead to more employment income in Aboriginal communities.

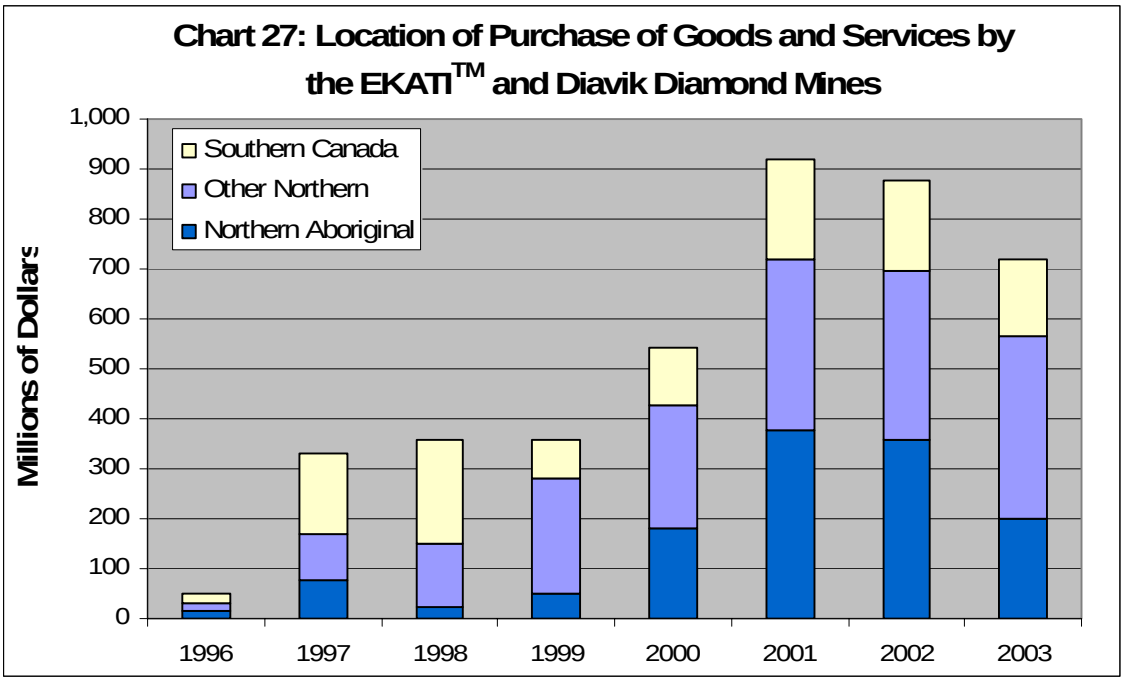

Table 27: Purchases of Goods and Services from Northern Businesses by the EKATI™ and Diavik Diamond Mines

	1996	1997	1998	1999	2000	2001	2002	2003	Total
				(Millions of Dollars)					
Aboriginal	14	78	25	52	182	377	358	202	1,287
Other NWT	19	93	126	228	245	344	338	365	1,758
Total NWT	33	171	150	280	427	721	696	566	3,044
South	18	160	207	76	115	196	180	153	1,105
Total	50	331	358	356	542	917	876	719	4,149
				(Percent of Total)					
Aboriginal	27%	24%	7%	15%	34%	41%	41%	28%	31%
Other NWT	38%	28%	35%	64%	45%	38%	39%	51%	42%
Total NWT	65%	52%	42%	79%	79%	79%	79%	79%	73%
South	35%	48%	58%	21%	21%	21%	21%	21%	27%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%

Chart 28 and Table 28 show the impact on employment income per person[15] in the NWT over the period 1996 to 2002 for four different categories of communities. The

[15] Employment Income per Person is estimated by dividing total employment income (from income tax records) by the population estimate for each community. The source for employment income is Statistics Canada income tax records (as reported in the 2002 "Communities and Diamonds" Report prepared by the GNWT) and the source for the population estimates is Ellis Consulting Services. The index is calculated by dividing all annual values by the 1996 value and multiplying by 100.

first is the "diamond" impacted communities which includes Rae Lakes (Gameti), Wekweti (Snare Lake), Wha Ti, Rae-Edzo, Detah, N'dilo, and Lutsel K'e. The second category is "Yellowknife" which is the territorial capital and the third "Other" represents all other communities in the NWT. Lastly the fourth "Total NWT" represents the NWT average.

Over the period of 1996 to 2002, employment income per person in the communities directly impacted by the diamond mining industry rose from $7,323 to $13,099. This represented an increase in the index from 100 to 179. Over the same period, employment income per person rose to 101 in Yellowknife, 104 in other communities and the NWT average rose to 104.

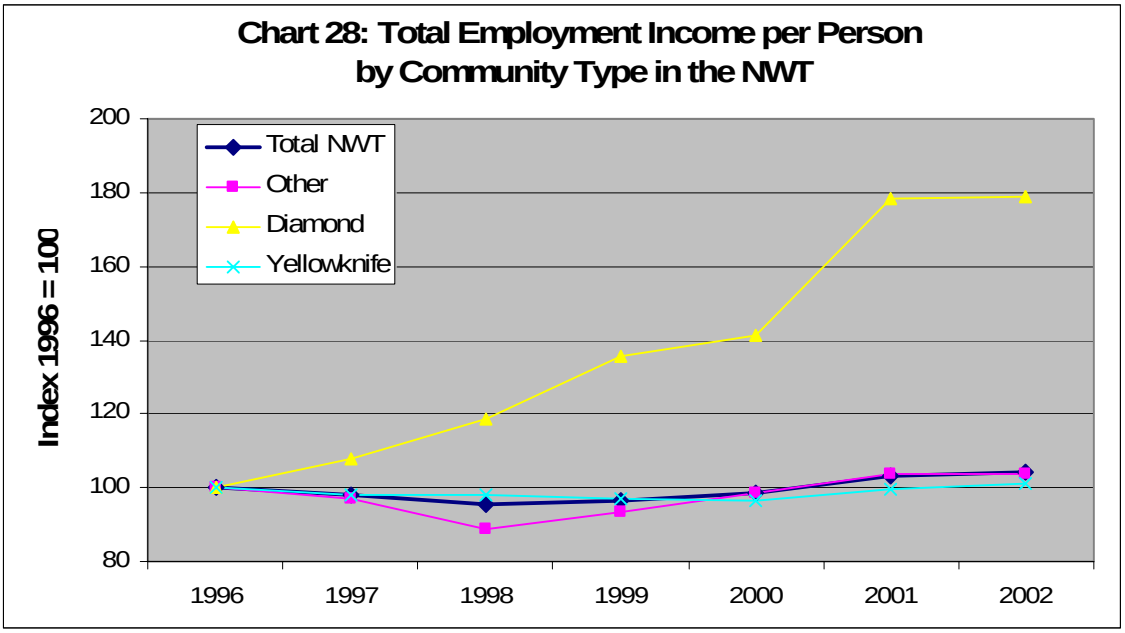

Table 28: Total Employment Income Per Person by Community Type

	1996	1997	1998	1999	2000	2001	2002
				(2002 Constant Dollars)			
Total NWT	19,480	19,082	18,548	18,842	19,227	20,134	20,297
Other	14,957	14,490	13,262	13,973	14,728	15,479	15,495
Diamond	7,323	7,892	8,684	9,927	10,346	13,075	13,099
Yellowknife	26,422	25,889	25,954	25,602	25,550	26,339	26,680
				(Index 1996=100)			
Total NWT	100	98	95	97	99	103	104
Other	100	97	89	93	98	103	104
Diamond	100	108	119	136	141	179	179
Yellowknife	100	98	98	97	97	100	101

The largest increase in the diamond impacted communities occurred from 1998 to 2002, which corresponds to the period of diamond mine construction and operation and with it the growth in Aboriginal businesses.

In addition to more employment, rising employment income, and falling social assistance payments, the diamond communities have also had a tremendous growth in the number of people enrolled in post-secondary education programs. The growth in school enrolment would of course not be possible without the work and support provided by the local educational community, but two other major factors have helped contribute to this success.

The first is that the diamond mining companies have provided funding for a large number of scholarships. The second is the result of the employment opportunities presented by the diamond mines and Aboriginal businesses enterprises. Quite simply, people are more likely to seek education in an environment where real opportunities exist to achieve employment.

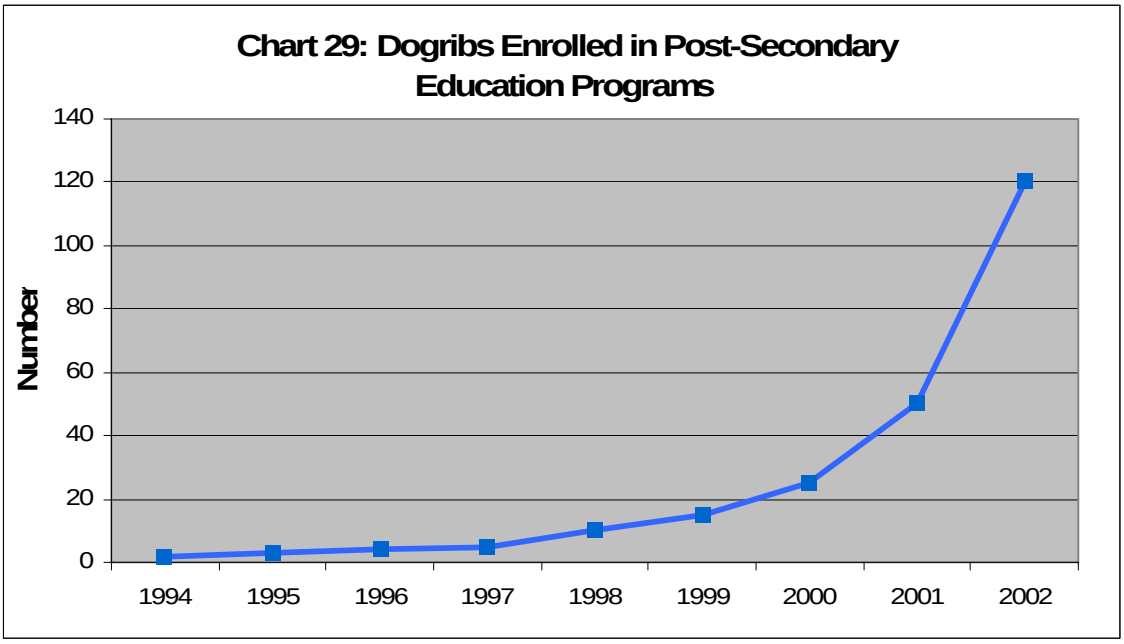

Table 29: Dogribs Enrolled in Post-Secondary Education Programs (Number)

1994	1995	1996	1997	1998	1999	2000	2001	2002
2	3	4	5	10	15	25	50	120

Chart 29 and Table 29 give the number of Dogribs[16] enrolled in post-secondary programs since1994. There were only two students in 1994 and by 1998 there were ten. Starting in 1999, the number rose dramatically and reached 120 by the end of 2002. The major rise in the number of students from 1998 to 2002 coincides with the beginning of operation of the EKATI™ Diamond Mine and the construction of the Diavik Mine.

In summary, in general the Aboriginal communities impacted by the diamond industry have been building business capacity and have had rising revenues, lower unemployment, and with it, rising employment income and a dramatic rise in the number of students in post-secondary educational institutions.

THE RAE BAND GROWTH IN BUSINESS CAPACITY

Another method of assessing the impact of the diamond mining industry on Aboriginal communities can be seen by examining the growth of the business activities and employment of the individual parties to the Impact and Benefit and Participation agreements. The Yellowknife Dene First Nation (N'dilo and Detah), the Kitikmeot Inuit Association (Nunavut) and the Dogrib Treaty 11 Council have been very successful growing businesses related to the diamond industry. A particularly good example is the success of the Rae Band, the largest of the four Dogrib Treaty 11 communities.

THE RAE BAND BUSINESS DEVELOPMENT

Since 1994, the Dogrib Rae Band has been actively building a business base that has enabled it to take advantage of many of the opportunities flowing from resource development on its traditional lands. Key to the creation of this business base was the establishment of joint ventures with established companies operating in specific industry sectors. The Rae band has established the following companies that have been specifically targeting the diamond mining and other resource based industries.

Tli Cho Landtran Transport Ltd.

Tli Cho Landtran Transport Ltd. was established in 1999 and is 51% owned by the Dogrib Rae Band and 49% by Landtran Systems (previously known as Byers Transport, which is based in Edmonton). It is primarily a general freight operator and its operations include the trucking re-supply of bulk fuel to the mining sector. Tli Cho Landtran specializes in moving project cargo and bulk materials over seasonal ice roads to the diamond mines.

[16] This does not include the members of Lutsel K'e Dene Band, North Slave Métis Alliance or the Kitikmeot Inuit Association. The source is the Dogrib Rae Band but in some cases Ellis Consulting Services estimates have been used.

Tli Cho Logistics Ltd.

Tli Cho Logistics Ltd. was established in 1999 and is 51% owned by the Dogrib Rae Band and 49% by Atco Frontec. It supplies services to the mining sector including facility management, operational contracts, airport operations, bulk fuel supply and small airport operation and management.

Tli Cho Explosives Ltd.

Tli Cho Explosives Ltd. is 51% owned by the Dogrib Rae Band, and 49% by Bulk Explosives. It supplies explosive management systems, products and related services.

Rae Band Construction

Rae Band Construction is 100% owned by Dogrib Rae Band. It began by building residential housing units in Rae during the summer construction season but has now moved to serve resource industry construction projects and, among other activities, is currently providing construction services to the Diavik Mine.

North Slave Region Employment Solutions (NSR)

North Slave Region Employment Solutions (NSR) is 100% owned by Dogrib Rae Band and provides recruitment, screening and placement services, individual career planning, translation services, education upgrading, income support services, apprentice development, training program delivery and counselling services aimed at resource companies.

The revenue growth of the Rae Band resource related businesses has been substantial. Chart 29 and Table 29 presents the growth in these revenues from 1999 to 2002.

In 1999 the Rae Band had just over $2 million in revenues. The growth in revenues from 2000 to 2002 has been steady and significant. Revenues rose to over $10 million in 2000, to just under $20 million in 2001 and reached almost $30 million by 2002.

The growth in business revenues and employment has been accompanied by an increase in the number of jobs and with it a rise in employment income received by the Dogrib in Rae-Edzo. In 2002, Rae Band businesses employed close to 200 band members.

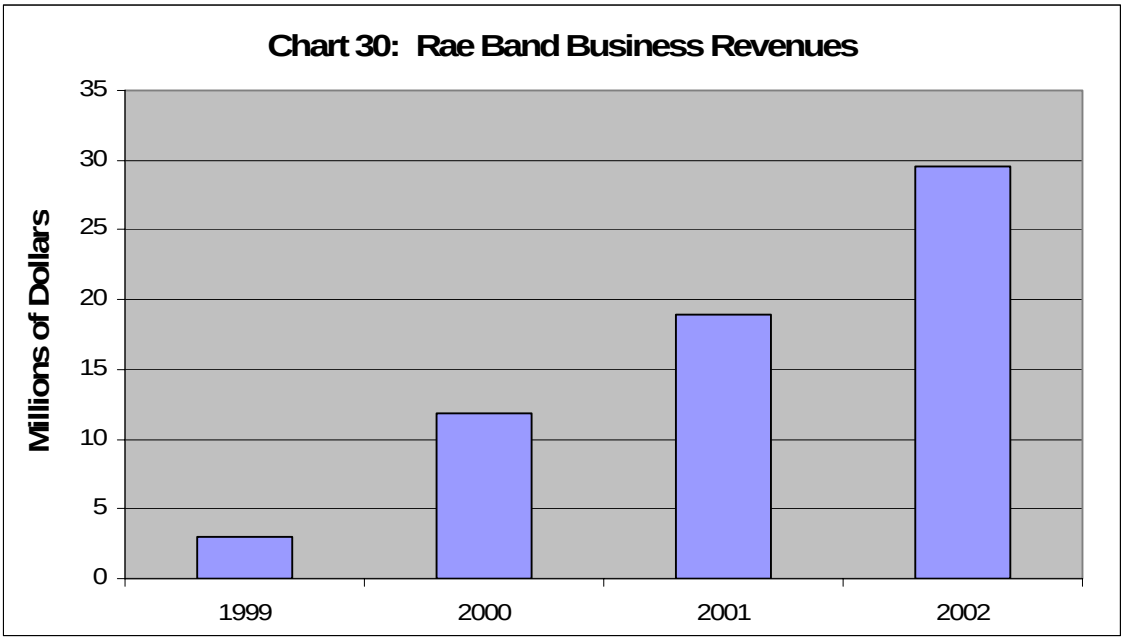

Table 30: Rae Band Business Revenues
(Millions of Dollars)

	1999	2000	2001	2002
Total Revenues	3.0	11.8	18.9	29.5

Chart 31 and Table 31 show the impact of job growth on employment income in Rae-Edzo.

In 1996 before the full impact of the diamond mining industry and Rae Band business development, employment income per person in Rae-Edzo was $13,824 while the average for the NWT was $19,480. By 2002, with the impact of diamond mining industry, average employment per person had risen 78% (index 178) to $24,654 while in contrast the average in the NWT rose only 4% to $20,297.

The rapid rise in income demonstrates the positive impact of both the direct employment in diamond mining and in band owned businesses that served the diamond and other mining industries.

The Rae Band is an excellent example of an Aboriginal community that is actively working to take advantage of the opportunities presented by the diamond industry and, based on the indicators, is having a great deal of success.

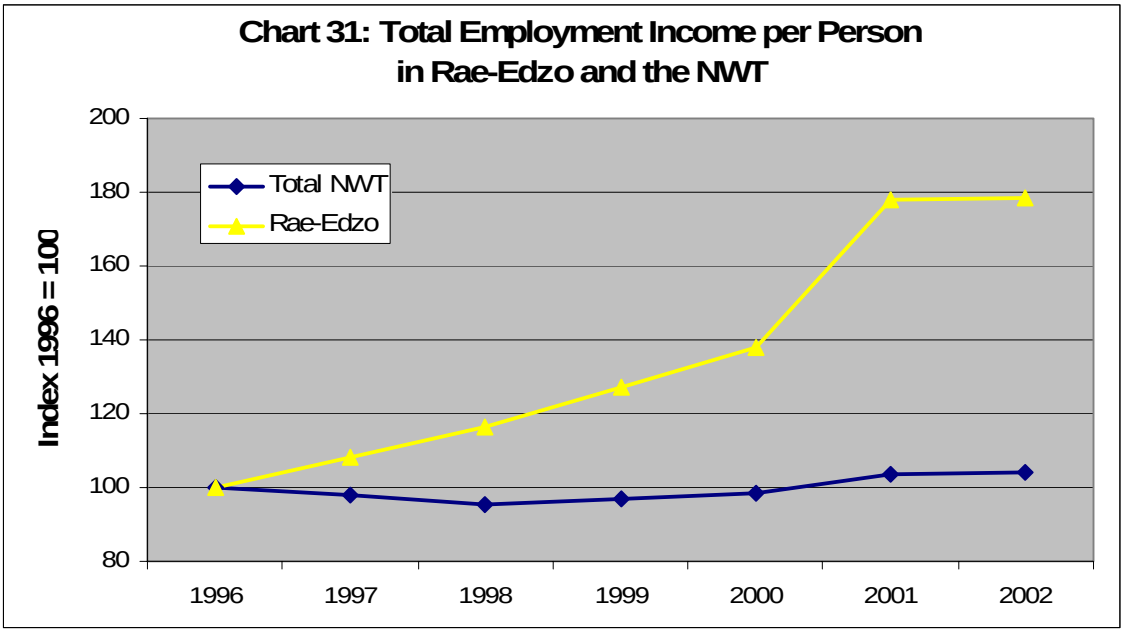

Table 31: Total Employment Income Per Person in Rae-Edzo and the NWT

	1996	1997	1998	1999	2000	2001	2002
				(2002 Constant Dollars)			
Total NWT	19,480	19,082	18,548	18,842	19,227	20,134	20,297
Rae-Edzo	13,824	14,943	16,086	17,576	19,036	24,583	24,654
				(Index 1996=100)			
Total NWT	100	98	95	97	99	103	104
Rae-Edzo	100	108	116	127	138	178	178