

CHARTING THE NEXT COURSE

Background on the Northwest Territories
Economy

November 2006

CHARTING THE NEXT COURSE: Background on the Northwest Territories Economy

This document provides general background information for discussions on a macro economic framework for the Northwest Territories (NWT). The document has five sections:

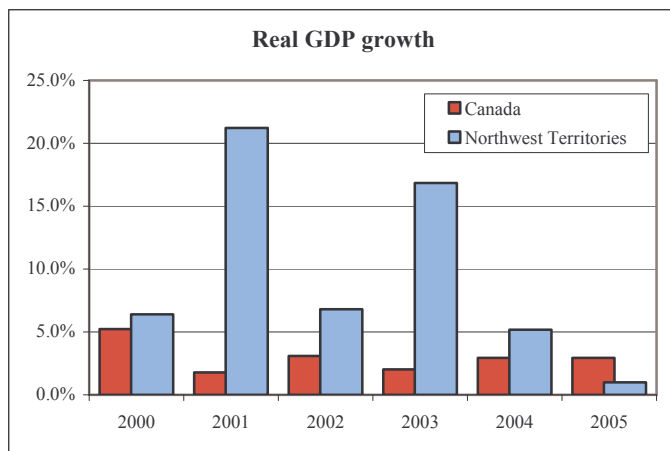
1. A discussion of the NWT economy in a global context.
2. An overview of the NWT economy over the past six years, including the effect of economic growth on the territorial economy.
3. A description of how government revenue and expenditures have changed during this period of economic growth.
4. NWT linkages with the domestic and international economy.
5. Forecasts of key economic variables over the next twenty years with and without additional resource development activity.

1. The NWT in a Global Economy

- The NWT economy is small and extremely open. This means that the NWT economy is strongly linked to the global economy and easily influenced by external factors.
- Prices for NWT resources are determined by global or continental demand, which in turn influences the demand for NWT resources. For example, mining exploration and development is linked to the world prices for base metals, gold or other commodities on world markets. These world prices reflect global supply and demand, which are influenced by many factors such as geographical political and economic conditions and technological change.
- The NWT must compete globally to attract investment, produce non-renewable resources, attract tourists and sell manufactured goods. The NWT economy cannot operate in isolation from the rest of the global economy but must work towards becoming efficient in order to compete.

2. Scale of the Economy – Overall Pattern of Growth

2.1 Overall GDP

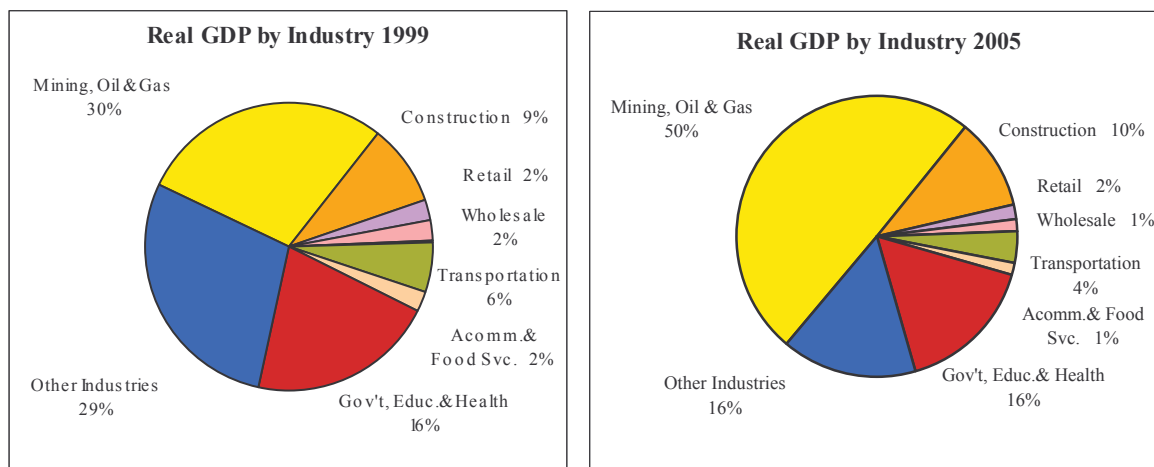


- The NWT economy has grown dramatically in the past six years, with real GDP growth of 71 per cent in the NWT between 1999 and 2005, while the Canadian growth over this period was 19 per cent.

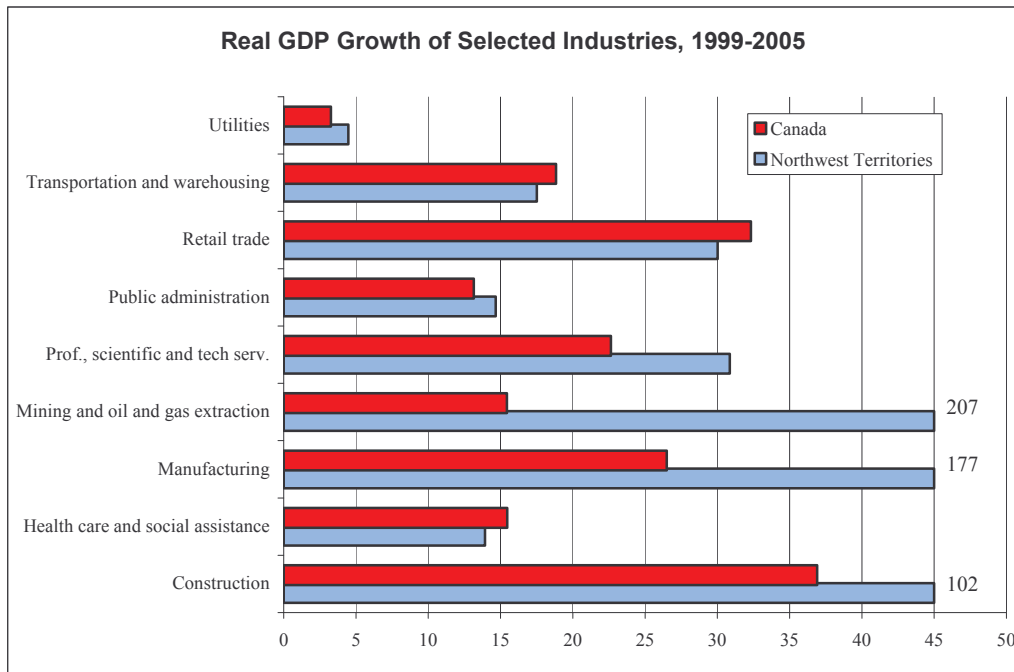
- The NWT had the highest real GDP growth in Canada in 2001, 2003 and 2004.
- The overall pattern of high growth is strongly linked to resource development activities. For example, the growth in 2001 reflects the start of construction of the Diavik diamond mine and the growth in 2003 reflects the start of production at Diavik.

2.2 Real GDP by industry

- The mining, oil and gas sector has grown from one-third of the NWT economy in 1999 to one-half in 2005.
- The value of mineral production reached \$2.2 billion in 2005. Diamond production was 75 per cent and fuel production was 24 per cent of total mineral production.
- The mining, oil and gas sector grew 207 per cent from 1999 to 2005, compared to 15 per cent for Canada.
- Oil and gas exploration activity increased over the last decade.
- Expenditures on mineral exploration are dominated by diamond exploration (from \$24.2 million out of \$27.9 million in 1999 to \$50.1 million out of \$66 million in 2005); exploration expenditures for other minerals have increased by a factor of four since 1999.



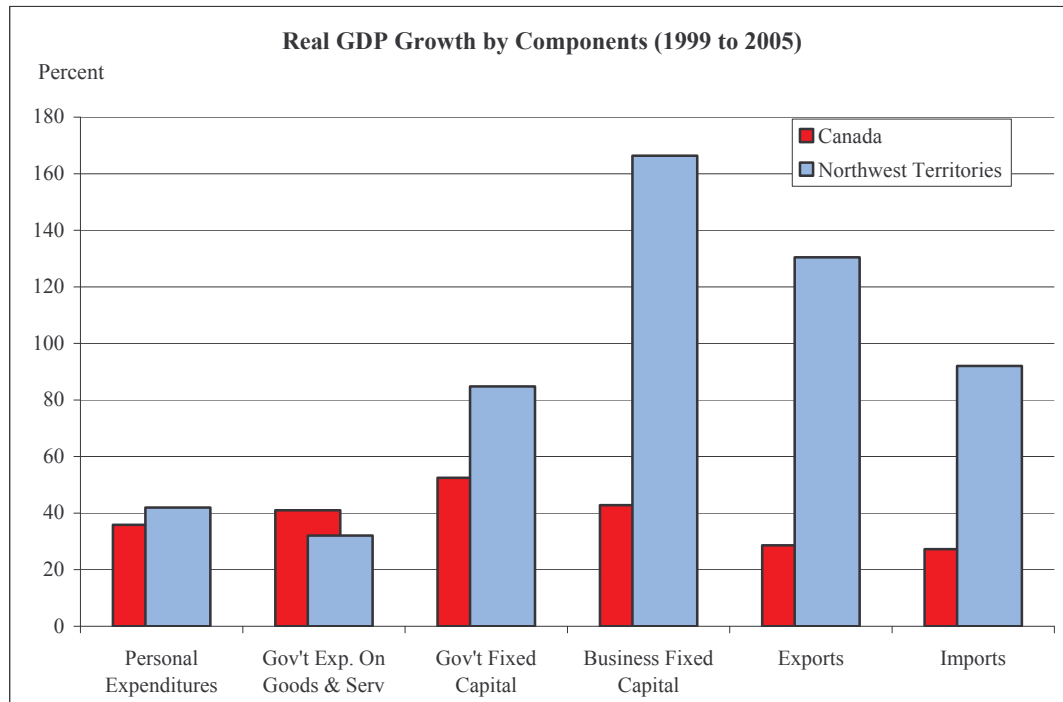
2.3 Overall Growth, by Industry



- All sectors of the NWT economy have grown, although the shares of other sectors of the economy have declined relative to the non-renewable resource sectors.
- While the manufacturing sector in the NWT is small, real GDP growth was 177 per cent in the NWT between 1999 and 2004 compared to 11 per cent for Canada (2005 data suppressed for the NWT).
- Real GDP growth for the construction industry in the NWT between 1999 and 2005 was 102 per cent, compared to 37 per cent for Canada.
- Real GDP growth in the NWT professional, scientific and technical services sector (includes engineering, accounting and legal services) also exceeded Canadian growth in this sector.
- Other industrial sectors grew at similar rates as Canada over the past six years. Growth in retail sales in the NWT has tended to exceed Canadian growth and wholesale trade tends to be very strong in years with construction of large projects, but returns to previous levels after construction is completed. Growth in government services, including the health and social service sector, has been similar to Canada.

2.4 Real GDP by components

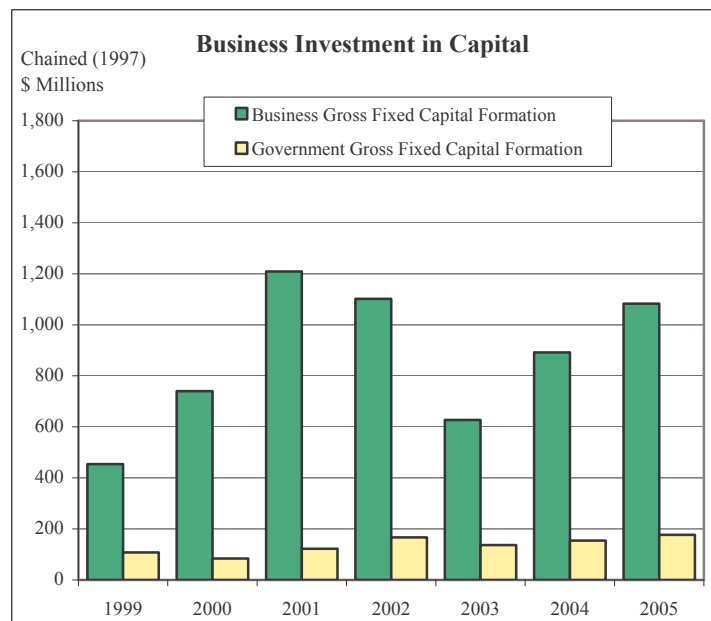
- Growth by GDP component shows that economic growth in the NWT since 1999 has largely been driven by net exports (exports of diamonds) and capital investment (mainly construction of diamond mines).



- NWT growth in all GDP components except government expenditures on goods and services outpaced those of Canada since 1999.
- While not as significant as some other components, growth in personal expenditure on goods and services in the NWT was greater than Canada's, increasing 42 per cent from 1999 to 2005, compared with 36 per cent for Canada.

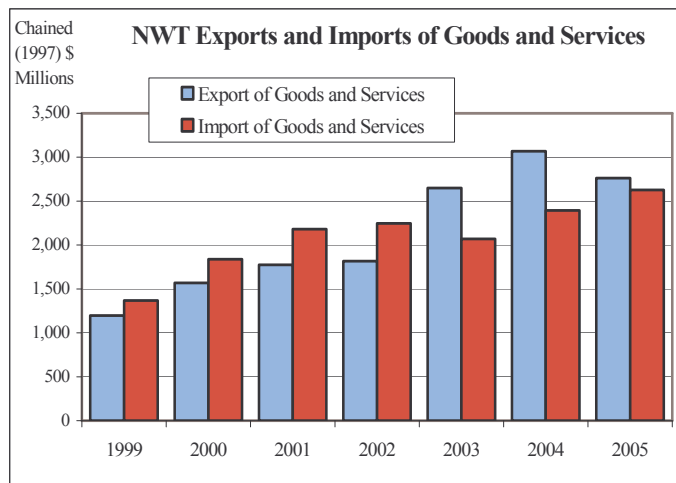
2.5 Business Investment in Capital

- Cumulative business investment from 1999 to 2005 is \$6.5 billion (\$6.1 billion in Constant Dollars (Chained 1997 Dollars)).



- Business investment in capital grew 139 per cent from 1999 to 2005, or almost four and a half times the 32 per cent growth rate for Canada.
- The \$6.5 billion in total capital investments in the Northwest Territories from 1999 to 2005 compares with \$1.7 billion in the Yukon, \$1.5 billion in Nunavut and \$3.9 billion in Prince Edward Island over the same period.

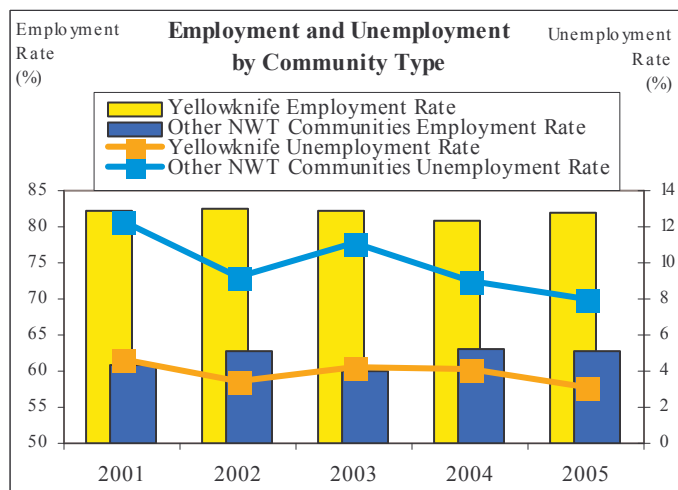
2.6 Imports and Exports

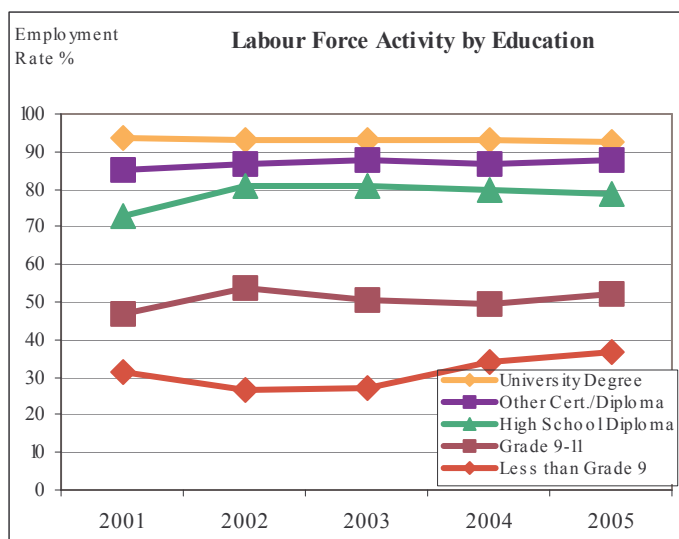


- NWT exports have grown faster than imports since the division of the NWT in 1999.
- Exports of Goods and Services grew by 144 per cent between 1999 and 2005, largely due to exports of diamonds.
- Export of goods to other countries, mostly diamonds, grew 383 per cent from 1999 to 2005.
- Imports of Goods and Services grew by 78 per cent between 1999 and 2005. The increase in imports is tied to construction and capital investment activity.
- From 1999 to 2005, the increase in exports is almost twice the increase in imports. Since 2003, which coincides with the start of operations at Diavik, exports outweigh imports of goods and services to the NWT.

2.7 Employment

- The growth in the NWT economy has resulted in a labour market that is operating near capacity.
- From 2001 to 2005, the cumulative growth in resident employment was 12.9 per cent in the NWT compared with 7.7 per cent for Canada.
- The NWT has had the highest employment rates among





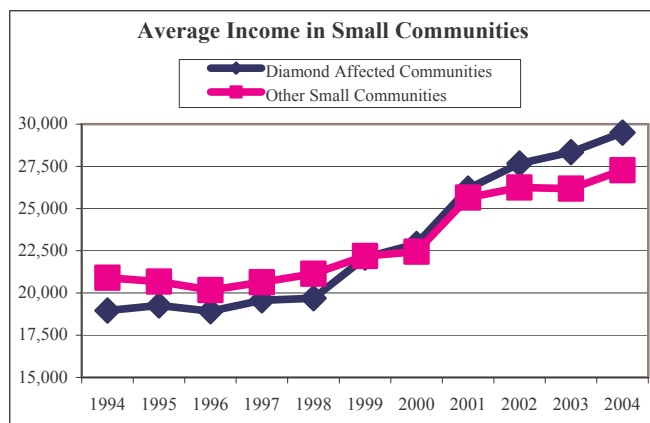
provinces and territories in recent years. The Yellowknife employment rate has been near 80 per cent from 2001 to 2005. Although the employment rate in other communities was lower than Yellowknife's over this period, it has been improving.

- Workers with high school or more as their highest level of schooling have very high employment rates. Much of the available labour supply in the NWT has less than high school as their highest level of schooling.

- Employment growth in the Goods-Producing Sector was 14 per cent in 2004 and 10 per cent in 2005, while employment in the Services-Producing Sector grew by 2 per cent in both years.
- From 2001 to 2005, public sector employment decreased 1.1 per cent, while private sector employment increased 25.8 per cent and self-employment increased 11.1 per cent.
- The number of non-resident workers, often working on a rotational basis, is estimated to be about 2,900 full-time equivalents earning about \$300 million in labour income.
- From 1999 to 2005, non-resident employment in the NWT has doubled with non-resident employment income rising from 13 per cent of total NWT labour income in 1999 to 16 per cent in 2005.

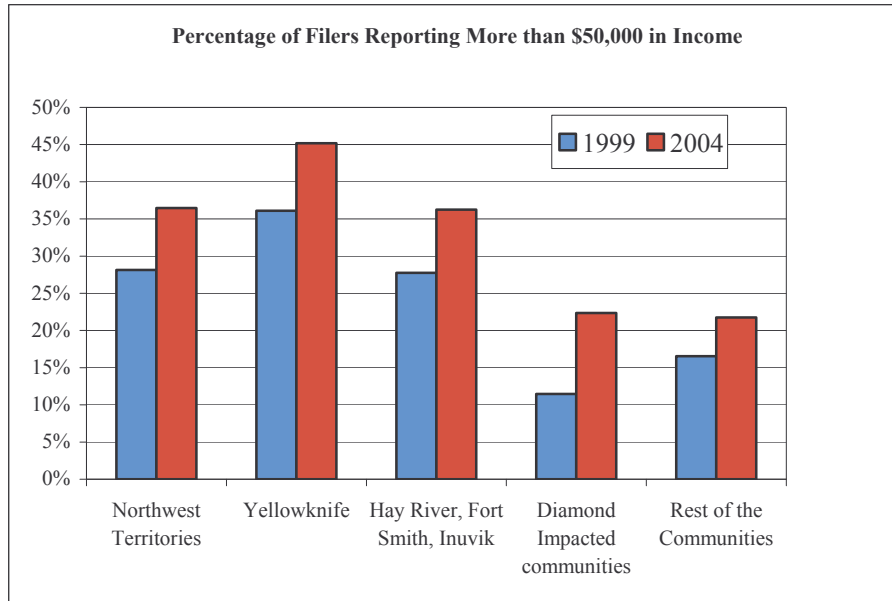
2.8 Income Growth and Disparity

- Total personal income in the NWT increased 41 per cent from 1999 to 2004, compared to 27 per cent for Canada.

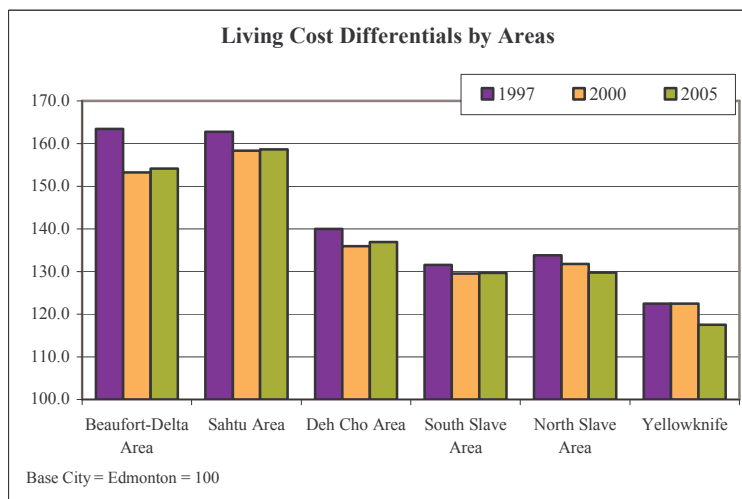


- Total employment income in the NWT increased by 58 per cent between 1999 and 2005, reaching \$1.7 billion in 2005.
- Diamond-affected communities (communities with socio-economic agreements with the diamond mines (Lutselk'e, Gameti, Behchoko, and Whati) saw the largest increase in employment income.

- The proportion of high-income earners is increasing and the proportion of low-income earners in most communities is decreasing.

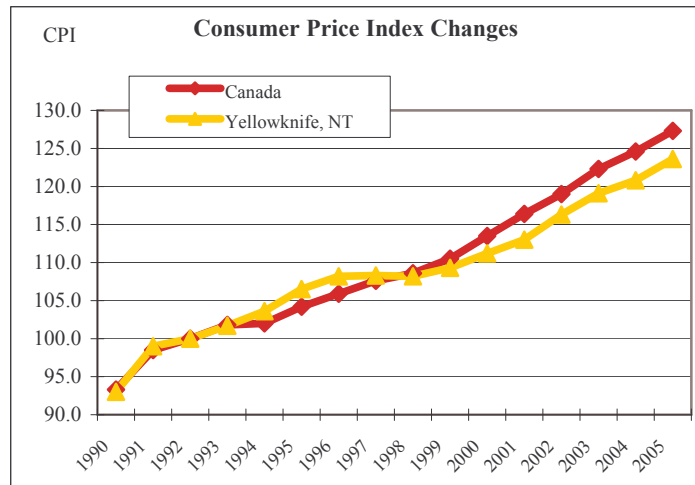


2.9 Cost of Living/Price Changes



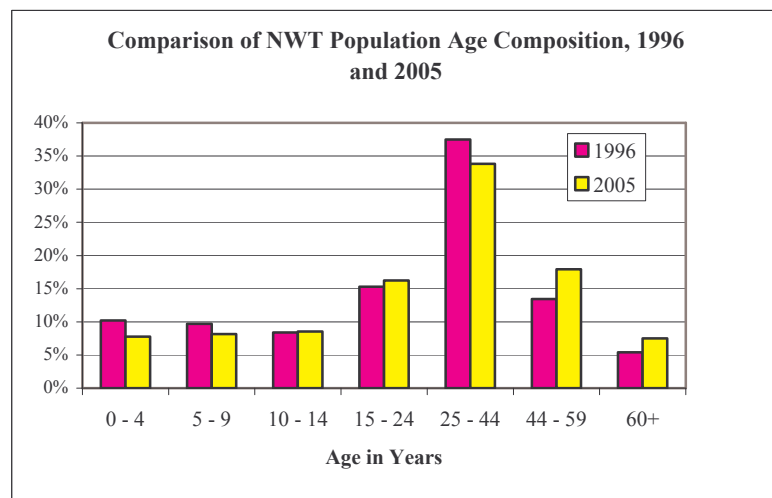
- Federal Isolated Post Indices (IPI), which compare retail prices in each community to Edmonton, show that the differences have decreased in all regions of the NWT since 1997. However IPIs do not include price components for shelter, clothing, furniture or vehicle purchases.

- The Yellowknife and Canadian All-items Consumer Price Indices (CPI) have tracked together closely over time.



2.10 Economic Growth and Population

- The NWT real GDP grew 71 per cent from 1999 to 2005, while the population grew by only 6 per cent.
- Over a longer time period, from the 1996 census to 2005, the NWT population has increased 3 per cent, an addition of 1,234 people. Over this period, the combined populations of Hay River, Inuvik and Fort Smith decreased almost 1 per cent (83 people), Yellowknife's population increased 6 per cent (1,174 people), and the rest of the communities' total population increased 1 per cent (146 people).
- The population shares of the various communities are relatively unchanged since 1996. Yellowknife's share of the total population has increased from 43.7 per cent to 45.2 per cent. Hay River, Inuvik and Fort Smith's share has decreased slightly from 23.5 per cent to 22.6 per cent. The rest of the communities' population share has remained very stable, decreasing marginally from 32.8 per cent in 1996 to 32.2 per cent in 2005.
- The NWT population has aged since 1996. The number of children aged 0 to 14 years decreased 11 per cent from 1996 to 2005, while the population of those aged 15 to 60 years has increased 6 per cent and those over 60 years has increased 43 per cent.

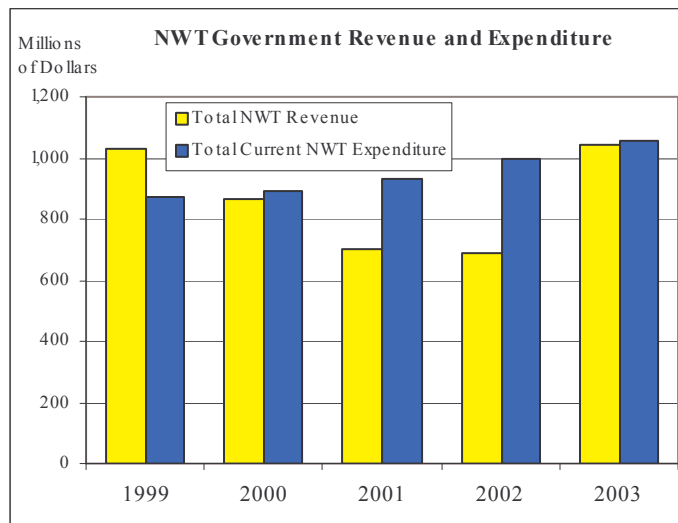


3. Economic Growth and Government Finances

3.1 Territorial Revenues and Expenditures

- Provincial Economic Account data shows that the significant economic growth over the 1999 to 2003 period is not reflected in a corresponding growth in Government of the NWT (GNWT) revenues.

- The GNWT's tax bases are too small to fund territorial government program and service responsibilities and therefore the GNWT depends on federal transfers, in particular, the Territorial Formula Financing (TFF) arrangements, to provide adequate government revenues. TFF arrangements are designed to cover the fiscal gap between GNWT own-source revenues and expenditure needs. Consequently, growth in own-source revenues decreases the TFF by a corresponding but

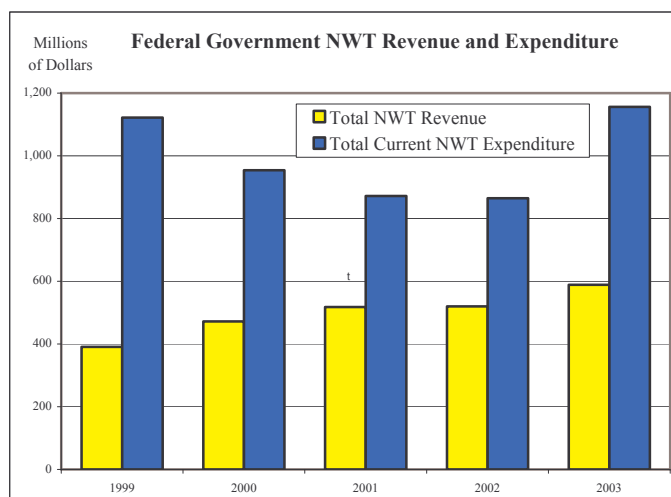


lesser amount. Since the TFF Grant is 70 per cent of GNWT revenues, the escalator on the expenditure component in the TFF Grant drives the increase in total GNWT revenues. TFF Grants for 2004-05 to 2006-07 are fixed amounts based on averages of previous Grants and the structure of TFF Grants after 2006-07 is unknown. If, as is likely, new TFF arrangements include an offset against own-source revenues, volume-driven increases in GNWT own-source revenues will continue to reduce the TFF Grant.

- According to the Provincial Economic Accounts, total territorial government revenues over the 1999-2003 period have remained flat, while total expenditures have grown 5 per cent annually.
- GNWT own-source revenues have also remained flat over the 1999-2003 period, due partly to tax rate decreases (both personal and corporate income tax rate decreases) and to the small size of territorial tax bases, which exhibit wide swings in volume.
- Using the NWT Public Accounts data from 1999-00 to 2005-06, and forecast data for 2006-07, NWT total revenues have grown 6.2 per cent annually, tax and liquor revenues have grown 8.5 per cent annually, and the TFF Grant has grown 5.4 per cent annually. Operating expenditures over this period are predicted to grow 6 per cent annually over the same period.
- The difference between own-source revenue growth and total revenue growth means that the GNWT is receiving few fiscal benefits from rapid resource development while it is incurring increased costs in both program services and increased need for capital investment.

- Increased economic activity corresponds with increased fuel, property and payroll tax revenue. However, some of the increases in other GNWT tax revenues and some fees can also be attributed to economic growth and corresponding population growth.
- The growth in GNWT consumption tax (fuel and tobacco) and liquor revenues since 1999 can be attributed to both population and economic growth. Growth in fuel tax revenues in particular can be linked to fuel taxes paid by the diamond mines.
- Growth in GNWT property tax revenue is largely attributable to increased property taxes paid by the diamond mines but also to an increase in the number of assessed properties, which is clearly linked to economic growth.
- GNWT payroll tax revenue is also growing on an annual basis due to increased employment levels and increases in wages and salaries.
- A definitive link between personal and corporate income taxes and economic growth is difficult to determine. Wide swings in both taxes, and especially corporate income tax, are the result of the actions of single taxpayers.
- A number of workers, especially workers employed in the NWT resource industry, live in other jurisdictions and therefore pay personal income taxes to those jurisdictions.
- Corporate income tax paid by multi-jurisdictional companies is allocated among provinces and territories according to federal income tax regulations. In general, for corporate income tax calculations, half of a corporation's income is allocated based on where wages and salaries are paid and half based on the location of sales.

3.2 Federal revenues and expenditures

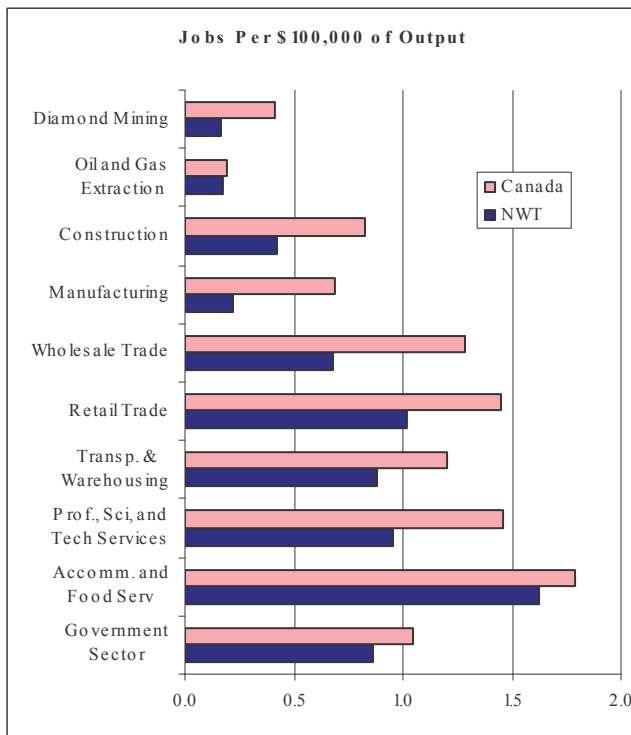


growth in provincial/local government expenditures. Under previous TFF arrangements, growth in territorial own-source revenues has reduced the growth in the Grant.

- Total federal revenue from the NWT has grown at an annual rate of 10.8 per cent from 1999 to 2003 (National Accounts data), while total expenditures to the NWT have grown only 0.7 per cent on an annual basis.
- Sixty-two (62) per cent of total federal expenditures in the NWT are transfers to the territorial government, primarily the TFF Grant. The Grant's design after 2006-07 is not known, however, in the past the Grant has grown by the population-adjusted

- Federal royalties and other non-renewable resource revenues from fees and licences from the NWT have grown 18 per cent annually from 1999 to 2005, from \$84 million to \$224 million (Source: Public Accounts of Canada). The federal mining royalties from the NWT over this period have increased 45 per cent annually from \$9 million to \$78 million.

4. NWT Linkages in the Domestic and International Economy



- The limited extent of linkages in the territorial economy means that activity in the NWT generally has less total impact on the NWT economy than on the economy in the rest of Canada.

- Direct economic activity, whether it is the operations of a mine or a retail establishment, has a direct impact on employment and also an indirect impact on other territorial businesses when it purchases goods and services.

- The overall impact of leakages is demonstrated by comparing the total effect on employment in both the NWT and Canada from economic activity in the NWT. For example, it is estimated that for every \$100,000 worth of production in the NWT

construction industry yields direct and indirect employment of 0.42 person years' of employment in the NWT and 0.83 person years' of employment in Canada.

- This pattern is relatively similar for many industries. Differences between industries are explained by differences in what they purchase from other businesses and labour costs within the industry compared to total operating costs.

5. Forecasts

- The forecast information is the result of a project undertaken by the Bureau of Statistics and the Financial Management Board Secretariat (FMBS) to identify the cumulative impacts of a range of resource development projects that may occur in the NWT over the next 15 years. The economic modeling provided estimates of project related impacts on the economy, labour income, capital investment and employment. These estimates include not only direct project impacts, but also indirect impacts to industries supporting the development activity and induced impacts as household incomes increase and consumer expenditures rise.

- The base forecast includes projects that are already in progress, while the base plus potential forecast includes the Mackenzie Gas Project, other oil and gas development and 16 other projects that are reasonably foreseeable. Whenever possible, the forecast employed publicly available information, primarily from information prepared by proponents for their respective Environmental Assessment (EA) processes. As a validation process, and to obtain further project details (e.g., detailed employment, commodity and industry impacts), project information was run through the Bureau of Statistics' input-output model.
- The project list for the two scenarios is as follows:

Projects Included in Forecast

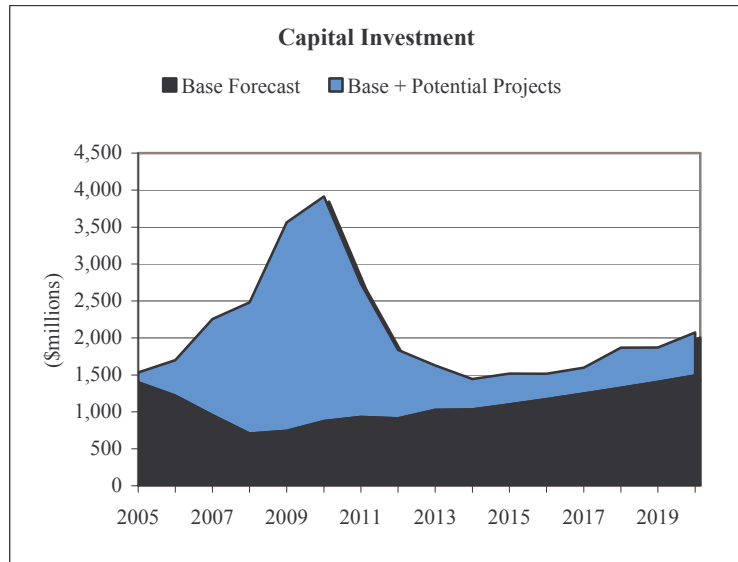
Project	Start Date	Project Life (yrs)*
<u>Base Forecast</u>		
Ekati diamond mine operations	1998	11
Diavik diamond mine operations	2003	14
Mineral exploration (on-going)
GNWT/Federal Government Infrastructure Program	2003	3
Snap Lake diamond mine construction	2004	2
Ekati diamond mine Panda underground construction	2004	1
Jericho diamond mine construction	2005	1
Diavik dike A418 construction	2005	2
<u>Other Projects Included in Base Plus Potential Forecast</u>		
<u>Mackenzie Gas Project</u>		
Pipeline construction & Field development	2008 ¹	4
Pipeline operations & Gas production	2012	22
<u>Other Oil and Gas</u>		
Incremental oil & gas exploration & development	2007	32
Incremental gas production	2013	26
Cameron Hills development construction	2005	10
<u>Other Development Activity</u>		
Snap Lake diamond mine operations	2007	22
Jericho diamond mine operations	2006	8
Mackenzie River bridge construction	2007	2
Gahcho Kue construction	2009	3
Gahcho Kue diamond mine operations	2011	15
Taltson hydroelectric development construction	2009	3
Prairie Creek construction	2007	2
Prairie Creek operations	2008	10
Yellowknife Gold Project construction	2007	1
Yellowknife Gold Project operations	2008	8
Courageous Lake construction	2011	3
Courageous Lake operations	2014	9
Giant Mine remediation	2009	15
Ekati diamond mine Koala underground construction	2006	2
Cantung Operations	2005	7
Pine Point Pilot Project construction	2007	1
Pine Point Pilot Project operations	2008	1

* For projects currently operating, life refers to years left following 2005.

¹. There is a low level of capital investment associated with MGP construction prior to 2008.

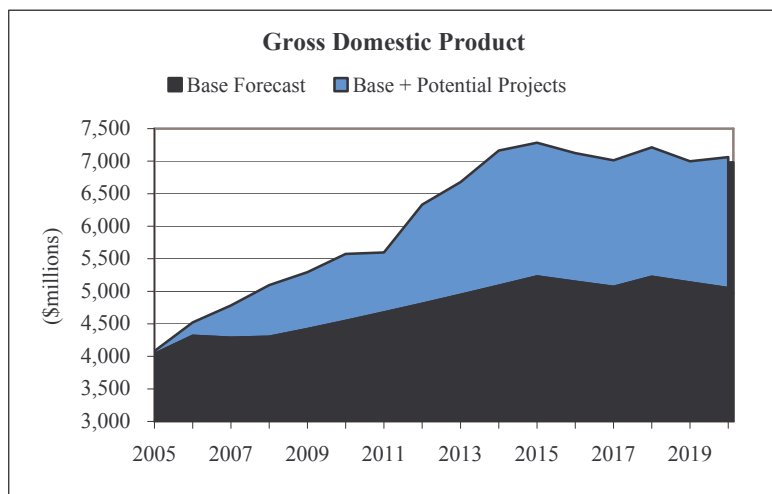
5.1 Capital Investment

- A drop in the base capital investment forecast occurs in 2008, as construction expenditures at Snap Lake and the underground construction at Ekati and Diavik come to a close in 2007, and capital investment returns to 2003 levels when no large industrial capital investment occurred. The base plus potential projects forecast peaks are primarily associated with the construction of the Mackenzie Gas Project (MGP); in 2009 MGP capital investment is expected to make up 62 per cent of all capital investment in the NWT. Following 2010, projects such as Courageous Lake Gold Development, incremental oil and gas exploration and ongoing mineral exploration are expected to maintain capital investment levels above 2004 levels.



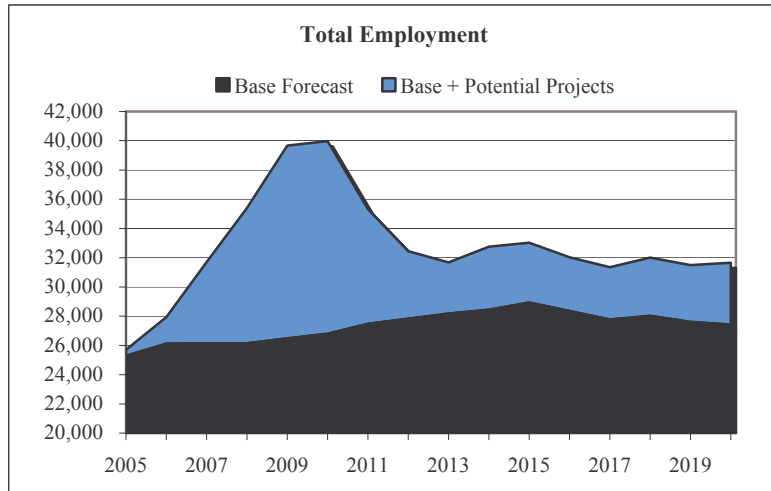
5.2 Gross Domestic Product (GDP)

- Base GDP is expected to grow at historical rates adjusted for past resource development, with small dips occurring in 2017 and 2020 with the close of the Ekati and Diavik diamond mines. The potential projects forecast is dominated by the impacts of the MGP. While the construction activity related to the MGP will have significant impacts on overall economic activity, the largest impact on GDP will be felt when operations begin in 2012. Production from oil and gas developments incremental to the MGP's three anchor fields is also expected to significantly contribute to overall economic activity after 2013.

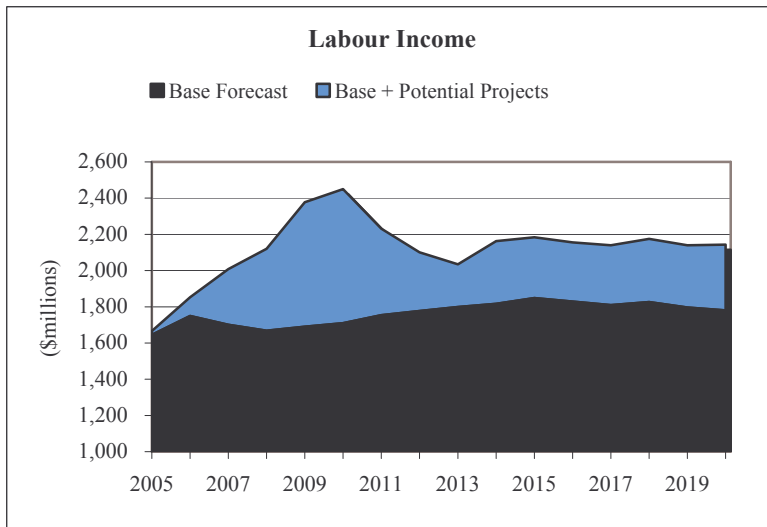


5.3 Employment and Labour Income

- Base employment is forecast to increase slightly over the forecast period, with the exception of two small dips in 2017 and 2020 that correspond with the close of the Ekati and Diavik diamond mines. However, the potential projects impacts forecast is very volatile with double-digit growth in total employment in 2007, 2008 and 2009 due to the MGP. The MGP is



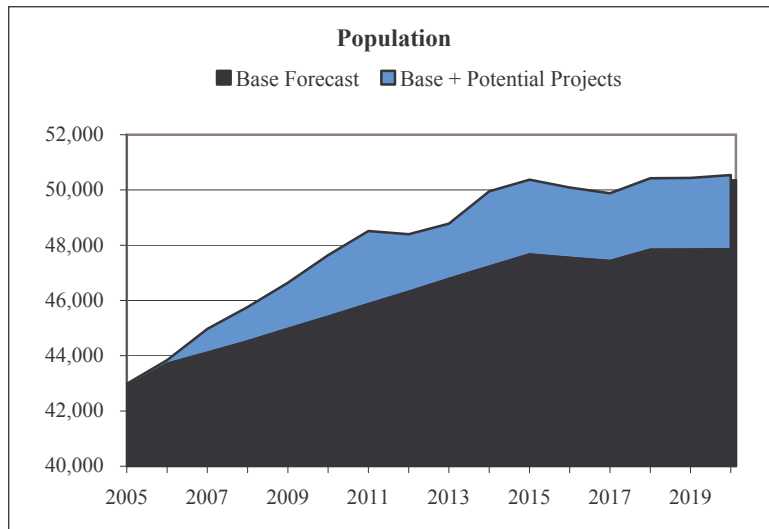
expected to employ over 2,000 NWT residents at the peak of construction in 2009; the remainder of the growth is from the 8,000 non-residents expected to be employed by the project in 2009. The forecasted fall in employment between 2010 and 2011 results entirely from completion of the MGP. Between 2011 and 2013, employment is forecast to continue to decrease with the completion of construction at Gacho Kue, the Talston Hydro project, and a decrease in incremental oil and gas exploration activity. The small rebound in employment in 2013 is a result of the beginning of operations at Courageous Lake.



- Labour income mirrors the trend in total employment. While the base forecast remains relatively stable, the major peaks and valleys in the base plus potential projects forecast are associated with the MGP, the conclusion of Gacho Kue and Talston Hydro construction and the start of mine operations at Courageous Lake.

5.4 Population

- The population forecast is based on the Bureau of Statistics Population Projections model with adjustments made for in-migration associated with resource development. The steady growth in the base population forecast abates between 2016 and 2020 with the expected closure of the Ekati and Diavik diamond mines. The base plus potential projects population forecast shows its fastest growth between



2007 and 2011, peaking in 2011 with 2,645 new residents associated with the additional resource development. Unlike employment and capital investment, most of this growth is not due to the MGP. The MGP proponents expect less than 1,000 direct in-migrants associated with project construction due to the short-term nature of employment opportunities it offers. Therefore almost half of the population growth associated with additional resource development projects between 2007 and 2011 results from in-migrants employed with mining projects such as Gacho Kue, Prairie Creek, Discovery (Yellowknife Gold Project) and Courageous Lake.

